

DEVELOPER HANDBOOK



KINDER MORGAN

Guidance for Working Near or Adjacent to a Pipeline

Welcome!

Kinder Morgan owns and operates high-pressure natural gas pipelines from coast to coast and border to border. Working together with Kinder Morgan and following the guidelines in this booklet will ensure that we operate a safe pipeline and that you have the ability to use the land, while honoring our easement rights to maintain and operate our high pressure natural gas pipelines as safely and efficiently as possible.

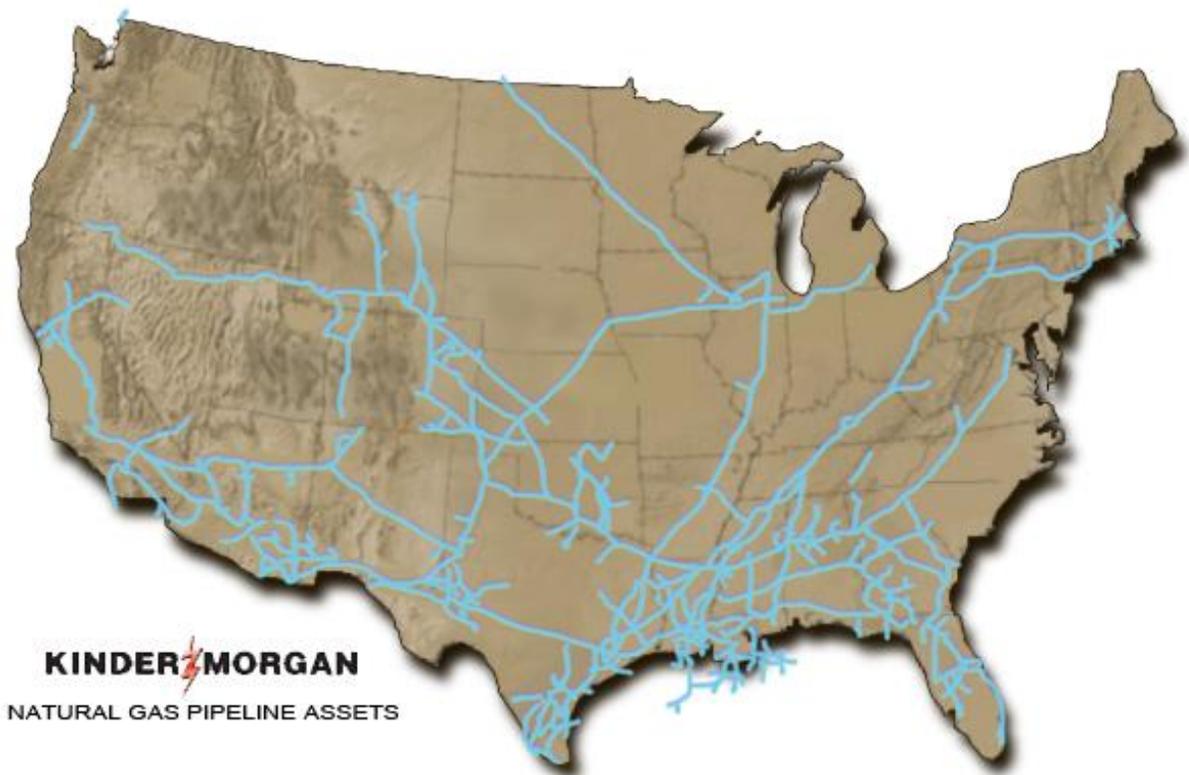


FIGURE 1: THIS MAP OFFERS A GENERAL REPRESENTATION OF KINDER MORGAN NATURAL GAS PIPELINES IN THE UNITED STATES. VISIT THE NATIONAL PIPELINE MAPPING SYSTEM WEBSITE WWW.NPMS.PHMSA.DOT.GOV TO VIEW A CURRENT MAP OF PIPELINES IN YOUR AREA.

This booklet will explain some basic land management guidelines. It will describe our right-of-way and land rights and requirements that allow us to maintain the safety and preserve the integrity of our facilities.

This booklet is also designed for city planners, building inspectors, surveyors, landscape and building architects, and other interested parties who may be working near or approving work adjacent to our easement.

To learn more about pipelines safety and pipelines in your community, visit:

- **Kinder Morgan Public Awareness** website:
www.KinderMorgan.com/public_awareness
- **PIPA** website: primis.phmsa.dot.gov/comm/pipa/landuseplanning.htm
- **National Pipeline Mapping System** website: www.npms.phmsa.dot.gov

Developer Handbook

KINDER MORGAN, INC.

A FEW WORDS ABOUT US

Kinder Morgan transports natural gas from the well to your Local Distribution Company (LDC). Your LDC brings natural gas to your home. Because this service is transportation-related, we fall under federal regulations administered by the Department of Transportation. Our job is to ensure the efficient, uninterrupted delivery of natural gas. Safety guides our actions every day.

The guidelines in this booklet allow us to operate our pipelines safely. We strive to keep you, your neighborhood, and your community safe, but to do that, we need your support. To maintain the integrity of our pipeline system, we request your cooperation when you plan, design, and construct improvements around our easement.

* Safety

Natural gas is the safest mode of energy transportation, and our pipeline system has the best



safety record in the industry. At Kinder Morgan, safety is a core value. It's our top priority. We focus on the safety of you, your neighbors, our employees, and all landowners with the pipeline located on their property. Federal regulations outline the safe operation of our pipeline. We take those rules seriously.

If our employees observe an unsafe activity occurring that would compromise pipeline integrity, then we will require the activity to stop. If we need support enforcing this requirement, the local police authorities will be contacted for their support.

We request that you follow the guidelines in this booklet. Please contact us to discuss your planned activities within our easement area. These activities ensure your safety and the safe operation of our facilities:

- Send us your plans so we can review and approve them.
- Contact your local One Call Center by dialing 811 prior to any excavation activity.
- Follow our approval letter guidelines.
- Respect our rights to maintain and operate our facilities.



The use of your property, where it is crossed by our easement, is subject to our granted easement rights. Certain uses within the easement area can conflict with the safe operation of our pipeline.

Some activities are allowed, such as walking across, lawn mowing, and watering a garden. We



must review activities with greater impact, including, but not limited to, deep plowing, crossing with equipment, blasting, constructing roads or driveways, installing utilities, adding fences, landscaping, logging, mining, and grading activities. Before you undertake any development or encroachment activities, you must submit your plans for our review.

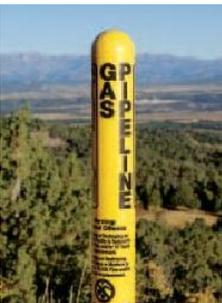
All plans for review must show our pipeline and easement. We encourage the approved plan to be recorded in County Clerk's office.

We will review your plans. Please allow two to four weeks for a complete review. If your plans are not approved, you will need to submit a revised proposal. Once your proposal is approved, you will receive an approval letter, which you must sign and return prior to start of any work.

After we have approved your development or encroachment activity, you must follow the guidelines contained in our approval letter, and respect our right to operate and maintain our facilities. Some encroachment activities not normally allowed may be considered under special circumstances. If approved by Kinder Morgan, then an Encroachment Agreement will be signed by all parties.

Our review of your proposal will be based upon our ability to safely maintain and operate our facilities. For example, we must be able to respond quickly in an emergency. To access our easement, it must be free and clear of encroachments and woody vegetation.

We also examine plans to add fill over the pipeline, and we will not allow any cover to be removed. No structures will be allowed within the easement. Utilities must cross as close to 90 degrees as possible. Fencing can only cross the easement provided at least a 16-foot gate is installed. (See page 10 for more details.)



We will mark our pipeline and easement edge prior to your planned construction activities. You or your contractor will be required to establish a boundary with fencing or markers separating the approved work area from our easement area.

Our easements include markers that identify the presence of buried high-pressure natural gas pipeline. All markers include a 24-hour emergency contact number. These markers let you know how to get in touch with us and remind third-party contractors to contact us prior to digging. These markers are only a general representation of the location of our pipeline (or multiple pipelines). They cannot

be used to identify the exact location of the buried facility. Our markers must be visible along the corridor. Contact 811 to identify the exact location of our buried pipeline. To discuss your plans contact us at 713-420-2600.



We regularly monitor our pipeline easement for third-party damage and unauthorized activity by aerial

surveillance with the use of helicopters or airplanes. Unauthorized activities can compromise the integrity of our pipeline. Your communication and cooperation will enable us to work with you while maintaining the safety of our pipeline system.

* Easements and Right of Way

Our Easement Agreements cover our rights to maintain and operate our facilities across your property. If you would like to discuss the terms of the Agreement, then please call our Right of Way Agent, who can be contacted through the Kinder Morgan office.

Some easements have a defined width, while others are not specified and have no width defined within the document. We will define the width of the easement upon your request and record the document in the local County Clerk's office at no charge to you.

Developers and landowners are encouraged to consider the easement area as green space, parks, hike and bike trails, horse trails, and other recreational uses. Approval is still required for any proposed improvements.

* One Call

The law requires anyone who excavates to contact One Call 811, a clearinghouse for all utilities regarding excavation. This is not to add extra requirements to your project—it's to keep you safe.

Excavation can rupture our facilities, damage our coating, and, if left unchecked, cause corrosion. If you hit a buried facility, do not try to fix it; call our local office immediately.

Contact information is included at the end of this booklet.



* Local Offices

Our offices are located throughout your state, approximately 100 miles from each other. Contact your local office for accurate information on the location of our buried facilities. To determine the location of our local office, please call our main number at 713-420-2600. We will support your excavation activities while we are on site. However, we request that you work with us, following our rules and requirements when excavating near our pipelines. Our employees are familiar with our restrictions and requirements, and they are trained and qualified to locate, mark, and stand by while you excavate across our facilities. We will support your approved project, so please help keep our pipeline safe.

ENCROACHMENT ACTIVITIES

Your development or planned activity may involve one of the following activities. Although this list is not complete, it summarizes the majority of activities that impact our easement and pipeline.



* Utility Crossings

All utilities require 12 inches of padding around any buried conduit.

At least 24 inches of vertical separation are required between all utilities and our pipeline.

All crossings must be as close to 90 degrees as possible. Parallel occupation within our easements is not allowed.

A cathodic bond may be needed to maintain the integrity of our pipeline. Additional cathodic protection equipment will be at your expense.

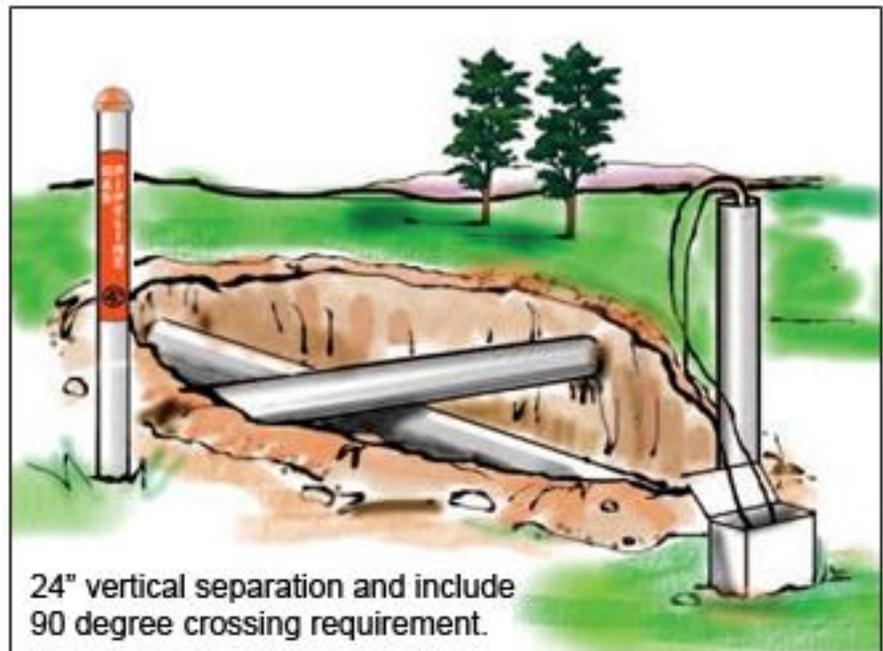


FIGURE 2: DOT-APPROVED PIPELINE MARKERS, CATHODIC PROTECTION BONDS, AND POTENTIAL LEADS ARE AT ALL CROSSINGS AND TERMINATE AT ABOVE-GROUND LOCATIONS.

New DOT Standard surface markers must be installed for all of your utility crossings. We must clearly know—without guessing—where your utilities cross in case excavation of our pipeline is necessary.

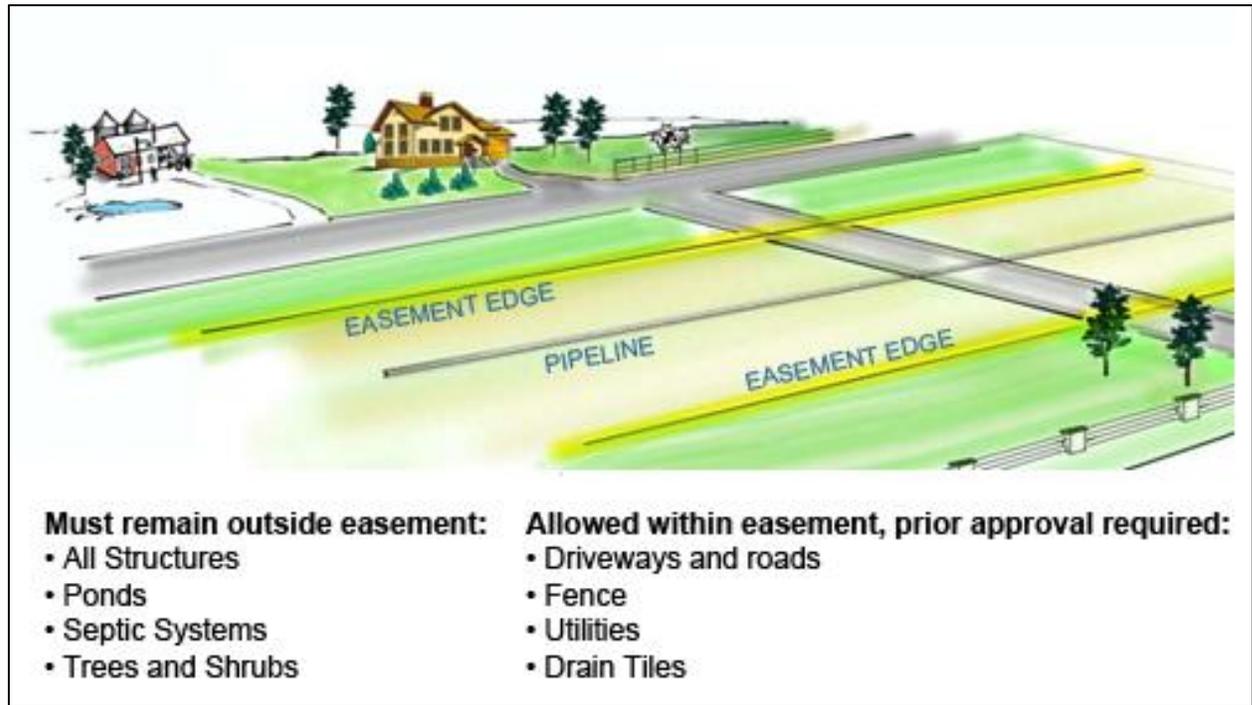


FIGURE 3: EASEMENT ILLUSTRATION.

Electric crossings, except low voltage ones used for residential services, must be encased in non-metallic conduit. The conduit must be covered with at least 3 inches of red colored concrete and be at least 36 inches wide centered on each conduit. Both the conduit and the concrete must extend across the full limits of the pipeline right-of-way. All buried conductor crossings shall be clearly and permanently marked with signs showing the location of the buried conductor.

* Landscaping

Landscaping can directly impact our facilities' safety, so we restrict most landscaping in the easement. Roots can damage pipeline coating, which can lead to corrosion. Growth obstructs our ability to monitor for leaks, erosion, and third-party activities. Plants can also restrict our ability to respond in an emergency.

No trees or shrubs will be allowed within the easement.

We must have open and clear visibility with the unobstructed ability to access our easement.

Remember, you must contact One Call by dialing 811 prior to any excavation.

*** Roads, Driveways, Parking Lots**

Our pipeline was designed according to the land's original use. If you want to change the surface's use, you will be responsible for all the costs for changes required for your proposed improvement.

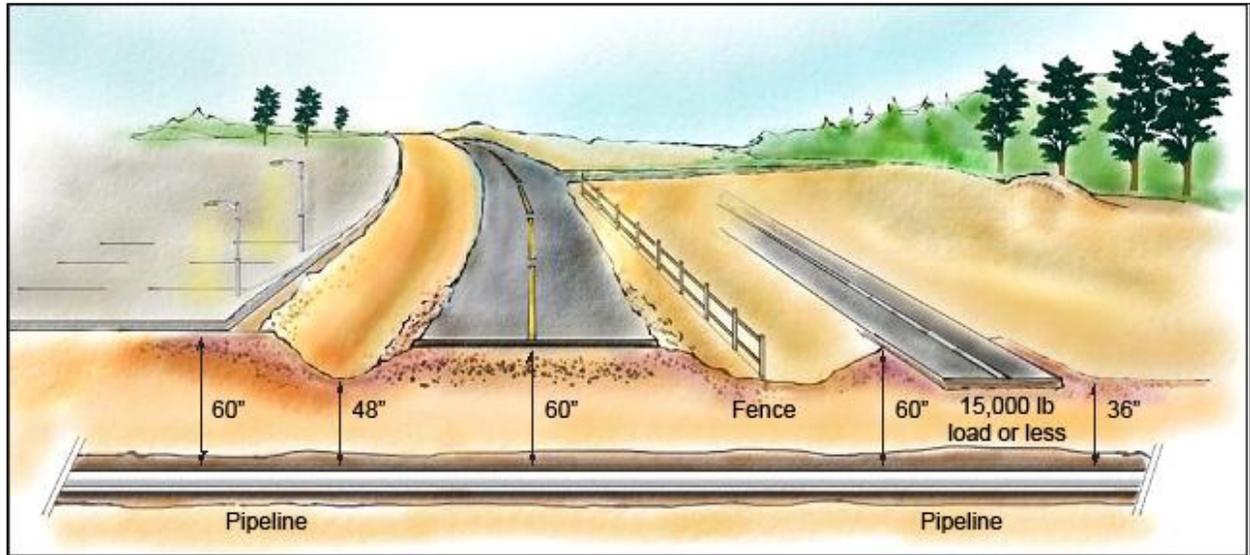


FIGURE 4: ALL ROADS, PARKING LOTS, DRIVEWAYS, AND HEAVY EQUIPMENT CROSSINGS MUST BE APPROVED PRIOR TO INSTALLATION. SEE SAMPLE BELOW.

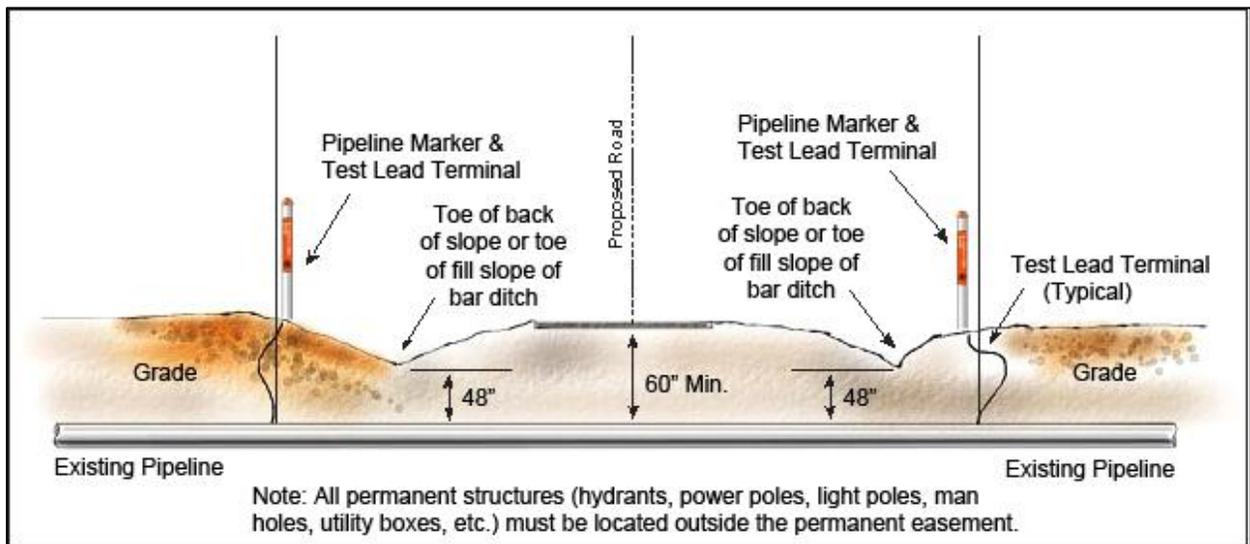


FIGURE 5: TYPICAL PROFILE DATA FOR PROPOSED ROAD CROSSING AND PARKING LOT.

All roads and driveways must cross as close to 90 degrees as possible.

All roads and driveways must have at least 4 feet of cover in the bar ditch.

Parking lots must have at least 5 feet of cover from top of pipe.

Plans must identify the required cover. Cover cannot exceed 9 feet from the top of the pipe.

Test holes are required to determine depth of cover at all proposed road and driveway crossings. They must be installed at your expense. Both One Call (811) and our office must be notified prior to any test-hole excavation. A Kinder Morgan representative will stand by when work occurs within the easement.



FIGURE 6: RIGHT-OF-WAY PHOTOGRAPH.

All roads, driveways, and parking lots may be required to be re-bedded at your expense. This will be determined when we examine the existing back-fill material around the pipeline. This re-bedding will accommodate the new loads placed upon the pipeline by crossing vehicles.

If the pipeline design has to be adjusted to accommodate new crossing loads from cars and trucks, it will be done at your expense.

Longitudinal excavation around the pipeline can only be done by a contractor who meets DOT operator qualifications.

Gas monitoring test stations used to check for the presence of natural gas will be required when parking lots are constructed over the pipelines and the parking facility is adjacent to a building. These test stations and the subsurface design will be at the owner's expense.

* Structures

No structures are allowed within the easement, including, but not limited to, sheds, garages, pools, septic systems, above-ground utility connections, wells, retaining walls, fire hydrants, light poles, driveway columns, wing walls, headwalls, spillways, retention ponds, and stormwater and water management infrastructure.

We will mark parameters of the easement to ensure that nothing is placed in the easement. Feel free to call our office to find out the specific easement width as it crosses your property.

* Fences

Fences are allowed to cross the easement as long as they cross as close to 90 degrees as possible and have a minimum of a 16-foot gate at the entrance and exit of the property. No fence posts may be installed within 5 feet of the pipeline. Parallel fencing is not allowed within the easement.

* Drain Tiles

All drain tiles must cross as close to 90 degrees as possible. We will not allow parallel drain tiles within the easement area. All drain tiles must maintain at least 24 inches of vertical separation between any crossing and the pipeline.

* Erosion

All soil erosion must be stabilized immediately.

* Logging and Timber Harvesting

We require a Logging Encroachment Agreement before logging activities are allowed within the easement area. We will meet on site with your forester to review the site conditions and proposed work plan. We will mark the easement limits. No skidding or timber forwarding are allowed parallel to or within the easement. Only crossings perpendicular to the easement are allowed. No staging areas or landings are allowed within the easement. The actual pipeline crossing must be approved and bridged with approved material. The bridge must be maintained throughout the job. Finally, all soils on the easement must be stabilized and re-seeded to prevent erosion.

* Deep Plowing

Deep plowing can cause severe pipeline damage. Please contact the local office or 811 so we can meet with you on site to review your plowing needs.



* Cover

You may not remove any cover from the easement area. If your encroachment will impact the easement, please submit your plans. Plans for roads and driveways must include a cross-section showing the existing and proposed grades based upon our existing pipeline. See the sample cross-section plan for additional information. (See page 8.) Test pits will be required to determine this information. These pits will be completed at your expense and can only be done while we are on site. We will review your proposal based upon your plans, our engineering standards, and the pipeline design.

Maximum cover will also be evaluated when we review your proposal. We will not allow more than 9 feet of cover above the top of the pipe. Extra cover increases the load on the pipe. It also impacts our work area and the ability to maintain safe Occupational Health and Safety Administration (OHSA) standards.



FIGURE 7: LAYING PIPE.

* Heavy Equipment Crossing

Crossing the pipeline with heavy equipment can compromise our pipeline's safety. Depending on the equipment's size and type of tracks or wheels, the weight load on the surface can place extra stress on the pipeline. Call the local office or 811 before crossing with heavy equipment. We will meet with you on site to determine the best crossing location, taking into account soil stability and rock composition. Once we determine a suitable crossing location, please do not cross elsewhere. We will then require additional padding over the pipeline (or pipelines)



extending at least 15 feet outside each pipeline. This padding material must be maintained throughout the job.

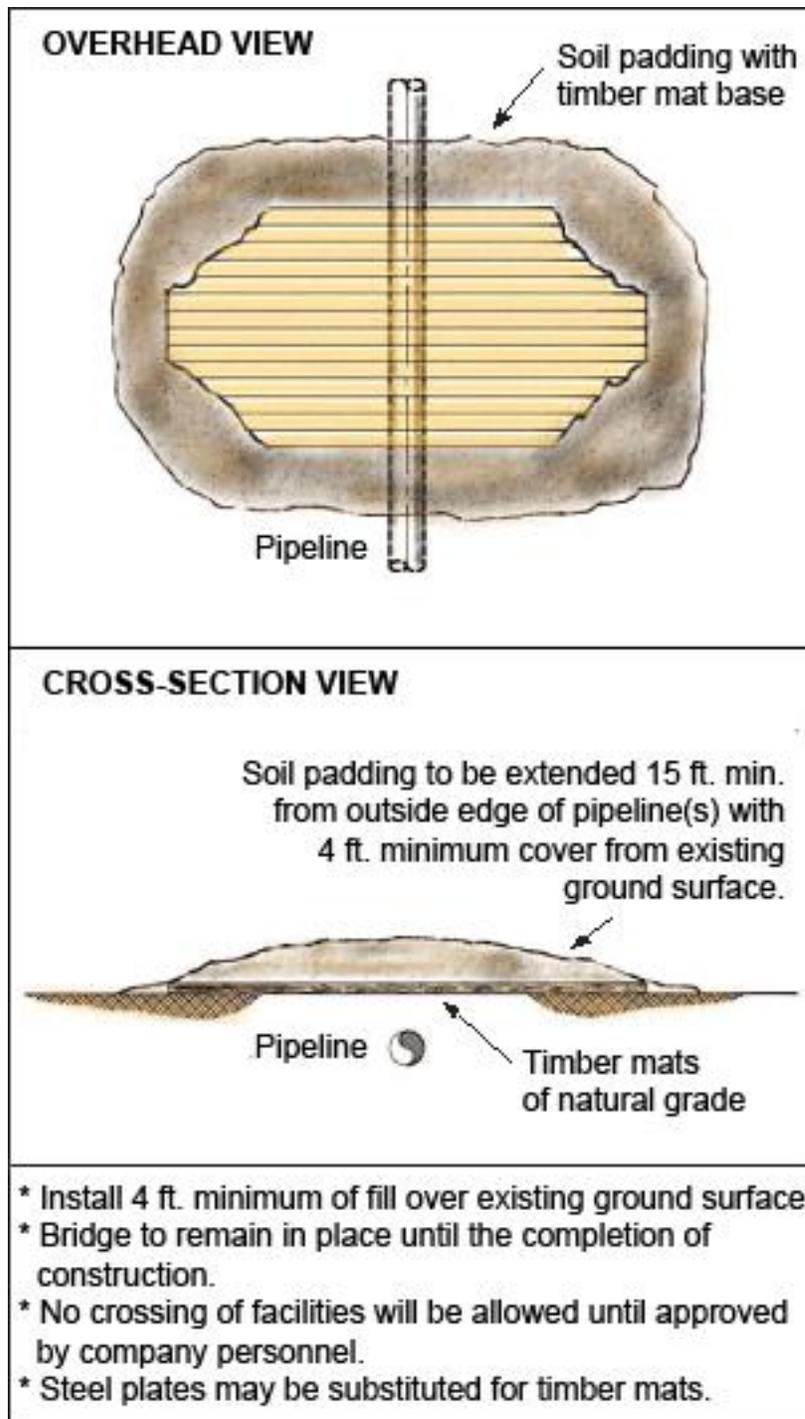


FIGURE 8: REQUIREMENTS FOR HEAVY EQUIPMENT CROSSING A PIPELINE.

* Burning

Please do not burn within the easement area. If you need to discuss this further, contact your local office.

* Overhead Lines

All new poles must be located off the easement at least 15 feet from the pipeline and not between multiple pipe- lines. At least 25 feet of clearance is required from the top of the ground to the overhead crossing. No guy-wire, appurtenances, above-ground cable towers or telephone cabinets are allowed within the easement.

* Blasting

Blasting can profoundly impact our facilities. Please forward any proposed blasting activities within 1000 feet of our pipeline, allowing two weeks for review and approval. If the blasting will occur within 100 feet, you will be required to hire a blasting inspector with seismograph equipment on site during your blasting activities. The inspector will confirm that your blasting plan is being followed and that proper seismic readings are being taken and meet our standards and your approved blasting plan. All blasting must be done by licensed blasting contractors who conform to any and all state and local regulations. A Certificate of Insurance, Blasting Indemnification Agreement and Emergency plan will be required.



Seismic activity must be approved within 300 feet of the pipeline. Please submit a seismic plan for our review and approval.

Vibrator activity must be approved within 300 feet of the pipeline. Please submit a plan covering all vibrator activities within 300 feet of the pipeline.

* Excavation Activity

Excavation damage is one of the leading causes of damage to buried facilities, including our pipelines. That's why we provide the following specific excavation guidelines to help protect you and our facilities.

Before Excavating, if necessary, Kinder Morgan's on site personnel will consult with our Engineering Department or Pipeline Services group to determine the length of pipe that may be safely excavated.

A qualified representative from Kinder Morgan must be on site whenever an excavation is underway

or equipment is being used within 25 feet of our pipeline.

Before any excavation can take place within State defined distances or offsets, the pipeline facility must be positively located, under Kinder Morgan supervision, using methods such as hydrovac, hand digging or pot-holing.

During the Excavation, until the pipeline is exposed, make sure you use an observer, spotter, or encroachment monitor when performing machine excavation, and don't dig any closer than State regulations dictate in any direction from the pipeline facility. You should check the remaining cover periodically.

After a facility has been exposed, you can continue to use machine excavation as defined by state regulations of the facility, with the assistance of an observer. The pipeline should remain exposed and clearly visible to the observer at all times during machine excavation. After you've reached state mandated offset, the remaining excavation, including top and sides, must be hand dug or removed by other non-invasive methods such as use of a hydrovac.

For excavations near a buried pipeline facility, as State regulations dictate, you must ensure the hoe bucket teeth are barred and that side cutters are removed or that you're using approved paddle/flared teeth. If soil conditions require the removal of the bar or the use of the side cutters for excavation, you'll need to make a request in writing to your Kinder Morgan representative, outlining the locations for the exception, and the reasons the equipment is needed. Excavations involving removal of the bar or the use of side cutters should be done with an observer and under the direct supervision of the onsite Kinder Morgan representative or their designee.

You will need to provide adequate support or protection for all exposed facilities.

If during excavation flowable fill is discovered, work should be stopped. Kinder Morgan's on site representatives will consult with our Engineering group to develop a plan for managing the situation to minimize any damage to Kinder Morgan's facilities.

If the excavation requires entrance into a confined space, you must follow the OSHA standards.

If the excavation requires the use of ladders or other temporary structures for ingress and egress, you must follow the OSHA standards.

* If the Unexpected Occurs

If damage occurs to a facility, we will immediately notify our Operations Supervisor or Area Manager. If the damage results in the escape of any flammable, toxic, or corrosive gas or liquid that could endanger life or property, call 911 immediately. If the damage involves a facility not owned by Kinder Morgan, the owner or operator of the facility and the state One Call 811 center should also be notified.

* Mining Activity

All mining activity must be reviewed and approved so we can ensure the lateral support of the soil adjacent to the pipeline. Mining activity is not allowed within the easement area.



WHAT WE EXPECT OF YOU

As we've stressed throughout this booklet, safety is our top priority. To ensure your safety, we strive to keep our pipelines safe. Please respect our rights to operate our facilities safely. By planning your project according to the guidelines in this booklet, you can minimize impact to our pipeline. We will strive to work with you throughout the process. Please remember to follow these guidelines:

- Always contact your local One Call center before excavating.
- Notify us prior to any work on the easement.
- Please allow us to review your project plans, and wait for our approval letter before starting work.
- Return the signed approval letter in a timely fashion.
- Throughout your project, adhere to the guidelines included in your approval letter.
- Contact us if you see suspicious activity along our right of way or at our valve stations.
- Contact us if you notice exposed pipe or a large washout.



WHAT YOU CAN EXPECT FROM US

We will respond to your requests and review your plans in a timely manner. We will provide clear, concise guidance that will ensure your project meets our safety standards. Communication and cooperation are vital. When you work with us, we promise to do our part to ensure the safety of you, your family, and your community.

NATURAL GAS SAFETY

Please help keep your community safe by calling the local emergency services at 911 if you see any unusual conditions or abnormal activity around the pipelines.

* Recognize Pipeline Markers

These markers display information about what type of product each pipeline transports and the name/contact information of the pipeline operator. You can look for our markers by visiting www.npms.phmsa.dot.gov to view maps of the pipelines near you.

* Dig Safely

Reduce the potential for pipeline damage during excavation or construction by following these simple steps:

1. Call 811 to contact your One Call Center before digging or excavating.
2. Wait for the site to be marked by a pipeline representative. (This is a free service.)
3. Respect all pipeline markers.
4. Dig with care.

Natural gas is lighter than air, colorless, odorless (unless an odor has been added), and non-toxic. However, escaping gas can displace oxygen and may ignite and burn.

* Signs of a Pipeline Leak

The following signs are indications of a possible pipeline leak:

1. Blowing or hissing sound.
2. Dust blowing from a hole in the ground.
3. Blowing or bubbling water.
4. An unusual odor.
5. Dead vegetation.

* Act Immediately If You Suspect a Leak

Take the following actions immediately if you suspect a pipeline leak:

1. Avoid all ignition sources.
2. Do NOT start vehicles.
3. Do NOT use cell phones.
4. Abandon all equipment.
5. Evacuate the area.
6. Call 911 and the pipeline company.



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





For more information about Kinder Morgan, Inc visit our website at www.kindermorgan.com, email us at km_web@kindermorgan.com or call **713-420-2600**.

Kinder Morgan, Inc. reserves the right to periodically update, amend, revise, and make changes to the guidelines and terms identified within this publication.

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