

Property Development Specifications



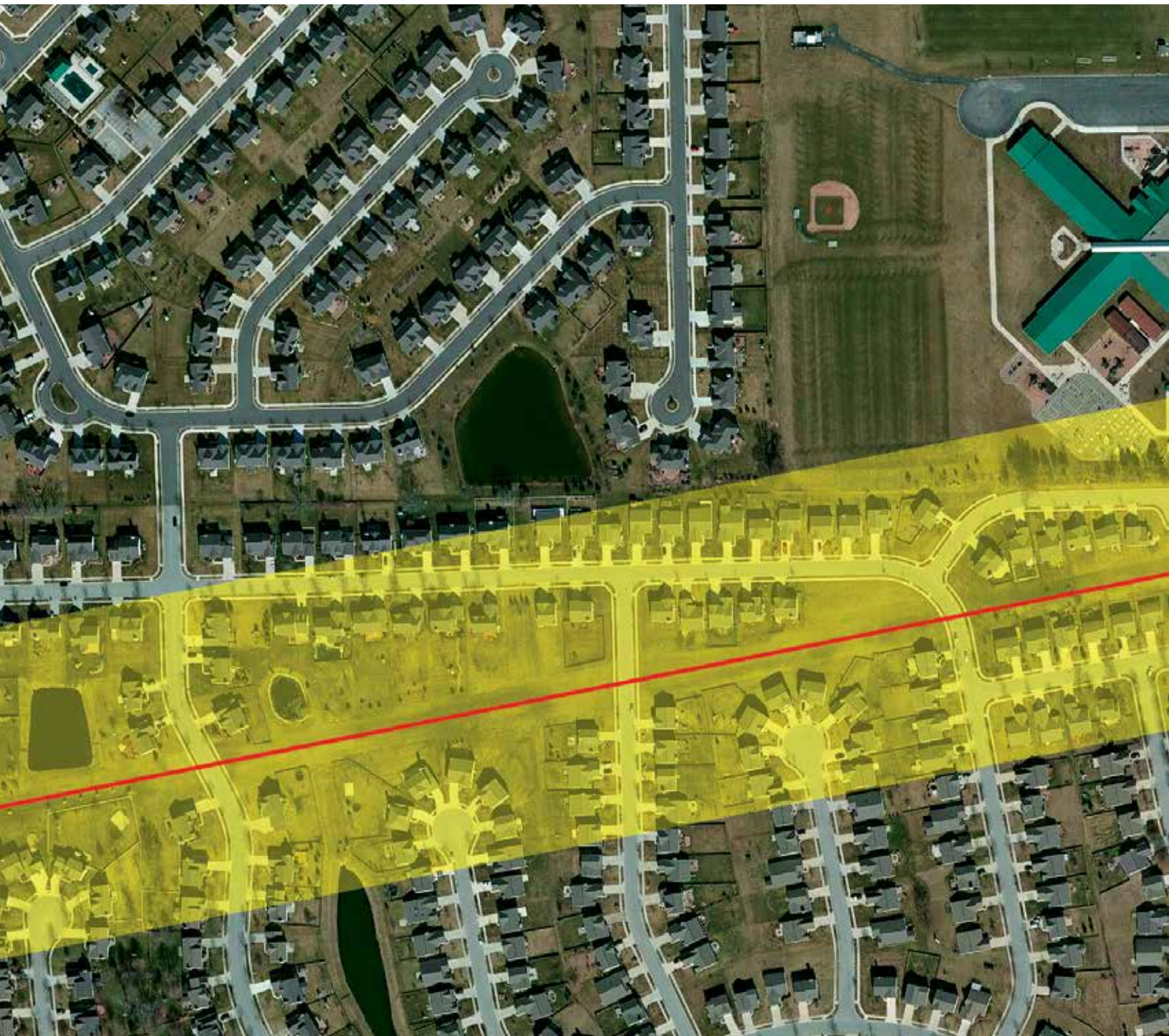
Marathon
Pipe Line LLC

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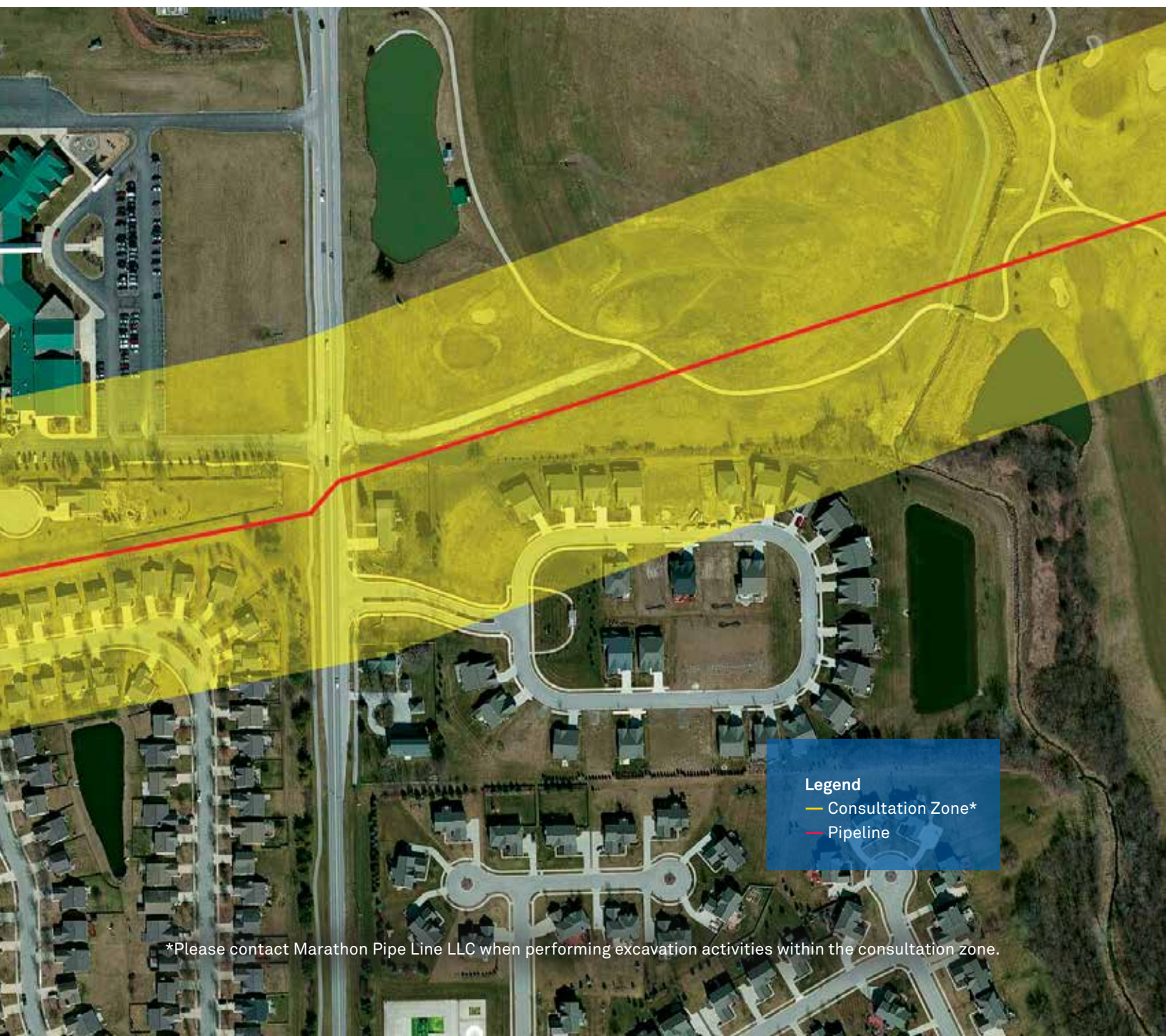
Partnering for Pipeline Safety

- Ensuring safe excavation and development operations



This publication provides guidance on how to safely perform a variety of excavation activities around a pipeline. It is intended for use by those involved in land use planning, excavation activities, property development, or agriculture operations. This includes:

- Real estate developers
- Engineers and surveyors
- General contractors and their subcontractors
- Local government planners and zoning boards
- Property owners



Legend
— Consultation Zone*
— Pipeline

*Please contact Marathon Pipe Line LLC when performing excavation activities within the consultation zone.

One Call System



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

Digging that seems harmless can be dangerous and may cause damage to underground facilities, resulting in interrupted utility service, environmental damage, property damage, injuries or even fatalities.

Most damage is avoidable. It's a simple matter of advance planning and using the one call system.

State law requires that you call at least two full business days (excluding Saturdays, Sundays and holidays) before you dig. Some states require more than two days' notice (refer to table on next page). This free call can help protect you from serious legal, financial and most importantly, physical harm resulting from damaging a buried pipeline or other utility.

Never assume the location of pipelines. They can change directions abruptly and without any aboveground physical evidence (even between marker posts). Their depths vary, and more than one pipeline may exist within a right of way.








Steps for Safe Digging

1 Call 811 or your state's one call number (see page 7) the required number of days before excavation is scheduled to begin. Provide the operator with the following information:

- Your county, city or township
- Digging location (street address and nearest cross street)
- Type and extent of work (front/rear/side of property)
- Digging start date and time

- 2** Outline the digging area with white paint or flags
- 3** The one call center will notify the appropriate utility companies. Trained technicians will mark the location of underground facilities with colored flags, stakes or paint, at no cost to you.
- 4** Do not remove the flags, stakes or paint marks until you have finished digging.
- 5** A Marathon Pipe Line LLC (MPL) representative must be present when work is performed within 50 feet of a pipeline operated by MPL. Always hand dig within the tolerance zone (see page 9).
- 6** Be available to answer questions and to meet utility representatives at the work site.

Color Code for Marking Underground Utility Lines

	Electric
	Gas-Oil-Steam
	Communication CATV
	Water
	Sewer
	Temporary Survey Markings
	Proposed Excavation

State	Advance Notice	Toll-Free Number	State	Advance Notice	Toll-Free Number
Alabama	2 days	800-292-8525	Nebraska	2 days	800-331-5666
Alaska	2 days	800-478-3121	Nevada	2 days	800-227-2600
Arizona	2 days	800-782-5348	New Hampshire	3 days	888-344-7233
Arkansas	2 days	800-482-8998	New Jersey	3 days	800-272-1000
California	2 days		New Mexico	2 days	800-321-2537
Underground Service Alert North		800-642-2444	New York	2 days	
Underground Service Alert South		800-422-4133	Dig Safely New York		800-962-7962
Colorado	2 days	800-922-1987	Long Island One Call		800-272-4480
Connecticut	2 days	800-922-4455	North Carolina	3 days	800-632-4949
Delaware	2 days	800-282-8555	North Dakota	2 days	800-795-0555
District of Columbia	2 days	800-257-7777	Ohio	2 days	800-362-2764
Florida	2 days	800-432-4770	Oklahoma	2 days	800-522-6543
Georgia	2 days	800-282-7411	Oregon	2 days	800-332-2344
Hawaii	5 days	800-227-2600	Pennsylvania	3 days	800-242-1776
Idaho	2 days	800-342-1585	Rhode Island	3 days	888-344-7233
Illinois	2 days	800-892-0123	South Carolina	3 days	888-721-7877
Digger (Chicago Utility Alert Network)		312-744-7000	South Dakota	2 days	800-781-7474
Indiana	2 days	800-382-5544	Tennessee	3 days	800-351-1111
Iowa	2 days	800-292-8989	Texas	2 days	
Kansas	2 days	800-344-7233	Texas One Call System		800-245-4545
Kentucky	2 days	800-752-6007	Texas Excavation Safety System		800-344-8377
Louisiana	2 days	800-272-3020	Lone Star Notification Center		800-669-8344
Maine	3 days	888-344-7233	Utah	2 days	800-662-4111
Maryland	2 days		Vermont	2 days	888-344-7233
Miss Utility		800-257-7777	Virginia	2 days	800-552-7001
Miss Utility of Delmarva		800-282-8555	Washington	2 days	800-424-5555
Massachusetts	3 days	888-344-7233	West Virginia	2 days	800-245-4848
Michigan	3 days	800-482-7171	Wisconsin	3 days	800-242-8511
Minnesota	2 days	800-252-1166	Wyoming	2 days	800-849-2476
Mississippi	2 days	800-227-6477			
Missouri	2 days	800-344-7483			
Montana	2 days				
Utilities Underground Location Center		800-424-5555			
Montana One Call Center		800-551-8344			

Tolerance Zone

→ Working within the buffer of protection

State	Zone	State	Zone	State	Zone
Alabama	18"	Kentucky	18"	North Dakota	24"
Alaska	24"	Louisiana	18"	Ohio	18"
Arizona	24"	Maine	18"	Oklahoma	24"
Arkansas	18"	Maryland	18"	Oregon	24"
California	24"	Massachusetts	18"	Pennsylvania	18"
Colorado	18"	Michigan	48"	Rhode Island	18"
Connecticut	18"	Minnesota	24"	South Carolina	24"
Delaware	24"	Mississippi	18"	South Dakota	18"
District of Columbia	18"	Missouri	24"	Tennessee	24"
Florida	24"	Montana	18"	Texas	18"
Georgia	18"	Nebraska	18"	Utah	24"
Hawaii	30"	Nevada	24"	Vermont	18"
Idaho	24"	New Hampshire	18"	Virginia	24"
Illinois	18"	New Jersey	24"	Washington	24"
Indiana	24"	New Mexico	18"	West Virginia	24"
Iowa	18"	New York	24"	Wisconsin	18"
Kansas	24"	North Carolina	24"	Wyoming	24"

What is the tolerance zone?

The tolerance zone is a horizontal area, measured from the marks, where the excavator should excavate using hand tools (or other non-invasive tools) to protect the marked underground facility until it is exposed. The tolerance zone includes the area from the ground surface down and around the facility.



Hand Dig
within the
Tolerance
Zone



Pipeline

Excavation Guidelines

→ Common Ground Alliance best practices

One Call Facility Locate Request

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 10 working days prior to beginning excavation.

White Lining

When the excavation site cannot be clearly and adequately identified on the locate ticket, the excavator will designate the route and/or area to be excavated using white marking, either on-site or electronically (when available through the one call center), prior to or during the request for the locate ticket.

Locate Reference Number

The excavator receives and maintains a reference number from the one call center that verifies the locate was requested.

Pre-excavation Meeting

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.

Facility Relocations

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.

Separate Locate Requests

Every excavator on the job has a separate one call reference number before excavating.

One Call Access (24/7)

The excavator has access to a one call center 24 hours per day, 7 days a week.

Positive Response

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.

Facility Owner/Operator Failure to Respond

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 determined, 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.

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12"



→ Ensuring a safe and efficient process

Locate Verification

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.

Documentation of Marks

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

Work Site Review with Company Personnel

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

One Call Reference at Site

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.

Contact Names and Numbers

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.

Facility Avoidance

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

Federal and State Regulations

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.

Marking Preservation

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.

Excavation Observer

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

Excavation Tolerance Zone

The excavator observes a tolerance zone that is comprised of the width of the facility plus 18 inches 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 inches.

Excavation within Tolerance Zone

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.

Mismarked Facilities

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.

Exposed Facility Protection

Excavators support and protect exposed underground facilities from damage.

Locate Request Updates

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.

Facility Damage Notification

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.

Notification of Emergency Personnel

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. The excavator takes reasonable measures to protect everyone in immediate danger, including the general public, property, and the environment until the facility owner/operator or emergency responders arrive and complete their assessment.

Emergency Excavation

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 services or public transportation.

Backfilling

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.

As-built Documentation

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

Trenchless Excavation

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

Emergency Coordination with Adjacent Facilities

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.

No Charge for Providing Underground Facility Locations

Upon notification by one call centers, locations of underground facilities are provided by operators at no cost to excavators.

Vacuum Excavation

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 should also follow state/provincial laws and/or local ordinances.

Facility Owner Provides a Monitor During Excavation

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.

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Working Near High-Pressure Pipelines

→ Easement information and general specifications

Easement Information

An easement amendment may be required when crossing an existing easement.

General Conditions of an easement give the holder of the easement the right to operate a business in a safe and unencumbered manner. Easement Amendments & License Agreements attempt to change the legal document to reflect the physical changes to the property. These new arrangements may require the crossing party to:

- Recognize the rights and the needs of the utility being crossed by obtaining permission to encroach on the easement and follow the specifications for crossing the pipeline system.
- If the utility needs to be altered, then all costs will be the responsibility of the crossing party.
- Indemnify, and hold harmless, the utility from all claims and liabilities. Also, the crossing party shall pay all costs and fees for responding to failures, or in the enforcement of all details in the performance of the encroachment or crossing.
- Notify the utility three days before working near the utility system, and follow specifications and the directions of the utility representative.
- Develop diagrams and surveys with plan and profile views of the site and the method of construction including materials, equipment, personnel training, and construction loads.

General Specifications

Any variance from these specifications must be confirmed in writing by a Marathon Pipe Line LLC (MPL) representative. The crossing party shall:

- Not attempt to probe for or engage in any activities which might damage the pipeline or coating.
- Contact MPL to re-mark a pipeline if crossing party believes existing marks to be inadequate for any reason, including disturbance during construction.
- Not burn trash, brush or other items or substances within 50 feet of any pipeline.
- Not construct any obstruction above or below ground (including, but not limited to, buildings, engineering structures, pavement, fences, refuse, pools and waste disposal systems) within 50 feet of any pipeline.
- Not operate heavy equipment over any pipeline.
- Not blast within 1,320 feet of any pipeline.
- Cross as near perpendicular as possible to any pipeline.
- Perform no power digging within 50 feet of the side of the pipe unless an MPL representative is present.
- Ensure all excavation work complies with OSHA's excavation standards outlined in 29 CFR 1926 and correct any noncompliant excavation site before any MPL representative or contractor enters the site to perform work.



- Perform no power digging within 18-24 inches of the outer edge of the pipeline. See page 8 for state-specific Tolerance Zone requirements. The Tolerance Zone extends on all sides of the pipeline and includes the area from the ground surface down and around the facility (see diagram on page 9). Within the Tolerance Zone, use only hand excavation, air cutting and vacuum excavation.
- Not cross the pipeline by auto tunneling, boring or directional drilling methods unless approved and documented by MPL. An MPL representative must be present during this operation.
- Not develop or build retaining walls, drive piling or create an engineering works that develops or controls overburden loads that impact the pipeline without MPL's approval.
- Not chisel, plow or rip the soil until inspected by an MPL representative. Rip no greater than 16 inches deep only after the exact position of the pipe is known and not within three feet of the outer edge of any pipeline.
- Backfill and compact to the satisfaction and in the presence of an MPL representative:
 - At least six inches of fine, loose earth or sand with no sharp gravel, rock, hard clods, vegetation or other debris shall be placed on all sides of any pipeline, and remaining backfill shall be placed so as not to disturb this padding material or injure the pipe.
 - Compact backfill directly over any pipe by hand until 18 inches of cover is achieved.
 - Compact disturbed ground to the same degree of compaction of surrounding areas.
- Restore the site to its original condition except for items which are part of the approved change.

Other Considerations

- Consider establishing evacuation routes in the design of a development. Adequate evacuation routes may be necessary in the event of a pipeline incident or other emergency.

Foreign Pipeline Crossings

→ Crossing pipelines, gas transmission lines, mains, and service connections

General Specifications

A foreign [non-Marathon Pipe Line LLC (MPL)] pipeline crossing should cross as nearly perpendicular to the existing MPL pipeline and its designated right of way as possible.

A foreign pipeline shall not run parallel or nearly parallel to an MPL pipeline within the boundaries of the MPL right of way or within 25 feet of the pipeline without MPL's written approval.

Foreign pipelines shall cross underneath MPL pipelines with a minimum clearance of 24 inches. This elevation should be maintained across the entire width of MPL's right of way. A clearance of at least 24 inches shall also be maintained between MPL pipelines and any other buried structure. An additional 24 inches is required if a conventional bore/utility push or directional drill is utilized.

If during the course of the crossing MPL's pipeline is exposed and unsupported for a distance in excess of 10 feet, the pipeline must be supported by cribbing on each side of the crossing or by some other manner approved by MPL. Prior to backfilling the hole, the cribbing must be removed and replaced with sand bags or good, compacted fill in order to minimize settling of the pipeline.

If MPL's pipeline is unusually deep at the crossing location, MPL may consider allowing the utility to cross over MPL's pipeline as long as the utility is placed in a steel casing across the right of way or protected in some other manner acceptable to MPL.

Warning tape shall be placed one foot above the location of a foreign pipeline for a distance of 25 feet on either side of MPL's pipeline.

Pipeline markers or identifying markers should be located to indicate the route of the foreign pipeline across the right of way of an existing MPL pipeline.

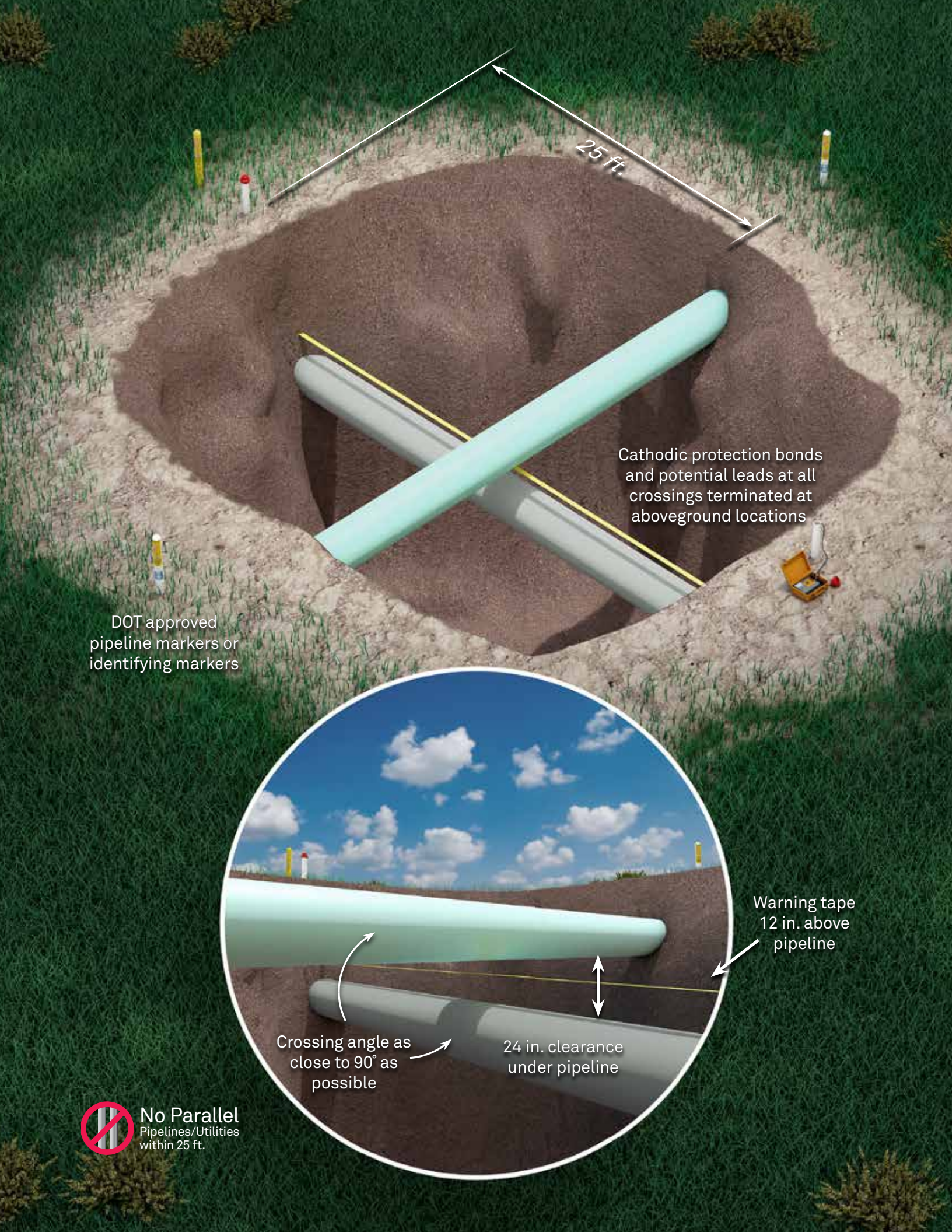
Metallic Pipe

Cathodic protection bonds and potential leads shall be required at all crossings and shall be terminated at aboveground locations. All test leads on MPL pipelines will be installed by MPL personnel.

The foreign pipeline should be coated with a suitable pipe coating for a distance of at least 50 feet on either side of the crossing.

Non-Metallic Pipe

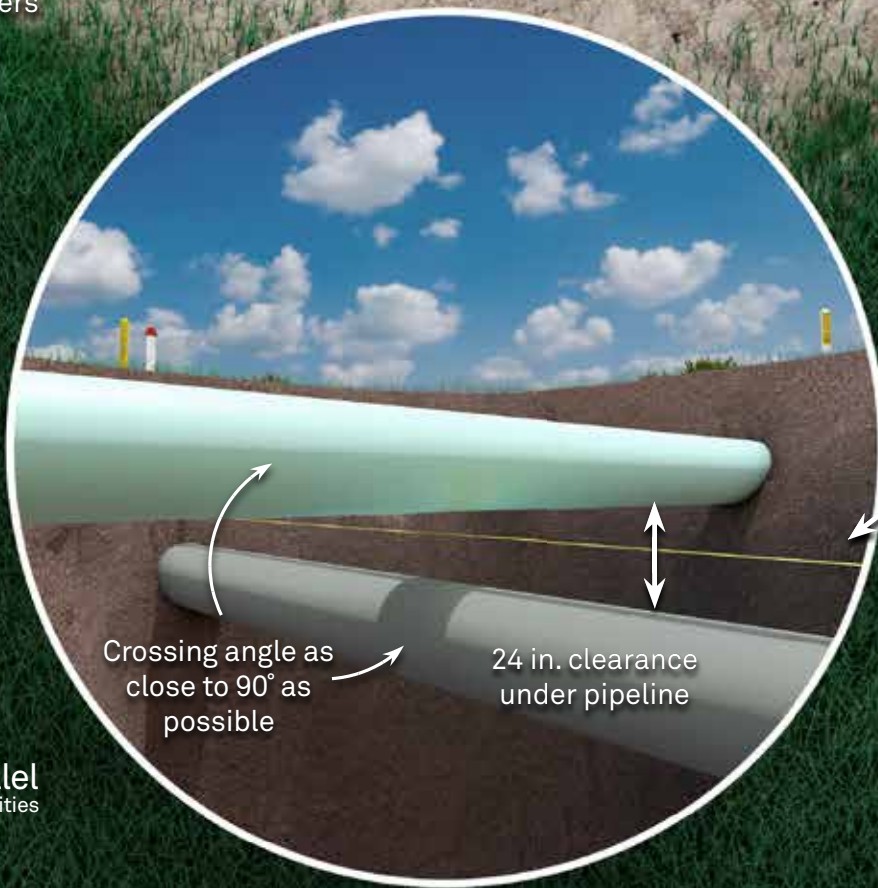
A tracer wire and warning tape for a non-metallic pipeline should be installed by the third party to allow easy identification.



25 ft.

Cathodic protection bonds and potential leads at all crossings terminated at aboveground locations

DOT approved pipeline markers or identifying markers



Warning tape 12 in. above pipeline

Crossing angle as close to 90° as possible

24 in. clearance under pipeline



No Parallel
Pipelines/Utilities
within 25 ft.

Agriculture Activities and Modifications

→ Field tile ditching and deep plowing

Agriculture Field Tile

The project should be planned in advance and the project plan should be followed. Many states establish required time frames for advance planning. Ample time is required to review design and verify pipeline depths and operational requirements. Prior to the installation of any field tile within Marathon Pipe Line LLC's (MPL) right of way, the installer should communicate and plan the project with MPL's field personnel.

During field tile installation, the pipeline should be located and a depth analysis made by an MPL representative. Yellow flags will be placed to mark the pipeline. The MPL technician will make a Depth Survey Report. Photos should be taken showing the flags.

When working within 50 feet of the pipeline, an MPL representative must be present. This will give adequate time and distance to keep everyone safe. It is recommended that long runs of parallel tile and pipeline should be spaced 25 feet apart (a minimum of 10 feet) where conditions and skills permit.

The pipeline should be crossed carefully. The crossing should be as near to perpendicular as possible and clear the pipeline by 24 inches. Where the field tile crosses the pipeline, it is recommended that solid tile be used and that pea gravel be used to prevent settling. Plastic pipe is preferred when crossing the pipeline. MPL shall conduct a field inspection of this work verifying pipeline depths and installation clearances.

Deep Plowing

Due to erosion and the removal of earthen cover in some areas, the existing depth of MPL's pipeline may not support deep plowing. MPL shall not allow deep plowing in areas where the integrity of the pipeline may be compromised.

Prior to any deep plowing, MPL should be notified well in advance. MPL shall locate and perform a depth analysis or pipeline depth profile. Yellow flags shall be placed to accurately mark the pipeline. These flags should be numbered and placed at frequent intervals, and should also indicate station and approximate depth.

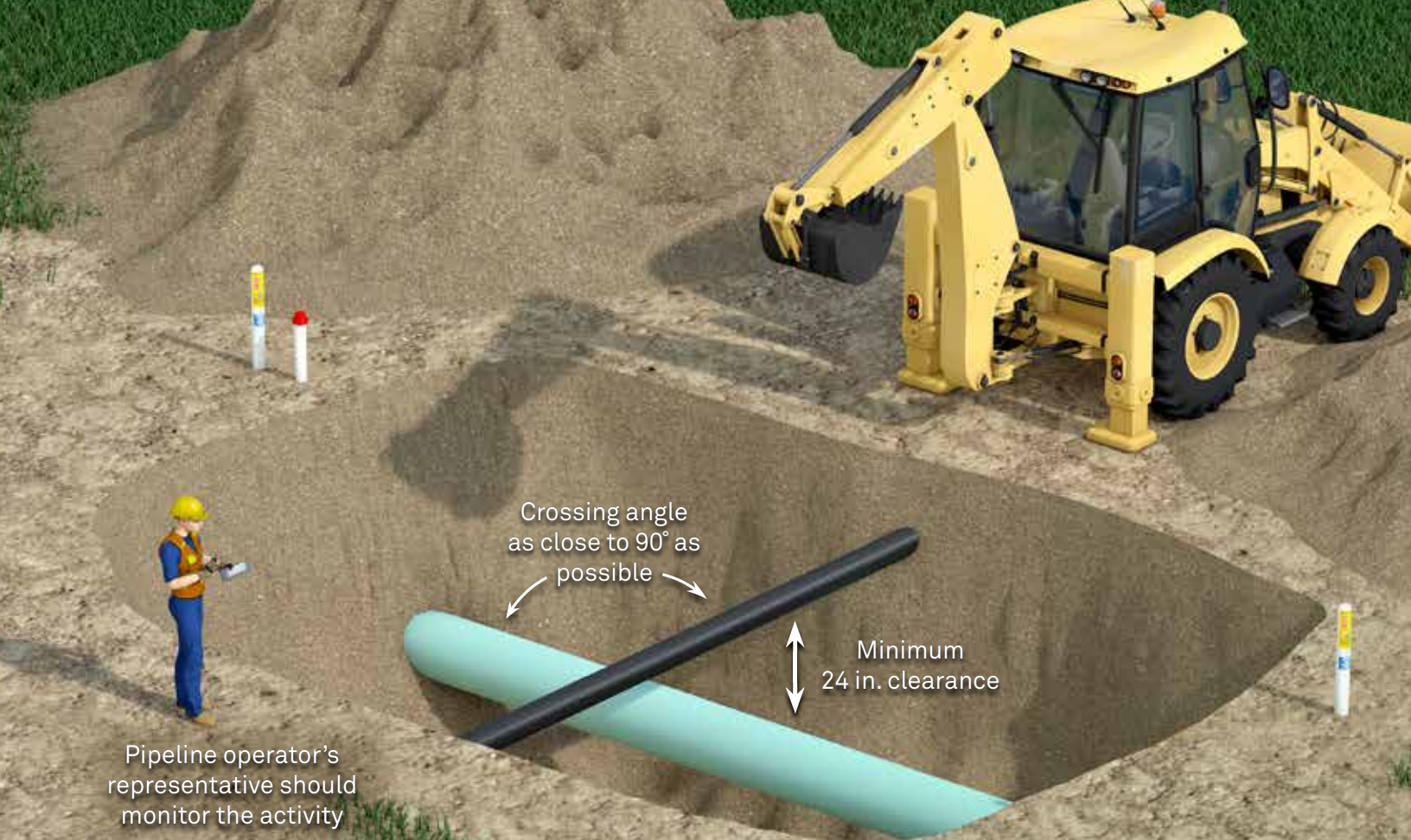
An MPL representative will prepare a Depth-of-Cover Survey, which shall include photographs showing the yellow flags.

When working within 50 feet of the pipeline, an MPL representative shall monitor the activity verifying pipeline depths and installation clearances.

Land Contour Modifications

Projects near an MPL pipeline that involve altering the land contour, including the installation of ponds, lakes and drainage ditches, require expert engineering in planning and implementation to ensure pipeline integrity. A plan should be developed and provided to MPL well in advance and take into consideration the integrity and safety of MPL's pipeline. There may be a conflict between the current location of the pipeline and the needs of the land modification project. The project planning process may indicate the need to relocate the pipeline or alter the land modification project. Ample time is required to review design and verify pipeline depths and operational requirements.

No substantial amount of cover shall be removed from above the pipeline. Typically, MPL requires at least 36 inches of cover over the top of the pipeline. Limited amounts of cover can be added. The pipeline should not be covered by more than 60 inches of soil without the prior written approval of MPL. The edge of a proposed surface improvement should maintain 25 feet of clearance with a buried pipeline when running parallel with the underground facility.



Pipeline operator's representative should monitor the activity

Deep Plowing and Land Contour Modifications

Plan Ahead and Work Safe

- When planning your project, notify the pipeline operator well in advance.
- Pipeline experts can help with the planning process and pipeline safety.
- Pipeline operators monitor the activity when work is within 50 feet of the pipeline.



Boring and Drilling

→ Conventional boring and directional drilling

Conventional Bore/Utility Service Line Push

Prior to commencing any conventional bore/utility service line push under or within 25 feet of any Marathon Pipe Line LLC (MPL) facility or pipeline right of way, permission must be received from MPL. Lines installed by conventional boring/utility service line push shall cross a minimum of four feet below MPL's pipeline. All crossing should be perpendicular to the existing pipeline and its designated right of way.

MPL shall be supplied with written notification documenting the scope of the work, the project schedule, and plans detailing the bore/utility service line push, as well as any special conditions or proposed adjustments that will be incorporated into the conventional bore/utility service line push plan to prevent possible damage to the pipeline system. This plan shall be reviewed and approved by MPL.

MPL shall have a representative on-site to monitor the crossing within the right of way.

Conventional Bore

Some method must be employed to ensure this minimum clearance is met, such as excavating in the path of the crossing on either side of MPL's pipeline to a depth that if the foreign line does not appear, then the minimum clearance has been achieved. These inspection holes should be completed prior to the bore or push commencing to be sure MPL's pipeline is not hit.

Directional Drilling

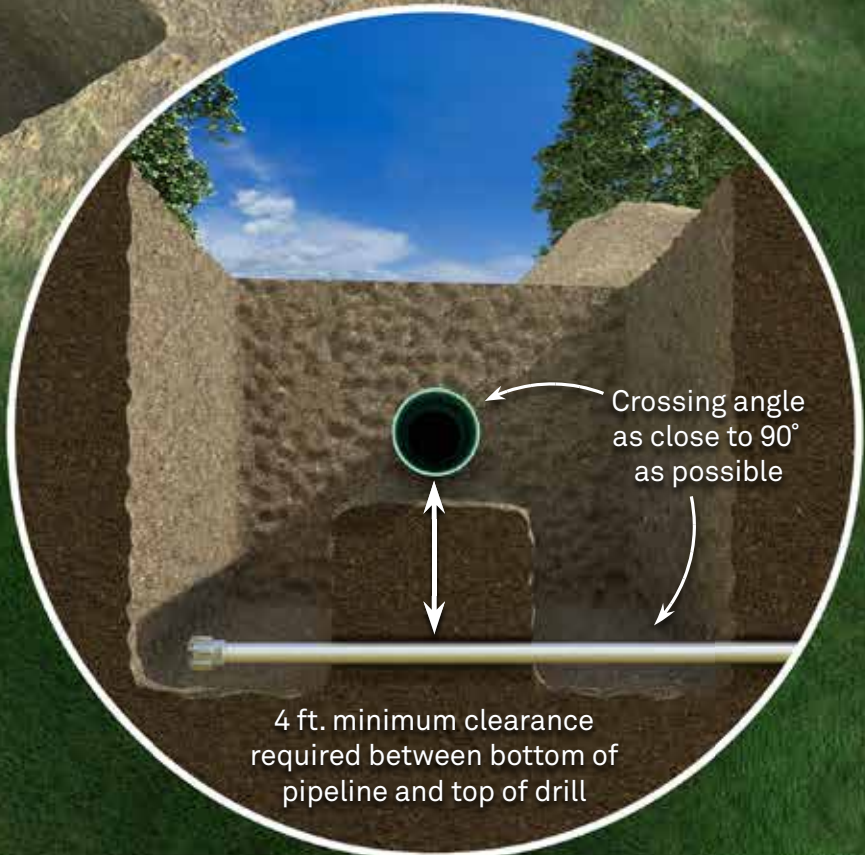
Prior to commencing any directional drilling activity under or in proximity to any MPL facility or pipeline right of way, permission must be received from MPL.

For any directional drilling operations across or within an MPL right of way, the excavator shall provide MPL with a directional drilling plan, complete with a written report documenting any special conditions or proposed adjustments that shall be incorporated into the directional drilling plan to prevent possible damage to the pipeline system. Lines installed by directional drilling shall cross a minimum of four feet below MPL's pipeline. This plan shall be reviewed and approved by MPL.

Some method must be employed to ensure this minimum clearance is met, such as excavating in the path of the crossing on either side of MPL's pipeline to a depth that if the foreign line does not appear, then the minimum clearance has been achieved. These inspection holes should be completed prior to the directional drill commencing to be sure MPL's pipeline is not hit.

Respect the Need for Safety

Pipeline operator's representative should monitor the activity when boring, drilling or tunneling in close proximity to the pipeline



Crossing angle as close to 90° as possible

4 ft. minimum clearance required between bottom of pipeline and top of drill



No Parallel
Pipelines/Utilities
within 25 ft.

Cable Crossings

→ Overhead and underground cable infrastructure

General Specifications

All cable crossings should cross perpendicular to existing Marathon Pipe Line LLC (MPL) pipelines and its designated right of way to the extent possible.

No cable shall run parallel or nearly parallel to an MPL pipeline within the boundaries of the MPL right of way or within 25 feet of the pipeline without MPL's consultation and expressed written approval. No splice box, service riser, or energized equipment shall be installed within 25 feet of the pipeline.

After construction of cables with an operating voltage greater than 13.8 kV, MPL will investigate the possibility of induced current on the pipeline. If AC interference is evident, the crossing party shall be responsible for the cost of mitigating the AC interference.

Underground Cables and Conduit

Cables and electrical conduit shall cross underneath MPL pipelines with a minimum clearance of 24 inches and shall be installed in steel casing or installed in PVC conduit covered with six inches of concrete running 10 feet on each side of MPL's pipeline. Concrete used for protecting electric cables shall be dyed red. If MPL's pipeline is unusually deep, consideration may be given to crossing over the pipeline as long as the cable is placed in a steel casing or protected from damage in some other manner acceptable to MPL. An additional 24 inches of clearance is required if a conventional bore/utility push or directional drill is utilized.

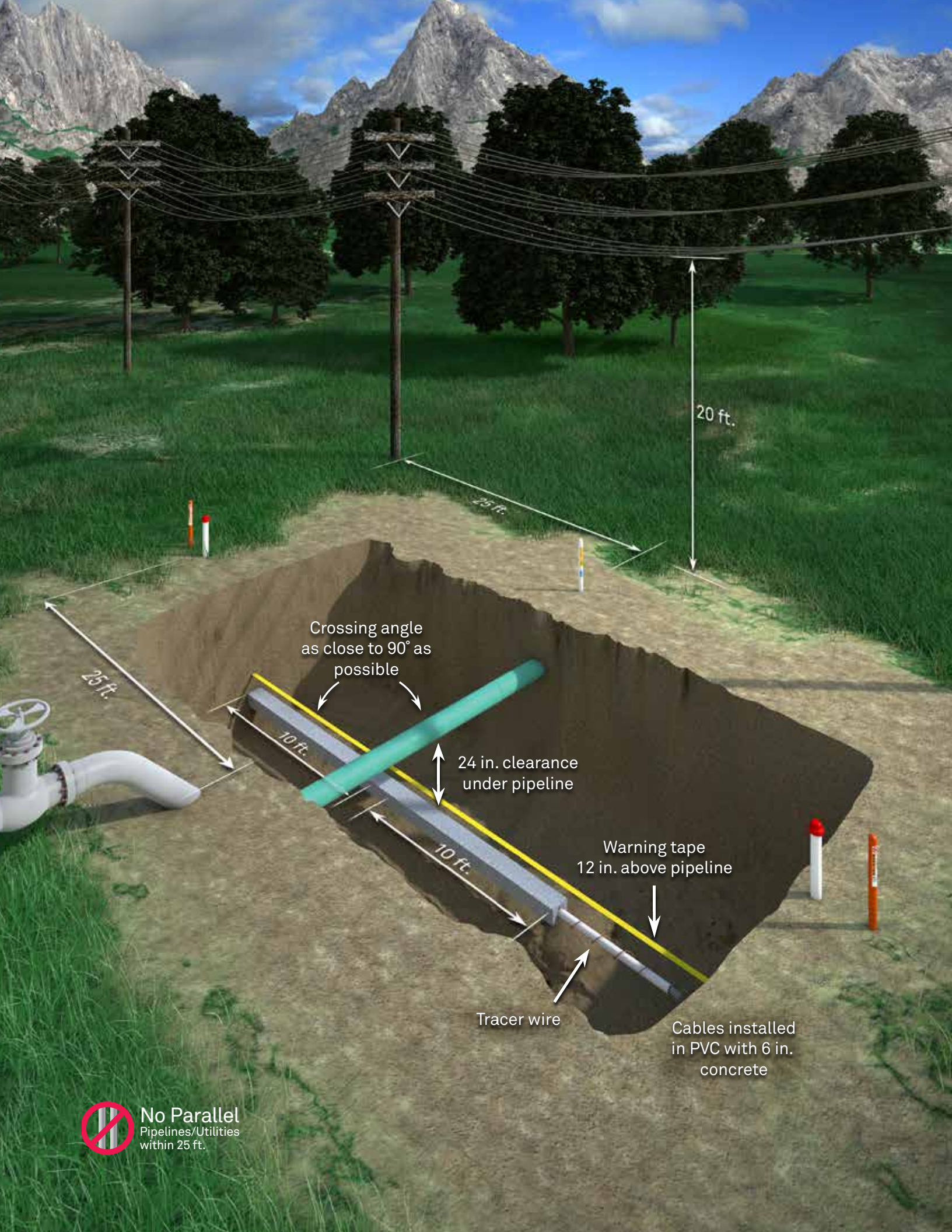
The minimum depth should be maintained and identification warning tape installed 12 inches above the cable for a distance of 25 feet on each side of the MPL pipeline.

Red aboveground "Warning Buried Cable" markers should be placed over the cable at a distance of 25 feet on each side of the MPL pipeline to properly identify the buried cable.

Overhead Cables

All overhead cables shall maintain a minimum height of 20 feet above grade for a distance of 25 feet on each side of the MPL pipeline.

No mechanical supports or service drops (including poles, towers, guy wires, ground rods, anchors, etc.) shall be installed within 25 feet of the MPL pipeline.



Crossing angle
as close to 90° as
possible

24 in. clearance
under pipeline

Warning tape
12 in. above pipeline

Tracer wire

Cables installed
in PVC with 6 in.
concrete



No Parallel
Pipelines/Utilities
within 25 ft.

Transportation Infrastructure

- Roads, railroads, paved lots, heavy equipment, vehicles, and logging operations

Temporary Crossing for Axle Loads Less Than 15,000 Pounds

Any traffic over a Marathon Pipe Line LLC (MPL) pipeline represents a risk and should be minimized unless adequate precautions (discussed below) are taken. Equipment with tracks, as opposed to having tires, is preferred if travel over the pipeline is required. In general, a minimum cover of 48 inches over a pipeline is required where a vehicle crossing is to be made for axle loads up to 15,000 pounds. Site conditions (such as damp soil), as determined by an MPL representative, may require that the crossing location be matted or provided with additional cover to compensate for soil displacement due to the subsidence of tires.

Temporary Crossing for Axle Loads Greater Than 15,000 Pounds

For axle loads greater than 15,000 pounds, which are common in mining and logging operations, MPL's pipeline shall be protected from excessive stress by placing one foot thick timber mats over the pipeline. The crossing design may require evaluation by MPL to ensure that the installation/crossing will not cause an excessive amount of stress on the underlying pipeline. If MPL determines that matting is required, then the mats shall be placed on a minimum of two feet undisturbed earth above the pipeline and oriented with the timbers perpendicular (across) the pipeline. Enough mats shall be placed to cover the complete width of the proposed crossing. An appropriate roadway material, such as crushed stone, can then be distributed over the mats to complete the crossing. Alternate means of protecting the pipeline must be approved by MPL.

Permanent Crossing

Permanent vehicle crossings, such as roads, railroads, and paved lots, that are planned over or near an MPL pipeline must meet the clearance requirements as defined by MPL. The crossing design will require evaluation by MPL to ensure that the installation/crossing will not cause an excessive amount of stress on the underlying pipeline. The crossing party shall provide MPL with a plan and profile drawing indicating the existing and proposed elevations of the proposed project; the pipeline and buried utilities within 25 feet of either side of the crossing shall be clearly indicated in all views. The proposed surface encroachments should cross a buried pipeline, where reasonably possible, in a perpendicular alignment (90 degrees) to minimize the length of the impact to the underground facility, but in no event less than 45 degrees. A geotechnical report may be required to identify soil profile components. This subsoil study will show the load array characteristics of the site.

In the event MPL determines that additional measures are necessary to provide adequate protection for the pipeline, the crossing party shall provide additional protection as approved by MPL. Some alternatives for additional protection are the provision of additional earth cover over the pipeline, the installation of reinforced concrete pads or pre-stressed concrete beams over the pipeline, or a lowering of the pipeline.



Recommended distances from pipeline. MPL must review plans prior to crossing activities taking place.

Cover Over Pipeline

Absent MPL's express written approval to the contrary, a minimum cover of 48 inches for roads and 72 inches for railroads will be required over the pipeline for both permanent installations over the pipeline and temporary crossings for heavy equipment. MPL's representative may require more, or allow less, cover depending on site-specific conditions.

The top of the pipeline must be a minimum of 36 inches below grade at drainage ditches on either side of a road or railroad, or at the perimeter of a paved lot.

The pipeline should not be covered by more than 60 inches of soil without the prior written approval of MPL.

Culverts

Culverts must not be located within 25 feet of the pipeline or in MPL's right of way, whichever is greater. Any modification or creation of a drainage pattern that affects MPL's right of way must be addressed such that erosion of pipeline cover is controlled. If there are no other options for relocating the culvert, or if the culvert is on public right of way (federal, state or local), then the design must be approved

by MPL. While reviewing the design, consideration should be given to additional stress placed on the pipeline, access to the pipeline for maintenance, and the effect any new drainage patterns might have on the pipeline right of way.

Logging Operations

- No trees shall be felled on, over, or across MPL's right of way. No trees or timber shall be stored on said right of way. No trees shall be trucked or skidded over or down the right of way without first obtaining approval from MPL.
- The same requirements for heavy equipment crossings as defined in Specifications for Road, Railroads, Paved Lots and Heavy Equipment Vehicles shall be followed for any logging operations proposing to work on MPL's right of way.

Future Responsibility

In the event that MPL deems it necessary to inspect or repair any section of pipeline under a road, railroad or paved lot at any time in the future, the cost of excavating and replacing any fill materials added to the original grade, and repairs to the road, railroad or paved lot itself, shall be borne entirely by the crossing party.

Non-Explosive Seismic Testing and Blasting Operations

→ Planning, testing, and blasting near pipelines

General Specifications

The third party responsible for the seismic testing or blasting operations shall comply with all applicable local, state, and federal regulations and requirements.

A seismic testing plan must be submitted and approved by MPL prior to commencement of any testing activity. All seismic testing or blasting operations shall be conducted by experienced personnel who are trained and certified in such operations and who are aware of the hazards involved.

Non-Explosive Seismic Testing

Seismic testing with steady state vibrator sources is prohibited within 150 feet of MPL's facilities or pipelines. All other non-explosive seismic testing sources, including the use of air guns, are prohibited within 600 feet of MPL's facilities or pipelines. Upon request, these distances may be reduced at the discretion of MPL and then only upon written permission from MPL.

The third party responsible for the seismic testing shall notify MPL immediately if any changes are made to the seismic testing plan.

Blasting Operations

Prior to commencement of any blasting activity within 1,320 feet (one-fourth mile) of MPL facilities or pipelines, permission must be received in writing from MPL. For any blasting operation within one-fourth mile of MPL's facilities or pipelines, MPL shall be supplied with a pre-work survey, complete with a written report documenting any special conditions or proposed adjustments which shall be incorporated

into the seismic testing or blasting activity plan to prevent possible damage to facilities or pipeline. This survey shall be performed by an accredited third-party surveyor and will be reviewed by MPL.

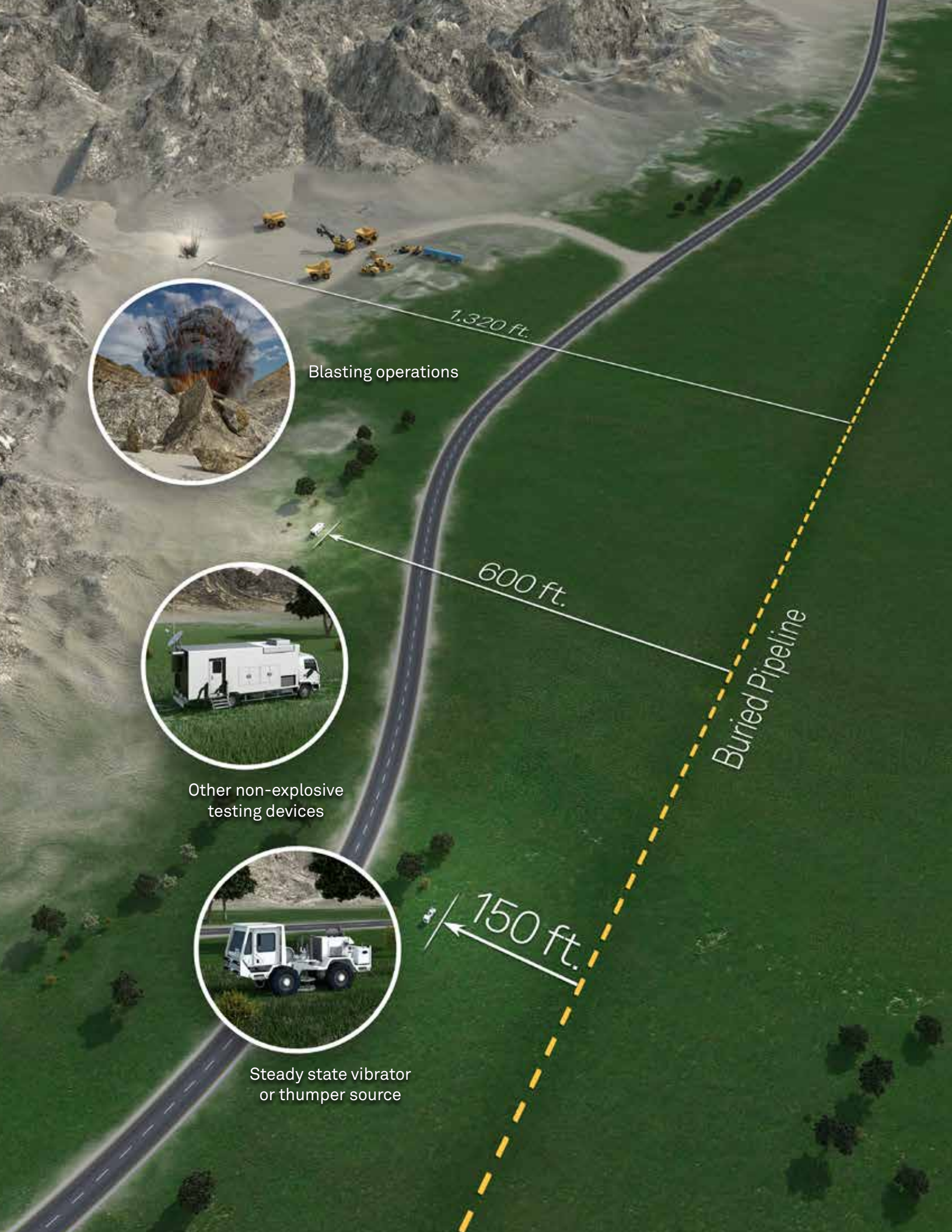
The third party responsible for the blasting shall notify MPL immediately if any changes are made to the blasting plan.

If blasting is to be performed within 600 feet of the pipeline, a seismic monitoring program shall be instituted by the contractor. A seismic monitoring unit in good working condition shall be utilized to measure the vibration at the pipeline. The geophone shall be inserted directly over the pipeline and covered with a sandbag if soil conditions prevent adequate insertion. The Peak Particle Velocity (PPV) shall not exceed four inches per second (IPS) for any blast. MPL shall be notified of any PPV readings approaching or exceeding four IPS.

No blasting shall be conducted closer than 50 feet to MPL's pipelines unless specifically approved by MPL.

Anyone suspecting blasting damage shall notify MPL immediately. If MPL has reasonable cause to believe that damage could have occurred during blasting operations, then MPL may recommend the pipeline be proof tested and/or excavated and inspected.

If PPV from blasting operations exceeds four IPS, then a proof test (leak survey) will be conducted by MPL. An MPL representative shall be on-site at the location of the blasting activity to observe the right of way during the proof test.



Blasting operations



Other non-explosive testing devices



Steady state vibrator or thumper source

1,320 ft.

600 ft.

150 ft.

Buried Pipeline

Property Improvements

→ On or near existing pipelines, facilities, and right of ways

General specifications

The crossing party shall provide Marathon Pipe Line LLC (MPL) a plan and profile drawing indicating the existing and proposed property improvements for the proposed project within 50 feet of the pipeline; MPL's pipeline shall be shown in both the plan and profile views. Each notification is evaluated on an individual basis; more stringent requirements may be required for a particular circumstance. Further, the crossing party assumes all risk and acknowledges that, while exercising easement rights, MPL may damage encroachments located within MPL's right of way.

Structures

In general, no structure or obstruction is allowed within MPL's right of way.

Landscaping

Trees, shrubs, and other plantings greater than three feet high are prohibited within 25 feet of any pipeline or appurtenance and typically all plantings are prohibited within 10 feet of any pipeline or appurtenance. MPL may trim or remove any trees, shrubs, and other plantings of any size within its right of way that it deems to interfere with the maintenance or integrity of the pipeline.

Fencing

Fence installation is not in the best interest of safe pipeline operation and should be avoided. If it is necessary for the installation of a fence, the following specifications should be followed: Fence posts shall not be installed within five feet of any MPL pipeline and, if crossing the pipeline, shall be equidistant from the pipeline. No fence shall cross MPL's right of way at less than a 60-degree angle

to the pipeline. Fences parallel to the MPL pipeline must be at least 10 feet from the pipeline. No masonry, brick or stone fences shall be installed on MPL's right of way.

Driveways or Lanes

Driveways or lanes should cross the MPL pipeline at no less than a 60-degree angle and shall not run parallel within 25 feet of the pipeline. A minimum cover of 36 inches for driveways and lanes, and 36 inches for side ditches is recommended, but MPL may want to evaluate the impact of the encroachment to the pipeline on a case-by-case basis. MPL shall approve in advance any lesser amount of cover.

Drainage and Septic Systems

Drainage and septic systems work on gravity. It is important that grade elevations and slope are considered before these systems are created. Septic systems and their leach fields should not be located within 25 feet of the pipeline. This area is reserved for heavy construction equipment for the pipeline. Crossing the pipeline with these systems must be accomplished with non-perforated solid pipe buried deep enough to carry heavy loads.

Removal or Deposit of Dirt

No amount of cover shall be added or removed from the pipeline right of way without the prior approval of MPL. Typically, MPL requires at least 36 inches of cover over the top of the pipeline. The pipeline should not be covered by more than 60 inches of soil without written permission from MPL.



Know what's below. Call 811 before you dig or visit:

call811.com



Setback Distances

New house, business, place of public assembly	50'
Addition to an existing dwelling, etc.	50'
Unoccupied permanent structure	50'
Garage	50'
Barn	50'
Deck and patio	50'
Swimming pool	50'
Pond	50'
Semi-moveable structure	25'
Garden shed	25'
Septic tank and leach field	25'
Telephone/light pole	25'
Water well	25'
Trees	25'
Yard light or mailbox	10'
Fence post	5'

NOTE: SITE-SPECIFIC PLANS ARE REQUESTED WHENEVER THE STRUCTURE DISTANCE CANNOT MEET THE SETBACK RECOMMENDATIONS.

Pipeline Safety Awareness

→ Pipeline markers, excavation damage, leak recognition, and response

Pipeline Markers

The U.S. Department of Transportation requires the use of markers to indicate the approximate location of underground pipelines. Markers are located at road, railroad, and navigable waterway crossings. Markers do not indicate the depth of the pipeline.

Markers display:

- The material transported through the pipeline
- The name of the pipeline operator
- A toll-free emergency telephone number

Signs of a Petroleum or Natural Gas Release

Sight

- A pool of liquid on the ground
- A rainbow sheen on water
- Bubbling in wet or flooded areas
- A dense white cloud or fog
- Discolored or dead vegetation
- Dirt or water being blown in the air

Sound

- An unusual hissing or roaring noise

Smell

- An unusual odor such as gasoline, oil, sulfur or a rotten egg smell

Excavation Damage

If a Marathon Pipe Line LLC (MPL) pipeline is accidentally hit during excavation, stop working immediately, call MPL's toll-free emergency phone number (1-833-675-1234) and report your location. Even a minor gouge, scrape, dent or crease to the pipeline or the coating may cause a future problem. An MPL representative will travel to the work site, inspect the pipeline and determine if any repairs are necessary.

What You Should Do

- Turn off equipment if it can be done safely
- Leave the area immediately and remain upwind
- Keep possible ignition sources (starting an engine, sparks, open flame) away from the area
- Call 911 or your local emergency response number
- Call MPL's toll-free emergency phone number (1-833-675-1234) and report the location





Sugarfire
Smoke House

CRUISIN SINCE 1957

Marathon Pipe Line LLC's
24-Hour Emergency Phone Number:

1-833-675-1234

If you are a landowner or tenant and have questions about Marathon Pipe Line LLC rights of way, call 1-855-888-8056 or email landowners@marathonpetroleum.com.

PIPE WARNING



Marathon Petroleum Corporation
15150 Westchase Drive
Houston, Texas 77060
www.marathonpetroleum.com



Marathon Petroleum Corporation
15150 Westchase Drive
Houston, Texas 77060
www.marathonpetroleum.com

Pipeline Emergency?
Call 911, then call
Marathon Pipe Line LLC
at 1-833-675-1234

539 South Main Street
Findlay, OH 45840

1-855-888-8056
marathonpipeline.com



**Marathon
Pipe Line** LLC

Earning Your
TRUST