



26' GROWING DOME USING CONCRETE PIERS

When the dome is to be set on concrete piers, several extra steps are needed beyond the basic layout, which should already be completed, first of which you have verified there are no underground utilities in the area where you will be digging. You may use piers above or at grade and will use the foundation wall that comes with the kit. This option will likely be regulated by local building codes. It is best to consult your local building department concerning any decisions regarding concrete piers. These instructions are only meant to give an overview of the process and are not meant to be all-inclusive.

USING CONCRETE PIERS AS A FOUNDATION WITH THE FOUNDATION WALL

1. Following the “Layout for Concrete Pier” Diagram 2b-D1 and the “Laying Out Your Dome” Written Instructions 2b-W1, you should have already staked the center of each pier at the correct distance from center stake and from the center of the neighboring piers (ring of inner stakes).
2. To aid in the placement of the foundation wall on the piers, you will want to place a second stake (ring of outer stakes) 4' outside the circle of inner stakes, or at a distance that will not be disturbed by machinery. Using a washer that will fit over the center stake, attach a piece of linen non-stretching twine, wire, or a measuring tape, the length of the radius plus 4'. Stretch the twine, wire, or tape from the center stake and in a straight line through the inner stakes marking the pier center and place a second stake at the additional distance. These outer stakes will be used to reference the foundation wall radius, to ensure the dome wall corners are all in the correct place relative to the pier center.
3. Once you have all the stakes (inner and outer stakes) in place, and have verified accuracy, it is helpful to spray paint the intersections of the radius and the strut wires (locations of these inner stakes) before you start digging out the holes. This will make it easier to verify the hole position once the stakes are removed for digging. Spray paint lines between each of these inner stakes (along the strut wire lines). And then use the radius wire as a guide to spray paint a line at the intersection of the radius wire and the strut wire line at least two to three feet on either side of the inner stake (towards the center stake and towards the outer stake).
4. Consider adding or planning for utilities at this point in the process. Make sure current utilities are marked before augering holes for the piers.
5. Verify accuracy of inner circle stakes one last time. Remove the inner stakes and auger the holes for the piers to the recommended depth. Place the concrete pier form (12" Sono tube) in place and check the radius is correct. Check that the string line pulled from the center stake to the outer stake bisects the tube exactly. Check that the pier form is plumb in the hole. When moving on to the corresponding tubes, check the radius and the wall section lengths. If you already have your kit, laying out the bottom plates can be useful to aid in the placement of the concrete pier forms. Note that the 26' domes have 2 different lengths of wall sections.
6. Utilize a transit to get the tops of all the concrete pier forms at the same elevation before pouring the concrete. Follow local building codes, engineered drawings, and contractor recommendations for rebar enforcement of the concrete piers. Some building departments may require an inspection of the piers prior to pouring concrete.
7. We recommend using expanding anchor bolts to secure the dome instead of placing J-bolts in the wet cement. While either option will work, the expanding anchor bolts make building and placing the foundation wall easier and allow for some error if the corners of the wall do not meet exactly in the center of the pier.
8. Backfill between the piers with 3/4" washed gravel to aid in moisture drainage and extend the life of the bottom plates. We have had customers install perimeter skirt insulation and/or hardware cloth below grade in between the piers before backfilling to help with temperature and/or rodent control.