



PUBLIC PROJECTS MANUAL

For Construction and Improvement Projects
That May Impact OmniTRAX-Managed
Railroads and Property

Engineering Services
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About OmniTRAX, Inc.

As one of North America's largest private railroad and transportation management companies, OmniTRAX's core capabilities include providing management services to its affiliated railroad, port, intermodal and industrial switching operations. Through its affiliation with The Broe Group and its portfolio of managed companies, OmniTRAX also has the unique capability of offering specialized industrial development and real estate solutions, both on and off the rail network managed by OmniTRAX. More information is available at www.omnitrax.com.

About OmniTRAX Public Projects Manual

The information contained in this *OmniTRAX Public Projects Manual* is neither exhaustive nor exclusive; rather, it is intended to be a general resource only and all statements contained herein are intended to be for broad use. Nothing identified in this *OmniTRAX Public Projects Manual* can be taken as authority to construct or improve. Specific projects will be subject to analysis of all factors leading to formal agreements between all project parties. The purpose of OmniTRAX review is solely to confirm compliance with the minimum standards of OmniTRAX, and not for any other purpose.

OMNITRAX Public Project Manual

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- A. Standard Preliminary Engineering Agreement
- B. Standard Construction Agreement
- C. Temporary Right of Entry Agreement
- D. Special Provisions for Protection of Railway Interests
- E. Utility Accommodation Policy

Additional information can be obtained by contacting the following:

- American Railway Engineering and Maintenance of Way Association,
www.arema.org
- U.S. Department of Transportation, Manual of Uniform Traffic Control Devices,
<http://mutcd.fhwa.dot.gov/>

Information Covered in This Manual

This information is intended to assist communities, public agencies, and other project sponsors to plan and implement construction and improvement projects that may involve OMNITRAX-managed Railroad property. Examples of such projects include:

Highway-Rail Grade Crossings: Closure, removal, installation, alterations, and Grade Separation of public highway-rail grade crossings. OMNITRAX's Real Estate Department manages private crossings.

Entry Onto OMNITRAX Property: Temporary rights of entry onto OMNITRAX property, easements, utility installation and other temporary access needs such as bridge inspections.

Bridges Over OMNITRAX: Construction, reconstruction, rehabilitation, repair, removal, and maintenance of bridges over the railroad by outside parties.

Bridges Carrying OMNITRAX: Construction, reconstruction, rehabilitation, repair, removal, and maintenance of bridges carrying OMNITRAX over highways and other public properties initiated by outside parties.

Parallel Roads/Facilities: Construction, reconstruction, modification, removal, and maintenance of parallel roads or other public facilities affecting OMNITRAX property or operations.

Quite Zones: Information for a public agency to potentially establish a new Quite Zone that encompasses OMNITRAX property or operations.

Other Projects Involving OMNITRAX Rail Corridors: Publicly sponsored projects involving or altering OMNITRAX facilities or its property. These projects may be on, above, adjacent to, or otherwise have the potential to impact OMNITRAX property.

Important notes:

The information herein is intended to be a tool only and all statements in this manual are intended to be for broad use. This manual cannot be taken as authority to construct. Specific projects will be subject to analysis of all factors leading to formal agreements between all parties. The purpose of review by OMNITRAX is solely to ensure compliance with the minimum standards of OMNITRAX, and not for any other purpose.

The guidelines and requirements herein are provided for reference only and are subject to revision without notice. All new projects shall be designed in accordance with the most current policies, requirements, and standards of OMNITRAX.

Any items affecting railroad property not covered in this manual shall be subject to OMNITRAX's prior review and approval.

The safety of OMNITRAX employees and the general public is of paramount importance to OMNITRAX.

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US Railroads

Alabama & Tennessee River Railway, L.L.C. ("ATN")
Central Texas & Colorado River Railway, L.L.C. ("CTXR")
Chicago Rail Link Railroad, L.L.C. ("CRL")
Decatur Central Railroad, L.L.C. ("DCC")
Fulton County Railway, L.L.C. ("FCTR")
Georgia & Florida Railway, Inc. (GFRR)
Georgia Woodlands Railroad, L.L.C. ("GWRC")
Great Western Railway of Colorado, L.L.C. ("GWRCO")
Illinois Railway, L.L.C. ("IR")
Kettle Falls International Railway, L.L.C. ("KFR")
Manufacturer's Junction Railway, L.L.C. ("MJ")
Nebraska, Kansas, Colorado Railway, Inc. ("NKCR")
Newburgh & South Shore Railway, L.L.C. ("NSR")
Northern Ohio & Western Railway, L.L.C. ("NOW")
Panhandle Northern Railway, L.L.C. ("PNR")
Peru Industrial Railroad, L.L.C. ("PIR")
Sand Springs Railway Company ("SSR")
Stockton Terminal & Eastern Railroad ("STE")

Canadian Railroads

Carlton Trail Railway Company ("CTR")
Kettle Falls International Railway ("KFR")

I. Definitions

1. *Agency* – The project sponsor (i.e., State DOT, Local Agencies, Private Developer, etc.)
2. *AREMA* – American Railway Engineering and Maintenance-of-Way Association – the North American railroad industry standards group. The use of this term shall be in specific reference to the AREMA Manual for Railway Engineering.
3. *Construction Submission* – The Agency or its representative shall submit six (6) sets of plans, supporting calculations, and detailed means and methods procedures for the specific proposed activity. All plans, specifications, and supporting calculations shall be signed/sealed by a Professional Engineer as defined below.
4. *Controlled Demolition* – Removal of an existing structure or subcomponents in a manner that positively prevents any debris or material from falling, impacting, or otherwise affecting OMNITRAX employees, equipment or property. Provisions shall be made to ensure that there is no impairment of railroad operations or OMNITRAX's ability to access its property at all times.
5. *Contractor* – The Agency's representative retained to perform the project work.
6. *Contractor Right of Entry Agreement* - An agreement between the Railroad and the Contractor allowing access to Railroad property to perform construction activities. All Contractors will be required to execute this agreement prior to starting any work on the Railroad property.
7. *Construction Documents* - Refers to design plans and calculations, project and/or standard specifications, geotechnical report and drainage report used to construct a project.
8. *Engineer* – OMNITRAX Engineering Representative or a GEC authorized to act on the behalf of OMNITRAX.
9. *Flagman* – A qualified OMNITRAX employee with the sole responsibility to direct or restrict movement of trains, at or through a specific location, to provide protection for workers.
10. *Force Account Estimate* - A time and materials estimate prepared by the railroad that reflects the anticipated costs to be incurred by the railroad. There is no cost allocation included for profit.
11. *GEC* – General Engineering Consultant who has been authorized to act on the behalf of OMNITRAX. GECs perform preliminary engineering, construction inspection, and monitoring under the direction of the OMNITRAX Engineering personnel. GEC personnel also perform day-to-day administration of certain types of projects.
12. *Horizontal Clearance* – Distance measured perpendicularly from centerline of any track to the nearest obstruction at any elevation between TOR and the maximum vertical clearance of the track.
13. *Industrial Track* - A track connected to the main track or siding which is generally owned by a customer of OMNITRAX.
14. *Main Track* - A track extending through yards and between stations that must not be occupied without proper authority.
15. *Multiple Main Tracks* - Two or more parallel or adjacent main tracks.

16. *MUTCD* - Manual on Uniform Traffic Control Devices (MUTCD, most current version).
17. *Professional Engineer* – An engineer who is licensed in State or Commonwealth in which the project is to occur. All plans, specifications, and supporting calculations shall be prepared by the Professional Engineer and shall bear his/her seal and signature.
18. *Potential to Encroach* – Work having the possibility of impacting OMNITRAX property or operations; defined as one or more of the following:
 - a. Any activity where access onto OMNITRAX property is required.
 - b. Any activity where work is being performed on OMNITRAX ROW.
 - c. Any excavation work adjacent to OMNITRAX tracks or facilities, within the Theoretical Railroad Live Load Influence Zone, or where the active earth pressure zone extends within the OMNITRAX property limits.
 - d. The use of any equipment where, if tipped and laid flat in any direction (360 degrees) about its center pin, can encroach within twenty five feet (25'-0") of the nearest track centerline. This is based upon the proposed location of the equipment during use, and may be a function of the equipment boom length. Note that hoisting equipment with the potential to foul must satisfy the 150% factor of safety requirement for lifting capacities.
 - e. Any work where the scatter of debris or other materials has the potential to encroach within twenty five feet (25'-0") of the nearest track centerline.
 - f. Any work where significant vibration forces may be induced upon the track structure or existing structures located under, over, or adjacent to the track structure.
 - g. Any other work which poses the potential to disrupt rail operations, threaten the safety of railroad employees, or otherwise negatively impact railroad property, as determined by OMNITRAX.
19. *ROW* – Right of Way; Refers to OMNITRAX Right-of-Way as well as all OMNITRAX property and facilities. This includes all aerial space within the property limits, and any underground facilities.
20. *Siding* - A track connected to the main track and used for meeting, storing or passing trains.
21. *Submission Review Period* – A minimum of 30 days will be required for the initial review response. Up to an additional 30 days may be required to review any/all subsequent submissions or resubmission.
22. *Temporary Construction Crossing/Access* - A temporary at-grade crossing for the exclusive use of the contractor working on the project. Temporary construction crossings are evaluated on a per project basis and if approved, require separate approvals, agreements, and fees with OMNITRAX Real Estate Dept.
23. *Theoretical Railroad Live Load Influence Zone* – A 1½ horizontal to 1 vertical theoretical slope line starting 1'-6" below TOR elevation and 12'-0" from the centerline of the nearest track.
24. *Timetable* - A railroad publication with instructions on train, engine or equipment movement. It also contains other essential Railroad information.
25. *TOR* – Top of Rail. This is the base point for clearance measurements. It refers to the crown (top) of

the steel rail; the point where train wheels bear on the steel rails. Use the higher of the two rails when track is superelevated.

26. *Track Structure* – All load bearing elements which support the train. This includes, but is not limited to, the rail, ties, appurtenances, ballast, sub-ballast, embankment, retaining walls, and bridge structures.
27. *Vertical Clearance* – Distance measured from TOR to the lowest obstruction, within six feet (6'-0") of the track centerline, in either direction.
28. *Yard* - A system of tracks, other than main tracks and sidings, used for making up trains, storing cars and other purposes.
29. *Yard Limits* - A portion of main track designated by "yard limit" signs and included in the timetable special instructions or a track bulletin.



Requirements for Preliminary Engineering Review

Key Points

- Starting OMNITRAX **Preliminary Engineering (PE)** early by providing conceptual plans lowers project costs and shortens the time required for OMNITRAX review and approval
- Using standard agreements lowers costs and saves time
- If the proposal requires an easement on OMNITRAX property, the project sponsor should contact OMNITRAX Real Property when beginning PE.
- If the proposal requires a utility encroachment, the project sponsor should contact OMNITRAX Property Services when beginning PE.
- PE typically costs \$8,000 to \$25,000
- **OMNITRAX PE Review will not begin until the PE Agreement is fully executed and PE funds are received.**

Overview

Any project proposals that may affect or be near the OMNITRAX right-of-way must be evaluated by OMNITRAX. To initiate a construction or improvement project, a PE agreement is required to identify the project sponsor, the scope, define the tasks to be accomplished, and specify the payment required. Once the plans for the project are approved by OMNITRAX, a construction agreement will be developed.

Purpose

The purpose of the PE is to identify issues related to safety, engineering, customer service, operations, legal and regulatory matters, expense, risk and other considerations specific to any proposed project. OMNITRAX review of plans is only to determine that the plans, and improvements constructed in accordance with the plans, satisfy OMNITRAX's requirements. Plans should be submitted early in project development to ensure that OMNITRAX requirements can be incorporated.

Process Steps to Be Taken

- Notify OMNITRAX Real Estate Dept. of the project by providing location information and conceptual plans. Provide OMNITRAX authorization to incur preliminary engineering costs.
- Review and complete a standard PE agreement and provide payment for expenses as specified in the agreement.
- Provide project information; attend meetings (as needed), review site with OMNITRAX or General Engineering Contact (GEC) personnel.
- Submit initial plans to OMNITRAX or designated GEC for review.
- Respond to OMNITRAX or designated GEC comments and adjust design if necessary.
- Submit final design for OMNITRAX or designated GEC review.
- OMNITRAX will perform final review to ensure compliance with railroad requirements.
- OMNITRAX will estimate the cost of the work to be done by OMNITRAX, including flagging.
- If OMNITRAX takes no exceptions to the design plans (or once all OMNITRAX concerns have been addressed), OMNITRAX will prepare a standard construction agreement for execution.

Costs and Expenses

These matters are covered in more detail in the section that follows (“Payment of OMNITRAX’s Costs and Expenses”). For the reasons described in that section, OMNITRAX requires advance payment for its costs and expenses of reviewing and handling the PE. All expenses of the party seeking the review will be borne by that party, including expenses for OMNITRAX employees or GEC personnel attending meetings, reviewing plans, preparing correspondence and other activities to support the review of the project.

Timing

It is in the interest of all parties to complete the PE review before commitments are made or construction steps begin. OMNITRAX will work to be responsive, with timing depending upon the complexity of the project. OMNITRAX and its GEC will work with the project sponsor to schedule PE and construction to meet project schedule objectives whenever possible, considering available resources.

Standard Documents

OMNITRAX executes hundreds of agreements each year for preliminary engineering and construction of projects. OMNITRAX has developed standard agreements which can be executed by OMNITRAX without additional legal review. Non-standard agreements or modifications to the OMNITRAX standard agreement terms will require additional legal review and may increase project duration and/or cost. Sample standard agreement documents are available in the Appendix.



Payment of OMNITRAX’s Costs and Expenses

Key Points and Procedures

- **Preliminary Engineering (PE) costs are paid in advance.**
- **OMNITRAX construction expenses will be estimated during PE and the estimate will be incorporated into the construction agreement. Advance payment is required to cover these expenses prior to the start of project construction.**
- **If OMNITRAX anticipates that actual expenses will exceed the advance payment, additional payment will be required. Project work may be stopped until additional payment is received.**
- **If OMNITRAX’s actual expenses are less than the sum of any deposits the difference will be refunded after final cost accounting.**
- **All funding sources must be identified up front, and any time funding sources change, OMNITRAX must be immediately informed.**

Overview

The types of projects being addressed in this manual usually do not directly benefit and, in some cases, create risk to, and hurdles for, OMNITRAX’s core business of providing transportation service vital to its customers and the North American economy. For these reasons, OMNITRAX seeks payment for its costs and expenses incurred in connection with project review or construction.

Examples of Costs and Expenses

Agency shall reimburse OMNITRAX for all costs and expenses incurred by OMNITRAX in connection with the Project, including, without limitation:

- All out of pocket expenses
- Travel and lodging expenses
- Telephone, facsimile, and mailing expenses

- Costs for equipment, tools, materials and supplies
- Sums paid to OMNITRAX's consultants and subcontractors
- OMNITRAX labor in connection with the Project (included but not limited to flagging), together with OMNITRAX labor overhead percentages established by OMNITRAX pursuant to applicable law
- For estimating purposes only, typical flagging costs are \$1,200 per day.



Insurance Requirements for Public Projects

I. Insurance Policies:

Contractor performing work on or about OMNITRAX's property, shall purchase and maintain insurance as specified below covering the Work to be performed pursuant to an executed Agreement with OmniTRAX, and all obligations assumed pursuant to it, from effective date of the Agreement until expiration or termination, unless otherwise specified in the Agreement, with insurance companies assigned a current Financial Strength Rating of at least A and Financial Size Category of X or better by A. M. Best Company or an equivalent rating agency approved by Railroad. Contractor shall require all subcontractors likewise to procure and maintain this same insurance unless they are covered by Contractor's insurance:

A. **Commercial General Liability Insurance** written on an occurrence basis subject to limit of \$1,000,000 each occurrence for bodily injury, property damage, personal injury, libel and/or slander with an annual aggregate limit of no less than \$2,000,000. Policy coverage is to be based on usual Insurance Services Office ("ISO") policy forms or equivalent to include, but not be limited to: Operations and Premises Liability, Completed Operations and Products Liability, Advertising and Personal Injury Liability, and Contractual Liability Insurance.

Any and all General Liability policies procured by Contractor shall be amended to delete any and all railroad exclusions including exclusions for working on or within fifty feet (50') of any railroad property, railroad track, railroad bridge, trestle or tunnel (CG 24 17 Endorsement).

B. **Workers' Compensation and Employers' Liability Insurance** providing statutory Workers' Compensation benefits mandated under applicable state law and Employers' Liability insurance subject to a minimum limit of \$1,000,000 each accident for bodily injury by accident, \$1,000,000 each employee for bodily injury by disease, and \$1,000,000 policy limit for bodily injury by disease. If coverage is provided through a Monopolistic State Fund, a stop gap endorsement on either the Commercial General Liability or Workers' Compensation Policy is required to meet the Employers' Liability requirement.

Notwithstanding the foregoing, Contractor may, subject to the terms and conditions of this paragraph, self-insure for Workers' Compensation where allowed by law. Contractor shall provide Railroad with audited financial statements and Railroad may, at its discretion, which shall not be unreasonably withheld, deem such financial statements acceptable prior to authorizing Contractor to self-insure. Where applicable, Contractor shall also provide state issued self-insurer authorization documents to Railroad.

C. **Business Automobile Liability Insurance** subject to a minimum limit of \$1,000,000 each accident for bodily injury and property damage. Policy coverage shall be based on ISO policy forms referred to as Business Automobile Policy ("BAP") to cover motor vehicles owned, leased, rented, hired or used on behalf of Contractor. If applicable to this Agreement and applicable under Federal Law, an MCS 90 endorsement evidencing limits of coverage as outlined in the Motor Carrier Act of 1980 dependent on type of carriage, commodity, and type of commerce.

D. **Umbrella Liability Insurance** written on an occurrence basis subject to a limit of \$4,000,000 each occurrence for bodily injury, property damage and personal injury. Policy coverage is to be at least as broad as primary coverages and include, but not be limited to, Operations and Premises Liability, Completed Operations and Products Liability, Personal Injury Liability, Contractual Liability insurance and coverage for sudden and accidental pollution. Completed Operations coverage is to be maintained for a period of not less than three (3) years after the expiration or termination of this Agreement. Umbrella Liability insurance shall apply to Commercial General Liability, Automobile Liability, and Employers' Liability insurance.

The required limits of insurance may be satisfied by a combination of Primary and Umbrella or Excess Liability Insurance.

E. All insurance required of Contractor with the exception of Workers' Compensation and Employer's Liability shall include OmniTRAX, the Railroad, and any subsidiary, parent or affiliates of OmniTRAX and their owners, agents, representatives, members, managers, officers, directors, shareholders, and employees as additional insureds and shall include wording which states that the insurance shall be primary and not excess over or contributory with any insurance carried by OmniTRAX, Railroad and their affiliates.

F. All insurance shall provide a minimum of thirty (30) days' advance written notice of insurer's intent to cancel or otherwise terminate policy coverage.

G. All policies shall be written on an occurrence basis. If Contractor cannot obtain an occurrence based policy for any required coverage, policies may be written on a claims made basis. If any policies providing the required coverage(s) are written on a claims-made basis, the following is applicable:

1. The retroactive date shall be prior to the commencement of the Work.
2. Contractor shall maintain such policies on a continuous basis.
3. If there is a change in insurance companies or the policies are canceled or not renewed, Contractor shall purchase an extended reporting period of not less than three (3) years after the Agreement expiration or termination date.

H. Contractor shall file with Railroad and its affiliates on or before the effective date of the executed Agreement a valid Certificate of Insurance for all required insurance policies. Each certificate shall identify OmniTRAX, Railroad, its or their affiliates and other required parties as set forth above as additional insureds, and shall state that OmniTRAX, the Railroad, and their affiliates will receive a minimum of thirty (30) days' advance written notice of insurer's intent to cancel or otherwise terminate policy coverage. Prior to expiration of such insurance, Contractor shall supply updated Certificates of Insurance that clearly evidence the continuation of all coverage in the same manner, limits of protection, and scope of coverage, as was provided by the original Certificates and as required in this Section 6.

I. Contractor hereby waives all rights of recovery and all insurance policies required above shall be endorsed to waive all rights of subrogation against OmniTRAX, Railroad, its affiliates, and other required parties as set forth above for damages to the extent covered by insurance.

J. Contractor's or subcontractor's compliance with obtaining the above insurances shall in no way limit the "Liability and Indemnity" afforded to the Indemnified Parties specified in an executed Agreement.



Entry onto OMNITRAX Property

Key Points

Written permission is required for all parties entering OMNITRAX property.

- Construction Agreements authorize entry onto OMNITRAX property.
- Temporary right-of-entry agreements can also be used for limited purposes.
- OMNITRAX Property Services handles temporary rights of entry for non-construction activities.
- OMNITRAX Public Projects handles temporary rights of entry for construction activities.
- All parties must adhere to OMNITRAX Safety procedures.
- Appropriate insurance is required.

Overview

To maintain efficient customer service and to ensure the safety of OMNITRAX employees and of those parties requesting access to OMNITRAX property, OMNITRAX requires all parties accessing its right-of-way for investigative activities or for the performance of construction work to have a written agreement with OMNITRAX fully detailing each party's responsibilities. Activities by others with the potential to affect OMNITRAX's property, operations, and or personnel without actually entering OMNITRAX property must also be reviewed with OMNITRAX and appropriate arrangements and agreements completed.

The process by which an appropriate agreement covering entry and/or the other necessary conditions or requirements can be developed and implemented is typically dependent upon the scope of the activities proposed by an outside party or agency. Although the type of agreement may vary, most agreements include insurance and liability provisions, work procedures and conditions and reimbursement provisions relating to payment to OMNITRAX for costs it may incur in relation to the entry or work. The following summarizes the various types of OMNITRAX agreements and contracts most frequently utilized to accommodate the requested entry and the proposed work activities.

Entry for Construction Work via OMNITRAX Public Projects

Entry for construction work (not exclusively associated with utility work) will require a Construction Agreement or a Temporary Right-of-Entry Agreement, as determined by the magnitude of potential impacts to OMNITRAX.

A Construction Agreement will be required for construction work that could impact OMNITRAX facilities or operation, such as construction or rehabilitation of a bridge over OMNITRAX, roadway construction or other highway improvements, or grading and/or drainage work.

Construction work that will not impact OMNITRAX facilities or operation may be handled by a Temporary Right-of-Entry Agreement, as determined by OMNITRAX Real Estate or Engineering Dept.

Entry for Non-Construction Work via OMNITRAX Property Services

A Temporary Right-of-Entry agreement is utilized by OMNITRAX primarily in situations where outside parties or agencies desire to undertake investigative work such as performing survey work, performing bridge inspections or undertaking other activities requiring only access to OMNITRAX property and not construction work activities. Different agreements are used for temporary private crossings.

Applications for Temporary Right-of-Entry agreements for investigative and non-construction work activities (including movement of off-highway or oversized loads at grade crossings) within OMNITRAX's right-of-way can be obtained by contacting OMNITRAX Real Estate Department. Information also is available by visiting <http://omnitrax.com/services/track-access/>.

Entry for Other Purposes via OMNITRAX Property Services

OMNITRAX may use other forms of agreements covering entry by outside parties or agencies depending on work scope or other factors. The process to obtain right of entry for these purposes as listed below may also be initiated through OMNITRAX's Real Estate Department. Information also is available by visiting <http://omnitrax.com/services/track-access/>.

- Environmental Right-of-Entry
- Utility Permit/License Agreement for pipeline and wire line construction – both for specifications and applications
- Land Lease applications
- Movement of oversized loads across OMNITRAX tracks at private or public highway-rail grade crossings
- Movement of off highway construction equipment across OMNITRAX tracks at private or public highway-rail grade crossings.

Construction Monitoring Requirements

Key Points

- **Construction work affecting OMNITRAX will be monitored by OMNITRAX and its consultants at the project sponsor's expense.**
- **Construction monitoring is in addition to flagging and other protective services.**

Overview

To ensure the safety of the public and OMNITRAX employees, maintain quality rail service to OMNITRAX customers and to protect OMNITRAX assets, OMNITRAX may require construction monitoring (in addition to flagging protection) of the project. The construction monitoring will be conducted by OMNITRAX and its consultants at project expense.

General Guidelines

Construction monitoring includes intermittent or continuous on-site presence of OMNITRAX or its consultants during construction activities.

- The construction project sponsor, owner, or agency in charge will pay for the cost of construction monitoring. Construction monitoring will be specified, and the estimated cost will be included in the construction agreement for the project.
- Construction monitoring is in addition to railroad employee flagging.
- Construction monitoring includes OMNITRAX review and approval of all plan changes and required contractor submissions during the construction phase of the project.
- The project sponsor is responsible for its safety and the safety of its property, contractors, and employees. OMNITRAX, as part of its construction monitoring, will review the work site for activities that could interfere with safe operation of the railroad.
- OMNITRAX and its consultants are not responsible for monitoring the general work activities under the direction of the project sponsor for compliance with safety regulation. Any observed unsafe acts or conditions will be reported immediately to the project sponsor or contractor representative.



Railroad Flagging for Activities On or Near OMNITRAX Property and Tracks

Key Points

- Flagging services are required when projects are within close proximity to active rail lines, as required by federal law.
- Flagging services can only be performed by qualified OMNITRAX personnel.
- Arrangements for flagging services may take up to 90 days to schedule a qualified employee.
- Further information regarding Railroad Flagging Services is presented in Appendix D, Section 7: *Special Provisions for Protection of Railway Interests*.

Overview

In the interest of public safety and the safety of employees and property, OMNITRAX will work cooperatively with agencies, consultants, contractors and others who need to access railroad property when work brings them in close proximity to active railroad tracks to determine the appropriate flagging services needed and to make arrangements for those services.

Conditions When OMNITRAX Flagging Services Are Required:

- When any entity is working on, near or adjacent to active railroad tracks.
- When an outside party is using railroad property or performing operations that may affect railroad property or facilities. This includes occasions when a party has been given express permission from OMNITRAX to enter railroad property or perform such operations under the terms of a Construction agreement, Temporary Right-of-Entry agreement or other appropriate documentation.
- When work off railroad property has the potential to impact OMNITRAX property or operations.
- When off-highway construction equipment is crossing the railroad at a private or public crossing.
- When oversized equipment or highway vehicles are to cross the railroad at a private or public crossing.
- In other instances as determined by OMNITRAX.

Qualified Flagging Personnel

OMNITRAX flagging services may only be performed by qualified OMNITRAX employees who are trained in the proper procedures related to rail operations and safety requirements, familiar with rail operations and procedures in a project area and able to communicate directly with OMNITRAX dispatching personnel and train crews.

Arrangements for OMNITRAX Flagging Services

- OMNITRAX will make arrangements for flagging services related to planned work by an outside party under the terms of a temporary right-of-entry agreement, construction agreement, environmental license agreement or other mutually acceptable arrangements.
- Advance notice must be provided to secure OMNITRAX flagging services. The level of advance notice may vary from site to site or project to project or if OMNITRAX determines, under the provisions of its labor agreements with its union forces, that flagging services can only be provided as a result of the flagging position being bid and awarded to qualified OMNITRAX personnel.

Responsibility for Costs and Expenses

- All costs and expenses associated with OMNITRAX flagging services are the sole responsibility of the agency, consultant or contractor.
- OMNITRAX will provide its estimated costs prior to the start of the project work or its assignment of flagging personnel.

- Once flagging personnel are formally assigned by OMNITRAX to a specific work location, the period of assignment can only be changed with appropriate advanced arrangements.
- Charges for providing flagging services beyond a normal eight-hour weekday are calculated and billed at an overtime rate.
- For initial planning purposes, typical flagging cost is \$1,200 per day.

Examples of Flagging Costs and Expenses

Charges billed by OMNITRAX to the agency, consultant or contractor may include, but are not limited to:

- Employee Salary

++ Hourly employee charges are based on the time an employee departs and returns to his or her headquarters location. As such, the charges can be expected to exceed the level actually incurred during the assigned coverage period or while the flagman is present at the specific work location.

++ This period also includes the time required for flagging personnel to perform the required preparations and termination procedures associated with flagging services at a location.

- Overhead Costs

++ These charges are assessed against the hourly employee charges and determined in accordance with standard accounting procedures or as mandated by State and/or Federal regulations.

- Employee Expenses or Per Diem Rate

++ This amount is calculated based on an employee's actual expenses or on a per diem rate according to the terms of applicable collective bargaining agreements between OMNITRAX and its assigned union flagging employees.

++ The amount includes travel and lodging expenses and the cost for a leased, rented, OMNITRAX, or personal vehicle to be used for transportation.

- Administrative, Accounting, and Billing Services

++ This amount is related to the time associated with setting up the agreement, arranging for and supervising the employee, billing and collection of costs, and other expenses associated with OMNITRAX providing flagging services.



Highway-Rail Grade Crossing Surface Maintenance and Replacement

Key Points

- Report issues with crossing surfaces to the OMNITRAX 24/7 crossing hotline at (800) 533-9416.
- Coordination is required for work near crossings.
- Highways must be closed to vehicular traffic for crossing replacement or maintenance work.
- Agreements with OMNITRAX are required for crossing work and work near crossings.
- Crossing surface maintenance and replacement must be performed by OMNITRAX.
- Crossing surfaces must meet criteria set by OMNITRAX's Engineering Standards. For identification purposes, each crossing has a distinct DOT inventory number (such as 654321X) posted at the crossing and the railroad milepost.

Overview

The crossing surface provides a path for highway vehicles to cross railroad tracks. The objective is to provide a safe, smooth, and cost effective crossing for highway and railroad traffic. Highway and railroad maintenance work in the vicinity of highway- rail grade crossings must consider safety concerns for both highway and railroad traffic before, during, and after the time the work is implemented.

Identification of the crossing and location

Each crossing has a unique DOT inventory identification number posted at the crossing. There is often more than one crossing on the same road. The crossing number (such as 123456A) must be used to identify the specific crossing in all communications with the railroad to reduce possible confusion about the specific location.

Crossing Construction

Railroad track is continuous through the crossing and includes railroad ties, rail and fasteners below the surface of the crossing. The crossing surface for highway traffic can be made of several different materials. Drainage is required for all four quadrants at a crossing.

Crossing Surface Types and Selection

Crossing surface material and construction methods are selected for each crossing based on the type of highway and railroad traffic, past experience and funding available from highway agencies for individual projects.

Standard types of OMNITRAX approved crossing surfaces are Concrete or Timber/Asphalt. Projects funded by outside parties may be constructed with other materials if specified by the outside party and approved by OMNITRAX. Modular Platform "Tub" type crossings may be considered for use at locations with slow rail operations of 15 MPH or less and high road vehicle count and/or heavy vehicles.

Crossing Maintenance and Replacement

Crossing maintenance and replacement of the track and crossing surface are performed by OMNITRAX and may be billable to an outside party or highway authority as specified in an agreement. The responsibility for the maintenance of public crossing approach pavement varies by state and is specified in some individual crossing agreements or orders.

Crossing work requires closing the entire highway-rail grade crossing. Replacement of track components through a crossing requires removal of the crossing surface, replacement of track ballast, and surfacing the track through the crossing prior to replacement of the crossing surface. If the subgrade needs to be

improved, the application of a hot mixed asphalt underlayment should be considered. Drainage will be reestablished for all four quadrants. After the crossing surface is replaced, the highway approach paving is completed and then the road is opened to highway traffic. Replacement of the track and crossing surface usually requires that the highway be closed for several days.

Crossing surfaces are also removed and replaced when track maintenance work is performed through a crossing such as rail replacement, tie replacement, and track surfacing (smoothing). Each crossing has the surface removed and replaced after the work has been completed. Crossings are usually closed for several days during this maintenance work.

Requesting Crossing Surface Replacement or Upgrades

Highway agencies seeking replacement of crossing surfaces should contact OMNITRAX Public Projects. The request for the work and the recommended surface must be reviewed and approved by OMNITRAX. If approved, Public Projects will prepare a standard agreement and include the cost estimate for the project.



Alterations to Highway-Rail Grade Crossing Warning Devices

Key Points

- Any alterations to highway-rail grade crossing warning systems must adhere to all applicable laws, regulations and national standards.
- Requests to OMNITRAX for new or modified public at-grade crossing warning devices must be initiated by the highway agency.
- Preliminary Engineering agreements are used to define the project scope and prepare design and estimate information for each project.
- The requesting project sponsor will be responsible for advance payment for engineering, design and installation of warning devices.
- The coordination of traffic intersection signals with warning devices will be determined by the highway agency or regulatory agency.
- Construction agreements are used to implement the projects.

Overview

The Public Projects Group will process all projects proposing alterations to public highway-rail grade crossing warning systems. Included will be projects for opening new crossings, closing existing crossings, modifying or widening of existing crossings, installing new warning systems, removing and/or relocating existing warning systems and modifying/upgrading existing warning systems.

Identification of the crossing and location

Each crossing has a unique DOT inventory identification number posted at the crossing. There is often more than one crossing on the same road. The number (such as 123456A) must be used to identify the specific crossing in all communications with the railroad to reduce possible confusion about the specific location.

Design Considerations

Highway-rail grade crossing warning systems must adhere to all applicable Federal and State standards and regulations, and local policies, laws and ordinances, as well as OMNITRAX standards. The highway agency, not OMNITRAX, is responsible for determining the level and configuration of warning devices for a public highway-rail grade crossing. In addition, the highway agency or other governmental agency responsible for making warning system and equipment determinations is responsible for selecting appropriate vehicular traffic control signs and/or devices for a specific public highway. Loop Detection

Circuitry will not be designed, installed, owned, or maintained by OMNITRAX.

Recommended practices and additional information are available in American Railway Engineering and Maintenance of Way Association (AREMA) manuals and the Manual on Uniform Traffic Control Devices (MUTCD).

Engineering, Cost Estimation, Installation

OMNITRAX will provide engineering, design, and cost estimates for the installation of highway-rail grade crossing warning devices at the expense of the project sponsor as part of the Preliminary Engineering for a project. Changes to highway-rail grade crossing surfaces may also require engineering and estimating by OMNITRAX. Because of labor agreements with OMNITRAX's union forces, OMNITRAX will install the highway-rail grade crossing warning devices.

Operation of Highway-Rail Grade Crossing Warning Devices

Highway-rail grade crossing warning systems are designed to activate in advance of a train entering the crossing. Train speed changes while approaching the crossing may cause the warning system to activate longer than expected. Trains stopping or making forward and reverse movements near the crossing may cause the warning system to activate and then clear after an appropriate time without a train entering the crossing.

Traffic Light Preemption Interconnection

The highway agency will determine if preemption is required. Preemption of the cycle of traffic signals at highway intersections near highway-rail grade crossings requires careful review by highway traffic engineers to determine the appropriate timing and sequence for both the traffic signal and the highway-rail grade crossing warning system. Preemption for the traffic signal may be simultaneous with, or in advance of, the warning system activation. The appropriate sequence and timing shall be provided by the highway agency and distributed to OMNITRAX to facilitate OMNITRAX's signal design. OMNITRAX will furnish one preemption interconnection circuit of a normally closed contact that is designed to open upon the approach or presence of a train and will terminate the closed preemption interconnection circuit in a common cable junction box to be used for the interconnection of the traffic signals and the grade crossing warning devices.



Overhead and Undergrade Bridge Projects

Key Points

- **Overhead and undergrade bridge projects must comply with OMNITRAX's policies and standards, which are available in the appendices of this manual.**
- **All work on overhead and undergrade bridges must be reviewed and approved by OMNITRAX.**
- **OMNITRAX should be involved early in the project development phases to allow required bridge standards to be incorporated into the design of the project.**
- **A preliminary engineering agreement and construction agreement will be required.**
- **OMNITRAX property and operations (including train speeds) shall not be negatively impacted by the project.**
- **No temporary reduced clearances will be permitted.**
- **OMNITRAX requires that new overhead bridges (including existing bridge replacements) span OMNITRAX's right-of-way and have a minimum 23' vertical clearance above top of rail.**

- **All new undergrade bridges must have a ballast deck.**
- **Mechanically Stabilized Earth (MSE) walls are prohibited on OMNITRAX property.**

Overview

Given the efficiencies and environmental benefits of moving goods by rail, OMNITRAX continues to see strong demand for rail services across its network. It is critical that OMNITRAX maintain the ability to expand its network in the future.

OMNITRAX requires that new overhead bridges (including existing bridge replacements) span OMNITRAX's right-of-way and have a minimum 23' vertical clearance above top of rail. OMNITRAX requires that new undergrade bridges provide accommodations for future operating needs, as determined by OMNITRAX.

During project construction, rail operations must not be impeded. Temporary run-around track(s) and/or phased construction may be necessary as determined by OMNITRAX.

General Guidelines

- All bridge projects over or under OMNITRAX shall be governed by the appropriate criteria found in the appendices. This includes but is not limited to replacements, new construction, substructure modifications and/or repairs, superstructure replacement or repair, and deck replacement or overlay.
- Temporary and final drainage plans must be approved by OMNITRAX.
- OMNITRAX's access to its property must be maintained.
- Plans must show all tracks and horizontal and vertical track clearances for both the existing conditions and the proposed project.
- Bridge demolition criteria are found in the Overhead Bridge Criteria in the appendices of this manual.
- Upon completion of construction, a full set of as-built drawings, showing actual measured vertical and horizontal clearances, shall be furnished to OMNITRAX.



Parallel Road Construction

Key Points

- **Proposed parallel public roads shall be located off OMNITRAX property.**
- **Safety at existing highway-rail grade crossings must be considered and not adversely impacted.**
- **No additional drainage may be directed onto railroad property.**
- **OMNITRAX's access to its property must not be impeded.**
- **Construction may result in the need for alterations to crossing warning systems or facilities.**

Overview

In the interest of public safety, parallel public roads shall be located off OMNITRAX property. Parallel roads involving intersections with existing or proposed highways where public or private crossings are present should be aligned to provide sufficient distance from the crossing for the largest vehicle (design vehicle) permitted to use the road to stop between the railroad and the parallel road traffic control signs, markings, and warning devices without interfering with railroad operations, obstructing or preventing the operation of traffic control devices or obstructing the crossing in any manner.

General Guidelines

The design of highways, highway intersection, and configuration of highway-rail grade crossings is the responsibility of the highway agency. Drainage for highway runoff, the railroad corridor, and adjacent property must be designed to reduce or maintain existing railroad drainage and to prevent standing water and potential erosion. Access for OMNITRAX equipment to the railroad property, structures, and track cannot be restricted or prevented.

Federal and State design manuals, the Manual of Uniform Traffic Control Devices (MUTCD) and additional recommended practices available in American Railway Engineering and Maintenance of Way Association manuals (AREMA) provide design information to be considered by the highway agency responsible for the project engineering. The table of contents of this document has additional information on the MUTCD and AREMA manuals and information.



Painting and Cleaning OMNITRAX Bridges to Improve Appearance

Key Points

- **OMNITRAX understands the desire of communities to improve the appearance of bridges and other structures. Safety of OMNITRAX employees, the general public and neighbors restrict some alternatives for bridge appearance improvement.**
- **OMNITRAX may permit others to paint OMNITRAX bridges if labor agreement, technical and responsibility requirements are resolved.**
- **Any surface preparation methods must follow all applicable environmental guidelines and must be approved in advance by OMNITRAX.**
- **OMNITRAX will not accept proposals to attach signage to OMNITRAX bridges.**
- **A written request should be submitted to OMNITRAX's Public Projects Group to initiate consideration of such projects.**

Overview

Requests are occasionally made by outside parties for various beautification projects, including painting of overhead and undergrade bridges. These requests are considered on a case-by-case basis by OMNITRAX. The cost of painting and future aesthetic maintenance will be the responsibility of the project sponsor proposing to paint the OMNITRAX bridge. OMNITRAX will make every effort to cooperate, consistent with maintaining the safety of the public and the safe operation of the railroad.

Consideration of Bridge Painting Projects

Bridge painting proposals must be reviewed and approved by OMNITRAX to ensure compliance with safety and environmental regulations, OMNITRAX specifications, and to ensure that the proposal will not impact OMNITRAX's property or operations.

- OMNITRAX will require an agreement for all bridge painting proposals.
- A public agency must be a party to the agreement.
- OMNITRAX will incur no costs or liabilities as a result of the project.
- The public agency or its designee will be responsible for maintenance of the painted surfaces, including aesthetic damage caused by highway vehicles and vandalism.
- A railroad flagman will be required at the project expense.

Submission of Project Requests

A written request by the party wishing to undertake such projects should be forwarded to OMNITRAX's Public Projects Group for handling. The request should include information about the situation and the project objectives to assist OMNITRAX with completion of the review. The following information should be included:

- The project sponsor and public agency that will execute appropriate agreements for implementation as well as future maintenance of the painted surfaces.
- Paint specifications that meet OMNITRAX standards and methods for surface preparation, cleanup, and paint application.
- Qualifications and experience of the painting contractor. OMNITRAX will accept state qualified bridge painting contractors working for the responsible agency or company. Containment system, clean up and disposal of all paint and other material removed from the bridge. The clean-up and disposal of material from the surface preparation for painting and actual painting must comply with all appropriate regulations. The materials removed during the surface preparation must not impact the surrounding area including ground, water, or air impacts. Materials must not be stored on OMNITRAX property.

- Control of paint overspray and vapors during application. The work must be done complying with appropriate regulations and over spray controlled to prevent damage to adjacent property and vehicles in the area.
- Pictures and conceptual drawing should be submitted with the initial request from the community to simplify the initial review and comment by OMNITRAX.
- Work site safety plan including keeping all personnel away from the tracks and fall protection measures where required.



Cleaning and Painting of Bridges over OMNITRAX

Key Points

- **OMNITRAX understands that maintenance of bridges over OMNITRAX may include cleaning and painting. The safety of OMNITRAX employees, the general public, and the project sponsor's contractors is of paramount importance to OMNITRAX.**
- **A written request should be submitted to OMNITRAX's Public Projects Group to initiate this type of project. The request will be reviewed for safety considerations and compliance with OMNITRAX engineering and environmental standards.**
- **An agreement is required to accommodate engineering, review of plans, flagging, right-of-entry, and payment of OMNITRAX incurred costs.**

Overview

All work over OMNITRAX has the potential to impact OMNITRAX property and rail operations. OMNITRAX will review bridge painting and cleaning projects to ensure environmental and engineering standards are met. This review, flagging protection and construction monitoring costs will be paid by the project sponsor.

Requirements for Initiating and Implementing Bridge Cleaning and Painting

A Preliminary Engineering agreement is required to cover OMNITRAX's review of the project and preparation of a cost estimate and construction agreement.

To ensure safety, a railroad employee flagman must be present to control railroad operations in the area during the planned work.

A written request by the party wishing to undertake such projects should be forwarded to OMNITRAX's Public Projects Group for handling. The request should include information about the location and the project objectives to assist OMNITRAX with completion of the review. The following information should be included:

- The project sponsor and appropriate public agency that will execute appropriate agreements for implementation as well as future maintenance of the painted surfaces.
- Qualifications and experience of the painting contractor. OMNITRAX will accept state qualified bridge painting contractors working for the responsible agency or company.
- Containment system, clean up and disposal of all paint and other material removed from the bridge. The clean-up and disposal of material from the surface preparation for painting and actual painting must comply with all appropriate regulations.
- The materials removed during the surface preparation must not impact the surrounding area including ground, water, or air impacts. Materials must not be stored on OMNITRAX property.

- Control of paint overspray and vapors during application. The work must be done complying with appropriate regulations and over spray controlled to prevent damage to adjacent property and vehicles in the area.
- Pictures and conceptual drawing should be submitted with the initial request from the community to simplify the initial review and comment by OMNITRAX.
- Work site safety plan including keeping all personnel away from the tracks and fall protection measures where required.



Public Road Crossing Openings and Closures

Key Points

- **Both federal and state government policies discourage the creation of new highway-rail grade crossings. To enhance highway-rail grade crossing safety, OMNITRAX endorses the United States Department of Transportation's goal of reducing the number of at-grade crossings through consolidation, elimination, grade separation and restriction of the number of new crossings installed.**
- **Grade separated structures are the best alternative to add new roads or additional highway capacity. OMNITRAX and state and federal agencies have worked with many communities to develop and implement projects that improve highway traffic flow without the creation of new highway-rail grade crossings.**
- **OMNITRAX, the Federal Railroad Administration (FRA), and state agencies encourage communities to consider all alternatives before planning to create new grade crossings and encourage closure of existing grade crossings where possible.**
- **OMNITRAX may provide incentive payments for crossing closures.**
- **To comply with and in support of the federal initiative to reduce crossings, OMNITRAX requires the community to identify three comparable active grade crossings to be closed for each new grade crossing.**

Overview

OMNITRAX understands the importance of highway-rail grade crossings and their relevance to such priorities as economic development, emergency vehicle access and other growth opportunities in the communities through which we operate. Because of the safety concerns associated with highway-rail grade crossings, however, every effort must be made to obtain alternative access or additional capacity using grade separations, or by other roads leading to existing crossings.

Crossing Closure Incentive Program

Eliminating crossings is a goal of OMNITRAX, states and the Federal Railroad Administration (FRA). Likewise, the Federal Highway Administration (FHWA) Railroad-Highway Grade Crossing Handbook acknowledges that the first alternative that should always be considered for a highway-rail at-grade crossing is elimination. Elimination of a crossing provides the highest level of crossing safety because the point of intersection between highway and railroad is removed. Closing adjacent crossings simplifies the design, installation and operation of highway-rail grade crossing warning systems. To help ensure the success of this effort, OMNITRAX may provide incentive payments for the closure of public crossings.

Considerations for Crossing Openings and Closures

The addition of any grade crossing brings the potential for incidents involving trains and motor vehicles. For this reason, both federal and state government policies discourage the creation of new grade crossings. OMNITRAX, other railroads, the United States Department of Transportation and most states encourage communities to carefully consider all alternatives, including grade separations (crossings that go over or under railroad tracks), as opposed to the creation of new at-grade crossings. The cost of a grade separation should not outweigh the enhanced safety it would provide for motorists.

OMNITRAX, the FRA and other railroads actively participate in programs such as Operation Lifesaver, an initiative dedicated to educating the public on the importance of practicing safe driving procedures at grade crossings.

Before agreeing to the establishment of a new crossing, OMNITRAX expects communities to engage in a study with the purpose of identifying existing redundant public crossings for closure. To comply with and in support of the federal initiative to reduce grade crossings, OMNITRAX requires that the

community identify the closure of three or more comparable active public at-grade crossings.

Policies and Procedures to Guide New Crossing Requests:

The project sponsor requesting a new crossing or seeking to convert a private crossing to a public crossing will be asked to prepare a written request, presenting the following information:

1. A description of the proposed highway project, including proposed passive or active traffic control devices, and the need for preemption and/or interconnection with traffic signals, together with a scale drawing or sketch of the proposed highway and vicinity.
2. Expected Annual Average Daily Traffic (AADT) and proposed vehicular speed limit, photographs, aerial map.
3. A detailed explanation of the necessity of the crossing.
4. Identify at-grade crossings to be closed. Include their vehicular speed limit, AADT, and traffic type.
5. The terms on which the project sponsor proposes that the crossing shall be constructed and subsequently maintained.
6. The determination by the highway or regulatory authority of the need for passive or active traffic control devices and other safety treatments (i.e., signage, roadway medians, etc.), as selected by the highway authority consistent with applicable federal and state MUTCD guidelines and requirements.
7. A plan to satisfy any appropriate regulatory authority's requirements, procedures and approval. The project sponsor should coordinate with all applicable agencies (state, county, city, etc.) to ensure proper procedures are followed.
8. Provide OMNITRAX authorization to incur costs for its Preliminary Engineering to review the crossing request (whether or not is approved), design and construction expenses, and for the ongoing maintenance of the crossing surface and related grade crossing warning devices.

OMNITRAX will review the request for a new crossing and inform the project sponsor whether or not the new crossing is approved. OMNITRAX may deny a new crossing request due to safety or operational concerns.



Bicycle/Pedestrian Pathways and Multi-Use Trails

Key Points

- Private or public parallel bicycle/pedestrian pathways and trails are not permitted on OMNITRAX property.
- Bicycle/pedestrian pathways and trails cannot cross tracks at grade outside of existing highway easements.
- The highway agency's design must include additional safety measures for at-grade pathways and trails within existing highway easements.
- OMNITRAX prefers grade separated bicycle/pedestrian pathways and multi-use trails.
- OMNITRAX will oppose condemnation proceedings aimed at recreational use of trackside property.

Overview

OMNITRAX recognizes that communities often wish to establish recreational pathways and trails in the proximity of active railroad lines. While OMNITRAX will work with communities to accommodate such requests, it is critical for project sponsors to recognize that OMNITRAX requirements must be met and safety precautions taken to protect the public and OMNITRAX employees. In addition, certain requests, such as pathway crossings at grade outside of existing highway easements, will not be permitted.

OMNITRAX Policy on Pathways and Trails Parallel to OMNITRAX Property

At OMNITRAX safety is paramount. OMNITRAX's policy is not to permit private or public parallel bicycle/pedestrian paths that come within the railroad's right-of-way. OMNITRAX will insist upon safety measures such as fencing and signage where such pathways or parks are established parallel to the railroad's right-of-way. The cost of installing, inspection and future maintenance are the responsibility of the trail sponsor or agency. OMNITRAX will oppose any attempt to establish recreational usage of OMNITRAX property through condemnation. Regardless of construction of pathways and trails, OMNITRAX reserves the right to use OMNITRAX right of way for operational necessities.

Pathways and Trails Crossing OMNITRAX Tracks and Right-of-Way

Bicycle/pedestrian pathways and trails cannot cross tracks at grade outside of existing highway easements. Grade separated pathway and trail crossings are preferred in all cases, and required when outside of an existing highway easement. Pathways and trails under existing railroad structures are discouraged and will only be allowed under special circumstances. Pathways and trails over and under the railroad track shall have protective fencing.

Bicycle/pedestrian pathways and trails crossing at-grade within a highway easement must have appropriate signs and warning systems as determined by the responsible highway and/or regulatory agency.

All expenses associated with the design, installation and maintenance of the pathway/trail, including the costs of signs, crossing surfaces and warning systems associated with an at-grade crossing, will be paid by the project sponsor.

OMNITRAX prosecutes trespassers and every precaution must be taken to ensure that the public remains clear of OMNITRAX's property.



Quiet Zones Proposals

Key Points

- This section was developed as a guideline for communities that approach OMNITRAX in regards to the implementation of a Quiet Zone under the Federal Railroad Administration's (FRA) final rule on the use of locomotive horns at public highway-rail grade crossings (49 CFR Part 222, the "Rule"), and to ensure OMNITRAX's full compliance and cooperation with respect to the Rule.
- According to the FRA, the implementation of Quiet Zones – without appropriate safeguards and equipment – increases the risk of accidents at highway-rail grade crossings. In this context, OMNITRAX encourages communities considering whether to pursue the implementation of a Quiet Zone to take into account the installation of appropriate Supplemental Safety Measures ("SSMs"), as defined in the Rule, as well as the consolidation and/or closing of adjacent crossings, all of which will act as a safeguard to potentially reduce the risk of accidents at each crossing below the risk level that existed prior to the implementation of the Quiet Zone.
- Communities that wish to implement Quiet Zones will be required to strictly comply with the Rule.
- Pursuant to the Rule, notifications and/or applications to implement or continue Quiet Zones are to be made to the FRA and must involve all relevant state and local agencies, OMNITRAX, and any other rail carriers operating in the area.
- OMNITRAX will seek to be reimbursed for work performed to design, implement, and maintain railroad facilities within Quiet Zones.
- OMNITRAX desires to be a good corporate citizen. OMNITRAX also places importance on the quality and timeliness of service to its customers and the communities it serves. As such, consistent with the Rule, OMNITRAX will seek to encourage communities requesting Quiet Zones to implement solutions and SSMs that optimally achieve safety while minimizing the impact on railroad operations.

Overview

OMNITRAX will fully comply with the Rule, which provides requirements for the sounding of locomotive horns when approaching public highway-rail grade crossings. The Rule also provides guidance for conditions under which a public authority with jurisdiction over the roadway crossing OMNITRAX tracks may apply for and establish Quiet Zones. A Quiet Zone is a section of a rail line that contains one or more consecutive public crossings at which locomotive horns are not routinely sounded. (For full details on the rules, OMNITRAX recommends that communities either visit the FRA web site at www.fra.dot.gov or contact the FRA's Office of Safety at 202-493-6299).

Policy on Quiet Zones

The Rule clearly defines requirements that must be satisfied by the public authority requesting that a Quiet Zone be established or continued. OMNITRAX will expect the public authority to strictly comply with these requirements.

Identification of the crossing and location

Each crossing has a unique DOT inventory identification number posted at the crossing. There is often more than one crossing on the same road. The crossing number (such as 654321X) must be used to identify the specific crossing in all communications with the railroad to reduce possible confusion about the specific location.

Preliminary Planning for Quiet Zones

Preliminary work by OMNITRAX personnel and/or its consultants is likely to be required in connection with the proposed new or continued Quiet Zone, including, but not limited to: updating crossing inventory information; attending meetings; participating, to the extent feasible, in diagnostic reviews of the public, private and pedestrian crossings in a proposed Quiet Zone; preparing and processing estimates covering the cost of work to be performed by OMNITRAX, if applicable; and processing necessary agreements. Preliminary Planning begins when Agency completes the OmniTRAX Quiet Zone Data Form and submits it along with a \$6,000 advanced deposit. OMNITRAX will coordinate preliminary planning activities with each public authority pursuant to an initial agreement that will also provide for payment to OMNITRAX for services provided during development of Quiet Zones.

Getting Started: Process for Pursuing a Quiet Zone

1. Groups or individuals interested in Quiet Zones should first contact the public authority responsible for the highway where the Quiet Zone would be located. Public authorities should then contact the FRA for additional information on Quiet Zone requirements and procedures.
2. The public authority shall initiate contact with OMNITRAX. Those making this contact will be furnished with the Quiet Zone policy and advised of the appropriate contact within the OMNITRAX Real Estate department for the initial planning activities with OMNITRAX.
3. If the public authority decides to proceed with preliminary planning for a Quiet Zone, OMNITRAX will assist by providing, when required, DOT inventory information and attending diagnostic review meetings, to the extent schedules permit. OMNITRAX resources to attend these meetings are limited and thus OMNITRAX will seek flexibility in establishing meeting dates and times in order to permit OMNITRAX representatives to attend.
4. The preliminary planning for a Quiet Zone project should include a review of the following principles:
 - a. OMNITRAX will cooperate and work in good faith with local communities and the appropriate public authority to provide all possible assistance in a manner that protects the safety of local citizens and their communities as well as OMNITRAX's employees.
 - b. In accordance with the Rule, OMNITRAX's support of a Quiet Zone proposal will require the plan to meet very specific FRA measures and requirements, which in some cases, may be subject to FRA review, approval and on-going oversight. Accordingly, OMNITRAX retains the right to review and comment on the requests.
 - c. OMNITRAX expects the involvement of the state DOT, FRA, and/or state regulatory authority in any diagnostic review of a public, private and pedestrian crossing in the Quiet Zone corridor being proposed.
 - d. As discussed above, the appropriate public authority will be expected to reimburse OMNITRAX for its cost of design, installation and future maintenance of safety enhancements, including, but not limited to, its installation of Supplemental Safety Measures (SSMs) and Alternative Safety Measures (ASMs). As an example, OMNITRAX installs and maintains active warning systems at highway-rail grade crossings that may be modified or expanded for a Quiet Zone. Curbs, medians, pavement markings and other traffic control signs such as advance warning signs are installed and maintained by Public Authorities. The specific responsibilities are expected to be resolved during the preliminary planning for a Quiet Zone.
 - e. If one or more SSMs or ASMs selected to be installed require work by OMNITRAX, a

separate standard Preliminary Engineering Agreement will be required to cover OMNITRAX's engineering, review, handling, and estimate preparation connected with the proposed work. A separate Construction Agreement will be used for implementation of the projects. The cost of this work will be the responsibility of the requesting public authority.

- f. SSMs or ASMs installed and maintained by the public authority as described above are important parts of traffic control at each crossing. The Public authority is responsible for periodic inspection and repair of these items.
5. Standard OMNITRAX Public Projects Group design and estimating procedures will be used for projects related to Quiet Zones.
6. Vehicle Loop Detection Circuitry will not be designed, installed, owned, or maintained by OMNITRAX.
7. Wayside Horn Systems are not authorized for use on OMNITRAX.



APPENDIX A

PRELIMINARY ENGINEERING AGREEMENT

Engineering Services,
252 Clayton Street 4th Floor,
Denver, CO 80206
Revised: March 2018

PRELIMINARY ENGINEERING AGREEMENT

This Preliminary Engineering Agreement (this "Agreement") is made as of _____, 20____, by and between GREAT WESTERN RAILWAY OF COLORADO, L.L.C, a Colorado limited liability company, hereafter referred to as "RAILROAD", and [insert name of public agency], a body corporate and political subdivision of the [State or Commonwealth] of [insert name of State/Commonwealth] ("Agency"). RAILROAD and Agency may sometimes be referred to as a "Party" or collectively as the "Parties."

EXPLANATORY STATEMENT

1. Agency wishes to facilitate the development of the proposed [DESCRIBE PROJECT] (the "Project").
2. Agency has requested that RAILROAD proceed with certain necessary engineering and/or design services for the Project to facilitate the Parties' consideration of the Project.
3. Subject to the approval of RAILROAD, which approval may be withheld for any reason directly or indirectly related to safety or RAILROAD operations, property, or facilities, the Project is to be constructed, if at all, at no cost to RAILROAD, under a separate construction agreement to be executed by the Parties at a future date.

NOW, THEREFORE, for and in consideration of the foregoing Explanatory Statement and other good and valuable consideration, the receipt and sufficiency of which are acknowledged by the Parties, the Parties agree as follows:

1. Scope of Work

1.1 Generally. The work to be done by RAILROAD under this Agreement shall consist of: (i) the preparation or review and approval of preliminary and final engineering and design plans, specifications, drawings, agreements and other documents pertaining to the Project, (ii) the preparation of cost estimates for RAILROAD's work in connection with the Project, and (iii) the review of construction cost estimates, site surveys, assessments, studies, agreements and related construction documents submitted to RAILROAD by Agency or requested from Agency by Railroad for the Project (collectively, the "Engineering Work"). Agency agrees that it shall not unreasonably withhold such requested documents.

Engineering Work may also include office reviews, field reviews, attending hearings and meetings, and preparing correspondence, reports, and other documentation in connection with the Project. Nothing contained in this Agreement shall oblige RAILROAD to perform Engineering Work which, in RAILROAD's opinion, is not relevant to RAILROAD's participation in the Project.

1.2 Effect of RAILROAD Approval or Preparation of Documents. By its review, approval or preparation of plans, specifications, drawings or other documents pursuant to this Agreement (collectively, the "Plans"), RAILROAD signifies only that the Plans and the Project proposed to be constructed in accordance with the Plans satisfy RAILROAD's requirements. RAILROAD expressly disclaims all other representations and warranties in connection with the Plans, including, but not limited to, the integrity, suitability or fitness for

the purposes of Agency or any other persons of such Plans or the Project constructed in accordance with the Plans.

2. Project Construction. Nothing contained in this Agreement shall be deemed to constitute RAILROAD's approval of or consent to the construction of the Project, which approval or consent may be withheld for any reason directly or indirectly related to safety or RAILROAD operations, property, or facilities. The Project if constructed is to be constructed, if at all, under a separate construction agreement to be executed by the Parties at a future date.

3. Reimbursement of RAILROAD Expenses.

3.1. Reimbursable Expenses. Agency shall reimburse RAILROAD for all costs and expenses incurred by RAILROAD in connection with the Engineering Work, including, without limitation: (i) all out of pocket expenses, (ii) travel and lodging expenses, (iii) telephone, facsimile, and mailing expenses, (iv) costs for equipment, tools, materials and supplies, (v) sums paid to consultants and subcontractors, and (vi) all labor, including overtime and holiday pay, together with labor overhead percentages established by RAILROAD pursuant to applicable law (collectively, the "Reimbursable Expenses") and any taxes related to all such costs and expenses.

3.2 Estimate. RAILROAD has estimated the total Reimbursable Expenses for the Project to be approximately \$ (the "Estimate" as amended or revised). In the event RAILROAD anticipates that actual Reimbursable Expenses may exceed such Estimate, it shall provide Agency with the revised Estimate of total Reimbursable Expenses for Agency's approval and confirmation that sufficient funds have been appropriated to cover the total Reimbursable Expenses as reflected in the revised Estimate. RAILROAD may elect, by delivery of notice to Agency, to immediately cease all further Engineering Work, unless and until Agency provides such approval and confirmation.

3.3 Payment Terms.

3.3.1. Advance Payment in Full. Upon execution and delivery of this Agreement by Agency, Agency will deposit with RAILROAD a sum equal to the Reimbursable Expenses, as shown by the Estimate. Agency shall pay RAILROAD for Reimbursable Expenses in the amount set forth in RAILROAD *PUBLIC PROJECTS APPLICATION FORM*, attached hereto, a copy of which shall accompany the advance payment. If RAILROAD anticipates that it may incur Reimbursable Expenses in excess of the deposited amount, RAILROAD will request an additional deposit equal to the then remaining Reimbursable Expenses which RAILROAD estimates that it will incur. RAILROAD shall request such additional deposit by delivery of invoices to Agency. Agency shall make such additional deposit within thirty (30) days following delivery of such invoice to Agency.

3.3.2. Following completion of all Engineering Work, RAILROAD shall reconcile the total Reimbursable Expenses incurred by RAILROAD against the total payments received from Agency and shall submit to Agency a final invoice if required. Agency shall pay to RAILROAD the amount by which actual Reimbursable Expenses exceed total payments, as shown by the final invoice, within thirty (30) days following delivery to Agency of the final invoice.

RAILROAD will provide a refund of any unused deposits if the deposit exceeds the incurred Reimbursable Expenses for the Project.

3.3.3. In the event that Agency fails to pay RAILROAD any sums due RAILROAD under this Agreement: (i) Agency shall pay RAILROAD interest at the lesser of 1.0% per month or the maximum rate of interest permitted by applicable law on the delinquent amount until paid in full; and (ii) RAILROAD may elect, by delivery of notice to Agency: (A) to immediately cease all further Engineering Work on the Project, unless and until Agency pays the entire delinquent sum, together with accrued interest; and/or (B) to terminate this Agreement.

3.4 Effect of Termination. Agency agrees that its obligation to pay RAILROAD Reimbursable Expenses in accordance with this Section shall survive termination of this Agreement for any reason.

4. Appropriations. Agency represents to RAILROAD that: (i) Agency has obtained appropriations sufficient to reimburse RAILROAD for the Reimbursable Expenses encompassed by the initial Estimate; (ii) Agency shall use its best efforts to obtain appropriations necessary to cover Reimbursable Expenses encompassed by subsequent Estimates approved by Agency; and (iii) Agency shall promptly notify RAILROAD in the event that Agency is unable to obtain such additional appropriations.

5. Termination.

5.1 By Agency. Agency may terminate this Agreement, for any reason, by delivery of notice to RAILROAD. Such termination shall become effective upon the expiration of fifteen (15) calendar days following delivery of notice to RAILROAD or such later date designated by the notice.

5.2 By RAILROAD. RAILROAD may terminate this Agreement (i) as provided pursuant to Section 3.3.3., or (ii) upon Agency's breach of any of the terms of, or its obligations under, this Agreement and such breach continues without cure for a period of thirty (30) days after written notification from RAILROAD to Agency of such breach.

5.3 Consequences of Termination. If the Agreement is terminated by either Party pursuant to this Section or any other provision of this Agreement, the Parties understand that it may be impractical to immediately stop the Engineering Work. Accordingly, both Parties agree that, in such instance a Party may continue to perform Engineering Work until it has reached a point where it may reasonably and/or safely suspend the Engineering Work.

Agency shall reimburse RAILROAD pursuant to this Agreement for the Engineering Work performed, plus all costs reasonably incurred by RAILROAD to discontinue the Engineering Work and all other costs of RAILROAD incurred as a result of the Project up to the time of full suspension of the Engineering Work. Termination of this Agreement or Engineering Work on the Project, for any reason, shall not diminish or reduce Agency's obligation to pay RAILROAD for Reimbursable Expenses incurred in accordance with this Agreement. In the event of the termination of this Agreement or the Engineering Work for any reason, RAILROAD's only remaining obligation to Agency shall be to

refund to Agency payments made to RAILROAD in excess of Reimbursable Expenses in accordance with Section 2.

6. Subcontracts. RAILROAD shall be permitted to engage outside consultants, counsel and subcontractors to perform or assist with all or any portion of the Engineering Work.

7. Notices. All notices, consents and approvals required or permitted by this Agreement shall be in writing and shall be deemed delivered (i) on the expiration of three (3) days following mailing by first class U.S. mail, (ii) on the next business day following mailing by a nationally recognized overnight carrier, or (iii) on the date of transmission, as evidenced by written confirmation of successful transmission, if by facsimile or other electronic transmission if sent on a business day (or if not sent on a business day, then on the next business day after the date sent), to the Parties at the addresses set forth below, or such other addresses as either Party may designate by delivery of prior notice to the other Party:

If to RAILROAD: GREAT WESTERN RAILWAY OF COLORADO, L.L.C.

252 Clayton St., #4

Denver, Colorado 80206

Attention: _____

If to Agency:

8. Entire Agreement. This Agreement embodies the entire understanding of the Parties, may not be waived or modified except in a writing signed by authorized representatives of both Parties, and supersedes all prior or contemporaneous written or oral understandings, agreements or negotiations regarding its subject matter. In the event of any inconsistency between this Agreement and the Exhibits, the more specific terms of the Exhibits shall be deemed controlling.

9. Waiver. If either Party fails to enforce its respective rights under this Agreement, or fails to insist upon the performance of the other Party's obligations hereunder, such failure shall not be construed as a permanent waiver of any rights or obligations in this Agreement.

10. Assignment. RAILROAD may assign this Agreement and all rights and obligations herein to a successor in interest, parent company, affiliate, or future affiliate. Upon assignment of this Agreement by RAILROAD and the assumption by RAILROAD's assignee of RAILROAD's obligations under this Agreement, RAILROAD shall have no further obligations under this Agreement. Agency shall not assign its rights or obligations under this Agreement without RAILROAD's prior written consent, which consent may be withheld for any reason.

11. Applicable Law. This Agreement shall be construed and enforced in accordance with the laws of the State of Colorado. In the event of litigation relating to or arising out of this Agreement, the prevailing Party shall be entitled to recover its costs and reasonable attorney's fees.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed in duplicate, each by its duly authorized officers, as of the date of this Agreement.

[AGENCY]

By: _____

Print Name: _____

Title: _____

GREAT WESTERN RAILRAY OF COLORADO, L.L.C.

By: _____

Print Name: _____



APPENDIX B

CONSTRUCTION AGREEMENT

Engineering Services
252 Clayton Street 4th Floor
Denver, CO 80206
Revised: December 2018

CONSTRUCTION AGREEMENT

This Construction Agreement (“Agreement”) is made as of __, 20____, by and between GREAT WESTERN RAILWAY OF COLORADO, L.L.C., a Colorado limited liability company (“RAILROAD”), and [PUBLIC AGENCY], a body corporate and political subdivision of the State of Colorado (“Agency”).

EXPLANATORY STATEMENT

1. Agency has proposed to construct, or to cause to be constructed, [PROJECT DESCRIPTION] (the “Project”).
2. Agency has obtained, or will obtain, all authorizations, permits and approvals from all local, state and federal agencies (including Agency), and their respective governing bodies and regulatory agencies, necessary to proceed with the Project and to appropriate all funds necessary to construct the Project.
3. Agency acknowledges that: (i) by entering into this Agreement, RAILROAD will provide services and accommodations to promote public interest in this Project, without profit or other economic inducement typical of other Agency contractors; (ii) neither RAILROAD nor its affiliates (including their respective directors, officers, employees or agents) will incur any costs, expenses, losses or liabilities in excess of payments made to RAILROAD, by or on behalf of Agency or its contractors, pursuant to this Agreement; and (iii) RAILROAD retains the paramount right to regulate all activities affecting its property and operations.
4. It is the purpose of this Agreement to provide for the terms and conditions upon which the Project may proceed.

NOW, THEREFORE, in consideration of the foregoing Explanatory Statement and other good and valuable consideration, the receipt and sufficiency of which are acknowledged by the parties, the parties agree as follows:

1. PROJECT PLANS AND SPECIFICATIONS

Preparation and Approval. Pursuant to Exhibit A of this Agreement, all plans, specifications, drawings and other documents necessary or appropriate to the design and construction of the Project shall be prepared, at Agency’s sole cost and expense, by Agency or RAILROAD or their respective contractors. Project plans, specifications and drawings prepared by or on behalf of Agency shall be subject, at RAILROAD’s election, to the review and approval of RAILROAD. Such plans, specifications and drawings, as prepared or approved by RAILROAD, are referred to as the “Plans”, and shall be incorporated and deemed a part of this Agreement. Plans prepared or submitted to and approved by RAILROAD as of the date of this Agreement are set forth in Exhibit B to this Agreement.

Effect of RAILROAD Approval or Preparation of Plans. By its review, approval or preparation of Plans pursuant to this Agreement, RAILROAD signifies only that such Plans and improvements constructed in accordance with such Plans and improvements constructed in accordance with such Plans satisfy RAILROAD’s requirements. RAILROAD expressly disclaims all other representations and warranties in connection with the Plans, including, but not limited to, the integrity, suitability or fitness for the purposes of Agency or any other persons of the Plans or improvements constructed in accordance with the Plans.

Compliance with Plans. The Project shall be constructed in accordance with the Plans.

2. ALLOCATION AND CONDUCT OF WORK

Work in connection with the Project shall be allocated and conducted as follows:

2.1 RAILROAD Work. Subject to timely payment of Reimbursable Expenses as provided by Section 4, RAILROAD shall provide, or cause to be provided, the services as set forth by Exhibit A to this Agreement. Agency agrees that RAILROAD shall provide all services that RAILROAD deems necessary or appropriate (whether or not specified by Exhibit A) to preserve and maintain its property and operations, without impairment or exposure to liability of any kind and in compliance with all applicable federal, state and local regulations and RAILROAD’s contractual obligations, including, but not limited to, RAILROAD’s existing or proposed third party agreements and collective bargaining agreements.

2.2 Agency Work. Agency shall perform, or cause to be performed, all work as set forth by Exhibit A, at Agency’s sole cost and expense.

2.3 Conduct of Work. RAILROAD shall commence its work under this Agreement following: (i) delivery to RAILROAD of a notice to proceed from Agency; (ii) payment of Reimbursable Expenses (as provided by Section 4.1) as required by RAILROAD prior to the commencement of work by RAILROAD; (iii) issuance of all permits, approvals and authorizations necessary or appropriate for such work; and (iv) delivery of proof of insurance acceptable to RAILROAD, as required by Section 9. The initiation of any services by RAILROAD pursuant to this Agreement, including, but not limited to, the issuance of purchase orders or bids for materials or services, shall constitute commencement of work for the purposes of this Section. The parties intend that all work by RAILROAD or on RAILROAD property shall conclude no later than [INSERT DATE], unless the parties mutually agree to extend such date.

3. SPECIAL PROVISIONS

Agency shall observe and abide by, and shall require its contractors ("Contractors") to observe and abide by the terms, conditions and provisions set forth in Exhibit C to this Agreement (the "Special Provisions"). To the extent that Agency performs Project work itself, Agency shall be deemed a Contractor for purposes of this Agreement. Agency further agrees that, prior to the commencement of Project work by any third party Contractor, such Contractor shall execute and deliver to RAILROAD Schedule I to this Agreement to acknowledge Contractor's agreement to observe and abide by the terms and conditions of this Agreement.

4. COST OF PROJECT AND REIMBURSEMENT PROCEDURES

4.1 Reimbursable Expenses. Agency shall reimburse RAILROAD for all costs and expenses incurred by RAILROAD in connection with the Project, including, without limitation: (1) all out of pocket expenses, (2) travel and lodging expenses, (3) telephone, facsimile, and mailing expenses, (4) costs for equipment, tools, materials and supplies, (5) sums paid to RAILROAD's consultants and subcontractors, and (6) RAILROAD labor in connection with the Project, together with RAILROAD labor overhead percentages established by RAILROAD pursuant to applicable law (collectively, "Reimbursable Expenses").

Reimbursable Expenses shall also include expenses incurred by RAILROAD prior to the date of this Agreement to the extent identified by the Estimate provided pursuant to Section 4.2.

4.2 Estimate. RAILROAD has estimated the total Reimbursable Expenses for the Project as shown on Exhibit D (the "Estimate", as amended or revised). In the event RAILROAD anticipates that actual Reimbursable Expenses for the Project may exceed such Estimate, it shall provide Agency with the revised Estimate of the total Reimbursable Expenses, together with a revised Payment Schedule (as defined by Section 4.3.1), for Agency's approval and confirmation that sufficient funds have been appropriated to cover the total Reimbursable Expenses of such revised Estimate. RAILROAD may elect, by delivery of notice to Agency, to immediately cease all further work on the Project, unless and until Agency provides such approval and confirmation.

4.3 Payment Terms.

4.3.1 Agency shall pay RAILROAD for Reimbursable Expenses in the amounts and on the dates set forth in the Payment Schedule as shown on Exhibit E (the "Payment Schedule", as revised pursuant to Section 4.2). RAILROAD agrees to submit invoices to Agency for such amounts and Agency shall remit payment to RAILROAD at the later of thirty (30) days following delivery of each such invoice to Agency or, the payment date (if any) set forth in the Payment Schedule.

4.3.2 Following completion of the Project, RAILROAD shall submit to Agency a final invoice that reconciles the total Reimbursable Expenses incurred by RAILROAD against the total payments received from Agency. Agency shall pay to RAILROAD the amount by which Reimbursable Expenses exceed total payments as shown by the final invoice, within thirty (30) days following delivery of such invoice to Agency. In the event that the payments received by RAILROAD from Agency exceed the Reimbursable Expenses, RAILROAD shall remit such excess to Agency.

4.3.3 In the event that Agency fails to pay RAILROAD any sums due RAILROAD under this Agreement: (i) Agency shall pay RAILROAD interest at the lesser of 1.0% per month or the maximum rate of interest permitted by applicable law on the delinquent amount until paid in full; and (ii) RAILROAD may elect, by delivery of notice to Agency: (A) to immediately cease all further work on the Project, unless and until Agency pays the entire delinquent sum, together with accrued interest; and/or (B) to terminate this Agreement.

4.3.4 All invoices from RAILROAD shall be delivered to Agency in accordance with Section 16 of this Agreement. All payments by Agency to RAILROAD shall be made by certified check and mailed to the following address or such other address as designated by RAILROAD's notice to Agency:

Great Western Railway of Colorado, L.L.C.
omnitrax-invoices@avidbill.com

4.4 Effect of Termination. Agency's obligation to pay to RAILROAD Reimbursable Expenses in accordance with Section 4 shall survive termination of this Agreement for any reason.

5. APPROPRIATIONS

Agency represents to RAILROAD that: (i) Agency has appropriated funds sufficient to reimburse RAILROAD for the Reimbursable Expenses encompassed by the Estimate attached as Exhibit D; (ii) Agency shall use its best efforts to obtain appropriations necessary to cover Reimbursable Expenses encompassed by subsequent Estimates approved by Agency; and (iii) Agency shall promptly notify RAILROAD in the event that Agency is unable to obtain such appropriations.

6. EASEMENTS AND LICENSES

6.1 Agency Obligation. Agency shall acquire all necessary licenses, permits and easements required for the Project.

6.2 Temporary Construction Licenses. Insofar as it has the right to do so, RAILROAD hereby grants Agency a nonexclusive license to access and cross RAILROAD's property, to the extent necessary for the construction of the Project (excluding ingress or egress over public grade crossings), along such routes and upon such terms as may be defined and imposed by RAILROAD and such temporary construction easements as may be designated on the Plans approved by RAILROAD.

Permanent Easements. Insofar as it has the right to do so, RAILROAD shall grant, without warranty to Agency, easements for the use and maintenance of the Project wholly or partly on RAILROAD property as shown on the Plans approved by RAILROAD, if any, on terms and conditions and at a price acceptable to the parties. Upon request by RAILROAD, Agency shall furnish to RAILROAD descriptions and plat plans for the easements.

7. PERMITS

At its sole cost and expense, Agency shall procure all permits and approvals required by any federal, state, or local governments or governmental agencies for the construction, maintenance and use of the Project, copies of which shall be provided to RAILROAD.

8. TERMINATION

8.1 By Agency. For any reason, Agency may, as its sole remedy, terminate this Agreement by delivery of notice to RAILROAD. Agency shall not be entitled to otherwise pursue claims for consequential, direct, indirect or incidental damages or lost profits as a consequence of RAILROAD's default or termination of this Agreement or Work on the Project by either party.

8.2 By RAILROAD. In addition to the other rights and remedies available to RAILROAD under this Agreement, RAILROAD may terminate this Agreement by delivery of notice to Agency in the event Agency or its Contractors fail to observe the terms or conditions of this Agreement and such failure continues more than ten (10) business days following delivery of notice of such failure by RAILROAD to Agency.

8.3 Consequences of Termination. If the Agreement is terminated by either party pursuant to this Section or any other provision of this Agreement, the parties understand that it may be impractical for them to immediately stop the Work. Accordingly, they agree that, in such instance a party may continue to perform Work until it has reached a point where it may reasonably and safely suspend the Work. Agency shall reimburse RAILROAD pursuant to this Agreement for the Work performed, plus all costs reasonably incurred by RAILROAD to discontinue the Work and protect the Work upon full suspension of the same, the cost of returning RAILROAD's property to its former condition, and all other costs of RAILROAD incurred as a result of the Project up to the time of full suspension of the Work. Termination of this Agreement or Work on the Project, for any reason, shall not diminish or reduce Agency's obligation to pay RAILROAD for Reimbursable Expenses incurred in accordance with this Agreement. In the event of the termination of this Agreement or the Work for any reason, RAILROAD's only remaining obligation to Agency shall be to refund to Agency payments made to RAILROAD in excess of Reimbursable Expenses in accordance with Section 4.

9. INSURANCE

In addition to the insurance that Agency requires of its Contractor, Agency shall acquire or require its Contractor to purchase and maintain insurance in compliance with RAILROAD's insurance requirements attached to this Agreement as Exhibit F. Neither Agency nor Contractor shall commence work on the Project until such policy or policies have been submitted to and approved by RAILROAD's Risk Management Department.

10. OWNERSHIP AND MAINTENANCE

[RAILROAD UTILIZES VARIOUS LANGUAGE IN COMPLETING THIS SECTION DESCRIBING BOTH MAINTENANCE RESPONSIBILITIES FOR RAILROAD AND AGENCY WHICH IS DEPENDENT UPON THE PROJECT WORK SCOPE, PROVISIONS OF LAW OR REGULATORY ORDERS, PROJECT NEGOTIATIONS AND OTHER FACTORS—FINAL LANGUAGE TO BE DETERMINED]

10.1 By Agency.

10.2 By RAILROAD.

10.3 Alterations. Agency shall not undertake any alteration, modification or expansion of the Project, without the prior written approval of RAILROAD, which may be withheld for any reason, and the execution of such agreements as RAILROAD may require.

11. INDEMNIFICATION

11.1 Generally. To the maximum extent permitted by applicable law, Agency and its Contractors shall indemnify, defend, and hold RAILROAD and its affiliates harmless from and against all claims, demands, payments, suits, actions, judgments, settlements, and damages of every nature, degree, and kind (including direct, indirect, consequential, incidental, and punitive damages), for any injury to or death to any person(s) (including, but not limited to the employees of RAILROAD, its affiliates, Agency or its Contractors), for the loss of or damage to any property whatsoever (including but not limited to property owned by or in the care, custody, or control of RAILROAD, its affiliates, Agency or its Contractors, and environmental damages and any related remediation brought or recovered against RAILROAD and its affiliates), arising directly or indirectly from the negligence, recklessness or intentional wrongful misconduct of the Contractors, Agency, and their respective agents, employees, invitees, contractors, or its contractors' agents, employees or invitees in the performance of work in connection with the Project or activities incidental thereto, or from their presence on or about RAILROAD's property. The foregoing indemnification obligation shall not be limited to the insurance coverage required by this Agreement, except to the extent required by law or otherwise expressly provided by this Agreement.

11.2 Compliance with Laws. Agency shall comply, and shall require its Contractors to comply, with any federal, state, or local laws, statutes, codes, ordinances, rules, and regulations applicable to its construction and maintenance of the Project. Agency's Contractors shall indemnify, defend, and hold RAILROAD and its affiliates harmless with respect to any fines, penalties, liabilities, or other consequences arising from breaches of this Section.

11.3 "RAILROAD Affiliates". For the purpose of this Section 11, RAILROAD's affiliates include RAILROAD Corporation and all entities, directly or indirectly, owned or controlled by or under common control of RAILROAD or RAILROAD Corporation and their respective officers, directors, employees and agents.

11.4 Notice of Incidents. Agency and its Contractor shall notify RAILROAD promptly of any loss, damage, injury or death arising out of or in connection with the Project work.

11.5 Survival. The provisions of this Section 11 shall survive the termination or expiration of this Agreement.

12. INDEPENDENT CONTRACTOR

The parties agree that neither Agency nor its Contractors shall be deemed either agents or independent contractors of RAILROAD. Except as otherwise provided by this Agreement, RAILROAD shall exercise no control whatsoever over the employment, discharge, compensation of, or services rendered by Agency or Agency's Contractors, or the construction practices, procedures, and professional judgment employed by Agency or its Contractor to complete the Project. Notwithstanding the foregoing, this Section 12 shall in no way affect the absolute authority of RAILROAD to prohibit Agency or its Contractors or anyone from entering RAILROAD's property, or to require the removal of any person from its property, if it determines, in its sole discretion, that such person is not acting in a safe manner or that actual or potential hazards in, on or about the Project exist.

13. "ENTIRE AGREEMENT"

This Agreement embodies the entire understanding of the parties, may not be waived or modified except in a writing signed by authorized representatives of both parties, and supersedes all prior or contemporaneous written or oral understandings, agreements or negotiations regarding its subject matter. In the event of any inconsistency between this Agreement and the Exhibits, the more specific terms of the Exhibits shall be deemed controlling.

14. WAIVER

If either party fails to enforce its respective rights under this Agreement, or fails to insist upon the performance of the other party's obligations hereunder, such failure shall not be construed as a permanent waiver of any rights or obligations in this Agreement.

15. ASSIGNMENT

RAILROAD may assign this Agreement and all rights and obligations herein to a successor in interest, parent company, affiliate, or future affiliate. Upon assignment of this Agreement by RAILROAD and the assumption of RAILROAD's assignee of RAILROAD's obligations under this Agreement, RAILROAD shall have no further obligation under this Agreement. Agency shall not assign its rights or obligations under this Agreement without RAILROAD's prior consent, which consent may be withheld for any reason.

16. NOTICES

All notices, consents and approvals required or permitted by this Agreement shall be in writing and shall be deemed delivered upon personal delivery, upon the expiration of three (3) days following mailing by first class U.S. mail, or upon the next business day following mailing by a nationally recognized overnight carrier, to the parties at the addresses set forth below, or such other addresses as either party may designate by delivery of prior notice to the other party:

If to RAILROAD:

If to Agency:

17. SEVERABILITY

The parties agree that if any part, term or provision of this Agreement is held to be illegal, unenforceable or in conflict with any applicable federal, state, or local law or regulation, such part, term or provision shall be severable, with the remainder of the Agreement remaining valid and enforceable.

18. APPLICABLE LAW

This Agreement shall be governed by the laws of the State of _____, exclusive of its choice of law rules. The parties further agree that the venue of all legal and equitable proceedings related to disputes under this Agreement shall be situated in Colorado, and the parties agree to submit to the personal jurisdiction of the State of Colorado.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed in duplicate, each by its duly authorized officers, as of the date of this Agreement.

[PUBLIC AGENCY]

By _____

PrintName_____

Title _____

GREAT WESTERN RAILWAY OF COLORADO, L.L.C.

By _____

PrintName_____

Title _____

EXHIBIT A

ALLOCATION OF WORK

Subject to Section 2.1, work to be performed in connection with the Project is allocated as follows:

A. Agency shall let by contract to its Contractors:

RAILROAD shall perform or cause to be performed:

EXHIBIT B

PLANS AND SPECIFICATIONS

Plans, Specifications and Drawings:

As of the date of this Agreement, the following plans, specifications and drawings have been submitted by Agency to RAILROAD for its review and approval:

[INSERT PLAN DESCRIPTION HERE]

EXHIBIT C
RAILROAD SPECIAL
PROVISIONS

EXHIBIT D
INITIAL ESTIMATE

EXHIBIT E
PAYMENT SCHEDULE

Advance Payment in Full

Upon execution and delivery of notice to proceed with the Project, Agency will deposit with RAILROAD a sum equal to the Reimbursable Expenses, as shown by the Estimate. If RAILROAD anticipates that it may incur Reimbursable Expenses in excess of the deposited amount, RAILROAD will request an additional deposit equal to the then remaining Reimbursable Expenses which RAILROAD estimates that it will incur. RAILROAD shall request such additional deposit by delivery of invoices to Agency. Agency shall make such additional deposit within 30 days following delivery of such invoice to Agency

[NOTE: ALTERNATE PAYMENT PROVISIONS MAY BE ABLE TO BE CONSIDERED BY RAILROAD IF DEEMED ACCEPTABLE AND ARE SUBJECT TO NEGOTIATION BETWEEN RAILROAD AND AGENCY]

EXHIBIT F

INSURANCE REQUIREMENTS

SCHEDULE I

CONTRACTOR'S ACCEPTANCE

To and for the benefit of RAILROAD Transportation, Inc. ("RAILROAD") and to induce RAILROAD to permit Contractor on or about RAILROAD's property for the purposes of performing work in accordance with the Agreement dated _____, 20____, between [PUBLIC AGENCY] and RAILROAD, Contractor hereby agrees to abide by and perform all applicable terms of the Agreement, including, but not limited to Exhibits C and F to the Agreement, and Sections 3, 9 and 11 of the Agreement.

Contractor: _____

By: _____

Name: _____

Title: _____

Date: _____



APPENDIX C

TEMPORARY RIGHT OF ENTRY AGREEMENT

Engineering Services
252 Clayton Street 4th Floor
Denver, CO 80206
Revised: October 18, 2018

GREAT WESTERN RAILWAY OF COLORADO

Temporary Right of Entry Agreement

THIS AGREEMENT, made as of _____, 20___, by and between GREAT WESTERN RAILWAY OF COLORADO, L.L.C., a Colorado limited liability company, hereinafter referred to as "RAILROAD", and (****), whose mailing address is (****), hereinafter called "**Licensee**," WITNESSETH:

WHEREAS, Licensee has submitted a written application to RAILROAD requesting permission to enter RAILROAD's property located within the (*****) Division, (*****) Subdivision, at DOT#: (*****) MP (*****). (STREET NAME) in (CITY), (COUNTY) County, (STATE), (the "**Property**"), for the purpose of (PROJECT DESCRIPTION), beginning (***) feet from the (*****) right of way, (the "**Project**"); and

WHEREAS, RAILROAD is willing to grant to Licensee the limited right and permission to enter upon the Property for the limited purpose of performing the Project.

NOW THEREFORE, RAILROAD hereby grants to Licensee the right and permission to enter upon the Property for the purpose of performing said Project, subject to the terms and conditions set forth below:

1. PROJECT: The Project shall be performed at the entire cost and expense of Licensee, in accordance with good and sound engineering practices, to the satisfaction of RAILROAD's Division Engineer or his or her duly authorized representative ("Division Engineer") and in a manner to avoid accidents, damages, unnecessary delays to or interference with train traffic of RAILROAD. Prior to entry, Licensee shall notify the Division Engineer's representative and arrange for flagging protection in accordance to Sections 5 and 6 of this Agreement. Licensee shall not dig in the ballast line or within the tracks loading influence area, or otherwise disturb the track structure. Licensee and Licensee's employees, agents, contractors and other representatives (collectively, "Agents") shall maintain in their possession a copy of this Agreement at all times during their occupation of the Property.

2. INDEMNITY:

2.1 Licensee hereby assumes risk of and agrees to indemnify, defend, protect and save RAILROAD and RAILROAD's Affiliates harmless with respect to any and all attorneys' fees, liability, claims, demands, payments, suits, actions, recoveries, penalties, costs, legal expenses, judgments, settlements, and damages of every nature, degree, and kind (including direct, indirect, consequential, incidental, and punitive damages) for:

2.1.1 personal injury, including, but not limited to bodily injury to or death of any person or persons whomsoever, including the agents, servants, Affiliates or employees of the parties;

2.1.2 the loss or damage to any property whatsoever, including property owned or in the care, custody or control of the parties hereto or their respective Affiliates;

2.1.3 any environmental damage and any related remediation brought or recovered against RAILROAD or any of its Affiliates; and

2.1.4 any and all other losses or damages; arising directly or indirectly from the presence of Licensee or its Agents on or about the Property, whether or not attributable in whole or part to the negligence, gross negligence, or intentional misconduct of RAILROAD or its Affiliates.

2.2 The parties waive any and all right or opportunity to contest the enforceability of this Section and agree that, in the event this Section, or any part of this Section, is found unenforceable by the final, unappealable judgment of a court of competent jurisdiction, this Section shall be construed so as to be enforceable to the maximum extent permitted by applicable law. In the event that such court of competent jurisdiction finds that Colorado statutory construction contract indemnity monetary limits apply to this Agreement with respect to Licensee's indemnification of RAILROAD and its Affiliates for liability caused in whole or in part by any act, omission or default by RAILROAD or its Affiliates, the parties hereto agree that such limit shall be equal to the limits (exclusive of deductibles) of the applicable insurance required by Sections 3 and 4 of this Agreement. The parties acknowledge and agree that this monetary limit, if required, bears a commercially reasonable relationship to this Agreement, in so far as, among other factors, the parties have taken into account the availability and cost of insurance and other risk transference devices, the scope of the Project, the risks associated with the Project, and the compensation and any other benefits exchanged between the parties in connection with this Agreement.

2.2.1 Licensee shall comply with any federal, state, or local laws, statutes, codes, ordinances, rules,

and regulations applicable to its presence or performance of any activity on the Property and agrees to indemnify, defend, and hold RAILROAD and its Affiliates harmless with respect to any fines, penalties, liabilities, or other consequences for its failure to so comply.

2.2.2 For the purpose of this Agreement, the term "Affiliates" includes all entities, directly or indirectly owned or controlled by, or under common control of a party or its respective officers, directors, employees and agents, and in the case of RAILROAD, includes RAILROAD Corporation, RAILROAD and their Affiliates and their respective officers, directors, employees and agents.

2.2.3 The provisions of this Section shall survive the termination or expiration of this Agreement.

3. GENERAL LIABILITY INSURANCE: Licensee shall procure and maintain, at its expense: (i) statutory Worker's Compensation and Employers Liability Insurance with available limits of not less than \$1,000,000.00, which insurance must contain a waiver of subrogation against RAILROAD and its Affiliates; (ii) Commercial General Liability coverage (inclusive of contractual liability) with available limits of not less than \$5,000,000.00 in combined single limits for bodily injury and property damage and covering the contractual liabilities assumed under this Agreement; (iii) business automobile liability insurance with available limits of not less than \$1,000,000.00 combined single limit for bodily injury and/or property damage per occurrence; and (iv) such other insurance as RAILROAD may reasonably require. Upon request, Licensee shall provide RAILROAD with a copy of Licensee's applicable insurance policies. A policy endorsement naming RAILROAD as an additional insured and specifying such coverage shall be furnished to RAILROAD prior to the execution of this Agreement, and the required coverage will be kept in force until all of Licensee's obligations under this Agreement have been fully discharged and fulfilled, or until Licensee shall have been specifically released by a written instrument signed by an authorized officer of RAILROAD. Licensee shall also provide RAILROAD with a copy of the insurance policies. The insurance policies shall provide that the insurance carrier must give RAILROAD notice at least thirty (30) days in advance of cancellation of coverage, of any change in coverage, or of cancellation of the policy. Notwithstanding any provisions of this Section, the liability assumed by Licensee shall not be limited to the required insurance coverage.

4. RAILROAD PROTECTIVE LIABILITY INSURANCE: Licensee agrees to purchase Railroad Protective Liability Insurance in accordance with RAILROAD's requirements (attached as Exhibit A and incorporated into this Agreement) for the benefit of RAILROAD for Licensee's operations under this Agreement. Licensee shall furnish an appropriate Insurance policy (and required endorsements), as the case may be, with the return of this executed Agreement.

5. PRIOR NOTIFICATION: Licensee or Licensee's Agents shall notify RAILROAD's Roadmaster at least 10 days prior to requiring entry on the Property and shall abide by the instructions of the Division Engineer, or his or her authorized representative. The Roadmaster, (*****), can be contacted at: (*****), to schedule flagging services.

6. CLEARANCES: Neither Licensee nor Agents shall perform any Project or place or operate any equipment of Licensee or Agents at a distance closer than fifty (50) feet from the center of any track, without the prior approval of the Division Engineer. The Division Engineer may require protective services or such other services as deemed necessary or appropriate. Equipment shall be moved across RAILROAD's track(s) only at a public crossing unless prior arrangements have been made with the Division Engineer and a Private Crossing Agreement is fully executed and in place. Licensee and Agents shall take all precautions necessary to avoid interference with or damage to RAILROAD's property and signal and communication facilities during their performance of the Project.

7. PROTECTIVE SERVICES: If protective services, such as flagging protection, are required by RAILROAD, Licensee shall make arrangements with the Roadmaster to furnish such personnel, flagman or watchman, that in the Roadmaster's opinion may be necessary to protect the facilities and traffic of RAILROAD during the performance of the Project. Licensee shall pay for the cost of such services, including all applicable surcharges and additives. These services are estimated to be \$ _____, as supported by the attached estimate.

8. PAYMENT FOR PROTECTIVE SERVICES: Payment shall be made by Licensee in accordance with the following designated option:

() **Option 1:** Licensee shall make an advance deposit of funds based on an estimate of the cost of protective or other services as determined by RAILROAD. The cost for RAILROAD's services shall then be assessed by RAILROAD against this advance deposit. Upon completion of the Project, any unused funding will be returned to Licensee. If RAILROAD's costs exceed the advance deposit(s), a request will be made to Licensee for additional funds or an

invoice will be issued to Licensee for final payment. Licensee shall remit payment to RAILROAD within thirty (30) days of receipt of either a request for additional funds or an invoice.

() **Option 2:** Licensee shall promptly reimburse RAILROAD for the cost of protective or other services on an as-incurred basis, including all applicable surcharges, upon receipt of bill(s) therefor.

9. ENVIRONMENTAL: This Agreement does not include and expressly excludes the performance of any site investigation activities designed to determine environmental conditions on, about or beneath the Property.

Precluded activities include performing soil borings for purposes other than geotechnical investigation, obtaining soil, sediment, groundwater and surface water samples, and conducting field or laboratory analyses of any soil, sediment, groundwater or surface water samples obtained from RAILROAD property to identify chemical composition or environmental condition. If any type of environmental investigation is desired, a separate right of entry agreement issued through RAILROAD's Environmental Department must be secured.

10. CLAIMS: Licensee shall, or shall require Agents, to promptly notify the Division Engineer of any loss, damage, injury or death arising out of or in connection with the Project.

11. REMEDIATION: It is understood and agreed that, upon completion of the Project, the Property shall be left in a condition satisfactory to Division Engineer or his or her duly authorized representative.

12. SAFETY:

12.1 All personnel entering the Property must comply with RAILROAD safety rules and requirements to include, without exception, the wearing of hard hats and approved safety shoes and safety glasses with side shields. Anyone not in compliance with these rules and regulations will be asked to leave the Property.

12.2 Before performing any work authorized by this Agreement, Licensee, at its sole cost and expense, shall obtain all necessary permit(s) (including but not limited to zoning, building, construction, health, safety or environmental matters), letter(s) or certificate(s) of approval. Licensee expressly agrees and warrants that it shall conform and limit its activities to the terms of such permit(s), approval(s) and authorization(s), and shall comply with all applicable ordinances, rules, regulations, requirements and laws of any governmental authority (state, federal or local) having jurisdiction over Licensee's activities, including the location, contact, excavation and protection regulations of the Occupational Safety and Health Act (OSHA) (29 CFR 1926.651(b), et al.), and State "One Call" -"Call Before You Dig" requirements.

13. TERM: This Right-of-Entry Agreement and the permission conferred and the license granted by it does not constitute a grant of permanent easement and shall terminate upon completion of the Project or at midnight, whichever occurs first, unless extended in writing by RAILROAD. In the event Licensee fails to comply with terms and provisions of this Agreement, Licensee agrees to pay and agrees that RAILROAD shall be entitled to recover costs and expenses incurred by RAILROAD, including legal fees and expenses, to enforce the terms of this Agreement.

14. SEVERABILITY: The parties agree that if any part, term or provision of the Agreement is held to be illegal, unenforceable or in conflict with any applicable federal, state, or local law or regulation, such part, term or provision shall be severable, with the remainder of the Agreement remaining valid and enforceable. If any provision or any part of a provision of the Agreement shall be finally determined to be superseded, invalid, illegal, or otherwise unenforceable pursuant to any applicable law, ordinance, rule or regulation, such determination shall not impair or otherwise affect the validity, legality, or enforceability of the remaining provision or parts of the provision of the Agreement, which shall remain in full force and effect as if the unenforceable provision or part were deleted.

15. ENTIRE AGREEMENT: This Agreement embodies the entire understanding of the parties, may not be waived or modified except in a writing signed by authorized representatives of both parties, and supersedes all prior or contemporaneous written or oral understandings, agreements or negotiations regarding its subject matter.

16. NOTICES: All notices, consents and approvals required or permitted by this agreement shall be in writing and shall be deemed delivered; upon personal delivery, upon the expiration of three (3) business days following mailing by U.S. first class mail, or upon the next business day following mailing by a nationally recognized overnight carrier, to the Licensee at the address above, and to Licensor at the address shown on Page 1, or at such other addresses as either party may designate by delivery of prior notice to the other party .

17. TERMINATION: RAILROAD shall have the right at any time and at its sole discretion to terminate this Agreement

upon notice to Licensee.

18. WAIVER: If either party fails to enforce its respective rights under this Agreement, or fails to insist upon the performance of the other party's obligations hereunder, such failure shall not be construed as a permanent waiver of any rights or obligations in this Agreement.

19. GOVERNING LAW; VENUE: This Agreement shall be governed by and construed under the laws of the State of Colorado, without regard to the choice of law provisions thereof. Venue for any action arising from, or brought to enforce, this Agreement, shall vest exclusively in the state or federal courts located in Colorado, and the parties agree to submit to the personal jurisdiction of any state or federal court located in Colorado.

20. NO ASSIGNMENT: Notwithstanding anything to the contrary contained in this Agreement, Licensee shall not permit Agents to enter the Property without first requiring Agents to agree in writing to comply with all of the terms of this Agreement. Notwithstanding the foregoing, Licensee shall continue to be responsible for insuring that Agents comply with all of the terms and conditions of this Agreement and shall indemnify and hold RAILROAD harmless for any damages described in Section 2 above caused in whole or in part by such subcontractor. Assignment of this Agreement to any party other than Agents in accordance with this Section shall not be permitted except upon the prior written consent of RAILROAD, which consent may be granted or withheld at RAILROAD's sole discretion. This Agreement shall be binding upon the parties and their respective successors and assigns.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the day and year first above written.

Witness for RAILROAD:

GREAT WESTERN RAILWAY OF COLORADO

By: _____

Name:

Title:

Witness for: (*****)

(*****):

By: _____

Print/Type Name: _____

Print/Type Title: _____

Who, by the execution hereof, affirms that he/she has the authority to do so and to bind the [*] to the terms and conditions of this Agreement.

ATTACHMENT
"A" INSURANCE
REQUIREMENT
S

Evidence required by RAILROAD Transportation, Inc.

You are required to furnish Insurance to protect RAILROAD Transportation, Inc. in connection with activities to be performed on or adjacent to RAILROAD Transportation's Right of Way.

The following summarize RAILROAD's specifications for proper evidence of insurance:

1. Commercial General Liability coverage at their sole cost and expense with limits of not less than \$5,000,000 in combined single limits for bodily injury and/or property damage per occurrence, and such policies shall name RAILROAD as an additional insured.
2. Statutory Worker's Compensation and Employers Liability Insurance with limits of not less than \$1,000,000, which insurance must contain a waiver of subrogation against RAILROAD and its affiliates [if permitted by state law].
3. Commercial automobile liability insurance with limits of not less than \$1,000,000 combined single limit for bodily injury and/or property damage per occurrence, and such policies shall name RAILROAD as an additional insured.
4. Railroad protective liability insurance with limits of not less than \$5,000,000 combined single limit for bodily injury and/or property damage per occurrence and an aggregate annual limit of \$10,000,000, which insurance shall satisfy the following additional requirements:
 - a. The Railroad Protective Liability Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance - Insurance Services Office (ISO) Form CG 00 35.
 - b. RAILROAD must be the named insured on the Railroad Protective Liability Insurance Policy. The address should be listed as:

Great Western Railway of Colorado
950 Taylor Avenue
Loveland, CO 80537
 - c. Name and Address of Licensee must be shown on the Declarations page.
 - d. A description of operations and location must appear on the Declarations page and must match the Project description.
 - e. Authorized endorsements must include the Pollution Exclusion Amendment - CG 28 31, unless using form CG 00 35 version 96 and later.
 - f. Authorized endorsements may include:
 - (i) Broad Form Nuclear Exclusion - IL 00 21
 - (ii) 30-day Advance Notice of Non-renewal or cancellation
 - (iii) Required State Cancellation Endorsement
 - (iv) Quick Reference or Index - CL/IL 240

g. Authorized endorsements may not include:

- (i) A Pollution Exclusion Endorsement except CG 28 31
- (ii) A Punitive or Exemplary Damages Exclusion
- (iii) A "Common Policy Conditions" Endorsement
- (iv) Any endorsement that is not named in Section 4 (e) or (f) above.
- (v) Policies that contain any type of deductible

5. All insurance companies must be A. M. Best rated A- and Class VII or better.

6. Such additional or different insurance as RAILROAD may require.

II. Additional Terms

1. Licensee must submit the original Railroad Protective Liability policy, Certificates of Insurance and all notices and correspondence regarding the insurance policies to:

insurancedocuments@OMNITRAX.com

2. Licensee may not begin work on the Project until it has received RAILROAD's written approval of the required insurance.



SPECIAL PROVISIONS FOR PROTECTION OF RAILWAY INTERESTS

Engineering Services
252 Clayton Street 4th Floor
Denver, CO 80206
Revised: December 2018

1. AUTHORITY OF RAILROAD ENGINEER AND SPONSOR ENGINEER:

OMNITRAX, INC. and OMNITRAX-MANAGED RAILROAD, hereinafter referred to as "RAILROAD", and their authorized representative shall have final authority in all matters affecting the safe maintenance of railroad traffic including the adequacy of the foundations and structures supporting the railroad tracks. For Public Projects impacting the RAILROAD, the RAILROAD's Public Projects Engineer, hereinafter referred to as "Railroad Engineer", will serve as the authorized representative of the RAILROAD.

The authorized representative of the Project Sponsor ("Sponsor"), hereinafter referred to as the "Sponsor's Engineer", shall have authority over all other matters as prescribed herein and in the Project Specifications.

The Sponsor's Prime Contractor, hereinafter referred to as "Contractor" shall be responsible for completing any and all work in accordance with the terms prescribed herein and in the Project Specifications. These terms and conditions are subject to change without notice, from time to time in the sole discretion of the RAILROAD. Contractor must request from RAILROAD and follow the latest version of these provisions prior to commencing work.

2. NOTICE OF STARTING WORK:

A. The Contractor shall not commence any work on railroad rights-of-way until he has complied with the following conditions:

1. Signed and received a fully executed copy of the required RAILROAD Contractor Right of Entry Agreement.
2. Given the RAILROAD written notice in electronic format to the Railroad Engineer, with copy to the Sponsor's Engineer who has been designated to be in charge of the work, at least ten days in advance of the date he proposes to begin work on railroad rights-of- way.
3. Obtained written approval from the RAILROAD of Railroad Protective Liability Insurance coverage as required by Section 14 herein. It should be noted that the RAILROAD does not accept notation of Railroad Protective insurance on a certificate of liability insurance form or Binders as RAILROAD must have the full original countersigned policy. Further, please note that mere receipt of the policy is not the only issue but review for compliance. Due to the number of projects system- wide, it typically takes a minimum of 30-45 days for the RAILROAD to review.
4. Obtained RAILROAD's Flagging Services as required by Section 7 herein (page 14).
5. Obtained written authorization from the RAILROAD to begin work on RAILROAD's rights-of-way, such authorization to include an outline of specific conditions with which he must comply.
6. Furnished a schedule for all work within the RAILROAD's rights-of-way.

- B. The RAILROAD's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the RAILROAD's representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

3. INTERFERENCE WITH RAILROAD OPERATIONS:

- A. The Contractor shall so arrange and conduct his work that there will be no interference with RAILROAD's operations, including train, signal, telephone and telegraphic services, or damage to the property of the RAILROAD or to poles, wires, and other facilities of tenants on the rights-of-way of the RAILROAD. Whenever work is liable to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad Engineer for approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor which requires flagging service or inspection service shall be deferred by the Contractor until the flagging service or inspection service required by the RAILROAD is available at the job site.
- B. Whenever work within RAILROAD's rights-of-way is of such a nature that impediment to RAILROAD's operations such as use of runaround tracks or necessity for reduced speed is unavoidable, the Contractor shall schedule and conduct his operations so that such impediment is reduced to the absolute minimum.
- C. Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations and property of the RAILROAD, the Contractor shall make such provisions. If in the judgment of the Railroad Engineer, or in his absence, the RAILROAD's Division Engineer, such provisions is insufficient, either may require or provide such provisions as he deems necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost to the RAILROAD or the Sponsor.
- D. "One Call" Services do not locate buried RAILROAD utilities. The contractor shall contact the RAILROAD's representative two (2) days in advance of work at those places where excavation, pile driving, or heavy loads may damage the RAILROAD's underground facilities. Upon request from the Contractor or Sponsor, RAILROAD forces will locate and paint mark or flag the RAILROAD's underground facilities. The Contractor shall avoid excavation or other disturbances of these facilities. If disturbance or excavation is required near a buried RAILROAD facility, the contractor shall coordinate with the RAILROAD to have the facility potholed manually with careful hand excavation. The facility shall be protected by the Contractor during the course of the disturbance under the supervision and direction of the RAILROAD's representative.

4. TRACK CLEARANCES:

- A. The minimum track clearances to be maintained by the Contractor during construction are shown on the Project Plans. If temporary clearances are not shown on the project plans, the following criteria shall govern the use of falsework and formwork above or adjacent to operated tracks.
 - 1. A minimum vertical clearance of 23'-0" above top of highest rail shall be maintained at all times.
 - 2. A minimum horizontal clearance of 13'-0" from centerline of tangent track or 14'-0" from centerline of curved track shall be maintained at all times. Additional horizontal clearance may be required in special cases to be safe for operating conditions.

This additional clearance will be as determined by the RAILROAD Engineer.

3. All proposed temporary clearances which are less than those listed above must be submitted to Railroad Engineer for approval prior to construction and must also be authorized by the regulatory body of the State if less than the legally prescribed clearances.
 4. The temporary clearance requirements noted above shall also apply to all other physical obstructions including, but not limited to: stockpiled materials, parked equipment, placement or driving of piles, and bracing or other construction supports.
- B. Before undertaking any work within RAILROAD right-of-way, and before placing any obstruction over any track, the Contractor shall:
1. Notify the RAILROAD's representative at least 72 hours in advance of the work.
 2. Receive assurance from the RAILROAD's representative that arrangements have been made for flagging service as may be necessary.
 3. Receive permission from the RAILROAD's representative to proceed with the work.
 4. Ascertain that the Sponsor's Engineer has received copies of notice to the RAILROAD and of the RAILROAD's response thereto.

5. CONSTRUCTION PROCEDURES:

A. General:

1. Construction work and operations by the Contractor on RAILROAD property shall be:
 - a. Subject to the inspection and approval of the Railroad Engineer or their designated Construction Engineering Representative.
 - b. In accordance with the RAILROAD's written outline of specific conditions.
 - c. In accordance with the RAILROAD's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment.
 - d. In accordance with these Special Provisions.
2. Submittal Requirements
 - a. The Contractor shall submit all construction related Correspondence and submittals electronically to the Railroad Engineer.
 - b. The Contractor shall allow for 30 days for the RAILROAD's review and response.
 - c. All work in the vicinity of the RAILROAD's property that has the potential to affect the RAILROAD's train operations or disturb the RAILROAD's

Property must be submitted and approved by the RAILROAD prior to work being performed.

- d. All submittals and calculations must be signed and sealed by a registered engineer licensed in the state of the project work.
- e. All submittals shall first be approved by the Sponsor's Engineer and the RAILROAD Engineer, but such approval shall not relieve the Contractor from liability.
- f. For all construction projects, the following submittals, but not limited to those listed below, shall be provided for review and approval when applicable:
 - (1) General Means and Methods
 - (2) Ballast Protection
 - (3) Construction Excavation & Shoring
 - (4) Pipe, Culvert, & Tunnel Installations
 - (5) Demolition Procedure
 - (6) Erection & Hoisting Procedure
 - (7) Debris Shielding or Containment
 - (8) Blasting
 - (9) Formwork for the bridge deck, diaphragms, overhang brackets, and protective platforms
 - (10) Bent Cap Falsework. A lift plan will be required if the contractor want to move the falsework over the tracks.
- g. For Undergrade Bridges (Bridges carrying the railroad) the following submittals in addition to those listed above shall be provided for review and approval:
 - (1) Shop Drawings
 - (2) Bearing Shop Drawings and Material Certifications
 - (3) Concrete Mix Design
 - (4) Structural Steel, Rebar, and/or Strand Certifications
 - (5) 28 day Cylinder Test for Concrete Strength
 - (6) Waterproofing Material Certification
 - (7) Test Reports for Fracture Critical Members
 - (8) Foundation Construction Reports

Fabrication may not begin until the RAILROAD has approved the required shop drawings.

- h. The Contractor shall include in all submissions a detailed narrative indicating the progression of work with the anticipated timeframe to complete each task. Work will not be permitted to commence until the Contractor has provided the RAILROAD with a satisfactory plan that the project will be undertaken without scheduling, performance or safety related issues. Submission shall also provide a listing of the anticipated equipment to be used, the location of all equipment to be used and insure a contingency plan of action is in place should a primary piece of equipment malfunction.

B. Ballast Protection

- 1. The Contractor shall submit the proposed ballast protection system detailing the

specific filter fabric and anchorage system to be used during all construction activities.

2. The ballast protection is to extend 25' beyond the proposed limit of work, be installed at the start of the project and be continuously maintained to prevent all contaminants from entering the ballast section of all tracks for the entire duration of the project.

C. Excavation:

1. The subgrade of an operated track shall be maintained with edge of berm at least 10'-0" from centerline of track and not more than 24-inches below top of rail. Contractor will not be required to make existing section meet this specification if substandard, in which case existing section will be maintained.
2. Additionally, the RAILROAD will require the installation of an OSHA approved handrail and orange construction safety fencing for all excavations of the RAILROAD right-of-way.

D. Excavation for Structures and Shoring Protection:

1. The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles or sheeting for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material.
2. All plans and calculations for shoring shall be prepared, signed, and sealed by a Registered Professional Engineer licensed in the state of the proposed project, in accordance AREMA standards. The Registered Professional Engineer will be responsible for the accuracy for all controlling dimensions as well as the selection of soil design values which will accurately reflect the actual field conditions.
3. The Contractor shall provide a detailed installation and removal plan of the shoring components. Any component that will be installed via the use of a crane or any other lifting device shall be subject to the guidelines outlined in section 5.G of these provisions.
4. The Contractor shall be required to survey the track(s) and RAILROAD embankment and provide a cross section of the proposed excavation in relation to the tracks.
5. Calculations for the proposed shoring should include deflection calculations. The maximum deflection for excavations within 18'-0" of the centerline of the nearest track shall be 3/8". For all other cases, the max deflection shall not exceed 1/2".
6. Additionally, the RAILROAD will require the installation of an OSHA approved handrail and orange construction safety fencing for all excavations of the RAILROAD right-of-way.
7. The front face of shoring located to the closet railroad track for all shoring set-ups located in Zone 2 as shown on Typical Drawing No. 4 – Shoring Requirements (Appendix I) shall remain in place and be cut off 2'-0" below the final ground elevation. The remaining shoring in Zone 2 and all shoring in Zone 1

may be removed and all voids must be backfilled with flowable fill.

E. Pipe, Culvert, & Tunnel Installations

1. Pipe, Culvert, & Tunnel Installations shall be in accordance with the appropriate RAILROAD Design Specification as documented in the *OmniTRAX Utility Accommodation Policy* (Appendix E).
2. The installation methods provided are for pipes carrying storm water or open flow run-off. All other closed pipeline systems shall be installed in accordance RAILROAD's Pipe and Wire Program and the NSCE-8

F. Demolition Procedures

1. General

- a. Demolition plans are required for all spans over the track(s), for all spans adjacent to the track(s), if located on (or partially on) RAILROAD right-of-way; and in all situations where cranes will be situated on, over, or adjacent to RAILROAD right-of-way and within a distance of the boom length plus 15'-0" from the centerline of track.
- b. RAILROAD tracks and other RAILROAD property must be protected from damage during the procedure.
- c. A pre-demolition meeting shall be conducted with the Sponsor, the Railroad Engineer or their representative, and the key Contractor's personnel prior to the start of the demolition procedure.
- d. The Railroad Engineer or his designated representative must be present at the site during the entire demolition procedure period.
- e. Existing, obsolete, bridge piers shall be removed to a sufficient depth below grade to enable restoration of the existing/proposed track ditch, but in no case less than 2'-0" below final grade.

2. Submittal Requirements

- a. In addition to the submittal requirements outlined in Section 5.A.2 (page 4) of these provisions, the Contractor shall submit the following for approval by the Railroad Engineer:

- (1) A plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or disposal locations shown. The location of all tracks and other Railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.

- (2) Rating sheets showing cranes or lifting devices to be adequate for 150% of the actual weight of the pick, including all rigging components. A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted. Safety factors that may have been "built-in" to the crane charts are not to be considered when determining the 150% factor of safety.
- (3) Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the existing structure showing complete and sufficient details with supporting data for the demolition the structure. If plans do not exist, lifting weights must be calculated from field measurements. The field measurements are to be made under the supervision of the Registered Professional Engineer submitting the procedure and calculations.
- (4) The Contractor shall provide a sketch of all rigging components from the crane's hook block to the beam. Catalog cuts or information sheets of all rigging components with their lifting capacities shall be provided. All rigging must be adequate for 150% of the actual weight of the pick. Safety factors that may have been "built-in" to the rating charts are not to be considered when determining the 150% factor of safety. All rigging components shall be clearly identified and tagged with their rated lifting capacities. The position of the rigging in the field shall not differ from what is shown on the final plan without prior review from the Sponsor and the RAILROAD.
- (5) A complete demolition procedure, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.
- (6) Design and supporting calculations for the temporary support of components, including but not limited to the stability of the superstructure during the temporary condition, temporary girder tie- downs and falsework.

3. Overhead Demolition Debris Shield

- a. The demolition debris shield shall be installed prior to the demolition of the bridge deck or other relevant portions of the superstructure over the track area to catch all falling debris.
- b. The demolition debris shield shall provide a minimum vertical clearance as specified in Section 4.A.1 (page 3) of these provisions or maintain the existing vertical clearance if the existing clearance is less than that specified in Section 4.A.1.
- c. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed Demolition procedure submission.
- d. The Contractor shall submit the demolition debris shield design and supporting calculations for approval by the RAILROAD Engineer.

- e. The demolition debris shield shall have a minimum design load of 50 pounds per square foot plus the weight of the equipment, debris, personnel, and other loads to be carried.
- f. The Contractor shall include the proposed bridge deck removal procedure in its demolition means and methods and shall verify that the size and quantity of the demolition debris generated by the procedure does not exceed the shield design loads.
- g. The Contractor shall clean the demolition debris shield daily or more frequently as dictated either by the approved design parameters or as directed by the Railroad Engineer.

4. Vertical Demolition Debris Shield

- a. A vertical demolition debris shield may be required for substructure removals in close proximity to the RAILROAD's track and other facilities, as determined by the Railroad Engineer.

G. Erection & Hoisting Procedures

1. General

- a. Erection plans are required for all spans over the track(s), for all spans adjacent to the track(s), if located on (or partially on) RAILROAD right-of-way; and in all situations where cranes will be situated on, over, or adjacent to RAILROAD right-of-way and within a distance of the boom length plus 15'-0" from the centerline of track.
- b. RAILROAD tracks and other RAILROAD property must be protected from damage during the erection procedure.
- c. A pre-erection meeting shall be conducted with the Sponsor, the Railroad Engineer or their representative, and the key Contractor's personnel prior to the start of the erection procedure.
- d. The Railroad Engineer or his designated representative must be present at the site during the entire erection procedure period.
- e. For field splices located over RAILROAD property, a minimum of 50% of the holes for each connection shall be filled with bolts or pins prior to releasing the crane. A minimum of 50% of the holes filled shall be filled with bolts. All bolts must be appropriately tightened. Any changes to previously approved field splice locations must be submitted to the RAILROAD for review and approval. Refer to RAILROAD's Overhead Grade Separation Design Criteria for additional splice details.

2. Submittal Requirements

- a. In addition the submittal requirements outlined in Section 5.A.2 of these provisions, the Contractor shall submit the following for approval by the Railroad Engineer:
 - (1) As-built beam seat elevations - All as-built bridge seats and top of rail elevations shall be furnished to the Railroad Engineer for review and verification at least 30 days in advance of the

erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.

- (2) A plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or staging locations shown. The location of all tracks and other RAILROAD facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.
- (3) Rating sheets showing cranes or lifting devices to be adequate for 150% of the actual weight of the pick, including all rigging components. A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted. Safety factors that may have been "built-in" to the crane charts are not to be considered when determining the 150% factor of safety.
- (4) Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the proposed structure showing complete and sufficient details with supporting data for the erection of the structure. If plans do not exist, lifting weights must be calculated from field measurements. The field measurements are to be made under the supervision of the Registered Professional Engineer submitting the procedure and calculations.
- (5) The Contractor shall provide a sketch of all rigging components from the crane's hook block to the beam. Catalog cuts or information sheets of all rigging components with their lifting capacities shall be provided. All rigging must be adequate for 150% of the actual weight of the pick. Safety factors that may have been "built-in" to the rating charts are not to be considered when determining the 150% factor of safety. All rigging components shall be clearly identified and tagged with their rated lifting capacities. The position of the rigging in the field shall not differ from what is shown on the final plan without prior review from the Sponsor and the RAILROAD.
- (6) A complete erection procedure, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.
- (7) Design and supporting calculations for the temporary support of components, including but not limited to temporary girder tie-downs and falsework.

H. Blasting:

1. The Contractor shall obtain advance approval of the Railroad Engineer and the Sponsor Engineer for use of explosives on or adjacent to RAILROAD property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:
 - a. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor and a licensed blaster.

- b. Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way radios.
 - c. No blasting shall be done without the presence of the RAILROAD Engineer or his authorized representative. At least 72 hours advance notice to the person designated in the RAILROAD's notice of authorization to proceed (see Section 2.B, page 3) will be required to arrange for the presence of an authorized RAILROAD representative and such flagging as the RAILROAD may require.
 - d. Have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting at his expense any track misalignment or other damage to RAILROAD property resulting from the blasting as directed by the Railway's authorized representative. If his actions result in delay of trains, the Contractor shall bear the entire cost thereof.
 - e. The blasting Contractor shall have a copy of the approved blasting plan on hand while on the site.
 - f. Explosive materials or loaded holes shall not be left unattended at the blast site.
 - g. A seismograph shall be placed on the track shoulder adjacent to each blast which will govern the peak particle velocity of two inches per second. Measurement shall also be taken on the ground adjacent to structures as designated by a qualified and independent blasting consultant. The RAILROAD reserves the option to direct the placement of additional seismographs at structures or other locations of concern, without regard to scaled distance.
 - h. After each blast, the blasting Contractor shall provide a copy of their drill log and blast report, which includes number of holes, depth of holes, number of decks, type and pounds of explosives used per deck.
 - i. The RAILROAD may require top of rail elevations and track centers taken before, during and after the blasting and excavation operation to check for any track misalignment resulting from the Contractor's activities.
2. The RAILROAD representative will:
- a. Determine location of trains and advise the Contractor the appropriate amount of time available for the blasting operation and clean up.

- b. Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accord with these special provisions.
- 3. The Contractor must hire, at no expense to the RAILROAD, a qualified and independent blasting consultant to oversee the use of explosives. The blasting consultant will:
 - a. Review the Contractor's proposed drilling and loading patterns, and with the blasting consultant's personnel and instruments, monitor the blasting operations.
 - b. Confirm that the minimum amounts of explosives are used to remove the rock.
 - c. Be empowered to intercede if he concludes that the Contractor's blasting operations are endangering the Railway.
 - d. Submit a letter acknowledging that he has been engaged to oversee the entire blasting operation and that he approves of the blasting plan.
 - e. Furnish copies of all vibration readings to the RAILROAD representative immediately after each blast. The representative will sign and date the seismograph tapes after each shot to verify the readings are for that specific shot.
 - f. Advise the RAILROAD representative as to the safety of the operation and notify him of any modifications to the blasting operation as the work progresses.
- 4. The request for permission to use explosives on the RAILROAD's Right-of-Way shall include a blasting proposal providing the following details:
 - a. A drawing which shows the proposed blasting area, location of nearest hole and distance to Railway structures, all with reference to the centerline of track.
 - b. Hole diameter.
 - c. Hole spacing and pattern.
 - d. Maximum depth of hole.
 - e. Maximum number of decks per hole.
 - f. Maximum pounds of explosives per hole.
 - g. Maximum pounds of explosives per delay.
 - h. Maximum number of holes per detonation.
 - i. Type of detonator and explosives to be used. (Electronic detonating devices will not be permitted). Diameter of explosives if different from hole diameter.
 - j. Approximate dates and time of day when the explosives are to be

detonated.

- k. Type of flyrock protection.
- l. Type and patterns of audible warning and all clear signals to be used before and after each blast.
- m. A copy of the blasting license and qualifications of the person directly in charge of the blasting operation, including their name, address and telephone number.
- n. A copy of the Authority's permit granting permission to blast on the site.
- o. A letter from the blasting consultant acknowledging that he has been engaged to oversee the entire blasting operation and that he approves of the blasting plan.
- p. In addition to the insurance requirements outlined in Section 14 of these Provisions, A certificate of insurance from the Contractor's insurer stating the amount of coverage for XCU (Explosive Collapse and Underground Hazard) insurance and that XCU Insurance is in force for this project.
- q. A copy of the borings and Geotechnical information or report.

I. Track Monitoring

- 1. At the direction of the Railroad Engineer, any activity that has the potential to disturb the RAILROAD track structure may require the Contractor to submit a detailed track monitoring program for approval by the Railroad Engineer.
- 2. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. RAILROAD reserves the right to modify the survey locations and monitoring frequency as necessary during the project.
- 3. The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Railroad Engineer for analysis.
- 4. If any movement has occurred as determined by the Railroad Engineer, the RAILROAD will be immediately notified. RAILROAD, at its sole discretion, shall have the right to immediately require all Contractor operations to be ceased and determine what corrective action is required. Any corrective action required by the RAILROAD or performed by the RAILROAD including the monitoring of corrective action of the Contractor will be at project expense.

J. Maintenance of RAILROAD Facilities:

- 1. The Contractor will be required to maintain all ditches and drainage structures free of silt or other obstructions which may result from his operations and provide and maintain any erosion control measures as required. The Contractor will promptly repair eroded areas within RAILROAD rights-of-way and repair any other damage to the property of the RAILROAD or its tenants.
- 2. If, in the course of construction, it may be necessary to block a ditch, pipe or other drainage facility, temporary pipes, ditches or other drainage facilities shall be installed to maintain adequate drainage, as approved by the

RAILROAD Engineer. Upon completion of the work, the temporary facilities shall be removed and the permanent facilities restored.

3. All such maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

K. Storage of Materials and Equipment:

1. Materials and equipment shall not be stored where they will interfere with RAILROAD operations, nor on the rights-of-way of the RAILROAD without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the RAILROAD will not be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment.
2. All grading or construction machinery that is left parked near the track unattended by a watchman shall be effectively immobilized so that it cannot be moved by unauthorized persons. The Contractor shall protect, defend, indemnify and save RAILROAD, and any associated, controlled or affiliated corporation, harmless from and against all losses, costs, expenses, claim or liability for loss or damage to property or the loss of life or personal injury, arising out of or incident to the Contractor's failure to immobilize grading or construction machinery.

L. Cleanup:

1. Upon completion of the work, the Contractor shall remove from within the limits of the RAILROAD rights-of-way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the Contractor, and leave said rights-of-way in a neat condition satisfactory to the RAILROAD Engineer or his authorized representative.

6. DAMAGES:

- A. The Contractor shall assume all liability for any and all damages to his work, employees, servants, equipment and materials caused by RAILROAD traffic.
- B. Any cost incurred by the RAILROAD for repairing damages to its property or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the RAILROAD by the Contractor.

7. FLAGGING SERVICES:

A. Requirements:

1. Flagging services will not be provided until the Contractor's insurance has been reviewed & approved by the RAILROAD.
2. Under the terms of the agreement between the Sponsor and the RAILROAD, the RAILROAD has sole authority to determine the need for flagging required to protect its operations. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are or are likely to be, working on the RAILROAD's right-of-way, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a RAILROAD structure or the RAILROAD roadbed or

surface and alignment of any track to such extent that the movement of trains must be controlled by flagging.

3. Normally, the RAILROAD will assign one flagman to a project; but in some cases, more than one may be necessary, such as yard limits where three (3) flagmen may be required. However, if the Contractor works within distances that violate instructions given by the RAILROAD's authorized representative or performs work that has not been scheduled with the RAILROAD's authorized representative, a flagman or flagmen may be required full time until the project has been completed.
4. For Projects exceeding 30 days of construction, Contractor shall provide the flagmen a small work area with a desk/counter and chair within the field/site trailer, including the use of bathroom facilities, where the flagman can check in/out with the Project, as well as to the flagman's home terminal. The work area should provide access to two (2) electrical outlets for recharging radio(s), and a laptop computer; and have the ability to print off needed documentation and orders as needed at the field/site trailer. This should aid in maximizing the flagman's time and efficiency on the Project.

B. Scheduling and Notification:

1. The Contractor's work requiring RAILROAD flagging should be scheduled to limit the presence of a flagman at the site to a maximum of 50 hours per week. The Contractor shall receive RAILROAD approval of work schedules requiring a flagman's presence in excess of 40 hours per week.
2. Not later than the time that approval is initially requested to begin work on RAILROAD right-of-way, Contractor shall furnish to the RAILROAD and the Sponsor a schedule for all work required to complete the portion of the project within RAILROAD right-of-way and arrange for a job site meeting between the Contractor, the Sponsor, and the RAILROAD's authorized representative. Flagman or Flagmen may not be provided until the job site meeting has been conducted and the Contractor's work scheduled.
3. The Contractor will be required to give the RAILROAD representative at least 10 working days of advance written notice of intent to begin work within RAILROAD right-of-way in accordance with this special provision. Once begun, when such work is then suspended at any time, or for any reason, the Contractor will be required to give the RAILROAD representative at least 3 working days of advance notice before resuming work on RAILROAD right-of-way. Such notices shall include sufficient details of the proposed work to enable the RAILROAD representative to determine if flagging will be required. If such notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally, it shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagman, or flagmen are present at the job site. It may take up to 30 days to obtain flagging initially from the RAILROAD. When flagging begins, the flagman is usually assigned by the RAILROAD to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, it may take up to 30 days to again obtain from the RAILROAD. Due to RAILROAD labor agreements, it is necessary to give 5 working days' notice before flagging service may be discontinued and responsibility for payment stopped.

4. If, after the flagman is assigned to the project site, an emergency arises that requires the flagman's presence elsewhere, then the Contractor shall delay work on RAILROAD right-of-way until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the Sponsor or RAILROAD.

C. Payment:

1. The Sponsor will be responsible for paying the RAILROAD directly for any and all costs of flagging which may be required to accomplish the construction.
2. The estimated cost of flagging is the current rate per day based on a 10-hour work day. This cost includes the base pay for the flagman, overhead, and includes a per diem charge for travel expenses, meals and lodging. The charge to the Sponsor by the RAILROAD will be the actual cost based on the rate of pay for the RAILROAD's employees who are available for flagging service at the time the service is required.
3. Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 and 1/2 times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 and 1/2 times the normal rate.
4. RAILROAD work involved in preparing and handling bills will also be charged to the Sponsor. Charges to the Sponsor by the RAILROAD shall be in accordance with applicable provisions of Subchapter B, Part 140, Subpart I and Subchapter G, Part 646, Subpart B of the Federal-Aid Policy Guide issued by the Federal Highway Administration on December 9, 1991, including all current amendments. Flagging costs are subject to change. The above estimates of flagging costs are provided for information only and are not binding in any way.

D. Verification:

1. RAILROAD's flagman will electronically enter flagging time via RAILROAD's electronic billing system. Any complaints concerning flagging must be resolved in a timely manner. If the need for flagging is questioned, please contact the Railroad Engineer. All verbal complaints will be confirmed in writing by the Contractor within 5 working days with a copy to the Sponsor's Engineer. Address all written correspondence electronically to Railroad Engineer.
2. The RAILROAD flagman assigned to the project will be responsible for notifying the Sponsor Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Sponsor's Engineer will document such notification in the project records. When requested, the Sponsor's Engineer will also sign the flagman's diary showing daily time spent and activity at the project site.

8. HAUL ACROSS RAILROAD TRACK:

- A. Where the plans show or imply that materials of any nature must be hauled across RAILROAD's track, unless the plans clearly show that the Sponsor has included arrangements for such

haul in its agreement with the RAILROAD, the Contractor will be required to make all necessary arrangements with the RAILROAD regarding means of transporting such materials across the RAILROAD's track. The Contractor or Sponsor will be required to bear all costs incidental to such crossings whether services are performed by his own forces or by RAILROAD personnel.

- B. No crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the RAILROAD unless specific authority for its installation, maintenance, necessary watching and flagging thereof and removal, until a temporary private crossing agreement has been executed between the Contractor and RAILROAD. The approval process for an agreement normally takes 90 days.

9. WORK FOR THE BENEFIT OF THE CONTRACTOR:

- A. All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans; included in the force account agreement between the Sponsor and the RAILROAD or will be covered by appropriate revisions to same which will be initiated and approved by the Sponsor and/or the RAILROAD.
- B. Should the Contractor desire any changes in addition to the above, then he shall make separate arrangements with the RAILROAD for same to be accomplished at the Contractor's expense.

10. COOPERATION AND DELAYS:

- A. It shall be the Contractor's responsibility to arrange a schedule with the RAILROAD for accomplishing stage construction involving work by the RAILROAD or tenants of the RAILROAD. In arranging his schedule he shall ascertain, from the RAILROAD, the lead time required for assembling crews and materials and shall make due allowance therefore.
- B. No charge or claim of the Contractor against either the Sponsor or the RAILROAD will be allowed for hindrance or delay on account of RAILROAD traffic; any work done by the RAILROAD or other delay incident to or necessary for safe maintenance of RAILROAD traffic or for any delays due to compliance with these special provisions.

11. TRAINMAN'S WALKWAYS:

- A. Along the outer side of each exterior track of multiple operated track, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 10 feet from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while RAILROAD's protective service is provided shall be removed before the close of each work day. If there is any excavation near the walkway, a handrail, with 10'-0" minimum clearance from centerline of track, shall be placed and must conform to AREMA and/or FRA standards.

12. GUIDELINES FOR PERSONNEL ON RAILROAD RIGHT-OF-WAY:

- A. The Contractor and/or the Sponsor's personnel authorized to perform work on RAILROAD's property as specified in Section 2 above are not required to complete RAILROAD Roadway Worker Protection Training; However the Contractor and the Sponsor's personnel must be familiar with RAILROAD's standard operating rules and guidelines, should conduct themselves accordingly, and may be removed from the property for failure to follow these guidelines.

- B. All persons shall wear hard hats. Appropriate eye and hearing protection must be used. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip-on type boots is prohibited. Hard-sole, lace-up footwear, zippered boots or boots cinched up with straps which fit snugly about the ankle are adequate. Wearing of safety boots is strongly recommended. In the vicinity of at-grade crossings, it is strongly recommended that reflective vests be worn.
- C. No one is allowed within 25' of the centerline of track without specific authorization from the flagman.
- D. All persons working near track while train is passing are to lookout for dragging bands, chains and protruding or shifted cargo.
- E. No one is allowed to cross tracks without specific authorization from the flagman.
- F. All welders and cutting torches working within 25' of track must stop when train is passing.
- G. No steel tape or chain will be allowed to cross or touch rails without permission from the RAILROAD.

13. GUIDELINES FOR EQUIPMENT ON RAILROAD RIGHT-OF-WAY:

- A. No crane or boom equipment will be allowed to set up to work or park within boom distance plus 15' of centerline of track without specific permission from RAILROAD official and flagman.
- B. No crane or boom equipment will be allowed to foul track or lift a load over the track without flag protection and track time.
- C. All employees will stay with their machines when crane or boom equipment is pointed toward track.
- D. All cranes and boom equipment under load will stop work while train is passing (including pile driving).
- E. Swinging loads must be secured to prevent movement while train is passing.
- F. No loads will be suspended above a moving train.
- G. No equipment will be allowed within 25' of centerline of track without specific authorization of the flagman.
- H. Trucks, tractors or any equipment will not touch ballast line without specific permission from RAILROAD official and flagman. Orange construction fencing may be required as directed.
- I. No equipment or load movement within 25' or above a standing train or RAILROAD equipment without specific authorization of the flagman.

- J. All operating equipment within 25' of track must halt operations when a train is passing. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.
- K. All equipment, loads and cables are prohibited from touching rails.
- L. While clearing and grubbing, no vegetation will be removed from RAILROAD embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.
- M. No equipment or materials will be parked or stored on RAILROAD's property unless specific authorization is granted from the Railroad Engineer.
- N. All unattended equipment that is left parked on RAILROAD property shall be effectively immobilized so that it cannot be moved by unauthorized persons.
- O. All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.
- P. Prior to performing any crane operations, the Contractor shall establish a single point of contact for the RAILROAD flagman to remain in communication with at all times. Person must also be in direct contact with the individual(s) directing the crane operation(s).

14. INSURANCE:

In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Prime Contractor "Contractor" performing work on or about OMNITRAX's property, shall purchase and maintain insurance as specified below covering the Work to be performed pursuant to an executed Agreement with OmniTRAX, and all obligations assumed pursuant to it, from effective date of the Agreement until expiration or termination, unless otherwise specified in the Agreement, with insurance companies assigned a current Financial Strength Rating of at least A and Financial Size Category of X or better by A. M. Best Company or an equivalent rating agency approved by Railroad. Contractor shall require all subcontractors likewise to procure and maintain this same insurance unless they are covered by Contractor's insurance:

A. **Commercial General Liability Insurance** written on an occurrence basis subject to limit of \$1,000,000 each occurrence for bodily injury, property damage, personal injury, libel and/or slander with an annual aggregate limit of no less than \$2,000,000. Policy coverage is to be based on usual Insurance Services Office ("ISO") policy forms or equivalent to include, but not be limited to: Operations and Premises Liability, Completed Operations and Products Liability, Advertising and Personal Injury Liability, and Contractual Liability Insurance.

Any and all General Liability policies procured by Contractor shall be amended to delete any and all railroad exclusions including exclusions for working on or within fifty feet (50') of any railroad property, railroad track, railroad bridge, trestle or tunnel (CG 24 17 Endorsement).

B. **Workers' Compensation and Employers' Liability Insurance** providing statutory Workers' Compensation benefits mandated under applicable state law and Employers' Liability insurance subject to a minimum limit of \$1,000,000 each accident for bodily injury by accident, \$1,000,000 each employee for bodily injury by disease, and \$1,000,000 policy limit for bodily injury by disease. If coverage is provided through a Monopolistic State Fund, a stop gap endorsement on either the Commercial General Liability or Workers' Compensation Policy is required to meet the Employers' Liability requirement.

Notwithstanding the foregoing, Contractor may, subject to the terms and conditions of this paragraph, self-insure for Workers' Compensation where allowed by law. Contractor shall provide Railroad with audited financial statements and Railroad may, at its discretion, which shall not be unreasonably withheld, deem such financial statements acceptable prior to authorizing Contractor to self-insure. Where applicable, Contractor shall also

provide state issued self-insurer authorization documents to Railroad.

C. **Business Automobile Liability Insurance** subject to a minimum limit of \$1,000,000 each accident for bodily injury and property damage. Policy coverage shall be based on ISO policy forms referred to as Business Automobile Policy ("BAP") to cover motor vehicles owned, leased, rented, hired or used on behalf of Contractor. If applicable to this Agreement and applicable under Federal Law, an MCS 90 endorsement evidencing limits of coverage as outlined in the Motor Carrier Act of 1980 dependent on type of carriage, commodity, and type of commerce.

D. **Umbrella Liability Insurance** written on an occurrence basis subject to a limit of \$4,000,000 each occurrence for bodily injury, property damage and personal injury. Policy coverage is to be at least as broad as primary coverages and include, but not be limited to, Operations and Premises Liability, Completed Operations and Products Liability, Personal Injury Liability, Contractual Liability insurance and coverage for sudden and accidental pollution. Completed Operations coverage is to be maintained for a period of not less than three (3) years after the expiration or termination of this Agreement. Umbrella Liability insurance shall apply to Commercial General Liability, Automobile Liability, and Employers' Liability insurance.

The required limits of insurance may be satisfied by a combination of Primary and Umbrella or Excess Liability Insurance.

E. All insurance required of Contractor with the exception of Workers' Compensation and Employer's Liability shall include OmniTRAX, the Railroad, and any subsidiary, parent or affiliates of OmniTRAX and their owners, agents, representatives, members, managers, officers, directors, shareholders, and employees as additional insureds and shall include wording which states that the insurance shall be primary and not excess over or contributory with any insurance carried by OmniTRAX, Railroad and their affiliates.

F. All insurance shall provide a minimum of thirty (30) days' advance written notice of insurer's intent to cancel or otherwise terminate policy coverage.

G. All policies shall be written on an occurrence basis. If Contractor cannot obtain an occurrence based policy for any required coverage, policies may be written on a claims made basis. If any policies providing the required coverage(s) are written on a claims-made basis, the following is applicable:

1. The retroactive date shall be prior to the commencement of the Work.
2. Contractor shall maintain such policies on a continuous basis.
3. If there is a change in insurance companies or the policies are canceled or not renewed, Contractor shall purchase an extended reporting period of not less than three (3) years after the Agreement expiration or termination date.

H. Contractor shall file with Railroad and its affiliates on or before the effective date of the executed Agreement a valid Certificate of Insurance for all required insurance policies. Each certificate shall identify OmniTRAX, Railroad, its or their affiliates and other required parties as set forth above as additional insureds, and shall state that OmniTRAX, the Railroad, and their affiliates will receive a minimum of thirty (30) days' advance written notice of insurer's intent to cancel or otherwise terminate policy coverage. Prior to expiration of such insurance, Contractor shall supply updated Certificates of Insurance that clearly evidence the continuation of all coverage in the same manner, limits of protection, and scope of coverage, as was provided by the original Certificates and as required in this Section 6.

I. Contractor hereby waives all rights of recovery and all insurance policies required above shall be endorsed to waive all rights of subrogation against OmniTRAX, Railroad, its affiliates, and other required parties as set forth above for damages to the extent covered by insurance.

J. Contractor's or subcontractor's compliance with obtaining the above insurances shall in no way limit the "Liability and Indemnity" afforded to the Indemnified Parties specified in an executed Agreement.

15. FAILURE TO COMPLY:

- A. In the event the Contractor violates or fails to comply with any of the requirements of these Special Provisions:
 - 1. The Railroad Engineer may require that the Contractor vacate RAILROAD property.
 - 2. The Sponsor's Engineer may withhold all monies due the Contractor on monthly statements.
- B. Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the RAILROAD Engineer and the Sponsor's Engineer.

16. PAYMENT FOR COST OF COMPLIANCE:

- A. No separate payment will be made for any extra cost incurred on account of compliance with these special provisions. All such costs shall be included in prices bid for other items of the work as specified in the payment items.

17. PROJECT INFORMATION

- A. Date: _____
- B. File No.: _____
- C. Milepost: _____
- D. Sponsor's Project No.: _____

UTILITY ACCOMMODATION POLICY



Engineering Services
252 Clayton Street 4th Floor
Denver, CO 80206

Revised: October 18, 2018

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PART 1

GENERAL POLICY

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 an 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 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 Railroad, prior to granting of the license, "Certificates of Insurance" or other evidence to show that the appropriate insurance is carried.

Insurance as 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, horizontal drilling or in some cases, open-trenching. WATER JETTING IS NOT PERMITTED.
- c. Where practical, pipelines carrying liquefied petroleum gas shall cross the Railroad where the tracks are carried on an embankment (Fill condition).

- 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 outside track for under crossings) by signs which state the size of the line and its depth.

Example:

CAUTION: 30" diameter high-pressure Gas main 7 feet deep from the base of rail.

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 accepted by the Railroad with regard to location and the manner of adjustment. This includes the measures to be taken to preserve the safety and rail service provided by the Railroad, 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 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 - latest edition.
 - 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 latest 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 mainline and passing tracks, greater than 26 inches in diameter, and at a depth of between 5.5 and 10.0 feet below base of rail, 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 construction, installation, and/or failure issues. 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 depth. Test results must be reviewed and approved by the Railroad, or its consultant, prior to installation activities commencing. The 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 proposed location.

C. Safety

1. Flagging

When work is performed within twenty-five (25) feet of the centerline of the outside 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 impede Railroad operations.

2) Two or more Railroad flagmen may be required when deemed necessary by the Railroad Roadmaster and solely at his or her discretion.

b. Flagging services shall be performed by Railroad employees or 3rd Party Sub-Consultant certified to supply flag protection services and the total cost borne by the Utility Owner/Permittee.

c. The Utility Owner will be billed monthly at a rate to be determined by Railroad or hired 3rd Party Sub-Consultant to include labor and payroll associated costs plus any expenses incurred by Railroad or Sub-Consultant 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 Roadmaster, as noted in the 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. All 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 the Railroad, 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 general public and which requires immediate repair. The Utility Owner shall take all necessary and reasonable safety measures to protect the General Public and the Railroad.
- b. It is the responsibility of the Utility Owner, in such an event, will advise the Railroad Roadmaster as soon as possible. Damage to the Railroad right-of-way and facilities will be restored to its original condition. A Utility License Agreement should be requested by the Utility Owner within two (2) 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 check dam, hay or straw cover, or other material that are acceptable by the Railroad and does not interfere with Railroad activities.

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 of the outside track).

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 utilities, wires, cables, structures, etc. 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.
- 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.
- b. All spraying shall be done by an authorized 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 application removal that will be used. When liability insurance is required, it shall be provided by the 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, shall be removed and the stumps treated to prevent future growth. Shrubbery type growth such as dogwood, sumac, redbud, plum, etc., should not be sprayed as a general rule. Steep slopes and/or embankment, where brushy growth is a major factor in preventing erosion, will 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 from Railroad property. 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 is required to follow state or local agency guidelines and permit application process within the work area defined. The Utility Owner will be held liable for any damage to grass, crops, native shrubs and trees arising from careless burning of such brush. The Utility Owner will be responsible for any expense of clean-up and is required to return the impacted area to its original condition prior to the start of the work.
- 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 and/or controlled future growth material.

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 the 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 Railroad right-of-way or adjacent property line so as to provide a safe environment and to preserve space for future Railroad improvements or other utility installations. Railroad Liaison must approve any installation over one (1) 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. If a conflict occurs between any publication and this manual, the most restrictive specification will be used.

B. Overhead Installations

1. Minimum four (4) 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 the outside 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 ten (+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, poles, support structures (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 Railroad signal system in the track causing failures in the track signals and highway at-grade crossing warning devices. The Railroad Signals Liaison will determine the need for a study on a case-by-case basis.

C. Underground Installations

1. Underground utility installations should be located at the high point of the back slope at the outer limits of the Railroad right-of-way.
2. If the pipeline is located forty (40) feet or less from centerline of the outside 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 the outside track. Pipe must be buried with a minimum cover of three (3) feet or per the industry regulation requirement.
 - a. If less than minimum depth is necessary because of existing utilities, water table, ordinance or similar reasons, the line shall be rerouted and reviewed by the Railroad for approval.
 - 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 the 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 property.
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 within Railroad right-of-way 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 right-of-way. 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 the outside track without the approval of the Railroad.

5. Electric Power Lines

- a. A minimum depth of three (3) feet below natural grade (BNG) will be maintained for 750 volts and less, and four (4) feet BNG for greater than 750 volts.

- b. A six (6) inch wide warning devise will be installed, one (1) 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 four (4) feet BNG for fiber optic cable wirelines.
- b. Whenever feasible, all cable should be laid within five (5) feet from the Railroad right-of-way and/or adjacent property lines.
- c. A six (6) inch wide warning devise will be installed, one (1) 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 utility through drainage structures or cattle passes. Utilities are not to be attached to other Railroad structures without the written approval of the Railroad. 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 the Railroad.

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 the 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 track 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 (signal bungalows, etc.) without the approval of the Railroad.

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. If a conflict occurs between any publication and this manual, the most restrictive specification will be used.

B. Overhead Installations

1. Minimum four (4) feet clearance required above signal and communication lines.
2. Poles must be located fifty (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 ten (10) foot clearance from the centerline of the outside 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 ten (+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, poles, support structures (34.5kV and higher) must be located off Railroad right-of-way.
5. Overhead crossings will not be installed under or within five hundred (500) feet of the end of any Railroad bridge/structure, or three hundred (300) feet from the centerline of any culvert or Railroad switch area.
6. Complete spanning of the property is encouraged with supportive structures and appurtenances located outside the Railroad property. For electric supply lines, normally the crossing span shall not exceed one hundred fifty (150) feet with adjacent span not exceeding 1-1/2 times the crossing span length. For communication lines, the crossing span shall not exceed one hundred (100) feet in Railroad heavy loading districts, one hundred twenty five (125) feet in Railroad medium loading districts, and one hundred fifty (150) feet in Railroad light loading districts; and the adjacent span shall not exceed 1-1/2 times the crossing span length. The Railroad will review current and future loading districts to determine span requirements. For heavier type construction, longer spans will be considered and need to be reviewed and approved by the Railroad.
7. Joint-use construction is encouraged at locations where more than one (>1) utility or type of facility is involved. However, electricity and petroleum, natural gas or flammable materials shall not be combined. Utility for more than one (>1) utility

crossing shall follow the Railroad application process required for an authorized Railroad Utility Agreement. Pipe truss design, overhead structure(s) and proposed layout will need to be reviewed and approved by the Railroad.

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 or warning devise on lowest wire over centerline of track(s).
9. The Utility Owner will label the posts closest to the crossing with the Owner's name and telephone number (contact information) for emergencies.
10. All overhead flammable and hazardous material lines will need the Railroad approval, but should be avoided if possible.
11. For proposed electrical lines crossing track(s), the 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 at-grade crossing warning devices. The Railroad Signals Liaison 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 Requirements). This 80,000-lb. axle load to 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 will be distributed between the five (5) foot axle spacing of the Cooper E-80 configuration.

Railroad loading criteria will also apply where future tracks of the Railroad are contemplated, to the extent this information may be available.

- b. All Utility crossings under ditches 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, or as approved by the Railroad. In fill sections, the natural ground line at the toe of slope will be considered as the ditch grade line. The depth of cover shall not be less than that meeting applicable industry standards.

- c. For all boring and jacking installations under mainline and passing tracks, greater than 26 inches in diameter, and at a depth of between 5.5 and 10.0 feet below base of rail, 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 construction, installation, and/or failure issues. 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 depth. Test results must be reviewed and approved by the Railroad, or its consultant, prior to installation activities commencing. The 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 proposed 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 Railroad 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 less than minimum depth is necessary because of existing utilities, water table, ordinance or similar reasons, the line shall be rerouted and reviewed by the Railroad for approval.
- 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 the Railroad.
- 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 no closer than thirty (30) feet of the centerline of the outside 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 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 within Railroad right-of-way 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 right-of-way. 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 the outside track without the approval of the Railroad.

- e. The Utility Owner will not be permitted to attach to Railroad bridges or route utility through drainage structures or cattle passes. Utilities are not to be attached to other Railroad structures without the written approval of the Railroad.
- f. Jacking pits shall be located a minimum of thirty (30) feet from the centerline of the outside track.

3. Pipeline Requirements

- a. Pipeline designs are to specify to the type and class of material, maximum working pressures test and the 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 be approved by the Railroad.
- 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 track(s) and across Railroad property shall be encased in a larger pipe or conduit called "Casings." Generally, casings shall extend from the Railroad right-of-way line to right-of-way line, unless otherwise approved by the Railroad.
- 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 the Railroad service.
 - 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 right-of-way.
 - 4) Carrier pipe must be steel and the wall thickness must conform to E-80 loading for casing pipe shown in the tables as included and defined in the AREMA manual 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.
 - 5) All steel pipe shall be coated and cathodically protected.
 - 6) 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 track(s) and across the 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 the outside track when casing is sealed at both ends.
 - 4) Forty-five (45) feet from centerline of the 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 future 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 Railroad approved methods. Tunneling construction under track(s) will be permitted only under direct supervision of a Railroad Representative. Tunneling procedures and equipment, as well as structural design, must have Railroad 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 the 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 service that is caused by only small amounts of track movement, Railroad forces may have to be called to surface the track several times at the expense of the Utility Owner.

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 track(s) 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 and immediate notification to the Railroad.
- 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 and complete fulfilling of the voided area.
- 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 the outside 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 Railroad property line. The markers shall give the name and address of the Owner, and a phone number and contact information case of emergencies.
- 3) Casing pipe, when sealed, shall be properly vented. The vent pipe(s) 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 the Railroad 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, the vent pipes on casings shall be at

least sixteen (16) feet (vertically) from aerial electric wires. Casings shall be suitably insulated from adjacent 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 property. 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 by the Railroad, 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. There shall be a minimum clearance of two (2) feet from the valve to the guardrail. Ballard/Bumping Post installed at all four (4) corner posts shall be driven to a minimum depth of four (4) feet below ground line. 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 Railroad 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 the Railroad.
- d. The Utility Owner shall place a readily identifiable and suitable marker at each Railroad right-of-way 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 Liaison.

8. Electric Power Lines

- a. A minimum depth of five and one-half (5.5) feet below the base of rail will be maintained for standard underground electrical utility lines.
- b. A minimum depth of three (3) feet below natural grade (BNG) will be maintained for 750 volts and less, and four (4) 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 fifty (50) feet of the end of any Railroad bridge, centerline of any culvert or Railroad switch area.
- e. A Railroad Signal Liaison must be present during installation if railroad signals are in the vicinity of the underground wireline crossings, unless the Railroad Signal Liaison authorizes otherwise.
- f. Markers that identify the Utility Owner shall be placed at both Railroad right-of-way lines for utilities crossing Railroad property. The markers should identify the Owner, type of cable and emergency telephone number. A six (6) inch wide warning devise will be installed, one (1) foot BNG directly over the underground power line where located on Railroad right-of-way outside the track ballast sections. For parallel lines markers shall be placed above the cable at intervals no less than three hundred (300) feet spacing.
- g. Above-ground utility appurtenances installed as a part of an underground installation shall be located at or near the Railroad right-of-way line and shall not be any closer than twenty-five (25) feet to the centerline of the outside 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 four (4) feet BNG for fiber optic cable wirelines.
- c. The Railroad must approve any specialized equipment used to install cable. No "rail plow" will be allowed for installation purposes.

PART 4

PLANS, APPROVALS AND

PROCEDURES

PART 4 - SUBMITTAL - PLANS, APPROVALS AND PROCEDURES

1) License Procedure

- a) All Utility Crossings must submit an application for a Utility Agreement with the Railroad prior to any plan reviews by the Railroad.
- b) Applications are located on the OmniTRAX website. Also available within the Railroad Real Estate Department.
- c) Agreements will be required for all encroachments on Railroad property.
- d) Generally, agreement-processing time will be thirty (30) to sixty (60) 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 to the Railroad Roadmaster after execution of an agreement will be required prior to initiation of construction.
- e) License fees must be submitted at the time the agreement is executed and returned.

2) Plans and Approvals

- 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 the Railroad before construction is initiated.
- c) Plans shall be drawn to scale showing the relationship of the proposed utility line to the railroad track(s), the proposed angle of crossing in relationship to the track, location of valves and vents (offsets distances from the centerline of track), the Railroad mile post and engineering station, Railroad right-of-way lines and general layout of track(s) and other Railroad facilities. A plan and profile sheet is required from the field survey that will show utility placement, depth of utility line and casing in relation to actual profile of existing ground and track(s). If tunneling is proposed, installation and construction method of supporting the existing track(s) or driving of tunnel shall be included. The geotechnical study, when required, should be included and submitted with the Plans.
- d) The Plans should contain the following but not limited to the data for carrier pipe and casing pipe:
 - i) Contents to be carried
 - ii) Inside diameter
 - iii) Pipe material
 - iv) Specifications and grade of material
 - v) Wall thickness

- vi) Actual working pressure
- vii) Type of joints
- viii) Longitudinal joint factor
- ix) Coating
- x) Method of installation
- xi) Vents-Number, Size, Height above existing ground and base of rail
- xii) Seals-Both ends, One end
- xiii) Cover (base of rail to top of pipe or casing)
- xiv) Cover (other than under track)
- xv) Cover (at ditch line)
- xvi) Cathodic protection
- xvii) Type, Size and Spacing of insulators or supports

When a geotechnical study is required, the findings and protection plan shall be prepared by a licensed civil engineer in the state where the work is located and included with the plans.

The geotechnical crew will need to submit an application for the "Right of Entry" to the Railroad prior to entering Railroad property. The application must be executed and referenced.

A Railroad flagman will be required when working within twenty-five (25) feet of the track.

3) 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 for the "Right of Entry" to the Railroad prior to entering Railroad property. The application must be executed and referenced.

4) Construction

- a) Contractor is required to submit application for the "Right of Entry" to the Railroad prior to entering Railroad property. The application must be executed and referenced.
- b) The execution of the work on Railroad property shall be subject to the observation of the Railroad Roadmaster or Railroad Representative.
- c) A representative of Railroads Signal Department must be present during installation if railroad signals are in the vicinity of the construction, unless approval of plans or authorization has been granted.

PART 5

APPENDIX

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

OmniTRAX managed Railroad properties application form and other information is available on the OmniTRAX Services Website. Right of Entry and Accessing Property, Utility Crossings (Pipeline, Wireline), Grade Crossings Application, Track Lease Application, Assignment of Documents are available or contacting the Railroad Real Estate Department.

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.

BASE OF RAIL: Bottom flange of the steel rail of the track.

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 proposed 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.

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 (90° Angle).

PERMIT TO BE ON RAILROAD PROPERTY is to be executed prior to any general access and all survey, geotechnical, and Contract Work on Railroad property (Right of Entry (ROE) Applications, etc.)

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 crew 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

- > Submit Application for Utility Crossing with the Railroad.
- > 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.