

How Private Utility Locating Supports Damage Prevention



Presented By:
Joel Davis, P.E.



Joel Davis, P.E.

President & Owner of RHD Services Inc. since 2003

Appointed by Governor Sonny Purdue in 2005 to serve on the Georgia Utility Facility Protection Act Advisory Committee to the Georgia Public Service Commission.

Over 25 years of experience in the construction industry. This includes 10 years as owner of a contracting company and four years working for Arthur Andersen and Deloitte.

EDUCATION

Georgia Institute of Technology, BSCE

Georgia Institute of Technology, MSCE

PROFESSIONAL LICENSES/ACCREDITATION

Professional Engineer, Georgia #38018

National Utility Locating Contractors Association (NUCLA)

American Society of Civil Engineers (ASCE)

National Society of Professional Engineers (NSPE)

ACCERADATION/CERTIFICATION

Sensors & Software Ground Penetrating Radar (GPR) Training

Radiodetection Utility Locating Training

Volunteer for Locate Rodeo 2002-2015, www.locaterodeo.com

How Private Utility Locating Supports Damage Prevention

Today's Outline...

- **History of Damage Prevention in Georgia**
- **Private Utility Locating**
- **ASCE Standard 38-02, ASCE 38-22**
- **Questions & Answer**

Two women flee blast from natural gas explosion at the Hapeville Day Nursery



Hapeville, Georgia, May 29, 1968

<https://digitalcollections.library.gsu.edu/digital/collection/ajc/id/2430/>

History of Damage Prevention in Georgia

May 29, 1968: Hapeville Day Nursery, Gas Explosion, 9 fatalities (7 children & 2 adults).

The blast, which heavily damaged the nursery building, was attributed to a bulldozer ripping a gas main while working on a construction project. The gas was believed to have accumulated in the basement before the blast.

History of Damage Prevention in Georgia

1930's: H.L. Wills Committee

May 29, 1968: Hapeville Day Nursery, Gas Explosion, 9 fatalities (7 children & 2 adults).

1974: Atlanta Gas Light, Georgia Power, and Bellsouth formed the “Utilities Protection Center, Inc.”

Mid-1980's: John Middleton, Sleuth, Middleton & Associates. 1st Private Utility Locating Company in Georgia.

-Metrotech 810-1st electromagnetic instrument providing simultaneous peak and null readings

1981: So-Deep founded, 1st SUE firm.

-GUCC name adopted.

July 1, 1986: “Call Before You Dig” law enacted. Georgia is one of the first 10 states to form a statewide call center.

1990: Robert Davis, PE, RHD Services, Inc., 2nd Private Utility Locating Company in Georgia.

History of Damage Prevention in Georgia

1998: Transportation Equity Act for the 21st Century (TEA 21), study of best practices in place nationwide for enhancing worker safety, protecting vital underground infrastructure, and ensuring public safety during excavation activities conducted in the vicinity of existing underground facilities.

2002: Pipeline Safety Improvement Act of 2002, required all utility services to have an abbreviated phone number, other pipeline safety requirements.

2002: American Society of Civil Engineers, ASCE 38-02

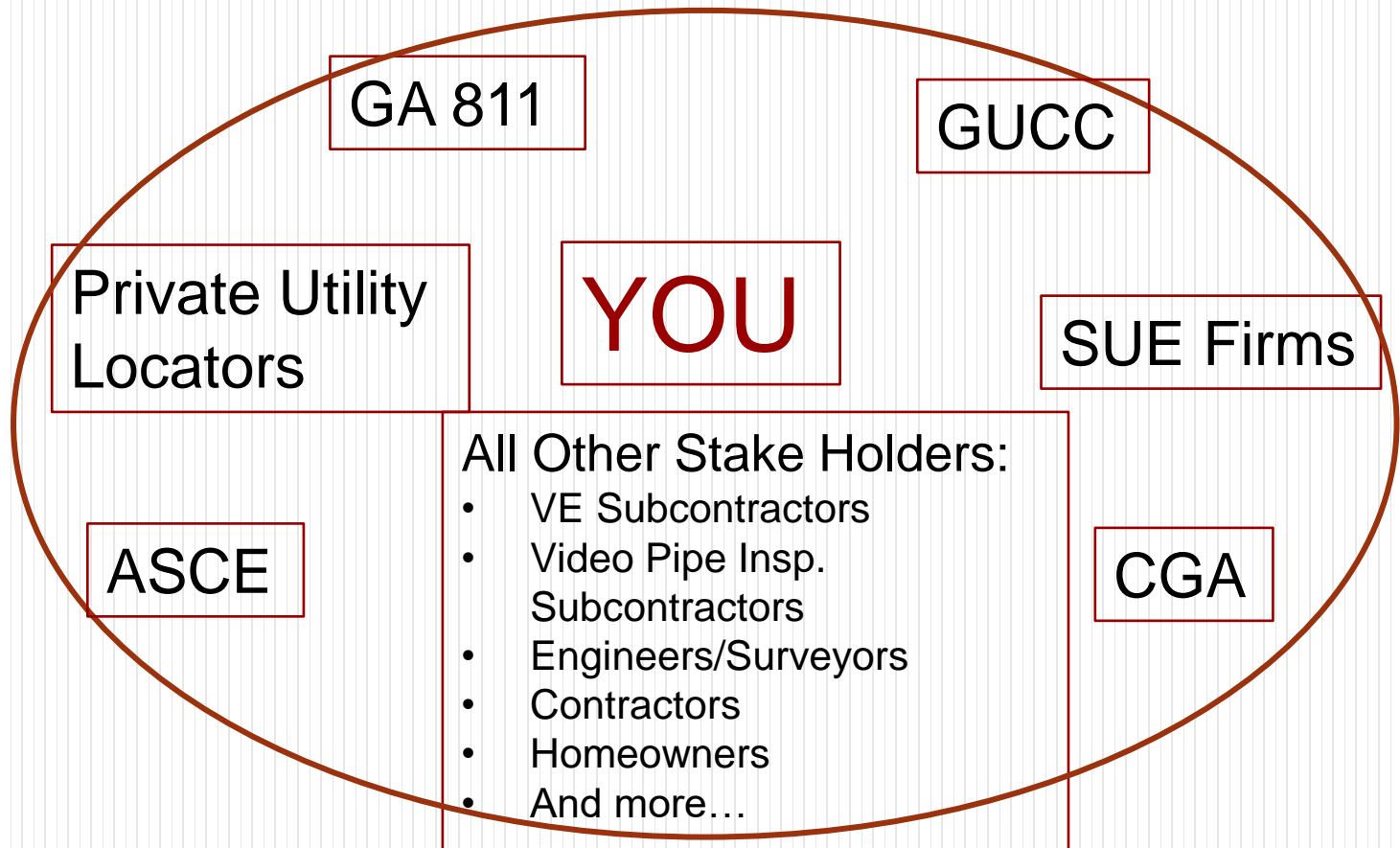
2005: 811 was established nationally as the universal number for the location of utilities

2007: 811 call center goes live in Georgia

2022: American Society of Civil Engineers, ASCE 38-22

Private Utility Locating Supports Damage Prevention

Damage Prevention is Everyone's Responsibility



Private Utility Locating Supports Damage Prevention

- Public vs. Private Utilities: Past the Meters...
- For Design Professionals – Engineers, Surveyors, Architects
- Ground Penetrating Radar (GPR)
- Sanitary Investigations
 - Sanitary Locating, CCTV, Pipe Assessments
 - Smoke Testing
 - Manhole Assessments
- Universities
- Manufacturing Plants
- Cemeteries
- Apartments
- Unusual Requests...

Private Utility Locating

Knowing Where Underground Utilities are Located is Valuable Information

“Managing Risks”

The earlier in a project the utilities are located
(and mapped)

The more opportunities there are for cost savings

Knowing Where Underground Utilities are Located is Valuable Information for Your Clients

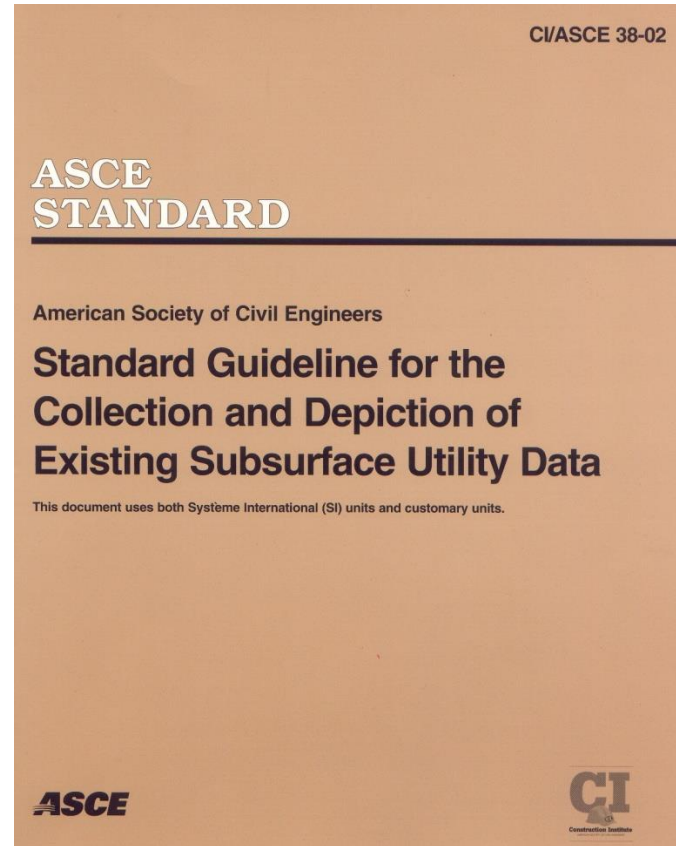
“Managing Risks”

- **Change orders and time delays due to unexpected utilities can be reduced if the utilities are located and mapped early in the project.**
- **Developing Project Budget Estimates**
- **Improve Bid and Construction Documents**
- **Reduce Utility Damages & Conflicts**
- **Avoid Construction Delays**
- **Minimize Change Orders**
- **Relocation Planning**
- **Safety**



ASCE Standard CI/ASCE 38-02

- Subsurface Utility Engineering (SUE)
- Quality Levels A-D



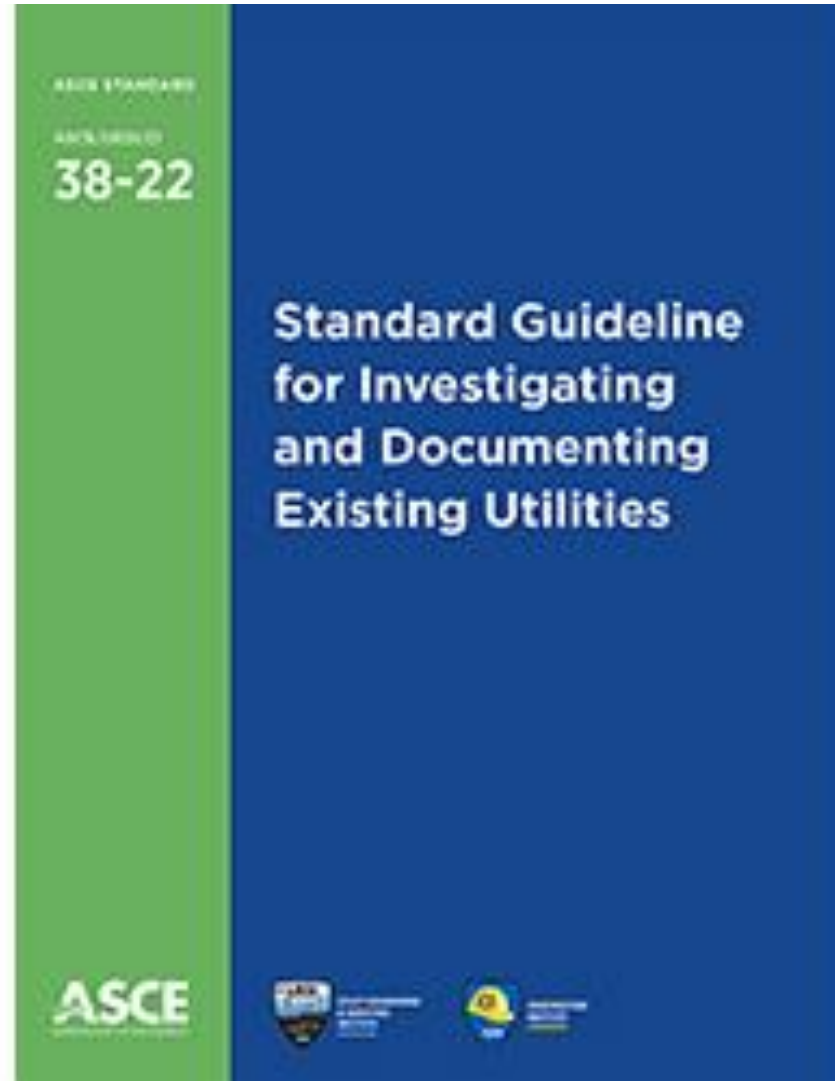
Quality Levels A – D

- **D – Research Information Only**
- **C – “D” Info & Above Ground Features**
- **B – “C” Info & Non-destructive Geophysical Methods (Radio Frequency Locating & Ground Penetrating Radar)**
- **A – “B” Info & Test Holes at Specific Locations**

Is the data good, bad, or somewhere in-between?

Allocation of Risk

ASCE 38-22





Original Limits



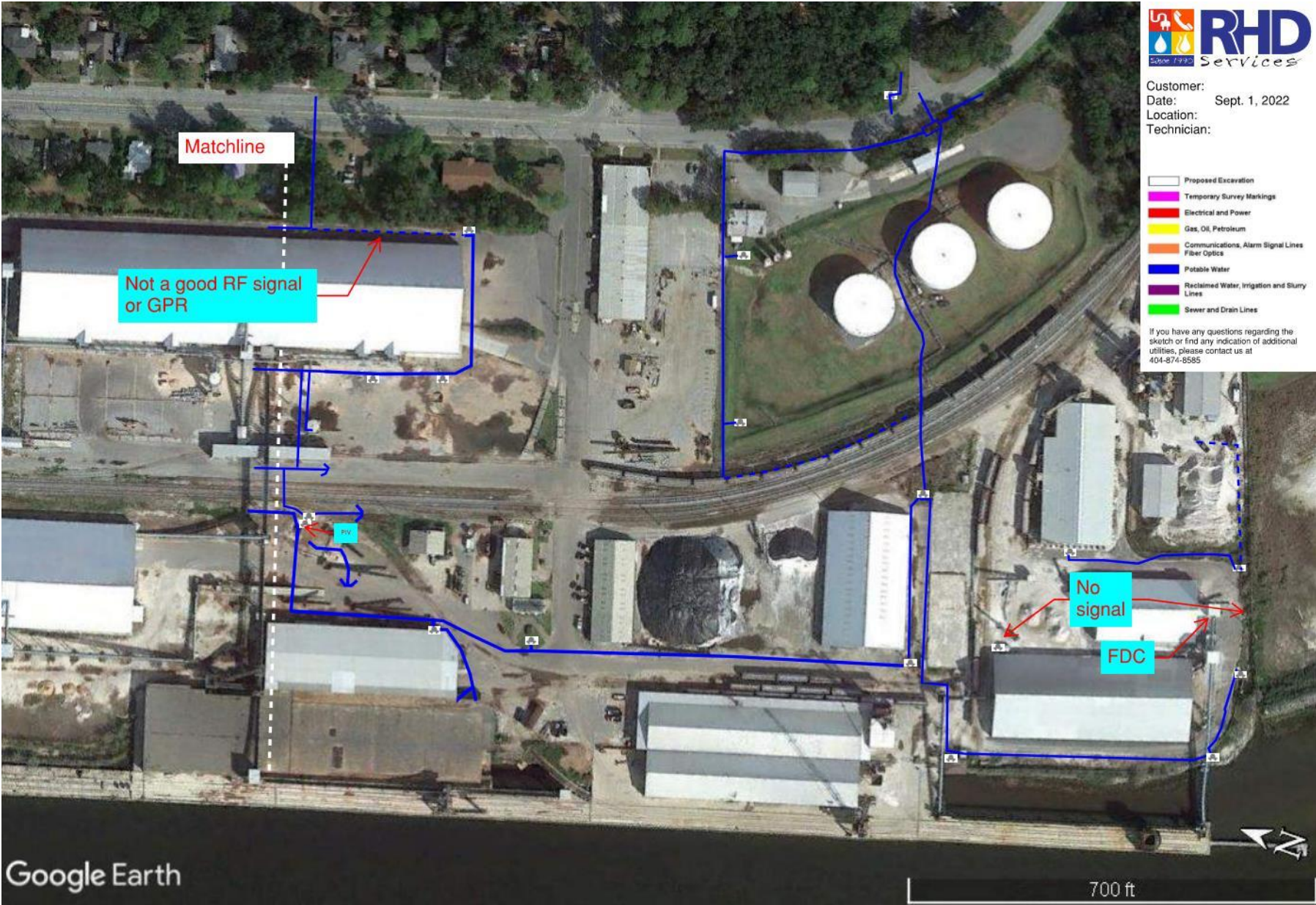
Google Earth

1000 ft

Customer:
Date: Sept. 1, 2022
Location:
Technician:

- Proposed Excavation
- Temporary Survey Markings
- Electrical and Power
- Gas, Oil, Petroleum
- Communications, Alarm Signal Lines
Fiber Optics
- Potable Water
- Reclaimed Water, Irrigation and Slurry
Lines
- Sewer and Drain Lines

If you have any questions regarding the sketch or find any indication of additional utilities, please contact us at 404-874-8585





Test hole - gas

Matchline



Google Earth

700 ft



Chill water enclosure, unable to locate, using GPR and Vivax locater

Chill water enclosure, unable to locate using GPR and Vivax locater.

- Proposed Excavation
- Temporary Survey Markings
- Electrical and Power
- Gas, Oil, Petroleum
- Communications, Alarm Signal Lines
Fiber Optics
- Potable Water
- Reclaimed Water, Irrigation and Slurry Lines
- Sewer and Drain Lines

If you have any questions regarding the sketch or find any indication of additional utilities, please contact us at 404-874-8585





This manhole contains power and communications

temporary trailers

power is aerial

Questions & Answers



Joel Davis, P.E.
404-874-8585
Joel@RHDServices.com

