

# DIRECT BURIAL

## Spun Concrete Poles



Spun concrete poles are generally direct buried eliminating the need for expensive anchor base footings. However, if required, base plate mounted poles can be supplied for most pole types. Under normal conditions, a concrete pole can be set "directly" into an augured hole, backfilling with the earth augured from the hole, tamping every 4" (10 cm). In situations where poles have large loadings, heavy imbalanced loads, or where soil bearing strengths are in question, an engineered base design may be required. In almost all cases the bases are less expensive than base plate mounted bases.

With the exception of extreme cases, all that may be required is a slight increase in bearing surface below grade. This can be achieved in a number of ways. The easiest is by simply setting the pole deeper, or by auguring a larger hole and backfilling with concrete or limestone screenings which are almost equal to concrete backfill when tamped damp in 4" layers and will allow easy removal if damage occurs to the pole.

**Remember when in doubt call in an expert!**

### Results of StressCrete's Direct Embedded Spun Concrete Poles

#### Time Savings

Installation takes time and time means money. Direct embedded poles can be installed in as little as one-half hour from start to finish, freeing the time of manpower and equipment.

#### Monetary Savings

It stands to reason that you can buy an extra few feet of pole for less money than it would take to design and build an anchor base. In some cases the cost of the anchor base alone is equal to the total cost of a direct embedded concrete pole.

#### Visually Appealing

Direct embedment of concrete poles means no unsightly base plates to hide or nuts to cover. Pour concrete, lay asphalt or sod grass around the base of the pole. Our solutions provide a simple, neat and cost effective appearance.

### Five Easy Steps to Follow to Ensure Proper Installation:

- 1) Use the fish wire provided to pre-wire the pole then install arms, luminaires etc., while pole is readily accessible.
- 2) Auger the setting hole - minimum auger size should be 8 to 10" greater in diameter than pole butt.
- 3) From the list of soil types on the next page, select backfill.
- 4) To install, choke the pole with a nylon sling 20% to 25% of pole length from top, attach the sling to hook and lift allowing butt to rest on ground until vertical. Now lift pole and position over augured hole and lower until butt rests on bottom center of hole.
- 5) While continuing to hold pole, add backfill, tamping every 4", check for plumbness using a plumb bob or instrument after which below grade wiring connection can be made. Remove sling and move to next pole while filling and tamping is continued to a point 2" above grade.



# BURIAL DETAILS

## Spun Concrete Poles



### Recommended Backfill for Typical Soil

#### Good Soil

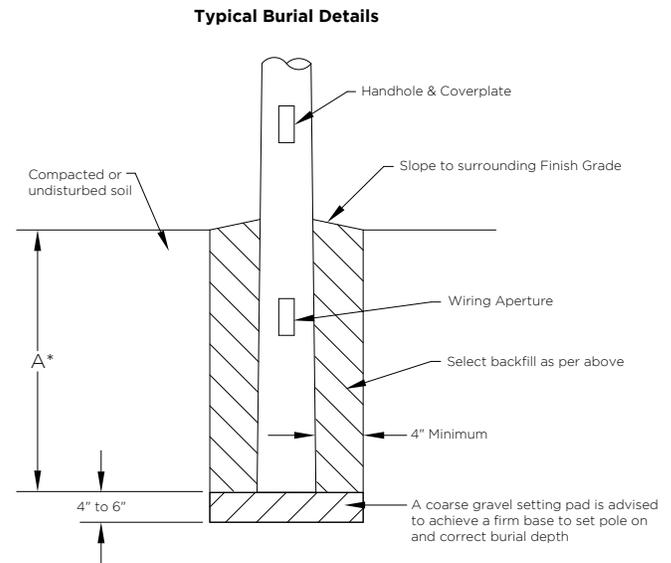
Compact well graded sand and gravel, hard clay or well graded fine and coarse sand (no standing water). Use as is for backfill.

#### Medium Soil

Compact fine sand and clay, compact sandy loam, loose coarse sand and gravel (no standing water). Requires select backfill clean washed sand or 1/2" minus well graded gravel.

#### Poor Soil

Soft clay, clay loam, poorly compacted sand or clays containing large amounts of silts (standing water during wet season). Use cementitious earth backfill - concrete - lime-stone screenings or urethane foam.



\* Dimension A - The burial depth rule of thumb is 10% of pole length plus an additional 2 feet. With large imbalanced loads or questionable soil strengths, a deeper burial or wider footing may be necessary.

### Direct Embedment of Sports Lighting Poles

Spun concrete poles are an obvious cost effective solution in street lighting applications however this advantage should not be overlooked in areas such as sports, industrial and hi-mast lighting. In many cases the direct embedment procedure described above can be followed here also, resulting in substantial time and money savings. A good rule of thumb is "bury 10% of overall length plus two feet, backfill and tamp".

A word of caution should be given for installations where soil strengths are questionable/high strength poles are being used. In these cases an engineer should check if the soil has adequate bearing strength to withstand the overturning moment of the pole.

A soil report and engineer's stamp are mandatory before the construction of any two storey building can be commenced. It is important to provide the same information on a lighting project of the same or greater value, and up to five times the height.

The type of pole being used does not affect the size of the footing. Generally, a proper footing is one which, when given the soil strengths, will resist the overturning moment at grade. Whether concrete or another type of pole is used, if they have identical overturning moments and are in similar soils, the size of the base would be the same.

The advantage of concrete poles is that, unlike most other types, they can be direct buried into the ground without fear of rust or rot. In most cases this direct embedded portion is large enough to provide an adequate footing. If this should not be the case special footings must be used.