

Right-of-Way Management

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CSEAO WINTER CONFERENCE
2025



Agenda



- 1 Background & History

- 2 Challenges

- 3 Benefits of Right-of-Way Management

- 4 Utility Conflicts Outcomes

- 5 Statistics

- 6 Approaches / Considerations

- 7 Benefits

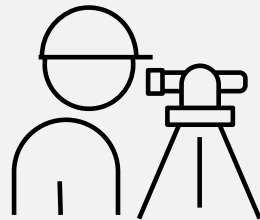
- 8 Summary/Q&A

Background & History



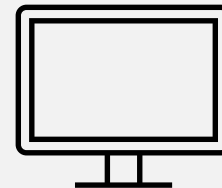
Utility Location

information is sketchy at best



Mismarked and

unknown utilities result in additional cost



Lack of Data

For older systems is limited



A new approach

Is needed to reduce conflicts and costs



Challenges

- History shows that many utilities were installed like the wild wild west, and it was first come first served
- Different utilities require more area than others.
- Agency guidelines restrict how close certain utilities can be to each other.
- Some utilities have easements which creates additional issues.
- More thought needs to go into where utilities can and should be located.

FIND IT, AVOID IT. HOW HARD CAN IT BE?



Challenges facing utility construction:

- Subsurface utility investigations are costly and only provide results where you located them
- OUPS tickets are rushed, miss marked and often times result from old data
- Agency guidelines require separation distance on some utilities
- Inspection on most utility projects are not required
- Utility conflicts are expensive!

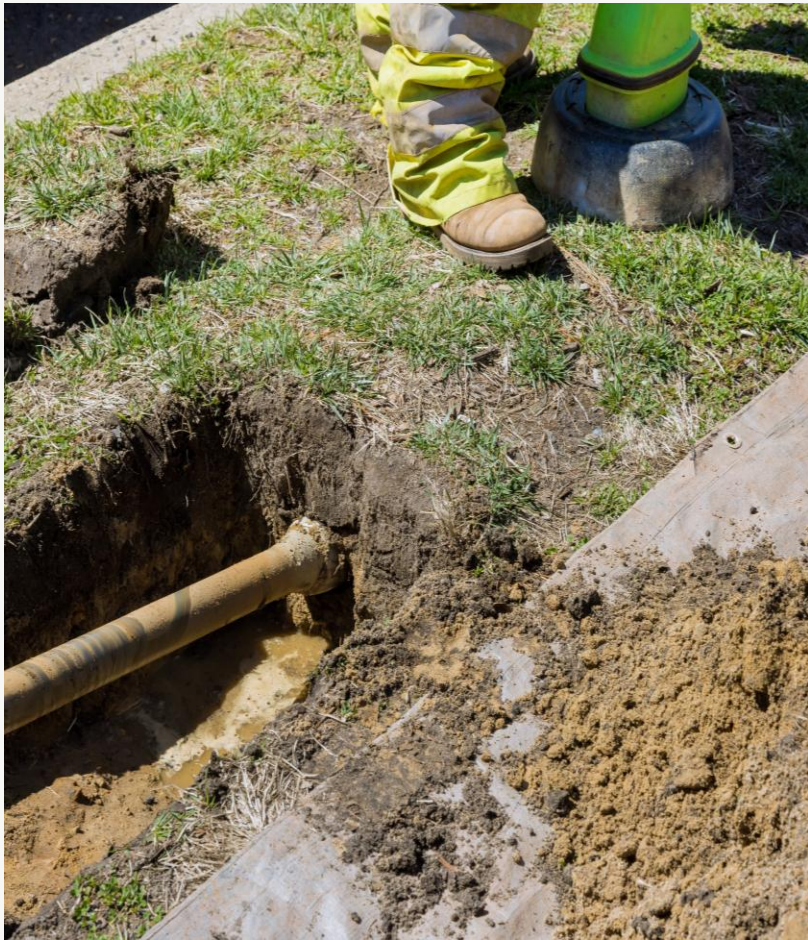


What's Next?

When the “find it and avoid it” approach fails:

- Down time for locating and / or fixing and repairing mismarked or unmarked utilities.
- Redesign of proposed improvements to address conflicts.
- Downtime for relocation of existing utilities if conflict can't be avoided.
- Dangerous situations due to line breaks
- or unable to meet OSHA requirements due to conflicts.

WE KNOW THEY'RE THERE, BUT WHERE ARE THEY?



- Choose Corridors for certain utilities based on constructability, dictate where utilities go
- Require that utilities provide as-built information!
- Require that any changes be approved by the ROW Owner!
- Get GPS coordinates of the utilities
- Improve ROW permit requirements to state that if utility is mis-located it's their expense.



Benefits of Right-of-Way Management

If utilities are required to install their utilities in a certain portion of the right of way then consistency will make knowing where utilities are located more intuitive. Ensuring utilities are clustered based on depth and size will help make other installations less complicated. Save money!



Utility Conflicts



- Disruptions when utility installations are encountered unexpectedly during construction either because there was no previous information about those installations or because their stated location was incorrect.
- Damage to utility installations, which can disrupt utility service, damage the environment, and endanger the health and safety of the construction workers and the public.....
- Delays that can extend the period of project development or delivery and increase total project costs.

Mismarked/Unmarked Outcomes

Forces in the field
redesign

Can be costly if
relocation
required or shut
down

Utility
standards on
location and
depths

History
shows no
good way as
is

Avoid costly
delays

Dangerous!





WHAT NOT TO DO





Critical Issues

- Facilities not marked accurately or on time
- Excavator error, failure to pothole or maintain clearance
- Effective and consistent use of 811, failure to notify remains the largest contributor to damages.



Statistics





Learn the OHIO811 Safe Digging Process

Be a Prepared Caller



White

PROPOSED EXCAVATION

**Fluorescent
Pink**

**TEMPORARY SURVEY
MARKINGS**

Red

**ELECTRIC POWER LINES, CABLES,
CONDUIT AND LIGHTING CABLES**

Yellow

**GAS, OIL, STEAM, PETROLEUM
OR GASEOUS MATERIALS**

Orange

**COMMUNICATION, ALARM OR SIGNAL
LINES, CABLES OR CONDUIT**

Blue

POTABLE WATER

Purple

**RECLAIMED WATER, IRRIGATION
AND SLURRY LINES**

Green

SEWERS AND DRAIN LINES

Ohio 811 Stats

2025 YEAR TO DATE


501,670
OPERATIONS VOLUME YTD


881,175
i-dig VOLUME YTD


536
DiG LOGiX VOLUME YTD


80,631
e-dig VOLUME YTD


99,600
TICKET UPDATER VOLUME YTD

Ticket Volume Percentage YTD

Operations — 32.08%

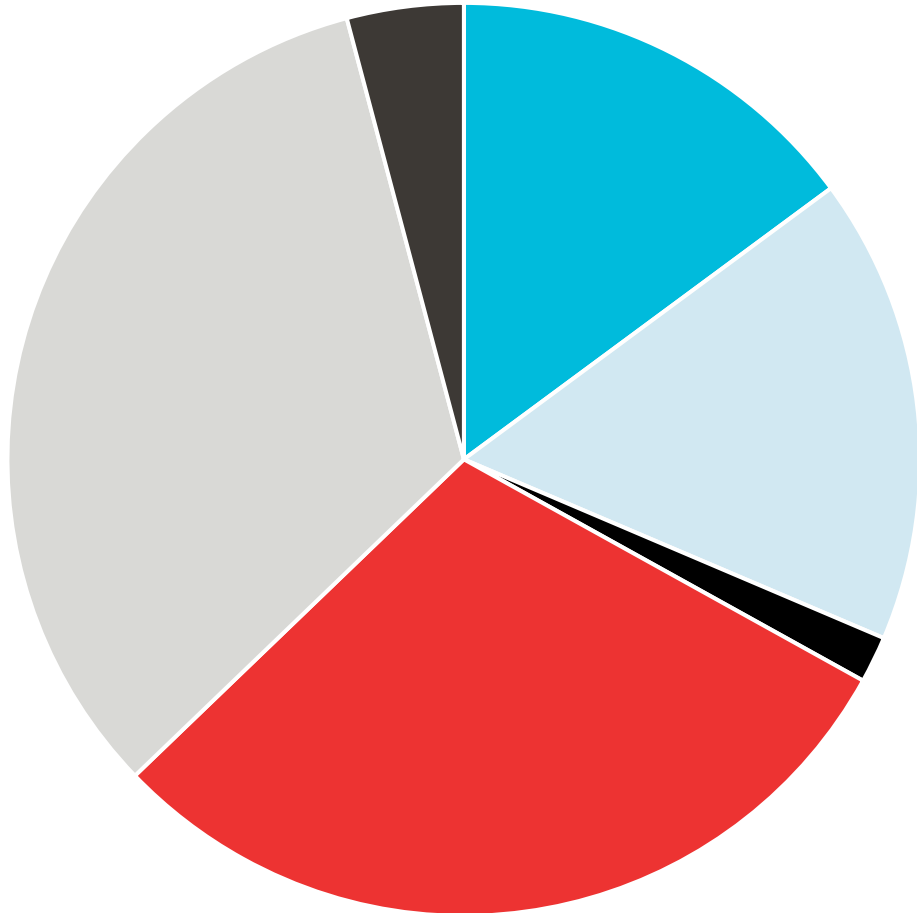
i-dig — 56.36%

DiG LOGiX — 0.03%

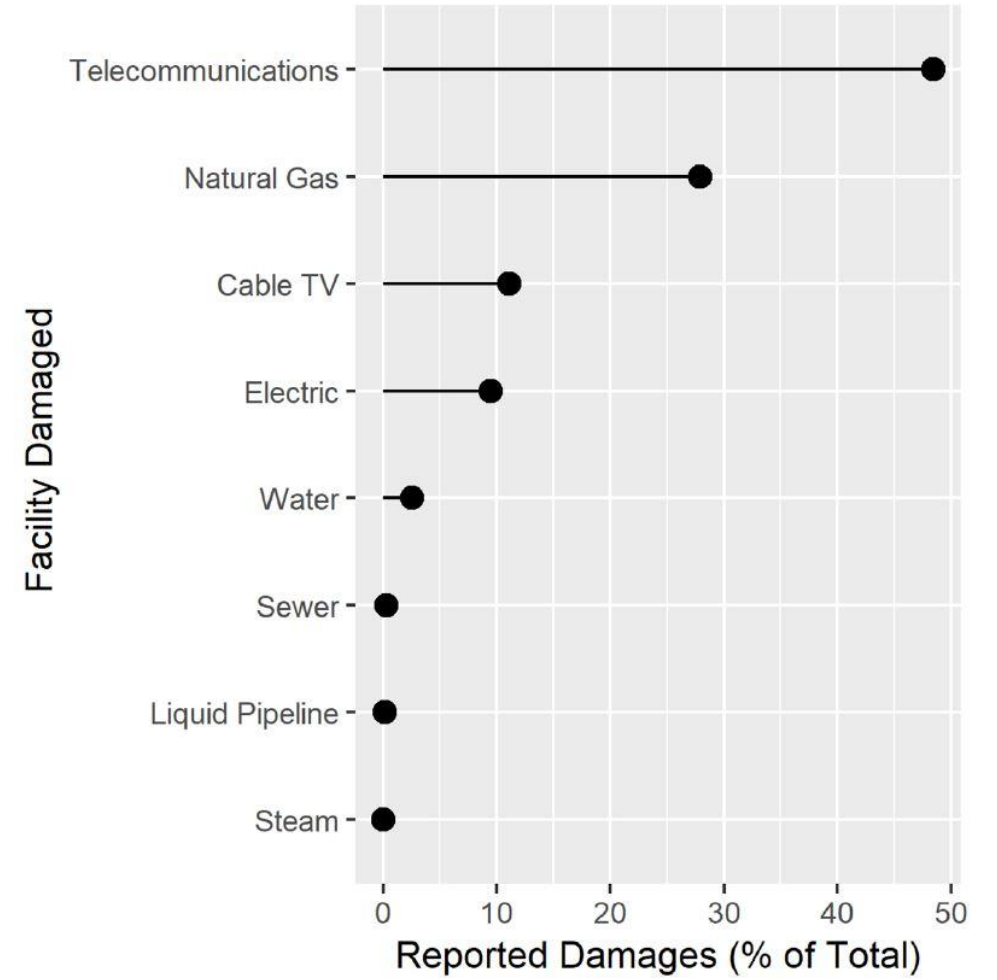
e-dig — 5.16%


Ticket Updater — 6.37%

Damage Stats




- Excavating issue
- Notification not made
- Loading issue
- Other Notification Issue
- Miscellaneous
- Unknown/Other





Locating Utilities could be easier, if there were standards!

“Many utilities were put in long ago when as-built information was vague and often times lost”





Approaches

Water & Sewer

Gas-Oil

Electric

Proposal Excavation

**Temporary
Survey Markings**

**Communication
CATV**

Approaches

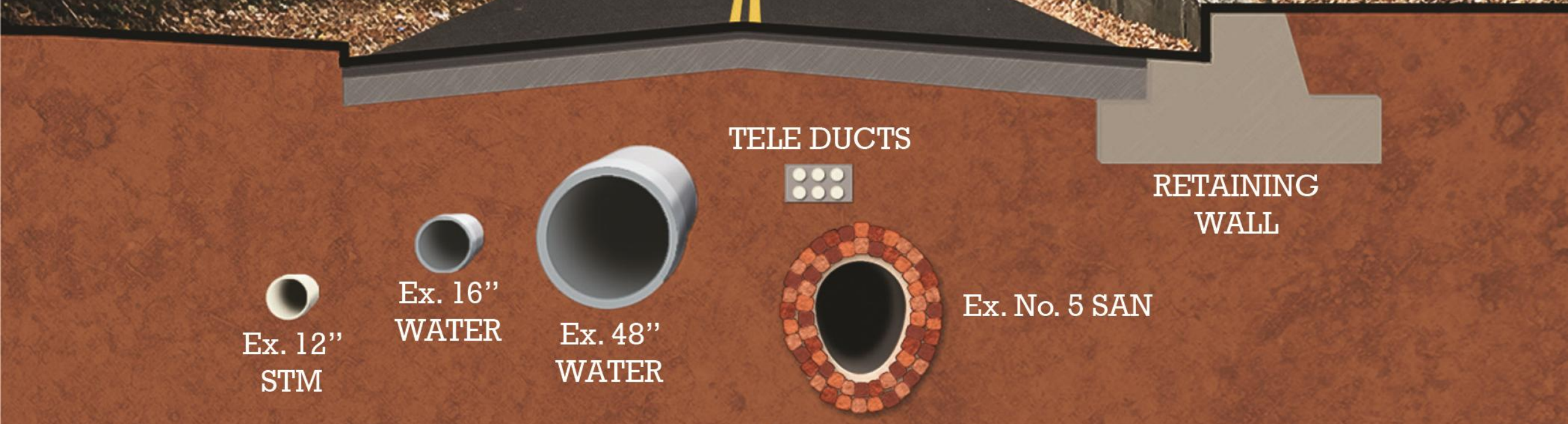
- Knowing how utilities will impact a project early in the planning phase can save time and resources during the construction phase.
- For transportation project utilities are often an afterthought, if there isn't a good process in place to deal with them early, then there could be a delay in construction, added cost to the public and possible outages.



Considerations

- What further geotechnical investigation work is scheduled for the site?
- What surface cover will need to be cut? Grass, Asphalt, Concrete?
- What type of soil is present?
- How much workspace is available for equipment access?
- What is the anticipated density of the buried services?





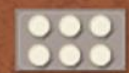
TELE DUCTS

RETAINING WALL

Ex. 12"
STM

Ex. 16"
WATER

Ex. 48"
WATER



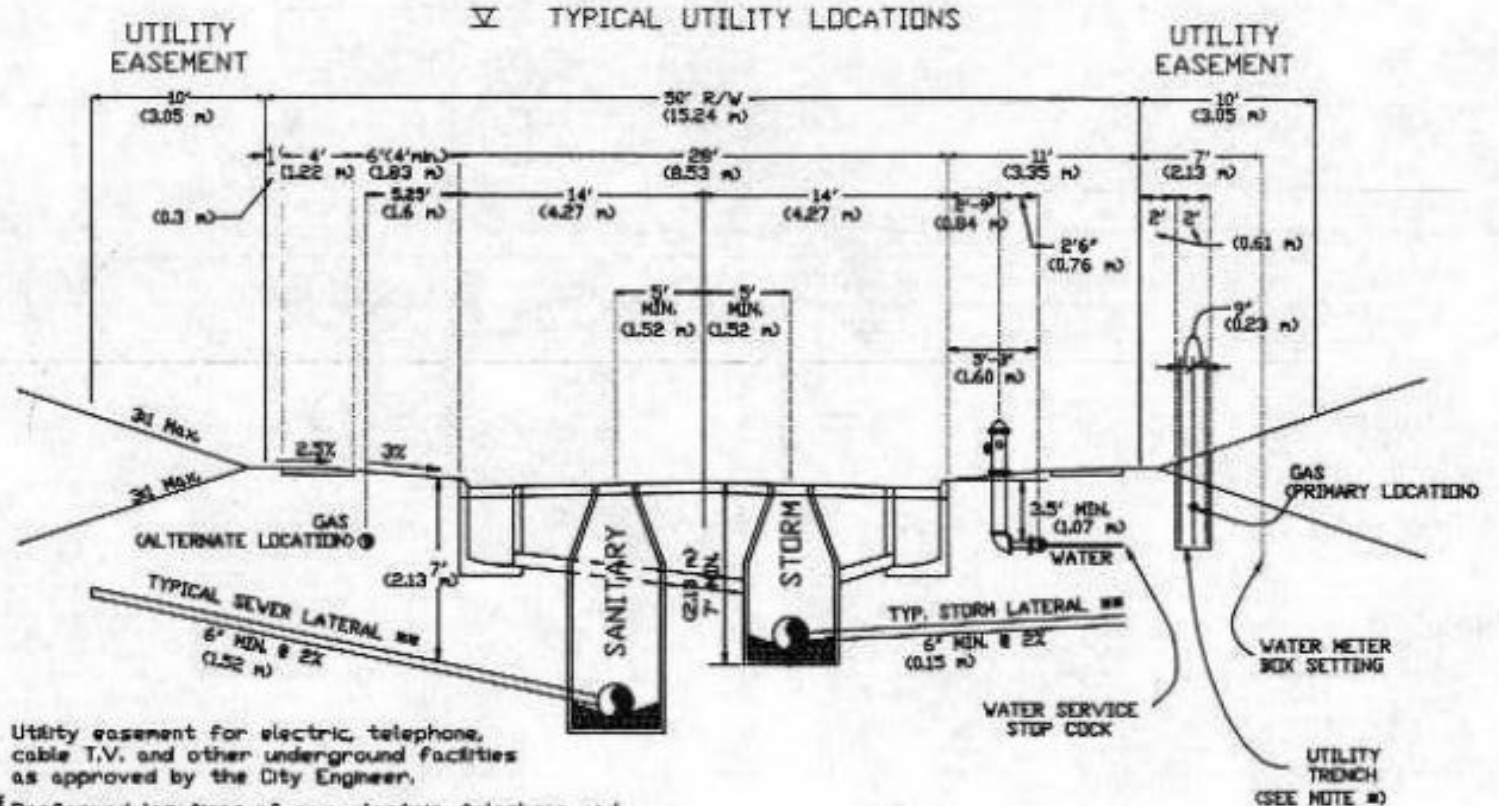
Ex. No. 5 SAN



Typical Struggles



Possible Solution



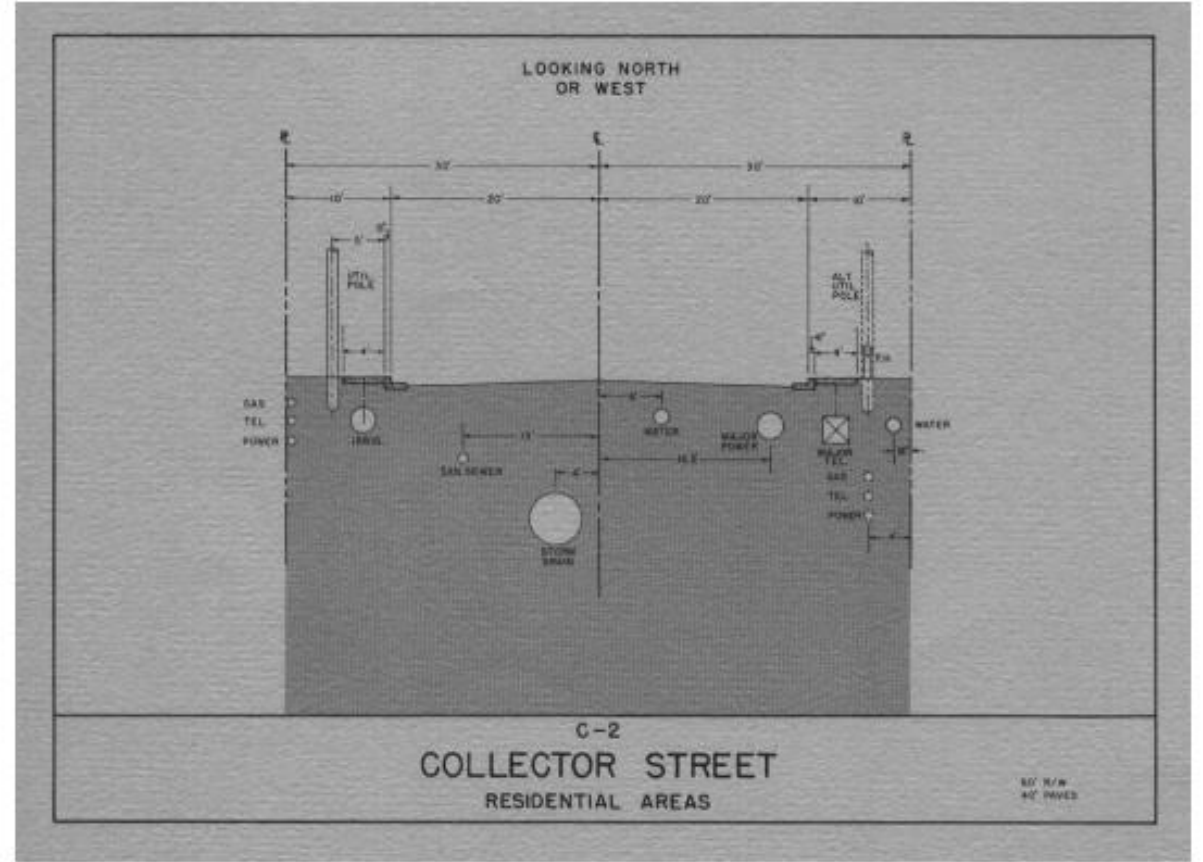
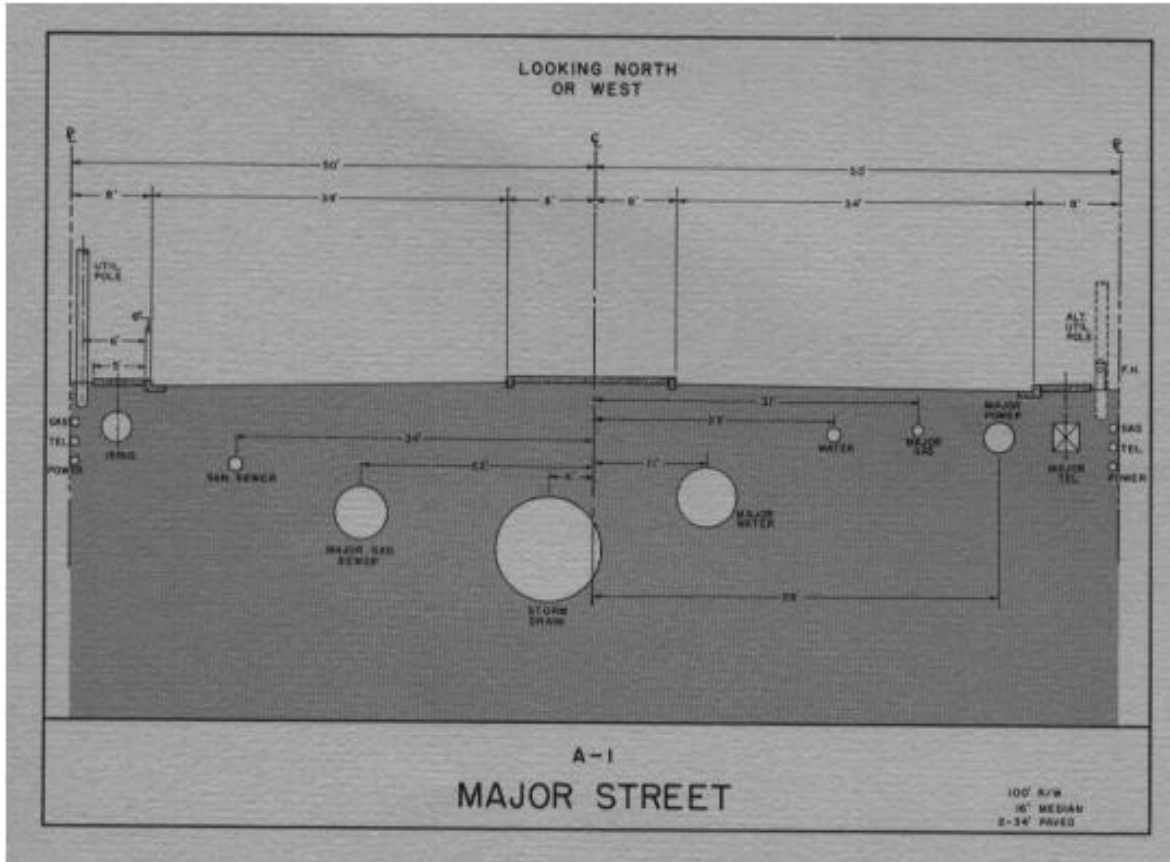
Utility easement for electric, telephone, cable T.V. and other underground facilities as approved by the City Engineer.

- * Preferred locations of gas, electric, telephone and cable T.V. in trench as shown.
- * Sewer and water service laterals to be extended to ten feet (10')(3.05 m) past R/W line and connect to main line not a manhole.

UTILITY	MINIMUM COVER
GAS	36" (0.91 m)
WATER	42" (1.07 m)
ELECTRIC	30" (0.76 m)
TELEPHONE	30" (0.76 m)
CABLE T.V.	30" (0.76 m)
SEWER LATERAL	7' (2.13 m)

Location of water meter box shall generally be seven feet (7')(2.13 m) beyond the R/W line. In special cases due to physical encumbrances the meter box may be located between five feet (5')(1.52 m) and ten feet (10')(3.05 m) from the property line as determined by the Water Works. In those cases where the normal seven feet (7')(2.13 m) dimension is exceeded the service branch shall be extended a minimum of three feet (3')(0.76 m) beyond the box in the original installation. The end of the water service branch shall be capped utilizing a flared copper to iron fitting and a brass plug. The branch shall be pressurized from box to plug.

Possible Solution





Benefits

- Fewer Contractor change orders and delay claims.
- Reduced cost from construction delays.
- Improved project development procedures based on anticipating and resolving utility conflicts early in the process.
- Better communication among transportation agencies and utilities.
- Reduced impacts on the public from construction related delays.
- Reduced impacts to the public from utility disruptions.
- Improved worker and public safety from construction related hazards.

Summary



Right of Way Management is critical to the safety and vulnerability of the public.



Utilities are a struggle for every community and a solution is needed.



Majority of all conflicts are related to poor information and lack of standards.



Managing your right of way and maintaining standards that utilities are required to follow **will save money and reduce the risk to the traveling public.**



Questions/
Open Discussion

