

Direct Embedded

Easy. Clean. Cost Effective.

In all soil conditions, direct embedded lighting poles and lamp posts can save customers hundreds of dollars in installation costs. The need for heavy equipment, labor and materials is greatly reduced. In addition to saving you money, direct embedded poles are cleaner in appearance.

Direct-Embedded - A 10 Step Installation Process

The following 10-step installation procedure is a composite, based on the experience of many Whatley customers over the past 30 years. The best and most cost-effective sequence for these steps will vary, depending on personnel, equipment, and locale. Feel free to adapt this sequence based on your own experience.

Note: Check electrical codes for specific installation requirements and evaluate soil conditions to determine proper backfill procedures.

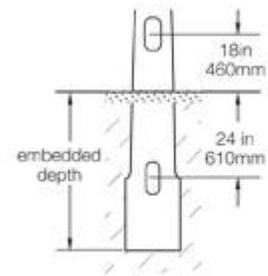
1 - Evaluate soil conditions to determine appropriate backfill material.

The following suggestions should be used as guidelines to determine soil type.

- **Good Soil Conditions.** Generally characterized by well-drained, non expansive soils of the silt, compacted sand, or selected clay types. These soils will result in a smooth side wall in a dug hole, and the excavated material will be of an even consistency. A minimum hole diameter that will allow a compaction tool to reach the bottom of the hole is all that will be required in good soil. Native soil, if it is of the proper moisture content, may be used for compacted backfill.
- **Average Soil Conditions.** Characterized by less well drained soils of the heavy silt, expansive clay and/or moderately organic types, with the possibility of standing water during wet season. Natural bearing capacity will be adequate to support the lateral loads of the pole base. These soils



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will result in a smooth side wall in dug hole except during wet periods. The excavated material usually is not acceptable for backfilling. Backfill material should be uncontaminated 3/4" minus crushed rock.

- **Poor Soil Conditions.** Characterized by inundated sites, highly organic soil, loose rock or gravel, or any other soil type or site condition that precludes the creation of a sound structural base and therefore requires special consideration. It is suggested that a soil expert with knowledge of local conditions be consulted to determine proper compaction soil mix.
- **Solid Rock Conditions.** Backfill should be uncontaminated 3/4" minus crushed rock or cemented sand. It is probable that a drilled hole in solid rock will not drain, therefore any backfill material should survive inundation.

2 Trench between locations and lay conduit

RECOMMENDED BURIAL DEPTH *

- 6-9 ft. Above Grade Shaft Length / 2 ft. Hole Depth
- 10-13 ft. / 3 ft.
- 14-24 ft. / 4 ft.
- 25-35 ft. / 5 ft.

** Direct burial installation depths are based on standard industry guidelines as outlined in ANSI C136.20 specifications. These are only recommended burial depths and may not be applicable in some markets.*

3 - Prepare holes using hand or power augur.

For best stability and compaction of poles, holes should be round and have smooth vertical sides with undisturbed soil. For hole diameter: Make each hole at least twice the width of the diagonal measurement of the square anti-rotational base, or approximately three times the ground line diameter of the pole as listed in the Whatley specification manual.

4 - Assemble the fixture.

Usually, you can assemble the fixture and attach to the pole prior to installation. While the pole is lying on the ground, truck bed or sawhorse, use standard installation procedures for wiring and mounting luminaires.

5 - Pull wire from conduit.

Pull wires from conduit and feed through wire entry. Fish wires through hand hole opening and temporarily secure to pole.

6 - Feed conduit.

Utilizing cable, flexible conduit, or a 90 degree elbow, feed the wire into the standard 2" x 5" slotted wire entry hole. You may elect to use an optional underground utility "J" box for conduit entry and make-up.

7 - Install the pole.

While feeding the wire, the pole is placed into the ground. In many cases, composite poles can be manually lifted and placed into the hole, or installed from the bed of a pickup truck.

8 - Level the pole.

Plumb and align the pole. Composite poles can easily be installed straight by using the plumb-bob method. Simply plumb the center of the pole using a string and weight from three sides during the compaction process.

9 - Backfill the hole.

Pour backfill material and tamp every 6" with recommended or specified backfill material for local soil conditions. Tamp frequently and firmly. Selection of appropriate backfill materials and proper compaction are the two most important elements for ensuring a successful installation.

10 - Complete the wiring.

Complete the splice from the fixture to the below-grade wire and insert into the

handhole access. Re-secure handhole cover to the pole.