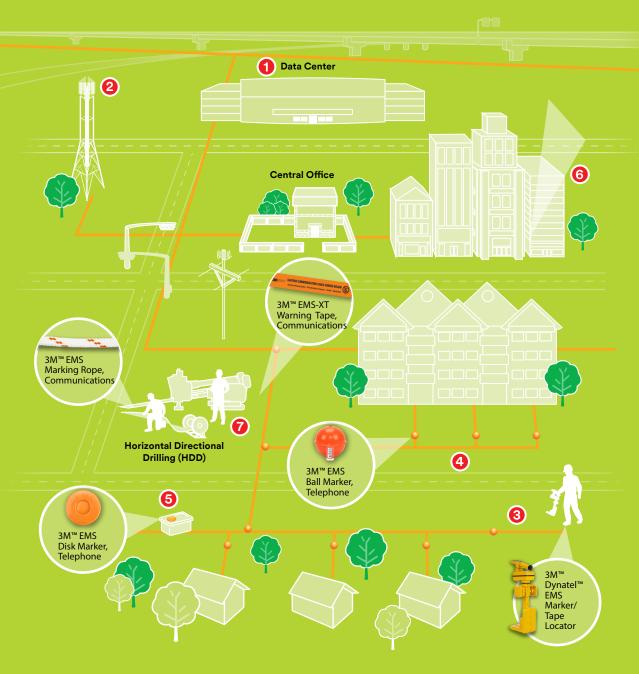


Locating and Marking Application Guide for Telecommunications Utilities



Data Centers

- Data centers host critical infrastructure for high value transactions globally.
- Markers and Path Markers are used to locate high value assets in order to help avoid possible damage.

Cell Tower

- Cell towers are used to provide cell service but requires high bandwidth fiber connections.
- Use path marking to help eliminate high voltage lightning path like
- tape for trenches or in-conduit rope.
- Use point markers to mark the first handhole.

Maintenance and Repair

- Higher risk point for future failures, where to look first when there's an issue
- Easily able to identify and map
- Ease of identification using a marker and precise positive location

EMS ID Markers for Buried Cable

- Provides information to installers and maintenance including: cable type, size and material
- Allows pinpoint locating of fiber and copper

Handhole

- Markers installed inside handholes are used to locate splices and terminations along cable runs.
- Environmental effects may cover handholes overtime and become difficult to locate. Markers can be found under vegetation, dirt, snow, etc.

Ball and Near Surface Markers

- Depth of cover confirmation, location of conduit, location accuracy for future road work
- Deep dive markings on each side of road to confirm utility location after bore, find buried or sawed-off conduits
- Identify facility in high congestion, high traffic area
- Identify facility in area of future construction

Path Marking

- 3M EMS Caution Tape and Rope
- For use in open trench and HDD (Horizontal Directional Drilling) applications
- A maintenance free solution for marking and locating the path of underground plastic pipes and casing.

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