

Figure 1. Dome-Off Interior Views of the CFDP206 Series of CFDP2 Pedlocks®

Fiber Cable Preparation, Termination and Splicing Instructions for the Charles® CFDP2™ EPS and IPS Series of Fiber Pedlock® OSP Pedestals (with 6" and 8" domes)

1. GENERAL

1.1 Document Purpose. This document provides instructions for the fiber cable technician to properly perform fiber cable preparations, routings, splicing, and terminations within the second generation of Charles Industries' Fiber Distribution Point (CFDP2™) EPS and IPS series of Pedlock® pedestals with 6" or 8" domes. These instructions describe fiber CO/feed cable and drop cable installations in branch or stub-end configurations. Figure 1 shows an interior, dome-off view of a CFDP2 EPS series model and IPS series model. See Table 2 for information on all models in the EPS/IPS series or call Charles Industries (see Part 3) to request more information or literature.

- NOTE -
Hereafter all models in the series will be commonly referred to as the "CFDP2" or "pedestal." Specific model numbers will be specified or referenced where important differences apply.

1.2 Document Status. Whenever this document is updated, the reason is stated in this paragraph. Print 4 updates Table 2. Print 3 updated Table 1 to concur with the install steps shown in the video footage and the practice. Print 2 updated Steps 23 and 28 of Table 1.

1.3 Product Purpose and Description. The CFDP2 is a double-protected (dome within a dome), above-grade, non-metallic pedestal that offers superior OSP protection against floods, fire, dirt, weather, insects, and impact for fiber-optic, buried, distribution cable splices and customer service drops in FTTP deployments. Double protection (two-stage) is achieved with: (1) a weather-tight yet free-breathing interior enclosure, that is (2) within the confines of a protective, exterior, buried distribution pedestal. The top section of the pedestal contains an outer dome, which covers and protects an inner dome, which in turn protects the exclusive and interchangeably-designed interior backboard. At the versatile backboard, technicians can route and attach various cables, tubes, splice trays, splitters or other equipment. The bottom section of the pedestal is the base: either the round, 1-piece, beveled-bottom, Integral stake base, or the square-shaped, Expanded-capacity, locking, 2-piece split base designed to open and easily install around conduit-fed cable bundles and to accept less flexible cables. Both support the backboard. Charles' CFDP2 pedestals are designed to be installed in new or replacement installations, to accommodate various soil and mounting applications, to accommodate various feed cable loop-through, branch, and stub-end applications, to accept various splice trays and cable-types (such as preconnectorized, ribbon, or loose buffer tube fiber cables) for either drop or feed cables, to accommodate certain fiber slack situations, and to exceed Telcordia GR-711-CORE specifications.

1.4 Product Mounting. The CFDP2 pedestal base is typically installed in a trench or hole in the ground, up to the ground line indicator on the base, at the FTTP or FTTH distribution point. The pedestal backboard, where all cable preparations are performed (as described in this document), mounts to the base. Once all cable connections are complete, the inner dome is placed over and attached to the backboard to protect all cabling and connections, then the outer dome is placed over and attached to the base, for further

protection. The base contains holes or knockouts at the rear and both sides which accept an optional, metallic, mounting stake or a pole-mount stake.

2. CABLE INSTALLATION AND SPLICING

The steps in Table 1 help the cable technician to perform all fiber feed and drop cable preparations, routings, attachments and splicing, and presume the following conditions:

- **Cable Architecture/Deployment** - The fiber cable deployment is a CO or feed cable in a stub-end configuration.
- **Equipment Installation** - A CFDP2™ base has been properly installed at the desired field site (for base installation information, see the pedestal base installation document factory-attached to the base).
- **Trench Setup** - The trench is either dug and open, or backfilled with the feed cable already placed, brought into, looped through and exiting out the base bottom.
- **Feed Cable** - The CO or feed cable has a central core buffer tube with ribbon fiber.
- **Drop Cable Design** - The drop cables are a flat-type with a copper tracer wire.
- **No Transportation Tubing** - a protective but flexible 3' length of transportation tube is provided for the central tube of the stub-end feed cable.

For information regarding other CFDP2 installation applications, types, or cable deployment and types, contact Charles Industries at the phone number provided in Part 3.

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)

- 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.

Cable and fiber cleaning solvents may contain hazardous materials or harmful ingredients. Always read and follow the manufacturer's precautions, warnings, and instructions when working with cleaning solvents or products.

Corrugated metal or armor that may be present in feed cables is very sharp when cut or exposed. Exercise extreme caution to prevent personal injury. Use protective work gloves when handling armored cable.

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

- FIBER/CABLE DAMAGE CAUTIONS -

Buffer tubes and fibers are sensitive to bending, pulling, and crushing forces. To avoid buffer tube kinking and fiber damage, use great care when working with fiber. Do not exceed or violate minimum bend-radius requirements for fibers, buffer tubes, or cables.

- CAUTION -

Perform bonding and grounding before electrical and communications connections.

Table 1 - Branch or Stub-End Configuration Installation			
Step #	Instruction		
1.	<ul style="list-style-type: none"> □ Obtain tools, materials and equipment. Assemble the following tools and equipment to perform fiber feed/drop cable connections in the installed CFDP2 pedestal. <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> □ 216 tool/can wrench □ Tape measure □ Cable marking tool □ Assorted cable ties □ Labels for cables □ Safety glasses □ Work gloves (optional) □ Grounding materials/tools □ Cable bond clamps □ Slotted screwdriver □ Wrenches or socket set □ Site clean-up tools □ Drop trenching equipment </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> □ Properly installed base of CFDP206/208 model □ Inner & outer domes and backboard (provided) □ Bag of parts (provided with the pedestal) □ Cable-entry tool or utility knife with hook blade (to cut feed cable) □ Buffer tube stripper tool (to score/cut buffer tubes) □ Isopropyl alcohol & clean rags (to clean fibers) □ Gel removal compound (to clean stripped cables) □ Fiber splicing tools and equipment □ Splice tray and labels for splice tray (one provided) □ Tweezers & tape (for cleaved glass fibers/shards) □ Shovel (to access drop cable hole) □ Proper lengths of drop cables </td> </tr> </table> 	<ul style="list-style-type: none"> □ 216 tool/can wrench □ Tape measure □ Cable marking tool □ Assorted cable ties □ Labels for cables □ Safety glasses □ Work gloves (optional) □ Grounding materials/tools □ Cable bond clamps □ Slotted screwdriver □ Wrenches or socket set □ Site clean-up tools □ Drop trenching equipment 	<ul style="list-style-type: none"> □ Properly installed base of CFDP206/208 model □ Inner & outer domes and backboard (provided) □ Bag of parts (provided with the pedestal) □ Cable-entry tool or utility knife with hook blade (to cut feed cable) □ Buffer tube stripper tool (to score/cut buffer tubes) □ Isopropyl alcohol & clean rags (to clean fibers) □ Gel removal compound (to clean stripped cables) □ Fiber splicing tools and equipment □ Splice tray and labels for splice tray (one provided) □ Tweezers & tape (for cleaved glass fibers/shards) □ Shovel (to access drop cable hole) □ Proper lengths of drop cables
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Preparing the Pedestal

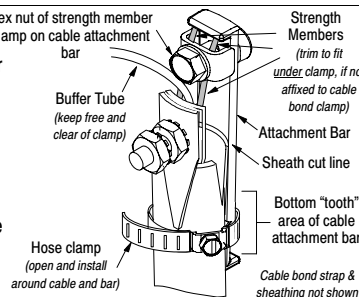
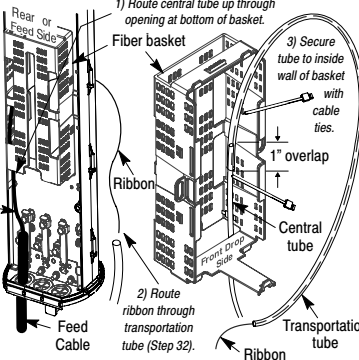
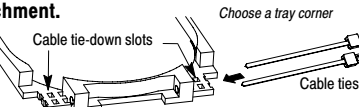
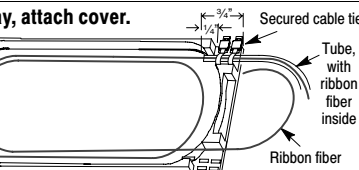
2. □ **Locate installed base and perform safety test for voltage.** Find the CFDP2 pedestal base installation site and apply or use a company-approved voltage detector or test set on or at all metallic points to verify no stray voltage is present. *If voltage is detected, do not proceed and call your manager.*
3. □ **Inspect the base.** Inspect the pedestal base. Verify the base is properly installed in the ground, and that it is not damaged.
4. □ **Verify/prepare earth ground. Always follow local codes and company practice when grounding cables/equipment.** If an earth ground is not present at the pedestal site and local practice requires an earth ground, prepare one at this time. Do not connect earth ground to the backboard until it is attached to the base.
5. □ **Spread ground cover.** Per company practice, clear the area around the pedestal base. Remove any debris or objects that will hinder the work performance. Spread an approved, plastic, ground cover on the ground around the base.
6. □ **Verify sufficient feed cable length.** Verify approximately 10 feet of cable (approx. 11.5 feet in areas of frost heave), from the ground line to the stub-end of the cable, extends out of the base. Press the cable toward the rear of the pedestal (Charles logo is on the front side of the base). See the base installation document for instructions on installing the base and routing cables into the base. Approx. 10' stub-end to Ground Line (GL)
7. □ **Remove shrink-wrap and separate domes.** Bring the stored and shrink-wrapped pedestal domes and backboard to the base installation site, remove any plastic wrapping, grasp a backboard leg, and pull the backboard out of the outer dome.
8. □ **Attach backboard.** To install the backboard onto the base, first verify the cable leans toward the rear of the base (the side without the Charles logo), then align the backboard so the drop side (side with the most grommet ports) faces the base front. When the legs are aligned with the guides in the base collar, push down on the backboard until the legs' lock-tabs are engaged (audible clicks indicate proper leg insertion). A wide orientation guide on one leg prevents backwards insertion. If it is difficult to insert the legs, flip the backboard the other way and try again. Align support legs with leg guides on base collar. Once aligned, press down on each leg until it "clicks" into place. Note the wider leg orientation guide.
9. □ **Remove inner dome.** Remove the inner dome attached to the backboard. Grasp the dome with both hands (at the bottom edge or around the dome perimeter) and pull up on it abruptly to drive the dome top past the round snap fastener on the top of the backboard (causes an audible "click"). Set the dome aside until needed. Round snap fastener at top of interior backboard. Grasp dome and lift up.
10. □ **Inspect all top pedestal pieces.** Inspect the outer dome, the inner dome, and the backboard for damage. If the equipment was damaged in transit, immediately report the damage to your local salesperson or the transportation company.
11. □ **Remove plastic bag kit from backboard and verify contents.** Locate the clear, plastic bag that is typically attached to the pedestal's interior backboard and verify the following contents:

□ 6 cable ties	□ 1 bonding strap
□ 1 hose clamp	□ Document
□ 1 splice tray and tray label	
12. □ **Connect earth ground to the backboard. Always follow local codes and company practice when grounding cables/equipment.** Per company practice, connect a #6 earth ground wire to the ground lug on the bonding plate at the bottom of the backboard. Loosen the ground lug's screw, insert the ground wire into the hole at the lug bottom, hold the wire in place, then firmly tighten the screw. After earth ground is connected to the ground lug, the bond posts can be used to bond cables. *Note: In the midwest or areas of frost heave, be sure to leave a minimum of 7" of ground wire slack (in the base) when connecting the ground wire to the pedestal's ground lug; also, connect the ground wire after Step 14 or 28, so that the ground wire does not inhibit any feed cable slack procedure (cable needs to spiral around the base collar area to create feed cable slack).* Attach bond strap to posts. Bonding plate. Attach earth ground to ground lug.

Preparing the Feed or Branch Stub Cable

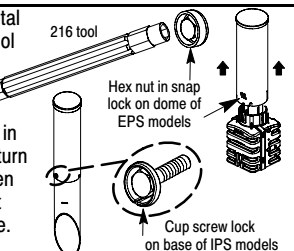
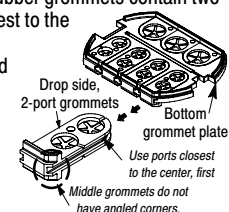
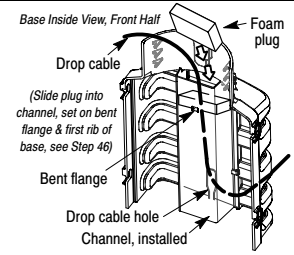
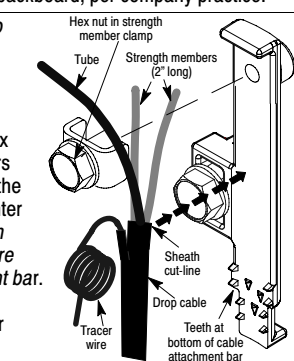
13. □ **Remove single-port feed grommet.** Grommets on the CO or feed cable side of the backboard have one port for one feed cable each (unlike the drop cable grommets which have two smaller ports). Pull or slide out one of the single-port feed-side grommets from the bottom grommet plate. Feed side, 1-port grommet. Backboard's bottom grommet plate. Drop side, 2-port grommets.

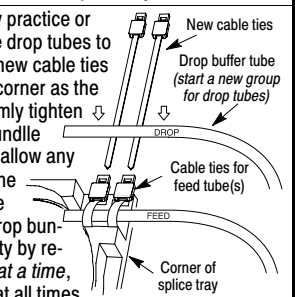
14. □ **Push cable through grommet.** Push the cable's stub-end through the thin center area of the grommet (at the center of the star shape). Slide the grommet down the cable, stopping near the grommet plate. Rotate and align the grommet with its slot on the plate, then re-insert the grommet in the plate. Pull up on the cable to reduce excess cable slack (see note below). *Note: In the Mid-west or areas where frost heave is a concern, leave at least 7" of feed cable slack under the grommet (in the base) when placing the grommet in the plate. Spiraling the cable within the base collar (12-18" of slack makes a good loop) will provide frost-heave cable slack. Consult local company procedures for proper frost heave slack length.* Feed Cable
15. □ **Mark cable for sheathing removal.** Approximately 8.5' of cable sheathing must be removed from the 10' cable stub to expose the fiber to be spliced, but enough cable length with sheathing must remain to attach the cable to the backboard. Locate the cable attachment bar that is directly above the selected grommet, pull the cable up until it is almost taut (see note below), hold the cable against the bar, and mark a cut-line on the cable 2" above the grommet). *Note: In areas of frost heave, per company practice, be sure to leave the proper cable slack in the base under the grommet.* Make mark here. Rear or Feed Side. Hex nut on strength member clamp. Note the teeth on the bar. Cable attachment bar. Grommet. Feed stub.
16. □ **Slide grommet off plate, for sheathing removal (optional).** If desired, pull the grommet (with the marked cable) off the grommet plate to create room to work and to facilitate the sheathing removal and bond clamp installation procedures.
17. □ **Remove cable sheathing.** Always use the tools and methods per company practice to remove the outer cable sheath from the mark to the cable end. If none exist, score the perimeter of the cable sheathing or make a ring cut (do not go too deep) at the marked location, then find the rip cord(s) at the stub-end and pull it/them to split the cable sheathing up to the cable's score mark. Peel apart the sheathing to the cut line, snap it off, and discard the removed sheathing.
18. □ **Cut strength members to length.** Per company practice, locate the strength members and cut them off the cable at a point approximately 2" longer than the cable sheathing cut (so only 2" remains). Strength members. Central tube (approx. 8.5 feet long). Sheath cut on cable. Cable armor not shown, for visual clarity.
19. □ **Score and peel back 2' of cable armor.** If the cable contains protective metallic shielding or armor, per company practice, peel back approximately 2 feet of it from the cable sheath cut, to expose the fiber buffer tube under it. First, measure down 1" past the sheath cut line, score around the perimeter of the armor at the measured mark, and carefully peel back about 2' of the armor. After the buffer tube is cut (next step), the armor can be carefully and completely pulled off with the tube. **See the corrugated metal or armor warning in Part 2.**
20. □ **Mark and score central tube.** Make a mark on the exposed central tube 8-9" past the point of the cable sheath cut (or 11" up from the grommet plate). Using local company procedures and tools, and being careful to avoid the ribbon fiber inside the tube, score the perimeter of the tube at the mark.
21. □ **Prepare ribbon cleaning materials.** Assemble and prepare the fiber ribbon cleaning materials that will be used simultaneously while performing the next step.
22. □ **Jointly remove tube and armor, and clean fibers.** Remove the surplus cut length of cable armor and central tube, and clean the exposed fibers, all per company practice, or as stated herein. Carefully pull the tube and the cable armor (as a single unit) away from the cut and toward the cable stub-end, for a length of approximately 6", to expose a short length of ribbon fiber. With one hand, gently wrap a fiber cleaning pad around the fiber at the exposed 6" length, and with the other hand, grasp the cable armor (with the buffer tube inside it). Slowly pull the armor and buffer tube off the fiber, and simultaneously but gently clean the fiber with the cleaning pad. DO NOT PULL ON THE FIBER. When the tube and armor are removed, clean the entire length of exposed fiber, per company practice.
23. □ **Attach bond clamp to cable.** Bond feed cables to the pedestal bonding plate. Per company practice, attach an AT&T-approved cable bond clamp to the cable shield at the sheath cut. Always follow clamp manufacturer instructions or company practice to attach cable bond clamps, as procedures and clamps used to bond cables may vary per location, application, and cable type and size. If taping the cable-clamp junction, leave enough strength member length for termination (see Step 27).
24. □ **Attach one end of a bond strap to the cable bond clamp.** (Skip this step if the provided bond strap is not used.) Attach one end of the provided bond strap to the cable bond clamp just installed in Step 23 above.
25. □ **Attach backboard.** If still removed, re-attach the backboard (see Step 8).
26. □ **Re-insert rubber grommet into plate.** Re-insert the grommet into its slot in the grommet plate (see the note in Step 14 for areas where frost-heave is a concern). Be sure the grommet is fully seated in the slot, to augment the weather-tight seal. To perform the next step, slide the cable up or down the grommet, as needed.

27. **Terminate strength members.** Terminate the strength members per company practice, or as stated herein. First loosen the hex nut in the strength member clamp (see Step 28). Next, slide the strength members under the clamp until they stop at the top flange of the attachment bar. Verify the cable sheath cut-line is high enough on the bar to allow a hose clamp to secure the cable sheath to the bar's lower tooth area. Hold the cable in this position and firmly tighten the strength member clamp.
28. **Secure cable to backboard's cable attachment bar.** Secure the cable to the cable attachment bar by opening and firmly affixing the provided hose clamp around the cable and the cable attachment bar at the bottom "tooth" area of the bar (see the teeth in Step 15). Verify the cable sheath cut line is approximately halfway up the bar (or 2" above the installed grommet). Adjust strength member length if needed.
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29. **Connect earth ground to ground lug.** If earth ground connection was delayed (for frost heave areas), connect the earth ground wire now (see Step 12 for details).
30. **Bond cable to bonding bar.** Regardless of the type of bond strap used, finish bonding the cable by attaching the free end of the bond strap to a bond post on the bonding plate (see plate in Step 12). Flex and route the strap as necessary to fit, then firmly secure it to a bond post.
31. **Route fiber to pedestal front.** Route the ribbon fiber and the short central tube up through the bottom opening of the fiber basket, to the front side of the backboard.
32. **Overlap transportation tube onto central tube.** Locate the 3' length of transportation tube shipped with the pedestal and route the ribbon fiber all the way through the tube until the end of the transportation tube meets the central tube in the fiber basket. Slide the transportation tube over the central tube until the tubes overlap about 1". Tie the tubes to the basket wall with several cable ties, to secure this tube junction. Put one tie just above the 1" tube overlap junction, and one just below it.
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33. **Prepare a splice tray for tube attachment.** Prepare a splice tray (provided) by removing the cover and starting two cable ties at a top tray corner, using the innermost tie-down slots.
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34. Put any x-shaped fiber guides onto the tray at this time, per company practice.
35. **Attach other end of transportation tube to tray.** Place the other end of the transportation tube against the splice tray, overlap it onto the tray corner 3/4" (see Step 36), then secure the tube to the tray with the two positioned cable ties. Verify no more than 1/4" of the tube extends into the tray past the inner cable tie.
36. **Store fibers in splice tray, label tray, attach cover.** Per company practice, wrap and store the fiber in the tray for later use. Locate and fill out the tray label, attach the label to the cover, and attach the cover to the tray.
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37. **Label the tube.** Label the tube near the tray and sheath cut, per company practice.
38. **Determine next step.** If drop cables will be installed later, do Steps 66-71 to perform tube management, to secure the splice tray, to perform pedestal housekeeping, and to close the pedestal. Go to Step 39 if drop cables are to be installed now.

Installing Fiber Drop Cables

39. **Dig trench from premises to pedestal.** Per company practice, prepare a trench to run the drop cable from the customer premises to the pedestal. Clear the soil from the bottom front of the base, where the cable enters at the drop cable access hole.
40. **Route the drop cable through trench.** Starting from the customer premises/NID box, route the drop cable through the trench to the pedestal base.

41. **Open pedestal (remove domes).** If the pedestal is closed, remove the outer dome with a 216 tool or can wrench. For EPS models, turn the snap lock's hex nut 1/4-turn counterclockwise, hold it in that position, then lift up on the dome. For IPS models, a hex nut-in-cup screw in the base locks the pedestal. Using a 216 tool, turn the cup screw counterclockwise until loose, then turn the dome counterclockwise slightly and lift up. Do not remove the cup screw from the base. Remove the inner dome by performing Step 9.
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42. **Route the cable through the base drop channel.** Per company practice, route the drop cable through the drop cable access hole at the bottom front of the base (see Step 47) and carefully push it up through the drop channel (or conduit). At the top of the channel, guide the cable between the installed foam plug and the back wall of the channel. If the plug dislodges during cable routing, wait until all drop cables are routed into the base and re-install the plug, as described in Step 47.
43. **Cut the drop cable to length.** Per company practice, verify at least 10 feet of drop cable (11.5' in areas where frost heave is a concern) will extend up past the ground line indicator on the base, then, measure and cut the cable at the desired length.
44. **Route cable through grommet.** The front/drop side rubber grommets contain two holes or ports each. Use the innermost ports first (closest to the pedestal center) for best hand mobility and drop cable management. Per company practice, push the stub-end of the drop cable through the bottom center of the selected grommet port. After piercing the grommet, pull the cable all the way up through the grommet. Note that in the Mid-west or areas where frost heave is a concern, loop or spiral about 12-18" [7" minimum] of cable slack back down into the base, under the grommet.
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45. **Route all drops to pedestal.** Repeat Steps 39 through 44 above for all drops ready to be routed or placed in service at this time.
46. **Install or inspect foam plug.** If the channel's foam plug dislodged during any drop cable entrance (see Step 42), re-install it by placing it in front of the cables (cables at the back of the channel), angling the plug's front edge down toward the first rib of the base front, and sliding it down until it rests on top of the first rib. Press down on the plug's back edge until it rests on the bent flange at the rear of the channel.
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47. **Backfill the trench and replace the sod.** For cleaner and easier working conditions, after all drop cables are in the pedestal (to their final length), backfill the pedestal hole and trenches. Tamp the backfilled soil and replace any removed sod at the pedestal, per company practice. Continue with cable preparation work below.
48. **Mark drop cable for sheathing removal.** Locate the cable attachment bar directly above the drop cable's grommet, hold the drop cable in it's proposed final position up against the bar (in frost heave areas, maintain the slack loop in the base), and mark the cable at a point about 2" above the grommet plate (or midway up the bar).
49. **Separate tracer wire.** If a tracer wire is attached to the drop cable, per company practice, use needle-nose pliers or the tool of choice to separate it and pull it down the cable to the marked location. Trim off all but 4 inches for later use. Optionally coil and point the 4" wire toward the pedestal center, away from the working area.
50. **Remove drop cable sheathing and open the cable.** Cut and remove the drop cable sheathing from the end of the cable to the cut mark, per company practice. If none exist, score the cable sheathing at the cut mark, slice off a piece of sheathing at the cable end to find the rip-cord, pull the cord down to the mark, and peel off or remove the sheathing. Trim any KEVLAR® and the rip-cord at the sheath cut-line. If the cable contains strength members, trim them per company practice or Step 52.
51. **Trim strength members.** If the cable contains strength members, trim them now but retain enough length to attach them to the backboard, per company practice.
52. **Secure strength members.** (Perform this step in conjunction with Step 53 to secure the cable at the correct vertical height on the bar.) Per company practice, terminate any strength members in the strength member clamp at the top of the cable attachment bar. Loosen the hex screw on the clamp, slide the strength members under the clamp, raise or lower the cable until the sheath cut mark is aligned with the vertical center of the cable attachment bar, and if needed, trim the strength members at the precise point where they abut the top flange of the cable attachment bar. While holding the strength members under the clamp, firmly tighten the clamp. Do not pinch or secure the fiber tube under or in the clamp.
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53. **Secure cable to attachment bar.** Verify the cable sheath cut-line is half-way up the cable attachment bar (above the "teeth"), then wrap a cable tie around the cable and the bar at the bar bottom where the teeth are located. The teeth help hold the cable in place. Double the tie over the cable, crisscross it (in a "Figure 8"), and tighten the tie in this position, securing the cable to the bar.
54. **Label drop tube.** To facilitate future cable identification during splicing, troubleshooting, or rework, label the drop tube per company practice. Charles recommends labelling the tube near the attachment bar and near the splice tray.
55. **Repeat for all drops.** Repeat Steps 48 through 54 above for all available drops.
56. **Free and prepare the splice tray.** Release the splice tray from the VELCRO® strap(s) holding it. Lift it off the bend-radius control. Prepare the tray for drop tube group attachment by inserting two plastic cable ties down through the middle cable tie-down slots, at the same tray corner where the feed tube is tied (see Step 63).
57. **Bundle the drop tubes.** After all drop tubes are secured to their attachment bars, gather the tubes together as a bundle for joint tube routing and tray attachment purposes. Gather all tubes just above their attachment bars, and tie them together (as a bundle) with a cable tie at the same inside wall of the fiber basket that secures the feed tube. If the pedestal serves more than 6 drops, and company practice allows only 6 drops per splice tray, create and use a second drop tube bundle and tray.
58. **Extend bundle, and join drop bundle and feed tube.** Without kinking any tubes, route the drop bundle alongside the feed tube and affix cable ties around all tubes (drop tube bundle and feed tube) at regular intervals, per company practice.
59. **Mark the drop tube cut-line.** Continue extending the drop tube bundle toward the splice tray, allowing the drop tube bundle to overlap the same tray corner where the feed tube is tied. Mark a cut-line on each drop tube where it overlaps the tray 3/4", so it will be cut to the same length as the feed tube.
60. **Cut drop tubes, to expose fibers.** Per company practice and without cutting or damaging the fibers inside, cut each drop tube at the mark, and gently remove the surplus tube length. The drop tubes should now be the same length as the feed tube, and at least 32" of exposed fiber should be free to be placed in the splice tray.
61. **Clean fibers.** Per company practice, clean the exposed fibers.
62. **Remove tray cover.** If not already removed, remove the splice tray cover.
63. **Tie drop tube bundle to the tray.** Per company practice or splice tray manufacturer instructions, secure the drop tubes to the splice tray. Charles recommends using two new cable ties to attach the drop tube bundle to the same tray corner as the attached feed tube, as described in Step 56. Firmly tighten each prepared cable tie around the drop tube bundle and the tie-down slots at the tray corner. Do not allow any tube to extend more than 3/4" into the tray from the outside tray edge. If another drop is added in the future, secure it at the same tray corner to the drop bundle, but maintain the drop bundle integrity or unity by replacing the existing bundle's two cable ties one at a time, so at least one tie affixes the bundle to the tray at all times. Always keep the feed tube tied to the tray separately, with its own ties.
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64. **Determine next step.** If splicing will be performed at this time, go to Step 72. If splicing is not performed now, continue with Step 65.

Closing the Pedestal

65. **Store fiber in splice tray, complete label, and attach cover.** If splicing will not be performed, wrap the drop fibers in the splice tray (like Step 36), per company practice. Fill out the label on the cover, and carefully attach the cover to the tray.
66. **Perform tube management and secure tray.** Carefully wrap (in a counterclockwise direction) and loop the feed/drop tube bundle into the surplus fiber basket, allowing the tray and tubes to freely rotate as needed to avoid any bending or kinking of the tubes (which can cause fiber damage). Never force tubes into place. The final tube bundle loop should hang over the top bend-radius control. Secure the hanging tray in place with the VELCRO® straps provided. Verify the label is not upside-down.
67. **Perform pedestal housekeeping, and install inner dome.** Verify all tubing is neat and not kinked, and that no cables, ties, clamps, or tubes protrude beyond the backboard walls. Press all grommets into place. Lift then slide the inner dome down over the backboard, guide it past the splice tray tab to the grommet plate. Align the dome's top hole with the backboard's top snap and push down on the dome until the snap goes through the dome hole with a clicking sound.
68. **Check foam plug.** If used, verify the foam plug is properly installed in the drop channel (see Step 46).
69. **Close the pedestal.** Locate the outer dome and orient it so the snap lock faces the front (base front has the Charles logo). Slide the dome down over the backboard, align the dome's snap lock with the base's latch catch mechanism, and allow the self-locking dome to drop down in place. An audible "click" indicates the dome is locked.
70. **Label outer dome.** Place all ID/warning labels on the dome, per company practice.
71. **Clean up work site.** Clean up the work area, properly dispose of all debris, and locate and put away all tools and work materials, all per company practice.

Re-entering the Pedestal and Splicing Fibers

72. **Obtain tools.** Prepare the area for splicing, assemble and prepare any equipment and tools needed to splice fibers. Review all the cautions and warnings in Part 1.
73. **Open pedestal and access the backboard.** If the pedestal is locked and secured, open the pedestal per Steps 41 and 9.
74. **Remove the splice tray from the backboard.** Loosen the VELCRO® straps that secure the splice tray, and carefully unwind the tray and the bundled tubes attached to it, allowing the tray to freely rotate. Detach the clear plastic cover from the tray.
75. **Perform splicing.** Unwrap the working fibers to be spliced, perform all fiber splicing at this time, and when complete, route/place the spliced fibers back into the splice tray, all per local/company practice and product manufacturer's instructions.
76. **Label and identify splices/tray.** Per company practice, label/identify the splices.
77. **Cover splice tray.** Re-attach the cover to the splice tray.
78. **Secure tray.** See Step 66 to re-secure the splice tray to the backboard.
79. **Close the pedestal.** Perform Steps 67 through 71 to carefully close up the pedestal.

Table 1. Branch or Stub-End Configuration Installation

Model #	CFDP2™ Description	
CFDP206-EPS/ATT	CFDP2™ Pedlock® OSP Pedestal, with a 6" diameter, locking, exterior dome and weather-tight interior dome, a square, 2-piece, Expanded-capacity split base, a removable backboard for fiber cable routing, storage, and splicing (tray capacity = 4 trays/96 splices), 3 single-port 1" diameter feed grommets and 4 double-port 0.625" diameter drop grommets for 8 drops, a splice tray, a ground/bond plate. Includes all equipment shown to the right.	
CFDP206-EPS/ATW	Same as above but also with a 36" metallic stake.	
CFDP206-IPS/ATT	Same as CFDP206-EPS/ATT but with a round, integral stake base (IPS) instead of square expanded base.	
CFDP208-EPS/ATT	Same as CFDP206-EPS/ATT but with 8" dome, 4 feed-side grommets (each a single, 1" diameter, cable port), and 6 drop-side grommets (each with two 0.625" diameter cable ports, for 12 drops).	
CFDP208-EPS/ATW	Same as CFDP208-EPS/ATT but also with a 36" metallic stake.	
CFDP208-IPS/ATT	Same as CFDP208-EPS/ATT but with round integral stake instead of square base.	
Optional Equipment for Use with CFDP2s		
80-002042-F	Replacement inner dome for 6" diameter pedestals	
80-002043-F	Replacement inner dome for 8" diameter pedestals	
97-001911-A	Grommets, feed-side type, one 1" port per grommet, 50-piece kit.	
97-001753-A	Grommets, drop side, middle type, two 0.625" ports per grommet, 50-piece kit	
97-001910-A	Grommets, drop side, end type, two 0.625" ports per grommet, 50-piece kit	
97-001913-A	Drop cable attachment bar, 25-piece kit	
97-PKOR06-A	Dome cap, high visibility, orange, 6"	
97-PKOR08-A	Dome cap, high visibility, orange, 8"	
Riser Pipes & U-Guards	<ul style="list-style-type: none"> Strong durable solution for protecting wires that are mounted to buildings and utility poles PVC construction: lightweight and easy to cut Various bends, lengths, offsets, and notches Available in 7/8" and 1.25" diameters 	
119 series (7/8" risers)		
122 series (7/8" U-guards)		
219 series (1.25" risers)		
222 series (1.25" U-guards)		

Various replacement parts are available. Contact Charles Industries for more information.

Table 2. Model Numbers and Ordering Information

Feature	Square/Expanded base models		Round/Integral Stake base models	
	6" dome	8" dome	6" dome	8" dome
Height, overall	42.75 in.	42.75 in.	59.5 in.	59.5 in.
Height, base only, incl. collar (stake only for IPS)	18 in.	18 in.	33.5 in.	33.5 in.
Height, outer dome only	28.5 in.	28.5 in.	28.5 in.	28.5 in.
Height, base or stake bottom to ground line	8.5 in.	8.5 in.	24 in.	24 in.
Height, dome top to ground line	34.25 in.	34.25 in.	35.5 in.	35.5 in.
Depth, base (front to back)	9.75 in.	10.8 in.	N/A	N/A
Width, base (side to side)	10.25 in.	11.75 in.	N/A	N/A
Diameter, EPS base collar or IPS stake base, O.D.	6.6 in.	8.1 in.	6.5 in.	8.13 in.
Diameter, EPS base collar, or IPS stake base, I.D.	6.2 in.	7.7 in.	6.1 in.	7.63 in.
Diameter, dome, O.D. (not the cap)	7.1 in.	8.6 in.	7.1 in.	8.6 in.
Diameter, dome, I.D.	6.7 in.	8.25 in.	6.7 in.	8.25 in.
Weight	18 lbs.	21.5 lbs.	15 lbs.	19.3 lbs.

NOTE: All dimensions and weights are approximate.

Table 3. Physical Specifications