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Know what's BELOW.
Call before you dig.

Call 811 before you dig!

Installation of vinyl fence

Vinyl fence is available in a variety of styles and heights. Today, color vinyl fence is available in a broad spectrum to please even the most discerning buyer.

Professional grade vinyl fence is designed to be installed with 'hollow' posts!

Post centers for each manufacturer are different, but they are all measured the same way. As you will see, having an accurate measurement is extremely important.

Since a quality PVC fence product is generally comprised of routed posts and section rails that extend beyond the picket 'field', measure the picket area and add the width of one post. This will give you the center to center measurement.

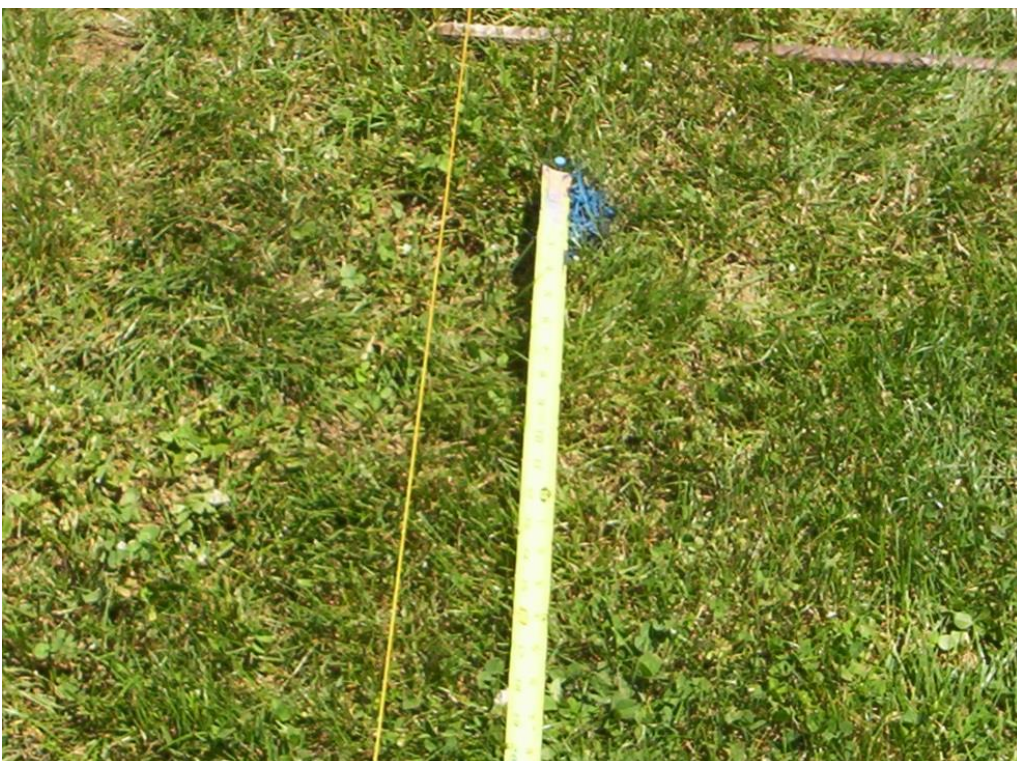


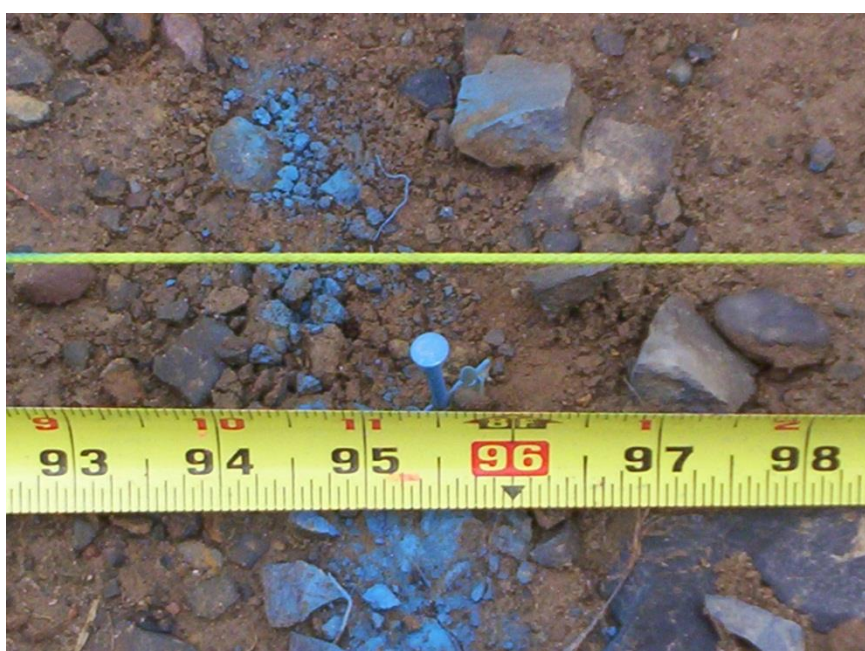
After a building permit is obtained if required, set up a string line in the desired location. All underground utilities should be located before any digging is done. A call to 811 is free and so is the mark out of buried hazards owned by the utility company.

The posts should be located where the entire footing will be on the property of the installed fence.

Rebar is a better stake than a 2x2 as it allows the string to be made very tight when the correct knot is used. Rebar should be placed a few feet beyond corners and ends to allow the holes to be dug and not interfere with the rebar stake. This is especially important if you will be digging with a machine of some sort.

If you plan on digging all your holes first to save money on equipment rental charges, use nails to mark the centers of the hole for accuracy.



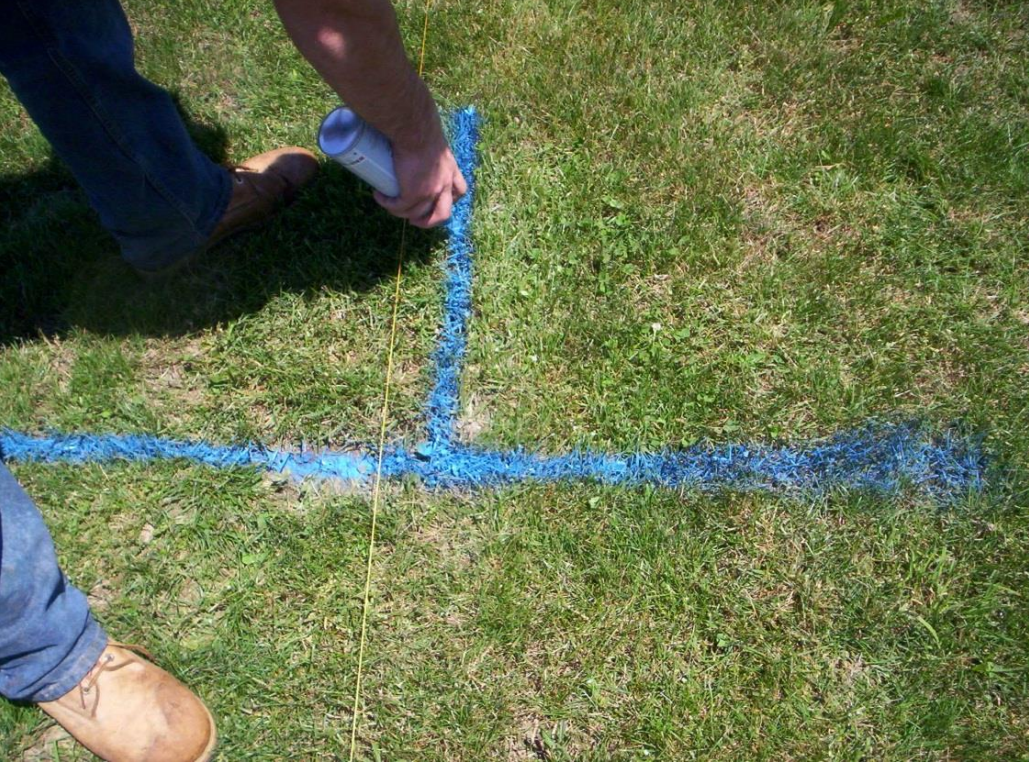


The fence being installed here has post centers of 95-1/2 inches. Press a nail into the ground and measure from there to the next 'center'. Measuring from nail to nail is the best assurance that we are marking accurately. 'Centers' that are off by as little as 1/2 an inch can lead to holes that are dug in the wrong spot and can be especially frustrating on a long 'run' of panels. Re-digging a hole is never any fun, even when a machine is used.

After all the holes are located with nails, go back to where the first post will be set and measure back from the center and place a nail through a piece of bright plastic or foil (so it is easy to find) two feet from where the SIDE OF THE POST will be. Since the posts are 5 inches square for the material being used here, measurement back from the center would be 26 -1/2 inches. This mark will be important later on.



Each hole should then be marked with a large 'X' approximately 2-1/2 inches off the string and as square to the line as possible. A small mark will be obliterated as soon as the auger bit is dropped as will be a good portion of the 'X'. Make the mark large enough that the outer portions won't be covered with dirt from the hole as the auger progresses. The portion of the 'X' that is left visible will help get the 'hole' back in the right spot if the bit hits a rock and causes it to 'wander'. Most mini skid steer machines do not have a true 'vertical lift' – their loader arms move on an arc. For this reason, it is a good idea to have another person watch where the bit is in relation to the ground mark and advise the operator of when to 'creep' (move) the machine to maintain as vertical a hole as possible.





ASTM F-1999 (Standard for PVC fence installation) recommends a hole that is 3 times in diameter the width of the post. Since this fence uses 5x5 posts, a 15 inch wide hole is required. If this seems excessive, bear in mind that solid privacy fence will have a heavy wind load. In areas prone to high winds a hurricane kit is suggested. The diameter of the hole should be kept in mind during the initial layout to prevent any part of the footing from being on the adjacent property. Local building codes should be researched for step back, height and permit requirements.



The string is removed and the holes are dug. It is important to have a machine that allows for side to side as well as front to back movement of the auger power head. This allows the bit to be manipulated around rocks. Remember, a large X helps to get the bit back in the correct spot when digging.



With a steady hand on the machine controls, the auger bit can be removed from the ground with the soil on it. Emptying dirt directly into a wheelbarrow will save cleanup effort later. Only cart away the amount that will be replaced by concrete.



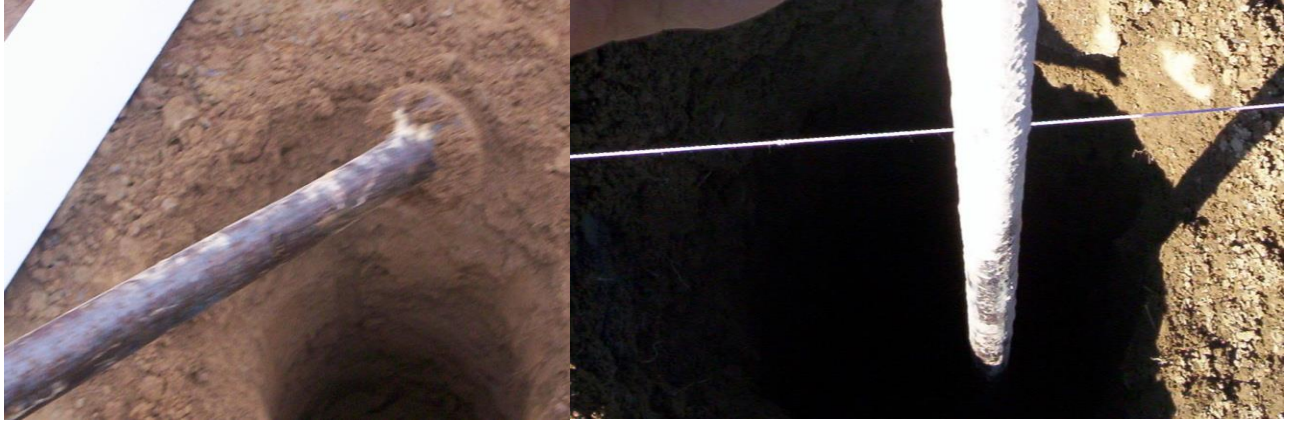
When all the holes have been dug, the string is reattached to the stakes and a check of the location of the hole in relation to it is done. The post will be set along the string so the center of the hole should be about 2-1/2 inches away on the side of the string that the fence will be set on. The objective is to have an equal amount of concrete on all sides of the post without sacrificing a straight line.



A stake should be placed between each hole to hold the line straight as the installation is done. Sometimes all it takes is a little brush up against the string to throw it off. If the string is tied as taut as possible and stakes are located between each hole, all it takes is a 'snap' of the line to get it back into position. As each section is installed the stake is removed.



Holes should be cleaned out to remove any loose soil at the bottom. For easier clean up, it is best to place all the soil on the same side of the fence.



The most important part of the hole is the bottom. Using the flat end of a digging bar, or a 4x4 the bottom of the hole is tamped to provide a firm base for the post footing. One of the worst things that can be done is to place dirt back in the hole.



As with the hole, ASTM F-1999 recommends that the post be prepared also. A small triangle out of one of the corners of the post about 12- 14 inches from the bottom can give the concrete a place to grab. We NEVER put dirt back into the hole! If the hole is dug too deep, drop a short piece of 4 inch drainage into the post BEFORE the rail ends are inserted and the concrete poured. Loose soil at the base of the footing WILL settle and with it the entire post. In areas where the ground freezes, it is suggested that the frost line be penetrated. Pouring concrete around the post leaves the bottom of the post open as opposed to filling the hole and 'floating' the post into it. An open post bottom allows for drainage which is a good idea. Condensate and rain water can accumulate inside the post and when it freezes it will expand and can push the post straight up and loosen it from the footing, another reason to properly prep the post. Four inch drainage pipe 'extends' the length of the post where deep holes are required. Drainage pipe is reasonably priced and readily available at the local hardware store or lumber yard.



The nail that was placed in the ground 26-1/2 inches past the center of the first post as a reference point is now important. When the first post is to be set, measure back from the nail with the brightly colored plastic 24 inches to the edge of the post and all the 'centers' should be in the right

location. Digging bars can be used to hold the post as the concrete is poured and post plumb can be adjusted with them. The first post may be left to give the chance for the concrete to set up, but the distance from the bottom of the bottom hole to the grade should be set at the height at which the rest of the panels will be installed. Doubled up 2x4's or other pieces of wood sized to the desired spacing can be used to hold the panel height. It is good practice to leave several inches between the bottom rail and the grade for weed whacking.



Rail ends come with notched tabs that will hold the rail in place after it is inserted into the post. If sections need to be cut there must be 1-1/2 inches of rail left beyond the 'field' (pickets) on each end to go into the post. Additionally, the tabs must be re-cut with a notch tool. Rail removal after installation can be difficult and most often requires the use of a special tool.



Top and bottom rails both have tabs, and most high quality vinyl fence products have a galvanized stiffener in the bottom rail to prevent sagging.



Rail ends are inserted into the hole on the post, the panel bottom is supported to the desired height above grade and the concrete is poured to just below the triangle that was cut in the post.



Plumb each post using the digging bar when necessary and maintain approximately 1/16 of an inch space from the string line. Move on to the next section and try to allow the concrete to set up a little which depends on weather conditions. If a slight adjustment to the height must be made, the post can be tapped down. It is preferable to set the post slightly higher and have to push down than to set it lower and have to pull it up. Of course placing the post and not having to touch it at all is the best. When the post is at the desired height, concrete can be added to cover the triangle cutout. Concrete should be left about 8 to 10 inches below grade to allow grass to root and in colder climates as a deterrent to heaving. Remember - the ground freezes from the grade down. Leaving the top of the footing below grade will keep the soil from pushing up on the concrete as it freezes and expands.





The process is repeated until the panel installation is complete. On the last panels of a straight run a piece of scrap PVC is used inside the post on the top rail positioned perpendicular to it and secured in place with a screw. Since the posts are hollow PVC some sway occurs in windy conditions. This is normal and securing the rail ends as described is done as a precaution. Caps fit snugly on posts and some installers only use glue in areas of high foot traffic where passersby are tempted to use them as a Frisbee. Whenever caps are glued, try select one corner to place a dab on and then use same corner of the cap at every post. This will facilitate access to the rail ends should the panel ever need to be removed.



A hand wash with car wash soap twice a year is suggested to keep the material free of environmental dirt and grime which can lead to mildew and premature degradation of the PVC.

[profencesupply](http://profencesupply.com) is a proud distributor of these quality fence products

Illusions Vinyl Fence, Grand Illusions Color Spectrum Color Vinyl Fence Products, Grand Illusions Vinyl Woodbond Woodgrain Vinyl Fence Products, Illusions Vinyl Railing System Eastern Ornamental Aluminum Fence Products, Eastern White Cedar Brand Wood Fence Products , System21 Chain Link Fence, Ameristar Montage Steel Fencing, OnGuard Fence Systems Aluminum Fence.



Illusions gates feature 'welded' corners and are considered the best in the business. At the time of delivery, please open gate packaging and inspect both sides of every corner for defects. Gates with defects or damage should be refused and will be replaced by manufacturer within a reasonable period of time. No claims for defects or damage to gates will be honored after delivery is complete.

DISCLAIMER OF LIABILITY

profencesupply makes no specific recommendations as to proper installation. The techniques described herein are those used by our installation technicians and may not be appropriate for all locations and ground conditions. profencesupply assumes no liability regarding the improper installation, misuse, or misapplication of any fence product purchased from us. It is the buyer and/or installer's responsibility to check for proper installation.

The very simple knot.....

To tie a string (masonry line) as tight as a piano wire it is important to use sections of concrete reinforcement rod because of the texture. This can be purchased at a fairly reasonable price from local masonry supply or lumber yards and cut into 18-24 inch lengths. Some steel suppliers have short pieces they'll let go cheaply. The rebar should be driven into the ground sufficiently to be able to handle the tension of the string.



You can tie one end of the masonry line to the first pin but it is best to use the same knot at both ends. This will make it easier to tighten without having to walk the length of the string to do it. Keep the string taut as you walk to the second pin (rebar stake) make one turn around the rebar with it as shown below.



In the photo below, the installer's left hand is holding the string tight as he uses his right to remove slack.



In the photo below, the installer brings the loose end of the string all the way around the rebar as tension is kept on the section between stakes.



Below, once the string is around the rebar the installer uses his left hand to hold the string away from the stake as the string is pulled as tight as possible taking the slack away from the pin with his right hand.



When the desired tension is achieved, the taut end of the string (in the installer's left hand in photo above) is crossed over the loose end of the masonry line (in the installer's right hand in photo above) and released. This forms an 'X' which sandwiches the loose part of the line between the taut part and the rebar and binds it in place. The rebar should be capped with safety caps to prevent injury as in the bottom picture.

