

Figure 1. Expanded Base of Charles Pedlock® Pedestals

Expanded Base Installation Guide for Charles BDO™/CFDP™ Pedlock® Pedestals in Buried Fiber Cable Applications

1. GENERAL

1.1 Document Purpose. This document provides installation instructions for the fiber optic cable crew to properly install a new, expanded, 2-piece, split base (bottom section, see Figure 1) of a Charles Industries' BDO™, CFDP™, or CFDP2™ Pedlock® pedestal in Outside Plant (OSP) buried fiber cable applications. These base installation instructions apply whether the fiber feed or drop cable installation is a loop-through, branch, home-run, or stub-end configuration. For instructions on how to perform cable preparations and fiber splicing at the pedestal backboard (in the protected top-section of the pedestal), see the document provided with and attached to the pedestal backboard. See Part 3 to contact Charles Industries for further information.

- NOTE -
Hereafter, the expanded, 2-piece, split base of a Charles' Pedlock BDO, CFDP, or CFDP2 pedestal will be referred to as the "base," and both the CFDP and CFDP2 pedestals will be referred to as the "CFDP."

1.2 Document Status. Whenever this document is updated, the reason will be stated in this paragraph. Print 5 updated step 25 for proper conduit trim height in Table 1. Print 4 updates Step 6 of Table 3 and Step 4 of Table 4. Print 3 adds Step 15 of Table 1, and updates Figures 3 and 4. Print 2 updated Steps 23 and 26 of Table 1, added GR-13-CORE Issue 4 compliance and information on the correct procedure to straighten an installed base.

1.3 Product Purpose and Description. The Charles Pedlock® pedestal is a protective above-grade pedestal that serves as an environmental housing for buried feed or distribution cable splices and customer service drops in Fiber To The Home (FTTH) and Fiber To The Premises (FTTP) deployments. Charles' weather-resistant yet free-breathing pedestal offers superior OSP protection against floods, fire, dirt, weather, salt-fog, insects, and impact. The pedestal's adaptable, expanded-capacity, split base can be opened and separated to easily install around less flexible cables, innerduct, or conduit-fed cable bundles in new construction, or around existing cabling or conduit in pedestal replacement and rehabilitation applications. Extra stability is provided by the square design and corrugated ribbed walls of the base. The base features an elongated knockout hole at the bottom front side and an interior drop cable channel for easy drop cable access.

Various knockouts are provided at the rear and sides for optional service cables or for attaching optional pole-mount brackets or UMS stakes. For easy installation, a ground line marker is factory-imprinted into the front and rear halves. Two, opposing, support-leg guides inside the base at the top collar accept and hold the legs of an interchangeably-designed, interior, backboard assembly, which allows technicians to securely mount various cables, splice trays, splitters, and terminal blocks. Charles BDO and CFDP pedestals are compliant with Telcordia GR-13-CORE, Issue 4, and are RDUP approved.

1.4 Product Mounting. The pedestal base is installed in a trench or hole in the ground, up to the ground line indicator, at the fiber FTTP or FTTH distribution point, per local company practice. When the base is installed, the pedestal is easily secured with the overlapping outer dome, which, when placed over the pedestal backboard and base collar, self-locks to the base with its audible snap lock.

- GROUNDING WARNINGS -

Always follow local codes and company practices for performing proper cable and site bonding and grounding.

Perform all bonding and grounding prior to fiber, electrical, and communications connections.

- CABLE WARNINGS -

Be careful not to damage any buried cables or service wires while digging either to expose cables or to prepare a hole or trench, or while driving stakes.

Buffer tubes and fibers are sensitive to excessive bending, pulling, and crushing forces. To avoid kinking of buffer tubes and fiber damage or breakage, exercise great care when working with fiber, and do not exceed/violate minimum bend radius requirements for fibers, buffer tubes, and cables.

- BODILY HARM WARNINGS -

Risk of serious eye damage! Never look into the end of a fiber optic line/circuit nor use a magnifier in the presence of laser light/radiation. Always exercise caution when installing, testing, or performing maintenance on live circuits. If eye exposure to laser light/radiation has occurred or is suspected, immediately seek medical treatment by a professional eye care physician.

Shards/cleaved glass fibers are very sharp and can easily pierce the skin. Do not let pieces of fiber stick to your clothing or drop in the work area where they can later cause injury. Use tweezers to pick up broken pieces of glass fibers and place them on a loop of tape or in a container specifically meant for this purpose. Good housekeeping is important.

The corrugated metal or armor that may be present in the feed cable is very sharp at the cut/exposed edges. Extreme caution should be taken to prevent personal injury. Protective work gloves are recommended when handling armored cable.

2. INSTALLING THE PEDESTAL BASE

Follow the steps in Table 1 to place a Charles expanded BDO™ or CFDP™ pedestal base in a trench. However, always follow company practices, as many variables may exist between companies regarding types of grounding methods and equipment, application types (loop-through vs. stub-end), use of and heights of innerducts or conduits, types of and bend radii of cables, timing and scheduling of the various pedestal installation phases such as when feed and drop trenches are dug, when conduit and/or cable is placed, when drop channels, backboards and domes are stored or installed, as well as backfilling materials and methods. See Table 3 for UMS stake-mounting instructions and Table 4 for pole-mounting instructions.

Step #	Instruction
Preparing the Installation Site	
1.	Prepare trench. Be careful not to damage any buried cables or wires while digging. Dig and prepare the cable trench, per local company practices.
2.	Establish an earth ground. Verify an earth ground is or will be accessible and available at or near the pedestal base installation site.
3.	Place cables, conduit, or innerduct in trench. Follow local company practice when laying, placing, and cutting any cables and innerduct or conduit. For cable-only applications, lay or place the cable(s) in or through the trench. For innerduct or conduit applications, first lay or place the innerduct/conduit in the trench. Next, cut the innerduct/conduit to its approximate final height about 7-8" above the ground line at the pedestal site (to avoid possible cable damage later by cutting the conduit after the cable is pulled through it). This height should produce a top conduit opening within the collar area of the installed base. (If desired, wait until the base is set in the trench after Step 24 to assure a more precise conduit top opening or height.) Last, pull or fish the cable(s) through the innerduct or conduit.

4. **Prepare and allow sufficient cable loop or stub-end length at base.** For loop-through configurations, place the fiber cable so that a large cable loop of (≥ 15' above the ground line) is present at the pedestal installation site, for future backboard attachment, cable preparation, and splicing purposes. For cable stub configurations, allow 8.5' (min.) of cable above the ground line.
5. **Cap/wrap cable ends (stub-end applications only).** Per local company practice, any cable stub-ends should be capped or securely wrapped to prevent the entrance of moisture, if splicing will not be performed at the time of the pedestal placement.

Preparing the Pedestal

6. **Unpack and inspect equipment.** Remove the pedestal from the shipping container or skid, and remove the plastic bag or shrink-wrapping. (If desired, if only base placement is performed at this time, the plastic bag or shrink-wrapping can be carefully removed and used again to re-wrap the dome and backboard.) Inspect the equipment thoroughly upon delivery. If the equipment has been damaged in transit, immediately report the extent of the damage to the transportation company.
7. **Obtain tools, materials and equipment.** Assemble the following tools and equipment to perform the pedestal base installation.

<input type="checkbox"/> 216 tool/can wrench	<input type="checkbox"/> Charles pedestal of choice
<input type="checkbox"/> Scissors, knife or snips (to remove plastic wrap)	<input type="checkbox"/> Trenching equipment, shovel, digging/soil moving tools
<input type="checkbox"/> Level	<input type="checkbox"/> Cable loop/stub management hardware & equipment
<input type="checkbox"/> Tape measure	<input type="checkbox"/> Clean, dry, pea gravel (approved 3/8"-5/8" diameter only)
<input type="checkbox"/> Hammer/mallet	<input type="checkbox"/> Conduit and conduit caps (optional)
<input type="checkbox"/> Safety glasses	<input type="checkbox"/> Cable grounding materials and equipment
<input type="checkbox"/> Work gloves	<input type="checkbox"/> Slotted screwdriver or utility knife (removing knockouts)
<input type="checkbox"/> Soil tamping tool(s)	<input type="checkbox"/> Site cleanup tools and containers
<input type="checkbox"/> Soil for backfill	<input type="checkbox"/> Bag of parts located in drop channel
<input type="checkbox"/> Spray paint (optional)	<input type="checkbox"/> Wrenches/socket set (9/16" for pole/stake mount hardware)
	<input type="checkbox"/> Insulated work gloves (optional, to pound UMS stakes)
8. **Remove dome from base.** If not already removed, remove the dome with a 216 tool or can wrench: turn the snap lock's hex nut 1/4-turn counterclockwise, hold it in that position, then lift up on the dome. Perform Step 9 below if the backboard is attached to the base collar. Perform Step 10 below if the backboard is enclosed in a red bag and inserted upside-down through the base collar.
9. **Remove the attached backboard/bracket.** (If the backboard is enclosed in a red plastic bag, and placed through the base upside down, skip this step and go to Step 10.) If the backboard is mounted to the base collar, remove the backboard by first pressing one finger push tab located in one support leg, pulling up on that support leg, and secondly, pressing the other one/two leg's push tabs and pulling up on the other leg(s). The push tabs are accessed through a hole in each leg, in the inside top collar of the base. Once the tabs are unlocked or released, pull the backboard off the base and set it aside.
10. **Remove the backboard from the red plastic bag.** (If the backboard is not enclosed in a red plastic bag, skip this step.) Lift the upside-down, red-bag-enclosed backboard out of the base, pull the bag off the backboard, and keep the red bag where it will be available for use later during this installation.
11. **Put backboard and dome in storage (optional).** If only the pedestal base placement is performed at this time, the backboard and dome optionally can be stored (or re-attached to the base per company practice). Put the backboard in the dome and put both in a safe place for a later install. (Note: if fiber cable preparation, attachment, and splicing will be performed directly after the base installation, the installation guide for that procedure is attached to the backboard.)
12. **Open the base (optional).** When the base is open, it is easier to place the base around rigid cables/conduit, access a bag of parts optionally attached to the drop cable channel in the base, re-attach the drop channel, and remove other knockouts (if desired). To open the base, loosen both hex nut-in-cup screws, one on each side of the base, with a 216 tool (shown in Step 8) or can wrench. When loose, pull the front half of the base (with the Charles logo) up and off the rear half of the base.

13. **Remove drop channel and find the bag of parts.** Detach the drop channel attached to the base front half to remove the bag of parts optionally attached to it or to install the black foam plug. Four stays/guides on the base, two on each side of the channel, hold the channel in place. To remove the channel, grasp and squeeze the flexible sides of the channel towards each other to free the channel's lips from under the stays. Depending on the model ordered, a plastic bag of parts may be attached to the channel (or alternately, to the backboard). Find and open the bag of parts and remove the black foam plug, this document, and if present, the red plastic vapor-barrier bag, all of which will be used in this installation.
14. **Remove knock-outs (if required).** If one or more holes are needed in the base wall(s) (such as for service/drop cables or for attaching either a pole-mount bracket or a UMS metallic stake), holes can be made in the base by removing the appropriate knockouts. The base is shipped with certain knockouts already removed; however, if additional holes are required in the base, per local company practice, it is best to choose them, mark them (on the outside), and to remove them at this time with the base separated. To remove a knockout, mark the exact knockout to be removed on the exterior side, set the base half on a firm flat surface with the marked knockouts (the base exterior) facing up. Place the blade of a slotted screwdriver in the round knockout groove and tap the screwdriver with a mallet or hammer to pierce the groove, then lift and move the screwdriver over a little along the round groove and tap again. Continue this moving/tapping procedure around the groove until the knockout is removed. Alternately, the point of a utility knife can be carefully inserted into the groove until it penetrates the other side, then pulled out, moved over along the groove, and re-inserted repeatedly in this fashion until the knockout is easily removed. Repeat for each knockout to be removed.
15. **Install UMS stakes or pole-mounting bracket (if required).** Install the UMS stake as shown in Figure 3. Install the pole-mount bracket per Figure 4. Maximum tightening torque for both the UMS stake and pole-mount bracket shall be 75 in-lbs.
16. **Install foam plug.** (Discard the foam plug and skip this step if conduit is used for drops.) To help prevent both backfilling of the drop-cable channel and rodent intrusion, locate the foam plug (provided) and place it inside the channel just above the bent flange near the top of the channel. Press it in place between and perpendicular to the channel walls, and slide it down in the channel until the bottom of the plug abuts or rests on the bent flange.
17. **Install channel.** After removing the bag of parts and the knockouts, re-install the drop-cable channel. (If conduit is used for drop cables, discard the unneeded channel.) Install the U-shaped channel on the inside of the base front (see Step 13). A narrow lip runs the length of the channel, on both sides. Inside the base front are molded-in channel guides/stays which hold the channel in place. Fit the channel lips under the base-front guides by placing one channel lip under one set of guides, then squeezing the flexible channel to compress it enough to slide the other lip under the other set of guides. The channel fits between the base collar and two round knobs at the base bottom.

Placing and Installing the Pedestal Base

18. **Assemble base (optional).** (Per company practice, if the location, size, flexibility, and bend radius of the cable allows it to be safely reduced enough to fit through the collar of the assembled base, then assemble the base halves at this point.) First, align the L-shaped slots on the sides of the base front with the corresponding cup-screws and shoulder pins on the sides of the base rear (see Step 12), then press the base front forward and then down into the base rear as far as it will go, to the end of the L-shaped slots. Tighten the cup-screws with a 216 tool to lock the base. Verify the proper knockouts were removed (if holes are desired), before backfilling.
19. **Determine and mark base installation location.** To determine exactly where to dig a hole or where to place the base in the trench, use the base itself as a positioning template by temporarily placing it up over the top of the conduit/innerduct or cable (route the cable through the base) and lowering it to the ground. Analyze the site and position the base at its proposed final orientation and horizontal positioning in the trench/hole. As stated in Step 4, allow 8 1/2 feet of stub-end cable or 15-16' of cable loop (min.) to extend above the ground line within the base and consider the best drop cable access. With the base temporarily in position, mark this spot by removing a layer of top soil from around the outside perimeter of the base (or spray painting) about 2-4 inches wider than the base. Remove the base and set it aside.

20. **Dig a hole for the base. Caution: Avoid damaging any buried cables, wires, conduit, innerduct, or ground equipment whenever digging.** At and around the marked perimeter boundary, dig straight down to a depth of 8½ inches. Do not dig too deep. In addition, per company practice and the specific site/trench condition, it may be necessary to (re)dig the trench and extend the hole on either side of the base enough to allow the cable/conduit to enter the bottom of the pedestal base at a proper/workable depth and with a proper cable bend radius (no severe angles).
21. **Place/prepare earth ground. Always follow local codes and company practice when preparing earth ground and when grounding cables/equipment.** Per local company practice, prepare an earth ground for the pedestal at or near the base.
22. **Put base in hole/trench and route feed cable through base. For flexible cable installations, carefully, so as not to excessively bend the cable, route the top of the CO/feed fiber cable loop (or stub-end) up through the assembled base, then put the assembled base in the prepared hole/trench while simultaneously pulling up on the cables to eliminate any cable slack in the trench/hole.**

For less flexible cable or conduit installations, where the base must be disassembled to be installed around the cables/conduit: 1) place the rear half of the base in the hole/trench, surrounding or enclosing the cable/conduit, 2) route the cable loop or stub-end upward and allow it to extend up and through the base top collar, 3) manipulate either the lower leg(s) of the cable or the base so the conduit/cables will be as centered and vertical as possible within the assembled base (cross and/or fasten conduit together, if needed (see Step 25)).

23. **Place/route any available service/drop cables into base (optional).** Per company practice, route any available drop cables, conduit, or innerduct into the base. If innerduct or conduit is not used, route the drop cable up through the knockout hole at the bottom front of the base and push it up through the drop cable channel. At the top of the channel, guide the cable between the foam plug (installed near the top of the channel) and the back wall of the channel. If the plug dislodges during cable routing, re-install the plug by placing it in front of the cables (cables at the back of the channel), angling the plug's front edge down and forward toward the first rib of the base front, and sliding it down and forward until it rests on top of the base's first rib. Press down on the back edge of the plug until it rests on the bent flange provided for it on the rear of the channel.

24. **Set/verify/finalize proper base depth.** Prior to backfilling, verify the base is at the proper depth, approximately 8½ inches deep. Rest the base on solid or well-tamped soil when measuring this distance. Verify the base ground line indicator is at the same approximate level as the final-grade top-ground line. Add or remove soil/fill as necessary. If the existing trench is too wide or deep, the UMS metal stake can be ordered, attached to, and used with the base to lend stability and to compensate for the oversized trench/hole. If a stake is used, Charles recommends digging a hole for the stake a few inches less than or shy of the stake depth (when attached to the base), then driving the unattached stake the remaining, short, required distance. This helps the stake to remain vertical after backfilling. Attach the base to the stake only after driving the stake into the soil. Alternately, but less preferred, the oversized hole or trench can be backfilled and tamped to raise it to a proper level (settling can occur).

25. **Verify conduit height (Conduit-type applications only)** Trim the innerduct/conduit so that it is even with, or no more than 1.5 inches below, the bottom of the base collar. Exercise caution when trimming conduit to avoid damage to fiber cable that may have been previously installed. Seal any open innerduct to keep rock and debris from entering the duct during backfill process.

26. **Assemble base (if not assembled).** If the base is still not assembled at this point, align and attach the front to the rear half at this time, as described in Step 18.

27. **Level the base.** Verify the level or plumb of the pedestal. To check the level, place a level tool on top of the base collar, first side to side, then front to back. (Alternately, check the plumb of the entire pedestal by temporarily installing the dome and placing a level vertically against the dome at intervals around the dome.) Make any needed base-bottom soil adjustments to get a good/true level or plumb line.

The base is designed to maintain its orientation after installation, therefore, it is important to verify and attain the plumbness of the pedestal at installation time. Should it be necessary to straighten a pedestal at any future time (such as in the event of uneven ground settling), **never attempt to straighten an installed pedestal by manipulating, pushing, or pulling on the attached dome, as pedestal damage may result.** To re-plumb and straighten a pedestal post-installation, always first remove the soil from around the base (and any stakes, if attached), then re-adjust the base until a proper base level is achieved.

28. **Backfill and tamp outside the base.** Hold the base in place and backfill the trench outside of the base. While backfilling, tamp the soil or fill and check the base level once or twice. Continue to add/tamp the soil until it is at the base ground line mark.
29. **Backfill soil inside the base and tamp.** First plug, cap, or cover all channel, conduit or innerduct openings, then per company practice, backfill soil *inside* the base, about 5 inches deep (see Figure 2), and firmly tamp the soil (a short shovel handle works well for tamping). This adds stability and inhibits any company-approved gravel (Step 31) from falling or slipping under the base sides when it is added.
30. **Place the red plastic bag.** Retrieve the provided, red-plastic, vapor-barrier bag (or sleeve) previously set aside, cut it open on all but one edge to make one large plastic sheet, verify it does not have any large holes in it (if it does, fold it or repair with duct tape), and place it into the base on top of the soil fill. Fit it around or encircle the cables, conduit, or innerduct, spread it around the drop cable channel, and press all sheet edges downward where they make contact with the base walls. Alternately, cut a hole or "X" in the center of the sheet and plunge/drop the sheet down over the centered cable loop, stub-end, or conduit group, bring the sheet all the way down to the tamped soil or fill, fit the sheet's inner hole edges snugly around the cables/conduit, then spread it out as underlined above. When installed properly, this sheet acts as a vapor barrier and aids moisture run-off into the soil.
31. **Pour gravel inside the base.** Pour company-approved gravel (gravel minimizes condensation and drains well) into the base to a level of 1" below any drop channel or conduit opening. Gravel should be pea gravel no larger than 5/8 inches in diameter or clean, dry, non-porous, gravel rock only (cut stone retains more moisture).
32. **End of base installation - determine next procedure.** If feed or drop cable preparation, attachment, and splicing will now be performed, locate the document typically shipped with and attached to the pedestal backboard (which describes fiber cable preparation and splicing procedures) and continue with the steps in that document. If cable splicing will NOT be performed at this time, perform either A) [recommended] or B) [not recommended] which follows. A) If company practice recommends leaving the installed base without attaching the backboard and dome, this ends the pedestal base installation. Keep the dome and backboard safe until it is time to install them. B) If company practice recommends closing the pedestal by attaching the backboard and dome, continue to the end of this table. **Caution: respect cable bend radius requirements and exercise care to avoid damaging cables if looping or coiling unopened cables inside domes.**
33. **Attach backboard.** Install the backboard. Larger diameter pedestals have three support legs instead of two. For two-legged models, install the backboard so the front of the backboard faces the front of the base (the side with the Charles logo on it). Align the backboard support legs with their matching leg guides in the top collar of the base, and push down on the backboard (or support legs) until it stops (audible clicks indicate proper leg insertion).
34. **Install dome(s).** Loop and secure the cable so it will not be damaged when the dome is installed. Locate the dome and orient it so the snap lock faces the front (the base front has the Charles logo embossed on it). Slide the dome down over the backboard, aligning the dome snap lock with the molded, latch-catch mechanism on the base front. When correctly aligned, let the self-locking dome drop down in place until an audible "click" indicates the dome is locked.
35. **End of pedestal placement. Clean up site.** If splicing is not performed at this time, clean up the installation site, and leave this document inside the pedestal (optionally with your notes written on it) for the next crew or installer.

Table 1. Installing an Expanded Pedestal Base

Feature	6" pedestal	8" pedestal	10" pedestal	12" pedestal
Height, base only, incl. collar	18 in.	18 in.	18.5 in.	18.5 in.
Height, base bottom to ground line	8.5 in.	8.5 in.	8.5 in.	8.5 in.
Height, dome top to ground line	34.5 in.	34.5 in.	34.5 in.	35 in.
Depth, base (front to back)	9.75 in.	10.8 in.	12.8 in.	15.1 in.
Width, base (side to side)	10.25 in.	11.75 in.	13.9 in.	16.1 in.

NOTE: All dimensions are approximate. See the backboard document for more specifications.

Table 2. Pedestal Base Physical Specifications

3. CUSTOMER TECHNICAL SERVICE

If technical assistance or customer service is required, contact Charles Industries by calling or using one of the following options:

847-806-8500 (Tech. Service local)	847-806-6300 (Customer Service)
800-607-8500 (Tech. Service toll-free)	847-806-6653 (Customer Service FAX)
847-806-8556 (Tech. Service FAX)	mktsterv@charlesindustries.com (email)
techserv@charlesindustries.com (email)	www.charlesindustries.com (website)

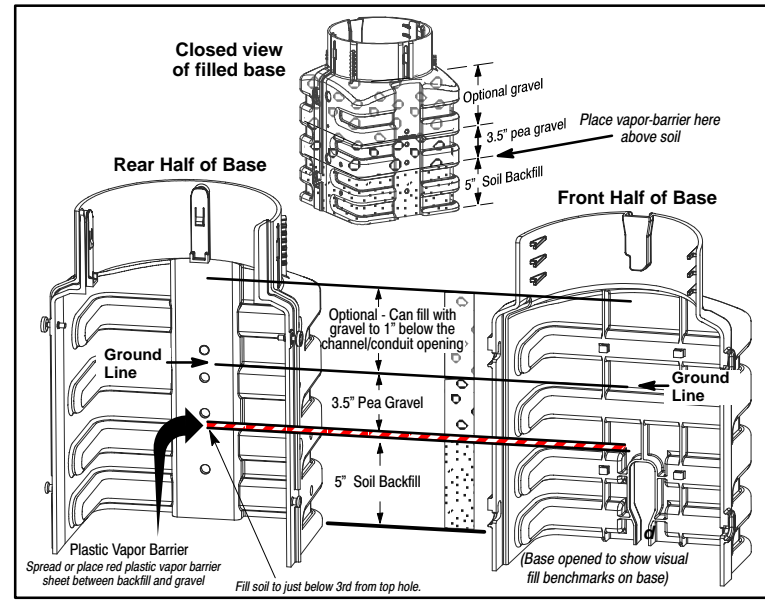


Figure 2. Backfill Levels Inside the Base

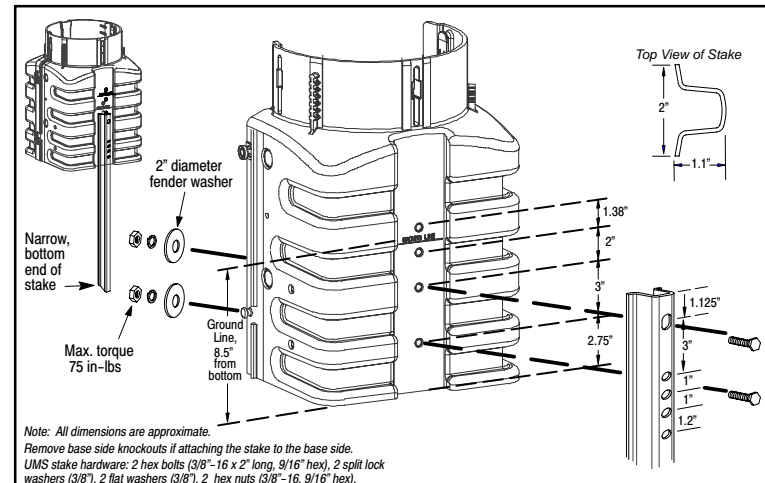


Figure 3. Mounting the UMS Stake on the Base

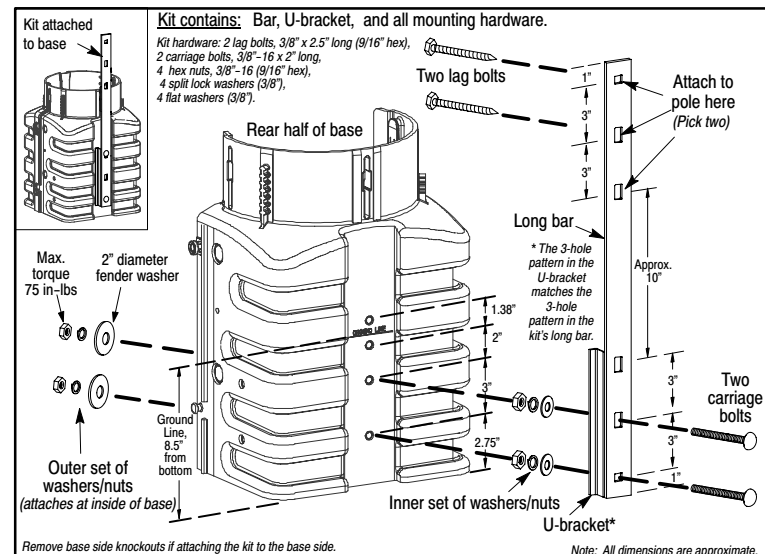


Figure 4. Installing the Pole-Mount Bracket Kit

- | Step # | Instruction |
|--------|---|
| 1. | Prepare the trench, base and cable. Perform Steps 1-21 of Table 1 to prepare the hole/trench, the base, and the cable/conduit. Verify the pedestal installation site is ready or suitable for pounding/driving a metallic stake without causing damage. |
| 2. | Select stake length/mounting holes*. Choose the desired stake length, and choose and mark the desired stake and base mounting holes, per local company practice. The marks facilitate vertical stake alignment when pounding the stake. |
| 3. | Remove mounting hardware. Remove the factory-attached mounting hardware from the stake, prior to driving the stake in the ground. |
| 4. | Position stake. Place the stake bottom (narrow end) in the hole/trench 1" away from the base wall and in vertical alignment with the chosen base knockout holes. Be sure the inside of the stake channel faces the base (rounded side faces out). If desired, tap the stake a couple times to get it started, then remove the base. |
| 5. | Drive stake to proper depth. Caution: Avoid damaging any buried cables, wires, conduit, innerduct, or ground equipment when driving stakes. Use insulated work gloves when holding or pounding metal stakes in place. To avoid damage to the top of the stake, set a wood striking board on top of the stake when pounding. Hold the stake level/plumb while driving it straight into the ground, checking the plumb and depth periodically and making appropriate adjustments. Pound the stake until the chosen stake holes are level or aligned with the chosen base holes. Do not drive too deep. Verify the stake is plumb and adjust if needed. |
| 6. | Secure base to stake. When the stake is at the proper height, place the base against the stake, align the marked base knockout holes with the correct stake mounting holes, and insert the bolts through the aligned holes, leaving the threaded part of the bolt inside the base. Place a 2" diameter fender washer then a lock washer onto each bolt at the inside of the base wall (per Figure 3), then thread a nut onto each bolt and firmly tighten (max torque is 75 in-lbs). Use galvanized hardware supplied with the product. |
| 7. | Verify height/plumb. Check and adjust the base height and level/plumb, if desired. |
| 8. | Continue with any, remaining, applicable, Table 1 installation steps, Steps 22-35. |
- *Note: The stake also can be attached to the side of the base; first remove any base side knockouts, as necessary.

Table 3. Installing a Pedestal Base with a UMS Stake (Figure 3)

- | Step # | Instruction |
|--------|---|
| 1. | Prepare the trench, base and cable. Perform Steps 1-21 of Table 1 to prepare the hole/trench, the base, and the cable/conduit. Verify the pole or post at the pedestal installation site is suitable/ready to accept and attach a metallic pole-mount stake. |
| 2. | Select base & kit mounting holes*. The pole-mount bracket kit can be attached to the base rear in several different vertical positions (remove the base's top knockout for the highest position, see Step 14). Select the desired holes (see Figure 4). |
| 3. | Prepare and/or reposition bracket. 1) Remove and set aside the pointed lag bolts (used for pole-attachment) factory-attached to the kit's long bar. 2) Remove the outermost first set of nuts and washers from the carriage bolts that are factory pre-installed in two of the kit's lowest holes. 3) [Optional] Adjust the U-bracket positioning on the bar and the carriage bolt locations. The kit is shipped with the U-bracket aligned with and attached to the bottom of the bar. If different holes (or bolt positions) are chosen to adjust the kit's vertical mounted position on the base or pole, remove the carriage bolts and re-attach them in the correct holes. Note that the U-bracket can be raised or lowered on the bar approximately 3" if needed for the specific pole/post installation in question. Once repositioned, re-connect the U-bracket to the bar. First, abut the wide, flat, edge of the U-bracket against the bar. Next, insert the carriage bolts through the correct bar holes and then through the correct U-bracket holes. Secure by placing a flat washer then a lock washer onto each bolt, then thread a nut all the way onto each bolt shaft, and firmly tighten each nut. |
| 4. | Attach kit to base. Attach the pole-mount bracket kit to the base by first aligning the carriage bolts attached at the bottom of the kit with the correct or chosen holes in the base. Next, press the kit to the base to fully-insert the bolts into the base holes. Place a 2" diameter fender washer then a lock washer onto each bolt at the inside of the base wall (per Figure 4), then thread a nut onto each bolt and firmly tighten (max torque is 75 in-lbs). Use the supplied galvanized hardware. |
| 5. | Mark mounting hole locations on pole. Lift the combined base/pole-mount kit, place it against the pole in the desired location (verify the actual, final-grade, ground line is level with the base's ground line marker), decide which two holes at the bar-top will be used to mount the base, and mark the mounting hole locations. |
| 6. | Attach base to pole. Per company practice, either set aside the base/kit to pre-drill the holes to easily accept the lag bolts, or lift and hold the base/kit in place and firmly tap the bolts to get them started. To install the bolts, lift the base into place, align the holes at the top of the pole-mount kit's bar with the marked or pre-drilled holes on the pole or post, then insert, tap, or start the bolts. Hold the base/kit in place and tighten the bolts with the tool of choice. |
| 7. | Continue with any, remaining, applicable, Table 1 installation steps, Steps 22-35. |
- *Note: The kit can be mounted to the side of the base; remove any required knockouts before kit attachment, as necessary.

Table 4. Pole-mounting a Base with a Pole-Mount Kit (Figure 4)