EXCAVATION

SAFETY GUIDE & DIRECTORY

811 Know what's below. Call before you dig.

ISSUE NUMBER 14

Pipeline Edition

provided by

Pipeline Association *for* Public Awareness

2019

Pipeline Safety Guidelines

Damage prevention is a shared responsibility. Digging safely begins with a call to your One Call System. Most state laws require this call, and it is normally free. Excavation information is then sent by the One Call System to operators of underground facilities near your excavation. The operators will mark the location of their facilities in accordance with the applicable state requirements. Emergency contact information should be obtained directly from the operator or from nearby pipeline markers.

Pipelines are an essential part of our transportation system. We depend on them every day to transport gas and liquid products to our homes and businesses. Pipeline companies perform ongoing maintenance to ensure the reliability of their systems. Local communities also play a vital role in keeping our Nation's energy infrastructure safe and secure. Individuals who observe any unusual conditions or suspicious activity near a pipeline facility should immediately report these to local law enforcement or the pipeline operator. Following these guidelines will help prevent pipeline emergencies and keep pipelines the safest method for transporting gas and liquid products.

Know the hazards

- Natural gas and other petroleum products will ignite and burn.
- If exposed to the skin, serious irritations may occur.
- Escaping gases can displace oxygen.

Recognize unsafe conditions

- Pipelines that are: leaking, damaged, insufficiently supported, exposed to high heat, or threatened by natural forces are all unsafe conditions.
- Any damaged or weakened pipeline must always be checked by the pipeline company for remaining strength. Even very minor damages can cause future leaks or ruptures and must be investigated.
- Pools of liquid, blowing dirt, hissing sounds, vapor clouds, gaseous odors, bubbles in standing water, dead vegetation and frozen soil or ice next to pipelines are all signs of a pipeline leak and should be treated as an emergency.

Respond immediately

- Immediately leave the area while avoiding any action that may cause sparks. Abandon all equipment and get a safe distance away.
- Call 911 and then immediately notify the pipeline company.
- Keep others away until emergency officials arrive. Stay upwind, do not attempt to operate pipeline valves or extinguish any pipeline fires.

Guía de Seguridad de Tuberías

La prevención de daños es una responsabilidad compartida. Excavar con cuidado empieza con una llamada a su "One Call System" local. La mayoría de las leyes estatales requieren esta llamada y normalmente es gratis. Información sobre la excavación es enviada por el "One Call System" a los operarios de las instalaciones subterráneas que están cerca de su excavación. Los operarios marcarán el lugar donde tienen sus instalaciones en acuerdo con los requisitos estatales. Información sobre contactos de emergencia puede ser obtenida directamente del operario o de las señales en los gasoductos u oleoductos.

Las tuberías son parte esencial de nuestro sistema de transporte. Dependemos de ellas a diario para transportar productos de gas y líquido a nuestros hogares y negocios. Las compañías de tubería realizan mantenimiento para asegurar la confiabilidad de sus sistemas. Comunidades locales también pueden jugar un papel importante en mantener segura la infraestructura nacional de energía. Individuos que observen cualquiera condición inusual o actividades sospechosas cerca de facilidades de acueductos debe reportarlo inmediatamente a las autoridades locales o al operador del acueducto. Siguiendo las pautas antedichas ayudará a prevenir emergencias de tubería y garantizar que las tuberías son el método más seguro para transportar productos de gas y líquido.

Conozca los peligros

- Gas natural y otros productos petróleos pueden encenderse y quemar.
- Si expuesta a la piel, serias irritaciones pueden ocurrir.
- Gases escapados pueden desplazar el oxígeno.

Conozca las condiciones peligrosas

- Condiciones peligrosas son: gasoductos u oleoductos que tienen escapes, están dañados, el soporte es insuficiente, están expuestos a temperatura muy alta, o amenazados por las fuerzas de la naturaleza.
- Cualquier gasoducto u oleoducto dañado o frágil siempre debe ser revisado por la compañía que los dirige para determinar la resistencia restante. Incluso daños menores en los gasoductos u oleoductos tienen que ser investigados porque pueden causar escapes o rupturas en el futuro.
- Indicios de un escape en un gasoducto u oleoducto son: charcos de líquido, tierra soplada, sonido de silbidos, nubes de vapor, olores a gas, burbujas en agua estancada, vegetación completamente seca, y tierra congelada o hielo alrededor de ella. Todos estos indicios deben ser tratados como una emergencia.

Actúe de inmediato

- Aléjese del área inmediatamente y evite cualquier acción que pueda causar chispas. Abandone todo el equipo y manténgase a una distancia segura.
- Llame al número de emergencia 911 y luego de inmediato notifique a la compañía que dirige el gasoducto u oleoducto.
- No deje que otras personas se acerquen hasta que llegue el personal de emergencia. Manténgase contra el viento y no intente manejar las válvulas ni extinguir incendios en el gasoducto u oleoducto.

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PIPELINE EDITION

BEFORE YOU DIG

What you need to know and what you need to do before you dig.

The Excavation Safety Guide is designed to be a reference for readers to use all year long. The articles are concise, to the point and focus on current industry trends and technologies. The resources include the CGA Excavation Best Practices, a complete One Call Center listing along with the state laws and provisions, a pull-out Emergency Response poster and much more. Protecting buried infrastructure is becoming more of a challenge every day and this guide will help you navigate through these challenges.

The Excavation Safety Guide Pipeline Edition is published annually by: **Pipeline Association for Public Awareness**, 16361 Table Mountain Parkway Golden, CO 80403 www.pipelineawareness.org

FREE
Excavation Emergencies Poster

LOOK ON PAGE 31 TO FIND YOUR COMPLIMENTARY PULL-OUT POSTER with complete information on how to recognize and respond to the hazards inherent in utility excavation. **Provided by Pipeline Association for Public Awareness**

FEATURING CURRENT PRACTICES AND TECHNOLOGICAL INSIGHTS FROM INDUSTRY LEADERS!

LOCATING AND MARKING

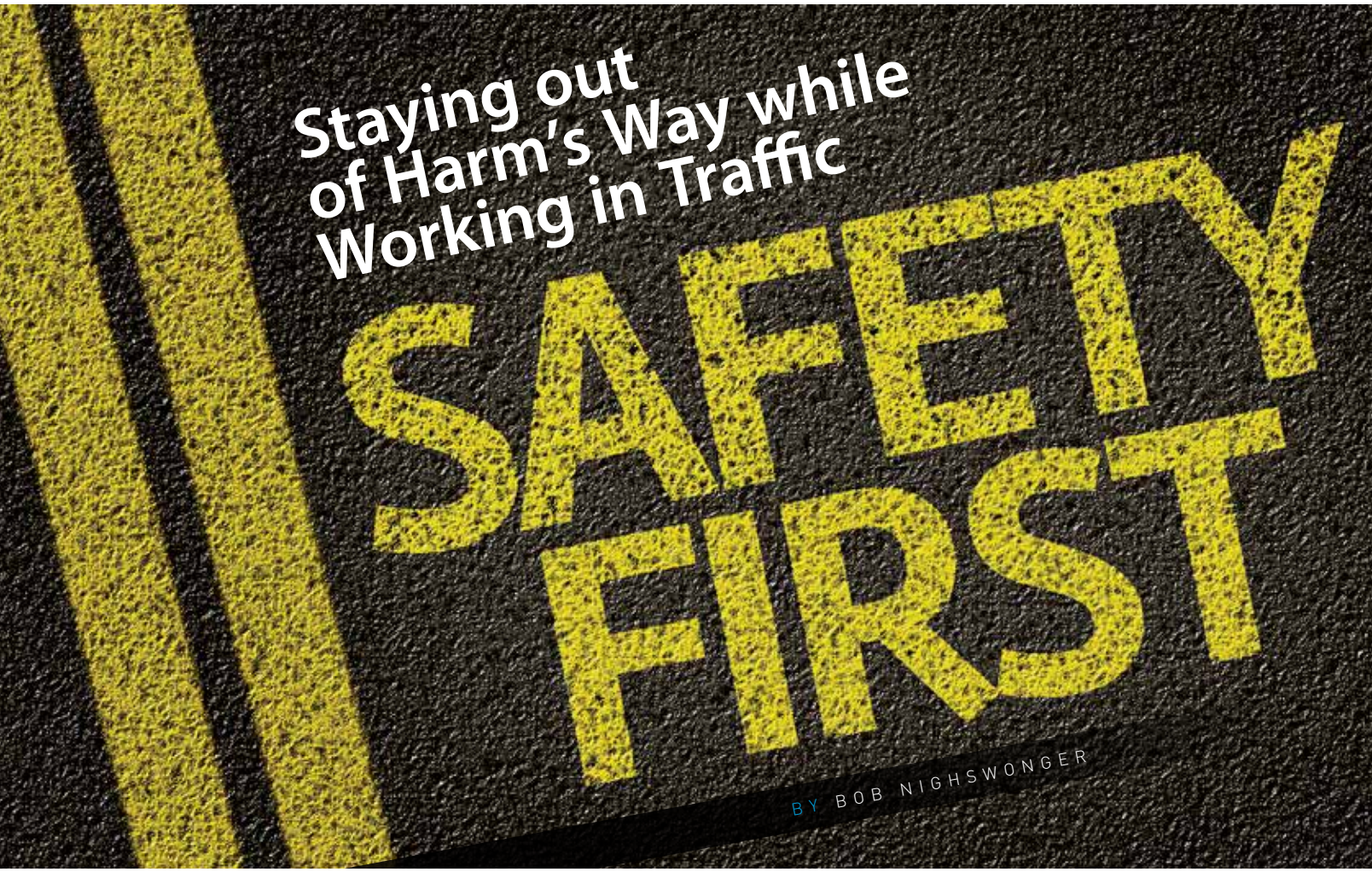
The importance of accuracy in locating and marking buried facilities.

DIGGING SAFELY

Technologies and techniques to stay safe and avoid damage.

RESOURCE DIRECTORY

A collection of invaluable information and access to resources.



Staying out of Harm's Way while Working in Traffic

BY BOB NIGHSWONGER

Many jobs require a person to work in the roadway or on the road side. According to OSHA statistics, nearly half, 40% of road way construction fatalities were caused by workers struck by moving vehicles and equipment. During my years of line locating, I have painted many miles of line buried beneath the road. Unlike the movie character Austin Powers, "Danger" should not be your middle name when working next to or in the middle of the road. I speak from personal experience when I say there is literally danger around every corner when marking lines buried beneath busy roadways.

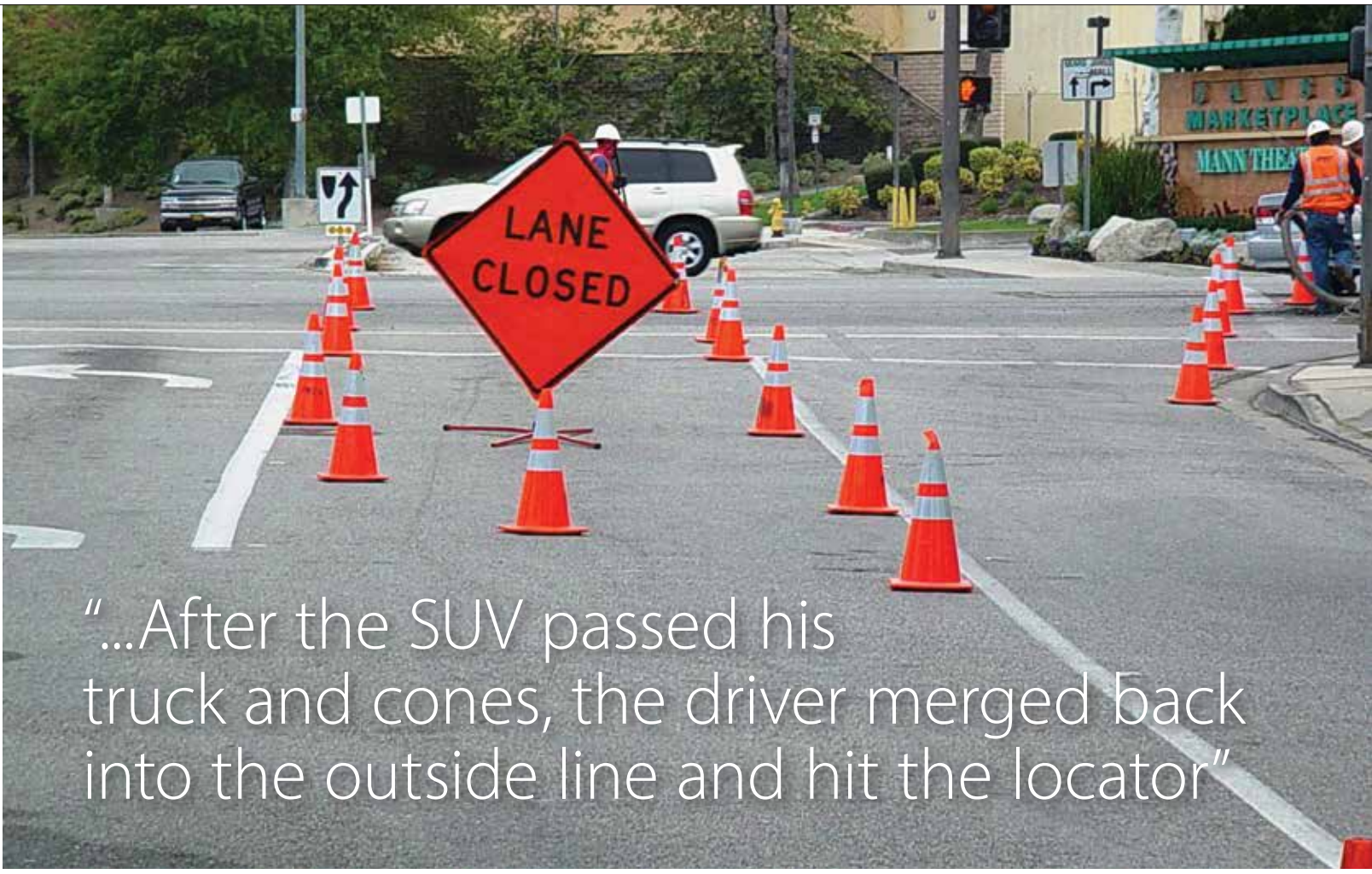
I was once hit in the neck with a rock that was propelled by a tire when a car passed me by. In that instance, I was in the wrong place at the wrong time. I have also been hit in the side of my face by a cup of soda thrown by a passenger of a random car driving by. I'm sure that guy though it was funny but I came to realize a new level of stupid that day. I have never been hit by a car but have had several close calls. Luck has played a big part in my survival but I like to give credit to the skills I developed playing dodge ball, which is a long lost sport. In dodgeball, you keep your eye on the ball and dodge, dip, dash when you need to avoid getting hit by the ball.

A few of my near misses were my own fault. My closest was when focusing on the task at hand, I was distracted by the readings of my line locating equipment and stepped into a lane of traffic. Luckily the driver saw me and swerved to miss. I was so close that the side mirror of the car passed between the screen on my locating equipment and my eyes. In this case, I took my eye off the dodgeball. I had several other close calls where drivers where distracted or in a hurry.

During a training event a few years ago, a water line locator in the class told us all a bone-chilling survival story. He had been hit in the back by a small SUV and became wedged beneath the vehicle. In a moment of

panic, the driver drug him for a little over 150 feet while slowing down and speeding up twice in attempts to shake him from beneath her vehicle before finally coming to a stop. He survived and recovered; and returned to line locating with a new perspective on safety in traffic.

In the survival story above, the locator told us he made the mistake of using only three cones placed beside and behind his truck to merge traffic to the middle lane so he could mark his water line in the outside lane. He was ahead of the cones marking the lines. After the SUV passed his truck and cones,



"...After the SUV passed his truck and cones, the driver merged back into the outside line and hit the locator"

the driver merged back into the outside line and hit the locator.

Make yourself as visible as possible. Use your PPE to make yourself visible. Use your traffic cones, flashers, beacon lights and whatever else you have available to safely merge traffic around your work area when locating along the road.

Plan Ahead. Pick the best time of day to mark lines in a traffic way. When you read your tickets in the morning, determine which jobs will require road marking and route those jobs for a good time of day. It has been my experience that during a normal workday, traffic is considerably lighter between the hours of 9am to 11am and from 1:30 to 2:30pm. If you have a jobs that involves marking on a busy road, try to schedule it between those hours. Don't take unnecessary risk. In heavy traffic it may be best to call for assistance to get a person onsite as your traffic spotter to cover your back.

Safety Scan. During your visual site inspection, view your work area like a playing field. Look sideline to sideline and goal line to goal line to determine your traffic control needs. Consider any special access to manholes and valves that may need to be opened for access to connection points to the utility.

Keep your eye on the ball. Years ago, when marking the road we mainly worried about drivers just not seeing us. In today's world we have so many drivers distracted by their cell phones. Drivers not only talking on the phones but those who also post selfies, send or read texts and emails or even watch a movie while cruising down the road. Plan your locate so you can walk towards traffic when marking lines in the road, keeping you facing the oncoming traffic. Just like the game, you want to keep your eyes on the oncoming dodgeball. You may also want to consider using a paint stick that will allow you to remain upright when tracing and marking lines in the road. If you're forced to bend over with a can of paint in your hand to mark the line, you are taking your eyes off the traffic. Some locators call this spraying and praying. If you must bend over to paint and turn away from traffic, this is a good time to have a fellow employee onsite to be your traffic spotter and watch your back.

With repetition can come complacency and it takes great self-discipline to make safety your first priority. Don't wait until you have an accident or a close call occurs before you think safety first. Be safety minded and good luck. Your best safety tools are your eyes and your brain when working in the roadway. Always keep an eye out for crazy drivers and never underestimate the level of stupid that could be behind the wheel. ESG

Bob Nighswonger is President of Utility Training Academy. He can be reached at bob@utasearch.com.

Pre-Excavation Checklist Before EVERY Excavation

IN THE OFFICE

- ❑ Review all drawings, plans, engineering blueprints for existing buried facilities
- ❑ Proposed excavation area has been marked in white paint and/or flags
- ❑ Call 811 at least 2-3 business days before excavation (check your state One Call laws)
- ❑ Locate ticket number is posted at the work location
- ❑ Onsite meeting scheduled with all high profile facilities in locate area (gas/oil pipelines, high-voltage cables, fiber optic)

ONSITE

Complete a pre-excavation walkthrough of the entire jobsite and adjacent areas

Visual Inspection of Jobsite:

Permanent markers:

- ❑ Signs or marking posts
  - Pavement markers (stamped nails, pavement decals, A-tags™)
  - Surface markers
- ❑ Other surface signage for landscaped areas
- ❑ Locate marks
- ❑ Consult any maps or field sketches of the location
- ❑ Identify all services to buildings such as:
  - Gas meters
  - Farm taps
  - Pipeline valves
  - Cable pedestals
  - Electric cables
  - Water valves
  - Telephone closures
- ❑ Look for evidence of trench lines from previous excavation
- ❑ Look for cleared pipeline ROWs
- ❑ Talk with the property owner or general contractor to identify potential private facilities that may not be marked:
  - Lighting
  - Outbuildings
  - Pools/Spas
  - Irrigation
  - Sewer laterals
  - Propane tanks
  - Communications lines

Document of Jobsite:

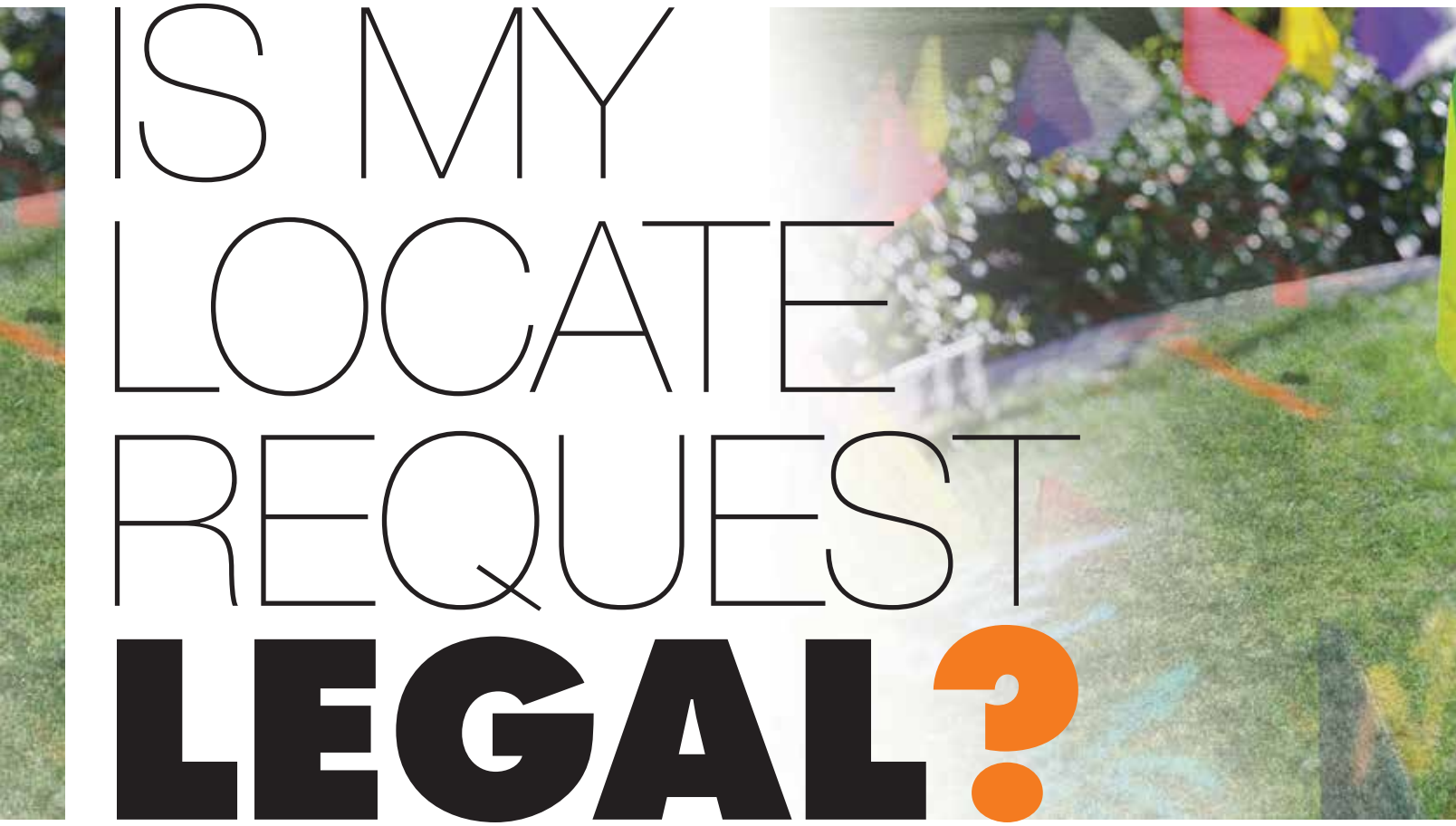
- ❑ Compare actual jobsite to One Call ticket
  - One Call ticket covers the scope of the work
  - One Call ticket "Work to Begin" date is valid
  - All utilities have responded
  - All facilities are marked within the excavation area
- ❑ Photograph the jobsite
  - Locate marks and flags from 360° at varying distances for perspective
  - Permanent signage and location relative to the dig area:
    - Note location, height, and operator of overhead lines
    - Note all required safety signage
- ❑ Video and/or sketches where pertinent

BEFORE YOU DIG

- ❑ Review safety information with anyone working the job
- ❑ Confirm with facility owner vacuum or hydro excavation is scheduled for all pipelines impacted
- ❑ Locations for hand digging within the tolerance zone are noted
- ❑ Representatives for all critical facilities are present
- ❑ Emergency equipment available when hazardous atmospheres are potentially present
- ❑ List of all emergency contact numbers for assets in and adjacent to the dig zone is readily available
- ❑ The location and route to the nearest hospital is known by onsite supervisors

BY JAMES J. PROSZEK

IS MY LOCATE REQUEST LEGAL?



According to the 2017 DIRT Report, the root cause category of "Notification Practices Not Sufficient" accounted for one percent of all reported damage incidents in 2017. This category covers events where the excavator provided, or attempted to provide, notice to the One Call center, but something went wrong, such as: (1) the excavator gave an incorrect description of the work site which led to no marks at the actual work site; or (2) the excavator did not provide notice sufficiently in advance of the beginning of excavation or began work before the locate marks were completed.

For the years 2015, 2016 and 2017, this category has typically accounted for approximately one percent of the total damages in each year. While one percent does not seem like a large number, this category still was the root cause of 5,645 reported damage incidents in 2017.

I. GENERAL CONSIDERATIONS

The starting point to determine whether a locate request is "legal" are the statutory provisions in the "One Call" law of the state in which the excavation is to be performed. However, familiarity with the requirements of the statutes alone is not sufficient. In a number of states, including New York and Oregon, the One Call statutes themselves contain only a bare bones description of excavation requirements. The detailed requirements, including notice requirements, are found in the regulations promulgated by the governing administrative agency in such states.

Moreover, a general precept of negligence law is that simply complying with the letter of the law is not sufficient. If a reasonable professional engaged in excavation would go beyond the requirements of the statutes, i.e., follow the procedures set forth in reasonable and accepted industry standards and practices, an excavator may still be found to be liable even if he complied with the requirements of the statutes, but not with additional requirements imposed by industry standards. The most common source of such industry standards is the Common Ground Alliance (CGA) Best Practices and the excavation handbooks the state One Call or 811 centers publish.

II. REQUIRED PRE LOCATE REQUEST ACTIONS

Many states require an excavator to "white line" the excavation area, i.e., mark the boundary of the excavation area with white paint, before providing notice to the One Call center. Washington's One Call law, for example, provides that if white lining

"The consequences of not having a timely locate request which covers the actual area of excavation are severe."

is not feasible, the excavator must communicate directly with the affected utility operators to ensure that the boundary of the excavation area is accurately identified. California's One Call law provides that if an excavator has not white lined the area of intended excavation, the utility operator may, at its discretion, choose not to locate and field mark its facilities until the excavator has completed the white lining.

III. REQUIREMENTS FOR THE LOCATE REQUEST

The information which must be included in a locate request is normally set forth in the state One Call statutes and/or regulations. Typically, the locate notice must provide, at the very least: (1) the name of the individual providing notice to the One Call center; (2) a description of the location of the proposed area of excavation; (3) the name, address and telephone number of the excavator; (4) a telephone number at which the excavator can be contacted in the field; (5) a description of the work to be done; and (6) the date and time the excavation is to begin.

Some states have specific provisions as to how the proposed excavation area should be described. For example, Missouri's One Call statutes require the description be made "by reference to a specific street address, or by description of location in relation to the nearest numbered, lettered, or named state or county road or city street for which a road sign is posted, or by latitude and longitude including the appropriate description in degrees, minutes, and seconds, or by state plane coordinates."

Many states also have specific requirements as to the size of the area which may be encompassed in one locate request. For example, Washington's One Call statutes and Oregon's One Call regulations provide that if the excavator intends to work at multiple sites or at a large project, the excavator must take reasonable steps to confer with facility owners to enable them to locate underground facilities reasonably in advance of the start of excavation for ease phase of the work. North Carolina's One Call law provides that the excavation area cannot exceed one-quarter mile in length (i.e., 1,320 feet) or five adjoining street addresses, not to exceed one-quarter mile in length. Other states require that the locate request cover only the area which can be excavated within the time period in which the locate request is valid.

In addition to these requirements found within state One Call statutes and

regulations, the CGA Best Practices state that every excavator on the job should have his own separate One Call reference number. In other words, under the CGA Best Practices, a subcontractor may not rely on the locate request the general contractor provides.

IV. REQUIRED TIME FOR THE LOCATE REQUEST

While the time frames may vary, the One Call statutes and/or regulations in all 50 states and the District of Columbia provide minimum and maximum times within which the excavator must make a locate request. Typically, the excavator must give at least two "working" or "business" days' notice before beginning excavation, although some states, such as North Carolina, require locate requests be made three working days before beginning excavation.

The maximum time limit varies more widely, and, depending on the state, can be set forth in either "working" or "calendar" days. Typically the maximum time ranges from 10 to 30 days. If the excavation does not commence before that date, many states require the excavator to make a new locate request.

Most states, Texas being a notable exception, provide an expiration date for locate requests. If the excavation is to continue beyond the excavation date, most state One Call statutes and regulations typically require the excavator to make an additional locate request. Many such statutes and regulations provide that the new locate request should be made two working days before the existing locate request expires.

Finally, most state One Call statutes and regulations require an excavator to stop working and make a new locate request if the paint marks or flags the utility operator placed in response to the original locate request have been obliterated or become illegible. The new locate request is required even though the original locate ticket has not expired.

Most, if not all, state One Call statutes and regulations do contain an exemption from certain locate request requirements in an emergency situation. An "emergency" is typically defined as something that posed an immediate threat to, or endangers, life, health or property. The fact an excavator waited until just before a project was to start to make a locate request and may now have to wait longer than he wants to start excavation is not an emergency. Based on my experience as an advisory member of the OKIE 811 Board, I can unequivocally state that if you are a fence contractor, and you are not trying to build a fence at a zoo to contain a lion that has escaped from its cage, it is not an emergency!

V. REQUIRED PRACTICES AT THE JOB SITE

Most state One Call statutes and regulations require that in addition to making a timely locate request, an excavator must use reasonable care in performing the excavation and/or must excavate in a "reasonable and prudent" manner. In some instances, state One Call statutes and regulations specifically define activities which constitute reasonable care. In the absence of specific provisions in the state One Call statutes and regulations, industry standards and practices will provide activities which constitute reasonable care.

Such activities include, but are not limited to: (1) inspecting the area of intended excavation to verify that the dig site matches the description in the locate request and is timely; (2) ensuring the locate request is timely; (3) inspecting the area to verify that all utilities shown on the dig ticket provided by the One Call center have been marked or that the utility operators have provided a positive response indicating they have no facilities in the area; (4) checking the excavation area for any visible signs of unmarked underground facilities such as pedestals, risers, meters, and manholes; and (4) reviewing the location of underground facilities with the excavator's site personnel. The One Call statutes and regulations in many states provide that if an excavator does find evidence of an unmarked, or a mismarked, utility facility, the excavator must stop and provide an additional notice to the One Call center and not continue excavating until the additional time requirement has passed.

VI. ADDITIONAL CONSIDERATIONS

One of the questions excavators have asked at previous CGA 811 Excavation Safety Conference & Expo presentations is whether they can use their own equipment to perform locates. Most state One Call statutes and regulations do not address this question. Some that do, do not allow it.

For example, California's One Call statutes provide that all locating must be done only by a "qualified person" which the statutes define as "a person who completes a training program in accordance with the requirements of Section 1509 of Title 8 of the California Code of Regulations Injury and Illness Prevention Program, that meets the minimum locators training guidelines and practices published in the most recent version of the Best Practices guide of the Common Ground Alliance." Missouri's One Call statutes provide that "[n]othing in [the One Call statute] shall authorize any person other than the owner or operator of a facility to attach an electronic locating device to any underground facility.

CONCLUSION

The consequences of not having a timely locate request which covers the actual area of excavation are severe. Hitting an underground utility because the locate request did not cover the right area or because the excavator did not wait the required time to allow the utility operators to mark their facilities can result in property damage, injuries and even death to workers and members of the public. Many state one call statutes and regulations provide that excavators who damage an underground utility while excavating without a proper and timely locate request "shall," or "are rebuttably presumed to be," negligent.

All in all, the best practice to avoid damaging underground utilities and the liability that goes with such damage is to make sure that the persons involved in making the locate request and for performing the excavation are aware of, and comply with, the requirements of the statutes, regulations and industry standards and practices set forth above. Hopefully, doing so will eliminate, or at least reduce, the damages in the "Notification Practices Not Sufficient" category. ESG

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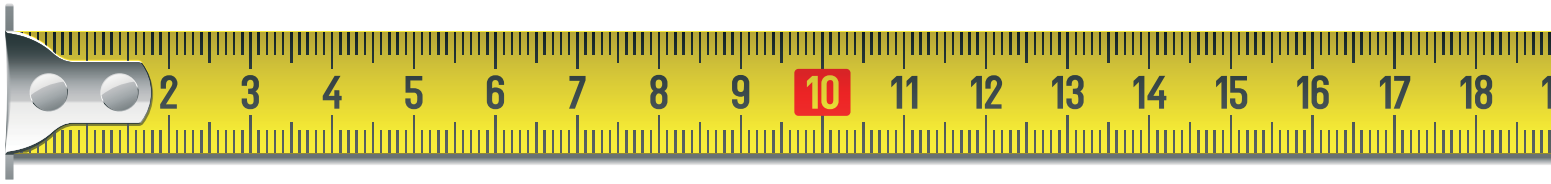


What is the Tolerance Zone?

When excavating, the tolerance zone is a horizontal measurement beginning at the outside edge of an underground pipe or cable and extending outwards for a predetermined length. That length varies by state and is defined by the state's One Call legislation. In Pennsylvania, for example, the tolerance zone is 18". That means if a 2" pipe is marked, 18" must be added to both sides of the pipe resulting in a dig-with-care area of 38" (18+2+18) surrounding the temporary mark placed by the locate technician. If the pipe is 6", the tolerance zone increases to 42" (18+6+18). To learn the dimensions of the tolerance zone in your state, review the One Call Directory beginning on page 49 of this publication.

`The existence of a tolerance zone can be confusing if you don't have a clear understanding of the science behind locating equipment. After all, if the locate technician has indicated a 2" pipe in exactly "this" location, why in the world would you need to dig with care for 18" to either side of the mark? The simplest answer is that cable locators do not actually locate cables. These nifty little gadgets that are the mainstay of every technician's toolbox, actually locate the electromagnetic field surrounding the pipe or cable. Let's explore that concept a little more.

Almost all locating equipment consists of two parts:

1. The transmitter, which emits a signal at a frequency selected by the technician that is induced onto nearby pipes or cables.

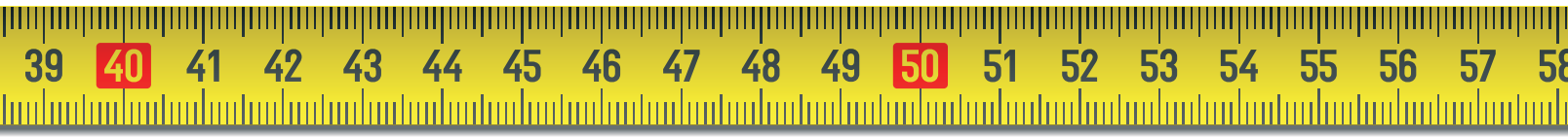
2. The receiver, which is usually held by the technician, and detects these radio frequencies.

Together, these two pieces of equipment help find the approximate location of underground facilities. The transmitter induces this radio frequency through conduction (direct connection to the pipe), ring clamp induction (the pipe is encircled with a clamp when direct connection is not an option), and induction (no surface access to the target line is available).

Once the transmitter has induced the signal onto the pipe, the locate technician sweeps the receiver across the ground and marks the aboveground location of the strongest electromagnetic field where the cable or pipe is 'located'.

In a perfect world, the marks indicating the location of the pipe would be accurate. If the transmitter is affixed to the cable or pipe aboveground, and the underground portion of the cable or pipe acts as an antenna radiating electromagnetic energy, then the receiver should easily and accurately find it. Unfortunately, this is not always the case.

Distortion to the electromagnetic field caused by changing density or composition of the earth, other underground facilities, moisture content, and other factors affect where the strongest signal is read on the surface. Because the level and direction of the distortion is unknown and unseen, the location indicated by the marks the technician makes may not be over the exact position of the pipe.



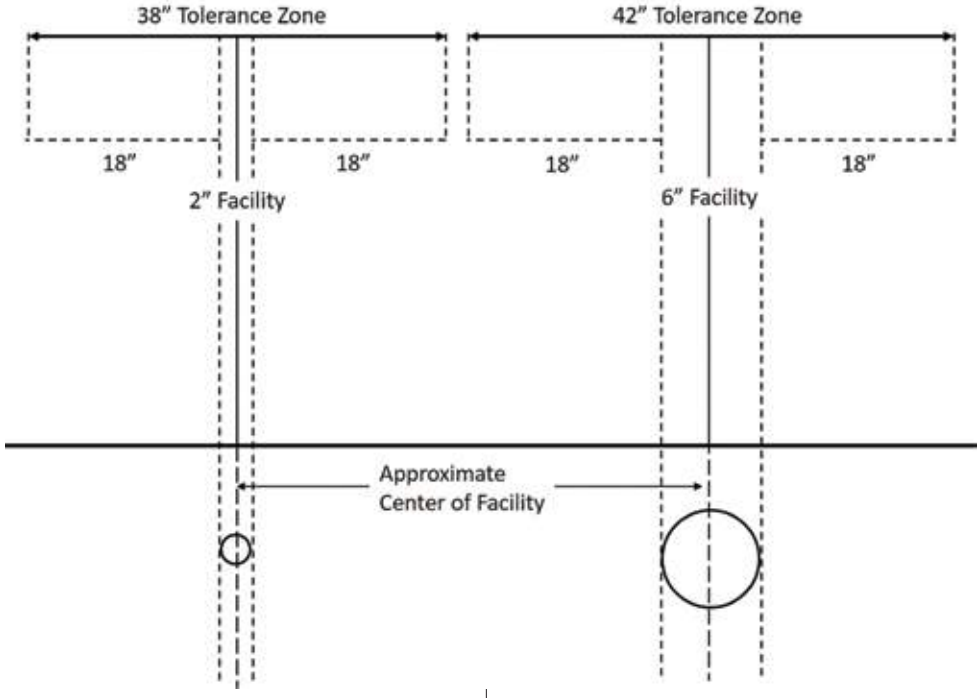
This is when the tolerance zone helps protect underground facilities. The distance provided on either side of the buried facility within the tolerance zone is used to provide for discrepancies caused by distortion. An excavator should always assume the underground facility may be located anywhere within the tolerance zone on either side of the temporary mark and take extra care when digging.

Along with knowing the tolerance zone requirements for their state, excavators must also understand the state's requirement for excavating within the tolerance zone area. Each state has specific guidelines intended to protect underground utilities. Some states may allow multiple soft excavations methods in the tolerance zone including air or water vacuum excavation and hand digging. Other states may require hand digging only. In some states soft digging is only required until the facility is exposed, in others all digging within the tolerance zone must be soft. Again, the One Call Directory of this publication can help you find the link to the requirements in your state.

Regardless of the specific legal requirements of your state, there are some common-sense approaches to use within the tolerance zone to protect the buried utility:

DO

- Use a blunted shovel to loosen dirt and a regular shovel to remove dirt.
- Dig at an angle and parallel with the utility, allowing the shovel to slide off the surface of any pipe you may come in contact with.
- Assume all lines are live.
- Report any damage to the pipe to the facility owner immediately. If there is risk of public safety contact 911 immediately.



- Provide support to the pipe if the soil surrounding it is removed.
- Ensure locate marks remain visible throughout the life of the job.
- Remember the color of the pipe you uncover may not indicate what it contains (plastic gas line is not necessarily yellow).
- Verify the depth and location of facilities along a horizontal or directional drilling/boring path by means of vacuum excavation or hand dug test holes at each point.

DON'T

- Use pick axes, pointed spades or digging bars.
- Stab at the soil.
- Assume a line was marked incorrectly if you encounter an unmarked line outside the tolerance zone. It may be another utility line.
- Assume an unmarked facility you uncover is abandoned, retired or out of service. Instead, stop excavation and notifying the facility owner.
- Assume the depth of the utilities. Erosion or grade changes may cause the depth to change over time or distance.
- Assume a facility runs straight or is centered between permanent marker posts.
- Dig toward a tolerance zone. Expose the utility first and then dig toward the exposure.
- Assume the width of the facility based on the marks. Although the size of the facility should be indicated when marked, it isn't always the case.

Failure to maintain the rules of the tolerance zone exposes buried utilities to the risk of damage. Indirect damage is also risked when supporting soil is removed and the facility is not stabilized, potentially causing the utility to bend or break. Injury or death can result from a damaged pipe, and your company could be liable for damages that occur. ESG

LOCATE REQUESTS: **COVERING THE BASICS**

1 Excavation Site Accuracy

Clearly defining the excavation site is critical when requesting a locate. The precision of this information improves the locator's ability to provide accurate marks in the appropriate space. Describing the dig site eliminates confusion. Driving directions and GPS coordinates can save time for the locator - especially in rural, newly-developed or difficult-to-find areas. Pre-marking the area with white paint or flags ensures an onsite visual for areas that are difficult to describe on the ticket.

2 Non-Members/ Private Utilities

Even if you call your One Call Center for every ground disturbance you undertake, you may still have unmarked facilities in your dig site. Laws vary between states and even municipalities on who is required to be a One Call member; and the ownership of many utilities transfer to the property owner at a specific demarcation point. For these facilities, a private utility locator is necessary to indicate their location. A few visual signs of private utilities on a dig site include utility meters, signs, markers, pedestals, hydrants, valve boxes, farm taps, regulators, lighting, or irrigation taps; especially if there is no paints or flags leading to them.

3 Locate Longevity

Each state has different laws governing when the ticket request should be submitted, how long the locate ticket is valid, how soon the work must begin, and what to do if the marks become illegible. It is important to know the law for the state you are working in. Review the One Call Directory beginning on page 49 for the law in your state.

4 Second Requests: Remark/ Refresh Requests, Incomplete Marks, No-Shows

Requests for locates to remark the same location may be required for a variety of reasons. Normally these requests occur because the ticket expired before the project was completed, the initial marks were illegible or incomplete, one or more facility owner did not complete their marking with the required time or the marks were made but need to be refreshed due to activity at the dig site.

5 Emergency Locates

The exact definition of an emergency locate may vary, but this type of ticket is typically only allowed if there is a situation constituting an imminent danger to life, health, or property, or a utility service outage, which requires immediate repair or action. It is a good idea to have a clear understanding of what qualifies in your state as an emergency locate before an emergency occurs.

6 Onsite or Joint Meeting Requests

An onsite meeting is scheduled when the scope of the work may be confusing or extends over a large geographic area. It is also useful when maps, plans, and schedules need to be shared. This type of meeting also allows excavators to discuss the project and any special circumstances with all concerned parties.

Held at the excavation site, or as close as practical, these meetings normally require more advance notice than a standard locate request. For jobs covering a large area, it is normally best to segment your request into reasonable sections. Identifying these sections on a map will facilitate communication between you and the locators, facility owners, and One Call Center. Call centers often needs very specific information about your excavation site to request joint meets, so be prepared before you ca11.

7 Design Notifications

Design notifications are done as a part of the development and preconstruction planning process to accommodate existing utilities and reduce problems during construction. Each state and/or facility owner will likely have specific polices on how these notifications are handled.

8 Tolerance Zone

The tolerance zone is a defined horizontal distance extending from either side of the outer edge of a buried utility. The exact distance of this tolerance zone varies from state to state, ranging from 18 inches to 30 inches on either side of the line or pipe, and is defined within the state's One Call law. To determine the tolerance zone for a given facility, you must know the state's law and the size of the utility. For example, in a state where the defined tolerance zone is 18 inches, the total size of the tolerance zone would be 38 inches for a two-inch pipe: 18 inches on either side of the pipe plus the two-inch diameter of the pipe itself.

CGA Best Practices call for the size of the pipe to be included in the locate marks on the ground, but caution should always be used when excavating within the tolerance zone as these indicators may be missing or incorrect.

Since locating equipment detects the electromagnetic field surrounding a pipe, and not the pipe itself, the science of locating underground facilities is not exact. The tolerance zone, therefore, serves as a warning to an excavator to proceed with care and caution while working in the area. Hand (or sometimes soft) digging is required within the tolerance zone. ESG

Understanding the Marks: Locating and Marking Practices

TAKEN FROM CGA BEST PRACTICES 15.0

Operator markings of facilities include the following:

- The appropriate color for their facility type
- Their company identifier (name, initials, or abbreviation) when other companies are using the same color
- The total number of facilities and the width of each facility
- A description of the facility (HP, FO, STL, etc).

Use paint, flags, stakes, whiskers, or a combination to identify the operator's facility(s) at or near an excavation site.

1. Marks in the appropriate color are approximately 12 in. to 18 in. long and 1 in. wide, spaced approximately 4 ft to 50 ft apart. When marking facilities, the operator considers the type of facility being located, the terrain of the land, the type of excavation being done, and the method required to adequately mark the facilities for the excavator. (Illustration 1)

2. The following marking examples illustrate how an operator may choose to mark their subsurface installations:

a. Single Facility Marking: Used to mark a single facility. This can be done in one of two ways • placing the marks over the approximate center of the facility. (Illustration 2a1) or

• placing the marks over the approximate outside edges of the facility with a line connecting the two horizontal lines (in the form of an H) to indicate there is only one facility. (Illustration 2a2)

These examples indicate an operator's 12 in. facility. When a facility can be located or toned separately from other facilities of the same type, it is marked as a single facility.[41]

b. Multiple Facility Marking: Used to mark multiple facilities of the same type (e.g., electric), where the separation does not allow for a separate tone for each facility, but the number and width of the facilities is known. Marks are placed over the approximate center of the facilities and indicate the number and width of the facilities. **Example:** four plastic facilities that are 4 in. in diameter (4/4" PLA). (Illustration 2b)

c. Conduit Marking: Used for any locatable facility being carried inside conduits or ducts. The marks indicating the outer extremities denote the actual located edges of the facilities being represented. **Example:** four plastic conduits that are 4 in. in diameter (4/4" PLA), and the marks are 16 in. apart, indicating the actual left and right edges of the facilities. (Illustration 2c)

d. Corridor Marking: Used to mark multiple facilities of the same type (e.g., electric), bundled or intertwined in the same trench, where the total number of facilities is not readily known (operator has no record on file for the number of facilities). Marks are placed over the approximate center of the facilities and indicate the width of the corridor. The width of the corridor is the distance between the actual located outside edges of the combined facilities. **Example:** a 12 in. corridor (12" CDR). (Illustration 2d)

Illustration 1

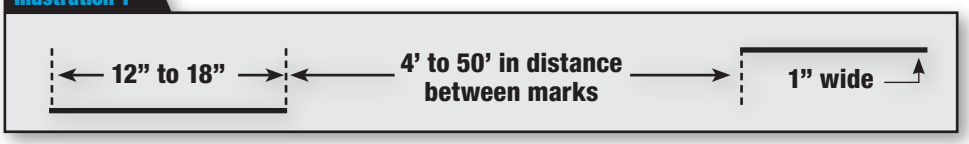


Illustration 2a1

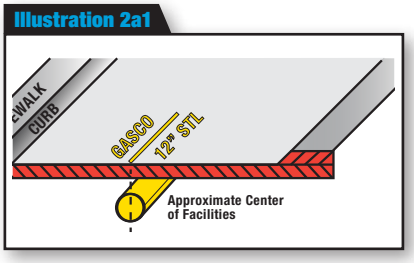


Illustration 2a2

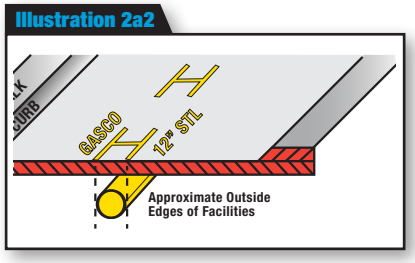


Illustration 2b

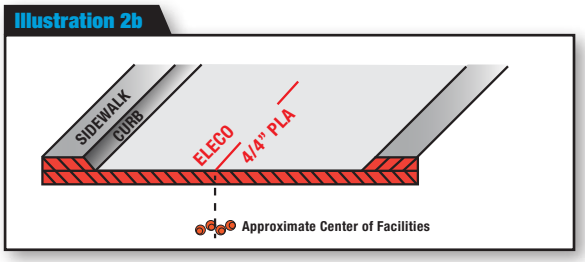


Illustration 2c

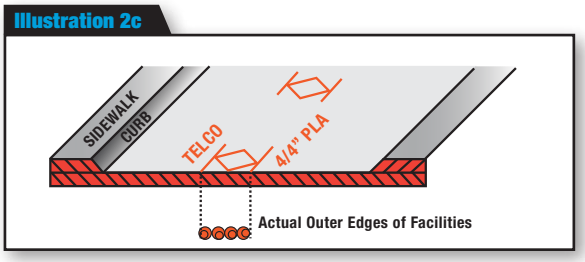
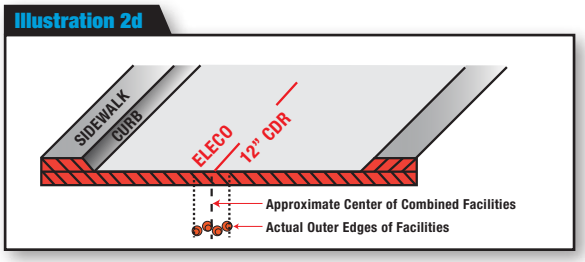
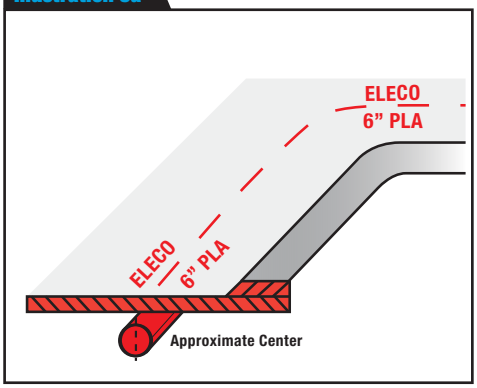


Illustration 2d



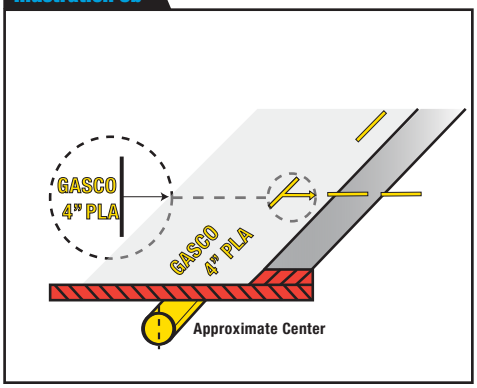
3. Changes in direction and lateral connections are clearly indicated at the point where the change in direction or connection occurs, with an arrow indicating the path of the facility. A radius is indicated with marks describing the arc. When providing offset markings (paint or stakes), show the direction of the facility and distance to the facility from the markings. **Example:** radius (Illustration 3a)

Illustration 3a



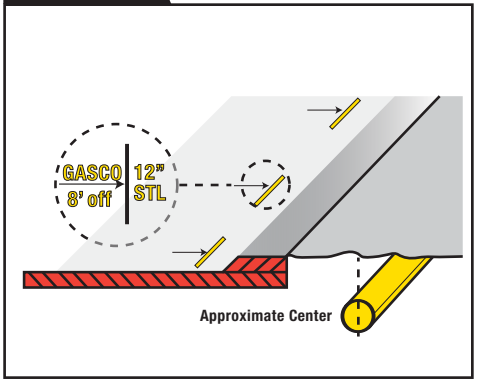
Example: lateral connection (Illustration 3b)

Illustration 3b



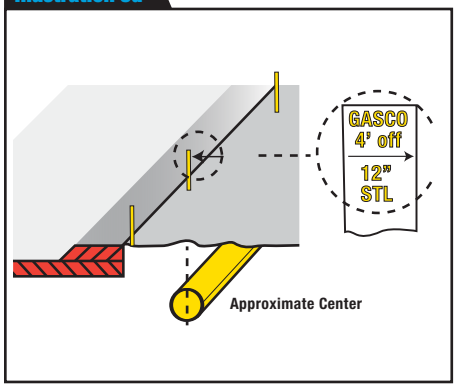
Example: painted offset (off) (Illustration 3c)

Illustration 3c



Example: staked offset (off) (Illustration 3d)

Illustration 3d



4. An operator's identifier (name, abbreviation, or initials) is placed at the beginning and at the end of the proposed work. In addition, subsequent operators using the same color mark their company identifier at all points where their facility crosses another operator's facility using the same color. Reduce the separation of excavation marks to a length that can reasonably be seen by the operator's locators when the terrain at an excavation site warrants. **Examples:**

CITYCO ELECO TELCO

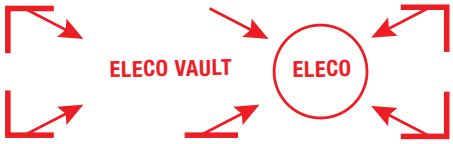
5. Information regarding the size and composition of the facility is marked at an appropriate frequency. **Examples:** the number of ducts in a multi-duct structure, width of a pipeline, and whether it is steel, plastic, cable, etc.

TELCO 9/4"CAB GASCO 4" PLA WATERCO 12"STL

6. Facilities installed in a casing are identified as such. **Examples:** 6 in. plastic in 12 in. steel and fiber optic in 4 in. steel.

GASCO 6" PLA/12" STL TELCO FO (4"STL)

7. Structures such as vaults, inlets, and lift stations that are physically larger than obvious surface indications are marked so as to define the parameters of the structure. **Example:**



8. Termination points or dead ends are indicated as such. **Example:**

9. When there is "No Conflict" with the excavation, complete one or more of the following:

- Operators of a single type of facility (e.g., TELCO) mark the area "NO" followed by the appropriate company identifier in the matching APWA color code for that facility. **Example:** NO TELCO

- Operators of multiple facilities mark the area "NO" followed by the appropriate company identifier in the matching APWA color code for that facility with a slash and the abbreviation for the type of facility for which there is "No Conflict." **Example:** NO GASCO/G/D illustrates that GASCO has no gas distribution facilities at this excavation site. The following abbreviations are used when appropriate: /G/D (gas distribution); /G/T (gas transmission); /E/D (electric distribution); /E/T (electric transmission).

- Place a clear plastic (translucent) flag that states "No Conflict" in lettering matching the APWA color code of the facility that is not in conflict. Include on the flag the operator's identifier, phone number, a place to write the locate ticket number, and date. Operators of multiple facilities indicate on the flag which facilities are in "No Conflict" with the excavation (see the previous example).

- If it can be determined through maps or records that the proposed excavation is obviously not in conflict with their facility, the locator or operator of the facility may notify the excavator of "No Conflict" by phone, fax, or e-mail, or through the One Call Center, where electronic positive response is used. Operators of multiple facilities indicate a "No Conflict" for each facility (see the previous examples).

COLOR CODE IDENTIFIERS

WHITE	Proposed Excavation
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 Line, Cables, or Conduit
BLUE	Potable Water
PURPLE	Reclaimed Water, Irrigation, and Slurry Lines
GREEN	Sewers and Drain Lines

FACILITY IDENTIFIER			
CH	Chemical	E	Electric
FO	Fiber Optic	G	Gas
LPG	Liquefied Petroleum Gas	PP	Petroleum Products
RR	Railroad Signal	S	Sewer
SD	Storm Drain	SL	Street Lightning
STM	Steam	SP	Slurry System
SS	Storm Sewer	TEL	Telephone
TS	Traffic Signal	TV	Television
W	Reclaimed Water "Purple"	W	Water
UNDERGROUND CONSTRUCTION DESCRIPTIONS			
C	Conduit	CDR	Corridor
D	Distribution Facility	DB	Direct Buried
DE	Dead End	JT	Joint Trench
HP	High Pressure	HH	Hand Hole
MH	Manhole	PB	Pull Box
R	Radius	STR	Structure (vaults, junction boxes, inlets, lift stations)
T	Transmission Facility		
INFRASTRUCTURE MATERIAL			
ABS	Acrylonitrile - Butadiene - Styrene	ACP	Asbestos Cement Pipe
CI	Cast Iron	CMC	Cement Mortar Coated
CML	Cement Mortar Lined	CPP	Corrugated Plastic Pipe
CMP	Corrugated Metal Pipe	CU	Copper
CWD	Cresote Wood Duct	HDPE	High Density Polyethylene
MTD	Multiple Tile Duct	PLA	Plastic (conduit or pipe)
RCB	Reinforced Concrete Box	RCP	Reinforced Concrete Pipe
RF	Reinforced Fiberglass	SCCP	Steel Cylinder Concrete Pipe
STL	Steel	VCP	Vertrified Clay Pipe

• Place "No Conflict" markings or flags in a location that can be observed by the excavator and/or notify the excavator by phone, fax, or e-mail that there is "No Conflict" with your facilities. When the excavation is delineated by the use of white markings, place "No Conflict" markings or flags in or as near as practicable to the delineated area.

Caution: Allow adequate space for all facility mark-outs.

"No Conflict" indicates that the operator verifying the "No Conflict" has no facilities within the scope of the delineation; or when there is no delineation, there are no facilities within the work area as described on the locate ticket. **Example:**

Guide for Abbreviation Use

Follow these guidelines when placing abbreviations in the field:

• Place the Company Identifier at the top or at the left of the abbreviations.

• Place the abbreviations in the following order: Company Identifier / Facility Identifier / Underground Construction Descriptions / Infrastructure Material. **Example:** TELCO/TEL/FO/PLA indicates that TELCO has a telecommunication fiber optic line in a single plastic conduit. The use of the abbreviation /TEL is not necessary, because the orange marking would indicate that the facility was a communication line; but its use is optional.

• To omit one or more of the abbreviation types, use the order described above but omit the slash and abbreviation that does not apply. **Example:** to omit /TEL, the result would be TELCO/FO/PLA. ESG

AIR EXCAVATION VS. HYDROEXCAVATION

As one of the few non-destructive methods to dig around buried infrastructure safely, the value of vacuum excavation has continued to increase.

Vacuum excavation has been around for many years and continues to grow today. The first known use of a dedicated vacuum excavation unit was the Vactor ExcaVACtor in 1969. Since that time, sewer cleaner equipment has been performing vacuum excavation by simply spraying high-pressure water on the ground to slurry the soil and the vacuum system to recover it.

It wasn't until the 1980s that the use of dedicated vacuum excavation equipment became prevalent, driven largely by the Western Canada oil fields and the desire to protect the buried infrastructure in that area. As one of the few non-destructive methods to dig around buried infrastructure safely, the value of vacuum excavation has continued to increase.

Selecting the right vacuum excavator

Before deciding between air excavation or hydroexcavation, it's helpful to know the size of a typical application so that the correct size debris body is selected to complete the work as efficiently as possible.

Knowing the soil conditions is paramount for selecting the right equipment. Other factors include travel distance to a disposal site, state and local weight restrictions, excavation distance from the unit, and availability of water.

Hydroexcavation

Hydroexcavation is the preferred method in larger excavation projects or in harder, more compact soil conditions. It is generally the preferred method of vacuum excavation due to its speed and productivity. Hydroexcavation trucks consist of a powerful vacuum system and an onboard water blaster and water tank, so anything that can be sprayed, washed down or vacuumed can be completed with this equipment.

- *ADVANTAGES*

Hydroexcavation does not produce the sandblasting effect the way air does, reducing the potential for damage to underground utilities. Water is able to move more material faster and more efficiently. In frozen ground or harder materials, water can be heated with onboard water heaters to aid in cutting through these materials. Water is also a lubricant, which helps to prolong the life of the excavation equipment by reducing wear on the vacuum hose and other components in the airstream.

- *APPLICATIONS*

Utilities, construction contractors and municipalities use hydroexcavation for a variety of applications, including installing light poles, repairing water main breaks, long trenches for burying cable, fiber optic repair, cathodic protection for gas and water lines, pressure testing, hauling fresh water to a job site, towing a trailer, and even window well installation.

Hydroexcavation equipment can often be used for tank, pit or general cleaning. With the onboard high-pressure water pump and water heater, hydroexcavators can perform many alternate applications that cannot be completed with pneumatic excavators.

When operating a hydroexcavator – as opposed to operating a unit employing high-pressure air only – it's important to monitor water usage. More water is not always better.

Air excavation

Air excavation – or pneumatic excavation – allows utilities to locate a utility to verify its location, while also allowing dry backfilling of the hole with the same soil it excavated, eliminating the need for disposal.

- *ADVANTAGES*

The advantage of air excavation is that air is limitless. Onboard compressors generate the required pressure on demand, so there is no need to refill water. Air is nonconductive. When vacuuming around live electrical wires, pneumatic excavation can be a preferred choice over hydroexcavation. Air excavation also provides dry spoils that can be returned to the excavation site immediately. The speed of hydroexcavation is too significant to overlook for general potholing, which is why utilities are looking for a machine with both capabilities.

- *APPLICATIONS*

In applications where the soil is loose, and water is not readily available, air excavation is preferred. Many applications in the utility segment require exposing the utility, making the repair, and then backfilling the material. This can't be done with hydroexcavation.

When working around buried electrical lines or brittle utilities, air excavation is often preferred due to the lower operating pressures. Some utility companies, DOTs or power plants specify air excavation for a given job.

Equipment Inspection

Regardless of the type of vacuum excavator, operators always should inspect the unit prior to leaving for the jobsite to ensure all required vacuum tubes, nozzles and accessories are loaded in the truck. Forgetting a nozzle or vacuum tube can bring a job to a halt. Aside from helping prevent forgetfulness, inspections contribute to safe operation.

Operator safety

Vacuum excavation equipment operators must be proficient in the safe and proper use of the equipment. Training is strongly recommended to ensure that the operator is familiar with the specific method of vacuum excavation, so they can safely maximize their efficiency and productivity on the job. Training in the areas of proper setup, operation, evacuation techniques and load handling is essential. While it can take some time to master, excavation technique and nozzle performance can really improve overall productivity.

Larger vacuum excavator machines have vacuum performance approaching 28 inches Hg, capable of vacuuming 800 pounds through an 8-inch hole. Operators must always be sure the vacuum relief and emergency stops are properly functioning. And they should always use an inline vacuum safety "T" when running remote hose. ESG

Nick Bruhn is a product manager at Vactor Manufacturing, Streator, Ill. He can be reached at nbrun@vactor.com. Vactor Manufacturing is a leading provider of vacuum excavation equipment used by contractors and municipalities across the country for non-destructive digging in a wide range of applications.

10 QUESTIONS TO ASK WHEN BIDDING EXCAVATION WORK

BY ERIC SWARTLEY

UGI Utilities, Inc., a Pennsylvania (PA) based natural gas & electric distribution company, continually examines the circumstances associated with third-party damages to facilities to determine contributing behaviors. Several key findings were determined from the review:

- Too often excavators enter into project agreements without a clear understanding of lawful responsibilities associated with underground utility protection statutes in their jurisdiction.
- Too many excavators are uninformed about the existing subgrade site conditions and the expectations of existing facility owners when working near their lines.
- The highest incidence of damages occurred on short turnaround project work where no design was involved. These projects are often disguised as a concept termed "Design/Build."
- A high incidence rate existed on projects where the project owner attempted to contractually self-indemnify their responsibilities which pushes the risk to the Excavator.
- There is a reluctance by Excavators to exercise their rights under the One Call Act to invoice the Project Owner for additional costs to safely locate marked facilities for fear of retribution.

A short turnaround project reduces the contractor's planning time for a given construction portion. When the total planning period is less than the two- or three-day period prior to the lawful dig date required for an excavation notification it generally does not include a pre-construction meeting. As a result, locators must react to large mark out tickets with minimal information.

When the first unexpected obstacle to production is encountered and the project owner denies the change order, the project completion date and the existing underground facilities are put in jeopardy. The foreman is pushing the crew, the operator is trying to get more footage installed, unfortunate shortcuts are taken, and the outcome is predictable.

The above factors are common when little attention is paid to the pre-construction phase. In October 2017, Act 50 was passed as an amendment to the PA One Call Law, and a key component was the transfer in enforcement responsibility to the PA Public Utility Commission. The PUC has stated there will be a focus on design and preconstruction activities that support reducing damages and conflicts with existing underground facilities.

By incorporating these ten questions when bidding for excavation work, UGI was able to open productive dialogue. While a work in progress, these questions have resulted in positive results.

1. **Was a Design Notification submitted to the One Call center requesting existing underground facilities information and is that information part of the bid documents?** Pennsylvania requires a Design Notification any time a drawing is to be prepared for excavation although this requirement has not been enforced. With the growing interest in design/build and cases where no information is exchanged prior to excavation beginning, project delays, cost overruns and, unfortunately, damage to underground facilities are the result. Additionally, the design phase is the best time to evaluate any abandon line information that facility owners can provide.

2. **Has the appropriate level of Subsurface Utility Engineering (S.U.E.) ASCE 38-02 been completed to determine the precise location of existing facilities?** Providing accurate information on what an excavator will encounter also leads to better pricing, reduces change orders and provides for more predictable project deadlines. Technologies that support effective designation of existing facilities

include vacuum excavation, line tracers and internal camera inspection.

3. Are there any vertical or horizontal separation requirements with existing facilities? Underground facilities require specific separation for a variety of reasons - future operations and maintenance, metallic facilities may have cathodic protection systems or simply because of the concern of damages with future excavation too close to the facility. Always consider and work to maintain the tolerance zone established around a facility.

4. Will the project area be videotaped once the One Call markings have been placed? This process documents locate accuracy for reference during construction, damage claims and provides protection for general liability purposes related to existing conditions. Temporary markings or flags get obliterated during construction and a damage can result once that point of reference is lost. The use of permanent markers or offset marks are strongly encouraged.

5. Will a pre-construction meeting be scheduled with existing facility owners and/or is the proposed excavation area to be marked in white? Project meetings prior to the start of excavation are high-leverage activities that ensure locators understand the scope of work, phasing and who their points-of-contact are for resolving issues. These meetings are required in PA for larger projects but are rarely used. On smaller scope work, white lining proposed excavations continues to be one of the best ways to ensure effective communication and provide efficiencies in completing mark outs.

6. Are there any project conditions related to work hours, critical facilities or the public that require bid consideration? Many industries have surveillance requirements when excavation is occurring around critical facilities or in proximity to sensitive public areas which require advance scheduling. Work that impacts the flow of vehicular or pedestrian traffic, public transportation, or school zones may have regulations limiting or restricting hours of activity which may impact production.

7. Will any existing utility facilities require relocation and who is responsible for those activities? If so, is time allocated in the schedule to allow the relocation to be completed prior to construction beginning? Interruption of critical utility service can have seasonal restrictions, long lead times to schedule and can be costly if reimbursement is required. Additionally, coordinating with multiple excavating contractors onsite, with different agendas, can create problems.

8. Will any utility facilities require support or specific care during the construction phase? Facilities consisting of plastic, bare or coated steel or cast iron have different structural support requirements which need to be considered. In addition, US Occupational Health and Safety Administration (OSHA) Subpart P outlines excavator responsibilities aimed at protecting existing facilities during excavation and must also be considered.

9. Are trenchless excavation methods such as HDD or piercing tools to be used on the project? If so, are there any conditions that need to be met such as spotting/daylighting if not completed in design? Trenchless excavation is a valuable tool and can provide a variety of benefits. It can be less costly than traditional methods of installation and create less public disruption, but the benefits cannot be at the expense of existing underground facilities.

10. Are there any facilities requiring special backfill provisions or compaction restrictions? Certain facilities are installed to specific standards which must be followed once the facility is exposed and/or when backfilling begins. Additionally, compaction requirements are critical to maintaining quality roadways and vibratory plates and flow fill are options to maintain roadway quality. While enhancing compaction, the impact on existing facilities like cast iron and plastic pipe needs to be considered. It accomplishes little to achieve the highest degree of compaction only to dig up a facility to repair a break within days of completing the final pave.

Through this review, UGI learned that good damage prevention practices begin in the design phase and by involving all stakeholders. It is our experience that many obstacles and damage incidents can be eliminated by applying the 4 C's of a CGA Regional Partnership: Communicate, Collaborate, Coordinate and Cooperate. Pennsylvania One Call has recently launched a new tool that should support a one stop shopping approach to applying the 4 C's called CoordinatePA, information on this can be found at www.pa1call.org. ESG

Eric Swartley is Senior Manager - Pipeline & Public Safety for UGI Utilities, Inc., a Board Member of Pennsylvania One Call System and Vice Chair of the recently created Pennsylvania Damage Prevention Committee. References are based on Pennsylvania One Call Law and nearly 40 years of experience in the utility business. Eric can be contacted at eswartley@ugi.com.

BY ERIC SWARTLEY AND BRUCE CAMPBELL

No One Call Reporting Tickets

Each state has a One Call statute where, at minimum, not calling 811 before you dig with powered equipment is a violation of the law. Yet the Common Ground Alliance 2017 DIRT Report showed that 24% of all damages or nearly 65,000 damages to underground facilities reported nationwide were the result of the party digging not calling the state One Call Center. This disparity has resulted in states and underground facility owners across the country taking various measures to reduce No Call damages. Here is a recap of what is being done in Pennsylvania and shares the approach Michican811 MissDig has adopted to curb this behavior.

Pennsylvania:

In 2014 several Pennsylvania electric and gas distribution companies experienced a rate of damage as a result of the excavator not calling prior to digging at, or higher than, the 2013 CGA national rate of 25% and applied individual focuses to address the problem. In 2015, Columbia Gas of PA, National Fuel Gas, PPL Electric Utilities and UGI Utilities began comparing notes and metrics regarding this category of damage. We recognized we all had programs or concerns and were searching for a way to address these violations. Unfortunately, enforcement was not an option in Pennsylvania at the time. We needed to look internally as PHMSA had recently completed their Determinations of Adequacy Study and rated Pennsylvania as "inadequate" regarding enforcement of the state One Call statute.

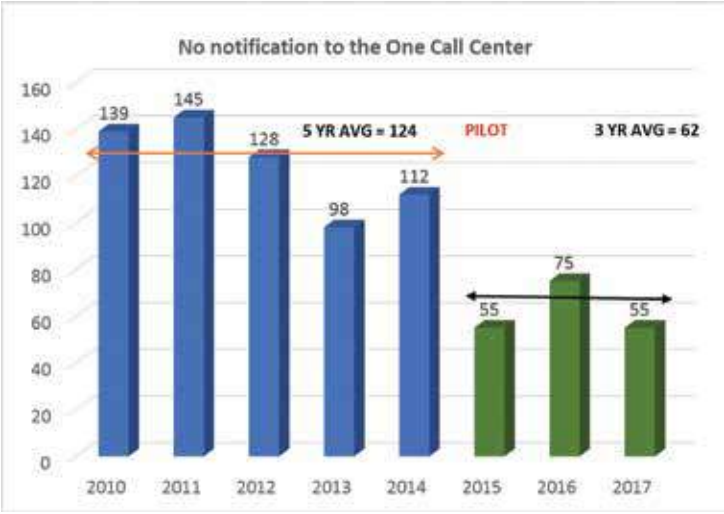
Since 2015 UGI has pursued an employee-based pilot program in a region of their service territory that experienced their highest No Call damage rate and provided a 57% reduction in that damage category. Supported with this experience, the collaborative approach and successes the other distribution companies were having, the topic made its way to a PA One Call Board Meeting. This effort resulted in a statewide No One Call Reporting program that went live in July of 2016 and is anchored by an Emergency One Call Ticket that goes out to all facility owners every time a No Call location is reported by calling 811.

The real discussion is around the impact a program of this nature can have on reducing damages as a result of the Excavator not notifying One Call prior to excavating. The program reports to the One Call Center locations where excavation with powered equipment is taking place where no marking paint or flags are present/obvious. See the sidebar for what was learned in the 45 County UGI service territory since focusing on this damage type in 2015.

Since the inception of the No One Call Reporting ticket, Pa One Call has processed 682 reports from focused Utility employees and concerned citizens. At the time this publication went to print, over 230 reports were made in 2018 alone.

Continuous Improvement:

- Monitor how other states and One Call Centers are applying similar programs and, based on their results and tools applied, consider ways to enhance program.
- Develop a positive response requirement so metrics on reporting quality can be evaluated.
- Determine if reporting can be incorporated into a mobile application. A current



tool, Tickets Near By, can confirm, by logging into the One Call website, if a ticket exists for a location.

- Use the information generated by the program to focus education on specific industries and associations that may represent certain frequent offender excavator types.
- New Pennsylvania One Call legislation, passed in 2017, transferred enforcement to the Public Utility Commission. With a dedicated Damage Prevention staff and budget, it sets the expectation that future violations of the One Call Law will be addressed and, therefore, reduced.

Missouri:

MISS DIG 811 created the "No Marks" ticket to utilize the public in combatting damages created by excavators not contacting 811 to have the underground utilities located prior to digging. Often excavators who are replacing concrete, landscaping, and installing fencing, temporary tents, or inflatables are erroneously under the impression that they are not required to contact 811. Therefore, it is no surprise that contractors performing these activities, in addition to homeowners, are the primary parties involved in damages. State laws may exempt activities using non-mechanized tools, but federal regulations under PHMSA require all individuals to notify the One Call center for both mechanized and non-mechanized tools.

Stakeholders and the public can assist in damage prevention by knowing what to look for on a dig site and contacting 811 to place a No Marks ticket if needed. If meters, gas markers, pedestals or other aboveground indicators of belowground facilities are apparent, but no marks or flags are visible, attention should be paid.

In Missouri, A concerned citizen can place a call to 811 for a No Marks ticket. Currently, No Marks tickets can only be placed by dialing 811. These tickets can be placed anonymously. The Notification System Representative will take down information the caller provides, including the location information and the name of the company performing the work, if available. Before sending the ticket out to facility owners, the representative utilizes "Near Ticket" to confirm a ticket has not already been submitted. If a ticket has been placed, the caller is informed. If not, the No Marks ticket is transmitted to member facility owners around the excavation and the Michigan Public Service Commission. The system generates a yellow, automatic Positive Response code signifying reported excavating with no visible marks.

Since implementing the ticket in April of 2018, MISS DIG 811 has transmitted forty-one No Marks tickets. The No Marks ticket has been a catalyst for major utilities to adopt internal programs combating the problem. Consumers Energy has implemented the Good Catch Program, and DTE has the Ambassador Program. Damage prevention is not just a slogan; it's a culture. Safety is the top priority, and the No Marks ticket is a valuable tool to assist all stakeholders in this critical mission. MISS DIG 811 encourages collaboration on this public safety campaign. ESG

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Bruce Campbell is Chief Executive Officer with Miss DIG 811. He can be reached at bcampbell@missdig811.org.

PENNSYLVANIA LESSONS LEARNED

- Reporting makes a difference. The No notification chart demonstrates the change in No One Call damages since the pilot reporting program began at UGI compared to the prior 5 years.
- 80% of No One Call damages were caused by Contractors not Homeowners.
- The type of No Call frequent offenders remains consistent and are identified by the term "light excavators," largely consisting of landscapers, building construction, fence installers, curbing/sidewalk & driveway contractors and to a lesser extent, tent rental vendors.
- Damages as the result of No One Call are seasonal (since 2010, 79% have occurred between April 1st and October 31st.)
- Employees are your greatest resource. Once you raise their awareness, provide education and incentivize them they become great ambassadors for safe digging. We have incorporated our reward for positive reports to 811, in our company safety recognition program and employees receive points which can be used like a debit card.
- Having Calls go directly to 811 provides a value-added service to One Call members. By using the existing effective and efficient communication system at One Call, verification of an existing ticket can be confirmed, lines at risk are quickly identified, and facility owners in the reported area are notified immediately and can respond to protect their buried lines.
- Relaunch and promote your reporting program each spring as part of National Safe Digging Month. Awareness can wane with the gap from November to April.
- Be prepared to educate Law Enforcement, with multiple other priorities and issues the One Call statute is not something they deal with regularly. We developed an Advisory employees can share with Emergency Services/Police in cases where an excavator is uncooperative and 911 must be called to ensure safety of our facilities.

CROSS BORES:

CGA Members Work Together to Measure and Address this Dangerous Type of Utility Damage

CROSS BORES, which occur when an existing underground facility is intersected by another, is a persistent issue in the damage prevention industry. A number of factors combine to make the issue particularly complex. Given the serious nature of the incidents they can lead to, Common Ground Alliance (CGA) members continue to work through the consensus-based process to address cross bores. Cross bores can be considered a two-pronged issue: 1) avoiding creation of new ones, and 2) avoiding incidents caused by the ones already in the ground.

CGA members are sharing their experiences with cross bore mitigation and collaborating on the ways the damage prevention industry as a whole can work to reduce the impact of this type of utility damage. In 2018, CGA's Damage Information Reporting Tool (DIRT) is incorporating new questions designed to better measure instances of cross bores, our first Technology Report included a case study on possible technical solutions for cross bore identification, and our Best Practices committee is reviewing existing cross bore determination and mitigation practices.

A Complex Problem

Sewer lines, which are often non-metallic and therefore difficult to locate using traditional methods, are most often affected by cross boring. When a gas main or service is inadvertently placed through a sewer line, typically using "trenchless" excavation methods, the resulting cross bore creates a particularly dangerous situation. When a sewer blockage occurs, attempts to clear it can result in gas migration into residences and businesses, with the potential for an explosion.

Compounding the issue is the reality that sewer laterals are often owned by municipalities exempted from One Call membership. As a result, these laterals are not always located and marked. During the facility installation process, gas utilities can attempt to locate sewer lines using surface ground penetrating radar (GPR), acoustic/seismic measures, traceable wire, electronic markers or closed-circuit television (CCTV) camera inspections – a process that typically falls to a specialized contractor.

With several stakeholder groups directly and indirectly involved in the cross bore issue, CGA's consensus process is essential as we work to reduce this type of damage.

How Member Washington Gas Tackles Cross Bores

CGA member and Bronze Sponsor Washington Gas delivers natural gas in the Washington, D.C. metro region, and has developed a robust and effective cross bore mitigation program after beginning to look at the issue seriously in 2008. Washington Gas' multi-pronged approach proactively identifies legacy cross bores, addresses new facility installation processes to prevent new cross bores, and integrates day-to-day operational procedures to prevent dangerous situations from developing.

To find and address legacy cross bores, Washington Gas began to systematically review its records to identify locations where the possibility of cross bores was high due to known use of horizontal directional drilling (HDD), moling or other trenchless digging techniques, known conversion work, areas where its facilities are buried at the same depth as water and sewer, and/or proximity of other known cross bores. After identifying potential cross bores via record review, Washington Gas sends contractors to those sites who use CCTV cameras to inspect sewer laterals via either a "lateral launch" capability, or in cases of blockages or other accessibility issues, via a "push camera" from a clean out or from inside of a house. The same camera inspection process was added to the company's Operations and Maintenance Manual for new installations as well to prevent new cross bores by carefully locating and inspecting sewer facilities by camera before excavation begins, and in some instances after installations are completed.

The company also created and promotes a "Call Before You Clear" program that encourages plumbers and excavators who use mechanical equipment to clear sewer blockages to make an emergency locate request. A Washington Gas locator will respond by painting the approximate location of the gas facility, and the plumber can use those paint marks to assess whether there is the potential for a cross bore. In instances where there is cross bore potential, Washington Gas immediately responds just as it would to a Grade 1 emergency and will stay onsite until the issue is resolved. Washington Gas promotes the "Call Before You Clear" program through One Call centers, customer outreach/education and the training it provides throughout its footprint. The company has mitigated 48 cross bores to date, and damage prevention manager Scott Brown has brought Washington Gas' mitigation program to bear on his work as a member of the Best Practices committee's cross bore task team.

2018 DIRT Data will Tell us More

In a data-driven industry, a first step toward addressing a problem is having good information about the issue. As part of a larger revision of the DIRT form, CGA's Data Evaluation & Reporting Committee added a question to begin measuring instances of cross bores as it collects 2018 data.

As the committee evaluated how best to collect cross bore data, it decided the best solution was to add a simple "yes or no" question in Part C: "Did the event involve a cross bore?" Making cross bore its own root cause would take away the ability to correlate it with other root causes like lack of 811 notification or failure to pothole. DIRT Users Guide material has been written on how to fill out a DIRT report for the various scenarios by which a cross bore condition is created and/or discovered and can be found at www.cga-dirt.com.

Best Practices Task Team Identifying Cross Bores Mitigation and Determination Practices

In 2014, CGA's Best Practices committee established a task team dedicated to identifying best practices for determining the presence of and mitigating cross bores. The team has worked diligently since then to incorporate input from CGA's stakeholder groups, as well as soliciting input from plumbers, and gathered information from providers of technical solutions and several CGA members who have successful cross bore mitigation programs.

At its most recent meeting in March 2018, the task team discussed how the draft language of TR2014-02 is geared mostly toward legacy cross bores, and how membership can work together to identify practices to avoid new cross bores. The team will meet again in July to discuss next steps. If you would like to get involved in the cross bore task team, contact CGA staff at support@commongroundalliance.com.

The Future of Damage Prevention

Addressing the issues surrounding cross bores requires collaborative problem solving across industries and disciplines – an expansive endeavor, but one that CGA is uniquely suited for given its members' commitment to our shared responsibility philosophy. As CGA increases efforts to measure the scope of the cross bore issue, documents potential technology solutions, and works toward a consensus-based Best Practice, the organization's integrated program structure is bringing the best minds in damage prevention together to tackle this entrenched issue. ESG

I stood on the edge of the railroad right of way as I watched construction activity for a new highway – railroad grade separation. I knew I was safe standing 50 feet from the nearest track. Still, the hair on my neck stood up as my mind detected a presence behind me. Turning, I saw over a million pounds of train, on 480 axles, rolling slightly down grade on continuously welded rail. The wind was blowing, and the constant roar of traffic on the highway filled the air. I never heard it coming. The engineer never blew the whistle for there was no grade crossing to protect. I was safe, but a shiver still went up my spine when I heard the rumble as the locomotives passed by. This was my railroad safety epiphany. What will be yours?

More than 800 people were killed by trains in the United States in 2017, according to Operation Lifesaver, the non-profit rail safety organization. Approximately 600 of those were pedestrians or trespassers. Preventing tragedies along railroad tracks is the rail industry's #1 priority, both from the occupational standpoint and from the public standpoint. To protect the lives, you have to protect the property. Any work conducted on the railroad requires direct coordination with the railroad.

Permitting

Performing any type of work on the railroad, whether that be site investigations, surveying, locating utilities, potholing, construction, maintenance, etc. requires coordination with the primary operating railroad. Proper permitting will certify that these activities are safe to perform on the railroad and ensure the safety of others.

Plan ahead

Ensure that your planners properly account for any work that may need to be performed on railroad property. Oftentimes railroads can be an afterthought in the planning process, which results in last minute requests to the railroad and lackluster results in terms of your speed to construction. With the proper amount of notice to the railroads, you increase the chances of the railroad not landing on your project's critical path. Some railroads even require Roadway Worker Protection training, which can take several days to complete along with scheduling for the event.

How do I know which railroad to contact?

There are many tools out there to help you determine the railroad owner. DOT crossing placards are located at every public road crossings and list valuable information such as 1) emergency contact info, 2) DOT crossing number, 3) operating railroad, and 4) railroad mile post. The Federal Railroad Administration (FRA) offers a valuable online tool that will provide you with additional ownership information and an interactive GIS map, link below. All you need is the DOT crossing number.
https://safetydata.fra.dot.gov/officeofsafety/publicsite/crossing/crossing.aspx

Design/Engineering:

One fully loaded train transports millions of pounds of cargo at highway speeds at any given time. These massive dynamic loadings are a modern marvel that should not be taken lightly. Excavating on railroad property requires thorough engineering to ensure that these significant live loads produced by trains are properly supported. A licensed engineer should be consulted when permitting plans for excavation around railroad property.

Utility crossings beneath tracks also require proper engineering to ensure that no settlement occurs during and after the installation process. A minor amount of settlement from an improperly installed utility can have potential disastrous effects resulting in a possible train derailment.

Insurance

Check with your insurance provider before performing any work on the railroad. Many general insurance policies have specific exclusions for work in and around railroads.

Utility locates

Locating railroad facilities and locating third-party utilities are two completely separate processes. When permitting with the railroad, the railroad will locate their own facilities. It is your responsibility to locate the remaining third-party utilities on the

railroad property by placing the appropriate utility locate requests with the local One Calls in the area.

Safety

The railroads are regulated by the FRA, which requires there to be track protection when people or equipment will be fouling the tracks or undermining the track structure. It is paramount for your safety and the safety of others that track protection be provided when determined necessary by the operating railroad.

Proper personal protective equipment should also be worn when performing work on the railroad, which includes but is not limited to: hardhat, high visibility vest, steel-toe boots, and eye protection.

When you properly permit and coordinate with the railroad you are ensuring the safety of your workers, the railroad's employees/facilities, and the overall general public. Safety is, and always will be, the rail industry's #1 priority. ESG

By Alex Saar, CSX Transportation, and Gary Voogd, Union Pacific.

I've Been Working on the Railroad...

Safely

BY ALEX SAAR AND GARY VOOGD

811 AND HAND TOOLS

BY WALT KELLY

One of the fundamental differences in One Call statutes is whether you are required to call in an excavation notice based on if you are digging by hand or if you are using mechanized (power) tools. Virtually every statute makes this distinction. Did you ever wonder if one of these is safer? Does it make any difference? Is it even the right question to be asking?

In my mind, the better question is: Which is more profitable - to do one's best to prevent damage or to simply avoid a violation of the law?

Based on 25 years' experience in a variety of roles in One Call, I don't see the language of a state's statute as being as large a factor in productivity, profit, or damage prevention as the attitude of the various players, especially the excavator (considering that the excavator is the last link in the chain of events that either leads to a safe excavation or to a damage).

The question as to whether to make a One Call when hand-digging vs. using power equipment is a tough one to address with a simple statute that covers all, or even most, situations. What's really needed is a strong desire to avoid damage, and to recognize that for a project to be financially successful, it has to go fast while minimizing any issues that would cause unexpected expense.

For example: How far ahead of excavation do you pothole? Do you assume the marks are accurate and start at the edge of the tolerance zone or at the beginning of the excavation project? At the edge of the tolerance zone might be legal, but potholing facilities at the beginning of the project will result in less downtime and, likely, fewer damages in the case of a bad locate. If the time it takes to pothole is the same, there is little cost difference.

How much will it cost an excavator in downtime in the event of a hit? How much in terms of equipment loss and/or personnel loss? How much to defend himself should that be necessary?

Do you have to have potholes open when a bore goes past in a few days or weeks? How about filling the pothole with pea-gravel and topping it with blacktop mix? It's easy to suck out, even when the temperature is below freezing. Or, how about a steel plate dropped over the pothole? Weld a section of pipe whose diameter is slightly smaller than that of the pothole to keep the plate in place.

In a case I wrote about before, a church blew up when a mismarked gas line was severed. Potholing early would have found the gas line was not where it was marked and that would have given the locator time to catch his error. The excavator was not required to pothole early, but doing so would likely have prevented the incident.

How about the federal manager in Washington D.C. who mentioned that he had to remove a bush, and after hearing me talk about the danger of digging without calling, called MissDig. He was stunned to find red paint going straight through the bush he was going to chop out with an all-steel cutter!

The law only sets minimum standards, not the better practices. If you want better results, you will want to aim higher than the minimum! ESG

Walt Kelly is a former Director of Pipeline Safety for the State of Minnesota and former consultant to PHMSA for reducing excavation damage to pipelines. He has called over 12,000 excavation notices for fiber optic installations around the U.S. He can be reached at 507-454-5147 or walt@waltkelly.com.

Pipeline Location Information

PIPELINE MARKERS

Pipelines are buried in areas called rights-of-way. Pipeline markers are used to designate the general route of the pipeline. Markers can also be found where a pipeline crosses a street or railroad, emerges from the ground, or in waterways.

BE AWARE: Pipeline markers will not designate the exact location, depth or number of pipelines in the area. Markers come in different shapes and sizes, but will always:

- **Include the word WARNING, DANGER OR CAUTION**
- **Identify the material being transported**
- **Provide a number to reach the company in event of an emergency**
- **Provide the name of the pipeline company**

Gathering pipelines are normally located in rural areas and transport crude oil or natural gas from wellheads and production facilities to processing facilities where the oil, gas and water are separated and processed.

Transmission pipelines move refined liquid products and natural gas from refineries to marketing and distribution terminals typically using larger diameter, high-pressure lines. The general location of all transmission pipelines can be viewed in the National Pipeline Mapping System at www.npms.phmsa.dot.gov

Distribution pipelines are normally located in populated areas and carry natural gas or propane from a transmission pipeline or storage facility directly to residential and industrial customers. Some companies have included the location of their pipelines in a mobile friendly web application called Pipelines Nearby, which can be accessed at www.pipelinesnearby.org

MARCADORES DE TUBERÍA

Las tuberías son enterradas en áreas llamadas derecho de paso (ROW por sus siglas en ingles). Los marcadores de tubería se usan para designar la ruta general de la tubería. Los marcadores también pueden ser encontrados donde una tubería cruza una calle o riel de tren, donde sale del suelo, o en vías navegables.

ESTÉ CONSCIENTE: Los marcadores no dan la ubicación exacta, profundidad ni número de tuberías en el área. Los marcadores vienen en diferentes formas y tamaños, pero siempre incluyen:

- **Incluye la palabra WARNING, DANGER OR CAUTION (aviso, peligro o precaución)**
- **Identifica el material siendo transportado**
- **Da el número de la compañía en case de emergencia**
- **Da el nombre de la compañía de tubería**

Tuberías **Recolectoras** están situadas en zonas rurales y transportan normalmente petróleo crudo o el gas natural de manantiales y de instalaciones de producción a centros de procesamiento donde se separan y se procesan aceite, gas y agua.

Las tuberías de **Transmisión** mueven productos y gas natural líquidos refinados desde refinerías a terminales comerciales y de distribución típicamente usando líneas de alta presión con diámetro más grande. La ubicación general de todas las tuberías de transmisión se puede ver en el sistema de trazado nacional de tubería en www.npms.phmsa.dot.gov

Las tuberías de **Distribución** están situadas en áreas pobladas y llevan normalmente el gas natural o propano de una tubería de transmisión o instalación de almacenamiento directamente a clientes residenciales e industriales. Algunas compañías han incluido la ubicación de sus tuberías en una aplicación web móvil llamada Pipelines Nearby, que puede ser accedida en www.pipelinesnearby.org

Pipeline Products & Facilities

NATURAL GAS is a naturally occurring resource formed millions of years ago because of heat and pressure acting on decayed organic material. It is extracted from wells and transported through gathering pipelines to processing facilities. From these facilities, it is transported through transmission pipelines to distribution pipeline systems. The main ingredient in natural gas is methane (approximately 94 percent). Natural gas is odorless, colorless, tasteless and nontoxic in its natural state. An odorant (called mercaptan) is normally added when it is delivered to a distribution system. At ambient temperatures, natural gas remains lighter than air. However, it can be compressed (CNG) under high pressure to make it convenient for use in other applications or liquefied (LNG) under extremely cold temperatures (-260° F) to facilitate transportation.

PETROLEUM GAS is a mixture of gaseous hydrocarbons, primarily propane, butane and ethane. These products are commonly used for cooking, heating and other industrial applications. They are easily liquefied under pressure and are often stored and transported in portable containers labeled as Liquified Petroleum Gas (LPG). When transported in transmission pipelines they may also be identified as Highly Volatile Liquids (HVLs) or Natural Gas Liquids (NGLs). Vaporized LPG may also be found in smaller gas distribution systems. Typically, LPG is a tasteless, colorless and odorless gas. When transported via transmission pipelines it normally will not have odorant added. Odorant is added when LPG is offloaded to a distribution pipeline system or transport tanks to facilitate leak detection. Ethylene and propylene do have a faint natural odor like petroleum.

PETROLEUM LIQUIDS is a broad term covering many products, including: crude oil, gasoline, diesel fuel, aviation gasoline, jet fuel, fuel oil, kerosene, naphtha, xylene and other refined products. Crude oil is unrefined petroleum that is extracted from beneath the Earth's surface through wells. As it comes from the well, crude oil contains a mixture of oil, gas, water and other impurities, such as metallic compounds and sulfur. Refinement of crude oil produces petroleum products that we use every day, such as motor oils and gasoline. Crude oil is transported from wells to refineries through gathering or transmission pipelines. Refined petroleum products are transported in transmission pipelines to rail or truck terminals for distribution to consumers. Odorant is not added to these products because they have a natural odor.

ANHYDROUS AMMONIA is the liquefied form of pure ammonia gas. It is a colorless gas or liquid with an extremely pungent odor. It is normally transported through transmission pipelines and is used primarily as an agricultural fertilizer or industrial refrigerant.

CARBON DIOXIDE is a heavy gas that is normally transported in transmission pipelines as a compressed fluid. It is a naturally occurring, colorless, odorless and tasteless gas used in the petroleum industry. Under normal conditions, carbon dioxide is stable, inert and nontoxic. However, it can act as an asphyxiant.

ETHANOL (also called ethyl alcohol) is a colorless liquid that is widely used as an additive to automotive gasoline. It may be transported in buried transmission pipelines.

HYDROGEN GAS is commonly produced from the steam reformation of natural gas. It is frequently used near its production site, with the two main uses being petrochemical processing and ammonia production. Hydrogen is a flammable gas that is colorless, odorless and lighter than air. It is nontoxic, but can act as an asphyxiant.

"SOUR" CRUDE OIL AND "SOUR" GAS refer to products containing high concentrations of sulfur and hydrogen sulfide. Products containing little or no sulfur are often referred to as "sweet". Hydrogen sulfide (H2S) is a toxic, corrosive contaminant found in natural gas and crude oil. It has an odor like the smell of rotten eggs or a burnt match. Exposure to relatively low levels of hydrogen sulfide (500 ppm) can be fatal. ESG

811

Know what's **below.**
Call before you dig.

DIRECTRICES PARA REACCIONAR EN EMERGENCIAS

PÓSTER DE SEGURIDAD PROVEIDO POR PIPELINE ASSOCIATION FOR PUBLIC AWARENESS

CONOZCA LOS PELIGROS

- El gas natural y otros productos de petróleo son inflamables y queman. Si la piel está expuesta, serias irritaciones pueden ocurrir. Los gases escapados pueden desplazar el oxígeno.
- La electricidad hará descargas o cortocircuito a tierra produciendo temperaturas que son cuatro veces más intensas que la temperatura del sol. Como mínimo quemaría la piel y dañaría los organos internos. Los altos voltajes de electricidad pueden hacer arco a distancias considerables a través del aire. Usted debe estar consiente de cables aéros de alto voltaje y aleje cualquier parte del equipo por lo menos a 10 pies de distancia de los cables aéreos.
- El agua a alta presión pueden causar heridas graves. Las aguas residuales contienen bacterias que puede ser de alto riesgo para la salud. Los gases del alcantarillado son inflamables y queman.

RECONOZCA LAS CONDICIONES PELIGROSAS

- Los charcos de liquido, la tierra soplando, los sonidos siseantes, las nubes de vapor, los olores a gas, las burbujas en agua estancada, la vegetación completamente seca, y la tierra congelada o hielo alrededor de gasoductos/ oleoductos son todas señales de escapes de gas natural o petróleo y deben de ser tratadas como una emergencia.
- Trate el contacto con cualquier cable eléctrico como una emergencia sin tener en cuenta si aparece dañado o no o si está cortado. Ésto incluye el contacto con cables aéreos de alto voltaje.
- Con frecuencia los servicios usan zanjas conjuntamente poniéndolo a usted en un mayor riesgo en las zanjas que támbien tienen electricidad.
- La tierra mojada o descolorida es un indicio de un escape de agua/alcantarillado y debe ser tratada como una condición de emergencia potencial.

EXCAVATION EMERGENCIES

PROVIDED BY PIPELINE ASSOCIATION FOR PUBLIC AWARENESS

KNOW THE HAZARDS

- Natural gas and other petroleum products will ignite and burn. If exposed to the skin, serious irritations may occur. Escaping gases can displace oxygen.
- Electricity will arc or short to ground producing heat that is up to four times greater than the heat of the sun. At a minimum, it will burn skin and damage internal organs. High voltage electricity can arc significant distances through the air. Be aware of all aboveground high voltage lines and keep any part of the equipment at least 10 feet away from overhead lines.
- Water under high pressure can cause serious injury. Wastewater contains bacteria that can be a significant health risk. Sewer gas will ignite and burn.

RECOGNIZE UNSAFE CONDITIONS

- Pools of liquid, blowing dirt, hissing sounds, vapor clouds, gaseous odors, bubbles in standing water, dead vegetation, and frozen soil or ice next to pipelines are all signs of a natural gas or petroleum pipeline leak and should be treated as an emergency.
- Treat contact with any electric line as an emergency regardless of whether it appears undamaged, damaged or severed. This includes contact with aboveground high voltage lines.
- Utilities often jointly use trenches placing you at greater risk in trenches that also have electricity.
- Wet or discolored soil is an indication of a water/sewer leak and should be treated as a potential emergency condition.

EMERGENCY CONDITIONS INVOLVING UNDERGROUND FACILITIES INCLUDE:

Leaks, ruptures, explosions, fires, severe settling or soil movement, weakened or damaged facilities and similar instances where immediate action is necessary to prevent loss of life, injury to persons, or damage to property and the environment. Every situation is different and must be evaluated on the individual circumstances. Below are general emergency response guidelines for various emergency/damage situations involving underground facilities.

RESPOND IMMEDIATELY

NATURAL GAS & PETROLEUM LIQUIDS

1. Turn off equipment, if it can be done safely.
2. Abandon all equipment and get a safe distance away.
3. Avoid open flames or anything that might start a fire. Do not start motor vehicles or electrical equipment. Remove all ignition sources (cigarettes, cell phones, or anything that could create a spark or static electricity).
4. Evacuate the area and keep people out.
5. Do not make contact with escaping liquids.
6. Do not operate any pipeline valves.
7. Call 911 or your local fire, police, or sheriff's office.
8. Do not try to put out a fire. If it's burning, let it burn; ask local firefighters to observe and protect adjacent property.
9. Contact the facility operator immediately to report the condition.

ELECTRICITY

1. Only move equipment in contact with overhead or underground electric lines if you can move it away safely.
2. If excavator equipment remains in contact with electric equipment, it's safest to stay on equipment (unless on fire) until rescue workers arrive; keep others away. If you must abandon equipment, jump clear of it, landing with both feet on the ground at the same time, and then only shuffle or hop away.
3. If a buried electrical line is struck in wet soil/conditions, the ground may become energized for a large area around the strike. *(Hopping or shuffling away will help reduce your risk to step potential.)*
4. Contact the facility operator immediately to report the condition.
5. If appropriate, call 911 for local emergency response.

WATER/SEWER

1. Evacuate the area immediately and keep people out. Leaking water can fill a trench quickly making escape extremely difficult.
2. Do not close valves in order to stop flooding. Closing the wrong valve may affect fire flows and/or possible containment of potable systems.
3. Be careful of damaged high-pressure water lines because even the slightest scratch or vibration can cause pipelines to break.
4. Move carefully around trenches with wet walls. Wet soil can easily cause suffocation.
5. Avoid contact with wastewater. Do not wade in or work around wastewater.
6. Sewer gas is flammable; avoid open flames or anything that might start a fire.
7. Contact the facility operator immediately to report the condition.

FIBER/COMMUNICATION

1. If a fiber optic cable is cut, do not look into the end of it. Serious eye damage may occur.
2. Contact the facility operator and report the condition.

NEVER BURY A DAMAGED FACILITY!

Even a minor scrape, nick, cut, tear, break, or dent should be reported to the facility owner immediately. If not promptly repaired, it could result in a future leak, service outage, explosion, accident, injury, or death.

CONDICIONES DE EMERGENCIA que afectan las instalaciones subterráneas incluyen: escapes, rupturas, explosiones, incendios, hundimiento severo o movimiento de tierra, debilitamiento y daño de gasoductos/oleoductos/acueductos, y casos similares donde es necesaria la acción inmediata para impedir pérdida de vidas, heridas a personas, o daños a propiedad y el medio ambiente. Cada situación es diferente y debe ser evaluada individualmente según las circunstancias. A continuación se dan directrices generales de emergencia para reaccionar ante varias emergencias/situaciones donde hay daños que afectan las instalaciones subterráneas.

REACCIONE INMEDIATAMENTE

GAS NATURAL Y LÍQUIDOS DERIVADOS DEL PETROLEO

1. Apague el equipo, si lo puede hacer con seguridad.
2. Abandone todo el equipo y aléjese a una distancia segura.
3. Evite llamas abiertas o cualquier cosa que pueda prender fuego. No arranque vehículos de motor o equipo eléctrico. Retire todas las fuentes de ignición (cigarrillos, teléfonos celulares, o cualquier cosa que pueda crear una chispa o electricidad estática).
4. Evacúe el área y no deje pasar a la gente.
5. No haga contacto con escapes de líquidos.
6. No maneje las válvulas de gasoductos/oleoductos.
7. Llame al número de emergencia 911 o llame a las oficinas locales del cuerpo de bomberos, policía, o sheriff.
8. No trate de apagar el fuego. Si está ardiendo déjelo quemar; pídale a los bomberos que observen y protejan la propiedad adyacente.
9. Inmediatamente póngase en contacto con a la compañía que opera los gasoductos/oleoductos para reportar las condiciones.

ELECTRICIDAD

1. Sólo mueva equipo que esté en contacto con cables eléctricos aéreos o subterráneos si usted lo puede mover con seguridad.
2. Si el equipo excavador continúa en contacto con equipo eléctrico, es más seguro quedarse en el equipo (a no ser que esté en llamas) hasta que lleguen los trabajadores de rescate: no deje que otros se acerquen. Si tiene que abandonar el equipo, salte lejos del equipo, cayendo con ambos pies a la misma vez, y luego sólo aléjese arrastrando los pies o saltando
3. Si hay impacto con un cable enterrado y la tierra está mojada, la tierra en el área alrededor del impacto puede estar energizada. (Reduzca el riesgo de electrocutarse alejándose saltando o arrastrando los pies.)
4. Inmediatamente póngase en contacto con la compañía que opera las instalaciones para reportar la emergencia
5. Si es apropiado llame al número de emegencia 911 para ayuda local.

ACUEDUCTO/ALCANTARILLADO

1. Evacúe el área de inmediato y no deje que la gente se acerque. Un escape de agua puede llenar una zanja rápidamente haciendo su escape sumamente dificil.
2. No cierre las válvulas para impedir inundaciones. Cerrar la válvula equivocada puede impedir que el agua pase por los ductos de agua que usan los bomberos para apagar fuegos y/o posiblemente contaminar el sistema de agua potable.
3. Tenga cuidado con los ductos de agua de alta presión debido a que cualquier leve rasguño o vibración puede causar una ruptura.
4. Muévase con cuidado alrededor de zanjas que tienen las paredes mojadas. Tierra mojada puede derrumbarse fácilmente y causar asfixia.
5. Evite contacto con aguas residuales. No camine o trabaje alrededor de aguas residuales.
6. Los gases del alcantarillado son inflamables; evite llamas abiertas o cualquier cosa que pueda iniciar un incendio.
7. Inmediatamente póngase en contacto con la compañía que opera los acueductos y alcantarillados para reportar la emergencia.

FIBRA ÓPTICA/COMUNICACIÓN

1. Si el cable de fibra óptica está cortado, no mire adentro de la punta del cable. Graves daños a los ojos pueden ocurrir.
2. Inmediatamente póngase en contacto con la compañía que opera la fibra óptica para reportar la situación.

NUNCA ENTIERRE EQUIPO DAÑADO

Nunca entierre equipo dañado como cables eléctricos, gasoductos, oleoductos, o ductos de cualquier tipo. Informe de inmediato a la compañía afectada cualquier leve rasguño, corte, rotura, o abolladura. Si la reparación no es hecha rápidamente en el futuro pueden resultar escapes, interrupción de servicios, explosiones, accidentes, heridas, o muerte.

Know the Possible Hazards

Leak, Hazard, and Emergency Response Information	Natural Gas	Petroleum Gas	Petroleum Liquids	Anhydrous Ammonia	Carbon Dioxide	Ethanol	Hydrogen Gas	Sour Gas (H_2S)	Sour Crude Oil (H_2S)	Liquids & Natural Gas
INDICATIONS OF A LEAK										
See - liquid pooling on the ground			X			X			X	X
See - a white vapor cloud that may look like smoke		X		X						
See - fire coming out of or on top of the ground	X	X					X	X		X
See - dirt blowing from a hole in the ground	X	X		X	X		X	X		X
See - a sheen on the surface of water		X	X						X	X
See - an area of frozen ground in the summer	X	X			X		X	X		X
See - an unusual area of melted snow in the winter	X	X			X		X	X		X
See - an area of dead vegetation	X	X	X			X	X	X	X	X
See - bubbling in pools of water	X	X			X		X	X		X
Hear - a loud roaring sound like a jet engine	X							X		X
Hear - a hissing or whistling noise	X	X		X	X		X	X		X
Smell - an odor like rotten eggs or a burnt match	(1)	(1)						X	X	(1)
Smell - an odor like petroleum liquids or gasoline		X	X			X			X	X
Smell - an irritating and pungent odor				X				X	X	
HAZARDS OF A RELEASE										
Highly flammable and easily ignited by heat or sparks	X	X	X			X	X	X	X	X
Will displace oxygen and can cause asphyxiation	X	X		X	X		X	X		X
Vapors are heavier than air and will collect in low areas		X	X	X	X	X		X	X	X
Contact with skin may cause burns, injury or frostbite		X	X	X	X	X	X	X		X
Initial odor may be irritating and deaden the sense of smell								X	X	
Toxic and may be fatal if inhaled or absorbed through skin				X				X	X	
Vapors are extremely irritating and corrosive				X				X	X	
Fire may produce irritating and/or toxic gases	X	X	X	X		X	X	X	X	X
Runoff may cause pollution			X	X		X			X	X
Vapors may form an explosive mixture with air	X	X	X			X	X	X	X	X
Vapors may cause dizziness or asphyxiation without warning	(1)	(1)			X		X	X	X	(1)
Is lighter than air and can migrate into enclosed spaces	X						X			X
EMERGENCY RESPONSE										
Avoid any action that may create a spark	X	X	X			X	X	X	X	X
Do NOT start vehicles, switch lights or hang up phones	X	X	X			X	X	X	X	X
Evacuate the area on foot in an upwind and/or uphill direction	X	X	X	X	X	X	X	X	X	X
Alert others to evacuate the area and keep people away	X	X	X	X	X	X	X	X	X	X
From a safe location, call 911 to report the emergency	X	X	X	X	X	X	X	X	X	X
Call the pipeline operator and report the event	X	X	X	X	X	X	X	X	X	X
Wait for emergency responders to arrive	X	X	X	X	X	X	X	X	X	X
Do NOT attempt to operate any pipeline valves	X	X	X	X	X	X	X	X	X	X
Take shelter inside a building and close all windows				(2)	(2)			(2)	(2)	

(1) The majority of these products are naturally odorless and only certain pipeline systems may be odorized
(2) Sheltering in place is an alternative to evacuation when the products are toxic or the risk of fire is very low

Electric Safety Means NO CONT

BY LORI WARNER

AS YOU ARE PREPARING to perform work, it is important to plan ahead and be aware of your surroundings. Utilities are present throughout our communities. Calling 811 in advance of any digging work will help you to identify underground utilities but what about other utility equipment?

LOOK UP! And all around

Don't put yourself or your workers at risk. The safest way to work around electricity is to have no contact with it. Electricity is always searching for a path to ground. Metal is a good conductor of electricity, but water is a great conductor of electricity. Your body is made up of 50-65 percent water, so if you come in contact with electricity it will flow through you, which can cause you to be badly hurt, burned or can even cause death.

Be aware and make others aware

A good practice during your job planning is to identify and note any electrical equipment that supports the electric system, such as overhead lines and metal cabinets. The work site can change from day to day, so survey your job site each day and share information during morning work briefings to make all workers aware of the potential hazards of contacting electricity. Be sure to also review your emergency plan for responding to power line contacts.

Be Safe

Assume all electric lines and electric equipment is energized at all times. Keep workers, tools and equipment at least 10 feet away from overhead power lines.

Cranes and derricks may require a greater clearance and should adhere to encroachment requirements. For specific requirements consult **https://www.osha.gov.**

Always use a spotter to help you keep equipment clear of overhead lines. Rely on a designated spotter to minimize human error whenever possible. It can be difficult to judge distance when operating equipment alone.

No Contact

Carry tools horizontal. Use non-conductive wood or fiberglass ladders when working near overhead electric lines. If your coworker or equipment comes in contact with electric lines, don't put yourself at risk trying to rescue someone else.

Stay clear of downed or fallen electric power lines. Don't drive over downed power lines. If your equipment vehicle comes in contact with a power line:

- **It's safest to remain in the vehicle**
- **Warn others to keep away**
- **Call 911 and wait for emergency personnel or utility workers to say it is safe to exit**

However, if you must exit for safety reasons such as fire, jump out and jump clear; don't touch the equipment and the ground at the same time. Land with both feet together, and keeping both feet on the ground, shuffle away in small steps to avoid shock or electrocution.

Worker safety is always of concern. Contact your local utility for additional assistance when working around electricity. Remember, the safest approach to electricity is NO CONTACT. ESG

Lori Warner is Public Safety Coordinator with Xcel Energy. She can be reached at lori.a.warner@xcelenergy.com.

VIDEO VAULT

There are many **FREE** training tools available to you on the internet. Shown here are just a few of the excellent videos that have been created to help keep our excavators safe. To find more, go to dp-pro.com, or from YouTube, search for keywords like "excavation safety training".

Construction Safety Training Video by Cleveland Construction, Inc.

Designed as a training video for employees, Cleveland Construction's Employee Safety Training video talks about proper safety procedures to help avoid jobsite injury.

www.youtube.com/watch?v=QGkyYkx2NFY

Construction Safety Basics Training

Designed to provide learners with a high-level overview of a number of construction safety topics and safety rules to comply with OSHA standards.

www.youtube.com/watch?v=9XKv_aU-F9g

Trench and Excavation Safety

Geneva Rock provides basic trench and excavation safety tips to protect workers participating in construction activities.

www.youtube.com/watch?v=3dNFF9H0L-4

Spotter Safety in the Workplace

This video focuses on spotting equipment in the construction industry, including when a spotter is needed, assessing the hazards, working around overhead utilities, spotter expectations, signals to be used, communication, and what to do in an emergency.

www.youtube.com/watch?v=nJyePJedq-4

AEM Vacuum Excavation Safety & Operation Training Video

This video includes safety and operating tips for vacuum excavators.

www.youtube.com/watch?v=hJBqL5mTI_s

A Contractor Talks about the Importance of Calling 811

Three simple numbers -- 811 -- play a major role in protecting the community where you live and work. Listen to a contractor talk about why 811 is important and why calls are sometimes not made.

www.youtube.com/watch?v=70COyZytxqs

Missouri One Call: Confirming Utility Response

Missouri One Call points out that before your shovel hits the ground, you must confirm all utilities on your request have responded to the locate before proceeding.

www.youtube.com/watch?v=3woYKPw6wZ0

USA North 811 – How to Premark Your Excavation Site

This video will teach you how to properly premark your dig site so utility locators know where you plan on digging.

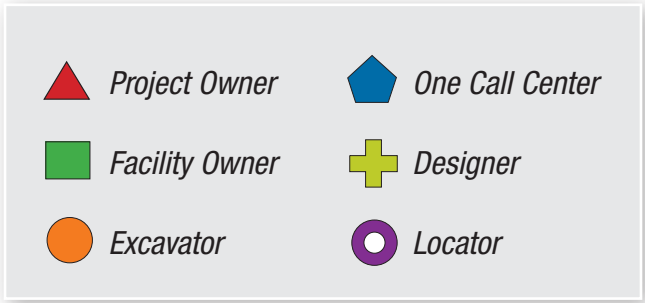
www.youtube.com/watch?v=0kUtHG8wEiI

ESG

Common Ground Alliance Excavation Best Practices 15.0

The Best Practices Committee of the Common Ground Alliance (CGA) developed the following guide based on the Common Ground Study. The Best Practices document is considered the "go to" resource by all stakeholders, governments, and associated industries when addressing safety and damage prevention issues internally, as well as on the local, state, and national levels.

To view or download the complete Common Ground Alliance Best Practices Field Manual, visit CommonGroundAlliance.com



5-1: One Call Facility Locate Request

Practice Statement:
The excavator requests the location of underground facilities at each site by notifying the facility owner/operator through the One Call Center. Unless otherwise specified in state/provincial law, the excavator calls the One Call Center at least two working days and no more than ten working days prior to beginning excavation.

Practice Description:
Currently 50 states and 5 Canadian provinces have One Call legislation and/or established One Call Centers recognizing that excavation performed without prior notification poses a risk to public safety, excavators, and the environment, and can disrupt vital services provided by facility operators. Increased participation in this One Call system provides for improved communication between excavators and facility operators necessary to reduce damage.

5-2: White Lining

Practice Statement:
When the excavation site cannot be clearly and adequately identified on the locate ticket, the excavator designates the route and/or area to be excavated using white premarking prior to the arrival of the locator.

Practice Description:
The route of the excavation is marked with white paint, flags, stakes, or a combination of these to outline the dig site prior to notifying the One Call Center and before the locator arrives on the job. Premarking allows the excavators to accurately communicate to facility owners/operators or their locator where excavation is to occur. The 1997 safety study "Protecting Public Safety through Excavation Damage Prevention" by the NTSB reached the conclusion that premarking is a practice that helps prevent excavation damage. Maine was one of the first states to have mandatory premarking for non-emergency excavations. Connecticut also adopted a premarking requirement; however, the law provides for face-to-face meetings between operators and excavators on projects that are too large for or not conductive to premarking. Facility owners/operators can avoid unnecessary work created when locating facilities that are not associated with planned excavation. (See Appendix B for additional practice information)

5-3: Locate Reference Number

Practice Statement:
The excavator receives and maintains a reference number from the One Call Center that verifies that the locate was requested.

Practice Description:
All calls from excavators processed by the One Call Center receive a unique message reference number, which is contained on all locate request messages. The excavator records this number; it is proof of notification to the members. The computer-generated request identifies the date, time, and sequence number of the locate request. Each locate request ticket (notification) is assigned a unique number with that One Call Center, the requestor, and the facility owner/operator. This number distinguishes this ticket from all other tickets so that it can be archived and retrieved upon request to provide the details of that request only.

5-4: Pre-Excavation Meeting

Practice Statement:
When practical, the excavator requests a meeting with the facility locator at the job site prior to marking the facility locations. Such pre-job meetings are important for major, or unusual, excavations.

Practice Description:
The meeting facilitates communications, coordinates the marking with actual excavation, and ensures identification of high-priority facilities. An on-site pre-excavation meeting between the excavator, facility owners/operators, and locators (where applicable) is recommended on major or large projects. This includes projects such as road, sewer, water, or other projects that cover a large area, that progress from one area to the next, or that are located near critical or high-priority facilities. Such facilities include, but are not limited to, high-pressure gas, high-voltage electric, fiber-optic communication, and major pipe or water lines.

5-5: Facility Relocations

Practice Statement:
The excavator coordinates work that requires temporary or permanent interruption of a facility owner/operator's service with the affected facility owner/operator in all cases.

Practice Description:
Any temporary or permanent interruption requires the active participation by the facility owner/operator and the excavator to ensure protection of facilities through a joint preplanning meeting or conference call. One Call Centers note on the ticket any special contractor requests for a joint meeting that require the facility owner/operator to initiate the process.

5-6: Separate Locate Requests

Practice Statement:
Every excavator on the job has a separate One Call reference number before excavating.

Practice Description:
There are often several excavators on a job site performing work. The construction schedule may dictate different types of work requiring excavation from different specialty contractors simultaneously. In these situations, it is imperative for each excavator to obtain a One Call reference number before excavation to ensure that the specific areas have been appropriately marked by any affected underground facility owner/operator.

5-7: One Call Access

Practice Statement:
The excavator has access to a One Call Center 24 hours per day, 7 days a week.

Practice Description:
Utilities service the public needs 24 × 7 and thus should be protected during that same time. Certain conditions may exist that require excavators to work during off-hours (city/road congestion, off-peak utility service hours). Although most excavators are on the job site during regular work hours, they need to be able to call in future work locations after 5:00 p.m. This allows them more flexibility to schedule work and to avoid peak hours of locate requests at the One Call center.

5-8: Positive Response

Practice Statement:
The underground facility owner/operator either 1) identifies for the excavator the facility's tolerance zone at the work site by marking, flagging, or other acceptable methods; or 2) notifies the excavator that no conflict situation exists. This takes place after the One Call Center notifies the underground facility owner/operator of the planned excavation and within the time specified by state/provincial law.

Practice Description:
If a facility owner/operator determines that the excavation or demolition is not near any of its existing underground facilities, it notifies the excavator that no conflict exists and that the excavation or demolition area is "clear." This notification by the facility owner/operator to the excavator may be provided in any reasonable manner including, but not limited to face-to-face communications; phone or phone message, facsimile or other electronic means; posting at the excavation or demolition area; or marking the excavation or demolition area. If an excavator has knowledge of the existence of an underground facility and has received an "all clear," a prudent excavator will attempt to communicate that a conflict does indeed exist, and the locator will make marking these facilities a priority before excavation begins. Better communication between the excavator and the facility owner/operator is required as an area of excavation becomes more crowded with new underground facilities.

"Positive response" is a term used to describe the two types of action taken by a facility owner/operator after it receives notification of intent to excavate. The facility owner/operator must 1) mark its underground facilities with stakes, paint, or flags; or 2) notify the excavator that the facility owner/operator has no underground facilities in the area of excavation. This process allows the excavator to begin work in a timely manner.

When the excavator makes the request to the One Call Center, the excavator is told which facility owners/operators will be notified. The excavator logs these facilities on a job sheet and identifies which facility owner/operators have responded by marking and which have cleared the area. When a facility owner/operator does not respond by marking or clearing, it may indicate that the facility owner/operator did not receive a locate notice or that the One Call Center's contact information for that facility owner/operator may be incorrect, incomplete, or corrupt (which could result in calamity).

When the excavator has obtained all required information, the excavation can commence with confidence that the safety of the work crew and the public at large has been considered.

5-9: Facility Owner/Operator Failure to Respond

Practice Statement:
If the facility owner/operator fails to respond to the excavator's timely request for a locate (e.g., within the time specified by state/provincial requirements) or if the facility owner/operator notifies the excavator that the underground facility cannot be marked within the time frame and a mutually agreeable date for marking cannot be arrived at, then the excavator re-calls the One Call Center. However, this does not preclude the excavator from continuing work on the project. The excavator may proceed with excavation at the end of two working days, unless otherwise specified in state/provincial law, provided the excavator exercises due care in all endeavors.

Practice Description:
The facility owner/ operator and the excavator partner together to ensure that facilities are marked in an acceptable time frame to allow for underground facility protection.

5-10: Locate Verification

Practice Statement:
Prior to excavation, excavators verify that they are at the correct location, verify locate markings and, to the best of their ability, check for unmarked facilities.

Practice Description:
Upon arrival at the excavation site and prior to beginning the excavation, an excavator does the following:

- Verifies that the dig site matches the One Call request and is timely
- Verifies that all facilities have been marked and reviews color codes if in doubt
- Verifies all service feeds from buildings and homes
- Checks for any visible signs of underground facilities, such as pedestals, risers, meters, and new trench lines
- Checks for any facilities that are not members of the One Call Center and contact someone to get them located.

Use of a pre-excavation checklist is recommended by insurers and practiced by responsible excavating contractors.

5-11: Documentation of Marks

Practice Statement:
An excavator uses dated pictures, videos, or sketches with distance from markings to fixed objects recorded, to document the actual placement of markings.

Practice Description:
In most situations when underground facilities are not properly marked, excavators have no way of knowing where underground utilities are located. If locate markings are adequately documented through the use of photographs, video tape, or sketches before excavation work begins, it is easier to resolve disputes if an underground facility is damaged as a result of improper marking, failure to mark, or markings that have been moved, removed, or covered. It is important for excavators and locators to document the location of markings before excavation work begins. The primary purpose of this best practice is to avoid unnecessary litigation and expensive legal fees for all parties involved.

5-12: Work Site Review with Company Personnel

Practice Statement:
Prior to starting work, the excavator reviews the location of underground facilities with site personnel.

Practice Description:
Sharing information and safety issues during an on-site meeting between the excavator and the excavating crews helps avoid confusion and needless damage to underground facilities.

5-13: One Call Reference Number at Site[59]

Practice Statement:
Except in case of an emergency, the excavator at each job site has available a complete description of the dig site, a list of the facility owner members impacted at that dig site as identified by the One Call Center, and the One Call Center ticket number.

Practice Description:
The availability of locate request details on site is useful because excavators can easily access information about the location and extent of work, the valid start time, and the list of operators notified. The documentation also provides an excavator with appropriate information for daily tailgate meetings for crews; provides quick references for excavation equipment operators; and facilitates communications between the excavator and the One Call Center with respect to that particular locate request, should it become necessary. When multiple crews are working on the same project at separate locations or when different employers have crews working at the same location, each crew has the information.

5-14: Contact Names and Numbers

Practice Statement:
The excavator's designated competent person at each job site has access to the names and phone numbers of all facility owner/operator contacts and the One Call Center.

Practice Description:
Situations arise on the job site that require immediate notification of the facility owner/operator, One Call Center, or local emergency personnel. To avoid costly delays, the excavator ensures that the designated job site personnel have all appropriate names and phone numbers. If telephone communication is unavailable, radio communication to the "home office" is available so that timely notification can be made. The "home office" also has immediate access to all appropriate names and telephone numbers.

5-15: Facility Avoidance

Practice Statement:
The excavator uses reasonable care to avoid damaging underground facilities. The excavator plans the excavation so as to avoid damage or to minimize interference with the underground facilities in or near the work area.

Practice Description:
Foremost on any construction project is safety. Excavators using caution around underground facilities significantly contribute to safe excavation of existing facilities.

5-16: Federal and State Regulations

Practice Statement:
The excavator complies with all applicable federal and state/provincial safety regulations, and, when required, provides training as it relates to the protection of underground facilities.

Practice Description:
Although most existing state/provincial damage prevention legislation does not include reference to federal and state/ provincial regulations, it is important to include reference to worker safety and training in the best practices. Excavators are required to comply with federal and state/provincial occupational safety and health requirements to protect employees from injury and illness. These regulations include reference to training each employee to recognize and avoid unsafe conditions in the work environment and to control or eliminate any hazards or exposures to illness or injury. Therefore, the excavator's crew, as part of its safety training, is informed of the best practices and regulations applicable to the protection of underground facilities.

5-17: Marking Preservation

Practice Statement:
The excavator protects and preserves the staking, marking, or other designation of underground facilities until no longer required for proper and safe excavation. The excavator stops excavating and notifies the One Call Center for re-marks if any facility mark is removed or is no longer visible.

Practice Description:
During long, complex projects, the marks for underground facilities may need to be in place far longer than the locating method is durable. Painting, staking, and other marking techniques last only as long as the weather and other variables allow. When a mark is no longer visible, but work continues around the facility, the excavator requests a re-mark to ensure the protection of the facility.

5-18: Excavation Observer

Practice Statement:
The excavator has an observer to assist the equipment operator when operating excavation equipment around known underground facilities.

Practice Description:
The excavator designates a worker (an observer) who watches the excavation activity and warns the equipment operator while excavating around a utility to prevent damaging that buried facility.

5-19: Excavation Tolerance Zone

Practice Statement:
The excavator observes a tolerance zone that is comprised of the width of the facility plus 18 in. on either side of the outside edge of the underground facility on a horizontal plane. This practice is not intended to preempt any existing state/provincial requirements that currently specify a tolerance zone of more than 18 in.

Practice Description:
(See Practice Statement 5–20)

5-20: Excavation Within Tolerance Zone

Practice Statement:
When excavation is to take place within the specified tolerance zone, the excavator exercises such reasonable care as may be necessary for the protection of any underground facility in or near the excavation area. Methods to consider, based on certain climate or geographical conditions, include hand digging when practical (pot holing), soft digging, vacuum excavation methods, pneumatic hand tools, other mechanical methods with the approval of the facility owner/operator, or other technical methods that may be developed. Hand digging and non-invasive methods are not required for pavement removal.

Practice Description:
Safe, prudent, non-invasive methods that require the excavator to manually determine the actual location of a facility are considered "safe excavation practices" in a majority of state/provincial laws (38 states). A majority of states outline safe excavation practices to include hand digging or pot holing (16 states). Some states specifically allow for the use of power excavating equipment for the removal of pavement. Each state/province must take differing geologic conditions and weather related factors into consideration when recommending types of excavation within the tolerance zone.

5-21: Mismarked Facilities

Practice Statement:
The excavator notifies the facility owner/ operator directly or through the One Call Center if an underground facility is not found where one has been marked or if an unmarked underground facility is found. Following this notification, the excavator may continue work if the excavation can be performed without damaging the facility, unless specified otherwise in state/ provincial law.

Practice Description:
When an excavator finds an unmarked or inaccurately marked facility, excavation stops in the vicinity of the facility and notification takes place. If excavation continues, the excavator plans the excavation to avoid damage and interference with other facilities and protects facilities from damage.

5-22: Exposed Facility Protection

Practice Statement:
Excavators support and protect exposed underground facilities from damage.

Practice Description:
Protecting exposed underground facilities is as important as preventing damage to the facility when digging around the utility. Protecting exposed underground facilities helps ensure that the utility is not damaged and, at the same time, protects employees working in the vicinity of the exposed facility. Exposed facilities can shift, separate, or be damaged when they are no longer supported or protected by the soil around them. Excavators support or brace exposed facilities and protect them from moving or shifting, which could result in damage to the facility. This can be accomplished in different ways; for example, by shoring the facility from below or by providing a timber support with hangers across the top of an excavation to ensure that the facility does not move or bend. In addition, workers are instructed to not climb on, strike, or attempt to move exposed facilities that could damage protective coatings, bend conduit, separate pipe joints, damage cable insulation, damage fiber optics, or in some way affect the integrity of the facility. The Occupational Safety and Health Administration (OSHA) also has addressed this issue in Subpart P—Excavation Standard 29 CFR 1926.651(b)(4), which states "While the excavation is open, underground installations shall be protected, supported, or removed as necessary to safeguard employees." For example, an unsupported sewer main could shift, causing the pipe joints to separate, which could result in the trench where employees are working to flood, endangering the safety of employees.

5-23: Locate Request Updates

Practice Statement:
The excavator calls the One Call Center to refresh the ticket when excavation continues past the life of the ticket (sometimes, but not always, defined by state/provincial law). This recognizes that it is a best practice to define ticket life. If not currently defined in state/provincial law, ticket life is ideally 10 working days but does not exceed 20 working days. Original locate request tickets are generated so that the minimum number of locate request updates are necessary for the duration of a project. After all the excavation covered by a locate request is completed, no additional locate request updates are generated. Communication between excavation project planners, field personnel, and clerical personnel is essential in accomplishing this task.[36]

Practice Description:
Refreshing the ticket recognizes that markings are temporary and provides notification to facility owners/operators of ongoing excavation when a job is started but not completed as planned. Any excavation not begun during the life of the ticket is recalled to the One Call Center. Any excavation that covers a large area and will progress from one area to the next over a period of time is broken into segments when notifying the One Call Center in order to coordinate the marking with actual excavation. The possibility exists that new facilities have been installed in the area where the excavation is to be conducted after the original notification and marking. This practice also helps in situations where multiple excavators are working in the same area at essentially the same time. An example of when this can occur is when two facility owners, such as a cable television company and a telephone company, are planning to serve a new section of a subdivision. In their pre-planning process, they see a vacant space in the right-of-way to place their new facility. Each excavator (internal or external) calls the One Call Center for locates and each facility owner/operator comes and marks their respective facilities indicating that nothing exists. For one reason or another, one of the excavators gets delayed and does not start construction as planned, and when returning to the job site to place the new facility, finds new lines have been installed in the previously vacant space. Many facility owners/operators do not perform their own locates and utilize the services of a contracted facility locator. These contracted facility locators may not be aware of work planned in the near future. By excavators refreshing the locate ticket, the contract locator has another opportunity to identify newly placed facilities. This practice also gives the facility owner/operator another chance to identify the location of their facilities and to avoid possible damage and disruption of service if something was marked incorrectly or missed on a previous locate. Excellent planning, generation, and updating of tickets enhance safety and reduce the unnecessary use of locate resources.[37]

5-24: Facility Damage Notification

Practice Statement:
An excavator discovering or causing damage to underground facilities notifies the facility owner/operator and the One Call Center. All breaks, leaks, nicks, dents, gouges, grooves, or other damages to facility lines, conduits, coatings, or cathodic protection are reported.

Practice Description:
A majority of states require notification for damage or substantial weakening of an underground facility (27 states). The possibility of facility failure or endangerment of the surrounding population dramatically increases when a facility has been damaged. Although the facility may not immediately fail, the underground facility owner/operator is provided the opportunity to inspect the damage and make appropriate repairs.

5-25: Notification of Emergency Personnel

Practice Statement:
If the damage results in the escape of any flammable, toxic, or corrosive gas or liquid or endangers life, health, or property, the excavator responsible immediately notifies 911 and the facility owner/operator.[3/] The excavator takes reasonable measures to protect everyone in immediate danger, the general public, property, and the environment until the facility owner/operator or emergency responders arrive and complete their assessment.[4/]

Practice Description:
This practice is already required by many of the states' One Call legislation. This practice minimizes the danger to life, health, or property by notifying the proper authorities to handle the emergency situation. In these situations, local authorities are able to evacuate as appropriate and command substantial resources unavailable to the excavator or underground facility owner/operator. The excavator takes reasonable measures based on their knowledge, training, resources, experience, and understanding of the situation to protect themselves, people, property, and the environment until help arrives. The excavator responsible remains on-site to convey any pertinent information to responders that may help them to safely mitigate the situation.[4]

5-26: Emergency Excavation

Practice Statement:
In the case of an emergency excavation, maintenance or repairs may be made immediately, provided that the excavator notifies the One Call Center and facility owner/operator as soon as reasonably possible. This includes situations that involve danger to life, health, or property or that require immediate correction in order to continue the operation of or ensure the continuity of public utility service or public transportation.

Practice Description:
This practice allows excavation to begin immediately to restore service or to stop a hazardous situation from getting worse in the case of a gas or pipeline leak, cut telephone cable, or other facility damage.

5-27: Backfilling

Practice Statement:
The excavator protects all facilities from damage when backfilling an excavation. Trash, debris, coiled wire, or other material that could damage existing facilities or interfere with the accuracy of future locates are not buried in the excavation.

Practice Description:
Extra caution must be taken to remove large rocks, sharp objects, and large chunks of hard-packed clay or dirt. No trash or pieces of abandoned lines are backfilled into the trench. This helps prevent inadvertent damage to the facility during the backfill process.

5-28: As-built Documentation

Practice Statement:
Contractors installing underground facilities notify the facility owner/operator if the actual placement is different from expected placement.

Practice Description:
For a facility owner/operator to maintain accurate records of the location of their facilities, it is critical that the contractor installing the new facility be required to notify the facility owner/operator of deviations to the planned installation. Some facility owners/operators do not require a full-time inspector and use a sampling process to ensure that a new facility is correctly installed in compliance to specifications. When this occurs, it becomes much more critical for the contractor to notify the facility owner/operator of changes. For example, it is common for the contractor to make adjustments in the location of the new facility when rocks or other underground obstructions are encountered or when the location of the new facility conflicts with another existing underground facility. This change in plan can represent changes in horizontal or vertical distances from the specified plans. The facility owner/operator establishes standards that require notification if a deviation is beyond specified tolerances, such as changes in depth of 6 in. or more and lateral measurement changes of greater than 1 ft. When these changes to the expected location are communicated to the facility owner/operator, it is the owner/operator's responsibility to take appropriate action to update their records so that an accurate locate can be conducted in the future.

5-29: Trenchless Excavation[13]

Practice Statement:
All stakeholders comply with all best practices and the following general guidelines prior to, during, and after any trenchless excavation (as applicable).

Practice Description:
- The excavator requests the location of underground facilities at the entrance pit, trenchless excavation path, and the exit pit by notifying the facility owner/operator through the One Call Center.
- The trenchless equipment operator performs a site inspection, walking the trenchless excavation path prior to commencing work, and has a good understanding of the job.
- The trenchless excavation operator confirms and maintains the path and minimum clearances established by the project owner and design engineer by tracking and recording the path of the trenchless excavation until complete. Means of tracking trenchless excavations include electronic locating/guidance devices, pipe lasers, water levels, visual inspection, etc.
- When existing facilities are known to be present but cannot be potholed as a result of local conditions, the facility owner and the excavator meet to discuss how to safely proceed with the excavation.
- The excavator stops the trenchless excavation operations if an abnormal condition, unknown substructure, or other hidden hazard is encountered. The excavator proceeds safely only after making positive identification. (Refer to Practice Statements 2–13 and 4–19 for additional information.)

5-30:	Emergency Coordination with Adjacent Facilities[16]
	Practice Statement: Emergency response planning includes coordination with emergency responders and other aboveground and/or underground infrastructure facility owner/operators identified by the Incident Commander through the Incident Command System/Unified Command (ICS/UC) during an emergency. Practice Description: During emergency situations, there are many stakeholders involved: excavators, locators, owner/operators, first responders, One Call Centers, and the general public. Any actions taken by one stakeholder could adversely affect other stakeholders. Accordingly, emergency planning and response are coordinated.
5-31:	**No Charge for Providing Underground Facility Locations[23]**
	Practice Statement: Upon notification by One Call Centers, locations of underground facilities are provided by operators at no cost to excavators. Practice Description: It is the basic underpinning of the call-before-you-dig process that persons involved in excavation activities receive facility locates at no charge when they contact their local One Call Center to give notice of intent to excavate. This service is critical to maintaining the communication between operators and excavators. Call-before-you-dig education and marketing campaigns, such as 811 and those promoted by One Call Centers and associated industries, advise persons involved in excavation activities, including the public, homeowners, and professional excavators, that the service is provided by facility operators at no charge to the person providing the notice of intent to excavate.

5-32:	Vacuum Excavation[39]
	Practice Statement: Vacuum excavation, when used appropriately, is an efficient, safe, and effective alternative to hand digging within the designated underground facility tolerance zone. Use of equipment also follows state/provincial laws and/or local ordinances. Practice Description: The safe exposure of underground facilities within the tolerance zone is essential to damage prevention. Site conditions may make the use of hand tools to expose underground facilities difficult or even impractical. Vacuum excavation is often an appropriate alternative. Locates must be obtained prior to the commencement of work (see Practice Statement 5–1). Many underground facility owners/operators have specific criteria for safe excavation/exposure practices around their facilities. Some underground facility owners/operators accept vacuum excavation as equivalent to hand excavation for exposing their facilities, and others have restrictions on its use. Vacuum excavation is an appropriate method of excavating safely around underground facilities provided that the equipment • has been specifically designed and built for this purpose; • is operated by a worker trained and experienced in its operation; • is operated in accordance with practices that provide appropriate levels of worker and public safety and prevent damage to buried facilities; and • is used in compliance with state/provincial laws and/or local ordinances.
5-33:	**Facility Owner Provides a Monitor During Excavation[64]**
	Practice Statement: If a facility owner/operator considers it necessary to be on site during excavation activities to work with the excavator in protecting their existing facilities, the facility owner/operator makes arrangements with the excavator to be present during those excavation activities within the time specified by state/provincial law. Practice Statement: The facility owner/operator may determine it necessary to be on site during excavation activities taking place near their facilities to help protect them. A facility owner/operator has access to information and resources that may not be available to the excavator. This practice should be considered in conjunction with Practice Statement 2–4: Utility Coordination.

3. 11/30/2001 Amendment approved by the CGA Board via TR-2001-02A
4. 09/27/2002 Amendment approved by the CGA Board via TR-2001-02B
13. 09/16/2005 Amendment approved by the CGA Board via TR-2002-03
16. 09/08/2006 Amendment approved by the CGA Board via TR-2005-02
23. 08/08/2008 Amendment approved by the CGA Board via TR-2007-06
36. 07/16/2010 Amendment approved by the CGA Board via TR-2009-16
37. 07/16/2010 Final wording approved by the CGA Board via TR-2009-16
39. 09/10/2010 Amendment approved by the CGA Board via TR-2009-09
59. 06/19/2014 Wording approved by CGA Board via TR-2011-11
64. 12/13/2016 Approved by CGA Board via TR-2014-01

Community Liaison Service

Formerly known as Community Assistance & Technical Services (CATS)

PHMSA has renamed its CATS program to "Community Liaison Services" to more appropriately align with current roles and responsibilities and better interface with various stakeholders.

The mission of the PHMSA Community Liaison Services is to advance PHMSA's pipeline safety mission:

By proactively engaging with pipeline stakeholders, providing technical expertise, and leveraging technology, data, and information to reduce pipeline risks and influence change through program and policy development.

If you need assistance with any of the following pipeline safety related matters, please contact a PHMSA Community Liaison today:
- Pipeline safety policy/programs (damage prevention, public awareness, emergency response, PIPA, etc.)
- Pipeline stakeholder engagement and outreach
- Pipeline technical services and support (public inquiries, whistleblowers, post incident/accident communications, siting and permit initiatives)
- Questions about pipeline safety in your community

Community Liaisons are located within each PHMSA region. Contact information for the Community Liaisons for your state is noted below.

Community Liaison Services Program Manager
Karen Lynch: karen.lynch@dot.gov • Phone: (202) 366-6855

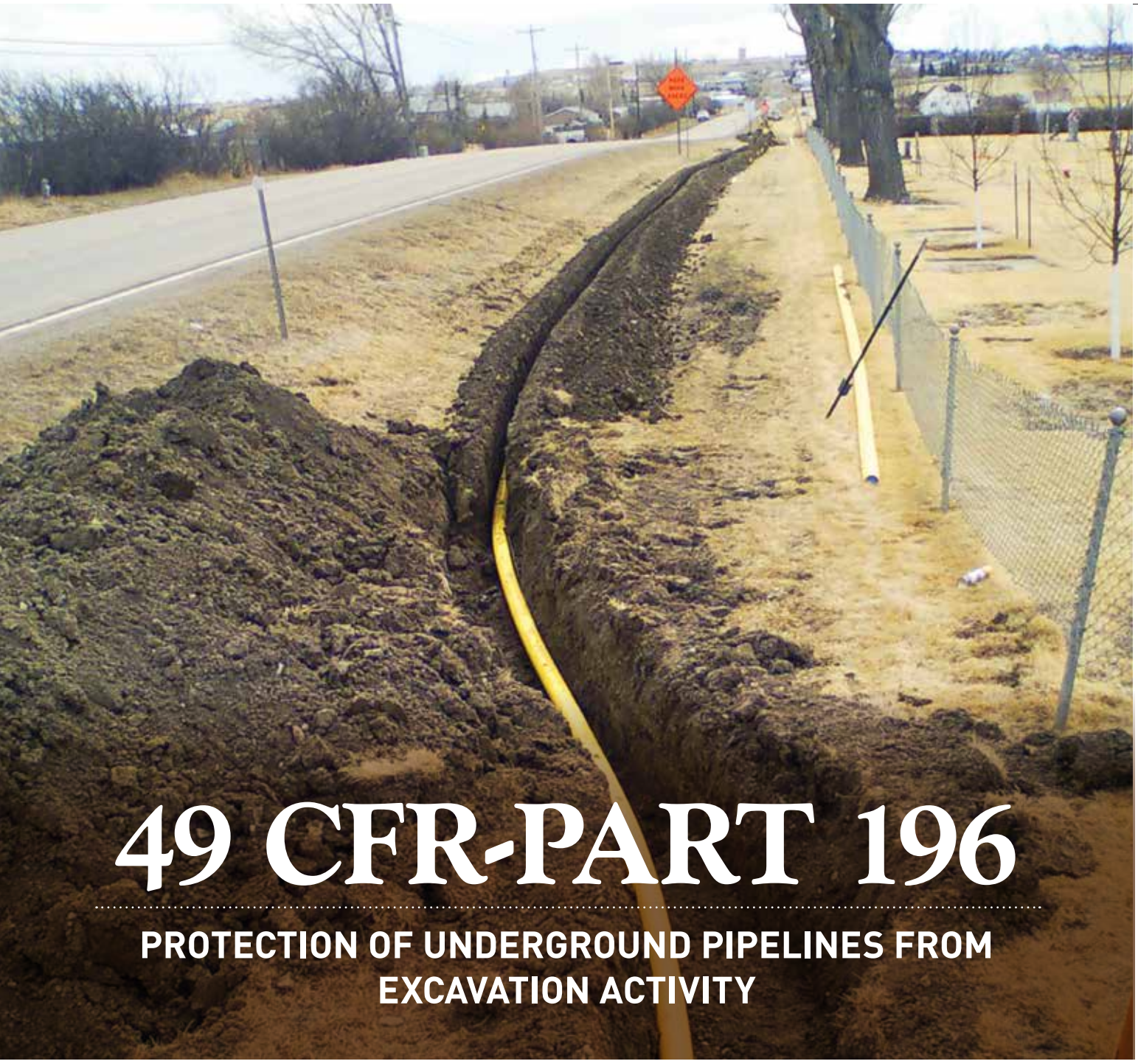
Central Region:
Illinois; Indiana; Iowa; Kansas; Michigan; Minnesota; Missouri; Nebraska; North Dakota; South Dakota; Wisconsin.
Angela Pickett: angela.pickett@dot.gov • Phone: (816) 329-3823
Sean Quinlan: sean.quinlan@dot.gov • Phone: (816) 329-3800

Southern Region:
Alabama; Florida; Georgia; Kentucky; Mississippi; North Carolina; Puerto Rico; South Carolina; Tennessee.
James Kelly: james.kelly@dot.gov • Phone: (404) 990-1848
Arthur Buff: arthur.buff@dot.gov • Phone: (404) 226-6153

Eastern Region:
Connecticut; Delaware; Maine; Maryland; Massachusetts; New Hampshire; New Jersey; New York; Ohio, Pennsylvania; Rhode Island; Vermont; Virginia; Washington, D.C.; West Virginia.
Karen Gentile: karen.gentile@dot.gov • Phone: (609) 433-6650
Ian Woods: ian.woods@dot.gov • Phone: (609) 468-9478

Southwest Region:
Arkansas; Louisiana; New Mexico; Oklahoma; Texas.
Bill Lowry: bill.lowry@dot.gov • Phone: (713) 272-2845
James 'Jay' Prothro:james.prothro@dot.gov • Phone: (713) 272-2832

Western Region:
Alaska; Arizona; California; Colorado; Hawaii; Idaho; Montana; Nevada; Oregon; Utah; Washington; Wyoming.
Tom Finch: thomas.finch@dot.gov • Phone: (720) 963-3175
Dave Mulligan: david.mulligan@dot.gov • Phone: (720) 963-3193



49 CFR-PART 196

PROTECTION OF UNDERGROUND PIPELINES FROM EXCAVATION ACTIVITY

Subpart A—General

§196.1 What is the purpose and scope of this part?

This part prescribes the minimum requirements that excavators must follow to protect underground pipelines from excavation-related damage. It also establishes an enforcement process for violations of these requirements.

§196.3 Definitions.

Damage or excavation damage means any excavation activity that results in the need to repair or replace a pipeline due to a weakening, or the partial or complete destruction, of the pipeline, including, but not limited to, the pipe, appurtenances to the pipe, protective coatings, support, cathodic protection or the housing for the line device or facility.

Excavation refers to excavation activities as defined in §192.614, and covers all excavation activity involving both mechanized and non-mechanized equipment, including hand tools.

Excavator means any person or legal entity, public or private, proposing to or engaging in excavation.

One-call means a notification system through which a person can notify pipeline operators of planned excavation to facilitate the locating and marking of any pipelines in the excavation area.

49 CFR PART 196

Pipeline means all parts of those physical facilities through which gas, carbon dioxide, or a hazardous liquid moves in transportation, including, but not limited to, pipe, valves, and other appurtenances attached or connected to pipe (including, but not limited to, tracer wire, radio frequency identification or other electronic marking system devices), pumping units, compressor units, metering stations, regulator stations, delivery stations, holders, fabricated assemblies, and breakout tanks.

Subpart B—Damage Prevention Requirements

§196.101 What is the purpose and scope of this subpart?

This subpart prescribes the minimum requirements that excavators must follow to protect pipelines subject to PHMSA or State pipeline safety regulations from excavation-related damage.

§196.103 What must an excavator do to protect underground pipelines from excavation-related damage?

Prior to and during excavation activity, the excavator must:

(a) Use an available one-call system before excavating to notify operators of underground pipeline facilities of the timing and location of the intended excavation;

(b) If underground pipelines exist in the area, wait for the pipeline operator to arrive at the excavation site and establish and mark the location of its underground pipeline facilities before excavating;

(c) Excavate with proper regard for the marked location of pipelines an operator has established by taking all practicable steps to prevent excavation damage to the pipeline;

(d) Make additional use of one-call as necessary to obtain locating and marking before excavating to ensure that underground pipelines are not damaged by excavation.

§196.105 [Reserved]

§196.107 What must an excavator do if a pipeline is damaged by excavation activity?

If a pipeline is damaged in any way by excavation activity, the excavator must promptly report such damage to the pipeline operator, whether or not a leak occurs, at the earliest practicable moment following discovery of the damage.

§196.109 What must an excavator do if damage to a pipeline from excavation activity causes a leak where product is released from the pipeline?

If damage to a pipeline from excavation activity causes the release of any PHMSA regulated natural and other gas or hazardous liquid as defined in part 192, 193, or 195 of this chapter from the pipeline, the excavator must promptly report the release to appropriate emergency response authorities by calling the 911 emergency telephone number.

§196.111 What if a pipeline operator fails to respond to a locate request or fails to accurately locate and mark its pipeline?

PHMSA may enforce existing requirements applicable to pipeline operators, including those specified in 49 CFR 192.614 and 195.442 and 49 U.S.C. 60114 if a pipeline operator fails to properly respond to a locate request or fails to accurately locate and mark its pipeline. The limitation in 49 U.S.C. 60114(f) does not apply to enforcement taken against pipeline operators and excavators working for pipeline operators.

Subpart C—Administrative Enforcement Process

§196.201 What is the purpose and scope of this subpart?

This subpart describes the enforcement authority and sanctions exercised by the Associate Administrator for Pipeline Safety for achieving and maintaining pipeline safety under this part. It also prescribes the procedures governing the exercise of that authority and the imposition of those sanctions.

§196.203 What is the administrative process PHMSA will use to conduct enforcement proceedings for alleged violations of excavation damage prevention requirements?

PHMSA will use the existing administrative adjudication process for alleged pipeline safety violations set forth in 49 CFR part 190, subpart B. This process provides for notification that a probable violation has been committed, a 30-day period to respond including the opportunity to request an administrative hearing, the issuance of a final order, and the opportunity to petition for reconsideration.

§196.205 Can PHMSA assess administrative civil penalties for violations?

Yes. When the Associate Administrator for Pipeline Safety has reason to believe that a person has violated any provision of the 49 U.S.C. 60101 et seq. or any regulation or order issued thereunder, including a violation of excavation damage prevention requirements under this part and 49 U.S.C. 60114(d) in a State with an excavation damage prevention law enforcement program PHMSA has deemed inadequate under 49 CFR part 198, subpart D, PHMSA may conduct a proceeding to determine the nature and extent of the violation and to assess a civil penalty.

§196.207 What are the maximum administrative civil penalties for violations?

The maximum administrative civil penalties that may be imposed are specified in 49 U.S.C. 60122.

§196.209 May other civil enforcement actions be taken?

Whenever the Associate Administrator has reason to believe that a person has engaged, is engaged, or is about to engage in any act or practice constituting a violation of any provision of 49 U.S.C. 60101 et seq., or any regulations issued thereunder, PHMSA, or the person to whom the authority has been delegated, may request the Attorney General to bring an action in the appropriate U.S. District Court for such relief as is necessary or appropriate, including mandatory or prohibitive injunctive relief, interim equitable relief, civil penalties, and punitive damages as provided under 49 U.S.C. 60120.

§196.211 May criminal penalties be imposed?

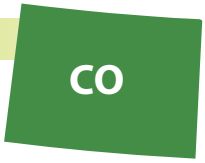
Yes. Criminal penalties may be imposed as specified in 49 U.S.C. 60123. ESG

CHANGES TO THE LAWS IN YOUR STATE

BY JENNIFER REAMS, UNDERGROUND TECHNICAL ADVISOR,
INFRASTRUCTURE COMPLIANCE CONCEPTS • JREAMS.ICC@GMAIL.COM

Presented for informational purposes only. Information and laws are subject to change. Please consult the One Call center website or other sources for current information. The Pipeline Association for Public Awareness attempted to verify all information for accuracy as of the date of this publication, but is not responsible for incorrect or missing information. The Pipeline Hazardous Materials Safety Administration also has compiled extensive documentation for each state, which can be found by visiting: https://primis.phmsa.dot.gov/comm/damagepreventionsummary.htm

COLORADO



SB 167 Signed 5/25/2018- Colorado underwent substantial changes with Senate Bill 167. First, the establishment of the Underground Damage Prevention Safety Commission within the Department of Labor and Employment. This commission is tasked with (a) advisory capabilities in association with best practices and training to prevent damage to underground utilities, policies that enhance public safety which include the establishment and periodic updating to industry best standards, and policies and best practices associated with the Colorado 811 program, (b) review complaints of alleged violations and order remedial action of penalties, (c) review association submitted annual report of specific one call locate and notice requests. Also, the incorporation of special provisional oversight restrictions for home rule county, city, municipality or power authorities. This commission will consist of governor appointments from the following groups: Colorado Counties, Inc., Colorado Municipal League, Special District Association, Colorado Energy Industry, Colorado Contractors Association, excavator association members (2), American Council of Engineering Companies, Investor-Owned Utilities, Rural Electric Association, Pipeline Association, Telecommunications and Broadband, Water Utility Council, Department of Transportation, and Commissioner of Agriculture. Further, structure, procedures and penalty structures are established. The penalty structure takes into account severity of violation and amount of previous violations in the last twelve month to make up a progressive monetary guideline.

Other notable changes are establishment and procedures for the safety commission fund and the damage prevention fund, exemptions from the definition of excavation, definitions for the following: ASCE38, licensed professional engineer, and subsurface utility engineered required project. Still further additions are: design requirements, excavator guidance for the purpose of exposing facilities, procedure for marking standards, life of ticket in annual road maintenance for 180 days with restrictions, and procedures for obtaining positive response from facility owners.

Beginning January 1, 2019, only when the ticket is created, a secondary excavator may be added to the ticket for activities that involve excavation for utility location. Also, mandatory positive response is required.

More changes will be in effect as of January 1, 2021 in terms of one call requirements to the association and the mandate to provide information to the notification association of all locations of any underground facilities that the member owns or operates.
It is highly recommended to reach out to the Colorado 811 center to get a comprehensive list of all changes and effective date. Link below.

http://colorado811.org/

CALIFORNIA

Important dates from 2017 Legislation:

January 1, 2018, every operator may supply an electronic positive response through the regional notification center before the legal excavation start date and time. The regional notification center shall make those responses available to the excavator

July 1, 2018: The Regional One Call Center board shall investigate possible violations.

July 1, 2020, The California Underground Facilities Safe Excavation Board shall enforce the provisions with limited exemptions. The board shall not initiate an enforcement action pursuant to this subdivision for a violation that occurred prior to July 1, 2020

Assembly Bill 1914 Approved 9/23/2018
Effective changes as of July 1, 2020, This change authorizes an excavator to use certain equipment prior to determining the exact location of the subsurface installations and would require the California Underground Facilities Safe Excavation Board, on or before July 1, 2020, to adopt regulations to implement this provision.

www.digalert.org
www.usanorth811.org

DELEWARE

SB 189 signed 8/29/2018- Provides mandatory reporting requirements for facility operators to report damage caused by excavation to facilities in excess of $3,000.00 to the Public Service Commission within 15 days. Also, all pipeline facility operators shall report damage caused by excavation to gas distribution and transmission lines, oil and petroleum products distribution and transmission lines, or dangerous materials, product lines or steam lines. Further, the Attorney General and the Public Service Commission shall review each notification of failure to perform an act required by the law or damage to facilities to determine any violations by the operators, excavators or the notification center. This new provision gives authority to the Attorney General or the Public Utilities Service Commission to impose penalties appropriate to the circumstances and gravity of violation.

http://www.missutility.net/delaware/

CHANGES TO THE LAWS IN YOUR STATE!

INDIANA

SB125 Passed 03/15/2018- Requires a utility excavation contractor doing work for a utility or communications service provider to register with the secretary of state a statement that the contractor and its employees will comply with Indiana's 811 statute. The contractor must provide documentation of compliance prior to entering into a contract.

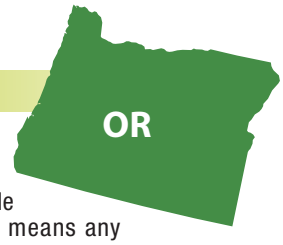
https://indiana811.org/

KENTUCKY

SB 104; Passed 04/02/2018- Provides definition for "Commission" as the Kentucky Public Service Commission. Also, each operator shall report to the commission excavation damage to an underground facility used in the transportation of gas or hazardous liquid within thirty (30) calendar days of being informed of the damage. Further, grants authority to the Commission to promulgate administration regulations to enforce, assess civil penalties and to seek injunctive relief for any violation that results in damage to an underground facility used to transport gas or hazardous liquids that are subject to federal pipeline safety laws. Three notable inclusions include: (a) once the commission initiate investigation no other state, city, or fire protection agency shall initiate enforcement, (b) Penalties paid will be deposited into the State Treasury and credited to the commission account, and (c) Penalties shall conform with Federal penalties.

https://kentucky811.org/

OREGON



Administrative Rule Change Approved 11/24/2018; Effective 01/01/2019- The changes to this rule are extensive and include (a) clarifying definition of business day to means any 24-hour day other than a Saturday, Sunday, or federal or state legal holiday as provided in ORS 757.542. A business day begins at 12:00 a.m. and ends at 11:59 p.m., (b) Adding a definition for "ticket life" to establish that a locate ticket is valid for 45 days, (c) definition of "Tolerance zone" to mean the area within 24 inches surrounding the outside dimensions of all sides of an underground facility, (d) Change excavator notice to at least two full business days, but not more than 10 full business days before beginning an excavation, the excavator must notify the Oregon Utility Notification Center of the date and location of the proposed excavation, and the type of work to be performed, (e) Provides limited exemptions for less than 2 business day notification obligation of excavator, (f) Refine "reasonable accuracy" definition to mark within 24 inches of the outside lateral dimensions of both sides of all its locatable underground facilities within the area of proposed excavation. All marks must indicate the name, initials or logo of the operator of the underground facilities, and the width of the facility if it is greater than 2 inches and provide marks to the excavator of the unlocatable underground facilities in the area of proposed excavation, using the best information available including as-constructed drawings or other facility records that are maintained by the facility operator, (g) large project design ticket requirements, (h) Mandatory safe excavation practices and excavator obligations when damaging an underground facility, and (i) Specific excavation requirements near critical facilities

https://digsafelyoregon.com/

https://digsafelyoregon.com/wp-content/uploads/2018/11/OUNC-OAR-Revision-2019.pdf

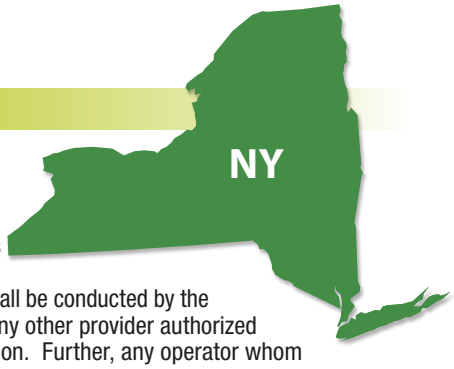
https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=4223

OKLAHOMA

SB 997 Passed 04/26/2018- Amended definition of underground facility to include the following: " intrastate and interstate gas pipelines, as described in 49 CFR Part 192.1, intrastate and interstate hazardous liquid or carbon dioxide pipelines, as described in 49 CFR Part 195.1, water (including storm water), steam, sewage and other commodities." Also, includes an effective date of 11/01/2018.

http://www.okie811.org/

NEW YORK



NY S06756- Passed 11/05/2018. Effective May 4, 2019. Mandatory training for excavators performing work with government contracts. This training shall be conducted by the one-call notification center or any other provider authorized by the Public Service Commission. Further, any operator whom contracts or performs excavation of underground facilities shall require the excavator to complete this training in manner described above. Another addition requires excavators to contact the fire department in the event of an electrical short, escape of gas or hazardous fluids endangering life.

https://www.digsafelynewyork.com/

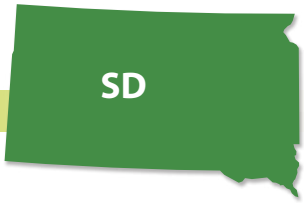
PENNSYLVANIA

SB 242 10/30/2017; Effective April 28, 2018- To recap substantial changes effective in 2018 as follows: (a) additional definitions such as alleged violation and work site, (b) Some important revisions to the previous definitions are as follows: Facility owners and excavators are now able to designate an excavation project as complex, unconventional oil and gas well production and gathering lines or facilities are now defined under facility, (c) exemptions to excavation work now include excavation that relates to the protection of underground facilities, stripper lines, excavation in the operation of a well pad, mining and coal refuse disposal, (d) new lawful start date shall be three business days through ten business days following notification to the One Call System, (e) An excavator shall renotify the one call center if mismarked or not marked facilities and wait three hours before proceeding with excavation subject to the limitations, (f) The process for submitting an alleged violation has changed to be submitted through the one call system within 30 days after receipt of notice that a facility has been damaged. Designers shall submit alleged violations through the one call system within 30 days of becoming aware of the alleged violation. Excavators will submit alleged violation through the one call system within 10 days of damage to a facility, (g) Facility owners will maintain records of abandoned facilities and mark the mains starting with the effective date of this provision, and (h)The

CHANGES TO THE LAWS IN YOUR STATE!

one call center is now delegated as the record keeper of alleged violation reports and all supporting documentation available for the commission and emergency management.

https://www.pa1call.org



SOUTH DAKOTA

HB1159 Signed 03/05/2018 – Provides excavator obligations for damage to a facility as follows: "If any underground facility is damaged, dislocated, or disturbed in advance of or during excavation work, the excavator shall immediately notify the one-call notification center and, if known, the operator of the facility of the damage, dislocation, or disturbance". Also, If the damage, dislocation, or disturbance results in the escape of any flammable, toxic, or corrosive gas or liquid, the excavator shall immediately report the escape to the authorities by calling the 911 emergency telephone number and notifying the one-call notification center and, if known, the operator of the facility. Further, contractor shall not conceal or attempt ot repair damage.

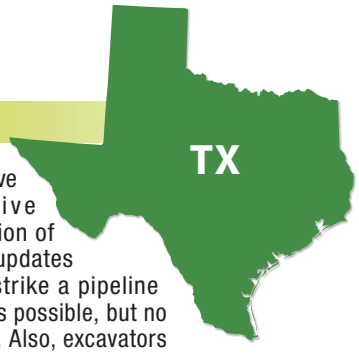
http://www.sdonecall.com/

TENNESSEE

HB 1791/SB1812 Passed 04/23/2018- Tennessee underwent several additions to their one call law as follows: (a) Established requirement for uniform color code and consistent marking best practices, (b) Adds a provision that an operator who is not a member of the one call will be held in violation; subjecting them to fines and penalties, (c) Allows the one call center to provide training for violators, (d) Allows the executive committee to review the reasonableness of fees for training mandated for violators, (e) Adds definition for contractor locator and adds a contractor locator representative to the enforcement committee, (f) Adds recovery protocols for non-payment of penalties and (g) Modifies exemption language for railroad, Tennessee department of transportation and any natural flowing run off systems.

http://www.tenn811.com/

TEXAS



Chapter 18.1, 18.4, 18.11 Administrative Rule Changes 2018 Effective 02/12/2018 The Railroad Commission of Texas damage prevention program updates requirements for excavators who strike a pipeline while digging to notify 811 as soon as possible, but no later than one hour after an accident. Also, excavators must also contact 911 if natural gas or product is released. The rule update extends the deadline for pipeline operators and excavators to file a damage report with the Railroad Commission from 10 days to 30 days.

https://www.rrc.state.tx.us/all-news/020818a/

WISCONSIN

HB532 Passed 01/31/2018 Creates procedures for handling complaints about violations of requirements under current law regarding excavations that involve natural gas or hazardous materials to include process time constraints. These complaints will be handled by the diggers hotline and assigned to a seven-member panel for investigation. The seven-member panel is made up of the following representatives: two transmission facility owners; two excavators; one employee of the one-call system's operational center; one member representing a political subdivision; and one person employed as an underground line locator. The panel shall determine violation and decide to assess education or escalate to the Public Service Commission. The Public Service Commission may dismiss, assign penalty or enter into a consent agreement. The penalty structure shall be no more than $25,000 for each violation, with each day of violation constituting a separate violation. If the Public Service Commission assesses a forfeiture in an order or consent agreement, the respondent will be required to pay a surcharge to the one-call system that is equal to 10 percent of the forfeiture. Some other notable changes are: (a) Requires excavators to promptly make a report to the 911 emergency telephone number upon discovering that flammable, toxic, or corrosive gas or liquid that may endanger life, cause bodily harm, or result in damage to property (b) Imposes requirements for parallel-type excavations and for using power-operated excavating or earthmoving equipment on certain excavations, (c) Specifies that an owner has marked its transmission facilities in a reasonable manner as required under current law if the owner has located and marked the facilities to a level of accuracy and precision consistent with national standards, (d) Allows the one-call system to establish policies, procedures, and forms for complaints made to the panel and allows the Public Service Commission to promulgate rules regarding its duties under the law, and (e) Grants additional powers and duties previously assigned to the Department of Administration to the Public Service Commission; along with assigning additional powers and duties in changes to regulations of public utilities.

https://www.diggershotline.com/

WEST VIRGINA

SB631 Passed 04/23/2018- Amend code by adding five new sections, relating to the one-call system; adding and modifying definitions; creating Underground Damage Prevention Fund; creating Underground Facilities Damage Prevention Board to include (1) The President of Miss Utility of West Virginia or the president's designee;(2) One representative of the excavation, utility, or site construction industry;(3) One representative of the natural resource extraction industry;(4) The Executive Director of the West Virginia Municipal League or its designee;(5) The Executive Director of the West Virginia Rural Water Association or its designee;(6) One representative of the natural gas transmission or distribution or hazardous liquid industry;(7) One representative of the electric, cable, or communications industry;(8) One representative of the privately owned water and/or wastewater services industry;(9) One representative from the general public; and(10) The Chairman of the Public Service Commission or the chairman's designee. Further additions include: specify authority, responsibilities, membership, and liability of board; requiring reports by board; authorizing actions by Public Service Commission; expanding required membership of one-call system; authorizing cost apportionment and collection from operators; modifying standard color code for temporary markings; exempting local or state government responding to emergency repair or replacement of traffic control device from notice requirements; requiring underground facilities be locatable; and providing for civil enforcement, including citations, orders, hearings, monetary civil penalties, and mandatory training.

https://wv811.com/

CHANGES TO THE LAWS IN YOUR STATE!

2019 BILLS

Florida H0263
- Introduced 1/14/2019

Massachusetts H3388, H4420, H1254
- Introduced 01/01/2019

Mississippi SB2222
- Introduced 01/15/2019

New Mexico Mexico Commission notice of One Call Law Proposed Revisions
- Case No. 18-00262-PL

Washington HB1006
- Introduced 01/14/2019

Wyoming HB94
- Introduced 01/10/2019, HB152 Introduced 01/15/2019 1/3/2018

ENFORCEMENT AGENCIES

Some states have more than one avenue of enforcement and appear more than once in the list below.

- **Public Utilities Commission:** Alaska, Arizona, California, Connecticut, Delaware, Georgia, Hawaii, Illinois- Illinois Commerce Commission, Indiana- Indiana Utility Regulatory Commission, Kansas, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Tennessee, Utah, Vermont, Virginia, West Virginia, Wisconsin
- **Attorney General:** Alabama, Arkansas, District of Columbia, Iowa, Nevada, South Carolina, Texas, Utah
- **Relevant County Court:** Alabama, Alaska, Arkansas, New Mexico
- **Division of Safety:** Idaho, Washington
- **Standalone Damage Prevention Boards/ Committees:** Colorado, Maryland, Mississippi, Puerto Rico
- **Railroad Commission:** Texas
- **Department of Labor:** Montana
- **Department of Natural Resources:** Louisiana
- **State Fire Marshal:** California
- **State One Call:** North Dakota, South Dakota, Wyoming
- **Law Enforcement:** Florida

One Call and State Law Directory

The Pipeline Hazardous Materials Safety Administration also has compiled extensive documentation for each state, which can be found at https://primis.phmsa.dot.gov/comm/damagepreventionsummary.htm

You can reach your local One Call center in the U.S. by dialing 811.

811 Know what's below. Call before you dig.

	TICKETS			STATE LAWS & PROVISIONS										NOTIFICATION EXEMPTIONS					NOTIFICATIONS ACCEPTED					
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design	Emergency	Overhead	Large Projects	Tolerance Zone (either side of the utility plus the width of the utility)
ALABAMA / Alabama 811 / 800-292-8525																								
Website: www.al811.com **Hours:** 24 hours, 7 days **Advance Notice:** 2 working days **Marks Valid:** 10 working days **Law Link:** www.al811.com/law	N	Y	Y	Y	Y	Y	N	N	N	Y	Y	N	Y	N	Y	Y	12" *	Y	Y	Y	N	N	18"
	*Agricultural purposes only																							
ALASKA / Alaska Dig Line, Inc. / 800-478-3121 or 907-278-3121 / Tickets Fax: 907-278-0696																								
Website: www.akonecall.com **Hours:** June 1 - Aug 31: 7:00 AM - 7:00 PM, M-F Sept 1 - May 31 8:00 AM - 5:00 PM, M-F **Advance Notice:** 2 business days **Marks Valid:** 15 business days **Law Link:** www.akonecall.com/faq.htm	Y	Y	N	Y	Y	Y	N	N	N	N	Y	N	N	N	N	N	N	Y	Y	Y	N	N	24"
ARIZONA / Arizona 811 / 800-782-5348 or 602-263-1100																								
Website: www.arizona811.com **Hours:** 6:00 AM - 5:00 PM, M-F **Advance Notice:** 2 full working days(excludes weekends and holidays) **Marks Valid:** 15 working days **Law Link:** www.arizona811.com/resources/	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	N	Y	N	Y	Y	Y	N	N	24"
ARKANSAS / Arkansas 811 / 800-482-8998																								
Website: www.arkansas811.com **Hours:** 24 hours, 7 days **Advance Notice:** 2 to 10 working days **Marks Valid:** 20 working days **Law Link:** www.arkonecall.com/statelaw/statelaw.aspx	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	N	N	N	N	N	Y	Y	N	Y	18"
CALIFORNIA																								
USA North 811 / 800-642-2444 **Website:** www.usanorth811.org **Hours:** 24 x 7 **Advance Notice:** 2 working days, not including the day of notification **Marks Valid:** 28 days **Law Link:** www.usanorth811.org/law	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	N	Y	N	Y	24"
Underground Service Alert of Southern California / 800-422-4133 **Website:** www.digalert.org **Hours:** 6:00 AM - 7:00 PM, M-F **Advance Notice:** 2 working days to 14 calendar days not including date of notice **Marks Valid:** 28 days **Law Link:** www.digalert.org/calaw	N	Y	Y	N	Y	Y	Y*	Y	Y	Y	Y	Y	N	Y	N	N	N	Y	N	Y	N	Y	24"
	*DOT and non-pressurized sewer lines, storm drains and drain lines exempt																							
COLORADO / Colorado 811 / 800-922-1987																								
Website: www.co811.org • **Hours:** 24 hours **Advance Notice:** 2 days, not to include the day of notice **Marks Valid:** 30 days **Law Link:** www.colorado811.org/wp-content/uploads/PDF%20Documents/colorado_one_call_law.pdf	N	Y	Y	Y	Y	Y	Y*	N	N	Y	N	Y	N	N	N	Y	Y	Y	Y	Y	N	Y	18"
	* DOT exempt																							
CONNECTICUT / Call Before You Dig / 800-922-4455																								
Website: www.cbyd.com **Hours:** 7:00 AM - 5:00 PM, M-F; Emergencies 24 Hours **Advance Notice:** 2 full working days up to 30 calendar days (excludes weekends and holidays) **Marks Valid:** 30 days **Law Link:** www.cbyd.com/resources/ct-cbyd-state-law-regulations#	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	N	Y	N	Y	Y	Y	N	Y	18"
DELAWARE / Miss Utility of Delmarva / 800-282-8555 (DE), 800-441-8355 (Eastern Shore MD)																								
Website: www.missutilitydelmarva.com **Hours:** 24 hours, 7 days **Advance Notice:** 2 full business days (for both DE and Eastern Shore MD) **Marks Valid:** 10 working days in DE; 12 business days in Eastern Shore MD **Law Link:** www.delcode.delaware.gov/title26/c008/index.shtml	N	Y	N	Y	Y	Y	Y	N	N	Y	Y	N	N	Y	N	N	N	N	Y	Y	N	N	*
	*24" DE, 18" Eastern Shore, MD																							
FLORIDA / Sunshine 811 / 800-432-4770																								
Website: www.sunshine811.com **Hours:** 7:00 AM - 5:00 PM, M-F **Advance Notice:** 2 full business days (10 if dig site is underwater) **Marks Valid:** 30 days **Law Link:** www.sunshine811.com/the-law	N	Y	N	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	N	24"

One Call and State Law Directory

HELP US STAY UP TO DATE.
Directory information is also available online at dp-pro.com. Report any updates to this directory by calling 866-279-7755.

You can reach your local One Call center in the U.S. by dialing 811. Know what's below. Call before you dig.

	TICKETS			STATE LAWS & PROVISIONS									NOTIFICATION EXEMPTIONS					NOTIFICATIONS ACCEPTED					
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design	Emergency	Overhead	Large Projects	Tolerance Zone (either side of the utility plus the width of the utility)
GEORGIA / Georgia 811 / 800-282-7411																							
Website: www.Georgia811.com **Hours:** 7:00 AM - 6:00 PM, M-F • (24/7 emergency) **Advance Notice:** 2 business days (excluding day of call) **Marks Valid:** 30 calendar days **Law Link:** www.georgia811.com/lawspolicies.aspx	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y*	Y	Y	Y**	N	Y	Y	Y	Y	Y	18"
	** Routine road maintenance* *** Farming activities*																						
HAWAII / Hawaii One Call Center / 866-423-7287 / Tickets Fax: 877-695-2466																							
Website: www.callbeforeyoudig.org **Hours:** 24 hours, 7 days **Advance Notice:** 5 workings days, not to exceed 28 calendar days **Marks Valid:** 28 calendar days **Law Link:** www.callbeforeyoudig.org/law.htm	Y	Y	N	Y	Y	Y	Y	N	Y	Y	Y	N	N	Y	N	N	N	Y	Y	Y	N	N	30"
IDAHO																							
DIG LINE / 800-342-1585 **Website:** www.digline.com **Hours:** 24 hours **Advance Notice:** 2 business days **Marks Valid:** 21 Days **Law Link:** https://legislature.idaho.gov/statutesrules/idstat/title55/T55CH22/	N	Y	N	N	Y	Y	Y	N	Y	N	Y	Y	N	15"	N	Y	15"	Y	Y	Y	Y	Y	24"
BONNER/BOUNDRY One Call / 800-626-4950 **Website:** www.passwordinc.com **Hours:** 24 hours, 7 days **Advance Notice:** 2 business days **Marks Valid:** 10 days **Law Link:** www.legislature.idaho.gov/statutesrules/idstat/Title55/T55CH22/	N	Y	N	N	Y	Y	Y	N	Y	N	Y	Y	N	15"	N	Y	15"	Y	Y	Y	Y	N	24"
SHOSHONE/BENEWAH One Call / 800-398-3285 **Website:** www.passwordinc.com **Hours:** 24 hours, 7 days **Advance Notice:** 2 business days **Marks Valid:** 10 days **Law Link:** www.legislature.idaho.gov/statutesrules/idstat/Title55/T55CH22/	N	Y	N	N	Y	Y	Y	N	Y	N	Y	Y	N	15"	N	Y	15"	Y	Y	Y	Y	N	24"
KOOTENAI COUNTY One Call / 800-428-4950 **Website:** www.passwordinc.com **Hours:** 24 hours, 7 days **Advance Notice:** 2 business days **Marks Valid:** 10 days **Law Link:** www.legislature.idaho.gov/statutesrules/idstat/Title55/T55CH22/	N	Y	N	N	Y	Y	Y	N	Y	N	Y	Y	N	15"	N	Y	15"	Y	Y	Y	Y	N	24"
ILLINOIS																							
JULIE, INC. / 800-892-0123 **Website:** www.illinois1call.com • **Hours:** 24 hours, 7 days **Advance Notice:** 48 hours notice (two business days), but no more than a 14 calendar day advance notice prior to the start of excavation. **Marks Valid:** 28 calendar days **Law Link:** www.cityofchicago.org/city/en/depts/cdot/supp_info/chicago-underground-facilities-damage-prevention-ordinance.html	N	Y	N	N	Y	Y	Y	N	Y*	Y	Y	Y	N	N	Y	Y	N	Y	Y	Y	N	N	18"
CHICAGO DIGGER / 312-744-7000 / Tickets Fax: 312-742-0950 **Website:** www.ipi.cityofchicago.org/Digger **Hours:** 6:00 AM - 10:00 PM **Advance Notice:** 48 hours • **Marks Valid:** 28 days **Law Link:** www.illinois1call.com/law_policies/law.htm	Y	Y	N	N	Y	Y	N	Y	Y*	Y	Y	Y	N	N	Y	Y	N	Y	N	Y	N	N	18"
	**When possible*																						
INDIANA / Indiana 811 / 800-382-5544																							
Website: www.indiana811.org • **Hours:** 24 hours, 365 days **Advance Notice:** 48 hours notice (two working days), but no more than a 20-calendar day advance notice prior to the start of excavation. **Marks Valid:** 20 calendar days **Law Link:** www.indiana811.org/wp-content/uploads/2017/07/IC8-1-26-2017.pdf	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	Y	Y	N	Y	Y	Y	N	N	24"
IOWA / Iowa One Call / 800-292-8989																							
Website: www.iowaonecall.com • **Hours:** 24 hours, 7 days **Advance Notice:** Forty-eight hours, excluding Saturdays, Sundays, and legal holidays **Marks Valid:** 20 calendar days **Law Link:** www.iowaonecall.com/Default.aspx?tabid=404#iowa	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	N	Y*	N	Y	Y	Y	N	Y	18"
	**Normal farm operations less than fifteen inches*																						

Know what's below. Call before you dig.

Expand public awareness by visiting call811.com. You will find a variety of downloadable elements available for use free in your company/organization's existing campaigns.

811 Know what's below. Call before you dig.

	TICKETS			STATE LAWS & PROVISIONS									NOTIFICATION EXEMPTIONS					NOTIFICATIONS ACCEPTED					
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design	Emergency	Overhead	Large Projects	Tolerance Zone (either side of the utility plus the width of the utility)
KANSAS / Kansas 811 / 800-344-7233																							
Website: www.kansas811.com **Hours:** 24 hours, 7 days **Advance Notice:** 2 full working days(not including day of notice) **Marks Valid:** 15 calendar days **Law Link:** www.kansasonecall.com/static/pdf/KUUDPA_04.03.2010.pdf	N	Y	Y	Y	Y	Y	Y	N	N	Y	N	N	N	Y*	Y	Y	N	N	Y	Y	N	N	24"
	*Homeowner retains responsibility for any damages due to digging																						
KENTUCKY / Kentucky 811 / 800-752-6007																							
Website: www.kentucky811.org **Hours:** 24 hours/7 days **Advance Notice:** 2 working days **Marks Valid:** 21 calendar days **Law Link:** www.kentucky811.org/the-dig-law	N	Y	N	Y	Y	Y	N	N	N	Y	Y	N	Y	N	Y	Y	N	Y	Y	Y	N	Y	18"
LOUISIANA / Louisiana One Call / 800-272-3020																							
Website: www.laonecall.com **Hours:** 7:00 AM - 6:00 PM, Emergency Locates 24/7 **Advance Notice:** 2 Business Days **Marks Valid:** 20 Days/30 Days for Forestry **Law Link:** www.laonecall.com/law_frame_page.htm	N	Y	Y	Y	Y	Y	Y	N	N	N	N	Y	N	Y	N	N	N	Y	Y	Y	N	N	18"
	*Homeowners are exempt IF they don't encroach upon the right-of-way of any utility owner / operator.																						
MAINE / Dig Safe System, Inc. / 888-344-7233																							
Website: www.digsafe.com **Hours:** 24 hours, 7 days **Advance Notice:** 72 hours(excluding weekends and holidays) **Marks Valid:** 60 days; must start within 30 days **Law Link:** http://www.digsafe.com/laws_rules.php	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	N	Y	N	Y	N	Y	18"
MARYLAND / Miss Utility Call Center / 800-257-7777																							
Website: www.missutility.net **Hours:** 24 hours, 7 days **Advance Notice:** 2 full business days **Marks Valid:** 12 business days **Law Link:** www.missutility.net/maryland/mdstatelaw.asp	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	N	N	Y*	N	N	N	N	Y	Y	N	N	18"
	*Hand-dig only.Mechanized equipment must call																						
MASSACHUSETTS / Dig Safe System, Inc. / 888-344-7233																							
Website: www.digsafe.com **Hours:** 24 hours, 7 days **Advance Notice:** 72 hours(excluding weekends and holidays) **Marks Valid:** Must start within 30 days; as long as marks maintained **Law Link:** http://www.digsafe.com/laws_rules.php	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	N	N	Y	N	Y	N	Y	N	Y	18"
MICHIGAN / Miss Dig System, Inc. / 800-482-7171																							
Website: www.missdig811.org **Hours:** 24 hours **Advance Notice:** 3 business days(excluding weekends and holidays) **Marks Valid:** 3 weeks to 6 months **Law Link:** www.missdig811.org/education/public-act-174.html	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	N	N	N	N	N	Y	Y	Y	Y	18"
MINNESOTA / Gopher State One Call / 800-252-1166 or 651-454-0002																							
Website: www.gopherstateonecall.org **Hours:** 24 hours **Advance Notice:** 48 hours(excluding weekends and holidays) **Marks Valid:** 14 days **Law Link:** www.revisor.leg.state.mn.us/statutes/?id=216D	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	N	N	Y	N	N	Y	Y	N	N	24"
MISSISSIPPI / Mississippi 811, Inc. / 800-227-6477 / Tickets Fax: 601-362-7533																							
Website: www.ms811.org **Hours:** 24 hours, 7 days **Advance Notice:** 2 working days **Marks Valid:** 14 working days **Law Link:** www.ms1call.org/One Call-law	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	Y	24"	12"	Y	Y	Y	N	Y	18"
MISSOURI / Missouri One Call System / 800-344-7483 / Tickets Fax: 800-635-8402																							
Website: www.mo1call.com **Hours:** 24 hours, 7 days **Advance Notice:** 2 working days, not counting day of request **Marks Valid:** As long as visible **Law Link:** www.mo1call.com/manual_law.php	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	Y	Y*	N	Y	Y	Y	N	N	24"
	*Less than 16"																						

One Call and State Law Directory

Informational purposes only. Information and laws are subject to change. Consult your local One Call Center website for updated information. Infrastructure Resources, LLC attempted to verify all information as of publication date, and accepts no responsibility for missing or incorrect information.

You can reach your local One Call center in the U.S. by dialing 811.

811 Know what's below. Call before you dig.

	TICKETS			STATE LAWS & PROVISIONS									NOTIFICATION EXEMPTIONS					NOTIFICATIONS ACCEPTED					Tolerance Zone (either side of the utility plus the width of the utility)
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design	Emergency	Overhead	Large Projects	
MONTANA																							
MONTANA 811 / 800-424-5555 **Website:** www.montana811.org **Hours:** 24 hours, 365 days **Advance Notice:** 2 business days **Marks Valid:** 30 days **Law Link:** www.montana811.org/montana-dig-law.html	Y	Y	Y	N	Y	Y	Y	N	N	Y	Y	Y	N	Y	N	Y	Y	Y	Y	Y	N	N	18"
MONTANA ONE CALL / 800-551-8344 or 406-755-8344 **Website:** www.montana811.com **Hours:** 24 hours, 365 days **Advance Notice:** 2 business days **Marks Valid:** 30 days **Law Link:** www.montana811.com	Y	Y	N	N	Y	Y	Y	N	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	Y	Y	N	18"
NEBRASKA / Nebraska811 / 800-331-5666 / Tickets Fax: 800-896-0664																							
Website: www.ne1call.com **Hours:** 24 hours, 365 days **Advance Notice:** 2 to 10 business days excluding holidays and weekends **Marks Valid:** 5-10 business days **Law Link:** http://www.ne1call.com/ne-law-enforcement/nebraska-statutes/	Y	Y	Y	Y	Y	Y	Y	N	N	Y	N	Y	N	N	Y	Y	N	Y	Y	Y	N	N	18"
NEVADA / USA North 811 / 800-642-2444																							
Website: www.usanorth811.org **Hours:** 6:00 AM - 7:00 PM, M-F **Advance Notice:** 2 working days up to 28 calendar days **Marks Valid:** 28 days **Law Link:** http://usanorth811.org/law	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N	N	N	N	Y	N	Y	N	N	24"
NEW HAMPSHIRE / Dig Safe System, Inc. / 888-344-7233																							
Website: www.digsafe.com **Hours:** 24 hours, 7 days **Advance Notice:** 72 hours(exluding weekends and holidays) **Marks Valid:** 30 days **Law Link:** http://www.digsafe.com/laws_rules.php	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	N	Y	N	Y	N	Y	18"
NEW JERSEY / New Jersey One Call / 800-272-1000 / Tickets Fax: 800-705-4559																							
Website: www.nj1-call.org **Hours:** 24 hours **Advance Notice:** 3 full business days **Marks Valid:** 45 business days **Law Link:** www.nj1-call.org/nj-law/	Y	Y	N	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	N	Y	Y	Y	N	Y	N	N	24"
NEW MEXICO / New Mexico One Call, Inc. dba NM811 / 800-321-2537 / Tickets Fax: 800-727-8809																							
Website: www.nm811.org **Hours:** 7:00 AM - 5:00 PM, M-F / Emergencies & Damages: 24 hours **Advance Notice:** 2 working days **Marks Valid:** 10 business days **Law Link:** www.nm811.org/new-mexico-811-law/	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	N	N	N	Y	Y	Y	N	Y	18"
NEW YORK																							
DIG SAFELY NEW YORK / 800-962-7962 **Website:** www.digsafelynewyork.com **Hours:** 24 hours, 365 days **Advance Notice:** 2 to 10 working days(Excluding day of call) **Marks Valid:** 10 working days **Law Link:** www.digsafelynewyork.com/resources/nys-code-rule-753	N	Y	N	N	Y	Y	Y	N	N	Y	Y	N	N	N	N	N	N	Y	Y	Y	N	N	24"
NEW YORK 811 / 800-272-4480 **Website:** www.newyork-811.com **Hours:** 24 hours, 7 days **Advance Notice:** 2 to 10 business days **Marks Valid:** 10 working days **Law Link:** www.newyork-811.com/law.html	N	Y	N	N	Y	Y	Y	N	N	Y	Y	N	N	Y	N	N	N	Y	Y	Y	N	N	24"
NORTH CAROLINA / North Carolina One Call Center, Inc. / 800-632-4949																							
Website: www.nc811.org **Hours:** 24 hours, 365 days **Advance Notice:** 3 full business days **Marks Valid:** 15 working days **Law Link:** http://nc811.org/nclaws.htm	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	N	24"

Know what's below. Call before you dig.

You can also reach your local One Call Center by dialing 811 anywhere in the United States. This is a FREE call and a FREE service.

811 Know what's below. Call before you dig.

	TICKETS			STATE LAWS & PROVISIONS									NOTIFICATION EXEMPTIONS					NOTIFICATIONS ACCEPTED					
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design	Emergency	Overhead	Large Projects	Tolerance Zone (either side of the utility plus the width of the utility)
NORTH DAKOTA / North Dakota One Call / 800-795-0555																							
Website: www.ndonecall.com **Hours:** 24 hours **Advance Notice:** 48 hours(excluding weekends and holidays) **Marks Valid:** 21 calendar days **Law Link:** www.legis.nd.gov/cencode/t49c23.pdf?20130530105605	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	N	N	Y	N	N	Y	Y	N	N	24"
OHIO																							
OHIO811 / 800-362-2764 **Website:** OHIO811.org **Hours:** 24 hours, 7 days **Advance Notice** 48 hours but not more than 10 working days **Marks Valid:** As long as visible and work begins within 10 days of original ticket **Law Link:** www.oups.org/ExploreOUPS/TheLaw	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	N	N	Y	N	Y	Y	Y	N	Y	18"
OIL AND GAS UNDERGROUND PROTECTION SERVICE / 614-715-2984 / Ticket Fax: 614-824-4329 **Website:** www.ogpups.org **Hours:** 8:00 AM - 5:00 PM, M-F (except holidays) **Advance Notice:** 48 hours **Marks Valid:** 7 days **Law Link:** www.oups.org/law/Law_law.html	Y	Y	N	Y	Y	Y	Y	N	Y	Y	Y	N	N	N	N	Y	N	Y	Y	N	N	N	18"
OKLAHOMA / Okie811 / 800-522-6543																							
Website: www.okie811.org **Hours:** 24 hours, 7 days **Advance Notice:** 48 hours **Marks Valid:** 10 business days **Law Link:** http://www.okie811.org/how-it-works/the-law/	N	Y	Y	Y	N	Y	Y	N	N	Y	Y	Y	Y	N	N	N	N	N	Y	Y	N	Y	24"
OREGON / Oregon Utility Notification Center / 800-332-2344 / Tickets Fax: 503-293-0826																							
Website: www.digsafelyoregon.com **Hours:** 24 hours, 7 days **Advance Notice:** 2 days to the life of the project **Marks Valid:** Life of project **Law Link:** www.digsafelyoregon.com/faqs/ounc_ors_oar.htm	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	12"	N	Y	N	N	Y	Y	N	N	24"
PENNSYLVANIA / Pennsylvania One Call System, Inc. / 800-242-1776																							
Website: www.paonecall.org **Hours:** 24 hours, 7 days **Advance Notice:** 3 to 10 business days(construction), 10-90 days (design) **Marks Valid:** as long as equipment is on site **Law Link:** www.paonecall.org/palaw	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y	N	N	Y	Y	N	Y	18"
RHODE ISLAND / Dig Safe System, Inc. / 888-344-7233																							
Website: www.digsafe.com **Hours:** 24 hours, 7 days **Advance Notice:** 72 hours(exluding weekends and holidays) **Marks Valid:** Must start within 30 days, as long as marks maintained **Law Link:** www.digsafe.com/laws_rules.php	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	N	N	Y	N	Y	N	Y	N	Y	18"
SOUTH CAROLINA / South Carolina 811 / 888-721-7877																							
Website: www.sc811.com **Hours:** 7:30 AM - 5:30 PM, M-F **Advance Notice:** 3 to 12 full working days notice(10-20 full working days notice subaqueous) **Marks Valid:** 15 working days **Law Link:** www.sc811.com/SCStateLaw.aspx	N	Y	Y	Y	Y	Y	Y	N	Y*	Y	Y	Y**	Y***	Y***	N	Y***	N	Y	Y	Y	N	N	24"
	** Mandatory when excavation site can't be clearly or adequately identified* ***Damages must be reported to the facility operator, if known, as well as the One Call Center.* ****Exemptions for agricultural tilling or plowing less than 12"; homeowners have a 10" non-mechanized depth exception provided the ROW/ Easement not encroached. SCDOT exception for specific work activities only.*																						
SOUTH DAKOTA / South Dakota 811 Center / 800-781-7474																							
Website: www.SD811.com **Hours:** 24 hours **Advance Notice:** 48 hours(excluding weekends and holidays) **Marks Valid:** 21 working days from start date and time on ticket **Law Link:** www.sdonecall.com/law.asp	N	Y	Y	Y	Y	Y	Y	N	N	N	Y	Y*	N	N	N	N	N**	Y	Y	Y	N	Y	18"
	** Damage reporting required. All damage must be reported to the facility operator, or if the operator is unknown, to South Dakota 811 Center.* *** For agricultural tilling and road and ditch maintenance to a depth of 18" only; homeowners have a 12" depth exception for tilling of soil and gardening*																						
TENNESSEE / Tennessee 811 / 800-351-1111 / Tickets Fax: 615-367-4469																							
Website: www.tn811.com • **Hours:** 24 hours **Advance Notice:** Not less than 3 working days, not more than 10 working days **Marks Valid:** 15 calendar days **Law Link:** www.tn.gov/tpuc/divisions/uudp-underground-utility-damage-prevention.html	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N	Y	N	N	N	Y	Y	N	N	24"

One Call and State Law Directory

HELP US STAY UP TO DATE.
Directory information is also available online at dp-pro.com. Report any updates to this directory by calling 866-279-7755.

You can reach your local One Call center in the U.S. by dialing 811.

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	TICKETS			STATE LAWS & PROVISIONS									NOTIFICATION EXEMPTIONS					NOTIFICATIONS ACCEPTED					
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design	Emergency	Overhead	Large Projects	Tolerance Zone (either side of the utility plus the width of the utility)
TEXAS																							
TEXAS811 **Website:** www.texas811.org **Hours:** 24 hours **Advance Notice:** 48 hours (excluding weekends and holidays) **Marks Valid:** 14 working days **Law Links:** http://www.rrc.texas.gov/pipeline-safety/pipeline-damage-prevention-program/	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	N	Y	Y	16"	Y	Y	Y	N	N	18"
LONE STAR 811 **Website:** www.lonestar811.com **Hours:** 24 hours, 7 days **Advance Notice:** 48 hours(excluding weekends and holidays) **Marks Valid:** 14 working days **Law Links:** http://www.rrc.state.tx.us/pipeline-safety/rules/	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y	N	Y	Y*	16"	Y	Y	Y	N	N	18"
	*Agriculture exemption less than 16"																						
UTAH / Blue Stakes of Utah 811 / 800-662-4111																							
Website: www.bluestakes.org **Hours:** 7:00 AM - 5:00 PM, M-F **Advance Notice:** 2 business days, 48 hours notice **Marks Valid:** 14 calendar day **Law Link:** www.le.utah.gov/xcode/Title54/Chapter8A/54-8a.html	N	Y	Y	Y	Y	N	Y	N	N	Y	Y	N	N	N	N	N	N	N	N	Y	N	N	24"
VERMONT / Dig Safe System, Inc. / 888-344-7233																							
Website: www.digsafe.com **Hours:** 24 hours, 7 days **Advance Notice:** 48 hours(excluding weekends and holidays) **Marks Valid:** 30 days **Law Link:** www.digsafe.com/laws_rules.php	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	N	N	Y	N	Y	N	Y	N	Y	18"
VIRGINIA / Virginia 811 / 800-552-7001																							
Website: www.va811.com **Hours:** 24 hours, 7 days **Advance Notice:** 2 working days(excluding day of call) **Marks Valid:** 15 working days **Law Link:** http://va811.com/lawspolicies/	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	N	N	Y	Y	Y	N	N	Y	Y	N	Y	24"
WASHINGTON / 800-424-5555 / TICKETS FAX: 503-293-0826																							
Utilities Underground Location Center (UULC/WA811) **Website:** www.washington811.com **Hours:** 24 Hours, 7 days **Advance Notice:** 48 Hours **Marks Valid:** 45 days **Law Link:** www.washington811.com/wa-dig-law-rcw-19-122/	N	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	N	Y	Y	Y	Y*	Y	N	Y	25"
	*Calls are taken and sent to utilities, however, no language detailing utility response																						
Northwest Utility Notification Center (NUNC) **Website:** www.callbeforeyoudig.org **Hours:** 24 hours, 7 days **Advance Notice:** 2 business day **Marks Valid:** 45 days **Law Link:** www.apps.leg.wa.gov/RCW/default.aspx?cite=19.122	N	Y	Y	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	N	Y	Y	Y	Y*	Y	N	Y	25"
	*Calls are taken and sent to utilities, however, no language detailing utility response																						
Inland Empire Utility Coordinating Council (IEUCC) **Website:** Website: www.ieucc811.org **Hours:** 24 hours, 7 days **Advance Notice:** 2 business day **Marks Valid:** 45 days **Law Link:** www.apps.leg.wa.gov/RCW/default.aspx?cite=19.122	N	Y	N	Y	Y	Y	Y	N	Y	N	Y	Y	N	Y	N	Y	Y	Y	Y*	Y	N	Y	25"
	*Calls are taken and sent to utilities, however, no language detailing utility response																						
WASHINGTON D.C. / District One Call / 800-257-7777																							
Website: www.missutility.net **Hours:** 24 hours, 7 days **Advance Notice:** 2 business day **Marks Valid:** 15 business days **Law Link:** www.apps.leg.wa.gov/rcw/default.aspx?cite=19.122&full=true	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	N	N	N	N	N	N	N	N	Y	N	N	18"
WEST VIRGINIA / West Virginia 811 / 800-245-4848																							
Website: www.wv811.com **Hours:** 24 hours **Advance Notice:** 2 days but not more than 10 **Marks Valid:** 10 days **Law Link:** http://www.wv811.com/one-call-law	N	Y	N	Y	Y	Y	N	N	N	N	N	N	Y	N	N	Y	N	Y	Y	Y	N	N	24"

Know what's below. Call before you dig.

Expand public awareness by visiting call811.com. You will find a variety of downloadable elements available for use free in your company/organization's existing campaigns.

811 Know what's below. Call before you dig.

	TICKETS			STATE LAWS & PROVISIONS									NOTIFICATION EXEMPTIONS					NOTIFICATIONS ACCEPTED					
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design	Emergency	Overhead	Large Projects	Tolerance Zone (either side of the utility plus the width of the utility)
WISCONSIN / Diggers Hotline / 800-242-8511																							
Website: www.diggershotline.com **Hours:** 24 hours, 7 days **Advance Notice:** 3 working days **Marks Valid:** 10 calendar days **Law Link:** https://docs.legis.wisconsin.gov/statutes/statutes/182/0175	N	Y	Y	Y	Y	Y	Y	N	N	N	Y	N	N	N	N	N	N	Y	Y	Y	Y	N	
WYOMING / One Call of Wyoming / 800-849-2476 / Tickets Fax: 800-217-3719																							
Website: www.onecallofwyoming.com **Hours:** 24 hours **Advance Notice:** 2 full business days **Marks Valid:** 14 business days **Law Link:** www.onecallofwyoming.com/law.htm	Y	Y	N	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	N	Y	N	Y	Y	Y	N	N	24"
GULFSAFE / Covers state and Federal waters in the Gulf of Mexico, the Florida Straits and Atlantic Coast / 888-910-4853 (GULF)																							
Website: www.gulfsafe.org **Hours:** 24 hours **Advance Notice:** 7 working days **Marks Valid:** Not Applicable **Law Link:** Not Applicable	N	Y	N	N	N	N	N	Y	N	N	N	N	Y	N/A	N/A	N/A	N/A	Y	Y	Y	N/A	N	N/A

Canada One Call

Click Before You Dig / Cliquez Avant de Creuser

Canadian One Call Centres Committee

	TICKETS			PROVINCIAL LAWS & PROVISIONS									NOTIFICATION EXEMPTIONS					NOTIFICATIONS ACCEPTED					
	FAX	Online	Mobile	Statewide Coverage	Civil Penalties	Emergency Clause	Mandatory Membership	Excavator Permits Issued	Mandatory Premarks	Positive Response	Hand Dig Clause	Damage Reporting	DOT	Homeowner	Railroad	Agriculture	Depth	Damage	Design	Emergency	Overhead	Large Projects	Tolerance Zone (either side of the utility plus the width of the utility)
ALBERTA / Alberta One Call Corporation / 800-242-3447																							
Website: www.albertaonecall.com **Hours:** 8:00 AM-4:00PM, M-F (Emergency: 24/7) **Advance Notice:** 2 full working days **Marks Valid:** 14 days(extendable to 30 if certain conditions are met)	N	Y	Y	Y	N	N	N	N	N	Y	Y	Y	N	N	N	N	**	Y	Y	Y	N	Y	1m (39")
*** 300 mm (12") hand tools only*																							
BRITISH COLUMBIA / BC One Call / 800-474-6886 / Tickets Fax: 604-451-0344																							
Website: www.bconecall.bc.ca **Hours:** 24 hours / 7 days **Advance Notice:** 3 working days excluding Saturdays, Sundays and holidays **Marks Valid:** 30 calendar days	Y	Y	N	Y	N	Y	N	N	N	Y	N	N	N	N	N	N	N	Y	Y	Y	N	N	VARIES
MANITOBA / Click Before You Dig Manitoba / 800-940-3447 / Tickets Fax: 204-222-7177																							
Website: www.ClickBeforeYouDigMB.com **Hours:** 7:00 AM - 5:00 PM **Advance Notice:** 2 days-3 weeks (peak) **Marks Valid:** 10 days	Y	Y	N	Y	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	
ONTARIO / Ontario One Call / 800-400-2255																							
Website: www.on1call.com **Hours:** 24 hours, 365 days **Advance Notice:** Minimum of five days for standard requests **Marks Valid:** Determined by Member	N	Y	N	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	N	N	N	Y	Y	Y	N	Y	
QUEBEC / Info-Excavation / 800-663-9228																							
Website: www.info-ex.com **Hours:** 24 hours/7 days **Advance Notice:** 72 hours (3 working days) **Marks Valid:** 30 days	N	Y	Y	Y	N	Y	N	N	N	Y	N	Y	N	N	N	N	N	Y	Y	Y	Y	Y	1m (39")
SASKATCHEWAN / Sask 1st Call / 866-828-4888																							
Website: www.sask1stcall.com **Hours:** December-March 8:00am - 5:00pm, April-November 7:00am - 5:00pm **Advance Notice:** 2 full working days **Marks Valid:** 10 working days	N	Y	Y	Y	N	N	N	N	N	Y	N	N	N	N	N	N	N	Y	N	Y	N	N	

PIPELINE OPERATOR CONTACT DIRECTORY

Company	EMERGENCY	NON-EMERGENCY	WEB ADDRESS
ADM	(563) 242-1121	(563) 241-1775	www.adm.com
AE2S Water Solutions	(218) 791-7372	(701) 746-8087	www.AE2SWaterSolutions.com
Aera Energy, LLC	(800) 247-5977	(661) 665-5103	www.aeraenergy.com
Aka Energy Group, LLC	(970) 737-2601	(970) 764-6672	www.akaenergy.com
Alliance Pipeline L.P.	(800) 884-8811	(952) 983-1026	www.alliancepipeline.com
Alliant Energy - IPL	(319) 365-8040	(800) 255-4268	www.alliantenergy.com
Alliant Energy - WPL	(800) 758-1576	(800) 255-4268	www.alliantenergy.com
American Midstream Partners	(800) 926-4352	(713) 815-3900	www.americanmidstream.com
Amplify Energy Corp.	(307) 328-2348	(307) 328-2348	www.amplifyenergy.com/
Anadarko Midstream - Colorado	(866) 504-8184	(970) 506-5980	www.anadarko.com
Anadarko Midstream - Utah	(435) 781-7825	(435) 781-9736	www.anadarko.com
Anadarko Midstream - Wyoming	(307) 682-9710	(307) 670-6042	www.anadarko.com
Andeavor High Plains Gathering Region	(866) 283-7676	(701) 627-2754	www.andeavor.com
Andeavor Northwest Products System	(800) 725-1514	(801) 521-4961	www.andeavor.com
Andeavor Rockies Gathering Region	(800) 725-1514	(800) 840-3482	www.andeavor.com
Andeavor Salt Lake Short Haul and Core	(800) 725-1514	(801) 521-4963	www.andeavor.com
Arrow Pipeline, LLC	(866) 234-7473	(701) 675-8602	www.crestwoodlp.com
Assiduous Energy, LLC	(405) 285-2201	(405) 285-2201	www.avadenergy.com
Atmos Energy Corporation	(866) 322-8667	(888) 286-6700	www.atmosenergy.com
Aux Sable Midstream	(701) 628-9380	(701) 628-9393	www.auxsable.com
AVAD Operating LLC	(435) 820-9801	(435) 636-2400	www.avadenergy.com
Avista Utilities	(800) 227-9187	(800) 227-9187	www.myavista.com
Baron Exploration Company	(405) 834-7535	(405) 341-1779	www.truecos.com
Basin Electric Power Cooperative	(800) 339-5616	(701) 557-5895	www.basinelectric.com
Belle Fourche Pipeline Co	(866) 305-3741	(307) 746-4417	www.truecos.com
Black Hills Colorado IPP, LLC	(719) 696-3220	(719) 696-3209	www.blackhillsenergy.com
Black Hills Energy	(800) 694-8989	(303) 566-3509	www.blackhillsenergy.com
Black Hills Energy - IA Gas	(800) 694-8989	(888) 890-5554	www.blackhillsenergy.com
Black Hills Power dba Black Hills Energy	(307) 757-3010	(307) 757-3010	www.blackhillspower.com
Blueknight Energy Partners	(855) 999-2537	(918) 237-4000	www.bkep.com
BOE Pipeline, LLC	(844) 220-9234	(701) 300-1333	www.boemidstream.com
Bridger Pipeline LLC	(866) 305-3741	(307) 746-4417	www.truecos.com
Bridger Swan Ranch, LLC	(307) 634-5305	(307) 634-5305	www.granitepeakindustries.com
Bronco Pipeline Company	(855) 595-8258	(832) 486-2588	www.conocophillips.com
Butte Pipe Line Company	(866) 305-3741	(307) 746-4417	www.truecos.com
Caliber Midstream Partners, LP	(866) 535-2522	(303) 628-1410	www.calibermidstream.com
California Resources Central Valley	(661) 763-6911	(661) 763-6363	www.crc.com
California Resources Elk Hills, LLC	(661) 763-6911	(661) 763-6363	www.crc.com
California Resources Ventura Basin	(844) 422-5737	(805) 525-8008	www.crc.com
Calumet Montana Refining, LLC	(406) 761-4100	(406) 454-9887	www.montanarefining.com
Carbon California	(805) 531-3712	(805) 794-8593	www.carbonenergycorp.com
Cascade Natural Gas	(888) 522-1130	(888) 522-1130	www.cngc.com
Cedar Falls Utilities	(319) 268-6999	(319) 268-5280	www.cfu.net
Cenex Pipeline, LLC	(800) 421-4122	(406) 628-5443	www.chsinc.com
CenterPoint Energy - OK	(888) 876-5786	(866) 275-5265	www.centerpointenergy.com/safety
Central Iowa Power Cooperative	(641) 782-5518	(641) 782-2158	www.cipco.net
Central Valley Gas Storage	(855) 303-2847	(530) 439-2607	www.cvgasstorage.com
Centurion Pipeline L.P.	(800) 765-8695	(713) 215-7000	www.centurionpipeline.com
Chesapeake Energy Corporation	(800) 566-9306	(405) 935-3847	www.chk.com
Chevron Pipe Line Company - CO	(800) 762-3404	(970) 675-3777	www.chevron.com
Chevron Pipe Line Company - UT	(800) 762-3404	(801) 975-2324	www.chevron.com
Cheyenne Rail Hub, LLC	(307) 634-5305	(307) 634-5305	www.granitepeakindustries.com
CHS MRI Pipelines	(844) 721-6611	(855) 424-7747	www.chsinc.com
City of Blanding	(435) 678-2916	(435) 678-2791	www.blanding-ut.gov
City of Ellensburg	(509) 925-8534	(509) 962-7124	www.ci.ellensburg.wa.us
City of Fort Morgan	(970) 867-4350	(970) 542-3910	www.cityoffortmorgan.com
City of Lake City, Natural Gas Dept.	(386) 758-5405	(386) 758-5405	www.lcfla.com
City of Sioux Falls	(605) 941-2351	(605) 261-2980	www.siouxfalls.org
City of Walsenburg	(719) 738-1044	(719) 738-1048	www.cityofwalsenburg.com
City of Waukee	(515) 249-1212	(515) 978-7920	www.waukee.org
Colorado Interstate Gas - Eastern CO and WY	(877) 712-2288	(800) 276-9927	www.kindermorgan.com/public_awareness/
Colorado Interstate Gas - MT, UT and Western WY	(877) 712-2288	(800) 276-9927	www.kindermorgan.com
Colorado Interstate Gas - Ruby Pipeline	(877) 712-2288	(800) 276-9927	www.kindermorgan.com
Colorado Interstate Gas - Western CO	(877) 712-2288	(800) 276-9927	www.kindermorgan.com
Colorado Natural Gas	(800) 720-8193	(303) 979-7680	www.coloradonaturalgas.com
Colorado Springs Utilities	(719) 448-4800	(719) 448-4800	www.csu.org
Continuum Midstream, LLC	(877) 587-0026	(806) 278-8266	www.crestwoodlp.com
CPN Pipeline Company	(877) 432-5555	(707) 374-1505	www.calpine,com
Crestwood Dakota Pipeline, LLC	(866) 234-7473	(701) 859-5001	www.crestwoodlp.com
Crooks Municipal Utilities	(605) 359-2371	(605) 543-5238	www.cityofcrooks.net
Dakota Access, LLC - ND	(800) 753-5531	(346) 231-3814	www.energytransfer.com
Dakota Access, LLC - SD	(800) 753-5531	(346) 231-3811	www.energytransfer.com
Dakota Gasification Company	(866) 747-3546	(701) 880-1129	www.dakotagas.com/Gas_Pipeline
Devon Energy Production Company LP	(800) 214-2154	(307) 857-2228	www.dvn.com
Dick Brown Technical Services	(888) 764-5147	(707) 249-8333	www.dbts.com

• If you would like any additional information from a pipeline member, call or visit the links above.

COMPAÑÍA	EMERGENCIA	NO EMERGENCIA	DIRECCIÓN DE INTERNET
Divide Creek Gathering LLC	(844) 663-0191	(281) 664-6839	www.sginterests.com
Dominion Energy Idaho	(800) 767-1689	(801) 324-5000	www.dominionenergy.com
Dominion Energy Questar Pipeline, LLC	(800) 300-2025	(801) 324-5000	www.dominionenergy.com
Dominion Energy Utah	(800) 767-1689	(801) 324-5000	www.dominionenergy.com
Dominion Energy Wyoming	(800) 767-1689	(801) 324-5000	www.dominionenergy.com
E & B Natural Resources - Kern	(661) 392-7575	(661) 448-4977	www.ebresources.com
E & B Natural Resources - LA - HBOC	(310) 286-9114	(661) 448-4977	www.ebresources.com
E & B Natural Resources - LA - Packard	(424) 702-1017	(661) 448-4977	www.ebresources.com
E & B Natural Resources - LA - San Vicente	(424) 702-1018	(661) 448-4977	www.ebresources.com
El Paso Natural Gas - CO and NM	(800) 334-8047	(713) 420-5433	www.kindermorgan.com
El Paso Natural Gas - OK	(800) 334-8047	(800) 276-9927	www.kindermorgan.com
Elk Hills Power, LLC	(661) 763-6911	(661) 763-6363	www.crc.com
Enable Bakken Crude Services	(701) 842-6916	(405) 576-5157	www.enablemidstream.com
Enable Gas Gathering	(800) 522-8048	(405) 576-5157	www.enablemidstream.com
Enable Gas Transmission	(800) 474-1954	(405) 576-5157	www.enablemidstream.com
Enable Illinois Intrastate Transmission	(800) 325-4005	(405) 576-5157	www.enablemidstream.com
Enable Midstream Partners	(800) 474-1954	(405) 576-5157	www.enablemidstream.com
Enable Mississippi River Transmission	(800) 325-4005	(405) 576-5157	www.enablemidstream.com
Enable Oklahoma Intrastate Transmission	(800) 522-8048	(405) 576-5157	www.enablemidstream.com
Enbridge Energy	(800) 858-5253	(715) 395-3812	www.enbridgeus.com
Enbridge Pipelines (North Dakota) LLC	(800) 858-5253	(701) 857-0800	www.enbridge.com
Energy Operations Management Inc	(877) 723-3344	(916) 859-4700	www.enterpriseproducts.com
Energy Operations Management Nevada LLC	(877) 723-3344	(916) 859-4700	www.enterpriseproducts.com
Energy West Montana	(800) 570-5688	(406) 791-7500	www.egas.net
Enterprise - Jonah Gas Gathering	(800) 203-1347	(307) 360-6552	www.enterpriseproducts.com
Enterprise - Mid America Pipeline - CO, UT, WY	(888) 883-6308	(307) 362-2703	www.enterpriseproducts.com
Enterprise Products - CO	(800) 546-3482	(713) 381-2802	www.enterpriseproducts.com
Enterprise Products - Piceance Gas Gathering	(888) 883-6308	(888) 806-8152	www.enterpriseproducts.com
EOG Resources - CO and WY	(307) 266-7406	(970) 895-2247	www.eogresources.com
EOG Resources - ND	(866) 994-4775	(701) 628-1635	www.eogresources.com
EOG Resources - OK	(405) 246-3100	(800) 225-8314	www.eogresources.com
Equinor Energy LP	(855) 750-8024	(701) 875-3501	www.equinor.com
Express Pipeline LLC	(800) 794-3827	(800) 700-8666	www.enbridge.com
ExxonMobil Pipeline Co - Montana	(800) 537-5200	(406) 657-5400	www.exxonmobil.com
ExxonMobil Production	(307) 276-6000	(307) 276-6242	www.exxonmobil.com
FDL Operating, LLC - Midwest	(307) 437-9500	(307) 262-9786	www.fdlenergy.com
FDL Operating, LLC - Monell	(307) 212-3486	(307) 705-1210	www.fdlenergy.com
Fort Union Gas Gathering	(307) 682-9710	(307) 670-6022	www.fortuniongg.com
Fountain Valley Power LLC	(303) 594-2655	(303) 922-0630	www.southwestgen.com
Freeport-McMoRan Oil & Gas	(805) 739-9111	(805) 934-8223	www.fcx.com
Front Range Pipeline, LLC	(800) 421-4122	(406) 628-5443	www.chsinc.com
Garretson Natural Gas	(605) 594-6723	(605) 594-6723	www.garretsonsd.com
Georgia-Pacific - Camas Paper	(360) 834-8414	(360) 834-3021	www.gp.com
Georgia-Pacific - Crossett Paper	(870) 567-8421	(870) 567-8627	www.gp.com
Glass Mountain Pipeline LLC	(888) 991-1628	(214) 660-8800	www.nesmidstream.com
Great Plains Natural Gas Company	(877) 267-4764	(406) 896-4215	www.gpng.com
Grove Municipal Service Authority	(918) 801-5404	(918) 786-6107	www.cityofgrove.com
Harlan Municipal Utilities	(712) 755-5182	(712) 733-0026	www.harlannet.com
Havre Pipeline Company LLC	(406) 357-2233	(406) 357-3643	www.humboldtsd.com
Hawaii Electric Light Co.	(808) 969-0413	(808) 969-6999	www.hawaiielectriclight.com
Hawaii Gas	(808) 526-0066	(808) 535-5933	www.hawaiigas.com
Hawaiian Electric Company, Inc	(808) 543-7685	(808) 548-7311	www.hawaiianelectric.com
Hawthorn Oil Transportation Inc. - ND	(888) 814-0188	(701) 629-9930	www.hawthornoiltransportation.com
Hess Corporation	(800) 406-1697	(701) 664-6200	www.hess.com
Hildale - Colorado City Gas Department	(435) 467-1160	(435) 874-1160	www.portlandgeneral.com
Holly Energy Partners	(877) 748-4464	(575) 748-8950	www.hollyenergy.com
Humboldt Municipal Gas Utility	(888) 320-1490	(605) 661-5268	www.humboldtsd.com
Intermountain Gas Company	(877) 777-7442	(208) 377-6179	www.intgas.com
Island Energy Services	(808) 682-4711	(808) 682-2227	www.islandenergyservices.com
Jayhawk Pipeline	(888) 542-9575	(855) 424-7747	www.chsinc.com
Kaiser-Frontier Midstream LLC	(800) 876-7023	(918) 494-0000	www.kfoc.net
Kaw Pipeline	(888) 542-9575	(855) 424-7747	www.chsinc.com
KB Pipeline	(800) 433-0252	(800) 433-0252	www.portlandgeneral.com
Kelton Gas Services, LLC	(800) 460-3601	(806) 826-3230	www.kindermorgan.com
Kern River Gas Transmission Company	(800) 272-4817	(800) 420-7500	www.kernrivergas.com
Kinder Morgan Altamont	(435) 454-3927	(800) 276-9927	www.kindermorgan.com
Kinder Morgan CO2 Company, LP	(877) 390-8640	(970) 882-2464	www.kindermorgan.com
Kinder Morgan Cochin Pipeline - IA	(800) 265-6000	(713) 369-9000	www.kindermorgan.com
Kinder Morgan Cochin Pipeline - ND	(800) 265-6000	(701) 252-9013	www.kindermorgan.com
Lakeshore Operating, LLC	(855) 771-4828	(844) 557-4673	www.legacylp.com
Legacy Reserves Operating LP	(307) 527-2873	(307) 587-7232	www.legacylp.com
Liberty Utilities	(855) 644-8134	(855) 872-3242	www.libertyutilities.com
Linde	(800) 232-4726	(307) 875-4480	www.linde.com
Lumen Midstream Partners - KS	(316) 542-0395	(316) 542-0395	
Lumen Midstream Partners - OK	(888) 851-5445	(405) 224-4681	www.magellanlp.com

• Si quisiera más información sobre un miembro de tubería, llame o visite los enlaces arriba.

Company	EMERGENCY	NON-EMERGENCY	WEB ADDRESS
Macpherson Oil Company	(661) 201-8320	(661) 201-8320	www.macphersonenergy.com
Magellan Midstream Partners LP - ND	(800) 720-2417	(701) 282-7134	www.magellanlp.com
Magellan Midstream Partners LP - WY and SD	(800) 720-2417	(918) 574-7000	www.magellanlp.com
Matrix Oil Corporation	(805) 586-0674	(805) 798-3592	www.matrixoil.com
Merit Energy Company	(307) 783-2608	(307) 783-2608	www.meritenergy.com
Mid American Energy Company	(800) 595-5325	(888) 427-5632	www.midamericanenergy.com
Midstream Energy Partners	(866) 295-2176	(661) 765-4087	www.montana-dakota.com
Midwest Energy Inc.	(800) 222-3121	(800) 222-3121	www.mwenergy.com
MIGC	(307) 682-9710	(307) 670-6022	www.migc.com
Montana Dakota Utilities Company	(800) 638-3278	(406) 896-4215	www.montana-dakota.com
Mountain Gas Resources, Inc.	(307) 875-9049	(307) 352-3302	www.anadarko.com
Naftex Operating Company	(661) 363-8801	(661) 330-2044	www.nephi.utah.gov
Natural Gas Pipeline Co. of America - IA	(866) 775-5791	(800) 276-9927	www.kindermorgan.com
Natural Gas Pipeline Co. of America - OK	(800) 733-2490	(800) 276-9927	www.kindermorgan.com
Nemaha Gas Gathering System, LLC	(479) 783-4191	(479) 783-4191	www.northernnaturalgas.com
NEOKC Pipeline, LLC	(405) 239-6001	(405) 239-6001	www.northernaturalgas.com
Nephi City Gas	(435) 623-0822	(435) 623-0822	www.nephi.utah.gov
Nesson Gathering System LLC	(701) 664-3139	(701) 664-3139	www.xtoenergy.com
Northern California Power Agency	(209) 333-3225	(661) 809-4956	www.ncpa.com
Northern Natural Gas - IA	(888) 367-6671	(888) 654-0646	www.northernnaturalgas.com
Northern Natural Gas - SD	(888) 367-6671	(402) 530-3833	www.northernnaturalgas.com
NorthWestern Energy - MT	(888) 467-2669	(406) 497-2446	www.northwesternenergy.com
NorthWestern Energy - NE and SD	(800) 245-6977	(406) 497-2446	www.northwesternenergy.com
NuStar Logistics, L.P	(800) 481-0038	(361) 290-0604	www.nustarenergy.com
NuStar Pipeline Operating Partnership L.P.	(800) 759-0033	(316) 721-7068	www.nustarenergy.com
NW Natural	(503) 226-4211	(503) 226-4211	www.nwnatural.com
Oasis Petroleum	(866) 584-8016	(855) 209-8370	www.oasispetroleum.com
Oklahoma Gas Gathering Llc	(405) 380-2284	(405) 380-2284	www.oneokpartners.com
Oklahoma Natural Gas	(800) 458-4251	(800) 664-5463	www.oklahomanaturalgas.com
ONEOK - North System	(888) 844-5658	(918) 732-1451	www.oneokpartners.com
ONEOK Field Services Company	(888) 675-3302	(918) 588-7000	www.oneokpartners.com
ONEOK Gas Transportation	(888) 215-5137	(918) 561-8019	www.oneokpartners.com
ONEOK NGL Pipeline, L.L.C.	(855) 348-7258	(855) 689-1298	www.oneokpartners.com
ONEOK Rockies Midstream	(800) 778-7834	(406) 433-3664	www.oneokpartners.com
ONEOK Rockies Midstream - Wyoming	(866) 575-6465	(307) 687-3103	www.oneokpartners.com
Overland Pass Pipeline Company	(800) 635-7400	(307) 872-2833	www.williams.com/overlandpass/
Pacific Gas and Electric Company	(800) 743-5000	(800) 743-5000	www.pge.com/pipelinesafety
Paradox Midstream	(435) 587-2237	(970) 529-3419	www.paradoxresources.com
Paradox Resources LLC	(866) 774-8385	(435) 686-7600	www.paradoxresources.com
Pecan Pipeline Company - ND	(866) 899-2626	(701) 628-1635	www.pecanpipeline.com
Petro - Hunt, LLC	(701) 863-6500	(701) 863-6500	www.petrohunt.com
Phillips Pipe Line Co - WY and MT	(877) 267-2290	(406) 855-6963	www.phillips66.com
Pine Pipeline	(800) 474-1954	(405) 576-5157	www.enablemidstream.com
Pinedale Natural Gas, Inc.	(307) 367-4427	(970) 928-9208	www.pinedalegas.com
Pioneer Pipe Line Company	(877) 267-2290	(801) 299-3627	www.phillips66.com
Plains Pipeline, L.P.	(800) 708-5071	(713) 646-4225	www.plainsallamerican.com
Plant Daniels	(866) 977-7374	(405) 576-5157	www.enablemidstream.com
Platte Pipe Line Company, LLC	(800) 794-3827	(800) 700-8666	www.enbridge.com
Platte River Power Authority	(970) 229-1733	(970) 226-4000	www.prpa.org
Pony Express Pipeline, LLC	(855) 220-1762	(303) 763-3445	www.tallgrassenergy.com
Prospector Pipeline Company	(877) 723-3344	(916) 859-4700	www.reupower.com
Puget Sound Energy	(800) 710-1515	(888) 225-5773	www.pse.com
QEP Field Services - LA	(888) 599-4923	(318) 540-9286	www.qepres.com
Red Cedar Gathering Company	(970) 382-0828	(970) 764-6900	www.redcedargathering.com
Redding Electric Utilities	(530) 245-7009	(661) 809-4956	www.reupower.com
Ringwood Gathering Company	(800) 967-8493	(580) 438-2345	www.ringwoodgathering.com
Rose Rock Midstream, LP - CO	(800) 522-3883	(720) 613-7008	www.semgroupcorp.com
Rose Rock Midstream, LP - ND	(800) 522-3883	(405) 945-6381	www.semgroup.com
Rose Rock Midstream, LP - OK	(800) 522-3883	(918) 524-8109	www.semgroupcorp.com
Running Horse Pipeline, LLC	(800) 889-7437	(928) 871-4880	www.nnogc.com
Salt Plains Gas Storage	(877) 694-2249	(580) 694-2249	www.rockpointgs.com
San Diego Gas & Electric	(888) 320-1906	(800) 411-7343	www.sdge.com
San Pedro Bay Pipeline C/O Beta Offshore	(562) 606-5711	(562) 628-1534	www.betaoffshore.com
SandRidge Energy	(877) 435-7080	(405) 429-5500	www.sandridgeenergy.com
Savage Bakken Connector, Inc	(701) 774-9316	(701) 774-9311	www.savageservices.com
Scissortail Energy	(855) 737-9555	(800) 276-9927	www.kindermorgan.com
SemGas, LP	(800) 522-3883	(918) 524-8078	www.semgroupcorp.com
Seneca Resources Company, LLC	(888) 595-8595	(661) 473-7005	http:www.natfuel.com/seneca
Sentinel Peak Resources LLC	(800) 766-4108	(323) 298-2200	www.sentinelpeakresources.com
Signature Flight Support	(808) 836-1830	(808) 226-3981	www.signatureflight.com
Silicon Valley Power	(408) 615-6550	(408) 615-5606	www.siliconvalleypower.com
Silver Creek Midstream, LLC	(469) 251-3359	(469) 251-3359	www.marathonpipeline.com
Sinclair Pipeline Company	(800) 321-3994	(307) 328-3643	www.sinclairoil.com/pipelines.html
SoCal Holdings, LLC / LA Basin	(562) 624-3452	(562) 624-3400	www.crc.com
South Dakota Intrastate Pipeline Co.	(800) 852-0949	(605) 224-0949	www.sdipco.com
Southeast Supply Header	(866) 977-7374	(405) 576-5157	www.enablemidstream.com

• If you would like any additional information from a pipeline member, call or visit the links above.

COMPAÑÍA	EMERGENCIA	NO EMERGENCIA	DIRECCIÓN DE INTERNET
Southern California Gas Company	(800) 325-4070	(800) 427-2200	www.socalgas.com
Southern Star Central Gas Pipeline	(800) 324-9696	(888) 885-6008	www.sscgp.com
Southwest Gas	(877) 860-6020	(877) 860-6020	www.swgas.com
St. Croix Gas	(715) 425-6177	(715) 425-6177	www.stcroixgas.com
Stephens Energy Group, LLC	(479) 783-4191	(479) 783-4191	www.tallgrassenergy.com
Stephens Production Company	(479) 783-4191	(479) 783-4191	www.tallgrassenergy.com
Summit Midstream	(888) 643-7929	(970) 858-3425	www.summitmidstream.com
Suncor Energy (U.S.A.) Pipeline Company	(866) 978-6267	(307) 775-8106	www.suncor.com
Superior Pipeline Company	(866) 904-4514	(918) 382-7200	www.superiorpipeline.com
Tallgrass Energy / Rockies Express Pipeline	(877) 436-2253	(303) 763-3445	www.tallgrassenergy.com
Tallgrass Interstate Gas Transmission	(888) 763-3690	(303) 763-3445	www.tallgrassenergy.com
Tallgrass Midstream Powder River	(307) 687-9691	(303) 763-3445	www.tallgrassenergy.com
Targa Badlands LLC	(866) 957-3133	(701) 842-3315	www.targaresources.com
Texas Kansas Oklahoma Gas (TKO Gas)	(806) 244-4210	(806) 244-4210	www.tkogas.com
THUMS Long Beach Company	(562) 624-3452	(562) 624-3400	www.crc.com
Thunder Creek Gas Services, LLC	(877) 619-4680	(307) 687-0614	www.thundercreekgas.com
Tidelands Oil Production Company	(562) 624-3452	(562) 624-3400	www.crc.com
Tidewater Terminal Company	(800) 562-1607	(360) 693-1491	www.tidewater.com
Timberland Gathering & Processing Inc.	(620) 624-3868	(620) 624-3868	www.timberlandgathering.com
Town of Aguilar	(719) 941-4360	(719) 941-4360	www.aguilarco.us
Trailblazer Pipeline Company, LLC	(866) 299-3050	(303) 763-3445	www.tallgrassenergy.com
TransCanada - Bison Pipeline	(800) 447-8066	(855) 458-6715	http://www.transcanada.com/public-safety.html
TransCanada - Gas Transmission Northwest	(800) 447-8066	(855) 458-6715	http://www.transcanada.com/public-safety.html
TransCanada - Keystone Pipeline	(800) 447-8066	(855) 458-6715	http://www.transcanada.com/public-safety.html
TransCanada - Keystone Pipeline XL	(800) 447-8066	(855) 458-6715	http://www.transcanada.com/public-safety.html
TransCanada - Northern Border Pipeline Co	(800) 447-8066	(855) 458-6715	http://www.transcanada.com/public-safety.html
TransCanada - Tuscarora Gas Transmission	(800) 447-8066	(855) 458-6715	http://www.transcanada.com/public-safety.html
TransColorado Gas Transmission Co.	(800) 944-4817	(800) 276-9927	www.kindermorgan.com/public_awareness
Tronox Alkali	(307) 875-8150	(307) 872-2131	www.alkali.tronox.com
TRP - OK Properties LLC	(405) 535-9402	(405) 360-2784	www.usg.com
UNEV Pipeline LLC	(877) 748-4464	(575) 748-8950	www.hollyenergy.com
United States Gypsum Company	(866) 650-6005	(503) 556-4360	www.usg.com
Utah Associated Municipal Power Systems	(801) 925-4008	(801) 925-4003	www.uamps.com
Vantage Pipeline US LP	(800) 360-4706	(888) 428-3222	www.pembina.com
Vermont Gas Systems	(800) 639-8081	(802) 863-4511	www.vermontgas.com
Viking Gas Transmission Company	(888) 417-6275	(218) 745-5082	www.vgt.nborder.com
Walden Gas	(970) 723-4662	(970) 928-9208	www.pinedalegas.com
Wamsutter Pipeline LLC	(307) 875-9049	(307) 352-3302	www.anadarko.com
Watertown Municipal Utilities	(605) 882-6233	(605) 882-6233	www.watertownsd.us
WBI Energy Midstream	(888) 859-7291	(406) 359-7316	www.wbienergy.com
WBI Energy Transmission	(888) 859-7291	(406) 359-7316	www.wbienergy.com
Westfield Gas & Electric	(413) 572-0000	(413) 572-0100	www.wgeld.org
White Cliffs Pipeline - CO	(800) 522-3883	(720) 613-7008	www.semgroupcorp.com
White Cliffs Pipeline - OK	(800) 522-3883	(918) 524-8109	www.semgroupcorp.com
White River Hub LLC	(800) 558-1913	(307) 352-7690	www.whiteriverhub.com
Whiting Oil and Gas Corporation - CO	(800) 723-4608	(303) 594-6304	www.whiting.com
Whiting Oil and Gas Corporation - ND	(701) 227-8703	(701) 627-2754	www.whiting.com
Wickland Pipelines LLC	(916) 978-2477	(916) 978-2480	www.wicklandpipelines.com
Wild Goose Storage LLC	(866) 940-7351	(530) 846-7351	www.rockpointgs.com
Williams Midstream - Central WY	(855) 427-2875	(855) 255-2406	co.williams.com/safety
Williams Midstream - Northwest CO	(800) 635-7400	(970) 285-5512	www.williams.com
Williams Midstream - OK	(855) 427-2875	(800) 945-5467	www.williams.com/safety
Williams Midstream - Southwest CO and NM	(800) 635-7400	(505) 634-4954	www.williams.com
Williams Midstream - Wyoming	(800) 635-7400	(307) 872-2839	www.williams.com
Williams Northwest Pipeline - Battle Ground	(800) 972-7733	(360) 687-3156	www.williams.com
Williams Northwest Pipeline - Boise District	(800) 972-7733	(208) 884-4300	www.williams.com
Williams Northwest Pipeline - Kemmerer Dist.	(800) 972-7733	(307) 872-2890	www.williams.com
Williams Northwest Pipeline - Moab District	(800) 972-7733	(435) 686-2214	www.williams.com
Williams Northwest Pipeline - Pasco District	(800) 972-7733	(509) 544-9216	www.williams.com
Williams Northwest Pipeline - Pocatello Dist	(800) 972-7733	(208) 238-4100	www.williams.com
Williams Northwest Pipeline - Redmond District	(800) 972-7733	(425) 868-1010	www.williams.com
Williams Northwest Pipeline - Spokane District	(800) 972-7733	(509) 466-6650	www.williams.com
Williams Northwest Pipeline - Sumas District	(800) 972-7733	(360) 988-2261	www.williams.com
Williams Northwest Pipeline - Vernal District	(800) 972-7733	(435) 781-3200	www.williams.com
Woodbine Municipal Natural Gas System	(712) 644-2537	(712) 647-2550	www.woodbineia.com
Wyoming Gas Company	(307) 347-2416	(307) 335-3584	www.wyogas.com
Wyoming Refining Company	(307) 746-4931	(307) 746-2379	www.xcelenergy.com
Xcel Energy, NSP - MN - Gas Distribution	(800) 895-2999	(800) 895-4999	www.xcelenergy.com
Xcel Energy, NSP - MN - Gas Transmission	(800) 895-2999	(800) 895-4999	www.xcelenergy.com
Xcel Energy, NSP - WI - Gas Distribution	(800) 895-2999	(800) 895-4999	www.xcelenergy.com
Xcel Energy, NSP - WI - Gas Transmission	(800) 895-2999	(800) 895-4999	www.xcelenergy.com
Xcel Energy, PSCo - Gas Distribution	(800) 895-2999	(800) 895-4999	www.xcelenergy.com
Xcel Energy, PSCo - Gas Transmission	(800) 698-7811	(800) 895-4999	www.xcelenergy.com
Xcel Energy, SPS	(800) 895-2999	(800) 895-4999	www.xcelenergy.com
XTO Energy - New Mexico	(575) 887-7329	(885) 218-2705	www.xtoenergy.com
XTO Energy - Oklahoma	(918) 423-0366	(580) 653-3200	www.xtoenergy.com
XTO Energy - West TX	(877) 311-1007	(806) 592-2939	www.xtoenergy.com

• Si quisiera más información sobre un miembro de tubería, llame o visite los enlaces arriba.

Industry Publications

811 Magazines

Now published in 9 states and growing. It is not just printing the dig safely message that gets the job done. It's about connecting with the right people. Working with the One Call systems in each state, we reach the people you're looking to reach.

American Gas Magazine

provides natural gas industry professionals with the information they need to enhance their effectiveness and that of their companies by publishing leading-edge reports on the industry and on American Gas Association activities that offer value to its members.

American Locator

gets to the heart of news, debate, technology and processes focusing on damage prevention in the underground utility industry. With each issue, we focus on relevant topics within key areas of the industry and strive to bring tips, breaking news and information to our readers from people working daily in the field.

APWA Reporter

The official magazine of the American Public Works Association covers all facets of public works for APWA members including industry news, legislative actions, management issues and emerging technologies. The APWA Reporter is the prime communication link uniting the various communities of public works professionals that make up APWA.

Broadband Communities

aims to accelerate the deployment of Fiber-To-The-Home and Fiber-To-The-Premises while keeping readers up to date on the available solutions capable of serving their practical needs. BC offers in-depth news, expert insights, and practical know-how on the technical, business, financial, and legal aspects of outfitting properties and communities with broadband solutions.

Compact Equipment

focuses on small and versatile construction equipment, used in markets as diverse as construction, landscaping, agriculture and private sectors. Editorial content specifically targets equipment considered to be "tool carriers," with the ability to wield an assortment of attachments – both PTO and hydraulically driven – from skid steers to mini excavators.

Contractors Hot Line

For over 52 years, Contractors Hot Line has reached the most active construction equipment buyers in the industry. Not only does Contractors Hot Line reach thousands of equipment buyers and sellers with our weekly print and digital magazines, we are also distributed at over 40 major industry trade shows and exhibitions nationwide.

Damage Prevention Professional

Published quarterly, Damage Prevention Professional reaches over 70,000 readers each issue in print and digital formats. With a different technology and industry spotlight focus in each issue, we keep our finger on the pulse of the industry through relevant and thought-provoking articles and features written by industry professionals.

Energy Ink Magazine

is a family owned, free, quarterly magazine which covers every aspect of the nation's energy industry. Our corporate readership in oil, coal, gas, and wind industries spans 42 states and 4 foreign countries.

Incident Prevention

Incident Prevention contains utility safety and operations articles written by industry experts specifically for utilities, contractors and communication providers. The iP audience has grown to rely on our valuable information.

Industrial Hygiene News

Industrial Hygiene News (IHN) is dedicated to the anticipation, recognition, evaluation, communication and control of environmental factors in or coming from the workplace that may result in injury, illness, impairment, or affect the well-being of workers and the community. These factors include safety, chemical, ergonomic, and biological.

ISE (ICT Solutions & Education)

Connects network evolution professionals with innovative solutions and concise education across the rapidly changing ICT landscape. As the lines separating telephone, Internet and television companies continue to blur, ISE in the resource telecom providers have trusted for over 30 years. www.isemag.com

North American Oil & Gas Pipelines

is the premier publication covering the business of oil and gas pipeline construction in North America, from the shale deposits to the oil sands, and all places in between. Editorial content includes the latest news on market developments that are shaping the industry, the most efficient methods of pipeline construction and maintenance and managerial strategies that enhance your company's bottom line.

Pollution Equipment News

Pollution Equipment News covers the environmental industries of water, wastewater, air and hazardous waste pollution, featuring equipment and services used to design the pollution abatement systems and policies. Topics cover green technologies, air quality testing instrumentation and air cleaning equipment, and waste and wastewater technologies.

Rural Water

Rural Water is the official magazine of the National Rural Water Association.

The Locator

is an annual publication focused on CAPULC initiatives, industry best practices, new legislation and damage prevention related topics. This magazine is the first publication in Canada geared towards line locating and ground disturbance.

Trenchless Technology

is the worldwide and premier communications vehicle for the promotion and development of the trenchless technology industry. Now entering its third decade of existence, the magazine's expanded editorial calendar provides cutting-edge information on the hottest areas of the underground construction market.

Utility Contractor

is the official magazine of the National Utility Contractors Association (NUCA), the largest trade association working solely for the excavation and underground utility construction industry. Utility Contractor presents the latest and most current information affecting every aspect of the industry, including technological advancements, safety issues, important legislative developments and instructional advice and more.

WorldWide Drilling Resource

In print – online – your choice! Easy-to-read top quality editorial. Classified Section included. The ONLY drilling magazine which focuses on ALL aspects of the drilling industry; construction-geotechnical, directional, environmental, exploration-blasthole, shallow gas & oil, geothermal, mining, water well. www.worldwidedrillingresource.com. ESG

Provide Feedback / Request Information

How useful, to you, is the content contained in this edition?

❑ Extremely ❑ Very ❑ Somewhat ❑ Not at all

Additional topics I'd like to see included in the Excavation Safety Guide are:

INFORMATION REQUEST FORM

Please complete the form below to request additional information from Pipeline Companies. Your request will be forwarded to all Pipeline Member Companies operating facilities in your State/County. Please print the information clearly in each field. All fields must be completed to process information requests.

Organization Name:

State & County:

Contact Person:

Contact Email:

Contact Phone:

Request:

After completing this form, **scan or snap a pic and email it to info@pipelineawareness.org**

PIPELINE ASSOCIATION FOR PUBLIC AWARENESS
16361 Table Mountain Parkway
Golden, Colorado 80403

PIPELINE EDITION

Request **FREE** copies of the **Excavation Safety Guide Pipeline Edition**.
https://pipelineawarenessorg.wufoo.com/forms/request-additional-materials

SAFETY VIDEO

The video contains valuable information about Pipeline Safety:

- Damage Prevention
- Products Transported
- Pipeline Locations
- Signs of a Leak
- Hazards of a Release
- Emergency Response
- Much More!

An exceptional video covering the potential dangers and safety precautions related to living and working around buried infrastructure.

The video is accessible at vimeo.com/114175332, or at the Pipeline Association's website: www.pipelineawareness.org

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