



# STANDARD EVSE PEDESTAL INSTALLATION GUIDE

## Please Note

This installation guide includes the latest information at the time of printing. ClipperCreek, Inc. reserves the right to make changes to this product without further notice.

## Before You Begin:

Read these instructions completely, including the Safety Instructions. If you have questions about the use of this product, contact your Service Representative.

## Note to the Installer:

Be sure to leave these instructions with the user.

## Note to the User:

Keep these instructions for further reference.

## Important Safety Instructions

ClipperCreek Electric Vehicle Service Equipment (EVSE or “charger”) is designed with the safety concerns of the end user as an utmost priority; however, the following safety precautions must be read and followed:

- The charger and electrical wiring should be installed by a qualified electrician in accordance with local electrical codes and ordinances.
- Grounding Instructions - The charger should be connected to a grounded, metal, permanent wiring system; or an equipment-grounding conductor should be run with circuit conductors and connected to a grounding terminal or lead on the charger. Connections to the charger should comply with all local electrical codes and ordinances.
- Call your local service provider anytime a procedural question arises; DO NOT attempt to perform a procedure you are unsure of.
- Read all installation instructions carefully before performing the pedestal and charger installation.

## Installation Requirements

### Required Equipment for a Single-Mount Pedestal with one Charging Station (One EVSE per Pedestal):

- One (1) ClipperCreek Standard EVSE Pedestal Kit.
- One (1) ClipperCreek Charging Station (EVSE).
- One (1) dedicated 208 or 240 VAC branch circuit.
- One (1) circuit breaker appropriately sized for the EVSE charging capacity.<sup>1</sup>
- Two (2) Live Line conductors.<sup>2</sup>
- One (1) Ground Line conductor.<sup>2</sup>
- Conduit sized to fit all three conductors.
- Four (4) Anchor Bolts with Nuts and Washers

### Required Equipment for a Dual-Mount Pedestal with two Charging Stations (Two EVSEs per Pedestal):

- One (1) ClipperCreek Standard EVSE Pedestal Kit.
- One (1) ClipperCreek Dual-Mount Pedestal Kit.
- Two (2) ClipperCreek Charging Stations (EVSEs).
- Two (2) dedicated 208 or 240 VAC branch circuits.
- Two (2) circuit breakers, appropriately sized with respect to the charging capacity of each EVSE.<sup>1</sup>
- Four (4) Live Line conductors (Two for each EVSE).<sup>2</sup>
- Two (2) Ground Line conductors (One for each EVSE) or a single bonded Ground Line.<sup>2</sup>
- Conduit sized to fit all Live Line and Ground Line conductors.
- Four (4) Anchor Bolts with Nuts and Washers

<sup>1</sup> Refer to the EVSE documentation to determine the appropriate circuit breaker current capacity.

<sup>2</sup> All conductors must be appropriately sized for the EVSE current capacity, in accordance with local and NEC electrical codes.

## Tools Required for Assembling the Pedestal

The following tools are required for the installation and assembly of the pedestal components.

- T27 Torx Driver
- #2 Phillips Head Screwdriver
- Box Wrench (appropriately sized for the Anchor Nuts)
- Tube of Silicone Sealant

## Tools Required for Wiring the EVSE

The following tools are required for wiring the service conductors to a charger rated for a branch circuit of *up to* 60A.

- T15 Torx Driver (for EVSE Door Access)
- 3/16” Flathead Screwdriver (for Ground Block Lug)
- ¼” Flathead Screwdriver (for Contactor Lugs)

The following tools are required for wiring the service conductors to a charger rated for a branch circuit *greater than* 60A.

- T15 Torx Driver (for EVSE Door Access)
- 5/16” Flathead Screwdriver (for Ground Block Lug)
- 5/32” Hex Head Wrench (for Contactor Lugs)

# Pedestal Dimensions

Figure 1: Pedestal Dimensions for Single-Mount and Dual-Mount Installations

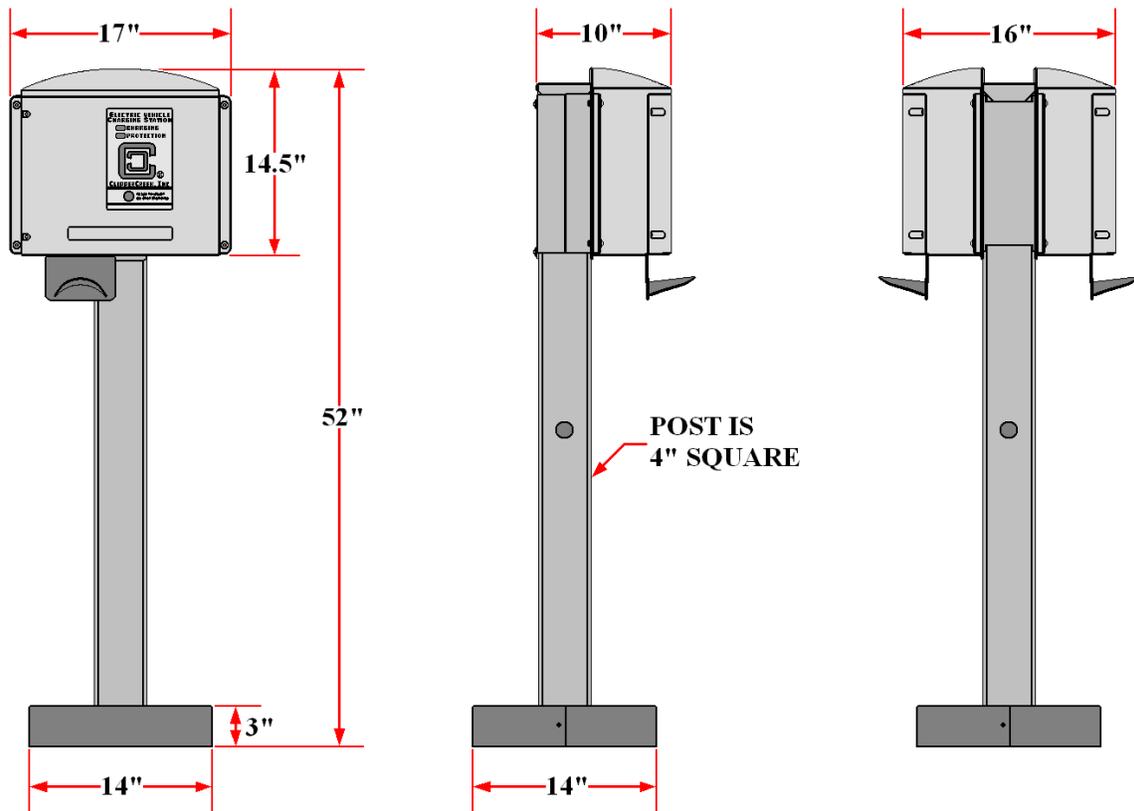


Figure 2: Pedestal Base Dimensions

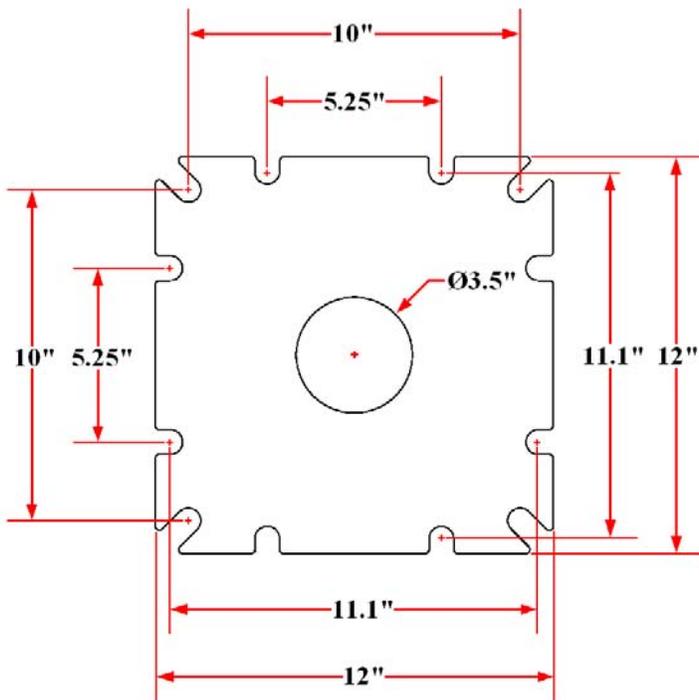
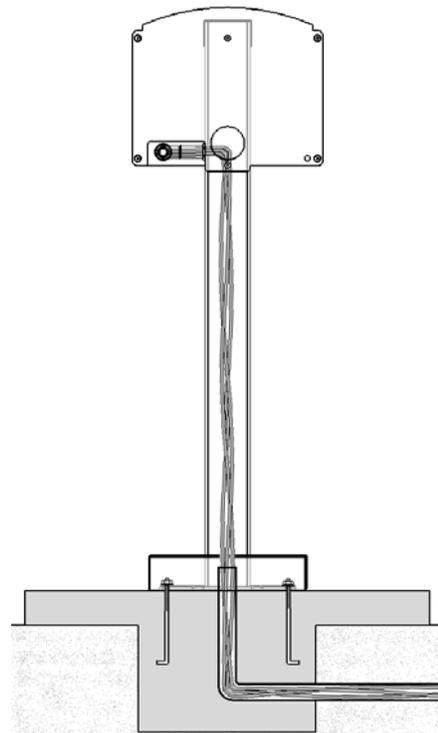


Figure 3: An Installation Cross-Section



## Packing Lists

### 0300-00-014 Pedestal Kit, Standard 4 Foot, Single Mount

Part Number	QTY	Description
0300-06-001	1	Pedestal Conduit Assembly, Standard 3/4" Fitting
1003-0014	1	Pedestal Metalwork, Cap with Rear Flange
1003-0019	1	Pedestal Metalwork, Back Bracket
1003-0023	2	Pedestal Metalwork, Base Cover
1003-0030	1	Pedestal Metalwork, Charger Mounting Plate
1003-0031	1	Pedestal Metalwork, 4-Foot Post
4000-0010	4	Machine Screw, Tapered Flat Head, 6-32 Size, 3/8" Length, Phillips
4000-0011	2	Machine Screw, Tapered Flat Head, 1/4-20 Size, 3/4" Length, T27 Torx
4000-0012	8	Machine Screw, Button Head, 1/4-20 Size, 1" Length, T27 Torx
4002-0002	8	Washer, Galvanized Steel, Neoprene Bonded Seal, 1/4" ID, 5/8" OD
4015-0000	4	Plug, Plastic Push-In, 1-3/32" ID, 1-7/32" OD
4015-0001	2	Plug, Plastic Push-In, 1-3/8" ID, 1-1/2" OD

## Optional Orderable Items

### 0300-00-013 Dual-Mount Kit for Standard 4 Foot Pedestal (Optional)

Part Number	QTY	Description
0300-06-001	1	Pedestal Conduit Assembly, Standard 3/4" Fitting
1003-0015	1	Pedestal Metalwork, Cap without Rear Flange
1003-0017	2	Pedestal Metalwork, Side Bracket
1003-0030	1	Pedestal Metalwork, Charger Mounting Plate
4000-0011	2	Machine Screw, Tapered Flat Head, 1/4-20 Size, 3/4" Length, T27 Torx
4000-0012	4	Machine Screw, Button Head, 1/4-20 Size, 1" Length, T27 Torx
4002-0002	4	Washer, Galvanized Steel, Neoprene Bonded Seal, 1/4" ID, 5/8" OD

### 0300-06-000 120V Ground Fault Receptacle Kit\*

Part Number	QTY	Description
4015-0002	1	Plug, Knockout Bushing, 1.109" OD, 3/4" Trade Size Aperture
4301-0000	1	GFCI Ground Fault Receptacle, 15A, 125V, NEMA 5-15R, Single Socket with Switch
4301-0001	1	Gang Box, Single, Silver Metal
4301-0002	1	Weatherproof Receptacle Cover, Clear, Single Gang, 2-3/4" Depth

\* The Ground Fault Receptacle Kit includes a 120VAC GFCI receptacle and housing. It may be installed at the knock-outs located 24 inches above the base on either side of the pedestal.

### 0300-06-002 Optional 1" Conduit Assembly

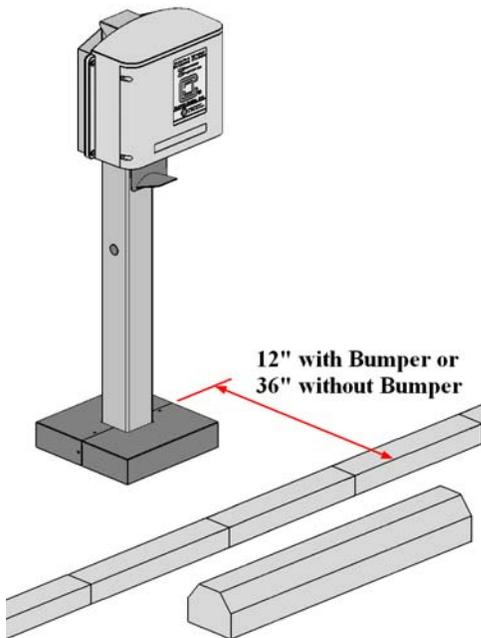
Part Number	QTY	Description
0300-06-002	1	Pedestal Conduit Assembly, Optional 1" Fitting

## 1. Concrete Pad Requirements

The location, dimensions, and composition of the concrete pad underlying the pedestal should always adhere to local building codes. The following dimensions are minimum recommended values. Always verify that installation plans adhere to local code requirements prior to proceeding.

- The pad area must be a minimum of 18" to a side.
- The concrete must be poured to a minimum depth of 12".
- If there is no bumper block, the center of the pedestal base should be situated 36" behind the curb.
- If a bumper block is in place, the center of the pedestal base should be situated 12" behind the curb.

**Figure 4: Proper Distance to the Curb**



## 2. Anchor Bolt Placement

A minimum of four (4) anchor bolts must be embedded in the concrete pad for the purposes of securing the pedestal post. The pedestal base is designed to permit the anchor bolts to be arranged in a standard 10" by 10" pattern (recommended) or in an alternative 5.25" by 11.1" pattern.

### For the Standard 10" Square Pattern:

- Arrange four (4) 1/2" or 3/8" anchor bolts in a 10" square pattern. This placement corresponds to the corner cutouts in the pedestal base.

### For the Alternate 5.25" x 11.1" Rectangular Pattern:

- Arrange four (4) 3/8" anchor bolts in a 5.25" by 11.1" rectangular pattern. This placement corresponds to the inner cutouts in the pedestal base.

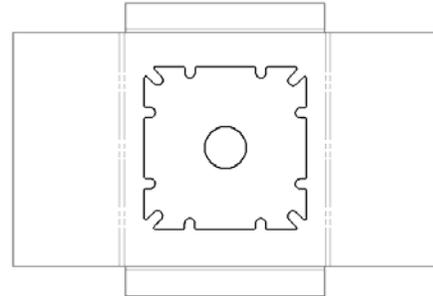
### Maximum Anchor Bolt Height:

- The anchor bolts should not protrude more than 3" above the surface of the concrete pad.

## Use the Pedestal Base Pattern Template:

To better facilitate the installation of the anchor bolts, a cardboard template in the shape of the pedestal base is included in the pedestal kit. This template is provided as a knock-out piece on the back of the cardboard box in which the charger mounting plate is packaged.

**Figure 5: Bolt Pattern Template Knockout**

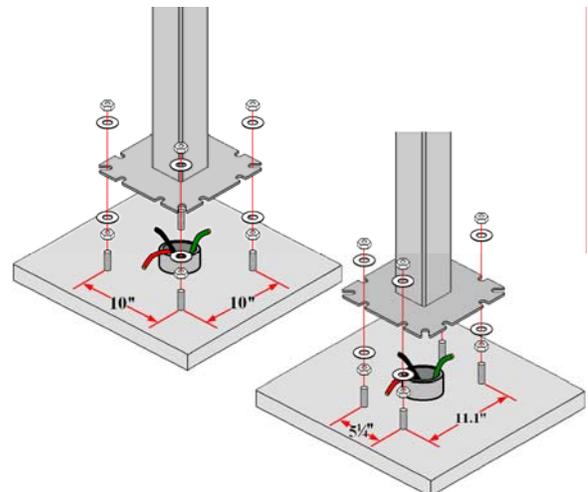


## 3. Mounting the Pedestal Post

Once the concrete pad with anchor bolts has been prepared and the three service conductors have been pulled through the underground conduit, the pedestal post may be put into place.

- Feed the three service conductors up through the inside of the pedestal post. Ensure that the conductors are of sufficient length to reach up through the body of the post and into the charger.
- Align the pedestal post base notches with the four anchor bolts and ease it into place.
- Nuts and washers may be used under the pedestal base to adjust the vertical alignment of the pedestal should the concrete pad not be level.
- Secure the pedestal post base to the concrete anchor bolts using appropriately sized nuts and washers.
- The anchor bolts, nuts and washers used for the installation of the pedestal base are not included in the pedestal kit and must be purchased separately.

**Figure 6: Pedestal Post Mounting by Pattern**

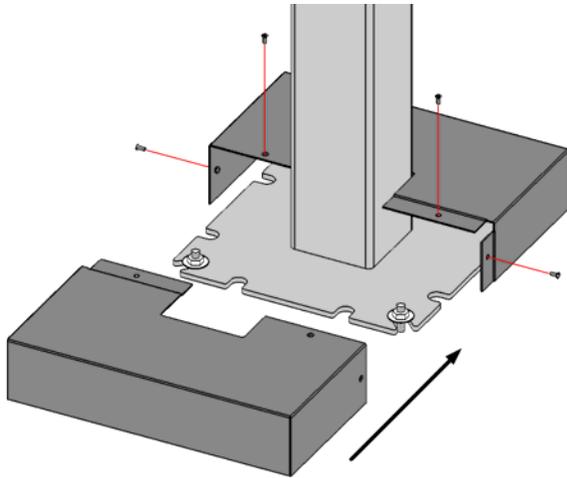


#### 4. Install the Pedestal Base Cover

A two-piece pedestal base cover set is included in the pedestal kit. The purpose of the pedestal base cover is to beautify the installation and to protect against injury from protruding anchor bolts.

- The two covers are of an identical overlapping design. Slide one cover on the front side of the pedestal base until the center notch surrounds half of the pedestal post. Slide the other cover onto the rear side in the same manner. Ensure that the flanges of each cover piece are tucked inside of the opposite cover.
- Align the four screw holes of each cover piece with the corresponding screw holes on the opposite cover.
- Secure each cover piece to the other with four (4) #6-32 x 3/8" flat-head taper screws using a #2 Philips-head screwdriver.

Figure 7: The Pedestal Base Covers



#### 5. Install the Conduit Assembly

The three conductors are routed through the side of the pedestal and into the back of the charger via an external conduit assembly.

##### For the Standard 3/4" Conduit Assembly:

Follow these instructions to install the standard 3/4" conduit assembly included in the pedestal kit.

- Knock-out the 3/4" plastic plug located 12" down from the top of the pedestal on the left side.
- Unscrew the locknuts on either end of the conduit.
- Route the three conductors through the following:
  - a) The first locknut (inside of the pedestal)
  - b) The open pedestal hole
  - c) The conduit assembly
- Push the threaded end of the straight conduit fitting into the open pedestal hole. Reach inside of the pedestal and hand-tighten the locknut onto the conduit threads.
- Face the open end of the 90 degree conduit fitting forward for later insertion into the back of the charger.

##### For the Optional 1" Conduit Assembly:

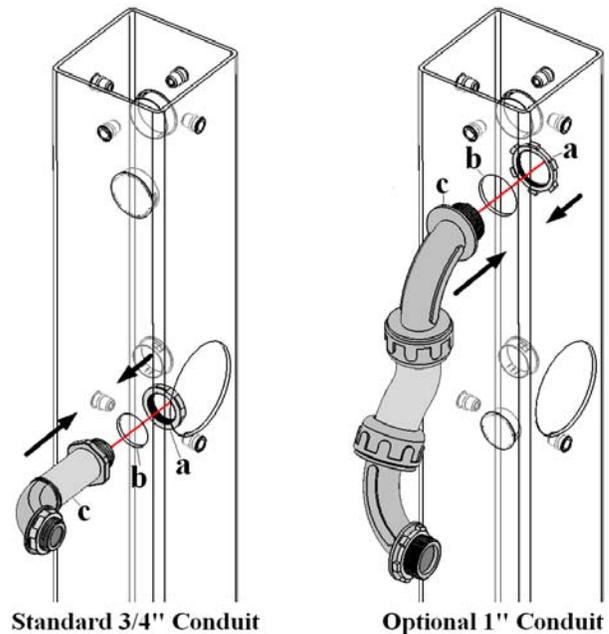
Some installations may require a conduit larger than the standard 3/4" assembly. For this purpose, an *optional* 1" conduit assembly may be requested. Follow these instructions to install the optional 1" conduit.

- Knock-out the 1" plastic plug located 3" down from the top of the pedestal on the left side.
  - Unscrew the locknuts on either end of the conduit.
  - Route the three conductors through the following:
    - a) The first locknut (inside of the pedestal)
    - b) The open pedestal hole
    - c) The conduit assembly
- The 1" conduit assembly may be disassembled to make it easier to pull the conduit through each fitting. Ensure the conduit is fully reassembled before proceeding.
- Push the threaded end of the straight conduit fitting into the open pedestal hole. Reach inside of the pedestal and hand-tighten the locknut onto the conduit threads.
  - Face the open end of the 90 degree conduit fitting forward for later insertion into the back of the charger.

##### For Dual-Mount Charger Installations:

- Install an appropriately-sized conduit assembly on *each* side of the pedestal post. The Dual-Mount Kit includes an additional 3/4" conduit assembly. The 1" conduit assembly is not included in the Dual-Mount Kit and must be requested separately.
- Face the open end of each conduit assembly toward the side of the pedestal where the corresponding charger will be installed.

Figure 8: Standard 3/4" and Optional 1" Conduit Assemblies



Standard 3/4" Conduit

Optional 1" Conduit

## 6. Install the Pedestal Post Cap

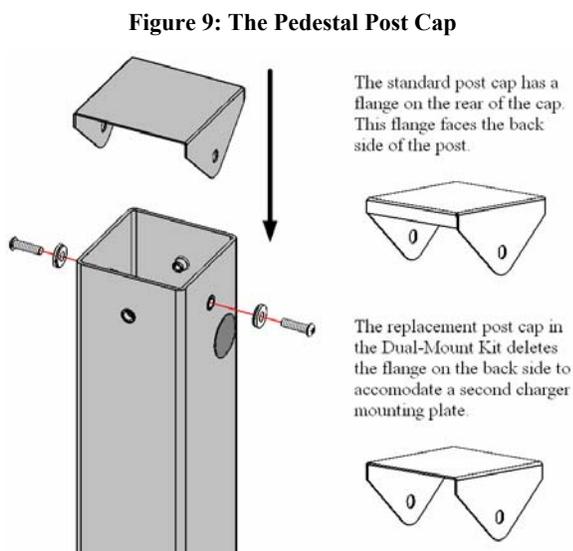
A pedestal cap is provided to cover the opening to protect the conductors and inner pedestal from the elements. Install the appropriate pedestal cap for a single or dual-mount charger installation.

### For Single-Mount Charger Installations:

- Single-mount charger installations utilize the standard post cap provided in the pedestal kit. This post cap includes a flange on one side. Place the post cap onto the top of the pedestal, with the flange facing the rear.
- Align the screw hole on each side of the post cap with the corresponding thread insert on the side of the pedestal.
- Place a 1/4" Neoprene-bonded sealing washer around the shaft of two (2) 1/4-20 x 1" Torx button-head screws. The metal portion of the washer should face the head of the screw while the neoprene should face the tip of the screw.
- Secure the cap to the pedestal with the two (2) 1/4-20 x 1" Torx button-head screws (with washers) using a T27 Torx driver.

### For Dual-Mount Charger Installations:

- Dual-mount charger installations utilize a *replacement* post cap provided in the Dual-Mount Kit. This post cap lacks a flange at the rear. Place the post cap onto the top of the pedestal.
- Align the screw hole on each side of the post cap with the corresponding thread insert on the side of the pedestal.
- Place a 1/4" Neoprene-bonded sealing washer around the shaft of two (2) 1/4-20 x 1" Torx button-head screws. The metal portion of the washer should face the head of the screw while the neoprene should face the tip of the screw.
- Secure the cap to the pedestal with the two (2) 1/4-20 x 1" Torx button-head screws (with washers) using a T27 Torx driver.



## 7. Install the Charger Mounting Plate

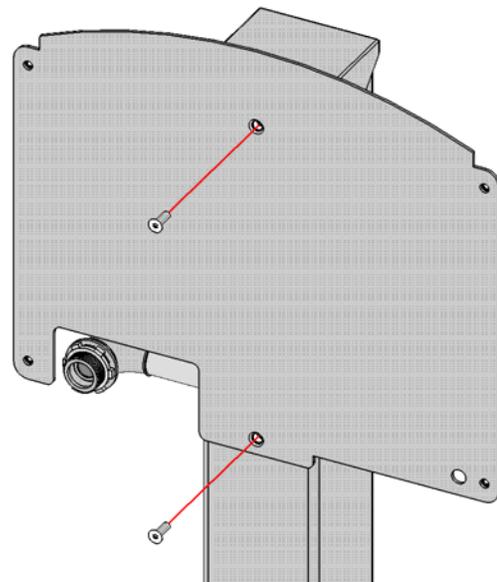
A charger mounting plate is affixed to the front of the pedestal post to provide a flat and rigid base on which the charger can be mounted. In the case of a dual-charger installation, a second mounting plate is affixed to the opposite side of the pedestal post.

- Hold the charger mounting plate against the front side of the pedestal post with the notch toward the left side to allow clearance for the conduit piece.
- Align the two screw holes along the centerline of the mounting plate with the corresponding thread inserts on the front of the pedestal post.
- Secure the mounting plate to the pedestal with the two (2) 1/4-20 x 3/4" Torx flat-head taper screws using a T27 Torx driver. Tighten until the head of the screws are flush with the surface of the mounting plate.

### For Dual-Mount Charger Installations:

- The Dual-Mount Kit includes a second charger mounting plate. This second mounting plate is affixed to the back side of the pedestal post, opposite of the first mounting plate.
- As with the first mounting plate, align the two screw holes and tighten two (2) 1/4-20 x 3/4" Torx flat-head taper screws using a T27 Torx driver until the screw heads are flush with the surface of the mounting plate.

**Figure 10: The Charger Mounting Plate**



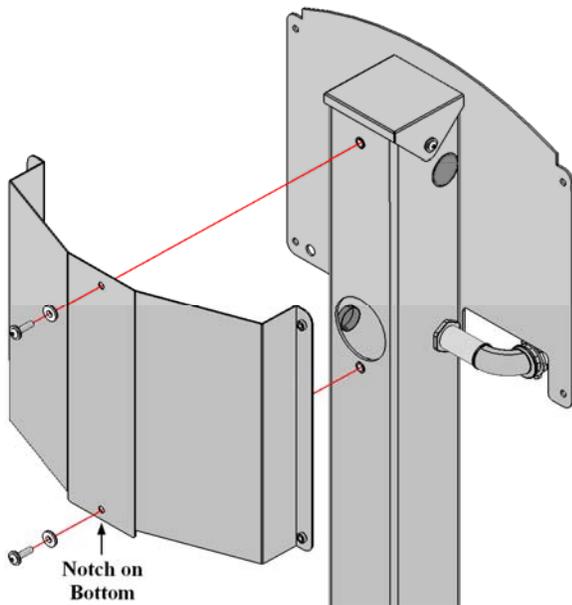
## 8. Install the Single-Charger Back Bracket

A bracket with thread inserts is included with the pedestal kit to make the installation more rigid and to provide threaded inserts for mounting the charger. *Note that this bracket is **not used** for dual-charger installations.*

- The top edge of the bracket is flush along its length, while the bottom edge of the bracket has metal notch in the middle to accommodate a screw hole.

- Hold the bracket against the back side of the pedestal post with the flanges coming into contact with the rear of the previously installed charger mounting plate.
  - Align the two screw holes along the centerline of the bracket with the corresponding thread inserts on the back of the pedestal post.
  - Place a 1/4" Neoprene-bonded sealing washer around the shaft of two (2) 1/4-20 x 1" Torx button-head screws. The metal portion of the washer should face the head of the screw while the neoprene should face the tip of the screw.
- ➔ **Note that the neoprene washer must be used to maintain a watertight seal.**
- Secure the bracket to the pedestal with the two (2) 1/4-20 x 1" Torx button-head screws (with washers) using a T27 Torx driver.

**Figure 11: The Single-Charger Back Bracket**

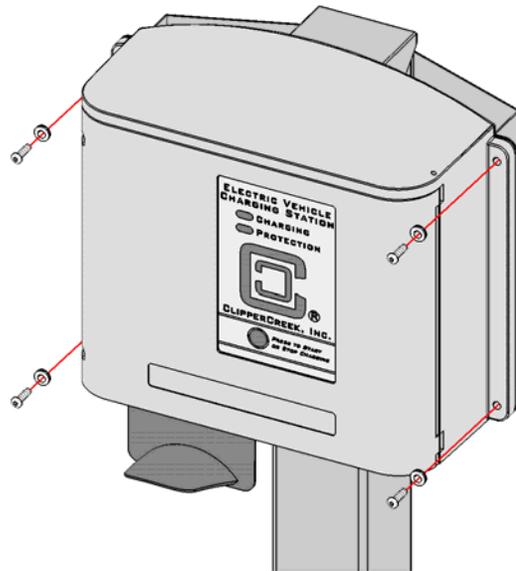


## 9. Mounting a Single Charger to the Pedestal

With the mounting plate and back bracket in place, the pedestal is now ready for a single charger to be mounted. For a *dual-charger* installation, proceed to step 10.

- Align the four screw holes on the side flanges of the charger with the corresponding screw holes in the mounting plate and the thread inserts on the back bracket.
- Place 1/4" Neoprene-bonded sealing washer around the shaft of four (4) 1/4-20 x 1" Torx button-head screws. The metal portion of the washer should face the head of the screw while the neoprene should face the tip of the screw.
- Secure the charger to the pedestal mounting plate and bracket with the four (4) 1/4-20 x 1" Torx button-head screws (with washers) using a T27 Torx driver.

**Figure 12: Mounting a Single Charger**

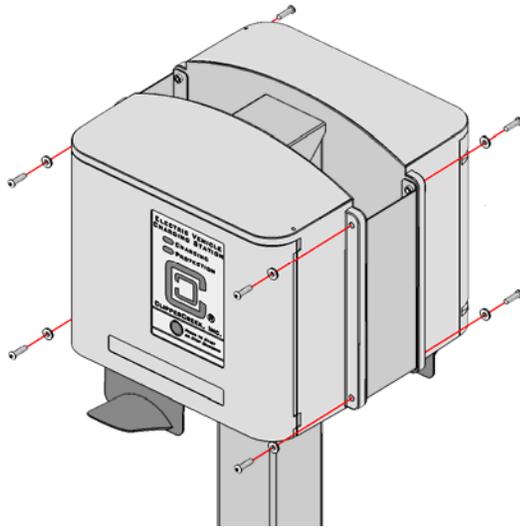


## 10. Mounting Two Chargers to the Pedestal

For an installation with two chargers affixed to the same post, the Dual-Mount Kit provides two side brackets to be used in place of the single back bracket.

- ➔ **This operation should be performed by two installers, one to hold the charger in place while the other secures the pedestal hardware.**
- Place 1/4" Neoprene-bonded sealing washer around the shaft of eight (8) 1/4-20 x 1" Torx button-head screws. The metal portion of the washer should face the head of the screw while the neoprene should face the tip of the screw.
  - Align the four screw holes on the side flanges of the first charger with the corresponding screw holes in the front mounting plate.
  - Align the two threaded inserts of each side bracket with the corresponding screw holes either side of the charger and mounting plate.
  - Secure the charger to the side brackets with four (4) 1/4-20 x 1" Torx button-head screws (with washers) using a T27 Torx driver.
  - Align the four screw holes on the side flanges of the second charger with the corresponding screw holes in the rear mounting plate.
  - Secure the charger to both side brackets with four (4) 1/4-20 x 1" Torx button-head screws (with washers) using a T27 Torx driver.

Figure 13: Mounting Two Chargers with Side Brackets

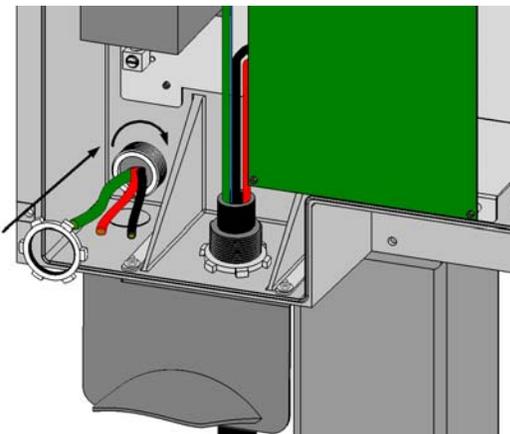


## 11. Seal the Conduit and Enclosure

It is necessary to ensure a good environmental seal between the conduit piece and the rear wall of the charger.

- To open the charger door, first remove the two door screws on the left side of the charger enclosure using a T15 Torx driver. Unlock the safety latch found on the bottom of the charger enclosure and swing the door open.
  - If it has not already been removed, knock out the plug found at the bottom left corner of the rear wall of the charger enclosure.
  - Pull the three conductor wires into the enclosure and insert the threaded end of the 90 degree conduit fitting into the open aperture.
  - Thread the remaining conduit locknut onto the conduit fitting and hand-tighten it until it is snug.
- ➔ **Apply silicone sealant to fill the conduit where it enters the enclosure. Use a sufficient quantity of silicone to ensure that no water or debris may enter the enclosure through the conduit.**

Figure 14: Tighten the Conduit Lock Nut

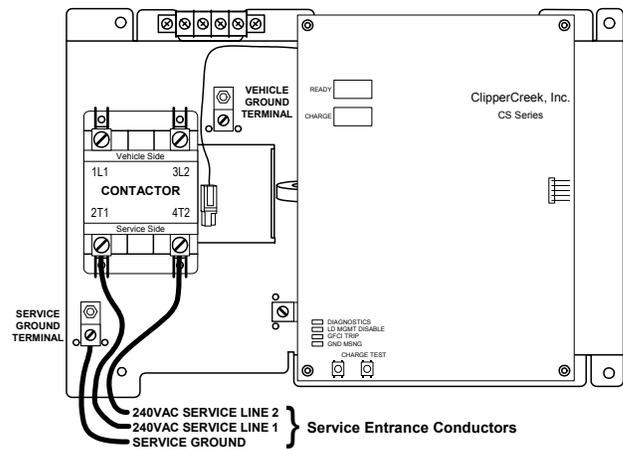


## 12. Wiring the Conductors to the Charger

The three service conductors must be wired to the charger's internal chassis and contactor.

- Strip the end of the ground conductor and insert the exposed wire into the *Service Ground Terminal Block*.
- Tighten the *Service Ground Terminal* screw using an appropriately sized flathead screwdriver.
- Strip the ends of the two live conductors. Insert the exposed wire of the first live conductor into the "2T1" terminal on the bottom of the contactor.
- Insert the exposed wire of the second live conductor into the "4T2" terminal on the bottom of the contactor.
- Tighten the contactor terminal blocks using 1/4" flathead screwdriver or 5/32" hex head wrench.

Figure 15: Wire Service Conductors to the Chassis



## 13. Complete the Installation

- Close the charger door and lock the safety latch. Replace the two door screws on the left side of the charger enclosure and tighten them using a T15 Torx driver. **Do not overtighten.**
- Verify the safety of the installation prior to turning on the circuit breaker.
- Refer to the Charging Station User's Guide for further operational and maintenance information.



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