



DEVELOPERS' HANDBOOK



Know what's below.
Call before you dig.

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INTRODUCTION

This handbook outlines the standards and procedures to be followed when planning land-use development on or near Kern River Gas Transmission Company (Kern River) rights of way. The handbook is intended for use by city and county planners, engineers, developers, land surveyors and anyone involved in the initial stages of land development. If Kern River is included in the initial planning stages, project delays can be avoided and safe development practices near pipelines can be attained.

The handbook is designed to make you aware of the most common standards and procedures Kern River typically requires to protect its facilities in areas of changing land use. Each proposed development or activity, however, requires a case-specific evaluation by a qualified Kern River representative.

Please become familiar with the contents of this handbook. If you have further questions or need assistance, please contact your local Kern River office.



KERN RIVER OFFICES

HEADQUARTERS

2755 East Cottonwood Parkway, Suite 300
Salt Lake City, UT 84121
801-937-6000 or 800-420-7500

WYOMING AND NORTHERN UTAH

Evanston District Office
126 Commerce Drive
Evanston, WY 82930
307-783-7200

CENTRAL AND SOUTHERN UTAH

Fillmore District Office
560 West 900 South
Fillmore, UT 84631
435-743-3500

NEVADA AND CALIFORNIA

Las Vegas District Office
2800 East Lone Mountain Rd.
North Las Vegas, NV 89081
702-639-3600

SAFETY

Kern River is committed to ensuring the safe operation of its natural gas pipeline system. According to the U.S. Department of Transportation, the transmission of natural gas through interstate pipelines is the safest means of transportation in the United States. Kern River and the industry enjoy an excellent safety and reliability record. Kern River has a comprehensive damage prevention policy to prevent pipeline failures. Third-party damage is one of the leading causes of pipeline failures.

RELIABILITY

Kern River is committed to reliable delivery of gas transportation services. Communities, factories, hospitals, power plants, businesses and residences depend on our services for energy to generate heat and electricity.

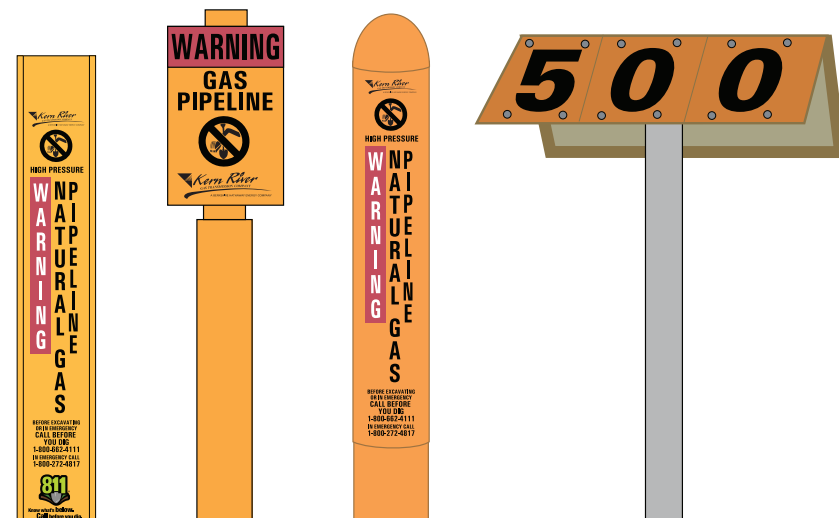
Kern River must and will use every available resource to ensure the safety and reliability of its facilities. Kern River does not encourage or support any development or encroachment that interferes with the operation or maintenance of its pipelines or pipeline facilities. In cases where development or encroachment cannot be avoided, we need your help to ensure the safety and reliability of our facilities. As a responsible landowner, developer, contractor or other party engaged in any ground-disturbing activity near pipeline facilities, we urge you to read and understand the guidelines presented in this publication.

PIPELINE FACILITIES OVERVIEW

Kern River owns and operates more than 1,700 miles of pipeline. The transmission operation includes high-pressure steel pipelines ranging from 6 to 42 inches in diameter, compressor stations, meter stations, cathodic protection equipment, valve settings, communications equipment and other facilities.

In accordance with federal regulations, Kern River identifies the location of its pipeline facilities by installing permanent pipeline markers (shown on this page) near road, rail, water, fence and underground utility crossings. Pipeline markers may also be strategically placed in extensive areas of open ground to delineate the location of the pipeline.

The maintenance of pipeline markers – and an open, clear right of way at all times – is critical to public safety. Construction or development near transmission pipelines increases the potential for excavation damage. It is the responsibility of Kern River, individual landowners and contractors to ensure all temporary and permanent pipeline markers installed by Kern River are protected and maintained at all times, especially during construction. Removing or defacing a pipeline marker is a federal criminal offense.



KERN RIVER RIGHT OF WAY AGREEMENTS

DESCRIPTION

Most of Kern River's existing pipeline easements were acquired through agreements granting Kern River the right to construct, operate, maintain, repair, modify, alter, protect, remove, replace, access and change the size of a pipeline or pipelines within its easement. While the owner maintains the right to use and enjoy the property, the agreements generally allow Kern River to restrict any uses that may conflict or interfere with Kern River's easements. Kern River encourages developers to inform subsequent purchasers of land encumbered by Kern River's easements about the encumbrances so they are familiar with Kern River's pipeline and potential restrictions on land use.

WIDTH

When the original pipeline routes were selected, undeveloped environments were deliberately chosen whenever possible. Kern River's rights of way vary in width from 30 to 100 feet, depending on the number and diameter of the pipelines, terrain and terms of the right of way agreements.

AMENDMENTS OR MODIFICATIONS

As the undeveloped environment is altered and land developments are proposed, Kern River, at the request of the landowner, may elect to amend or modify the right of way agreement to reflect the changing land use. Kern River may work with developers to incorporate the right of way into the project design, including consent to use the right of way as a "greenway" or open space area, so long as the use does not interfere with Kern River's ability to use and enjoy the acquired easements and rights.

LEGISLATION

FEDERAL

The Department of Transportation's Pipeline and Hazardous Materials Safety Administration regulates Kern River. The pipeline safety regulations are administered through Title 49, Code of Federal Regulations, Part 192.

Part 192 prescribes minimum standards for the safe operation of pipelines. The denser the population, the more stringent the standards for pipeline design, maximum allowable operating pressure, and frequency and type of patrols and leak surveys.

STATE

All of the states in which Kern River operates have damage prevention laws for the protection of pipelines and other underground utilities. Those states require excavators to notify their local One Call system of their excavation plans. Kern River participates in all One Call systems that notify impacted industries of excavation.

Some jurisdictions provide for triple damages resulting from a failure to notify under the One Call system.

CITY AND COUNTY

Local governments often play a major role in regulating land use by means of comprehensive planning and zoning. Some counties offer developer incentives to encourage easement use for parks and open space purposes.

Some counties require an additional building setback from the pipeline easement. Please check local codes before submitting lot layout plans.



ENCROACHMENTS

It is Kern River's philosophy to prevent encroachments, when possible, by working with agencies, developers and individuals to design projects around the pipeline easement. Many of Kern River's easement agreements restrict encroachments. Kern River will strictly enforce applicable provisions in its easement agreements where it believes the continued safe operation and maintenance of the pipeline could be threatened.

When Kern River determines an activity can be undertaken without jeopardy to the pipeline system, the company will require and issue either an Encroachment Permit or a Specific Encroachment Agreement depending on the type and scope of activity proposed.

The Encroachment Permit is typically issued for less invasive encroachments and will contain all pertinent conditions to be followed by the encroaching party for the activity planned. The permit is generally reviewed and issued to the encroaching party on-site. A sample Encroachment Permit is available on Kern River's website (www.kernrivergas.com).

The Specific Encroachment Agreement will contain all pertinent conditions to be followed by the encroaching party for the planned activity and may provide for cost reimbursement to Kern River. Typically, Kern River will seek reimbursement for projects that require significant design review, engineering investigation, field inspections, legal consultation or facility modification.

ENCROACHMENT PERMIT

WHEN IS AN ENCROACHMENT PERMIT REQUIRED?

An Encroachment Permit is required when:

- › Minor activities/works cross under or over the natural gas pipeline.
- › Minor activities/works extend into the right of way.

Examples of such activities/works may include:

- › Residential water lines
- › Residential television cable
- › Small diameter drainage or sewer lines
- › Residential electrical lines
- › Fences (livestock or typical residential)
- › Residential sprinkler systems
- › Minor street and road crossings
- › Residential driveways

WHO INITIATES THE ENCROACHMENT PERMIT?

The permit is initiated by a local representative of Kern River and must be executed before work begins on the right of way. The developer must notify Kern River well in advance of any planned activity.

SPECIFIC ENCROACHMENT AGREEMENT

WHEN IS A SPECIFIC ENCROACHMENT AGREEMENT REQUIRED?

A Specific Encroachment Agreement is required when:

- > A substantial development is proposed.
- > Activities/works extend into the right of way and require significant engineering investigation, field inspections, legal consultation or facility modification.

Examples of such activities/works may include, but are not limited to:

- > Permanent facilities and infrastructure associated with adjacent commercial or residential developments
- > Major and complex street and road crossings
- > Blasting or use of explosives near Kern River facilities
- > Complex large-diameter utility crossings

Other activities subject to a Specific Encroachment Agreement are determined on a case-by-case basis.

In addition, third-party activities/works that necessitate Kern River facility modifications (such as, but not limited to, pipeline casing extensions, pipeline relocations or replacements, and pipeline cathodic protection facility modifications) are addressed in the Specific Encroachment Agreement. Reimbursement provisions may also be referenced in the Specific Encroachment Agreement.

WHEN IS REIMBURSEMENT REQUIRED?

Reimbursement is typically required for activities/works proposed on the right of way that involve extensive preliminary engineering and/or field inspection services by Kern River representatives. Contact Kern River before construction plans have been finalized to address any unforeseen costs associated with protecting Kern River's facilities. These costs will be borne by the encroaching party.

In addition, Kern River will seek reimbursement for any third-party activities/works that require modification to Kern River facilities. Such modifications include, but are not limited to, pipeline casing extensions, pipeline relocations or replacements, and pipeline cathodic protection facility modifications.

WHO INITIATES THE SPECIFIC ENCROACHMENT AGREEMENT?

A Kern River land representative generally initiates the Specific Encroachment Agreement. The agreement must be executed before work begins on the right of way. In the event work commences without such an agreement, Kern River may take steps, including legal action, to prevent further activity. The developer must notify Kern River well in advance of any planned activity.



NOTIFICATION AND CONSTRUCTION SAFETY REQUIREMENTS

NOTIFICATION AND COORDINATION

In order to prevent unnecessary delays, Kern River encourages early and ongoing communication with our representatives throughout your entire project. We will be happy to attend pre-construction meetings and provide a safety/informational presentation to any interested parties, including contractors, local government, maintenance crews and developers. Please refer to page 3 for your regional contact number.

All of the states in which Kern River operates (see page 21) have One Call laws. These laws require excavators to provide 48 hours or two business days' notice before any excavating commences. It's easy to do. Simply call 811, explain your project and the location, and your local One Call system will notify all participating utilities in the area of your planned excavation activities.

A Kern River representative will be on-site following appropriate prior notice for all surface and subsurface activities within the pipeline right of way. Any encroachment made without a Kern River representative on-site may have to be re-excavated at the excavator's expense to provide Kern River an opportunity to inspect all affected pipeline facilities.

PROTECT YOURSELF, UTILITY COMPANIES AND THE PUBLIC. CALL BEFORE YOU DIG.

Federal regulations (OSHA 29 CFR 1926.651 and 49 CFR 196.103) also require excavators to notify underground utilities prior to the start of actual excavation. Your state regulations may be more specific, but in all cases the failure to notify underground utility operators of excavation activities could result in criminal prosecution.



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

Kern River's pipelines operate at high pressure. To ensure the safety and reliability of our facilities, we require a Kern River representative to be on-site while you work around our pipelines. Please contact your local Kern River office before work commences on, or in close proximity to, a Kern River right of way. A Kern River representative will be on-site to inspect the work and monitor the site until construction is completed.

SAFETY REQUIREMENTS

Excavations must be barricaded to protect pedestrians and vehicles. Proper access into the trench must be provided. Excavations must be properly sloped or shored, as required by state and federal OSHA requirements.

Stockpiling brush, trash or other debris on the easement is prohibited, since it could conceal pipeline markers and hinder pipeline inspections or routine maintenance. Contact your local Kern River office concerning burning restrictions.



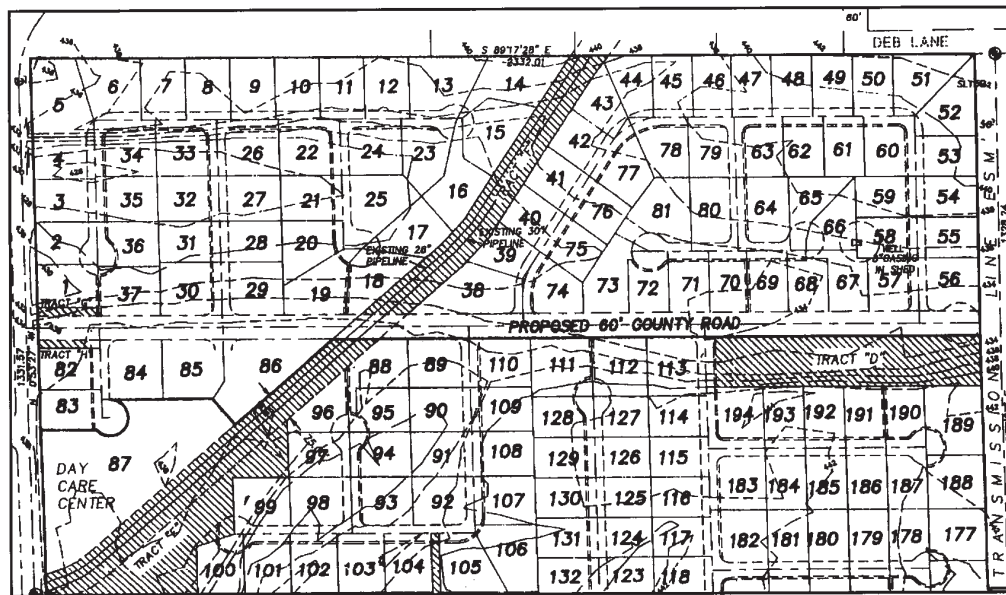
PLAN DESIGN AND REVIEW REQUIREMENTS

IDEAL SUBDIVISION LAYOUT GUIDELINES

- > The entire easement width is reserved as an open-space trail.
- > The easement identity is clear and easily marked.
- > Crews can undertake emergency repairs quickly.
- > The fewest possible landowners are affected by the easement, which reduces the chance of damage caused by third-party digging.
- > Routine maintenance and inspections are not hindered.

Visit the National Pipeline Mapping System (NPMS) website at www.npms.phmsa.dot.gov to access basic pipeline information, including operator name and location of facilities. Please note that the NPMS does not display all underground pipelines or other utilities. You must still call 811 to ensure all underground utilities are notified before beginning any excavation work.

When the proposed development plans call for the dedication of the street/road right of way to the city, county or state, it is important to note Kern River's easement is superior to this action and the company's rights are not diminished.



Drawing of pipeline easement in subdivision

SUBDIVISION PLANS

- > Kern River requires 90 business days' lead-time to review preliminary plans for impacts to the easement and to ensure all proposed improvements are designed in accordance with Kern River's Encroachment Specifications (available on Kern River's website at www.kernrivergas.com).
- > An open space trail, free of trees and other deep-rooted plants, is the ideal easement use. This land use reduces the opportunity for damage caused by third-party digging. When this is not possible, lot division on either boundary of the easement is preferable to splitting the easement between lots. A lot division configured on top of the pipeline causes lot restrictions, because no fences can be built directly over the pipeline. Construction, maintenance and routine inspections can be disruptive to the landowner when the easement is split between lots.

- > A Specific Encroachment Agreement is usually executed between Kern River and the developer/landowner to cover the new land use.
- > Kern River representatives will work with your surveyors to stake the location of our pipeline facilities.

STREET & ROAD CROSSING PLANS

- > Kern River requires 90 business days to review proposed road-crossing plans. Additional review time may be necessary for proposed divided highways, interstate highways, parallel/coincidental roadways and other road construction projects that require pipeline modifications.
- > The costs for any necessary pipeline modifications or relocations will generally be borne by the developer, state, county or city highway departments.
- > Kern River must be given the opportunity to make a pipeline inspection prior to the start of road construction.
- > When submitting road-crossing plans, provide a scope of work, description, and plan and profile drawings with your plans. Profiles are required to show depth of cover over each Kern River pipeline (existing and finished grade) and the clearance between Kern River's pipeline and any associated utilities. Include a location map showing the project site area, including sufficient geographical references such as legal property lines, roads and appropriate deed information to the properties impacted.

ENCROACHMENT REQUIREMENTS



Aerial view of an ideal easement in a developed area

The following Kern River specifications are minimum requirements for most proposed encroachments to maintain the safety and reliability of the pipelines and to avoid conflicts with U.S. Department of Transportation regulations and existing right of way agreements. Additional requirements may be imposed, depending upon the scope of the proposed encroachment and the existing Kern River easement rights. For a review of your individual situation, please contact your local Kern River office.

GENERAL REQUIREMENTS FOR SURFACE ALTERATIONS

- › One Call systems require 48 hours or two business days' notice prior to excavation activities. Check your local requirements. Notification is the law!
- › No aboveground structures or appurtenances are to be located within the Kern River right of way.
- › An authorized Kern River representative must be on-site prior to and during any surface-disturbing work performed within the right of way. Kern River's representative will assist you in determining the location of the pipeline, the right of way width and existing cover over the pipeline.
- › No cut or fill on the right of way is permitted without Kern River approval. Kern River may require submittal of plan and profile drawings for prior review and approval. All drawings must show, in detail, any nearby Kern River facilities and other features that will allow Kern River to determine the effects of the proposed construction or maintenance activity on its facilities.
- › Kern River may request evidence of general liability and other appropriate and usual insurance prior to any activity and/or construction on or near Kern River's right of way. In the event of excavation above or below Kern River pipelines, Kern River must be named as an additional insured. Any rights of subrogation or recovery will be waived in favor of Kern River. The insurance limits, terms and conditions that may be required will be dependent on the specific facilities potentially impacted and what would be usually and prudently obtained in similar industry situations.
- › All foreign lines crossing Kern River's right of way must be installed in accordance with all applicable codes and requirements governing such installations.
- › All foreign lines will cross Kern River's right of way at an angle as close to 90 degrees as possible. No horizontal or vertical bends will be permitted in Kern River's right of way. Parallel occupancy of Kern River's right of way will generally not be permitted.
- › Kern River pipelines are protected against corrosion by cathodic protection. At Kern River's request, metallic foreign lines that enter or cross Kern River's right of way must have test leads installed. In addition, Kern River personnel must be provided an opportunity to install test leads on Kern River's existing pipelines. All necessary measures (coatings, electrical bonds, etc.) will be taken to ensure the proposed pipe or utility is adequately protected from potential interference.
- › All foreign lines crossing Kern River pipelines or related facilities will be installed with a minimum of 24 inches of clearance between the existing Kern River pipeline facilities and the proposed foreign line. The foreign line will be installed at a uniform depth across the full width of the Kern River right of way. Kern River may require foreign lines be installed under its existing pipelines and related facilities.
- › Kern River may require foreign lines be identified with permanent aboveground markers where the lines enter and exit Kern River's right of way. It is the foreign line owner's responsibility to obtain any rights to install the markers, and to maintain the markers. Where practicable, a buried warning tape will be placed 12 to 18 inches above the foreign line and extend across the entire width of Kern River's right of way.
- › In some cases, there is significant delay between the review of a developer's plans and actual construction. If delays occur, all construction and maintenance activities are subject to Kern River's requirements in effect at the time the work actually takes place.





FENCES

- › Fences shall not be installed parallel to the pipeline within the Kern River easement.
- › Fence posts will not be installed within 5 feet of any Kern River pipeline. In addition, Kern River may require fence posts installed within its right of way be hand dug.
- › Kern River's easements generally guarantee the free right of ingress and egress. Kern River may require new fences have an access gate with a Kern River lock installed within the right of way at a location approved by Kern River.

LANDSCAPE GUIDELINES

- › No trees or large, deep-rooted shrubs are permitted on the right of way.
- › With prior approval from Kern River, some types of shrubs may be permitted on the right of way, provided the plantings do not interfere with the operation, maintenance and inspection of the pipeline and related facilities. Under no circumstances will mechanical equipment be allowed for planting of shrubs on the right of way.
- › Kern River reserves the right to cut or remove plants and trees on the Kern River right of way as required in the operation, inspection and maintenance of its pipeline facilities. Kern River assumes no responsibility for any cost involved in the damage to or replacement of removed landscape plantings.
- › All sprinkler or irrigation systems will require review by a Kern River representative.

STREETS, ROADS, DRIVEWAYS AND PAVED PARKING LOTS

- › Kern River must complete a preliminary engineering review for all highways, streets, roads and driveways proposed within the right of way. Any pipe casing, concrete slabs or other protection required by Kern River will be installed at no expense to Kern River. Kern River may require a pipeline inspection prior to construction.
- › Access to the soil above the pipeline must be maintained for leak detection and cathodic protection surveys. In certain instances, Kern River may require installation of leak detection and cathodic protection access points through concrete or asphalt surfaces.
- › The typical minimum cover requirement over Kern River's existing pipelines is 5.5 feet at all highways, streets, roads and driveways. The typical minimum cover requirement over Kern River's existing pipelines in adjacent ditches is 4 feet. Any change in grade in the right of way is subject to Kern River review and approval.
- › Highways, streets, roads and driveways crossing Kern River pipeline facilities will cross at an angle as close to 90 degrees as possible. All crossings must be over straight pipe and at locations free of any pipeline crossovers. Parallel occupancy of the right of way will generally not be permitted.
- › Kern River will retain the right to cut all highways, streets, roads and driveways within the existing right of way, and it will have no responsibility for restoration, loss of use or access or any other resulting damages.

TEMPORARY EQUIPMENT CROSSINGS

- › To protect Kern River's pipelines from external loading, Kern River must perform an engineering evaluation to determine the effects of any proposed equipment use. Make/model of equipment, maximum axle weight, as applicable, and crossing location will need to be provided. Additional cover, mats, timber bridges or other protective materials deemed necessary by Kern River will be placed over Kern River facilities for the duration of any loading. Protective materials will be purchased, placed and removed at no cost to Kern River. The right of way must be restored to its original condition.
- › Kern River may require markings, such as temporary fencing, to identify specific areas where equipment use is authorized. These markings will be installed at no cost to Kern River.

DRAINAGE, IMPOUNDMENT OF WATER AND EROSION CONTROL

- › Kern River may conduct a preliminary engineering evaluation for any proposed drainage channels or ditches within the right of way. Drainage channels or ditches must be adequately protected from erosion. Typically, a minimum of 4 feet of cover over the pipelines is required at ditch crossings. Altering (clearing, re-grading or changing alignment of) an existing drainage channel or ditch requires approval from Kern River.
- › Impoundment of water on the right of way is not permitted. Soil erosion control measures will not be installed within the right of way without prior Kern River approval.

EXCAVATIONS, BLASTING AND PILE DRIVING

- › Plans for excavation on the right of way require prior approval by Kern River. No machine excavation will be performed within 5 feet of Kern River's pipelines. Kern River's on-site representative may require hand digging at a distance less than 3 feet.
- › When a backhoe is used, the bucket teeth will be curled under each time the bucket is brought back into the ditch to reduce the chance of the teeth contacting the pipeline. Kern River requires a bar be welded across the teeth and side cutters removed from the bucket.
- › Prior to any plowing or ripping of soil on the right of way, your plans will be reviewed with your local Kern River representative to ensure proper cover exists.
- › Kern River may require an engineering evaluation of all excavation activities that necessitate unsupported pipeline spans.
- › Kern River may require a detailed blasting plan be submitted for review and authorization prior to any proposed blasting within a distance of 500 feet of Kern River pipeline facilities. If deemed necessary by Kern River, the blasting contractor may be required to perform seismic monitoring.
- › Kern River may require seismic monitoring for pile driving activities within 200 feet of Kern River pipeline facilities.

BURIED COMMUNICATION (TELEPHONE, TV, DATA TRANSMISSION AND FIBER OPTIC) AND BURIED POWER LINE CROSSINGS

- › All communications cables crossing Kern River facilities will be installed in rigid nonmetallic conduits for the full width of the right of way.
- › All buried electric cables crossing Kern River facilities will be installed in rigid nonmetallic conduits for the full width of the right of way. The crossing will need to be covered in 6-inch-thick red dye concrete across the full width of the right of way.
- › Kern River may require additional protection, including concrete encasement or concrete caps.



SANITARY SEWER AND WATER CROSSINGS

- > All sewer lines and waterlines will be plastic pipe installed in a rigid casing (minimum of Schedule 40) for the full width of the right of way. No piping connections will be allowed within 5 feet of any Kern River pipeline.

COMBUSTIBLE MATERIAL LINES

- > All plastic combustible material lines will be installed in rigid casing (minimum of Schedule 40) for the full width of the right of way.
- > All steel combustible-material lines (adequately protected from Kern River's cathodic protection system) should be installed under the existing Kern River pipeline facilities. In addition, Kern River may require additional protection for steel combustible material lines, including concrete encasement or caps.

BORED CROSSINGS

- > Any boring in the right of way is subject to Kern River review and approval. In many cases boring will not be allowed in the right of way. In the event boring is authorized:
 - Kern River's existing pipeline facilities will be potholed to verify the location of the pipe prior to any proposed boring operations. Kern River may require submittal of both plan and profile drawings for appropriate review prior to any proposed boring operations.
 - Kern River may require rigid casings (minimum of Schedule 40) for all bored crossings.
 - Prior to any boring, inspection holes will be excavated to verify the depth of the bore as it approaches each pipeline. The contractor will provide and utilize instrumentation to locate the bore head.

OVERHEAD LINE CROSSINGS

- > Overhead line crossings will be installed with a minimum of 30 feet of vertical clearance above the Kern River right of way to provide adequate equipment clearance. No poles or appurtenances will be located on the Kern River right of way.
- > Overhead line crossings will not be installed within 100 feet (measured horizontally to the nearest conductor) of any gas vent (e.g., relief valve, blow-down vent).
- > Overhead lines will cross at an angle as close to 90 degrees as possible. Parallel occupancy of the Kern River right of way will not be permitted.
- > When high-voltage AC power lines, high-voltage DC power lines and DC traction systems are being installed within 1,500 feet of the pipeline, the owner will be required to pay for interference studies plus installation and maintenance of mitigation for the life of the facility.

DISPOSAL SYSTEMS

- > No septic tanks, liquid disposal systems or hazardous waste disposal systems will be allowed on the right of way or within 25 feet of Kern River facilities. This prohibition includes, but is not limited to, facilities that have the potential of discharging effluent from sewage disposal systems, the discharge of any hydrocarbon substance, the discharge or disposal of any regulated waste, or any other discharge that may prove damaging or corrosive to Kern River facilities.

ONE CALL NUMBERS

Wyoming, Utah, Nevada and Southern California

- > Call 811
- > Wait for the site to be marked
- > Respect all markings
- > Dig with care

Remember, Call Before You Dig.



Know what's below.
Call before you dig.



KERN RIVER GAS TRANSMISSION COMPANY

2755 EAST COTTONWOOD PARKWAY, SUITE 300

SALT LAKE CITY, UT 84121

801-937-6000 OR 800-420-7500

