



# How Fiberglass Conduit Promotes Project Success in Below-ground Applications

Fiberglass conduit excels in many applications across a variety of industries. And whether the conduit is installed above ground or below, there are specific considerations to address for each. Learn how fiberglass conduit advances project success in below-ground applications through a comprehensive overview examining installation, project benefits and specific product recommendations.

## Below-ground Applications of Fiberglass Conduit

In below-ground applications, fiberglass conduit is used to protect cable when it is buried underground. The cable runs through the conduit duct which is then buried in the earth. Below-ground applications include power utilities, like transmission lines. Similarly, telecommunications lines are often buried as are the cables running power and information to data centers. Many commercial and industrial markets require buried conduit, as well. Often, buried cable is installed below streets and roads because it contributes less disruption to roadway infrastructure.

## Types of Below-ground Installations

When cable is installed below ground, there are two types of installations – direct buried (DB) and encased buried (EB). Direct buried conduit is just as it sounds. It is conduit that is placed directly in a trench in the ground to protect cables and wires.

Encased-buried conduit is buried as well, but encased in cement or other materials for additional protection within the trench. Often, encased-buried conduit will come together in an underground cement vault or reinforced duct bank that allows for a “stack” of conduit.

## How Fiberglass Conduit Contributes to Below-ground Project Success

There are special considerations with buried conduit that need to be evaluated like strength of conduit, temperature range and corrosion resistance. Here are the ways Champion Fiberglass conduit solves for these concerns:

- Fiberglass conduit protects cabling and infrastructure with the broadest range of corrosion resistance compared to other underground ducting products. The conduit is resistant to many chemicals.
- To safeguard against extreme weather conditions, temperature range of fiberglass conduit is a broad -60° to 250°F.
- Excellent shape retention prevents impact or compression of conduit encased in concrete.
- Fiberglass elbows are resistant to cable burn-through thereby speeding up the installation and eliminating damaged conduit.
- Rodent-proof fiberglass conduit provides protection from animals digging near trenches.
- Champion Fiberglass has the lowest NECA man/hour installation rates of any material type of conduit sized 1-1/4” and above.

## Conduit Recommendations in Below-ground Applications

Since conduit is buried in below-ground applications, the wall width varies based on the type of installation.

### Encased Burial (EB)

**Standard Wall excels in most installations encased in concrete (EB quality).** Fiberglass conduit holds up very well for concrete encasement. Use Standard Wall for 3/4" - 4" diameter and Medium Wall for 5" and 6".

### Direct Buried (DB)

**UL-listed fiberglass conduit safeguards in direct buried (or DB quality) applications.** Use Standard Wall for 3/4" - 4" diameter and Medium Wall for 5" and 6". For very deep trenches, special soil conditions or where a high rate of compacting can be expected, an even heavier wall should be selected.

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## CASE STUDY: FIBERGLASS CONDUIT PROMOTES PROJECT EFFICIENCIES

For one below-ground installation, Champion Fiberglass was able to save an Indiana utility \$3,000,000. The conduit's low coefficient of friction allowed them to relocate the concrete vaults from 250 feet apart to over 750 feet apart accounting for savings in the cost of additional vaults and cable pulling/connection labor.

[Learn more about this project.](#)

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# FIBERGLASS CONDUIT OFFERS HIGH PERFORMANCE IN BELOW-GROUND INSTALLATIONS

CHAMPION FIBERGLASS CONDUIT SAFEGUARDS INFRASTRUCTURE  
WITH STRENGTH AND DURABILITY

Proven project success in encased buried, direct buried and core boring applications for power and telecommunications utilities, data centers and industrial and commercial applications.

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