

# UTILITY ACCOMMODATION POLICY



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# PART 1

## GENERAL POLICY

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## PART 1 - GENERAL POLICY

### A. Policy Application

#### 1. Purpose

This policy is to prescribe the accommodation, location and method of installation, adjustments, removal, relocation and maintenance of utility facilities within property of a OmniTRAX managed railroad, referred to hereafter as Railroad. The policy was developed in the interest of safety, protection, utilization, and future development of OmniTRAX managed railroads with due consideration given to public and private service afforded by adequate and economical utility installations.

#### 2. Application

The policy concerning utility accommodations shall apply to all:

- a. New utility installations.
- b. Additions to existing utility installations.
- c. Adjustment and relocation of utilities.
- d. Existing or planned utility installations for which agreements with Railroad were entered prior to the date of the adoption of this policy.
- e. Existing utility installations that do not meet the license requirements may remain at the discretion of Railroad.

Various types of utility lines not specifically discussed herein shall be considered within the provisions of this policy. It shall be the general practice to consider all lines carrying caustic, flammable or explosive materials under the provisions for high-pressure gas and liquid fuel lines.

#### 3. Scope

Utilities include lines, facilities and systems for producing, transmitting or distributing communications, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, storm water and other similar commodities which are privately, publicly or cooperatively owned and which serve directly or indirectly the public or any part thereof.

A Utility Agreement License allowing a Utility Owner the privilege of placing its facilities in or on railroad property does not constitute permanent right for such usage. Any removal, remodeling, maintenance or relocation of the facilities, whether or not required by Railroad, will be accomplished promptly by the Utility Owner at no cost to Railroad.

#### 4. Exceptions

Exceptions to any design, location or methods of installation provisions contained in this policy must be authorized by Railroad. Requests for exceptions will be considered only where it is shown that extreme hardship and/or unusual conditions provide justification and where alternate measures can be prescribed in keeping with the intent of this policy. All requests for exceptions shall be fully documented including design data, cost comparisons and other pertinent information.

#### 5. Liability

The Utility Owner, its successor, or assigns shall assume all risk and liability for accidents and damages that may occur to persons or property on account of this work, and shall indemnify and hold Railroad harmless from any and all costs, liabilities, expenses, suits, judgments or damages to persons or property or claims of any nature whatsoever arising out of or in connection with the permit, or the operation and performance thereunder by the utility, its agents, employees or subcontractors. In this regard, it is further understood and agreed that the utility may be required to obtain insurance coverage as determined by Railroad.

The Utility Owner agrees that if liability insurance is required, it will file with the designated office, prior to granting of the license, "Certificates of Insurance" or other evidence to show that the appropriate insurance is carried.

Insurance as may be required shall be maintained in force until the final release of the Utility Owner by Railroad from all obligations under the terms of the license. The insurance contract shall cover claims for such length of time as law permits said claims. The insurance document shall include a clause requiring the insurer to notify Railroad ten (10) days in advance of any cancellation or change in insurance contacts.

The Utility Owner is responsible for any subcontractor to be knowledgeable of the policy and to require all work to be in compliance with this policy. Subcontractors must carry a liability insurance policy unless the subcontractor is covered by the Utility Owner's insurance.

#### 6. Replacement of Facility

Replacement of existing facility with the same facilities or facilities of a different type, or design, is to be considered as a new utility installation and all work shall adhere to this policy.

#### 7. Change in Ownership

It is the Utility Owner's responsibility to inform Railroad, in writing, of any name, ownership or address changes.

## 8. Noncompliance

Noncompliance with any terms of this Utility Accommodation Policy or Utility License Agreements may be considered as cause for discontinuance of construction or operations until compliance is assured. Continued noncompliance will result in the revocation of the license. The cost of any work required by Railroad in the removal of non-complying construction will be assessed against the Utility Owner.

## 9. Discharge of Waste Material

Applications for a Utility License Agreement for the installation of utility facilities which will discharge materials into the nation's waters, must comply with all applicable requirements of Corps of Engineers, and other federal, state or local environmental protection agencies. Identification of applicable requirements and administration of compliance procedures are the responsibility of the Utility Owner.

### B. Utility License Agreement Requirements

#### 1. General

Utility License Agreements are required when utility facilities are installed, relocated, removed or maintained along or across all Railroad property.

If liability insurance is required, then evidence of adequate liability insurance is to be on file with Railroad for each agreement.

#### 2. Applications

Approved requests to install, maintain, relocate or remove a utility within the property of Railroad shall be authorized by a Utility License Agreement. The applications for utility license agreements along with plans for the proposed installation shall be submitted to Railroad and approved before construction has commenced.

#### 3. Location

- a. Utility lines shall be located to avoid or minimize the need for adjustments for future railroad improvements and to permit access to the utility lines for their maintenance with minimum interference to railroad traffic.
- b. Pipelines shall be installed under tracks by boring, jacking, or in some cases, open-trenching. WATER JETTING IS NOT PERMITTED.
- c. Where practical, pipelines carrying liquefied petroleum gas shall cross the railway where the tracks are carried on an embankment.

- d. All high-pressure pipelines (greater than 60-psi internal pressure), except those in public roads, shall be prominently marked at the property line (on both sides of the track for under crossings) by signs which state the size of the line and its depth.

Example:

CAUTION: 30-inch diameter high-pressure Gas main 7 feet deep.

#### 4. Design Considerations

- a. The design of any utility installation will be the responsibility of the Utility Owner. An installation within the railroad property must be reviewed and approved by the railroad with regard to location and the manner of adjustment. This includes the measures to be taken to preserve the safety and flow of rail traffic, structural integrity of the roadway or structure, ease of maintenance and the integrity of the utility facility. Utility installations, on, over or under Railroad property shall conform with requirements contained herein and/or as a minimum, the appropriate requirements outlined in the following:
  - 1) Safety Rules for the Installation and Maintenance of Electric Supply and Communication Lines-National Electric Safety Code.
  - 2) Title 49 C.F.R. Part 192, Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards and Amendments.
  - 3) Title 49 C.F.R. Part 195, Transportation of Liquids by Pipelines and Amendments.
  - 4) American Society for Testing and Materials (ASTM) Specifications - latest edition.
  - 5) Manual on Uniform Traffic Control Devices - with revisions.
  - 6) Rules and Regulations for Public Water Systems - latest edition, published by the appropriate State Health Department.
- b. All utility installations on, over or under Railroad property shall be of durable materials designed for long service life and relatively free from routine servicing and maintenance. Conformance with current applicable material specifications and codes is mandatory.
- c. References given to any manual, publication or specification are intended to be the most current edition. If a conflict occurs between any publication and this manual, the most restrictive specification will be used.

- d. For all boring and jacking installations under main and passing tracks, greater than 26 inches in diameter, and at a depth of between 5.5 and 10.0 feet below top of tie, a geotechnical study will need to be performed to determine the presence of granular material and/or high water table elevation, at the sole expense of the Permittee. The study will include recommendations and a plan for a procedure to prevent failure and a collapse of the bore. Generally, core samples are to be taken near the ends of tie at the proposed location, at least as deep as the bottom of the proposed horizontal bore. Test results must be reviewed and approved by Railroad, or its agent, prior to boring activities commencing. Railroad reserves the rights, based on test results, to require the Permittee to select an alternate location, or to require additional engineering specifications be implemented, at the sole expense of the Permittee, in order to utilize existing location.

## C. Safety

### 1. Flagging

When work is performed within twenty-five (25) feet of the centerline of the track, railroad flagging will be required.

#### a. Railroad flagging will be required:

- 1) During the period of construction when it is necessary for the Contractor to operate equipment in the vicinity of, or over, Railroad property which may endanger railroad operations, or
- 2) Two or more railroad flagmen may be required when deemed necessary by the Railroad Roadmaster and solely at his or her sole discretion.

#### b. Flagging services shall be performed by Railroad employees and the total cost borne by the Utility Owner.

#### c. The Utility Owner will be billed monthly at a rate to be determined by Railroad to include labor and payroll associated costs plus any expenses incurred by Railroad for flagging services.

#### d. A written request for flagging services will be required at least 72 hours prior to the time when such services are needed. This request is made to the Railroad Road master, as noted in agreement.



### 3. Material Storage

Storage of materials, parking of equipment and vehicles when not used in actual utility work will not be permitted on railroad property.

### D. Maintenance and Servicing Utilities

#### 1. Utility Owner's Responsibility

- a. Maintenance of the utility is the responsibility of the Utility Owner.
- b. Maintenance must be performed to keep the facility in an as-constructed condition, and in a good state of repair in accordance with the requirements of Federal, State and Local laws, regulatory standards and utility codes.
- c. It is the Utility Owner's responsibility to replace and stabilize all earth cover and vegetation when it has eroded over an underground utility facility where such erosion is due to, or caused by, the placement or existence of the underground utility facility.
- d. The Utility Owner shall be responsible for any settlement of backfill, fills, and embankments that may occur.

#### 2. Emergency Maintenance

- a. Emergency maintenance of utilities located on railroad property is permissible without obtaining a Utility License Agreement if an emergency exists that is dangerous to the life, safety or welfare of the public and which requires immediate repair. The Utility Owner shall take all necessary and reasonable safety measures to protect the public and the railroad.
- b. The Utility Owner, in such and event, will advise the Railway Company's Roadmaster as soon as possible. Damage to the right-of-way and facilities will be restored to its original condition. A Utility License Agreement should be requested by the Utility Owner within the second working day provided the work is not covered under any previously granted license. Flagging requirements described earlier apply in all situations.

## E. Preservation, Restoration and Cleanup

### 1. Disturbed Areas

- a. Areas of railroad property, disturbed by the installation, maintenance, removal and relocation of utilities shall be kept to a minimum.
- b. Disturbed areas shall be returned to normal grade and elevation, with compaction of backfill material, and all excess or undesirable material removed by the Utility Owner. The Utility Owner shall replace destroyed vegetation by sodding, or seeding, fertilizing and mulching, or a combination thereof.
- c. The Utility Owner shall provide protection against erosion in disturbed areas that are subject to erosion. Such protection may be in the form of rock riprap, wash checks, hay or straw cover, or other material that is approved and does not interfere with railroad maintenance.

### 2. Drainage Facilities

Care shall be taken to avoid disturbing existing drainage facilities. Underground utility facilities shall be bedded with pervious material and outlets provided for entrapped water. Underdrains should be provided where necessary.

### 3. Cleanup

Unused material or debris shall be removed from the work site area. At the end of every construction day, construction equipment and materials shall be removed as far from the operating railroad tracks as possible (minimum 25 feet from centerline).

## F. Protection of Vegetation

### 1. Trimming, Clearing or Removal of Vegetation

- a. Consistent with the preservation of planted vegetation, consideration will be given to Utility Owners for the necessary trimming, clearing or removal of vegetation to provide adequate clearance of overhead wires. Such work will be done in accordance with established practices and standards; however, approval will not be granted for wasteful or wanton trimming, or removal in order to provide easy solutions to a difficult situation.
- b. No trees, shrubs, bushes, vines or ground cover on railroad property shall be sprayed, trimmed, cut down, rooted up, removed or mutilated in any manner unless a permit is granted by Railroad to do such work.

## 2. Chemical Brush Control

- a. Spraying brush and seedling tree growth to prevent re-sprouting may be permitted, and when permitted, shall be carried out with extreme caution and careful performance. The Utility Owner shall be responsible for the performance of their employees or contractors in the application of brush control and approved by Railroad Engineering Department.
- b. All spraying shall be done by a herbicide applicator that is licensed in the state where the work is to be performed.
- c. Permit applications for spraying shall list the kinds of chemical weed and brush killers that will be used. When liability insurance is required, it shall be provided by the herbicide applicator, or be insured under the liability insurance of the Utility Owner.
- d. Plants over five (5) feet in height should not be sprayed for control. Brush over five (5) feet in height, which is to be removed, should be cut and the stumps treated to prevent growth. Shrubbery type growth such as dogwood, sumac, redbud, plum, etc., should not be sprayed as a general rule. Steep slopes, where brushy growth is a major factor in preventing erosion, should not be sprayed.

## 3. Tree Pruning

- a. Tree pruning on railroad property for utility lines will utilize the best horticultural practices. All cut branches, dead limbs, etc., shall be removed. Such materials shall not be burned or disposed of on railroad property unless permission is granted by Utility License Agreement.
- b. Should burning be permitted, the Utility Owner will be held liable for any damage to grass, crops, native shrubs and trees arising from careless burning of such brush.
- c. Any and all limbs trimmed shall be removed with a clean cut and all limb scars over one (1) inch in diameter shall be treated with appropriate tree paint.

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## PART 2

# UTILITIES PARALLELING RAILROAD PROPERTY

## PART 2 - UTILITIES PARALLELING RAILROAD PROPERTY

### A. General Provisions

This section of the policy applies to all public and private utilities, including electric power, telephone (including fiber optics), telegraph, cable television, water, gas, oil, petroleum products, steam, chemicals, sewage, drainage, irrigation and similar lines that are located, adjusted or relocated within the property under the jurisdiction of Railroad. Such utilities may involve underground, surface or overhead facilities.

Any utility line greater than five hundred (500) feet in length will be considered a parallel line and is to be located on uniform alignment, within ten (10) feet or less of the property line so as to provide a safe environment and to preserve space for future railroad improvements or other utility installations. Railroad Engineering must approve any installation over one mile.

Utilities will be located so as to provide a safe environment and shall conform to the current "National Electrical Safety Code," "American Waterworks Association Specifications," Federal Pipeline Safety Regulations," and "The American Railway Engineering and Maintenance Association Specifications." Where laws or orders of public authority prescribe a higher degree of protection, then the higher degree of protection prescribed shall supersede the provisions of this manual.

### B. Overhead Installations

1. Minimum four feet clearance required above signal and communication lines.
2. Poles must be located 50 feet out from the centerline of railroad main, branch and running tracks, CTC sidings, and heavy tonnage spurs. Pole location adjacent to industry tracks; must provide at least a 10-foot clearance from the centerline of track, when measured at right angles. If located adjacent to curved track, then said clearance must be increased at a rate of 1-1/2 inches per degree of curved track.
3. Regardless of the voltage, unguyed poles shall be located a minimum distance from the centerline of any track, equal to the height of the pole above the ground-line plus 10 feet. If guying is required, the guys shall be placed in such a manner as to keep the pole from leaning/falling in the direction of the tracks.
4. Poles (including steel poles) must be located a minimum distance from the railroad signal and communication line equal to the height of the pole above the ground-line or else be guyed at right angles to the lines. High voltage towers (34.5kV and higher) must be located off railroad right of way.

5. For proposed electrical lines paralleling tracks, Railroad may request that an inductive interference study be performed at the expense of the utility owner. Inductive interference from certain lines have the potential to disrupt the signal system in the track causing failures in the track signals and highway grade crossing warning devices. The General Director of Signals will determine the need for a study on a case-by-case basis.

### C. Underground Installations

1. Underground utility installations should be located on top of the back slope at the outer limits of the railroad property.
  2. If the pipeline is located forty (40) feet or less from centerline of track, the pipeline shall be encased in a steel pipe subject to approval from Railroad. No pipe may be placed closer than twenty-five (25) feet from centerline of track. Pipe must be buried with a minimum cover of three (3) feet.
    - a. If less than minimum depth is necessary because of existing utilities, water table, ordinance or similar reasons, the line shall be rerouted.
    - b. Locations where it will be difficult to attain minimum depth due to wet or rocky terrain shall be avoided. Any location change from plan must be approved by Railroad.
  3. The use of plastic carrier pipe for sewer, water, natural gas and other liquids is acceptable under specific circumstances. The use of plastic pipe is satisfactory if the pipe is designed to meet AREMA and all applicable federal and state codes, and if the carrier pipe is properly encased with a steel casing pipe for the entire length on Railroad right of way.
  4. Manholes shall be limited to those necessary for installation and maintenance of underground lines. Manholes vary as to size and shape depending on the type of utility they serve. To conserve space, their dimensions should be minimally acceptable by good engineering and safety standards. In general, the only equipment to be installed in manholes located on railroad property is that which is essential to the normal flow of the utility, such as circuit reclosers, cable splices, relays, valves and regulators. Other equipment should be located outside the limits of the railroad property. Manholes shall not protrude above the surrounding ground nor be located in the shoulder, shoulder slope, ditch, backslope, or within twenty-five (25) feet of the centerline of track without approval of Railroad.
- ### 5. Electric Power Lines
- a. A minimum depth of 3.0 feet below natural grade (BNG) will be maintained for 750 volts and less, and 4.0 feet BNG for greater than 750 volts.

- b. A 6-inch wide warning tape will be installed, 1.0 foot BNG directly over the underground power line where located on Railroad right-of-way outside the track ballast sections.

#### 6. Fiber Optic Lines

- a. A minimum depth of 4.0 feet BNG for fiber optic cable wirelines.
- b. Whenever feasible, all cable should be laid within 5 feet from property lines.
- c. A 6-inch wide warning tape will be installed, 1.0 foot BNG directly over the underground fiber optic line where located on Railroad right-of-way outside the track ballast sections.

#### D. Attachment to Bridges and Other Structures

The Utility Owner will not be permitted to attach to Railroad bridges or route facilities through drainage structures or cattle passes. Utilities are not to be attached to other railroad structures without the written approval of Railroad Structures Department. As a general rule, overhead power, communication and cable television line crossings at bridges must be avoided. Pipelines laid longitudinally on railroad property shall be located as far as practical from any tracks or other important structures. If located within forty (40) feet of the centerline of any track, the carrier pipe shall be encased or be of special design as approved by Railroad Engineering.

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## PART 3

UTILITIES CROSSING

RAILROAD PROPERTY



## PART 3 - UTILITIES CROSSING RAILROAD PROPERTY

### A. General Provisions

This section of the policy applies to all public and private utilities, including electric power, telephone (including fiber optics), telegraph, cable television, water, gas, oil, petroleum products, steam, chemicals, sewage, drainage, irrigation and similar lines that are located, adjusted or relocated within the property under the jurisdiction of Railroad. Such utilities may involve underground, surface or overhead facilities.

Installations crossing the property of the railroad, to the extent feasible and practical, are to be perpendicular to the railroad alignment and preferably at not less than forty-five (45) degrees to the centerline of the track. Utilities shall not be placed within culverts or under railroad bridges, buildings or other important structures.

Utilities will be located so as to provide a safe environment and shall conform to the current "National Electrical Safety Code," "American Waterworks Association Specifications," Federal Pipeline Safety Regulations," and "The American Railway Engineering and Maintenance Association Specifications." Where laws or orders of public authority prescribe a higher degree of protection, then the higher degree of protection prescribed shall supersede the provisions of this manual.

### B. Overhead Installations

1. Minimum four feet clearance required above signal and communication lines.
2. Poles must be located 50 feet out from the centerline of railroad main, branch and running tracks, CTC sidings, and heavy tonnage spurs. Pole location adjacent to industry tracks; must provide at least a 10-foot clearance from the centerline of track, when measured at right angles. If located adjacent to curved track, then said clearance must be increased at a rate of 1-1/2 inches per degree of curved track.
3. Regardless of the voltage, unguyed poles shall be located a minimum distance from the centerline of any track, equal to the height of the pole above the ground-line plus 10 feet. If guying is required, the guys shall be placed in such a manner as to keep the pole from leaning/falling in the direction of the tracks.
4. Poles (including steel poles) must be located a minimum distance from the railroad signal and communication line equal to the height of the pole above the ground-line or else be guyed at right angles to the lines. High voltage towers (34.5kV and higher) must be located off railroad right of way.
5. Crossings will not be installed under or within 500 feet of the end of any railroad bridge, or 300 feet from the centerline of any culvert or switch area.

6. Complete spanning of the property is encouraged with supportive structures and appurtenances located outside railroad property. For electric supply lines, normally the crossing span shall not exceed 150 feet with adjacent span not exceeding 1-1/2 times the crossing span length. For communication lines, the crossing span shall not exceed 100 feet in heavy loading districts, 125 feet in medium loading districts, and 150 feet in light loading districts; and the adjacent span shall not exceed 1-1/2 times the crossing span length. For heavier type construction, longer spans will be considered.
7. Joint-use construction is encouraged at locations where more than one utility or type of facility is involved. However, electricity and petroleum, natural gas or flammable materials shall not be combined. Pipe truss design and layout will need to be reviewed and approved by Railroad Engineering.
8. To ensure that overhead wire crossings are clear from contact with any equipment passing under such wires, communication lines shall be constructed with a minimum clearance above top of rail of twenty-four (24) feet, and electric lines with a minimum clearance of twenty-six and one-half (26 1/2) feet or greater above top of rail when required by the "National Electric Safety Code" or state and local regulations. Electric lines must have a florescent ball marker on low wire over centerline of track.
9. The utility owner will label the posts closest to the crossing with the owner's name and telephone number for emergency contact.
10. All overhead flammable and hazardous material lines will need Railroad Engineering approval, but should be avoided if possible.
11. For proposed electrical lines crossing tracks, Railroad may request that an inductive interference study be performed at the expense of the utility owner. Inductive interference from certain lines have the potential to disrupt the signal system in the track causing failures in the track signals and highway grade crossing warning devices. The General Director of Signals will determine the need for a study on a case-by-case basis.

## C. Underground Installations

### 1. General

- a. All underground utility crossings of railroad trackage shall be designed to carry Cooper's E-80 Railroad live loading with diesel impact (AREMA Cooper's loading Section 8-2-8). This 80,000-lb. axle load may be distributed laterally a distance of three (3) feet, plus a distance equal to the depth from structure grade line to base of rail, on each side of centerline of single tracks, or centerline of outer track where multiple tracks are to be crossed. In no case shall railroad loading design extend less than ten (10) feet laterally from centerline of track. Longitudinally, the load may be distributed between the five-foot axle spacing of the Cooper configuration.

Railroad loading criteria will also apply where future tracks on Railroad are contemplated, to the extent this information is available.

- b. All utility crossings under ditches and railroad trackage should have a minimum depth of cover of three (3) feet below the flow line of the ditch or ground surface and five and one-half (5-1/2) feet from base of rail. In fill sections, the natural ground line at the toe of slope will be considered as ditch grade. The depth of cover shall not be less than that meeting applicable industry standards.
- c. For all boring and jacking installations under main and passing tracks, greater than 26 inches in diameter, and at a depth of between 5.5 and 10.0 feet below top of tie, a geotechnical study will need to be performed to determine the presence of granular material and/or high water table elevation, at the sole expense of the Permittee. The study will include recommendations and a plan for a procedure to prevent failure and a collapse of the bore. Generally, core samples are to be taken near the ends of tie at the proposed location, at least as deep as the bottom of the proposed horizontal bore. Test results must be reviewed and approved by Railroad, or its agent, prior to boring activities commencing. Railroad reserves the rights, based on test results, to require the Permittee to select an alternate location, or to require additional engineering specifications be implemented, at the sole expense of the Permittee, in order to utilize existing location.
- d. The use of plastic carrier pipe for sewer, water, natural gas and other liquids is acceptable under specific circumstances. The use of plastic pipe is satisfactory if the pipe is designed to meet all applicable federal and state codes, and if the carrier pipe is properly encased within a steel casing pipe per AREMA standards. This casing must extend the full width of the right of way. Casing may be omitted only for gaseous products if the carrier pipe is steel and is placed ten (10) feet minimum below the base of rail per AREMA standards.

## 2. General Design and Construction Requirements

- a.  
If the minimum depth is not attainable because of existing utilities, water table, ordinances, or similar reasons, the line shall be rerouted.
- b. Locations that are considered unsuitable or undesirable are to be avoided. These include deep cuts and in wet or rocky terrain or where it will be difficult to obtain minimum depth.
- c. Underground installations may be made by open-trenching from the property line to the toe of the fill slope in fill sections and to the toe of the shoulder slope in cut sections but to no closer than thirty (30) feet of the centerline of track. The remainder will be tunneled, augured, jacked or directional-bored through the roadbed. Refer to the following sections for required encasement of utilities and boring requirements.

- d. Manholes should be located outside railroad property, when possible. No manhole will be located in the shoulder, shoulder slope, ditch or backslope, or within twenty-five (25) feet of the centerline of track, and shall not protrude above the surrounding ground without approval of Railroad.
- e. Utilities will not be attached to or routed through drainage structures or cattle passes. Utilities are not to be attached to other railroad structures without written approval of the Railroad Engineering Department.
- f. Jacking pits shall be located a minimum of thirty (30) feet from the centerline of track.

### 3. Pipeline Requirements

- a. Pipeline designs are to specify the type and class of material, maximum working pressures and test and design pressure. Pipelines which are not constructed, operated and maintained under regulations established under US Department of Transportation Hazardous Materials Regulations Board, shall upon revisions in the class of material or an increase in the maximum operating pressure, must obtain Railroad Engineering approval.
- b. Pipelines carrying oil, liquefied petroleum gas, natural or manufactured gas and other flammable products shall conform to the requirements of the current AREMA, ANSI/ASME B 31.4 Code for pressure piping - Liquid Petroleum Transportation Piping Systems; ANSI B 31.8 Code for pressure piping - Gas Transmission and Distribution Piping Systems; other applicable ANSI codes and 49 C.F.R. Part 192 or Part 195 - Transportation of Hazardous Liquids by Pipeline, except that the maximum allowable stress of design of steel pipe shall not exceed the following percentages of the specified minimum yield strength (multiplied by longitudinal joint factor) of the pipe as defined in the ANSI codes.
- c. Pipelines under railroad tracks and across railroad property shall be encased in a larger pipe or conduit called "casings." Generally, casings shall extend from right-of-way line to right-of-way line, unless otherwise approved.
- d. Pipelines and casing pipes shall be suitably insulated from underground conduits carrying electric wires on railroad property.
- e. Reinforced concrete pipe will need to be encased for a distance as wide as the embankment at the utility crossing. This is to protect against track failure due to joint separation.

#### 4. Encasement of Utilities

- a. Casings are oversized load-bearing conduits or ducts through which a utility is inserted:
  - 1) To protect the railroad from damages and to provide for repair, removal and replacement of the utility without interference to railway traffic.
  - 2) To protect the carrier pipe from external loads or shock, either during or after construction.
  - 3) To convey leaking fluids or gases away from the area directly beneath the railroad trackage to a point of venting at the railroad property line.
  
- b. Casings may be omitted for gaseous products only under the following circumstances:
  - 1) Carrier pipe must be steel and the wall thickness must conform to E-80 loading for casing pipe shown in the tables as included in the AREMA manual Chapter 1, Part 5 for Pipeline Crossings. The length of thicker-walled pipe shall extend from railroad right-of-way line to right-of-way line. This will generally result in thicker-walled pipe on railroad right-of-way.
  - 2) All steel pipe shall be coated and cathodically protected.
  - 3) The depth from base of rail to top of pipe shall not be less than ten (10) feet below base of rail. The depth from ditches or other low points on railroad right-of-way shall not be less than six (6) feet from ground line to top of pipe.
  
- c. In circumstances where it is not feasible to install encasement from right-of-way line to right-of-way line, casing pipe under railroad tracks and across railroad property shall extend to the greater of the following distances, measured at right angles to the centerline of track:
  - 1) Two (2) feet beyond toe of slope.
  - 2) Three (3) feet beyond ditch line.
  - 3) Twenty-five (25) feet from centerline of outside track when casing is sealed at both ends.
  - 4) Forty-five (45) feet from centerline of outside track when casing is open at both ends.
  - 5) If additional track is planned for future construction, casing must extend far enough to meet above distances given the additional track requirement.

- d. Pipelines and casing pipe shall be suitably insulated from underground conduits carrying electric wires on railroad property.
- e. Casing pipe and joints shall be made of metal, and of leakproof construction. Casings shall be capable of withstanding the railroad loadings and other loads superimposed upon them.
- f. Wall thickness designations for steel casing pipe for E-80 loading (including impact) are:

Nominal diameter, (inches)	Min. Thickness for coated (inches)	Non-coated (inches)
14 and Under	0.188	0.188
16	0.219	0.281
18	0.250	0.312
20 and 22	0.281	0.344
24	0.312	0.375
26	0.344	0.406
28	0.375	0.438
30	0.406	0.469
32	0.438	0.500
34 and 36	0.469	0.531
38,40 and 42	0.500	0.563
44 and 46	0.531	0.594
48	0.563	0.625
50	0.594	0.656
52	0.625	0.688
54	0.656	0.719
56 and 58	0.688	0.750
60	0.719	0.781
62	0.750	0.813
64	0.718	0.844
66 and 68	0.813	0.875
70	0.844	0.906
72	0.875	0.938

- 1) Steel pipe shall have minimum yield strength of 35,000 pounds per square inch.
- 2) All metallic casing pipes are to be designed for effective corrosion control, long service life and relatively free from routine servicing and maintenance. Corrosion control measures must include cathodic protection.

3) Cast iron may be used for casing. It shall conform to ANSI A21. The pipe shall be connected with mechanical-type joints. Plain-end pipe shall be connected with compression-type couplings. The strength of the cast iron pipe to sustain external loads shall be computed in accordance with the most current ANSI A21 .1 “Manual for the Computation of Strength and Thickness of Cast Iron Pipe.”

g. The inside diameter of the casing pipe shall be such that the carrier pipe can be removed without disturbing the casing. All joints or couplings, supports, insulators or centering devices for the carrier pipe shall be considered in the selection of the casing diameter.

h. For flexible casing pipe, a minimum vertical deflection clearance of the casing pipe shall be three percent (3%) of its diameter plus one-half (1/2) inch so that no loads from the roadbed, track, railroad traffic or casing pipe are transmitted to the carrier pipe. When insulators are used on the carrier pipe, the relationship of the casing size to the size of the carrier pipe is:

Diameter of Carrier Pipe	Inside Dia. Of Casing Pipe Equals Outside Dia. Of Carrier Pipe Plus:
0" - 8"	2"
10" - 16"	3 1/4"
Over 16"	4 1/2"

## 5. Casing and Pipeline Installation

a. Casing and pipeline installations should be accomplished by directional boring, jack-and-bore, tunneling or other approved methods. Tunneling construction under tracks will be permitted only under direct supervision of a Railroad Engineer. Tunneling procedures and equipment, as well as structural design, must have Railroad Engineering Department approval prior to starting any work on Railroad property. Generally, tunneling shall not be considered where less than six (6) feet of cover exists, or where excessively sandy, loose or rocky soils are anticipated.

Rail elevations over the work must be monitored at intervals prescribed by Railroad to detect any track movement. Movements of over one-quarter (1/4) inch vertically shall be immediately reported to the Railroad Roadmaster. Due to the danger to rail traffic that is caused by only small amounts of track movement, Railroad forces may have to be called to surface the track several times.

The following requirements shall apply to these construction methods:

1) The use of water under pressure jetting or puddling will not be permitted to facilitate boring, pushing or jacking operations. Some boring may require water to lubricate cutter and pipe, and under such conditions, is considered dry boring.

- 2) Where unstable soil conditions exist, boring or tunneling operations shall be conducted in such a manner as not to be detrimental to the railroad being crossed.
  - 3) If excessive voids or too large a bored hole is produced during casing or pipeline installations, or if it is necessary to abandon a bored or tunneled hole, prompt remedial action should be taken by the Utility Owner.
  - 4) All voids or abandoned holes caused by boring or jacking are to be filled by pressure grouting. The grout material should be sand cement slurry with a minimum of two (2) sacks of cement per cubic yard and a minimum of water to assure satisfactory placement.
  - 5) The hole diameter resulting from bored or tunneled installations shall not exceed the outside diameter of the utility pipe, cable or casing (including coating) by more than one and one-half (1-1/2) inches for pipes with an inside diameter of twelve (12) inches or less, or two (2) inches on pipes with an inside diameter greater than twelve (12) inches.
  - 6) Pits for boring, tunneling or jacking will not be permitted within thirty (30) feet of the centerline of track; or closer to the track than the toe of fill slopes in fill sections, or toe of shoulder slopes in ditch sections when pipes are allowed on the railroad property.
- c. Vents. In casing pipe installations, vents are appurtenances by which fluids or gases between carrier and casing may be inspected, sampled, exhausted or evacuated.
- 1) Vents shall be located at the high end of short casings and at both ends of casing longer than one hundred fifty (150) feet.
  - 2) Vent standpipes shall be located and constructed so as not to interfere with maintenance of the railroad or to be concealed by vegetation. Where possible, they shall be marked and located at the property line. The markers shall give the name and address of the owner, and a phone number to contact in case of emergency.
  - 3) Casing pipe, when sealed, shall be properly vented. Vent pipes shall be of sufficient diameter, but in no case less than two (2) inches in diameter and shall be attached near each end of casing, projecting through ground surface at property lines.
  - 4) Vent pipes shall extend not less than four (4) feet above ground surface. Top of vent pipes shall be fitted with a down-turned elbow, properly screened; or a relief valve.



- 5) For pipelines carrying flammable materials, vent pipes on casings shall be at least 16 feet (vertically) from aerial electric wires. Casings shall be suitably insulated from underground conduits carrying electric wires on Railroad right-of-way.

#### d. Shut-Off Valves

- 1) The Utility Owner shall install accessible emergency shut-off valves within effective distances on each side of the railroad. Where pipelines are provided with automatic control stations, no additional valves will be required.
- 2) Locating a shut-off valve on railroad property should be avoided. If approval is acquired, a guardrail must protect the shut-off valve.
- 3) When a guardrail is required, its height shall be four (4) feet above the ground line. All four corner posts shall be driven to a minimum depth of four (4) feet below ground line. There shall be a minimum clearance of two (2) feet from the valve to the guardrail. The steel pipes for the four corner posts and guardrail shall have a minimum diameter of four (4) inches. All joints will be welded with a one-quarter (1/4) inch fillet weld all around.

### 6. Water Lines

- a. Where casing pipe is used, venting is not required; however, sealing will be required if the ends of the casing are not above high water.
- b. Where non-metallic pipe is permitted and installed, steel casings are required from right of way line to right of way line.
- c. Manholes should be located outside the railroad property. Manholes shall not be located within twenty-five (25) feet of railroad trackage, in the shoulder, shoulder slope, ditch or backslope; and shall not protrude above the surrounding ground without the approval of Railroad Engineering.
- d. The Utility Owner shall place a readily identifiable and suitable marker at each railroad property line where it is crossed by a water line.

### 7. Sewer Lines

- a. New and relocated sewer lines shall be constructed with satisfactory joints, materials and designs which will provide protection and resistance to damage from sulfide gases and other corrosive elements to which they may be exposed.
- b. Where casing pipe is used, venting and sealing of casing will be required.

- c. Where non-metallic pipe is permitted and installed, a durable metal wire shall be concurrently installed; or other means shall be provided for detection purposes.
- d. Manholes should be located outside the railroad property. Manholes shall not be located within twenty-five (25) feet of railroad trackage, in the shoulder, shoulder slope, ditch or backslope; and shall not protrude above the surrounding ground without the approval of Railroad Engineering.

## 8. Electric Power Lines

- a. A minimum depth of 5.5 feet below the base of rail (BBR) will be maintained.
- b. A minimum depth of 3.0 feet below natural grade (BNG) will be maintained for 750 volts and less, and 4.0 feet BNG for greater than 750 volts.
- c. The wireline must be encased completely across the Railroad right-of-way with a rigid metallic conduit.
- d. Crossings will not be installed under or within 50 feet of the end of any Railroad bridge, centerline of any culvert or switch area.
- e. A Railroad signal representative must be present during installation if railroad signals are in the vicinity of wireline crossings unless signal representative authorizes otherwise.
- f. Markers that identify the Utility Owner shall be placed at both property lines for utilities crossing the railroad property. For parallel lines markers shall be placed above the cable at intervals no less than 300' apart. The markers should identify the owner, type of cable and emergency telephone number. A 6-inch wide warning tape will be installed, 1.0 foot BNG directly over the underground power line where located on Railroad right-of-way outside the track ballast sections.
- g. Above-ground utility appurtenances installed as a part of an underground installation shall be located at or near the railroad property line and shall not be any closer than twenty-five (25) feet to the centerline of track.

## 9. Fiber Optic Lines.

- a. The same requirements for electric power line crossings will apply for fiber optic line crossings except for the following:
- b. A minimum depth of 4.0 feet BNG for fiber optic cable wirelines.
- c. Railroad Engineering must approve any specialized equipment used to install cable. No rail plow will be allowed for installation purposes.

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## PART 4

# PLANS, APPROVALS AND

# PROCEDURES

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## PART 4 - PLANS, APPROVALS AND PROCEDURES

### A. Plans and Approvals

#### 1. Design

- a. The design of all utility installations will be the responsibility of the Utility Owner.
- b. The plans for the proposed installation shall be submitted to and meet the approval of Railroad Engineering before construction is initiated.
- c. Plans shall be drawn to scale showing the relationship of the proposed utility line to the railroad tracks, the angle of crossing, location of valves and vents, the railroad mile post and engineering station, railroad property lines and general layout of tracks and other railroad facilities. The plans should include a cross-section (or sections) from the field survey that will show utility placement in relation to actual profile of ground and tracks. If tunneling is proposed, method of supporting tracks or driving of tunnel shall be shown. The geotechnical study, when required, should be included.
- d. The plans should contain the following data for carrier pipe and casing pipe:
  - Contents to be carried
  - Inside diameter
  - Pipe material
  - Specifications and grade of material
  - Wall thickness
  - Actual working pressure
  - Type of joints
  - Longitudinal joint factor
  - Coating
  - Method of installation
  - Vents-Number, Size, Height above ground
  - Seals-Both ends, One end
  - Cover (top of tie to top of pipe or casing)
  - Cover (other than under tracks)
  - Cover (at ditches)
  - Cathodic protection
  - Type, Size and Spacing of insulators or supports
- e. When a geotechnical study is required, the findings and protection plan shall be prepared by a licensed civil engineer and included with the plans. The geotechnical crew will need to be properly permitted to enter Railroad right-of-way and a Railroad flagman will be required when working within 25 feet of the track.

## 2. Approvals

- a. Approval of plans and application forms is required for all installations of utilities prior to initiation of work on railroad property.
- b. If surveying is necessary for the completion of an application, a "Right of Entry" or "Release of Claim and Indemnity" must be executed and referenced.

## B. License Procedures

### 1. Applications should be submitted to:

LandRail, LLC  
50 S. Steele Street, Suite 374  
Denver, CO 80209

2. Upon receipt of the application, a letter will be forwarded acknowledging receipt and advising of the person who should be contacted for further inquiries.
3. Office Hours: 8:30 A.M. to 5:30 P.M. Monday through Friday, MT Phone Number: (303) 398-0400.
4. Agreements will be required for all encroachments on railroad property.
5. Generally, agreement-processing time will be thirty to sixty days. Please allow sufficient lead-time for document handling prior to desired construction date. Before construction begins, agreements must be executed by Utility Owner and returned. Verbal authorizations will not be granted or permitted. A minimum of seventy-two (72) hours advance notice after execution of an agreement will be required prior to initiation of construction.
6. License fees must be submitted at the time the agreement is executed and returned.
7. Applications are to be made on the standard application form including an Exhibit "A."

## C. Construction

1. The execution of the work on railroad property shall be subject to the inspection and direction of the Roadmaster or his representative.
2. A representative of Railroads Signal Department must be present during installation if railroad signals are in the vicinity of the construction.

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## PART 5

## APPENDIX

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## PART 5 - APPENDIX

### REFERENCES

American National Standards Institute (ANSI) Codes, 1430 Broadway, NY, NY 10018.

American Railway Engineering and Maintenance of Way Association (AREMA) Specifications.

American Society for Testing and Materials (ASTM) Specifications.

American Water Works Association Standards and Specifications, AWWA, 2 Park Avenue, NY, NY 10016.

Manual on Uniform Traffic Control Devices - with revisions, US Department of Transportation, Federal Highway Administration.

National Electrical Safety Code, US Department of Commerce, National Bureau of Standards.

Pipeline Safety Regulations - Code of Federal Regulations, Title 49 - Transportation, Parts 191-192-Natural Gas; Part 195-Liquid Petroleum Gas.

Rules and Regulations for Public Water Systems - latest edition, State Health Departments.

Rules and Regulations promulgated by the Hazardous Materials Regulation Board of the US Department of Transportation. Statutory Provisions, 23 U.S.C. 109 and 111. April 16, 2004

## DEFINITION OF TERMS

The terminology used in this Policy strives for conventional meaning and to insure uniform interpretation. To this end, the following definitions apply:

**ACCESS CONTROL:** Restriction of access to and from abutting lands to railroad property.

**AREMA:** American Railroad Engineering and Maintenance of Way Association. **ANSI:** American National Standard Institute.

**ASTM:** American Society for Testing and Materials.

**BACKFILL:** Replacement of soil around and over an underground utility facility.

**BORING:** Piercing a hole under the surface of the ground without disturbing the earth surrounding the hole. Boring may be accomplished by any approved manner. Water jetting or puddling will not be permitted. Holes may be mechanically bored and cased using a cutting head and continuous auger mounted inside of the casing. Small diameter holes may be augured and the casing or utility facility pushed in later.

**BURY:** Placement of the utility facility below grade of roadway, ditch or natural ground to a specified depth.

**CARRIER:** Pipe directly enclosing a transmitted fluid (liquid or gas).

**CASING:** A larger pipe enclosing a carrier.

**CFR:** Code of Federal Regulations.

**COATING:** Material applied to or wrapped around a pipe.

**COMMUNICATION LINE:** Fiber optic, telephone cable and similar lines, not exceeding four hundred (400) volts to ground or seven hundred fifty (750) volts between any two (2) points of the circuit, the transmittal power of which does not exceed one hundred fifty (150) watts.

**CONDUIT OR DUCT:** An enclosed tubular runway for protecting wires or cables.

**COVER:** The depth of material placed over a utility. Depth of cover is measured from top of utility casing or carrier pipe (if no casing is required) to the natural ground line or construction line above the utility.

**DIRECT BURIAL:** Installing a utility underground without encasement, by plowing or trenching. No rail plows will be permitted.



**ELECTRIC SUPPLY:** Electric light, power supply, and trolley lines, irrespective of voltage used for transmitting a supply of electrical energy.

**ENCASEMENT:** Structural element surrounding a pipe or cable.

**FLEXIBLE PIPE:** A plastic, fiberglass, or metallic pipe having a large ratio of diameter to wall thickness that can be deformed without undue stress. Copper or aluminum pipe shall be considered as flexible pipe.

**GROUNDING:** Connected to the earth or to some extended conducting bodies which intentionally or accidentally is connected with the earth.

**GROUT:** A cement mortar or slurry of fine sand or clay as conditions govern.

**JACK-AND-BORE:** The installation method whereby the leading edge of the jacked pipe is well ahead of the cutting face of the auger bit. The auger is removing waste from inside the pipe as it is being jacked. This method greatly reduces the likelihood of subsidence of granular material during installation.

**JACKING:** The installation of small pipes by the use of hydraulic jacks or rams to push the pipe under the traveled surface of a road, railroad roadbed, or other facility.

**LICENSE: UTILITY LICENSE AGREEMENTS** are executed for all utility facilities located on railroad property.

**MANHOLE:** An opening to an underground utility system which workmen or other may enter for the purpose of maintaining, inspecting, or making installations.

**NATURAL GAS PIPELINES:**

**DISTRIBUTION SYSTEM:** A pipeline other than a gathering or transmission line.

**SERVICE LINE :** A distribution line that transports gas from a common source of supply to a customer meter.

**TRANSMISSION SYSTEM:** A pipeline other than a gathering line that transports gas from a gathering line or storage facility to a distribution center or storage facility. It operates at a hoop stress of twenty percent (20%) or more of the Specified Minimum Yield Strength.

**NORMAL:** Crossing at a right angle.

**PERMITS:**

**PERMIT TO BE ON RAILROAD PROPERTY FOR UTILITY SURVEY** is to be executed prior to all survey work on railroad property.

**PIPE:** A tubular product made as a production item for sale as such. Cylinders formed from plate in the course of fabrication of auxiliary equipment are not pipes as defined here.

**PRESSURE:** Relative internal pressure in PSI (pounds per square inch) gauge.

**PRIVATE LINES:** Any privately owned facilities which convey or transmit the commodities outlined under the definition for Utilities but are devoted exclusively to private use.

**PUBLIC LINES:** Those facilities which convey or transmit the commodities outlined under the definition for Utilities and directly or indirectly serve the public or any part thereof.

**RAILROAD:** An OmniTRAX managed property

**RIGHT OF WAY:** A general term denoting land, property of interest therein, usually in a strip, acquired for or devoted to railroad transportation purposes.

**SEAL:** A material placed between the carrier pipe and casing to prevent the intrusion of water, where ends of casing are below the ground surface.

**SHOULDER:** That portion of the roadbed outside the ballast.

**TRENCHED:** Installed in a narrow excavation.

**TUNNELING:** Excavating the earth ahead of a large diameter pipe by one or more of the following processes: 1) The earth ahead of the pipe will be excavated by men using hand tools while the pipe is pushed through the holes by means of jacks, rams or other mechanical devices, 2) The excavation is carried on simultaneously with the installation of tunnel liner plates, and/or 3) The tunnel liner plates are installed immediately behind the excavation as it progresses and are assembled completely away from the inside.

**UTILITY OWNER:** All privately, publicly or cooperatively owned lines, facilities and systems for producing, transmitting or distributing communications, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, storm water and other similar commodities, including fire and police signal systems and street lighting systems which directly or indirectly serve the public.

## APPLICANT'S PIPELINE CROSSING CHECKLIST

- > Installation must comply with Standard Specifications.
- > Installation is located at least fifty (50) feet from the end of any railroad bridge or centerline of any culvert.
- > Steel casing must extend completely across railroad property if carrier pipe is made of plastic.
- > Approval for installation may be given if pipeline is uncased and commodity is gaseous and the carrier pipe is made of steel, buried a minimum of ten (10) feet below base of rail and six (6) feet below ground line for its entire length across railroad property.
- > A Railroad representative may be present during installation if railroad signals are in vicinity of installation, unless plans have been approved prior to installation.
- > Applications for both pipeline and wireline crossing licenses are included at the end of this manual.

## APPLICATION FOR WIRE OR CABLE LINECROSSING OR PARALLEL ENCROACHMENT OF PROPERTIES AND TRACK

Plans for proposed installation shall be submitted to and meet the approval of the property owner, and a written wire/cable line crossing agreement must be fully executed before construction can begin. Material and installation are to be in strict accordance with specifications of National Electrical Safety Code, current edition, and requirements of the Property Owner. Original and three (3) copies of this form shall be submitted, accompanied by four (4) letter size prints of a drawing showing plan, elevation section of crossing from field survey, location in respect to milepost, width of property owner's right of way and location of adjacent structures affecting crossing.

1. Complete Legal Name of Applicant: \_\_\_\_\_
2. Agreement to be in the name of (if different from above): \_\_\_\_\_
3. Type of Applicant (please mark one): Corporation \_\_\_ LLC \_\_\_ Individual \_\_\_ Municipality \_\_\_ Partnership \_\_\_  
(General \_\_\_ Limited \_\_\_ ) Other \_\_\_\_\_  
If applicable, state/province of incorporation or organization: \_\_\_\_\_  
Federal Tax Identification number (if applicable): \_\_\_\_\_
4. Mailing Address: \_\_\_\_\_  
Billing Address (if different): \_\_\_\_\_  
Overnight Delivery Service Address: \_\_\_\_\_
5. Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_
6. Phone No.: (\_\_\_\_\_) \_\_\_\_\_ Fax No.: (\_\_\_\_\_) \_\_\_\_\_  
Email: \_\_\_\_\_
7. ~~1~~ \_\_\_\_\_ feet \_\_\_\_\_ (direction) from nearest RR Milepost No. \_\_\_\_\_
8. Nearest City: \_\_\_\_\_ County: \_\_\_\_\_ State: \_\_\_\_\_  
Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_
9. Angle between centerline of right-of-way and wireline will be \_\_\_\_\_ degrees.
10. Number of RR Co.'s tracks to be crossed \_\_\_\_\_ Number of pole lines crossed \_\_\_\_\_
11. ~~Crossing will be (check one) transmission~~ \_\_\_\_\_ distribution \_\_\_\_\_ service
12. Altering current \_\_\_\_\_ voltage \_\_\_\_\_ No. of Phases \_\_\_\_\_ Hertz \_\_\_\_\_
13. Direct Current \_\_\_\_\_ voltage \_\_\_\_\_ amperes \_\_\_\_\_
14. Conductors: (a) Number \_\_\_\_\_ (b) AWG gauge \_\_\_\_\_ (c) material \_\_\_\_\_
15. Maximum voltage \_\_\_\_\_ Maximum current \_\_\_\_\_
16. ~~Maximum current~~ \_\_\_\_\_ Ht. of wire supports above ground level \_\_\_\_\_
17. Material (encasement) \_\_\_\_\_
18. Outside diameter \_\_\_\_\_
19. Wall thickness \_\_\_\_\_
20. Total length within Railroad right-of-way \_\_\_\_\_
21. ~~1~~ \_\_\_\_\_ Sag in Spans at 60°F \_\_\_\_\_
22. Height of wires above Railroad communication and signal wires at 60°F \_\_\_\_\_ Feet
23. Bury: Base of rail to top of casing \_\_\_\_\_ Not beneath tracks \_\_\_\_\_ Roadway ditches \_\_\_\_\_
24. Type of wire supports \_\_\_\_\_ Size \_\_\_\_\_ False dead ends \_\_\_\_\_
25. Number of poles to be located on Railroad Company's right-of-way \_\_\_\_\_
26. Distance from butt of pole to nearest rail of main track \_\_\_\_\_
27. Distance from butt of pole to nearest rail of sidetrack \_\_\_\_\_
28. If additional wireline attachments or revisions are to be made to existing crossing, please advise number and/or date of agreement:  
\_\_\_\_\_
29. Will line exclusively serve Lessee of Railroad? \_\_\_\_\_ Name \_\_\_\_\_
30. Will line run parallel or approx. parallel to Railroad Co.'s tracks? \_\_\_\_\_ Distance of parallelism: \_\_\_\_\_  
Please give approximate horizontal separation from our signal and telephone wires
31. Will line be located in public road right-of-way? \_\_\_\_\_ DOT/AAR Crossing No. \_\_\_\_\_  
(If "yes", show name, road number and right-of-way on print). Name of Public Road \_\_\_\_\_

If application is approved, applicant agrees to reimburse property owner for any cost incurred by property owner incident to installation, maintenance, and/or supervision necessitated by this installation and further agrees to assume all liability for accidents or injuries which arise as a result of this installation as provided in the agreement to be executed. **Non-refundable fees in the amount of \$1,000 (US) for document preparation, \$1,000 engineering review fee (U.S.), and \$800 Right of Entry fee (US) made payable to LandRail, LLC are required at the time of application.** In addition, annual fees will be assessed pursuant to a written crossing agreement. Applications submitted without the required fees will not be processed. Please note, if the submitted application and prints require review by any independent environmental (HAZMAT) or other outside consultants, this review will be at applicant's sole cost and in addition to the aforementioned fees. Please return application, payment and prints to: LandRail, LLC, 50 S. Steele St. STE 374, Denver, CO 80209 Telephone (303)393-0033 and Fax Number: (303) 393-8636.

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Name Printed: \_\_\_\_\_

Title: \_\_\_\_\_

Phone No.: \_\_\_\_\_

**APPLICATION FOR PIPE LINE CROSSING/PARALLEL ENCROACHMENT UNDER/OVER PROPERTIES AND TRACKS**

Plans for proposed installation shall be submitted to and meet the approval of the property owner, and a crossing agreement must be fully executed between the property owner and the applicant before construction can begin. Material and installation are to be in strict accordance with specifications of the American Railway Engineering Association and requirements of the property owner. Original and three (3) copies of this form shall be submitted, accompanied by four (4) letter-sized prints of a drawing showing plan, elevation section of crossing from field survey, location in respect to Mile Post, width of railroad right of way, location of adjacent structures affecting crossing, and all information required in Figures 1 and 2 of AREMA Specifications, Part 5. If open cutting or tunneling is necessary, details of sheeting and method of supporting tracks or driving tunnel shall be shown.

1. Complete Legal Name of Applicant: \_\_\_\_\_
2. Agreement to be in the name of (if different from above): \_\_\_\_\_
3. Type of Applicant (please mark one): Corporation \_\_\_ LLC \_\_\_ Individual \_\_\_ Municipality \_\_\_ Partnership \_\_\_  
(General \_\_\_ Limited \_\_\_ ) Other \_\_\_\_\_
- If applicable, state/province of incorporation or organization: \_\_\_\_\_
- Federal Tax Identification number (if applicable): \_\_\_\_\_
4. Mailing Address: \_\_\_\_\_
- Billing Address (if different): \_\_\_\_\_
- Overnight Delivery Service Address: \_\_\_\_\_
5. Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_
6. Phone No.: (\_\_\_\_) \_\_\_\_\_ Fax No.: (\_\_\_\_) \_\_\_\_\_
- Email: \_\_\_\_\_
7. Location: \_\_\_\_\_ ft \_\_\_\_\_ (dir) from nearest **RR Mile Post (REQUIRED)**: \_\_\_\_\_ vs \_\_\_\_\_
8. Nearest Railroad Station: \_\_\_\_\_ County \_\_\_\_\_ St \_\_\_\_\_
9. Within limits of public highway name \_\_\_\_\_
10. Temporary track support or rewrapping required? ( ) Yes ( ) No If yes, please describe: \_\_\_\_\_  
\_\_\_\_\_
11. Wires, poles, obstructions to be located? ( ) Yes ( ) No If yes, please describe \_\_\_\_\_  
\_\_\_\_\_
- 2  \_\_\_\_\_ Flammable? ( ) Yes ( ) No Temp \_\_\_\_\_
- 3 Max. Working Pressure: \_\_\_\_\_ PSI. Field Test Pressure: \_\_\_\_\_ PSI.  
Type test: \_\_\_\_\_
- 4 Location of shut-off valve: \_\_\_\_\_
- 5 

<b>PIPE SPECIFICATIONS</b> Material Material Specifications and Grade Min. Yield Strength of Mat. PSI Mill Test Pressure PSI Inside Diameter Wall Thickness Outside Diameter Type of Seam Laying Lengths Kind of Joints Total Length within RR R/O/W VENTS: # _____ Size _____ Ht. above ground _____ SEALS: Both ends _____ One end _____ BURY: Base of rail to top of casing _____ ft. _____ in. BURY (Not beneath tracks): _____ ft. _____ in. BURY (Roadway pipe): _____ ft. _____ in. CATHODIC PROTECTION: ( ) Yes ( ) No PROTECTIVE COATING: ( ) Yes ( ) No Kind: _____ Type, size, and spacing of insulators or supports: _____	<b>CARRIER PIPE</b>	<b>CASING PIPE</b>
--	---------------------	--------------------
16. Method of Installation: \_\_\_\_\_

If application is approved, applicant agrees to reimburse property owner for any cost incurred by property owner incident to installation, maintenance, and/or supervision necessitated by this installation and further agrees to assume all liability for accidents or injuries which arise as a result of this installation as provided in the agreement to be executed. **A non-refundable document preparation fee in the amount of \$1,000, an engineering review fee of \$1,000, and a Right of Entry Fee of \$800 payable (\$2,800 total) to LandRail LLC, is required at the time of application.** In addition, fees will be assessed pursuant to a written crossing agreement. Please note, if the submitted application and prints require review by any independent environmental (HAZMAT) or other outside consultants, this review will be at applicant's sole cost and in addition to the aforementioned fees. Please return application, payment and prints to: LandRail LLC, 50 S. Steele St. Suite 374, Denver, CO 80209.

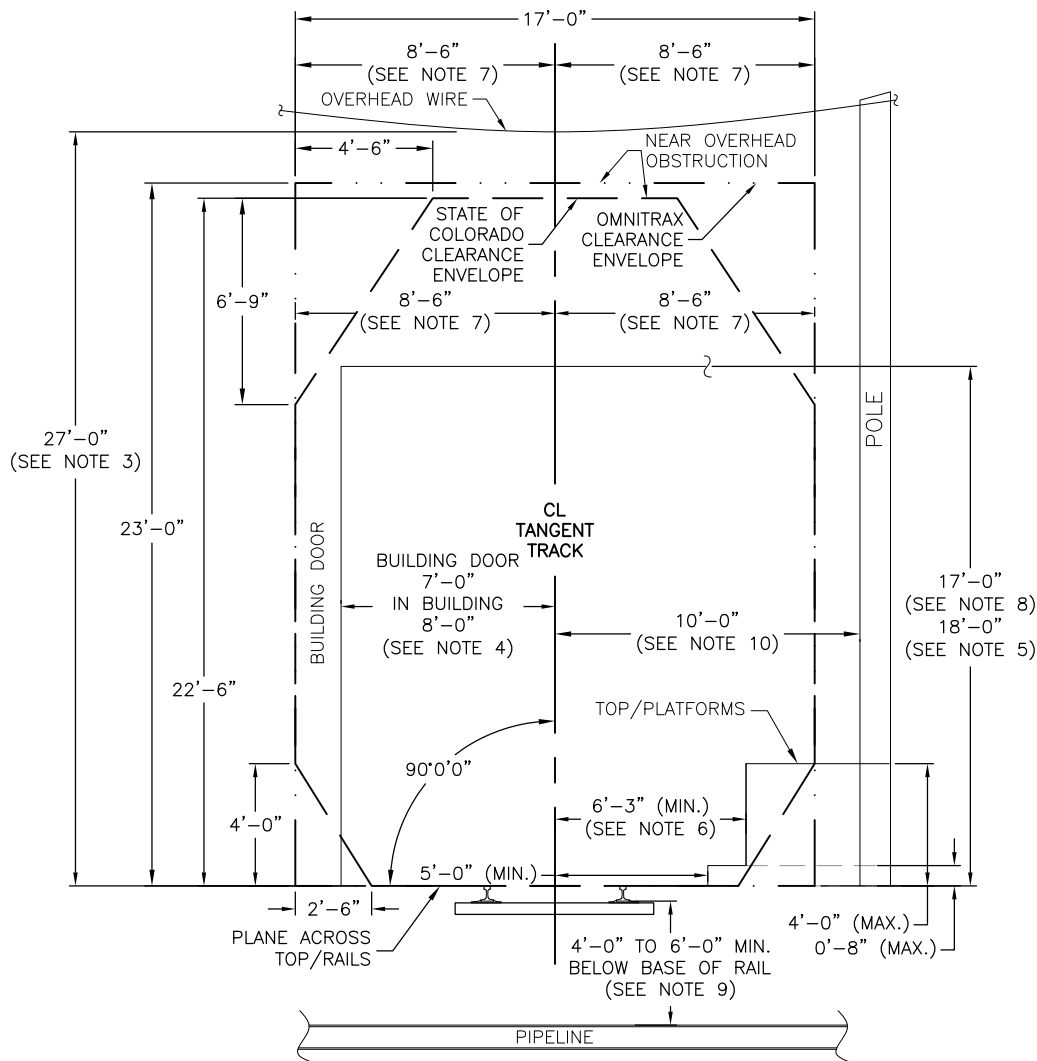
Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Name Printed: \_\_\_\_\_

Title:  
\_\_\_\_\_

Phone No.: \_\_\_\_\_



**NOTE:**

1. REGULATION REFERENCE BASED ON COLORADO DEC. 55621 AND 4 CODE OF COLORADO REGULATIONS (CCR) 723-7.
2. SEE AREMA MANUAL FOR RAILWAY ENGINEERING CHAPTER 28 (LATEST EDITION) FOR COMPLETE CLEARANCE REQUIREMENTS BY STATE AND RECOMMENDED AREMA CLEARANCE.
3. ALL WIRES IN GENERAL SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF NOT LESS THAN THAT SPECIFIED BY THE NATIONAL ELECTRIC SAFETY CODE, AS INCORPORATED BY REFERENCE IN RULE 7008, AND OVERHEAD WIRE VERTICAL CLEARANCE INCREASED AS REQUIRED.
4. AT ELEVATIONS OF 4'-0" OR LESS ABOVE TOP OF RAIL INSIDE OF BUILDINGS, THE MINIMUM SIDE CLEARANCE MAY BE REDUCED ON ONE SIDE OF THE TRACK TO 6'-3", PROVIDED THAT 8'-0" IS MAINTAINED ON THE OPPOSITE SIDE.
5. OVERHEAD CLEARANCE INSIDE OF ENCLOSED BUILDINGS MAY BE REDUCED TO 18'-0", PROVIDED THAT THIS CLEARANCE SHALL APPLY ONLY TO TRACKS TERMINATING WITHIN THE BUILDING OR IN THE IMMEDIATE PLANT AREA IF SAID TRACKS SHOULD EXTEND THROUGH THE BUILDING.
6. IF SIDE CLEARANCE IS REDUCED TO 6'-3" ON ONE SIDE, A FULL CLEARANCE OF 8'-0" SHALL BE MAINTAINED ON THE OPPOSITE SIDE.
7. HORIZONTAL CLEARANCES ARE TO BE INCREASED 1-1/2" PER DEGREE OF CURVE WHERE THE OBSTRUCTION IS LOCATED ADJACENT TO OR WITHIN 80 FEET OF A TURNOUT OR CURVE LIMITS.
8. ENGINE HOUSES, SHOP BUILDINGS, TIPPLES, AND LOADING FACILITIES PERMITTED LESSER DIMENSIONS WITH APPROVAL OF THE VP ENGINEERING.
9. UNDERGROUND PIPELINE CROSSINGS TO MEET AREMA PART 5 RECOMMENDATIONS (LATEST EDITION).
10. NO PART OF ANY SIGN OR APPURTENANCE ATTACHED TO SUCH POLES OR POSTS SHALL BE LESS THAN 8'-6" FROM THE CENTERLINE OF AN ADJACENT TRACK, BETWEEN THE TOP OF RAIL AND A POINT 15 FEET ABOVE.
11. IN SOME INSTANCES, CERTAIN STATES MAY ACCEPT VERTICAL OR HORIZONTAL CLEARANCES SLIGHTLY LESS THAN OMNITRAX STANDARDS. IN THESE INSTANCES, OMNITRAX NORMALLY WILL ACCEPT THE STATE'S LESSER CLEARANCE REQUIREMENTS, ALTHOUGH THE INDUSTRY WILL BE REQUIRED TO SIGN AN IMPAIRED CLEARANCE AGREEMENT WITH THE RAILROAD. IN ANY INSTANCE, WHEN EITHER HORIZONTAL OR VERTICAL CLEARANCE IS LESS THAN THOSE OF THE STATE RAILWAY OR PUBLIC SERVICE COMMISSION, AS THE CASE MAY BE, THE INDUSTRY SHALL SECURE NECESSARY APPROVAL FROM THE APPROPRIATE STATE AUTHORITY FOR EACH IMPAIRED CLEARANCE. THE AGREEMENT COVERING SERVICE TO THE INDUSTRY'S TRACK WILL INCLUDE SPECIFIC REFERENCE TO THE SUBSTANDARD CLEARANCE INVOLVED. WHEN STATE LAW REQUIRES CLEARANCES THAT ARE MORE RESTRICTIVE, SUCH LAWS WILL GOVERN.
12. REQUIRED WARNING SIGNS SHALL BE PLACED IN ADVANCE OF THE IMPAIRED CLEARANCE TO ADVISE RAILROAD OPERATING PERSONNEL OF THE IMPAIRMENT.

## TYPICAL MINIMUM CLEARANCE SECTION (COLORADO)

OMNITRAX TECHNICAL SPECIFICATIONS FOR INDUSTRIAL TRACK – SECTION 7  
(NOT TO SCALE)