

SUBSURFACE UTILITY ENGINEERING

SERVICES

- ◆ **Underground Utility Locating, Designating and Mapping:** Determines the existence and horizontal and vertical locations of utilities
- ◆ **Residential/Light Commercial Septic Field, Wells, and UST Detection and Mapping:** Techniques include terrain conductivity, magnetics, radio frequency, electromagnetics, and nondestructive excavation
- ◆ **Contamination Detection and Mapping:** Utility trenches provide preferential migration paths for contaminants, tremendous benefit to DOT's environmental division
- ◆ **Utility Condition Assessment:** Pipe-wall thickness measurements, VOC detection, structure-to-electrolyte measurements, sonic emissions and current flow measurements are all of value to utility owners



SUPPORT SERVICES

- ◆ Ecological Services
- ◆ Environmental Services
- ◆ Geographic Information Systems
- ◆ Geological/Hydrogeological Services
- ◆ Geotechnical Engineering
- ◆ Site Planning and Engineering
- ◆ Solid Waste Management
- ◆ Structural Engineering
- ◆ Surveying
- ◆ Telecommunications Engineering
- ◆ Transportation Engineering
- ◆ Utilities/Civil Engineering

Subsurface Utility Engineering (S.U.E.) is an engineering process for accurately locating and mapping underground utilities by utilizing new and existing technologies.

Using S.U.E. has many advantages. S.U.E. typically costs less than 1% of the total project cost. In fact, project savings may approach \$7, or more, for every \$1 spent for S.U.E. Additionally, it is estimated that the time required to design the project may be reduced by as much as 20% by using S.U.E. Most importantly, in industrial and commercial construction projects, a major source of delay and additional costs is due to encountering utilities and other objects in unexpected places during excavation. Locating or designating utilities and other subsurface objects prior to excavation can potentially avert the delays and cost overruns encountered from locating these same objects during excavation.

Members of Draper Aden Associates' staff have been performing S.U.E. since the early 1990s. Our staff has experience with Departments of Transportation, one-call systems, municipalities and numerous utility companies and consulting firms throughout the Eastern United States.



Draper Aden Associates

Engineering • Surveying • Environmental Services

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