

New Hampshire Underground Utility Facility Damage Prevention Program

LP Seminar October 13, 2005



N. H. PUBLIC UTILITIES COMMISSION



**Underground
Damage Prevention**

**Natural Gas, LP & Electric
Safety & Security**



**film clip not
available**

Gas Explosion in Lafayette, Mississippi

Cortez, NM

January 7, 2001



Legal Requirement

LP Jurisdictional Facility Operators

- Required to participate in the Damage Prevention Program under
 - CFR 49 Section 192.614
 - RSA 374:48 - 374:56
 - Puc 800 Rules



Legal Requirement

RSA 362:4-b Gas Companies, When Public Utilities. –

III. Nothing in this section prevents the commission from monitoring or enforcing the provisions of federal pipeline safety standards relative to liquefied petroleum gas systems pursuant to the Natural Gas Pipeline Safety Act.

Source. 1997, 298:1, eff. June 20, 1997.

Legal Requirement

- Therefore LP jurisdictional system operators are “operators” under the law and

**Must belong to Dig Safe
(Puc 802.02(a)(2))**



What is Dig Safe Systems, Inc?

- Private, not-for-profit call center located in Woburn, MA
- Funded entirely by members
- Free service for anyone
- www.digsafe.com
- 888-DIG-SAFE, ***NOT*** 800-DIG-SAFE



What is Dig Safe Systems, Inc?

(con't)

- Open Monday-Friday, 6am to 6pm
- Off hours emergency calls routed to Kentucky
- Processes nearly 600,000 utility locate requests per year
- Alternate Telephone number for Dig Safe Supervisors: **877-DIG-SAFE**



www.digsafe.com lets members and excavators:

- Apply for and renew Dig Safe Tickets
- Download "Dig Safe" Laws and Rules
- Review New / Proposed Legislation
- See Enrollment Information
- Order Promotional Items
- Find a list of other Members
- Get a list of Private Locators



Other Companies Required to Join **Dig Safe**®



- Gas Utilities
- Non-Municipal Electric Utilities
- Telecommunications Companies
- Cable Television Companies
- Non-Municipal Water & Sewer Utilities

Dual Responsibilities

- As Operators



- As Excavators



Key Responsibilities of **Operators**

Maintain Accurate Records

Respond in timely manner to Dig Safe requests

Accurately locate owned facilities

Communicate with excavators

Report Probable Violations

Key Responsibilities of **Operators**

Maintain Accurate Records

Respond in timely manner to Dig Safe requests

Accurately locate owned facilities

Communicate with excavators

Report Probable Violations

Maintain Records

- Maps



- Account Records



- Use Tracer Wire



Sobering Thoughts



- Excavators are digging blind.
- They may maim you, your customers and bystanders.
- They may disrupt critical services.
- They (and maybe you) may be held responsible for damage to the facility, to property and for injuries.
- Excavators may be fined up to \$5,000 per violation.
- There goes the profit.

Key Responsibilities of **Operators**

Maintain Accurate Records

Respond in timely manner to Dig Safe requests

Accurately locate owned facilities

Communicate with excavators

Report Probable Violations

72 Hour Maximum Response Time

- RSA 374:53 Within 72 hours after the receipt of notice from a proposed excavator or from the system of a proposed excavation, but not including Saturdays, Sundays and legal holidays, an operator shall mark the location of its underground facilities in the area of the proposed excavation.



Key Responsibilities of **Operators**

Maintain Accurate Records

Respond in timely manner to Dig Safe requests

Accurately locate owned facilities

Communicate with excavators

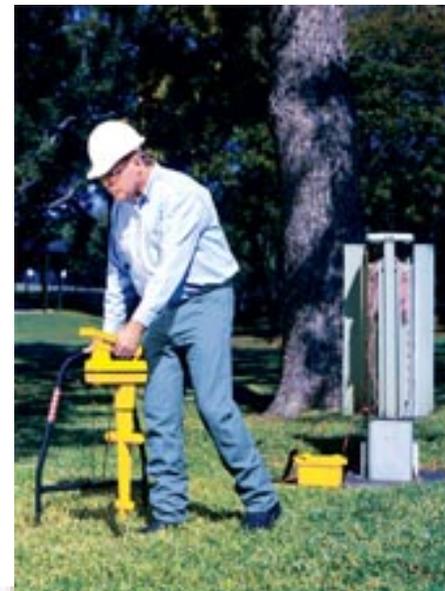
Report Probable Violations

Locate Facilities

**Within 18"
Tolerance Zone**

**Using yellow
paint**

**Mark size of
facility**

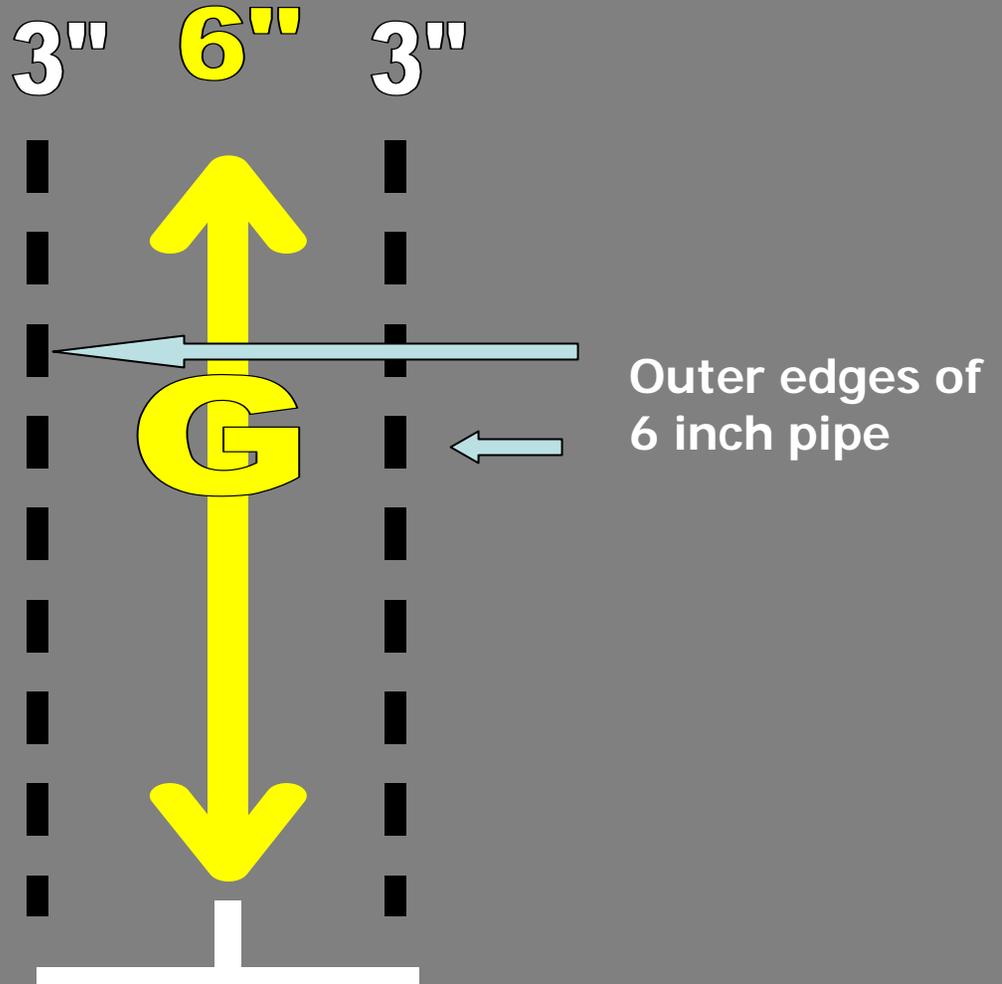


"Center line" Marks

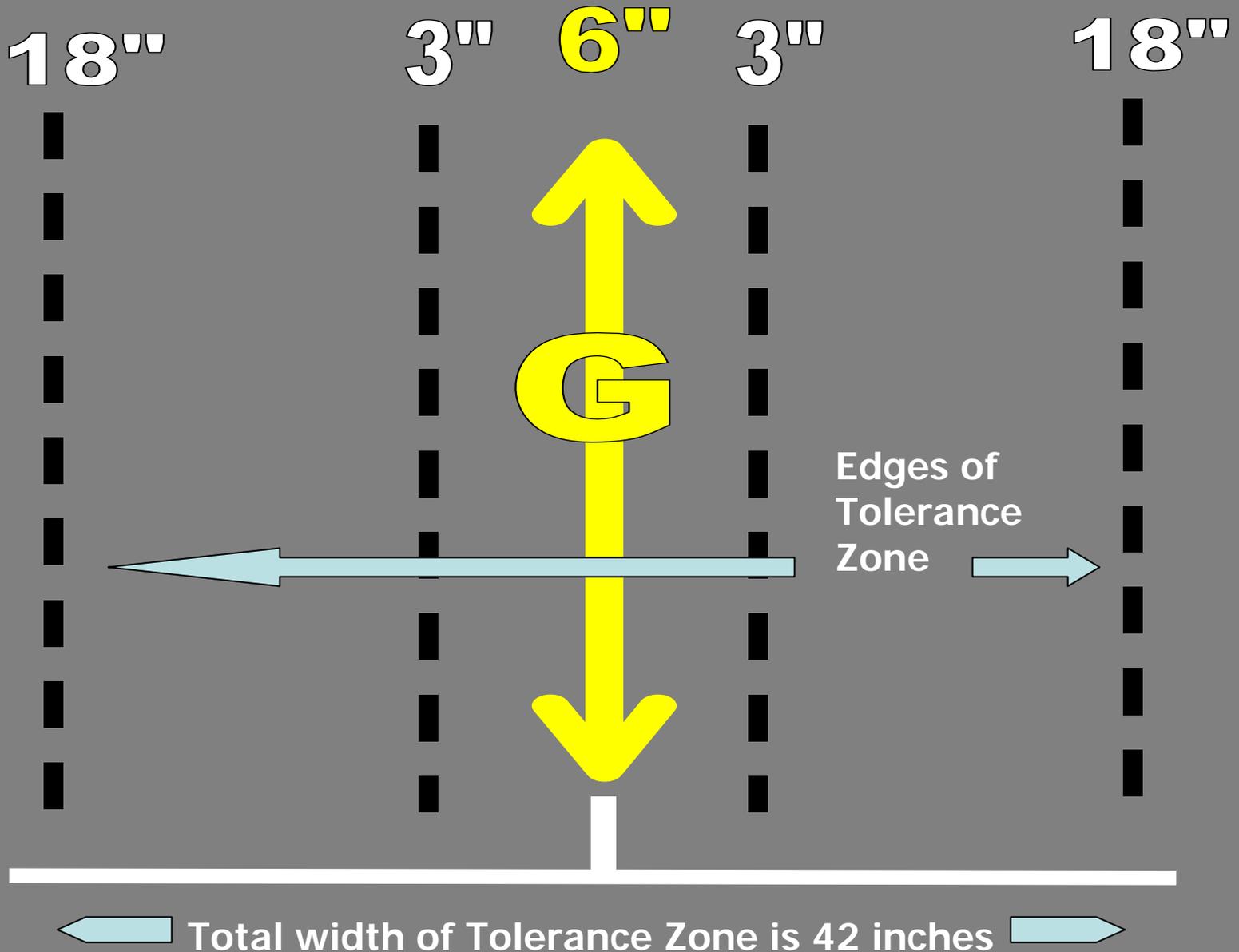
6"



"Center line" Marks

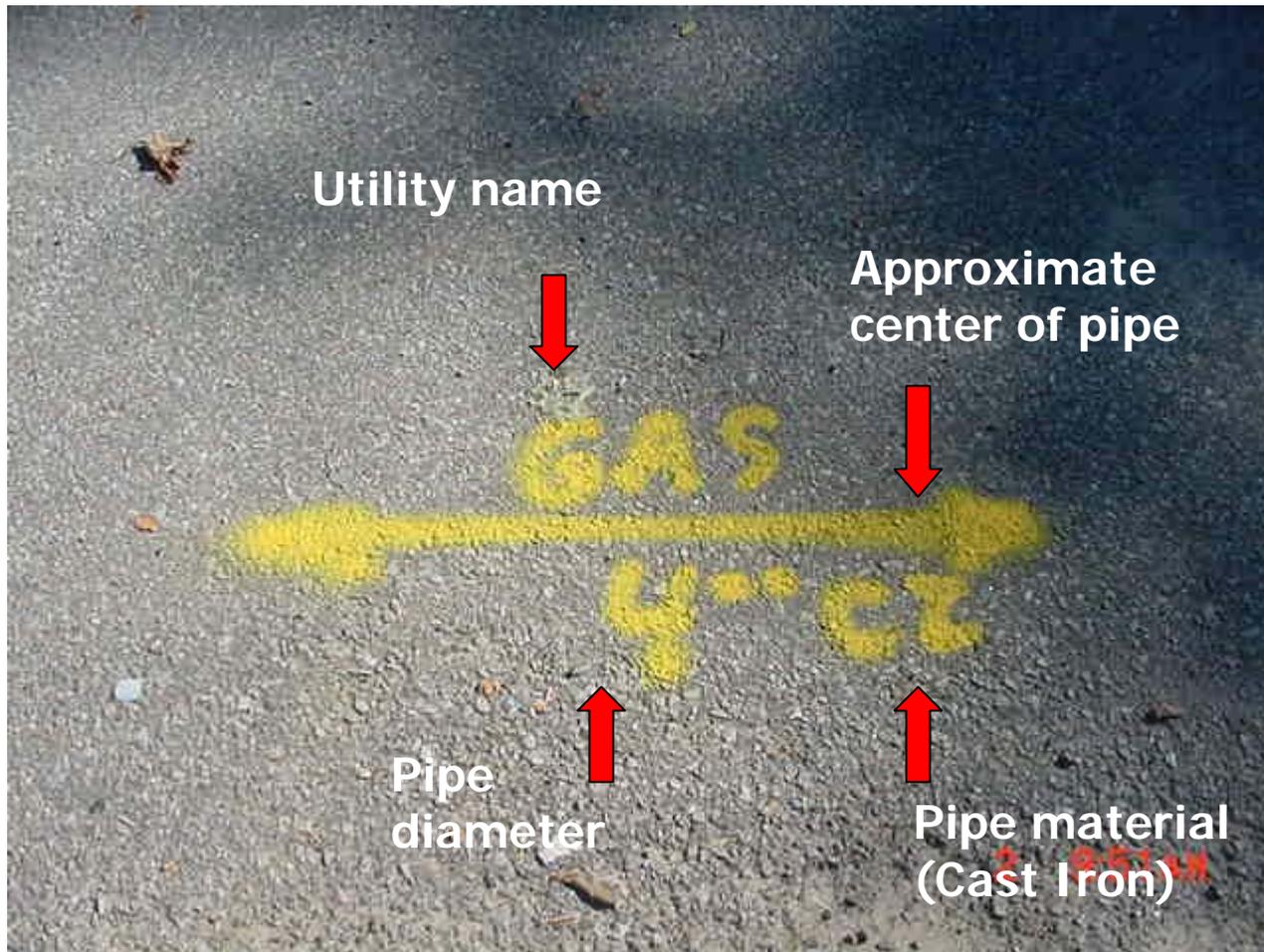


"Center line" Marks



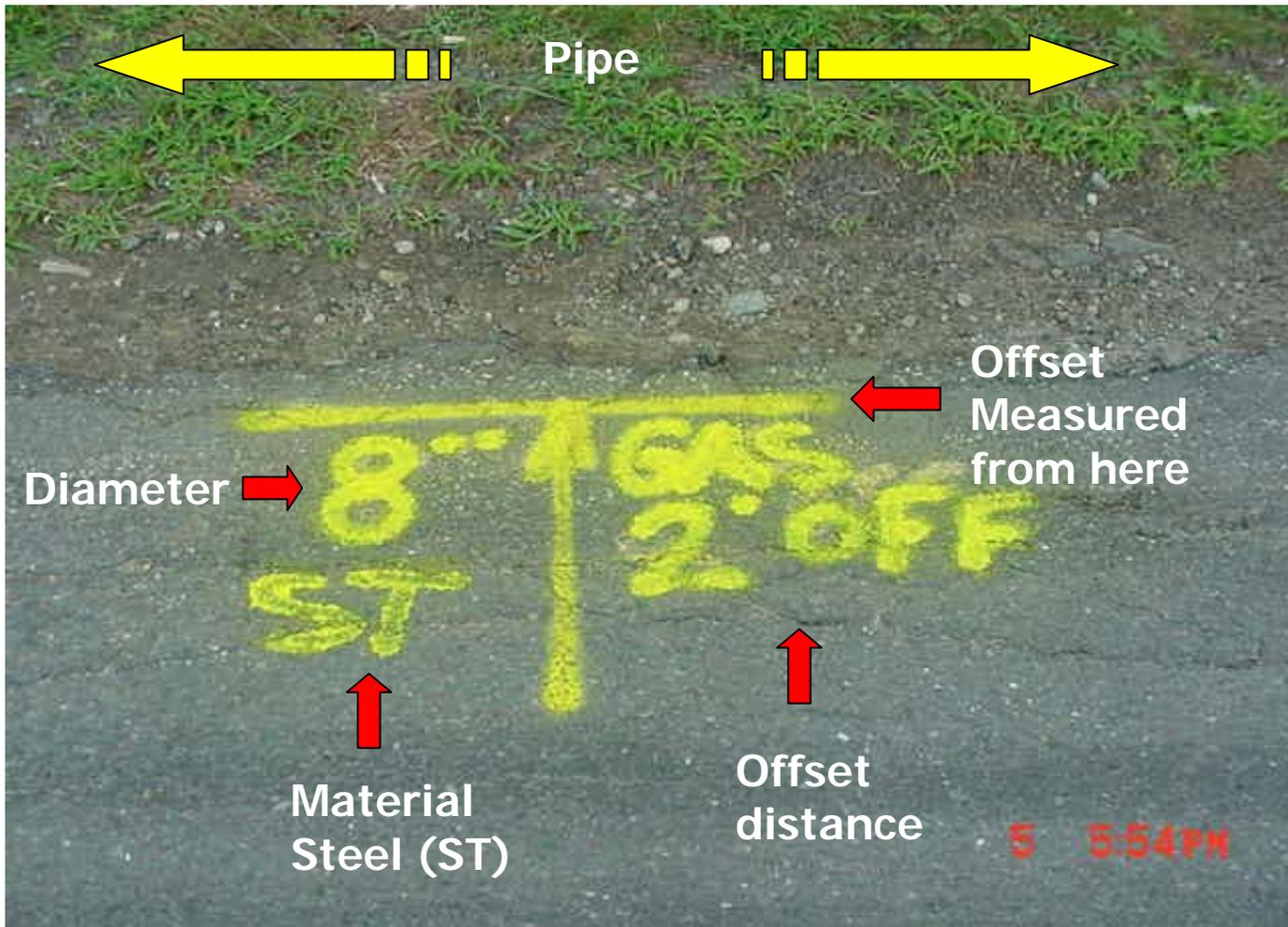
GAS LINE MARKINGS

shows center of 4 inch cast iron (CI) gas line.



OFFSET GAS MARKING

shows 8 inch steel (ST) gas line is located approximately 2 feet from end of arrow.



Operator Owned Facilities Only

- Puc 804.02 (d) An operator ...shall not be required to locate underground facilities not owned by the operator



Key Responsibilities of **Operators**

Maintain Accurate Records

Respond in timely manner to Dig Safe requests

Accurately locate owned facilities

Communicate with excavators

Report Probable Violations

Communicate with Excavators

- Describe unusual conditions
 - Shallow lines
 - Obstructions
 - Valves
 - Changes in direction
- Marking Delays
 - RSA 374:53 An operator and an excavator may by agreement fix a later time for the operator's marking of its facilities.



Key Responsibilities of **Operators**

Maintain Accurate Records

Respond in timely manner to Dig Safe requests

Accurately locate owned facilities

Communicate with excavators

Report Probable Violations

Report to PUC with E-26 Form

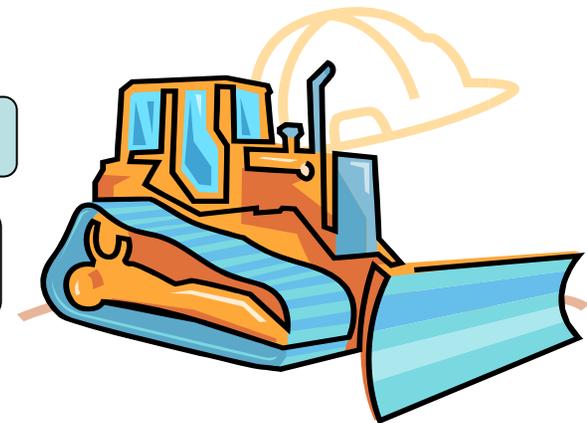
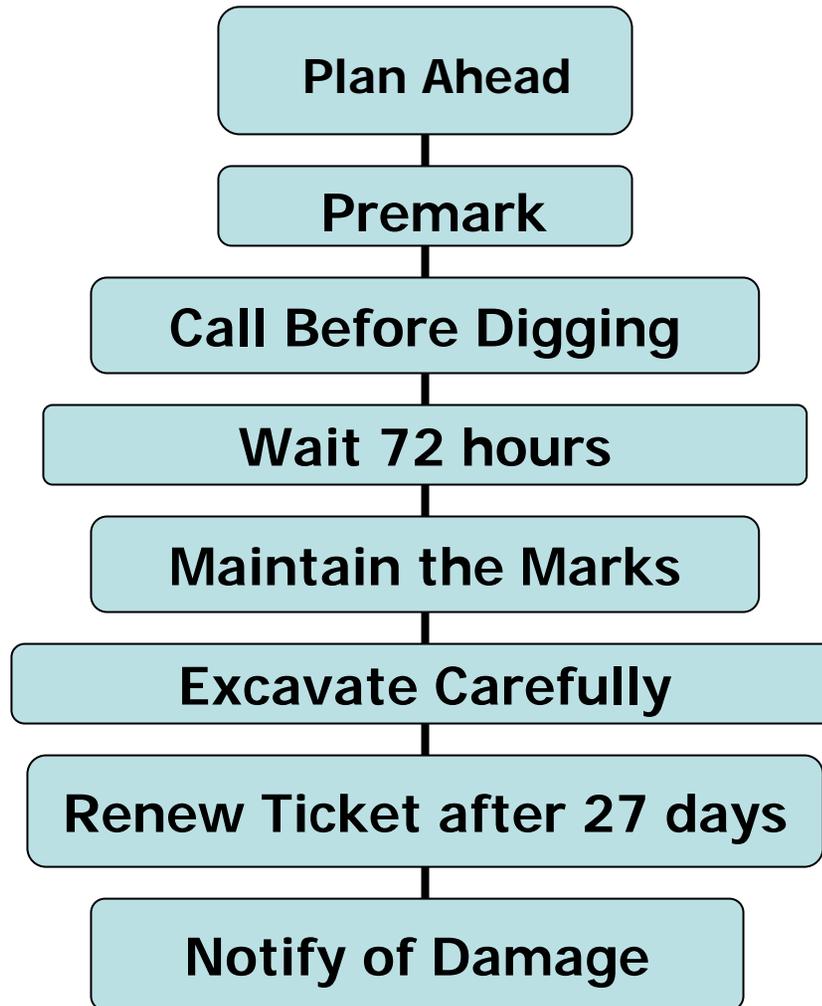
NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION					
REPORT OF PROBABLE VIOLATION OF UNDERGROUND UTILITY					
REGULATIONS AND/OR DAMAGE TO UNDERGROUND FACILITIES					
		NEGATIVE REPORT Month: <input type="text"/> Year: <input type="text"/>		No probable violation of underground utility	
regulations or damage to underground facilities occurred since the date this company last filed a report as required by Puc 803.02.					
INCIDENT DATE: (m/d/yr)		TIME:		a.m. p.m.	
REPORT DATE: (m/d/yr)					
LOCATION OF VIOLATION / DAMAGE:		GPS COORDINATES: Long:		Lat:	
Address:		PUBLIC WAY		RIGHT OF WAY	
City:					
State:		Zip Code:		EASEMENT PRIVATE PROPERTY	
PERSON REPORTING: (FACILITY OPERATOR, EXCAVATOR OR ANY OTHER PARTY)					
Name:		Home No.		AREA CODE 7 DIGIT NUMBER EXT.	
Company: (# applicable)		Work No.			
Address:		Fax No.			
City:		Cell No.			
State:		Zip Code:		Pager No.	
EXCAVATOR / FACILITY OPERATOR:					
Name:		Home No.		AREA CODE 7 DIGIT NUMBER EXT.	
Company: (# applicable)		Work No.			
Address:		Fax No.			
City:		Cell No.			
State:		Zip Code:		Pager No.	
DOING WORK FOR:					
Name:		Work No.		AREA CODE 7 DIGIT NUMBER EXT.	
Company: (# applicable)		Cell No.			
FACILITY DAMAGED: include type, size, material, pressure / voltage or Safety Concern:					
ESTIMATE OF DAMAGE: <input type="text"/> Excavator Billed for Damage? YES NO					
PERSONAL INJURY: <input type="text"/>					
DESCRIPTION OF INCIDENT:					
TYPE OF MARKING: <input type="text"/>					
OTHER PERTINENT INFORMATION: (photos, diagrams, sketch, etc.)					
PLEASE CHECK ONE OR MORE OF THE FOLLOWING:					
1. Notification completed. DIG-SAFE NUMBER: <input type="text"/>		10. Procedures for notification not followed DIG-SAFE NOT NOTIFIED			
2. Notification completed, marked, markings not maintained		11. Failure to notify of damage			
3. Notification completed, location was not marked		12. Pre-marked YES NO			
4. Notification completed, marked, damage occurred		13. Operator's markings were incorrect due to:			
5. Excavating outside the pre-marked area		a. LOCATOR ERROR			
6. Excavation classified as EMERGENCY SITUATION		b. INCORRECT RECORD			
7. Excavator failed to observe 18-in. tolerance zone		c. NO RECORD			
8. Excavator failed to notify nonmember facility operator		14. Facility operator failed to mark in a timely manner			
9. Excavating on an expired ticket		15. OTHER			
Signature: <input type="text"/>		Title: <input type="text"/>			
* Reviewed by signing authority listed (if submitted electronically)		Yes <input type="text"/> No <input type="text"/>			
Note: Please provide explanation to items above where necessary.		FORM-E26 Revised 12/2003			

E-26 Form

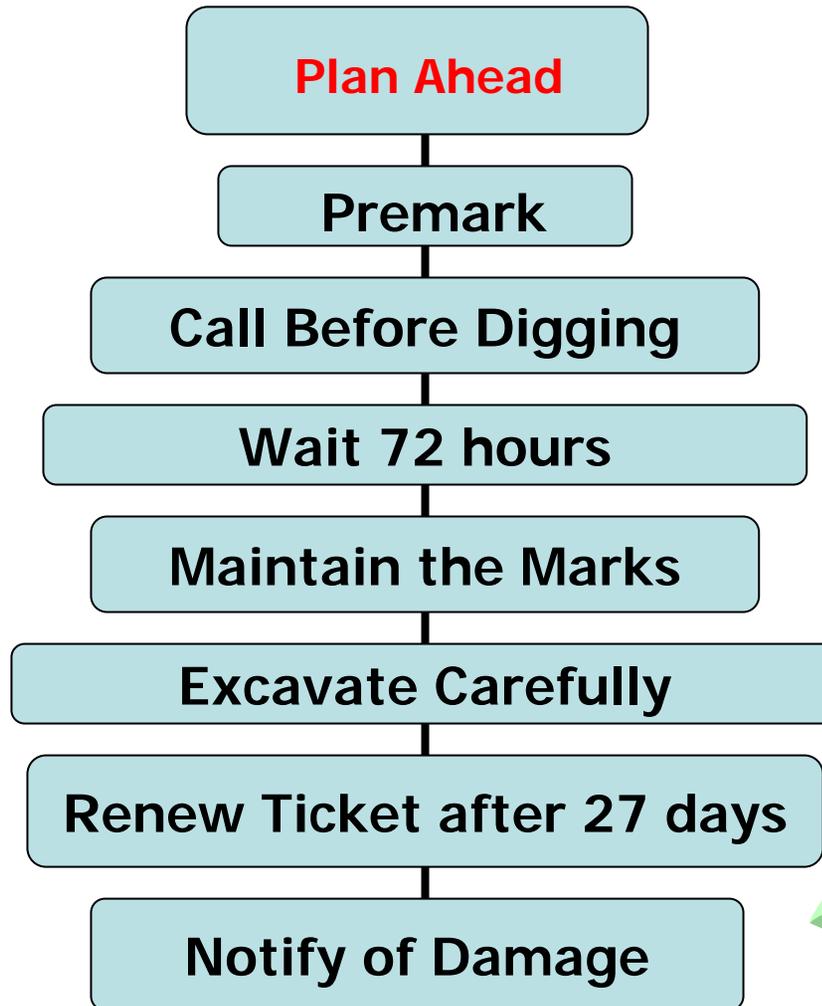
- Puc 804.01(a) Each operator shall file monthly, including any month in which there are no violation to report, with the commission on or before the 15th of the following month, written reports of probable violations of Puc 800, damage to underground facilities, or both.
- Each operator shall file reports required by (a) above on Form e-26.

The image shows a thumbnail of the E-26 Form, titled "NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION REPORT OF PROBABLE VIOLATION OF UNDERGROUND FACILITIES REGULATIONS INCORPORATING DAMAGE TO UNDERGROUND FACILITIES". The form is a complex document with multiple sections, including fields for reporting details, violation descriptions, and a section for "OTHER INFORMATION OR STATE OF THE VIOLATION". It features various colored highlights (yellow and blue) and checkboxes.

Key Responsibilities of Excavator



Key Responsibilities of Excavator



What is excavation?



“Excavation”- Any operation ... in which earth, rock or other material in the ground is moved, removed, or otherwise displaced by means of any tools, equipment or explosive, including but not limited to drilling, grading, boring, milling, trenching, tunneling, scraping, tree and root removal, cable or pipe plowing, fence or sign post installation, pile driving, wrecking, razing, rending or moving any structure or mass material...”

(Statute RSA374:48, Section III)

Hand Digging, Bar Holing is Not Exempt

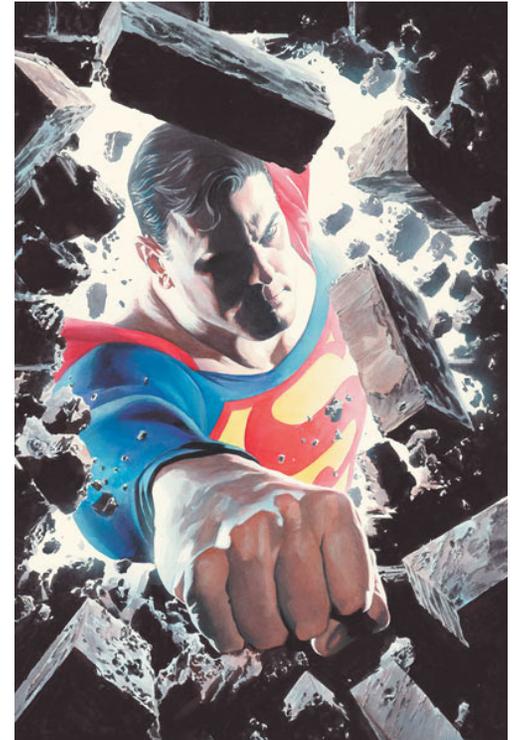
RSA 374:51 I says: No person shall perform an excavation within 100' of an underground facility.

How can an excavator know if there are no facilities within 100'?

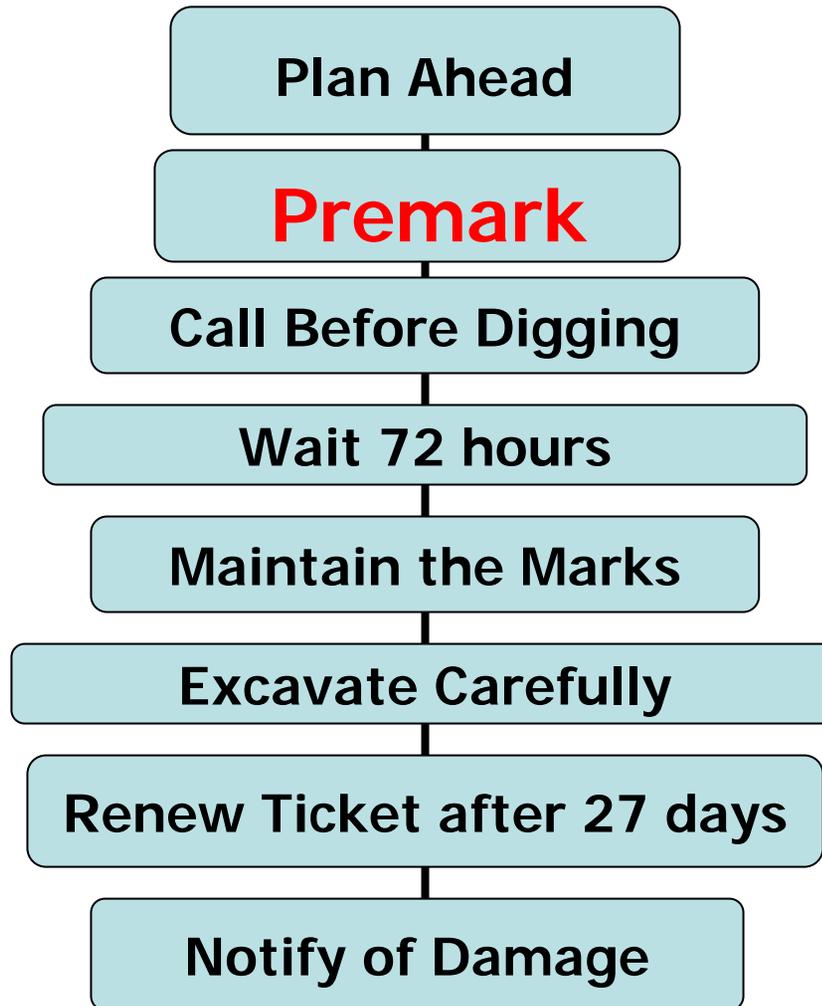
He/she can't

unless...

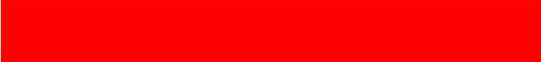
or owner marks them



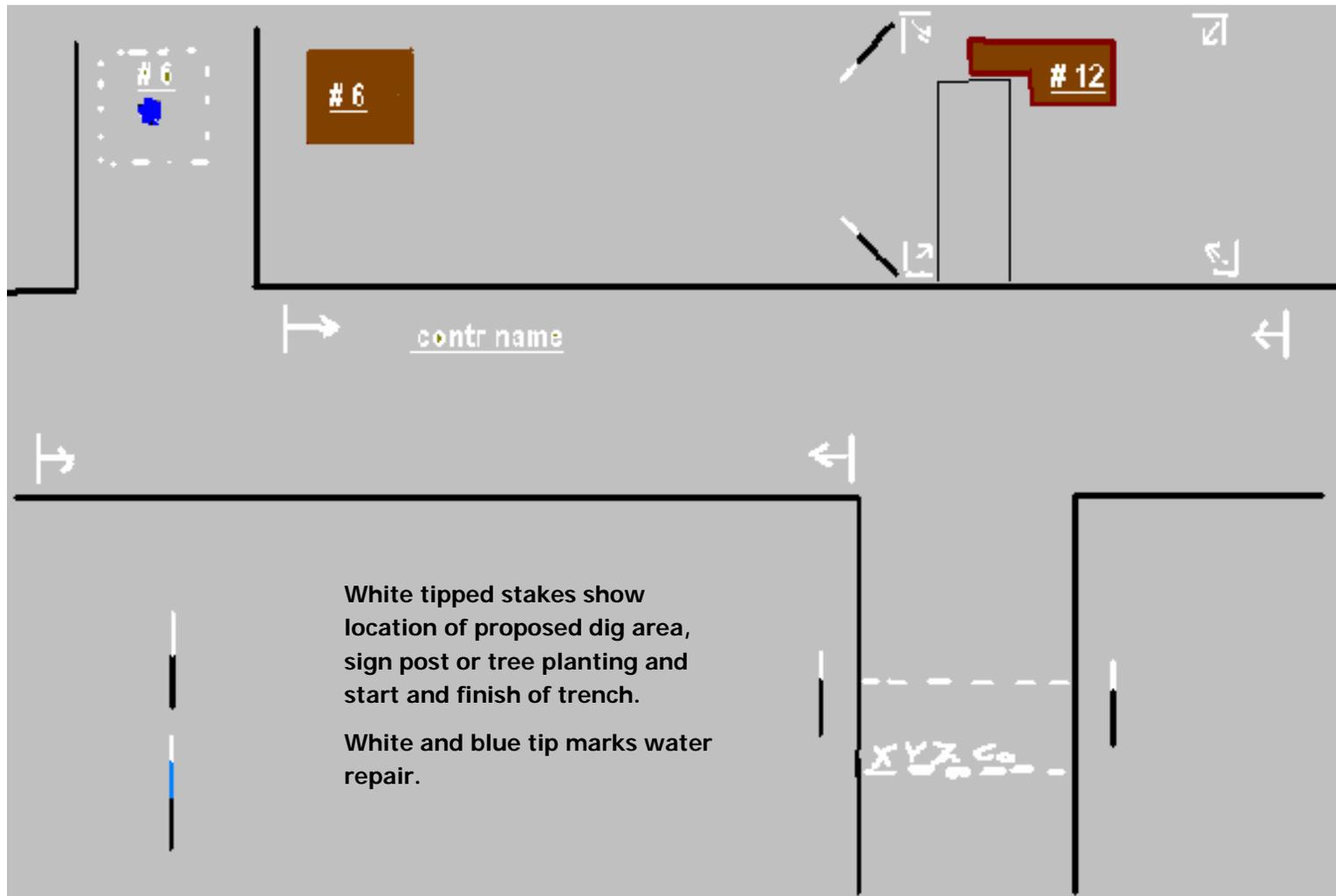
Key Responsibilities of Excavator



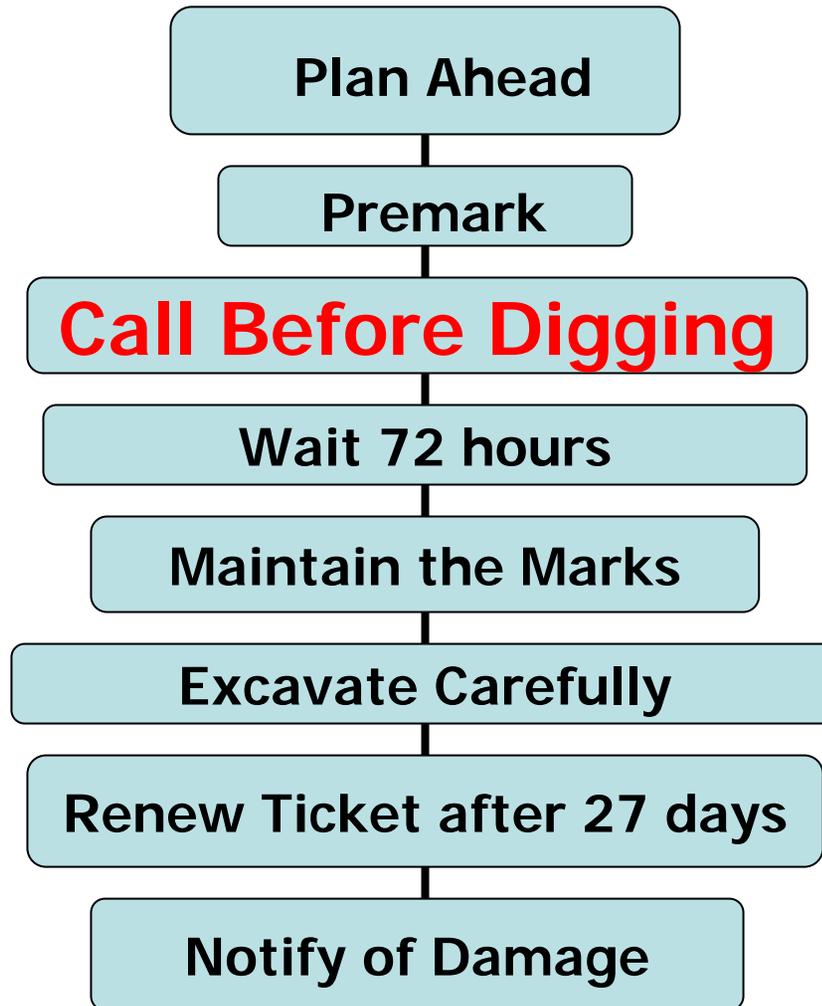
Marking Color Code

	ELECTRIC
	GAS-OIL-STEAM
	COMMUNICATIONS
	POTABLE WATER
	RECLAIMED WATER
	SEWER
	TEMPORARY SURVEY MARKS
	PROPOSED EXCAVATION (PRE-MARK)

Locators must Interpret Premarks



Key Responsibilities of Excavator



Dig Safe® does not notify non-member facility owners

including:

- **Municipal** water, sewer, electric and drainage.
 - Excavators must contact them directly.
- ALSO: Privately-owned facilities should be marked by their owner.



Electric Utilities For Example

Members:

PSNH

N.H. Electric Cooperative

Granite State Electric

Unitil

Ashland Electric Dept.

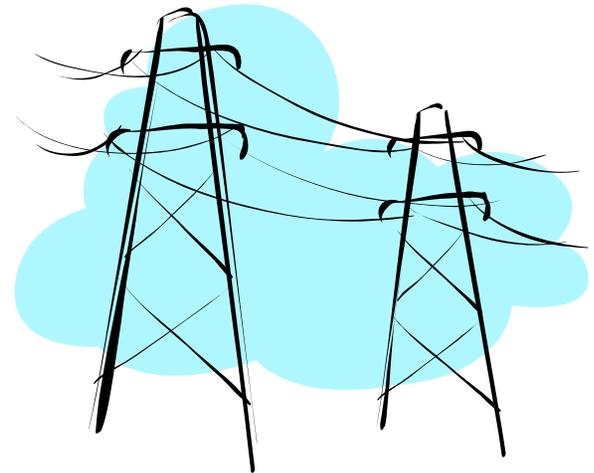
Non-Members:

Littleton

New Hampton

Woodsville

Wolfeboro



Advice to Contractors:

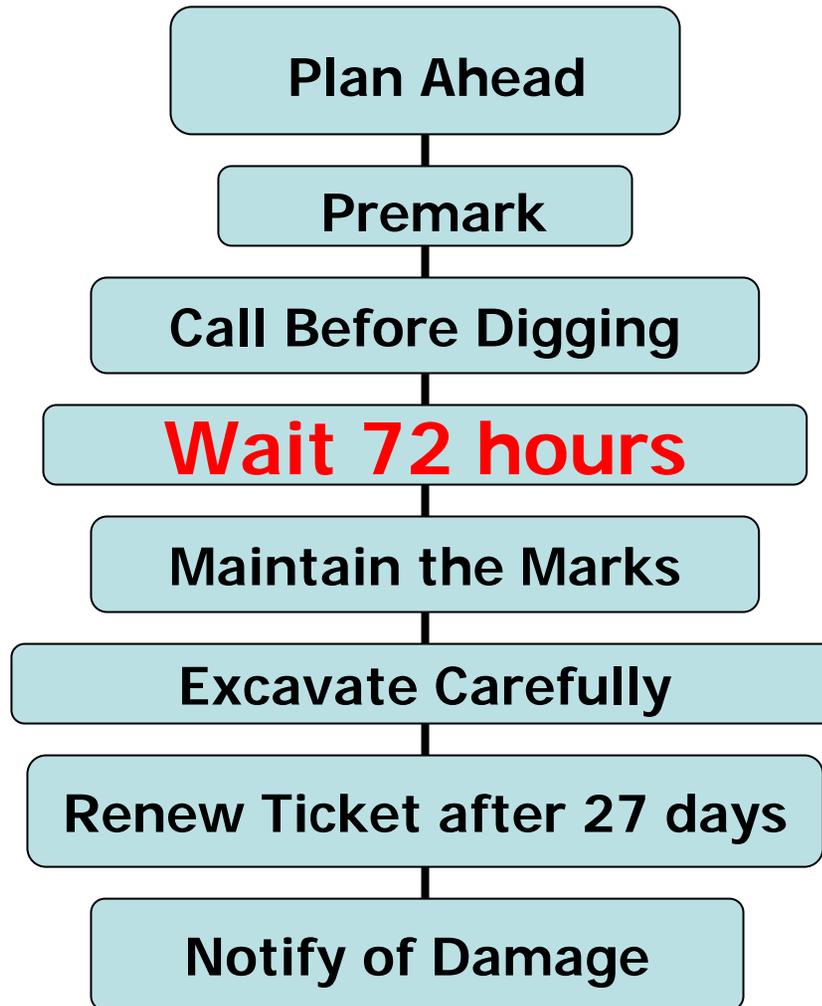
- Ensure that any subcontractor is listed on the ticket if you obtain the tickets

[Puc 805.01(c)(3)]



- 8/11/2005 DIG SAFE SYSTEM, INC. 10:08
- INQUIRY REQUEST
- AI *TNACOM AE *METCAS EN *KEYSPAN HE XNHELEC
- NB XVERIZN ON *ONTARG PS XPBLCSV RJ *VERIZN
- -----
- ***** REGULAR ***** WS-18 MED
- TIME..10:13 DATE..8/11/2005
- REQUEST NO....20053300541 PREVIOUS REQUEST NO. 2005280057
- LATITUDE..... LONGTITUDE..
- STATE.....NEW HAMPSHIRE
- MUNICIPALITY..CONCORD
- STREET.....SOUTH FRUIT ST
- NEAREST CROSS STREET..PLEASANT ST
- WKG AT WALKER BUILDING
- -----
- NATURE OF WORK.....PLANTING TREES
- DEPTH (FEET).....005
- AREA ENCLOSING THE BUILDING FROM SIDEWALKS ON S FRUIT AND PLEASANT TO GULLY ON EAST SIDE AND BALL FIELD ON SOUTH SIDE
- AREAS IS PREMARKED..YES OFFHRS..
- -----
- START DATE.....08/16/2005 START TIME..10:10
- CALLER.....JON
- CALLER TITLE.....FOREMAN
- RETURN CALL.....603-555-1234
- PHONE #.....603-555-2345
- FAX #.....603-555-3456
- ALT. PHONE #.....603-555-4567CELL
- EMAIL ADDRESS...JON.OSGOOD@PUC.NH.GOV
- CONTRACTOR.....OSGOOD PLANTING
- ADDRESS.....18 EAST WEST STREET
- CITY.....CONCORD
- STATE.....NH
- Zip.....03301
- -----
- EXCAVATOR DOING WORK: MASON HAND DIGGING, WALTER'S WATERING

Key Responsibilities of Excavator



If you've waited 72 hrs and find no marks but you plan to dig within 100' of these indicators, contact Dig Safe again!

- **Buildings or lights without overhead service**
- **Risers attached to poles**
- **Transformers on pads**
- **Old "Dig Safe" marks**



If you've waited 72 hrs and find no marks but you plan to dig within 100' of these indicators, contact Dig Safe again!

- Gas meters on buildings
- Drilled or shallow wells, pools, fountains
- Others?
- Call if you are in doubt!





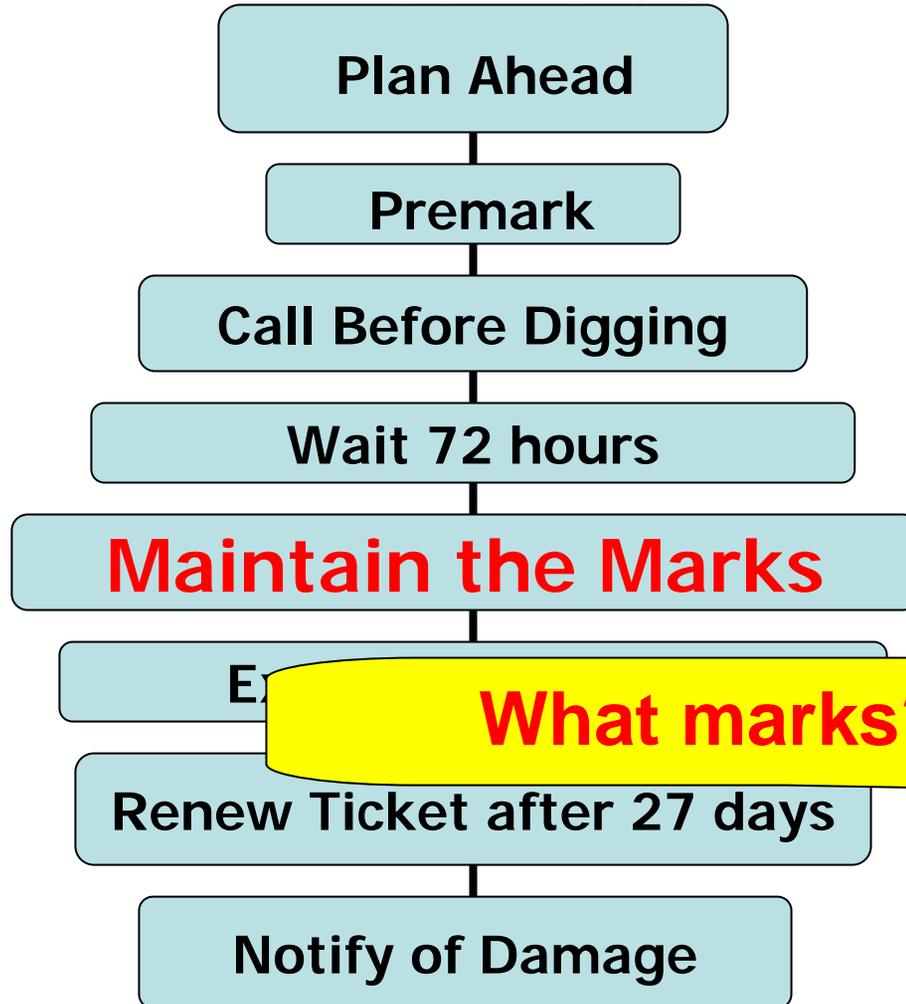
Exception to 72 hr wait:

Emergency Situation

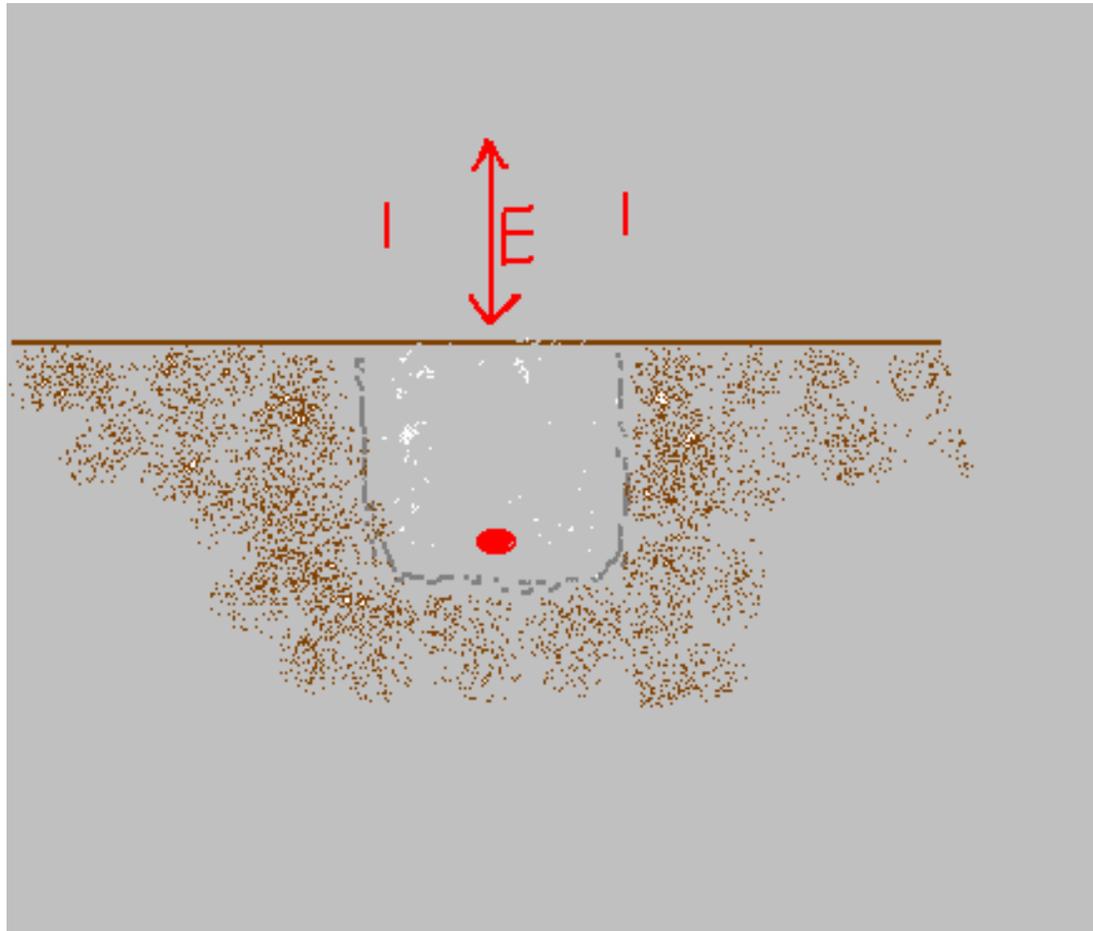
- Puc 802.03 “Emergency situation” means a sudden or unexpected occurrence involving a **clear and imminent danger** demanding **immediate action** to prevent or mitigate loss of, or damage to, life, health, property, or essential public services.
- Be prepared to respond ASAP to Emergency Requests



Key Responsibilities of Excavator



Single Cable or Wire



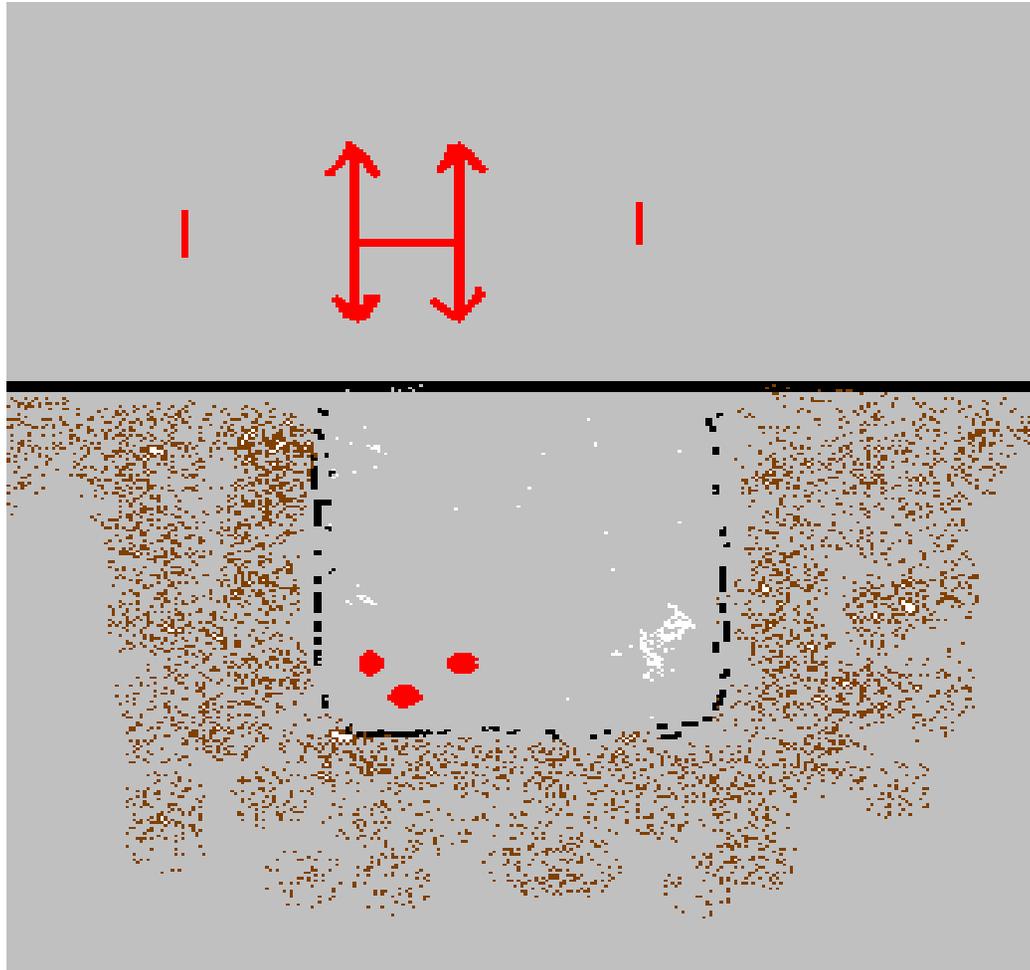
Tolerance Zone Rule

To locate and identify underground facilities, an excavator must hand dig, pot hole, soft dig or vacuum excavate in the ***Tolerance Zone*** except to remove pavement or with the approval of the underground utility owner or operator.



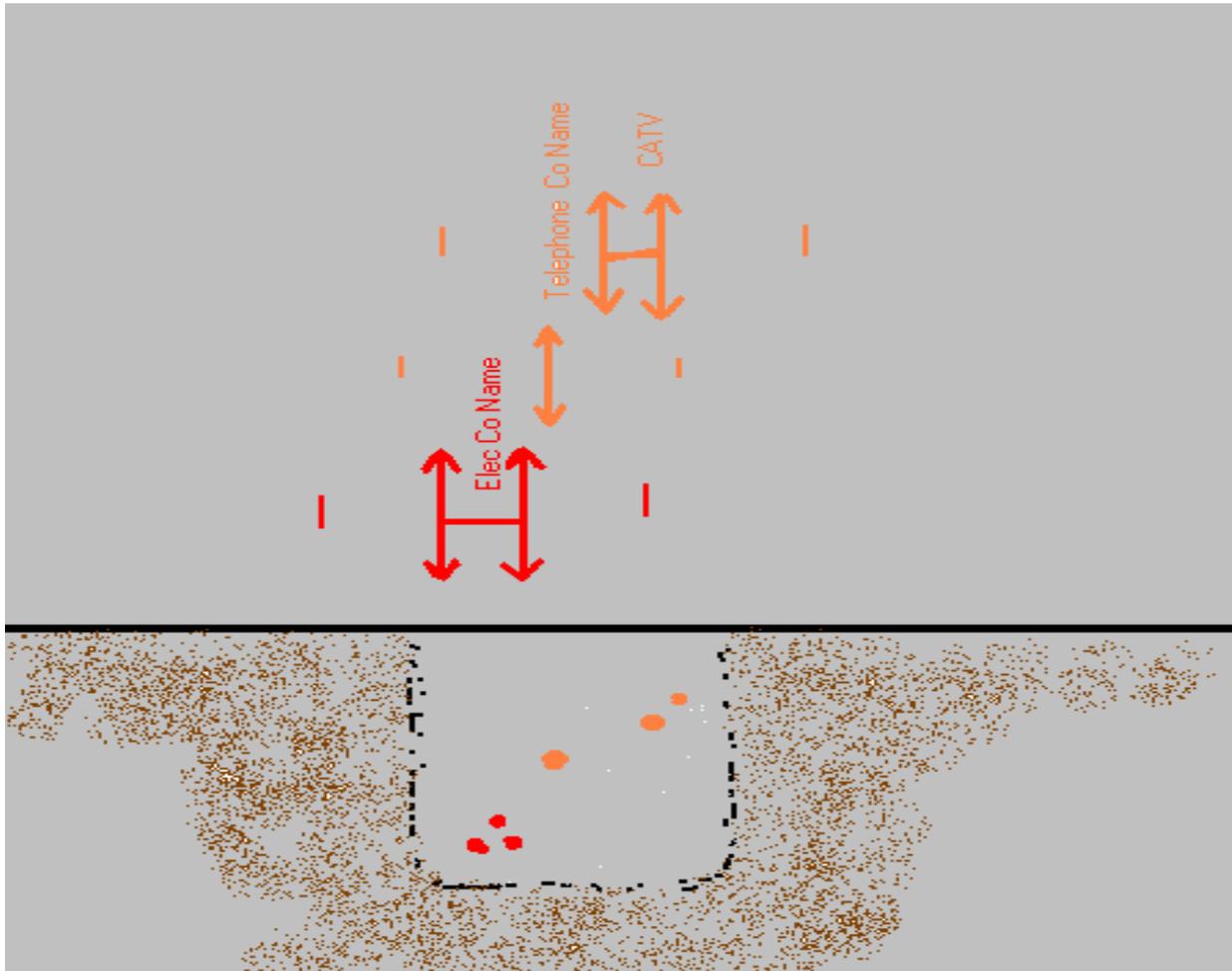
Multiple Cables

Same Utility

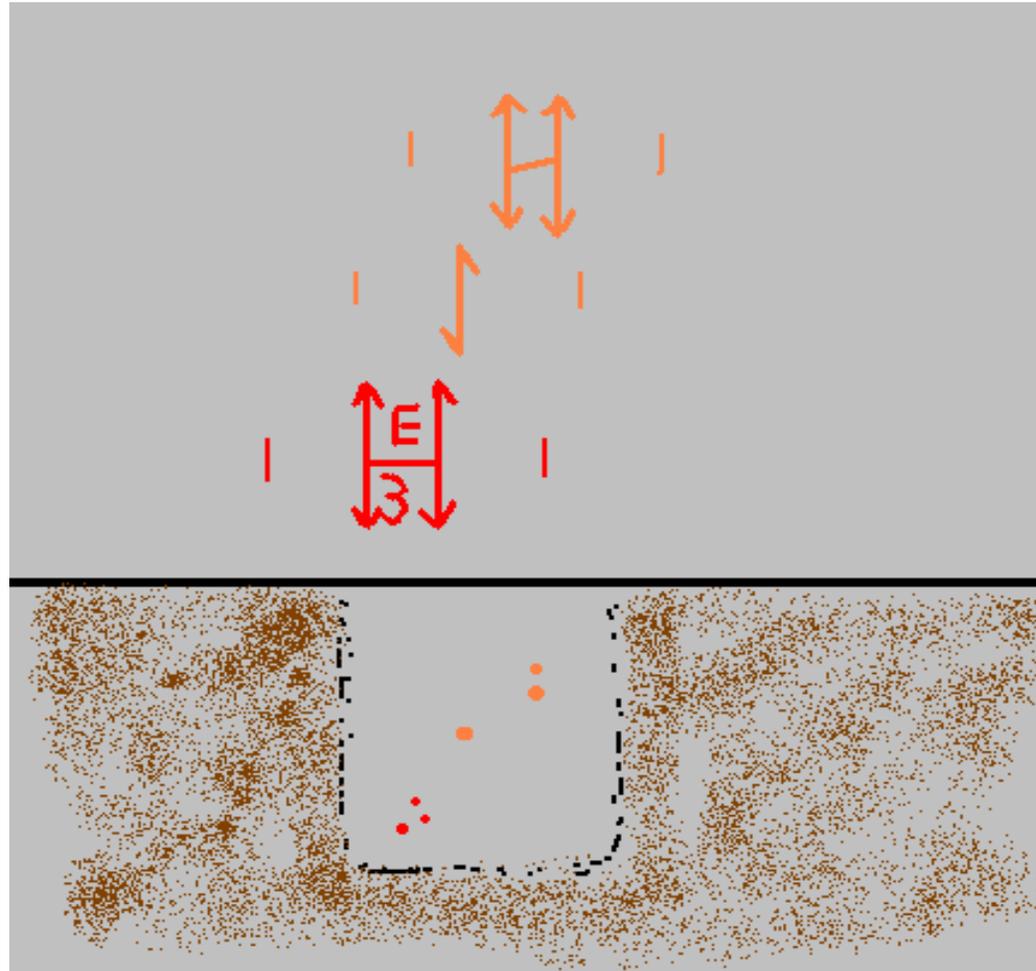


Multiple Cables

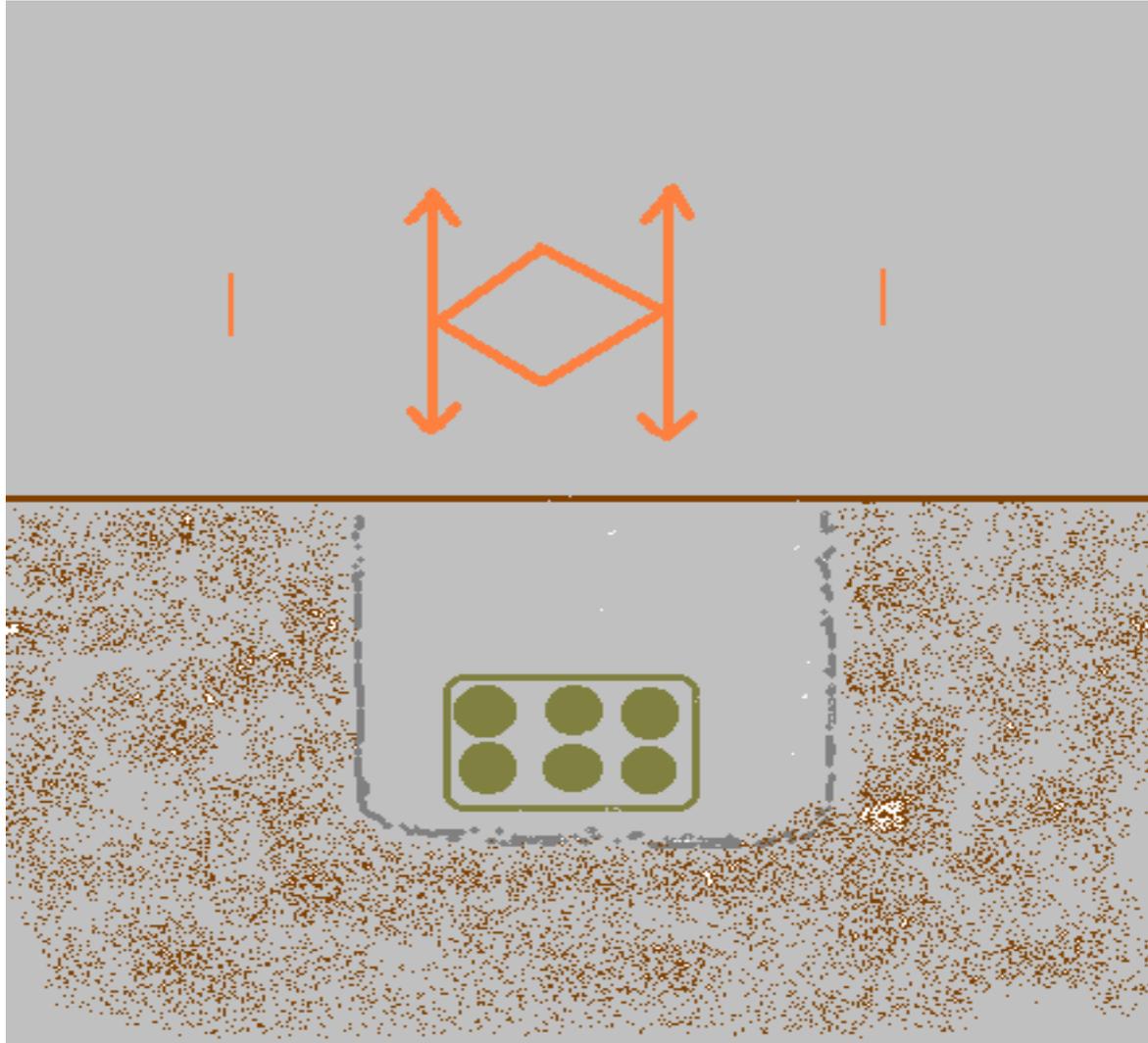
Different Utilities



Number of Cables when known



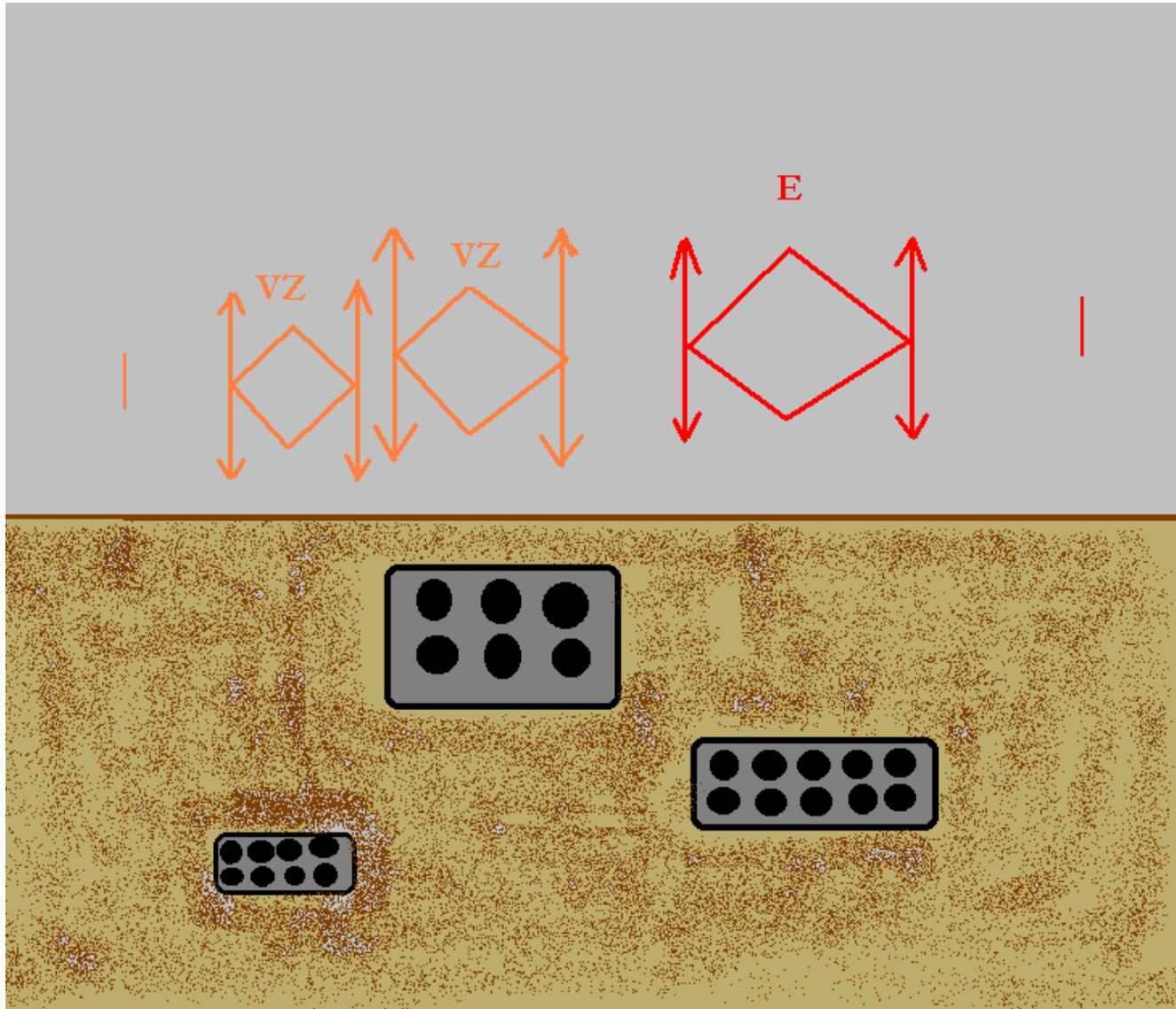
Duct



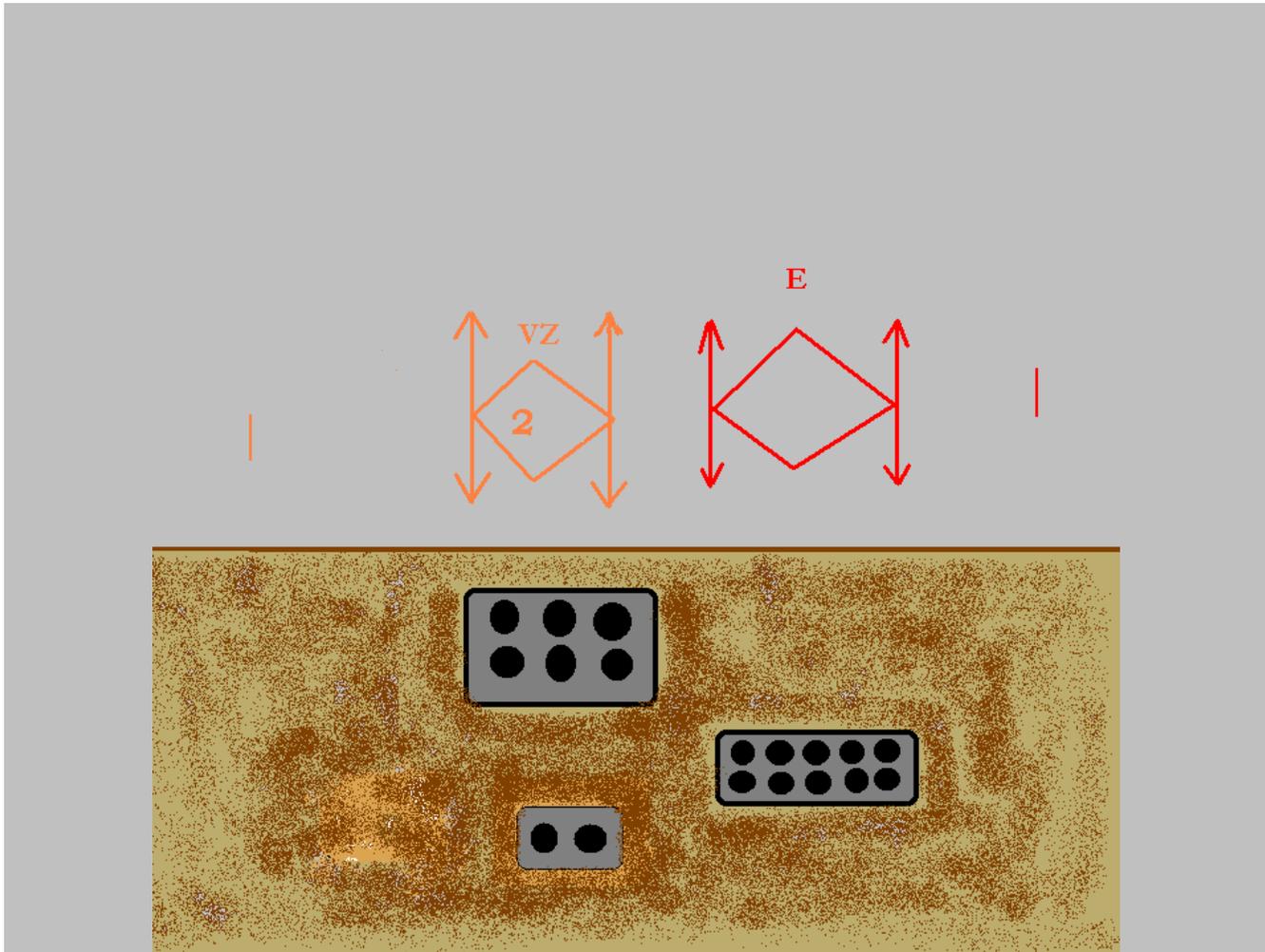
Duct



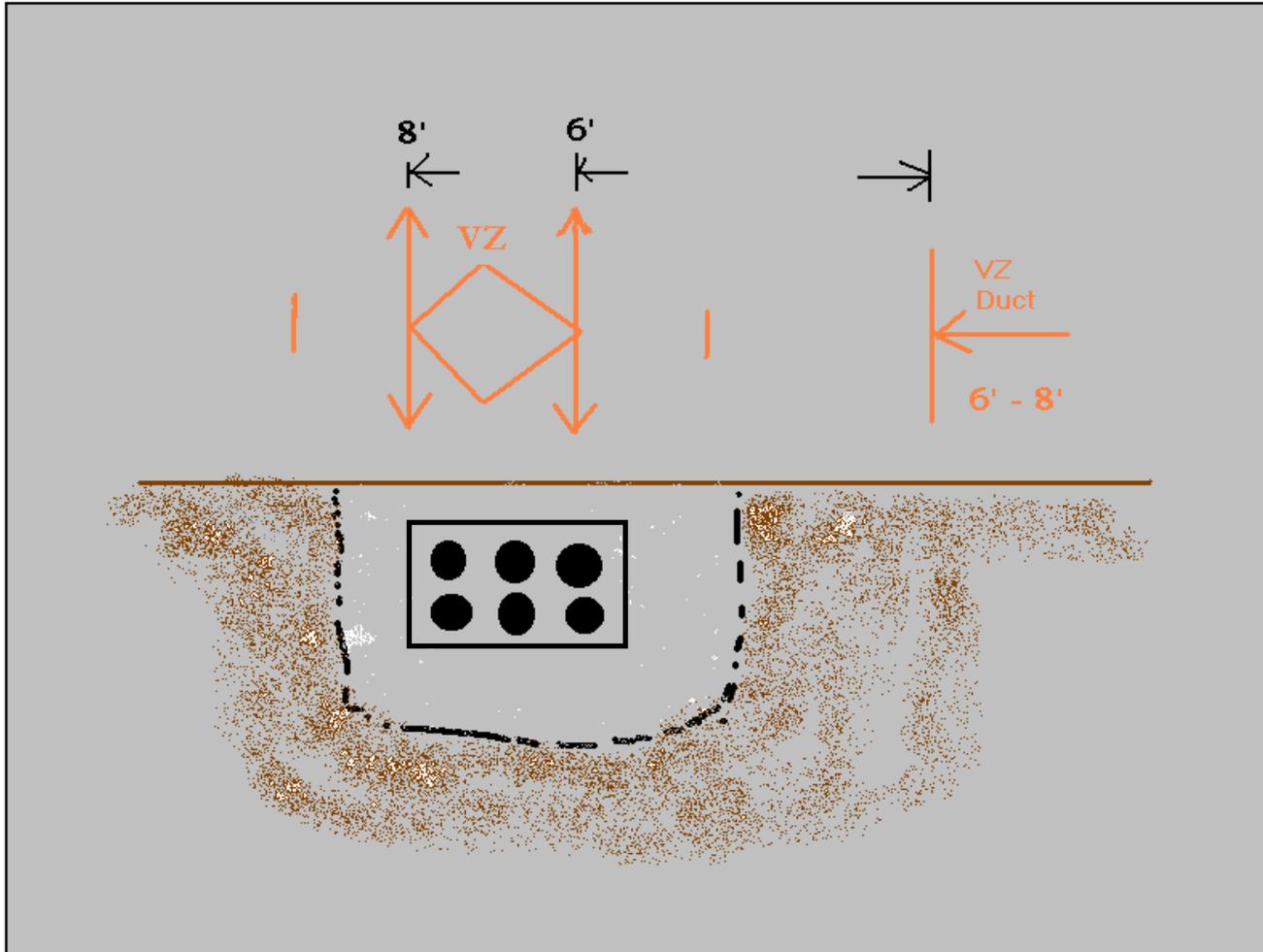
Multiple Ducts



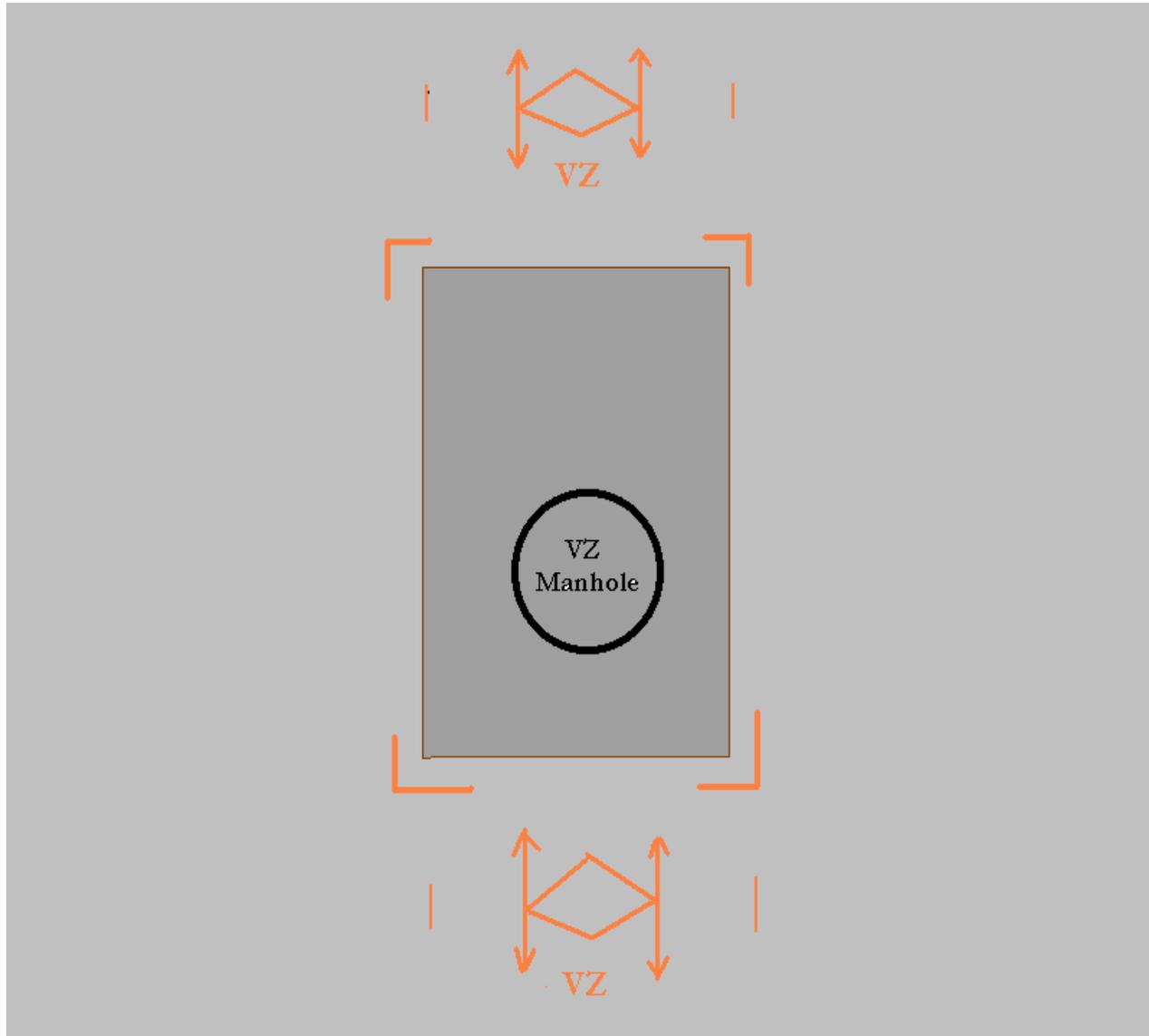
Ducts at Different Depths



Off-set Marking



Manhole / Vault Brackets

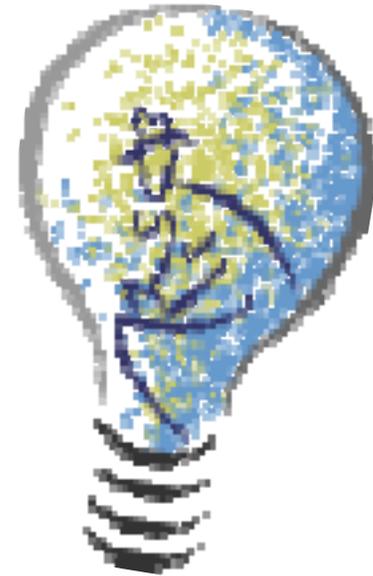


Manhole and Ducts

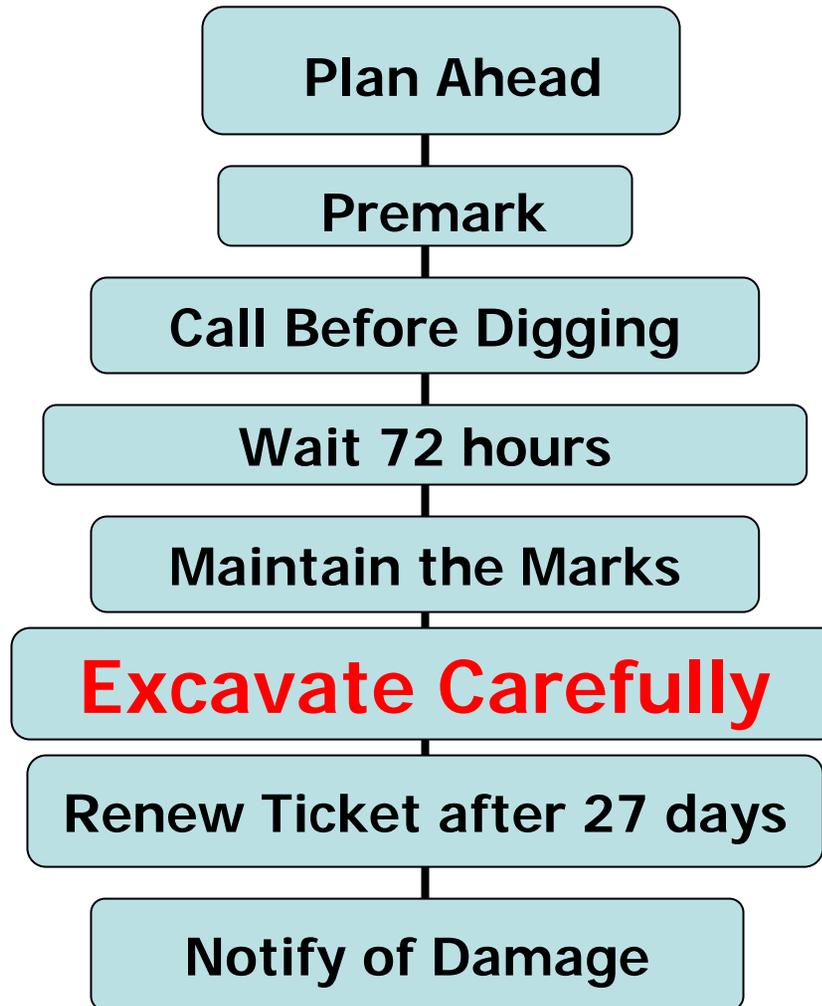


Renewed Tickets

Remember that a ticket renewal in NH is the same as a new ticket requiring the operator to mark the location of its underground facilities again!

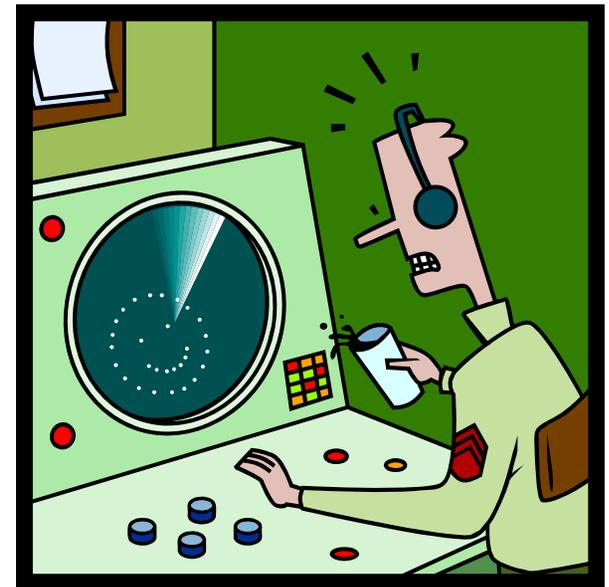


Key Responsibilities of Excavator



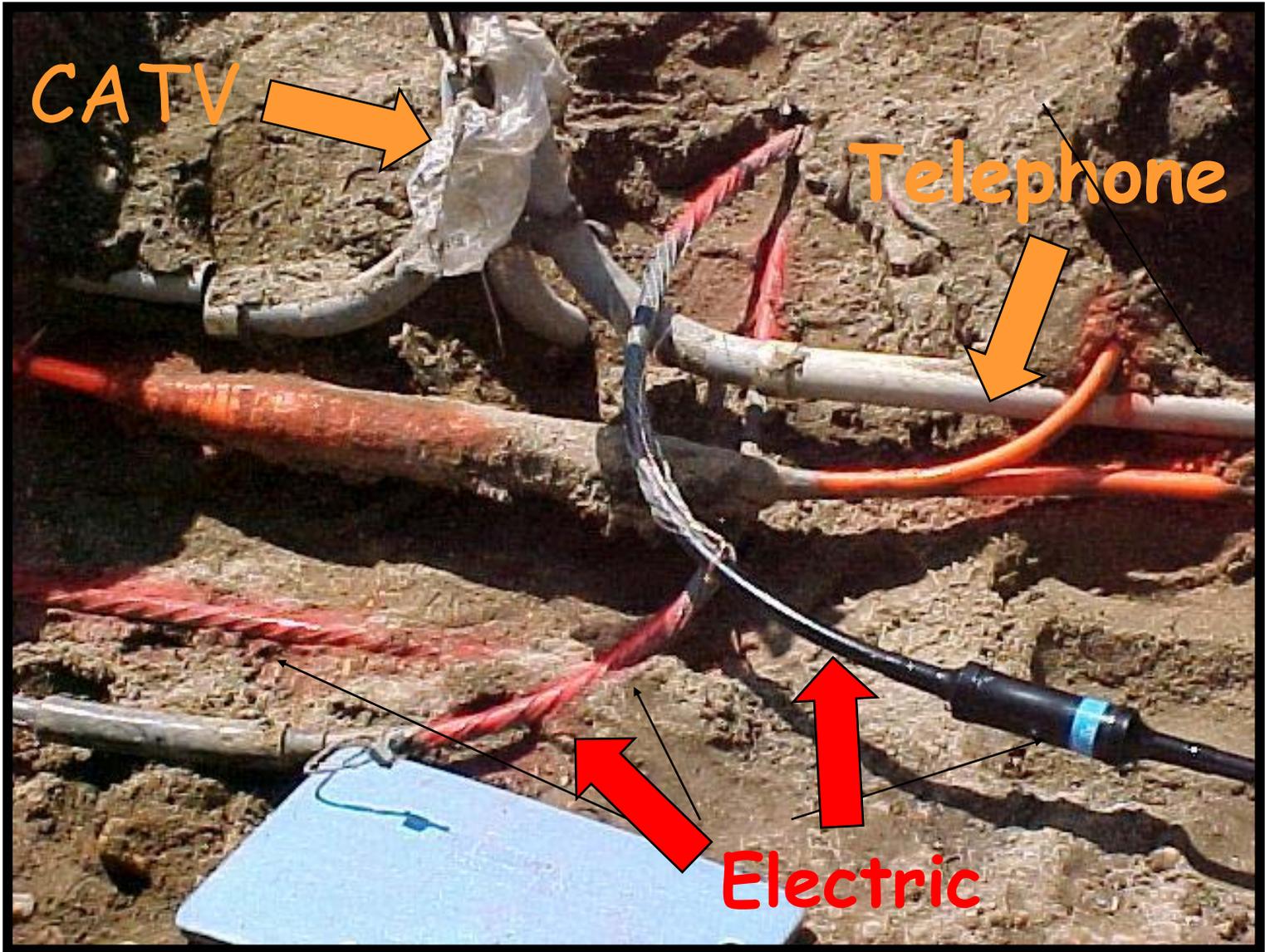
Marking is not infallible

- Limitations
 - Locators can't find some facilities
 - Locators can't determine depth accurately
 - Records are not reliable
 - The deeper the facility, the less accurate the marks
 - Flags may be moved
 - Marks may have disappeared









CATV



Telephone



Electric



Key Elements for a **SAFE DIG**

Plan Ahead

Premark

Tickets are valid for only 30 days after the Dig Safe ticket is issued. A new call requires a new mark-out.

Maintain the Marks

Excavate Carefully

Renew Ticket after 27 days

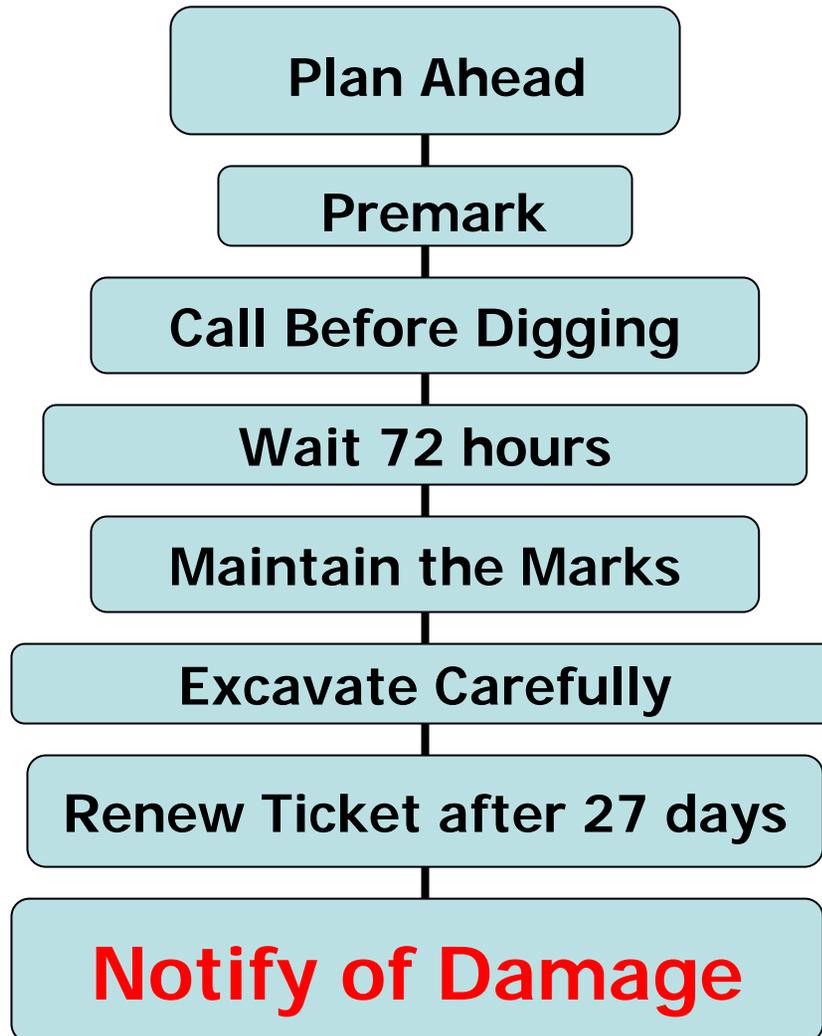
Notify of Damage



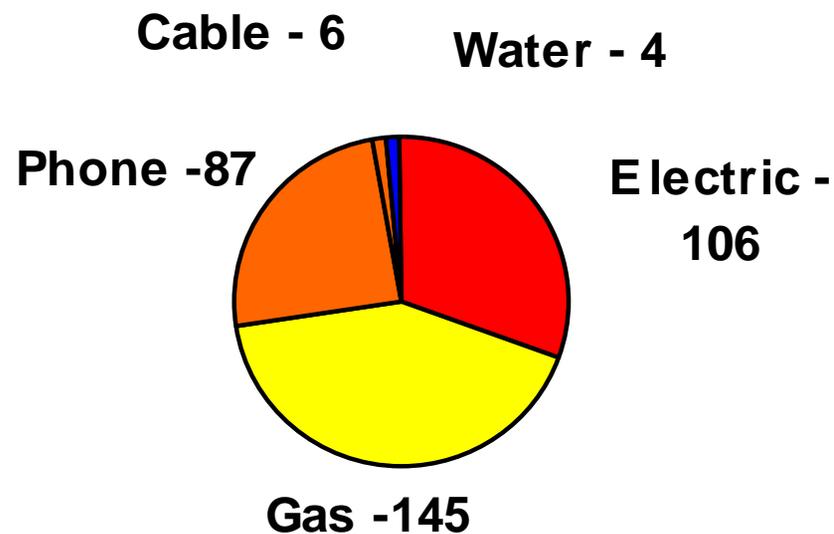
Dig Safe Ticket Schedule

	J	U	L	Y	1 Call Dig Safe	2 X
3 X	4 X Holiday	5	6	7 Ticket effective	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27 Call for new Ticket	28	29	30 Ticket Expires

Key Responsibilities of Excavator



Incidents Reported to the N.H. Public Utilities Commission 2004



Rochester

November, 2001

**Drilled through
high pressure
main.**





Where excavator drilled.

White premark where excavator planned to drill.



Laconia

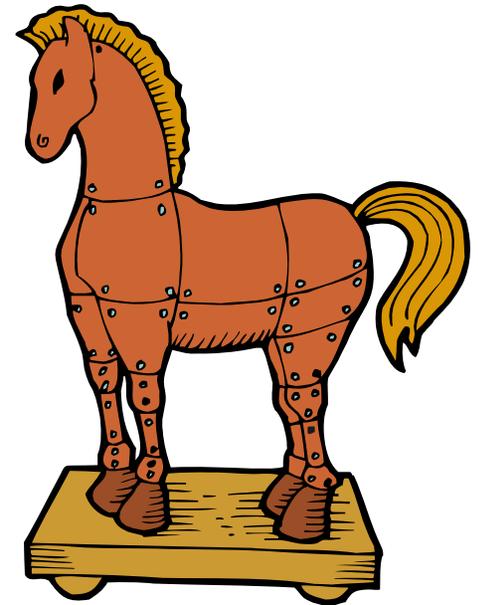
**Excavator
drilled directly
on the gas
utility line
marks.**

The Depth Myth



Utility locators *do not* determine depth.

Don't count on *any* amount of cover.





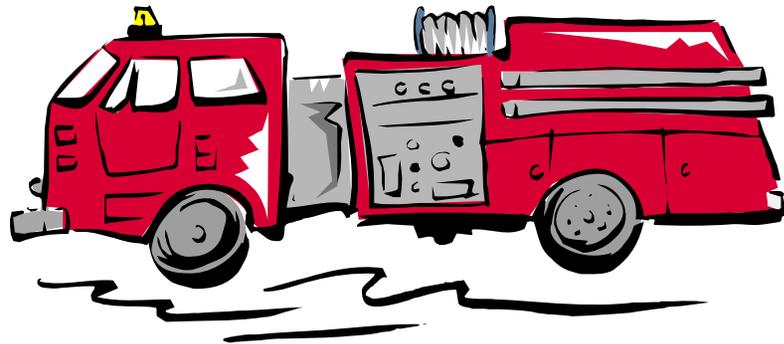
The Reality

- Slopes change
- Contours change
- The installed protection may not be enough to protect a line
- Shallow depth will never be an excuse in a “Dig Safe” violation case



If there is an incident...

- Call 911 if appropriate
- Evacuate nearby structures if necessary
- Repair facility when safe, if it's yours
- Call 888 DIG-SAFE for emergency ticket if excavating



If there is an incident

(con't)

- Take photos or video of the scene (best after marking facility)
 - Your marks
 - Any damage
 - Other conditions
- Get witnesses' names
- Take notes
- File E-26 Report with PUC



Last Thoughts!

Join Dig Safe Systems, Inc.

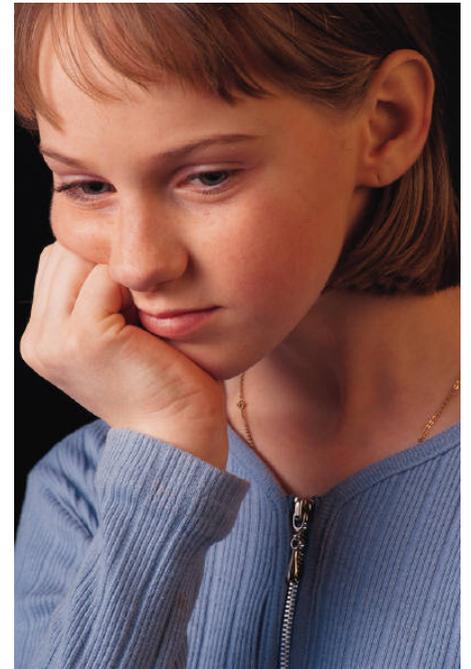
Respond to locate requests within 72 hrs (not counting weekends or holidays).

Document facilities so you can clearly mark them.

Be prepared for remark requests.

Be prepared to respond to emergency calls.

File E-26 reports monthly.



**Thank You
and
Good Luck!**