



Public Project Information

For Construction and Improvement Projects
That May Involve the Railroad



Prepared by the Public Projects Group
CSX Transportation Inc. Jacksonville, Florida

Last revised 08-10-12

**To the Communities,
Businesses and
Government Agencies
We Serve:**

CSX Corporation and its business units CSX Transportation (CSXT) and CSX Intermodal (CSXI) provide rail and intermodal service in 23 states, the District of Columbia and two Canadian Provinces. CSXT operates more than 1,200 trains daily, over 21,000 miles of track, helping America maintain the strongest and most productive transportation system in the world.

In addition to CSXT's vitally important customer service responsibilities, the company wants to be a good neighbor in the states and communities where we operate. That is why we have prepared this information. We want to make it easier for communities to work with us when they have construction and improvement projects that may involve the CSXT railroad.

CSXT's Public Projects team is involved in a wide variety of projects initiated by government agencies, local businesses and others. Accurate and timely communication of information between CSXT and these parties improves planning, relationships and successful completion of projects.

The information in this manual is intended to improve communication and cooperation on construction and improvement projects that may involve the CSXT rail property. These tools explain important steps CSXT must follow including information required in connection with any public project proposal.

CSXT places the highest priority on safety – for its employees and for the public. Because CSXT is a business and its shareholders ultimately own its rail system, the company must also give careful consideration to anything that could adversely affect customer service, compensation for use of railroad property, and risk to railroad operation.

The Project Managers – Public Projects are the initial contact for CSXT and are assigned territories by State. Please contact them directly about public projects using the information provided. General Engineering Consultants (GEC) provide additional engineering services to assist CSXT in managing public projects.

CSXT hopes the information and procedures provided here will make it easier for us to work together.

Charles E. Gullakson
Assistant Chief Engineer
Project Management

CSXT Public Project Policy Information

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Additional information can be obtained by contacting the following:

- American Railway Engineering and Maintenance of Way Association,
(301) 459-3200, or www.arema.org.
- U.S. Department of Transportation, Manual of Uniform Traffic Control Devices,
<http://mutcd.fhwa.dot.gov/>
- Safeway Rules Book Manual
https://sso.csx.com/tjax2214db/Safety_Reports/Operating%20Practices/CSX%20Rule%20Books/Safe%20Way%20Eff%207-1-2010.pdf

Information In This Manual

This information is intended to help communities plan and implement construction and improvement projects that may involve the CSXT rail property. Examples of such projects include:

- **Highway-Rail Grade Crossings:** Closure, removal, installation and alterations of public highway-rail grade crossings. CSX's Property Services department manages private crossings. (See contact information on page 4.).
- **Bridges Over CSXT:** Construction, reconstruction, rehabilitation, repair, removal, and maintenance of bridges over the railroad by outside parties.
- **Bridges Carrying CSXT:** Construction, reconstruction, rehabilitation, repair, removal, and maintenance of bridges carrying CSXT 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 CSXT property or operations.
- **U. S. Army Corps of Engineers Projects:** Any project undertaken by the Corps of Engineers that involves CSXT property or operations.
- **Other Projects Involving CSXT Rail Corridors:** Publicly sponsored projects involving or altering CSXT facilities or its property, including highway construction, drainage improvements or other activities that require access to CSXT right of way or property.

Important note: This information is intended to be a tool for communities to assist them in dealing with public projects that may involve CSXT property. All of the statements in this manual involve current policies and are intended to be for broad use. Naturally, any specific project will be subject to analysis of all factors leading to formal agreements between all parties.

Safety of railroad operations and on railroad property will always be of paramount importance.

Any or all of this document or the appendices are subject to revision without prior notification.

CSX Transportation Public Projects Staff

Initial contacts with CSXT for projects should be directed to the Project Manager – Public Projects for the state that includes the project location.

Office Address:
500 Water Street (J-301)
Jacksonville, Florida 32202

Illinois, Indiana, Kentucky, Michigan, Ohio

Amanda J. DeCesare

Project Manager – Public Projects
(859) 426-6924 • fax (859) 426-6930
Email: Amanda_DeCesare@csx.com

Florida, Louisiana, Mississippi

Karen E. Murphy, P.E.

Project Manager – Public Projects
(904) 359-1650 • fax (904) 366-4042
Email: Karen_Murphy@csx.com

Alabama, Georgia, South Carolina, Tennessee

Shelby L. Stevenson

Project Manager – Public Projects
(904) 359-1177 • fax (904) 366-4042
Email: Shelby_Stevenson@csx.com

Connecticut, Massachusetts, New Jersey, New York, Pennsylvania, Canadian Provinces

Leslie L. Scherr

Project Manager – Public Projects
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Delaware, Maryland, North Carolina, Virginia, Washington DC, West Virginia

Benjamin P. Biesterveld

Project Manager – Public Projects
(804) 226-7718 • fax (804) 226-7759
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Tony C. Bellamy, P.E.

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Supervisor Public Projects Operations
(904) 359-3120 • fax (904) 366-4042
Email: Fran_O'Donnell@csx.com

CSX Transportation

Additional CSX Resources and Contacts

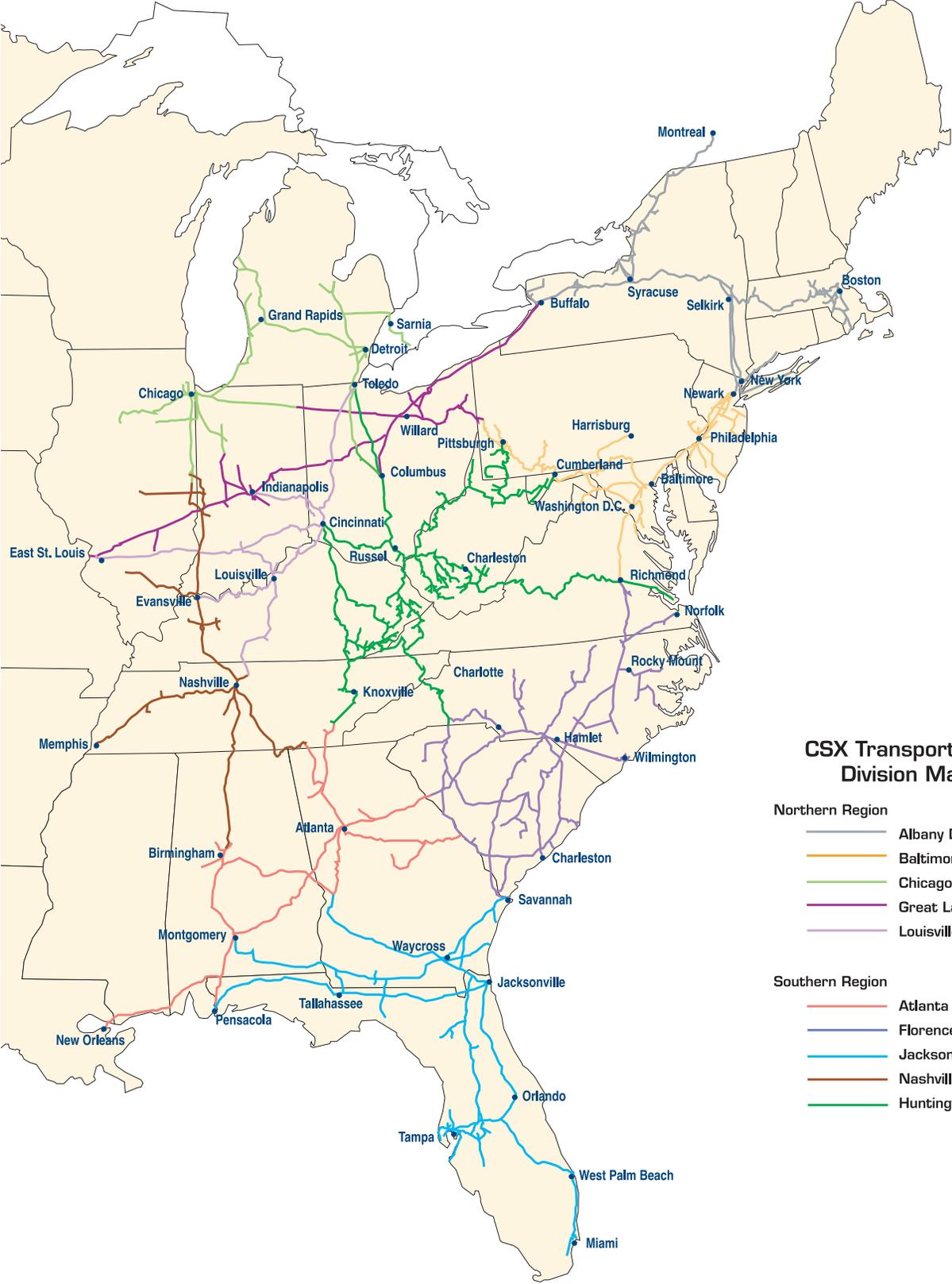
Many areas of community interest are outside the scope of this manual. The following is a list of contacts within CSXT that may be helpful on other community matters:

- **Emergencies:** Emergencies and suspicious situations should be reported immediately to the Public Safety Coordination Center, (800) 232-0144.
- **Corporate Communications and Public Affairs:** News media information, public affairs, state and community relations. Contact: (904) 366-2949.
- **Industrial Development:** New industry site locations, track proposals. Contact: John Milton (904) 359-1617.
- **Insurance:** Review and approve insurance required for projects. Contact: Jonathan MacMarthur (904) 359-3394.
- **Property Services:** Right-of-entry, wire line and pipeline crossings, private highway-rail grade crossings, compliance with codes relating to right-of-way conditions. Contact: Adama Harris (904) 279-4495.
- **Public Safety:** Non-emergency highway-rail crossing safety policies, general safety matters. Contact: Director - Public Safety (904) 366-2949.
- **Railroad Division Engineers:** Track maintenance, drainage maintenance, maintenance of highway-rail grade crossings surfaces. Contact: TellCSX@csx.com or (877) 835-5279.
- **Real Estate Lease or Purchase:** Contact: Adama Harris (904) 279-4495.
- **Signals and Communications:** Maintenance of highway-rail grade crossing warning systems. Contact: CSXT Signal Control Center (888) 999-1725.
- **Structures and Bridges:** Maintenance of bridges that are CSXT's responsibility. Contact: Ed Sparks (904) 359-1104.
- **Passenger & Joint Facilities Contracts:** Amtrak, passenger train proposals, commuter train proposals, light rail corridors, joint facility agreements with other railroads. Contact: Virginia Beck (904) 359-2499.
- **Rails to Trails:** Conversion of unused rail lines to trails. Contact: Bruce McMahon (904) 279-3869.
- **Real Estate Transactions Associated with Public Projects:** Contact: Jim Shircliff (904) 279-4597

CSXT Railroad Division & Staff Engineers Office

Division	Name/Title	Office Telephone	Address
Albany CT, MA, NJ, NY, PA, QE	Wilhite, Greg <i>Division Engineer</i>	(518) 767-6557 RNX 245	One Bell Crossing Rd. Selkirk, NY 12158 Fax: (518) 767-6359
	Lorensen, Chris <i>Staff Engineer</i>	(518) 767-6544 RNX 245	
Appalachian KY, NC, SC, TN, VA	Ramsey, Martin <i>Division Engineer</i>	(423) 743-2780 RNX 362	229 Nolichucky Ave. Erwin, TN 37650 Fax: (423) 743-3635
	Ali, Amar <i>Staff Engineer</i>	(423) 743-2793 RNX 362	
Atlanta AL, FL, GA, LA, SC, TN	Murray, Bill <i>Division Engineer</i>	(404) 350-5074 RNX 377	1590 Marietta Blvd. NW Atlanta, GA 30318-3699 Fax: (404) 350-5433
	Stewart Jr, Bill <i>Staff Engineer</i>	(404) 350-5274 RNX 377	
Baltimore DC, DE, MD, NJ, PA, VA, WV	Daniels, Randy <i>Division Engineer</i>	(410) 368-4792 RNX 463	4724 Hollins Ferry Rd. Baltimore, MD 21227 Fax: (410) 368-4795
	Helene, Jeremy <i>Staff Engineer</i>	(410) 368-4791 RNX 463	
C&O KY, MD, OH, VA, and WV	Wharton, Mike <i>Division Engineer</i>	(304) 522-5102 RNX 431	935 7th Avenue Huntington, WV 25701 Fax: (304) 522-5163
	Buckley, Jim <i>Staff Engineer</i>	(304) 522-5122 RNX 431	
Chicago MI, ON, OH, IN, IL	Brass, Josh <i>Division Engineer</i>	(708) 832-2254 RNX 481	1700 167th Street Calumet City, IL 60409 Fax: (708) 832-2090
	Phillips, Jon <i>Staff Engineer</i>	(708) 832-2257 RNX 481	
Great Lakes OH, PA, IN, IL	Thoburn, Tom <i>Division Engineer</i>	(440) 239-3608 RNX 479	14955 Sprague Rd. Strongsville, OH 44136 Fax: (440) 239-3630
	Cameron, Mike <i>Staff Engineer</i>	(440) 239-3602 RNX 479	
Florence GA, NC, SC, VA	Moore, Bobby <i>Division Engineer</i>	(843) 629-2243 RNX 383	100 Oakland Ave. Florence, SC 29506 Fax: (904) 245-3887
	Thomas, John Henry <i>Staff Engineer</i>	(843) 629-2319 RNX 383	
Jacksonville AL, FL, GA	Spatafore, Dick <i>Division Engineer</i>	(904) 381-4126 RNX 388	3019 Warrington St., Jacksonville, FL 32254 J390 Fax: (904) 245-2792
	Van Hoose, Joey <i>Staff Engineer</i>	(904) 381-4126 RNX 388	
Louisville KY, OH, TN, IL, TN	Peterson, JR <i>Division Engineer</i>	(513) 853-1116 RNX 435	3131A Spring Grove Ave. Cincinnati, OH 45225 Fax: (904) 245-3120
	Little, Mike <i>Staff Engineer</i>	(513) 853-1120 RNX 435	
Nashville AL, TN, KY, IN, IL	Fortune, John <i>Division Engineer</i>	(615) 835-6004 RNX 275	624 Grassmere Pk Rd., Nashville, TN 37211 Ste 14 Fax: (904) 245-3024
	Smith, Buford <i>Staff Engineer</i>	(615) 835-6005 RNX 275	

CSXT Division Map



CSX Transportation Division Map

- Northern Region**
 - Albany Division
 - Baltimore Division
 - Chicago Division
 - Great Lakes Division
 - Louisville Division

- Southern Region**
 - Atlanta Division
 - Florence Division
 - Jacksonville Division
 - Nashville Division
 - Huntington Division



Requirements for Preliminary Engineering Review

Key Points and Procedures

- Starting CSXT Preliminary Engineering early lowers project costs and shortens the time required for CSXT review and approval
- Using standard agreements lowers costs and saves time
- Complete Preliminary Engineering agreement
- Arrange payment for expenses as specified in the agreement
- Start initial review with conceptual plans
- CSXT prepares estimate for railroad work and flagging required
- If approved for construction, complete Construction agreement
- Preliminary Engineering typically costs \$8,000 to \$25,000

Overview

Any proposals that communities, businesses and others outside CSXT make that may affect or be near the CSXT right-of-way must be evaluated in advance by CSXT to ensure the safety of the public and CSXT employees, maintain quality rail service to CSXT customers and protect CSXT assets. This section provides guidance on the purpose, content, expense and timing of the Preliminary Engineering process that is used to complete these reviews and approvals.

Definitions

- Parties proposing projects are referred to as “Project Sponsors.”
- The Preliminary Engineering for a project is referred to as the “PE.”
- General Engineering Consultants (GECs) provide engineering services to support and represent CSXT’s interest in public projects. GECs perform preliminary engineering, construction inspection, and monitoring under the direction of the CSXT Engineering personnel. GEC personnel also do day-to-day administration of certain types of projects.

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. CSXT review of plans is only to determine that the plans and improvements constructed in accordance with the plans satisfy CSXT’s requirements.

Process Steps To Be Taken

- Notify CSXT Public Projects Group or designated GEC of the project location and provide initial project information.
- Review and complete a standard PE agreement.
- Provide project information; attend meetings (as needed), review site with CSXT or GEC personnel.
- Submit initial plans to CSXT or designated GEC for review.
- Respond to CSXT or designated GEC concerns and adjust design if necessary.
- Submit final design for CSXT or designated GEC review.
- CSXT will complete final review to ensure compliance with railroad requirements.
- CSXT will estimate the cost of the work to be done by CSXT and required flagging.
- When the project sponsor and CSXT approve the project for construction, a standard construction agreement will be prepared by CSXT for execution.

Costs and Expenses

These matters are covered in more detail in the section that follows (“Payment of CSXT’s Costs and Expenses.”) For the reasons described in that section, CSXT generally seeks payment for its costs and expenses of reviewing and handling the PE. In addition, all expenses of the party seeking the review will be borne by that party, including expenses for CSXT 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. CSXT will work to be responsive, with timing depending upon the complexity of the project. CSXT and its GEC will work with the project sponsor to schedule PE and construction to meet project schedule objectives whenever possible, considering available resources. PE for a grade crossing project typically takes 4 to 5 months depending on the complexity of the design.

Standard Documents

CSXT executes hundreds of agreements each year for preliminary engineering and construction of projects. Standard agreements can be executed by CSXT without additional legal review. Non-standard agreements or terms will require additional legal review and CSXT may request reimbursement for the additional expense. There are variations in standard documents used with some states and agencies. Sample Standard documents are available in the Appendix

- Preliminary Engineering Agreement
- Construction Agreement
- Special Provisions for Work on CSXT Right of Way



Payment of CSXT's Costs and Expenses

Key Points and Procedures

- Preliminary Engineering (PE) costs are usually paid in advance, but other arrangements can be made, if necessary.
- A deposit is generally required to cover CSXT reimbursable expenses expected to be incurred as part of the Construction agreement.
- If CSXT's actual expenses are less than the sum of any deposits the difference will be refunded after final cost accounting.

Overview

Because CSXT's shareholders ultimately own CSXT's assets, fair compensation for their use and for the company's resources is necessary and reasonable. Moreover, the types of projects being addressed in this manual usually do not directly benefit and, in some cases, create hurdles for, CSXT's core business of providing transportation service vital to its customers and the American economy. For these reasons, CSXT seeks payment for its costs and expenses incurred in connection with project review or construction.

Preliminary Engineering Agreement

To initiate a construction or improvement project, a Preliminary Engineering (PE) agreement is required to identify the sponsor, the project, define the tasks to be accomplished and specify the payment schedule. Advance payment at the time of the execution of a standard PE agreement is the easiest and fastest way to enable CSXT to proceed with PE, but CSXT also understands that on occasion there will be mitigating circumstances requiring alternative accommodations. If the project sponsor qualifies for a method of payment other than advance payment in full, terms of payment are expected to ensure that CSXT is always working from the sponsor's funds.

Construction Agreement

When a project is approved, CSXT will work with the project sponsor to complete a Construction agreement. The project sponsor will be expected to make a deposit with CSXT for the total estimated reimbursable expenses, as detailed by the estimate. In the event that CSXT anticipates it may incur reimbursable expenses in excess of the deposited amounts, it will request that the project sponsor submit an additional deposit to cover the remaining balance of the reimbursable expenses, as shown in a revised estimate. If the actual reimbursable expenses are less than the deposit made, CSXT will refund the overpayment.



Entry onto CSXT Property

Key Points and Procedures

- Permission is required for all parties entering CSXT right-of-way.
- Temporary right of entry agreements can be used for limited purposes.
- Preliminary Engineering agreements and Construction Agreements may also authorize entry onto CSXT property.
- All parties must adhere to CSXT Safety procedures as outlined in the entry document.
- Advance payment of the \$750 preparation fee is required for right-of-entry agreements.
- Appropriate insurance is required and not included in the preparation fee.
- Allow four-to-six weeks to process a Right-of-Entry agreement.

Overview

To maintain efficient customer service and to ensure the safety of CSX employees and of those parties requesting access to CSXT property, CSXT requires all parties accessing its right-of-way for investigative activities or for the performance of construction work to have a written agreement with CSXT fully detailing each party's responsibilities. Activities by others with the potential to affect rail operations without actually entering CSXT property must also be reviewed with CSXT 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 CSXT for costs it may incur in relation to the entry or work. The following summarizes the various types of CSXT agreements and contacts most frequently utilized to accommodate the requested entry and the proposed work activities.

Temporary Right-of-Entry Agreement

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

Because these types of activities generally do not provide benefit to CSXT, the requesting party will be responsible for reimbursing CSXT for its costs associated with preparation and handling of the Temporary Right-of-Entry agreement as well as any other expenses including field expenses for flagging and protective services. Depending on conditions or circumstances, advance payment for CSXT costs may be required under the terms of a Temporary Right-of-Entry Agreement.

Applicants should expect between four and six weeks will be required to process the necessary applications and agreements.

Additionally, the outside party or agency will be required to have the appropriate Commercial General Liability and Railroad Protective Liability insurance when appropriate. Typically, activities performed under a Temporary Right of Entry agreement may only be performed under the direct supervision of the assigned CSXT flagman. The cost of flagman is considered a project cost and will be covered by required advanced deposit of funds. CSXT will provide guidance to applicants in outlining both the process by which these services may be obtained as well as how the applicant's activities can best and safely be coordinated with CSXT's flag personnel and rail operations.

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 CSXT's right-of-way can be obtained by contacting CSXT Property Services department at (800) 322-4697 or via CSX's web site at www.csx.com.

Entry for Construction Work

Right-of-Entry to undertake construction work (not exclusively associated with utility work) within CSXT right-of-way that could impact CSXT facilities or operation, or requiring access to CSXT property in connection with that work (such as reconstruction of bridges, roadway construction or other highway improvements, grading and/or drainage work) often requires a more detailed review and evaluation as to possible effects to CSXT's property, operations and facilities. Should a need exist for entry by an outside party or agency to prepare plans or other documents necessary to describe the scope of the work proposed, such entry for the initial data collection and investigative activities can be handled via the use of a Temporary Right-of-Entry agreement between the party or its agents and CSXT, as covered in the section above. Entry may also be authorized as part of a Preliminary Engineering Agreement.

When the construction work relating to CSXT is approved, entry for the actual construction work planned by an outside party or agency or that is to be performed by their agents is most often covered within a formal Construction Agreement developed between the outside party or agency and CSXT, including all other appropriate provisions related to the performance of the planned work.

CSXT's Public Projects Group is responsible for the development and handling of agreements for construction work. The Public Projects Group may refer some projects to others if they are sponsored by rail passenger agencies.

Entry For Other Purposes

CSXT 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 CSXT's Property Services department. Information also is available by visiting www.csx.com

- 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 CSXT tracks at private or public highway-rail grade crossings.
- Movement of off highway construction equipment across CSXT tracks at private or public highway-rail grade crossings.



Public Road Crossing Openings and Closures

Key Points and Procedures

- CSXT considers safety of those using highway-rail grade crossings to be of great importance and believes the addition of crossings increases the potential for highway-rail collisions.
- Grade separations are the best alternative to add new roads or additional highway capacity.
- CSXT and state and federal agencies have worked with many communities to develop and implement projects that improve highway traffic flow and close public and private highway-rail grade crossings.
- CSXT and state and federal agencies encourage communities to consider all alternatives before planning to create new grade crossings and encourage closure of existing crossings where possible.
- The highway authority seeking a change in crossings will be asked to prepare a written request for such a change and CSXT will promptly respond with its decision.
- CSX will provide incentive payments for crossing closures.

Overview

No issue is of greater importance to CSXT than the safety of those who utilize highway-rail grade crossings and the employees of CSXT who operate the trains that cross them. At the same time, CSXT understands the importance of highway 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.

Crossing Closure Incentive Program

Closing crossings and reducing the frequency of crossing accidents is a goal of CSXT, states and the FRA. Closing adjacent crossings simplifies the design, installation and operation of highway-rail grade crossing warning systems. To help ensure the success of this effort, CSXT will 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 CSXT trains and motor vehicles. Recognizing this, in 1991 The Federal Railroad Administration (FRA) set a goal to reduce the number of public highway-rail grade crossings in the nation by 25 percent. The 2004 Secretary of Transportation Action Plan for Highway-Rail Crossing Safety and Trespass Prevention again supported efforts to close crossings and limit the creation of new crossings except where the public interest clearly provides justification. CSXT, other railroads, the FRA and most states also 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. CSXT and other railroads believe the cost of a grade separation should not outweigh the enhanced safety it would provide for motorists.

CSXT, 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.

To comply with and support the federal initiative to reduce crossings, CSXT has a practice of requesting that multiple redundant public crossings be consolidated before agreeing to the establishment of a new crossing. CSXT expects communities to engage in a study with the purpose of identifying existing redundant public crossings for closure.

Proposals for establishing a new public crossing or converting a private crossing to a public crossing are approved when they include the closure of three or more other active public crossings unless there are specific engineering or rail operation considerations at the specific location.

Public crossings closed within the last two years, and in the future will be counted toward future new crossing proposals. This is viewed as an incentive to close public crossings when an opportunity is identified.

CSXT's goal, outlined in the following policies and procedures, is to create an environment throughout the CSXT system where it is safe for the public to travel across its railroad tracks and for our rail operations to effectively and safely serve CSXT customers.

Policies and Procedures To Guide Crossing Requests:

The highway authority 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. A detailed explanation of the necessity of the crossing. CSXT will look more favorably upon requests for new crossings when proposals also identify crossings in the immediate area that qualify for closure.
3. The terms on which the highway authority proposes that the crossing shall be constructed and subsequently maintained.
4. 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.
5. A plan to satisfy any appropriate regulatory authority's requirements, procedures and approval.
6. The highway authority's willingness to pay CSXT 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 and related grade crossing warning devices.
7. The State Transportation department should also be asked to assist with identification of possible crossing closures. CSXT will look to the highway authority to pay the cost of the closures, unless the closure qualifies for voluntary contribution by CSXT as a part of our grade crossing closure and consolidation program.

CSXT will promptly advise the highway authority of its decision, with appropriate explanation, after its review of the submitted request.

Locations Where Crossings are Not Approved

As a matter of operational efficiency, some locations will not be approved for crossings because of railroad engineering and operating considerations such as passing sidings, tracks used for switching, special track work, sharp curves and other considerations.



Parallel Road Construction

Key Points and Procedures

- Parallel public roads should be located off CSXT property when possible.
- Safety at existing at highway-rail grade crossings must be considered and not adversely impacted.
- Drainage for the road and railroad must be considered.
- Access for CSXT equipment to its right of way must be permitted.
- Construction may result in the need for alterations to crossing warning systems or facilities.

Overview

The design of highways, highway intersection, and configuration of highway-rail grade crossings is the responsibility of the highway agency.

General Guidelines

In the interest of public safety, parallel public roads should be located off CSXT property wherever possible. 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 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.

Drainage for highway runoff, the railroad corridor, and adjacent property must be designed to prevent standing water and potential erosion.

Access for CSXT equipment to the railroad right-of-way, 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 appendix to this policy has additional information on the MUTCD and AREMA manuals and information.

Key Points and Procedures



Highway-Rail Grade Crossing Warning Devices Selection

- Any alterations to highway-rail grade crossings and/or warning systems must adhere to all applicable laws, regulations and national standards.
- Preliminary Engineering agreements are used to define the project scope and prepare design and estimate information for each project.
- The requesting highway agency will be responsible for 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 highway-rail grade crossings and/or warning systems. Included will be projects for opening new crossings, closing existing crossings, modifying or widening of existing crossings, installation of new surface treatments, 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 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.

Processing Project Requests

The Public Projects Group will ensure adherence to all applicable Federal and State standards and regulations, and local policies, laws and ordinances as well as CSXT practices. Compliance with State regulations also ensures that the highway agency or other governmental agency responsible for making system and equipment determinations selects appropriate vehicular traffic control signs and/or devices for a specific public highway. CSXT and its employees and contractors do not have the authority or expertise to determine the level or configuration of warning devices for a crossing for the highway agency. However, CSXT will contribute information that can be used by the highway agency in its decision.

The design of highways, highway intersections, and configuration of the highway-rail grade crossings is the responsibility of the highway agency. 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

CSXT and CSXT Signal Engineering Consultants (SEC) will provide engineering, design, and cost estimates for the installation of highway-rail grade crossing warning devices at the expense of the requesting highway agency as part of the Preliminary Engineering for a project. Changes to highway-rail grade crossing may also require engineering and estimating by CSXT General Engineering Consultants (GEC).

Coordination of Traffic Signals with Warning System

The highway agency will determine if preemption is required and the appropriate timing for the traffic signals and highway-rail grade crossing warning devices. 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.

Operation of Highway-Rail Grade Crossing Warning Devices

Highway-rail grade crossing warning systems are designed to activate at least a designed minimum amount of warning time before a train enters the crossing. Trains speeding up or slowing down within the approach distance may cause the warning system to activate longer than the minimum warning time specified for the crossing prior to a train entering the crossing. Trains stopping or making forward and reverse movements within the approach distance for the crossing may cause the warning system to activate and then clear after an appropriate time without a train entering the crossing.



Quiet Zone Proposals

Key Points and Procedures

- This section was developed as a guideline for communities that approach CSXT 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 (the "Rule"), and to ensure CSXT's full compliance and cooperation with respect to the Rule.
- According to the FRA's commentary on the Rule, implementation of Quiet Zones – without appropriate safeguards and equipment – increases the risk of accidents at highway-rail grade crossings. In this context, CSXT encourages communities considering whether to implement Quiet Zones 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 involve relevant state and local agencies, CSXT, and other rail carriers operating in the area.
- CSXT will seek to be reimbursed for work performed to design, implement, and maintain railroad facilities within Quiet Zones.
- CSXT desires to be a good corporate citizen. CSXT also places importance on the quality and timeliness of service to its customers and the communities it serves. As such, consistent with the Rule, CSXT 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

CSXT 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 will provide guidance for conditions under which Public Authorities 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, CSXT 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. CSXT 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 123456A) 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 CSXT 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 CSXT, if applicable; and processing necessary agreements. CSXT will coordinate preliminary planning activities with each Public Authority pursuant to an initial agreement that will also provide for payment to CSXT 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 should direct initial CSXT contact relating to possible Quiet Zones to: Director of Public Safety, 500 Water Street (C205), Jacksonville, Florida 32202. Those making this contact will be furnished with the Quiet Zone policy and advised of the appropriate contact within the CSXT Public Projects Group for the initial planning activities with CSXT.
3. If the Public Authority decides to proceed with preliminary planning for a Quiet Zone CSXT will assist by providing, when required, DOT inventory information and attending diagnostic review meetings, to the extent schedules permit. CSXT resources to attend these meetings are limited and thus CSXT will seek flexibility in establishing meeting dates and times in order to permit CSXT representatives to attend.
4. The Preliminary Planning for a Quiet Zone project should include a review of the following principles:
 - a. CSXT 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 CSXT's employees. Communities should keep in mind that, because of the anticipated large volume of Quiet Zone applications and the demands placed on CSXT resources by other transportation and safety projects, it is difficult at this time to estimate how long the planning and implementation process will take.
 - b. In accordance with the Rule, CSXT'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, CSXT retains the right to review and comment on the requests.
 - c. CSXT 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 CSXT for its cost of installation and future maintenance of Quiet Zones, including, but not limited to, its installation of Supplemental Safety Measures (SSMs) and Alternative Safety Measures (ASMs). As an example, CSXT 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 CSXT, a separate standard Preliminary Engineering Agreement will be required to cover CSXT'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 CSXT Public Projects Group design and estimating procedures will be used for projects related to Quiet Zones.



Bicycle/Pedestrian Pathways and Crossings

Key Points and Procedures

- Private or public parallel at-grade paths are not permitted on active CSXT right of way.
- CSXT will oppose condemnation proceedings aimed at recreational use of trackside property.
- The public agency or private landowner that establishes bike/pedestrian path usage of trackside property must provide unqualified indemnity and adequate insurance to protect CSXT as well as safety measures necessary to eliminate safety risks.
- Bicycle/pedestrian pathways cannot cross tracks at grade.

Overview

CSXT recognizes that communities often wish to establish recreational paths in areas adjacent to active railroad lines. Understanding the importance of these activities to local communities, CSXT will cooperate in establishment of such paths, recognizing that important requirements must be met and safety precautions taken to protect those who use the pathways.

CSXT's pathway policy is a reflection of its longstanding commitment to employee and public safety and its concern for the risks associated with pedestrian, bike or motor vehicle traffic moving on or adjacent to its railroad right-of-way.

CSXT Policy on Pathways Parallel to CSXT Tracks and Right of Way

At CSXT safety is paramount. Because of the risks associated with pedestrian, bicycle, and other recreational traffic moving parallel to active rail lines, CSXT's policy is not to permit private or public parallel at-grade paths that come within the railroad's right-of-way (generally 50 feet from the centerline of the track on both sides). In the interest of public safety, in the rare event that circumstances exist that an exception is made, CSXT 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 must be clearly assigned to and carried out by an appropriate agency or person other than CSXT.

Also in the interest of public safety, CSXT will oppose any attempt to impose recreational usage of trackside property through condemnation. In the event public authorities or private landowners succeed in establishing such usage, CSXT requires, as a condition of access to its property, an unqualified indemnity by the public agency or private landowner responsible for such usage, and insurance coverage adequate to cover the increased risk by such usage. CSXT also requires the public agency or private landowner to bear the cost of any safety measures that may be necessary to eliminate or lessen such risks.

Pathways Crossing CSXT Tracks and Right-of-Way

For obvious safety reasons, bicycle/pedestrian pathway crossing railroad tracks will not be permitted at grade. Establishing pathways over or under the railroad track and right of way, with appropriate safeguards, will then require pathway-rail grade separations.

Bicycle/pedestrian pathway-rail crossings at existing public highway-rail grade crossings will be permitted when they are within a highway easement across CSXT right-of-way and a determination of the appropriate signs and warning system is made by the appropriate highway and/or regulatory agency.

The cost of pathway-rail crossings, signs, and warning systems will be paid by the requesting party or government agency, including the initial installation and maintenance.

As a matter of practice, CSXT prosecutes trespassers upon its property and every precaution must be taken to ensure that the public remains clear of CSXT's right-of-way.



Painting CSXT Bridges to Improve Appearance

Key Points and Procedures:

- CSXT understands the desire of communities to improve the appearance of bridges and other structures. Safety of CSXT employees, the general public and neighbors restrict some alternatives for bridge appearance improvement.
- CSXT's priority is bridge safety, as reflected in its budget allocations.
- CSXT will permit others to paint CSXT bridges if labor agreement, technical and responsibility requirements are resolved.
- Billboard sign surfaces are also permitted to be attached to bridges for beautification purposes if technical and responsibility requirements are resolved.
- A written request should be submitted to CSXT's Public Projects Group to initiate consideration of this type of project.

Overview

CSXT operates 21,000 miles of track throughout the eastern United States with over 16,000 bridges. 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 CSXT. Some agreements assign maintenance responsibility to an outside agency.

Consideration of Bridge Painting Projects

CSXT places high priority on bridge safety and this is strongly reflected in its allocations within the CSXT bridge maintenance budget. Painting bridges or attaching billboard type surfaces to bridges must permit inspection and minor maintenance. Attachments or painted surfaces must not interfere with CSXT and other bridge inspections or repairs and must not require removal for inspection. Bridge painting and attachments must be reviewed and approved by CSXT. Other funding sources may be available to local communities that can be applied to such projects and CSXT encourages local communities to seek such assistance.

If outside parties wish to undertake a project to beautify CSXT's right-of-way or bridges, CSXT will make every effort to cooperate, consistent with maintaining the safety of the public and the safe operation of the railroad.

Submission of Project Requests

A written request by the outside party wishing to undertake such projects should be forwarded to CSXT's Public Projects Group for prompt handling. In cooperation with the CSXT Bridge Group, CSXT Public Projects will review and provide initial comments on the request and identify additional issues or concerns for resolution. The request should include information about the situation and the project objectives to assist CSXT with completion of the review. The following information should be included:

- The agency or company that will execute appropriate agreements for implementation as well as future maintenance of the painted surfaces or other attachments.
- Information and types of paint and painting methods proposed for the project. State specifications for surface preparation, cleanup, paint and paint application will be accepted by CSXT.
- Qualifications and experience of the painting contractor. CSXT will accept state qualified bridge painting contractors working for the responsible agency or company. A standard CSXT construction agreement will be required.

- 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.
- 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.
- Attachments to bridges are restricted to secondary members and must be designed by a professional engineer. Pictures and conceptual drawing should be submitted with the initial request from the community to simplify the initial review and comment by CSXT.
- Work site safety considerations including keeping all personnel away from the tracks and payment for the use of a railroad flagman to control train movements if required.
- The safety of the contractor employees doing the work including fall protection and health considerations during the work.
- Maintenance of railway traffic without interruption.
- Liability indemnification for CSXT and insurance will have to be provided for the project.
- The agency or company responsibility for maintenance of the painted surfaces or attached billboard and surfaces including damage by highway vehicles and vandalism must be clarified.



Painting and Cleaning of Bridges

Key Points and Procedures

- Cleaning and painting bridges over CSXT property require an agreement with CSXT.
- Work must be evaluated in terms of engineering standards at the outside party's expense
- A construction agreement is required to accommodate engineering, review of plans, flagging, right-of-entry and payment of CSXT incurred costs.

Overview

Cleaning and painting bridges over CSXT right-of-way and tracks require an agreement with CSXT to ensure compliance with applicable safety, environmental and other laws, regulations or ordinances

Requirements for Initiating and Implementing Bridge Cleaning and Painting

A Preliminary Engineering agreement may be required to cover CSXT's review of the project and prepare a cost estimate and agreement.

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

Also to ensure the safety of the public and CSXT employees, provide for quality service for CSXT customers and to protect CSXT assets, it is necessary that all work by outside parties within or adjacent to the CSXT right-of-way be evaluated in terms of engineering standards at the outside party's expense

During the preliminary engineering phase, standards, operations, and safety will be defined and must be addressed. When the project work has been approved by CSXT, a force account estimate(s) will be provided and a construction agreement prepared for the project.

A construction agreement will be required covering payment to CSXT for engineering, review, flagging, right-of-entry, work coordination, safety, and insurance. (see Section "Payment of CSXT's Cost and Expenses")



Overhead and Undergrade Bridge Criteria

Key Points and Procedures

CSXT's policies and standards for overhead and undergrade bridge areas are available for bridge projects and are furnished upon request.

Overview

The following listed exhibits in the appendix are CSXT's overhead and undergrade (ballast deck) bridge policy and standards. These standards were created and are maintained by CSXT's Bridge Department. They are available for bridge projects and will be furnished when requested.

- Compliance with these policies and standards will be reviewed during preliminary engineering for a project.
- Overhead (with reference to the railroad) Bridge Criteria
- Undergrade (with reference to the railroad) Bridge Criteria including ballasted decks.



Insurance Requirements for Public Projects

Insurance Policies

Agency and Contractor, if and to the extent that either is performing work on or about CSXT's property, shall procure and maintain the following insurance policies:

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 CSXT 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 CSXT 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 CSXT 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 Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance – Insurance Services Office (ISO) Form CG 00 35.
 - b. CSX Transportation must be the named insured on the Railroad Protective Insurance Policy.
 - c. Name and Address of Contractor and Agency must be shown on the Declarations page.
 - d. Description of operations must appear on the Declarations page and must match the Project description, including project or contract identification numbers.
 - 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

Continued on next page.

- (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 CSXT may require.

Additional Terms

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

Jonathan Macarthur
Insurance Department
CSX Corporation
500 Water Street - C907
Jacksonville, FL 32202
904.359.3394 (Phone)
904.306.5325 (Fax)
Jonathan_Macarthur@csx.com

2. Neither Agency nor Contractor may begin work on the Project until it has received CSXT’s written approval of the required insurance.



Construction Monitoring Requirements

Key Points and Procedures

- Construction work by outside parties affecting CSXT will be monitored by CSXT at the outside party's expense.
- Construction monitoring is in addition to flagging or other protective services.

Overview

To ensure the safety of the public and CSXT employees, maintain quality rail service to CSXT customers and to protect CSXT assets, construction monitoring of all outside party construction work within, over or that may in any manner affect CSXT will be conducted by CSXT or its General Engineering Consultant (GEC) personnel.

Monitoring Costs, Personnel, Safety Considerations

The following outlines procedures for the monitoring of construction work on or near CSXT property and steps that must be taken to ensure the safety of all personnel involved and for the efficient operation of CSXT's trains.

- Monitoring may include visits to the site or being continuously on-site during construction activity that could be hazardous to the public or CSXT employees.
- 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 to control train operation in the work area.
- Overhead bridge demolition and erection will require review by CSXT of all contractor work plans, calculation which bear the seal of a Professional Engineer, and CSXT construction monitoring.
- Signal Engineering Consultants (SEC) also may be used to review and monitor work by outside parties related to signal systems and electrical interference.
- Safety of the outside party or property, outside party contractors, and outside party employees is the responsibility of the outside party. CSXT as part of its construction monitoring will review the work site for activities that could interfere with safe operation of the railroad. CSXT and its GEC and SEC are not responsible for monitoring the general work activities under the direction of the outside party for compliance with safety regulation. Any observed unsafe acts or conditions will be reported immediately to the outside party or contractor representative.



Railroad Construction Site Flagging for Activities Near Railroad Property and Track

Key Points and Procedures

- Flagging services are required when projects are within close proximity to active rail lines.
- Flagging services can only be performed by qualified CSXT personnel.
- Arrangements for flagging services may take 45 days to schedule a qualified employee for a continuing assignment.

Overview

CSXT employees strongly believe that safety is a way of life. To protect public safety and the safety of employees and property, CSXT 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 CSXT Flagging Services Are Required:

- When an agency, consultant or contractor, 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 CSXT 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 could impact CSXT 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.

Qualified Flagging Personnel

CSXT flagging services may only be performed by qualified CSXT 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 CSXT dispatching personnel and train crews.

Arrangements for CSXT Flagging Services

- Arrangements for CSXT 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 will be performed by CSXT.
- According to the specific arrangements outlined in the agency's, consultant's or contractor's agreement or other documentation with CSXT, advance notice must be provided to secure CSXT flagging services. The level of advance notice may vary from site to site or project to project or if CSXT 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 CSXT personnel. Arrangements to start flagging services may take 45 days, depending on the availability of personnel.

Responsibility for Costs and Expenses

- All costs and expenses associated with CSXT providing flagging services in connection with work that might affect railroad property or facilities are the sole responsibility of the agency, consultant or contractor.
- The outside party typically will be provided with an estimate (by CSXT) describing its initial anticipated costs prior to the start of the project work or its assignment of flagging personnel.
- Costs for flagging or other required services provided by CSXT are billable to the agency, consultant or contractor based upon actual costs and expenses as incurred by CSXT.

- Once flagging personnel are formally assigned by CSXT 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 weekday eight-hour day are calculated and billed at an overtime rate.

Examples of Costs and Expenses

Charges billed by CSXT 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 CSXT and its assigned union flagging employees.
 - The amount includes the cost for a leased, rented, CSXT, 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 CSXT providing flagging services.
 - Typical flagging cost is \$800 to \$1,000 per day.



Highway-Rail Grade Crossing— Crossing Surface Maintenance and Replacement

Key Points and Procedures

- Highway-Rail Grade Crossings are intersections between highways and railroads.
- Coordination is required for work near crossings.
- Highways must be closed for crossing replacement or major maintenance work.
- Agreements are required for crossing work and work near crossings.
- CSXT will use crossing surfaces that meet criteria set by CSXT's Engineering Standards.
- For identification purposes, each crossing has a distinct DOT inventory number (such as 123456A) posted at the crossing and the railroad milepost.

Crossing Surface Purpose and Design

The crossing surface provides a path for highway vehicles to cross railroad tracks. The crossing surface must include flangeways next to the rail for railroad wheel flanges to pass through the crossing. The objective is to provide a safe, smooth, and cost effective crossing for highway and railroad traffic.

Safety During Work Near Crossings

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.

Two Types of Highway-Rail Grade Crossings

- Public highway-rail grade crossings are for public roads crossing railroad tracks.
- Private highway-rail grade crossings are for the use of private property owners, their invitees, or their customers. The responsibilities at private crossings are defined by private crossing agreements with CSXT or property documents.

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 CSXT approved crossings using wood ties are:

- Heavy Duty Highway Crossings (Concrete)
- Normal Duty Highway Crossings (Rubber/Asphalt/Timber)
- Normal Duty Highway Crossings (Timber/Asphalt)
- Light Duty Highway Crossings (Rubber/Asphalt)
- Farm/Residential Crossings (Rubber/Asphalt)
- Farm/Residential Crossings (Timber/Asphalt)

The CSXT Director of Engineering Standards must approve non-standard crossing material. Projects funded by

outside parties may be constructed with approved concrete slab or full depth rubber if specified by the outside party. Modular Platform 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 Responsibilities

Crossing maintenance, replacement of the track, and crossing surface is generally undertaken by railroad personnel or railroad contractors 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 Maintenance and Replacement Work

Crossing work requires closing the entire highway-rail grade crossing to both highway and railroad traffic to assure the work can be performed safely and to provide as high a quality surface as possible when completed.

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. The track is usually returned to service for train operation the same day the track replacement is started to compact the track sub-structure. Additional work to complete the crossing surface replacement and approach paving is completed within the next 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 2 days or more during this maintenance work.

Reporting Problems and Requesting Crossing Surface Maintenance

Railroad personnel working for the CSXT Roadmaster do crossing surface repair work. The Roadmaster is in charge of a specific railroad territory. Roadmasters are usually in the field with their personnel. Requests for road crossing maintenance should be made to the Staff Engineer for the specific CSXT division. The Staff Engineer works in the division office and communicates with the Roadmasters on a regular basis. They are listed by Division.

The CSXT Track Inspector or the Roadmaster will inspect the crossing and the planned corrective action will be communicated to the agency or individual.

Scheduling Crossing Maintenance and Replacement Work

Scheduling crossing replacement work requires advanced planning with the railroad and the highway authority for the specific crossing. Specialized traveling railroad teams do most railroad track maintenance and crossing work. Each team has a schedule that is prepared each year and adjusted based on actual progress during the construction season.

Crossing work is scheduled based on review of the field conditions and recommendations by the CSXT Roadmaster and the highway authority responsible for the highway.

Requesting Crossing Surface Replacement or Upgrades

Requests for replacement of crossing surfaces should be made to the CSXT Project Manager – Public Projects. The request for the work and the recommended surface will be reviewed and approved by CSXT. The Project Manager –

Public Projects will prepare a standard agreement and include the cost estimate for the project. Projects that require CSXT funding for some of the project expense require internal approval before the agreement is executed and the project scheduled.

Initiating a highway project in the vicinity of a Highway-Rail Grade Crossing

Highway work at or near highway-rail grade crossings must be planned to avoid conflicts with railroad traffic. Work such as highway paving or other work that may use equipment near a crossing requires a CSXT construction agreement, railroad protective insurance, and a railroad flagman. For these types of projects, please contact the Project Manager – Public Projects to arrange for a Preliminary Engineering and Construction agreement.

APPENDIX

CSX Transportation

PRELIMINARY ENGINEERING AGREEMENT

Public Projects Group
Jacksonville, FL
Date Issued: May 12, 2006

PRELIMINARY ENGINEERING AGREEMENT

This Preliminary Engineering Agreement (this “**Agreement**”) is made as of _____, 20__, by and between CSX TRANSPORTATION, INC., a Virginia corporation with its principal place of business in Jacksonville, Florida (“CSXT”), and [insert name of public agency], a body corporate and political subdivision of the [State or Commonwealth] of [insert name of State/Commonwealth] (“Agency”).

EXPLANATORY STATEMENT

1. Agency wishes to facilitate the development of the proposed [DESCRIBE PROJECT] (the “**Project**”).
2. Agency has requested that CSXT 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 CSXT, which approval may be withheld for any reason directly or indirectly related to safety or CSXT operations, property, or facilities, the Project is to be constructed, if at all, at no cost to CSXT, 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 CSXT 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 CSXT’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 CSXT by Agency for the Project (collectively, the “**Engineering Work**”). 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 CSXT to perform work which, in CSXT’s opinion, is not relevant to CSXT’s participation in the Project.

1.2 Effect of CSXT 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**”), CSXT signifies only that the Plans and the Project proposed to be constructed in accordance with the Plans satisfy CSXT’s requirements. CSXT 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 CSXT’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 CSXT 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.

Reimbursement of CSXT Expenses.

3.1. Reimbursable Expenses. Agency shall reimburse CSXT for all costs and expenses incurred by CSXT 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) labor, together with labor overhead percentages established by CSXT pursuant to applicable law (collectively, the “**Reimbursable Expenses**”).

3.2. Estimate. CSXT has estimated the total Reimbursable Expenses for the Project to be approximately \$ _____ (the “Estimate” as amended or revised). In the event CSXT 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. CSXT 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 CSXT a sum equal to the Reimbursable Expenses, as shown by the Estimate. Agency shall pay CSXT for Reimbursable Expenses in the amount set forth in CSXT Schedule PA attached hereto, a copy of which shall accompany the advance payment. If CSXT anticipates that it may incur Reimbursable Expenses in excess of the deposited amount, CSXT will request an additional deposit equal to the then remaining Reimbursable Expenses which CSXT estimates that it will incur. CSXT 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, CSXT shall reconcile the total Reimbursable Expenses incurred by CSXT against the total payments received from Agency and shall submit to Agency a final invoice if required. Agency shall pay to CSXT 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. CSXT 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 CSXT any sums due CSXT under this Agreement: (i) Agency shall pay CSXT 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) CSXT 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.

3.4 Effect of Termination. Agency’s obligation to pay CSXT Reimbursable Expenses in accordance with this Section shall survive termination of this Agreement for any reason.

4. Appropriations. Agency represents to CSXT that: (i) Agency has obtained appropriations sufficient to reimburse CSXT 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 CSXT 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 CSXT. Such termination shall become effective upon the expiration of fifteen (15) calendar days following delivery of notice to CSXT or such later date designated by the notice.

5.2 By CSXT. CSXT 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 ninety (90) days after written notification from CSXT 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 CSXT pursuant to this Agreement for the Engineering Work performed, plus all costs reasonably incurred by CSXT to discontinue the Engineering Work and all other costs of CSXT 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 CSXT 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, CSXT's only remaining obligation to Agency shall be to refund to Agency payments made to CSXT in excess of Reimbursable Expenses in accordance with Section 2.

- 6. Subcontracts. CSXT shall be permitted to engage outside consultants, counsel and subcontractors to perform 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 CSXT: CSX Transportation, Inc.
 500 Water Street, J301
 Jacksonville, Florida 32202
 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. CSXT 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 CSXT and the assumption by CSXT's assignee of CSXT's obligations under this Agreement, CSXT shall have no further obligations under this Agreement. Agency shall not assign its rights or obligations under this Agreement without CSXT's prior written consent, which consent may be withheld for any reason.
- 11. Applicable Law. This Agreement shall be governed by the laws of the [State or Commonwealth] of [*PROJECT LOCATION], 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 Duval County, Florida, and the parties agree to submit to the personal jurisdiction of any State or Federal court situated in Duval County, Florida.

Project Description: _____ CSXT OP# _____

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: _____

CSX TRANSPORTATION, INC.

By: _____

Print Name: _____

Project Description: _____ CSXT OP# _____

CSXT Schedule PA
(Advance Payment – Preliminary Engineering Agreement)

PAYMENT SUBMISSION FORM

Payment is hereby provided in accordance with the terms of Section 3.3 of the Agreement dated _____, 20____, between Agency and CSXT.

A copy of this Payment Submission Form shall accompany all payments delivered by Agency to CSXT which shall be forwarded to the following address:

CSX Transportation, Inc.
P. O. Box 116651
Atlanta, GA 30368-6651

Payment due within ten (10) days of Agency's receipt of fully executed agreement

(All information below to be completed by Agency providing Payment)

<u>Payment Date</u>	<u>Payment Amount</u>	<u>Check No.</u>
_____	_____	_____

Date: _____ By: _____

Name: _____

Title: _____

Phone: _____

Email: _____

APPENDIX

CSX Transportation CONSTRUCTION AGREEMENT

Public Projects Group
Jacksonville, FL
Date Issued: October 1, 1999

CONSTRUCTION AGREEMENT

This Construction Agreement (“Agreement”) is made as of _____, 20____, by and between CSX TRANSPORTATION, INC., a Virginia corporation with its principal place of business in Jacksonville, Florida (“CSXT”), and [PUBLIC AGENCY], a body corporate and political subdivision of the State of _____ (“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, CSXT 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 CSXT 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 CSXT, by or on behalf of Agency or its contractors, pursuant to this Agreement; and (iii) CSXT 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 CSXT or their respective contractors. Project plans, specifications and drawings prepared by or on behalf of Agency shall be subject, at CSXT’s election, to the review and approval of CSXT. Such plans, specifications and drawings, as prepared or approved by CSXT, 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 CSXT as of the date of this Agreement are set forth in Exhibit B to this Agreement.

Effect of CSXT Approval or Preparation of Plans. By its review, approval or preparation of Plans pursuant to this Agreement, CSXT signifies only that such Plans and improvements constructed in accordance with such Plans and improvements constructed in accordance with such Plans satisfy CSXT’s requirements. CSXT 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.

ALLOCATION AND CONDUCT OF WORK

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

- 2.1 CSXT Work. Subject to timely payment of Reimbursable Expenses as provided by Section 4, CSXT shall provide, or cause to be provided, the services as set forth by Exhibit A to this Agreement. Agency agrees that CSXT shall provide all services that CSXT 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 CSXT’s contractual obligations, including, but not limited to, CSXT’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. CSXT shall commence its work under this Agreement following: (i) delivery to CSXT of a notice to

proceed from Agency; (ii) payment of Reimbursable Expenses (as provided by Section 4.1) as required by CSXT prior to the commencement of work by CSXT; (iii) issuance of all permits, approvals and authorizations necessary or appropriate for such work; and (iv) delivery of proof of insurance acceptable to CSXT, as required by Section 9. The initiation of any services by CSXT 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 CSXT or on CSXT 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 CSXT 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 CSXT for all costs and expenses incurred by CSXT 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 CSXT’s consultants and subcontractors, and (6) CSXT labor in connection with the Project, together with CSXT labor overhead percentages established by CSXT pursuant to applicable law (collectively, “Reimbursable Expenses”). Reimbursable Expenses shall also include expenses incurred by CSXT prior to the date of this Agreement to the extent identified by the Estimate provided pursuant to Section 4.2.

4.2 Estimate. CSXT has estimated the total Reimbursable Expenses for the Project as shown on Exhibit D (the “Estimate”, as amended or revised). In the event CSXT 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. CSXT 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 CSXT 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). CSXT agrees to submit invoices to Agency for such amounts and Agency shall remit payment to CSXT 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, CSXT shall submit to Agency a final invoice that reconciles the total Reimbursable Expenses incurred by CSXT against the total payments received from Agency. Agency shall pay to CSXT 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 CSXT from Agency exceed the Reimbursable Expenses, CSXT shall remit such excess to Agency.

4.3.3 In the event that Agency fails to pay CSXT any sums due CSXT under this Agreement: (i) Agency shall pay CSXT 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) CSXT 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 CSXT shall be delivered to Agency in accordance with Section 16 of this Agreement. All payments by Agency to CSXT shall be made by certified check and mailed to the following address or such other address as designated by CSXT’s notice to Agency:

CSX Transportation, Inc.
P. O. Box 116551
Atlanta, GA 30368-6651

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

5. APPROPRIATIONS

Agency represents to CSXT that: (i) Agency has appropriated funds sufficient to reimburse CSXT 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 CSXT 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, CSXT hereby grants Agency a nonexclusive license to access and cross CSXT'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 CSXT and such temporary construction easements as may be designated on the Plans approved by CSXT.

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

8. TERMINATION

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

8.2 By CSXT. In addition to the other rights and remedies available to CSXT under this Agreement, CSXT 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 CSXT 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 CSXT pursuant to this Agreement for the Work performed, plus all costs reasonably incurred by CSXT to discontinue the Work and protect the Work upon full suspension of the same, the cost of returning CSXT's property to its former condition, and all other costs of CSXT 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 CSXT for Reimbursable Expenses incurred in accordance with this Agreement. In the event of the termination of this Agreement or the Work for any reason, CSXT's only remaining obligation to Agency shall be to refund to Agency payments made to CSXT 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 CSXT'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 CSXT's Risk Management Department.

10. OWNERSHIP AND MAINTENANCE

[CSXT UTILIZES VARIOUS LANGUAGE IN COMPLETING THIS SECTION DESCRIBING BOTH

MAINTENANCE RESPONSIBILITIES FOR CSXT 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 CSXT.

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

11. INDEMNIFICATION

11.1 Generally. To the maximum extent permitted by applicable law, Agency and its Contractors shall indemnify, defend, and hold CSXT 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 CSXT, 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 CSXT, its affiliates, Agency or its Contractors, and environmental damages and any related remediation brought or recovered against CSXT 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 CSXT'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 CSXT and its affiliates harmless with respect to any fines, penalties, liabilities, or other consequences arising from breaches of this Section.

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

11.4 Notice of Incidents. Agency and its Contractor shall notify CSXT 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 CSXT. Except as otherwise provided by this Agreement, CSXT 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 CSXT to prohibit Agency or its Contractors or anyone from entering CSXT'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

CSXT 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 CSXT and the assumption of CSXT's assignee of CSXT's obligations under this Agreement, CSXT shall have no further obligation under this Agreement. Agency shall not assign its rights or obligations under this Agreement without CSXT'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 CSXT:

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 Duval County, Florida, and the parties agree to submit to the personal jurisdiction of any State or Federal court situated in Duval County, Florida.

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 _____

Print Name_____

Title _____

CSX TRANSPORTATION, INC.

By _____

Print Name_____

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:

CSXT 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 CSXT for its review and approval:

[INSERT PLAN DESCRIPTION HERE]

EXHIBIT C

CSXT 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 CSXT a sum equal to the Reimbursable Expenses, as shown by the Estimate. If CSXT anticipates that it may incur Reimbursable Expenses in excess of the deposited amount, CSXT will request an additional deposit equal to the then remaining Reimbursable Expenses which CSXT estimates that it will incur. CSXT 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 CSXT IF DEEMED ACCEPTABLE AND ARE SUBJECT TO NEGOTIATION BETWEEN CSXT AND AGENCY]

EXHIBIT F

INSURANCE REQUIREMENTS

SCHEDULE I

CONTRACTOR'S ACCEPTANCE

To and for the benefit of CSX Transportation, Inc. ("CSXT") and to induce CSXT to permit Contractor on or about CSXT's property for the purposes of performing work in accordance with the Agreement dated _____, 20__, between [PUBLIC AGENCY] and CSXT, 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

CSX Transportation

CSXT SPECIAL PROVISIONS

Public Projects Group

Jacksonville, FL

Date Issued: May 9, 2011

CSXT SPECIAL PROVISIONS

AUTHORITY OF CSXT ENGINEER

The CSXT Representative shall have final authority in all matters affecting the safe maintenance of CSXT operations and CSXT property, and his or her approval shall be obtained by the Agency or its Contractor for methods of construction to avoid interference with CSXT operations and CSXT property and all other matters contemplated by the Agreement and these Special Provisions.

II. INTERFERENCE WITH CSXT OPERATIONS

- A. Agency or its Contractor shall arrange and conduct its work so that there will be no interference with CSXT operations, including train, signal, telephone and telegraphic services, or damage to CSXT's property, or to poles, wires, and other facilities of tenants on CSXT's Property or right-of-way. Agency or its Contractor shall store materials so as to prevent trespassers from causing damage to trains, or CSXT Property. Whenever Work is likely to affect the operations or safety of trains, the method of doing such Work shall first be submitted to the CSXT Representative for approval, but such approval shall not relieve Agency or its Contractor from liability in connection with such Work.
- B. If conditions arising from or in connection with the Project require that immediate and unusual provisions be made to protect train operation or CSXT's property, Agency or its Contractor shall make such provision. If the CSXT Representative determines that such provision is insufficient, CSXT may, at the expense of Agency or its Contractor, require or provide such provision as may be deemed necessary, or cause the Work to cease immediately.

III. NOTICE OF STARTING WORK. Agency or its Contractor shall not commence any work on CSXT Property or rights-of-way until it has complied with the following conditions:

- A. Notify CSXT in writing of the date that it intends to commence Work on the Project. Such notice must be received by CSXT at least ten business days in advance of the date Agency or its Contractor proposes to begin Work on CSXT property. The notice must refer to this Agreement by date. If flagging service is required, such notice shall be submitted at least thirty (30) business days in advance of the date scheduled to commence the Work.
- B. Obtain authorization from the CSXT Representative to begin Work on CSXT property, such authorization to include an outline of specific conditions with which it must comply.
- C. Obtain from CSXT the names, addresses and telephone numbers of CSXT's personnel who must receive notice under provisions in the Agreement. Where more than one individual is designated, the area of responsibility of each shall be specified.

IV. WORK FOR THE BENEFIT OF THE CONTRACTOR

- A. No temporary or permanent changes to wire lines or other facilities (other than third party fiber optic cable transmission systems) on CSXT property that are considered necessary to the Work are anticipated or shown on the Plans. If any such changes are, or become, necessary in the opinion of CSXT or Agency, such changes will be covered by appropriate revisions to the Plans and by preparation of a force account estimate. Such force account estimate may be initiated by either CSXT or Agency, but must be approved by both CSXT and Agency. Agency or Contractor shall be responsible for arranging for the relocation of the third party fiber optic cable transmission systems, at no cost or expense to CSXT.
- B. Should Agency or Contractor desire any changes in addition to the above, then it shall make separate arrangements with CSXT for such changes to be accomplished at the Agency or Contractor's expense.

V. HAUL ACROSS RAILROAD

- A. If Agency or Contractor desires access across CSXT property or tracks at other than an existing and open public road crossing in or incident to construction of the Project, the Agency or Contractor must first obtain the permission of CSXT and shall execute a license agreement or right of entry satisfactory to CSXT, wherein Agency or Contractor agrees to bear all costs and liabilities related to such access.
- B. Agency and Contractor shall not cross CSXT's property and tracks with vehicles or equipment of any kind or character, except at such crossing or crossings as may be permitted pursuant to this section.

VI. COOPERATION AND DELAYS

- A. Agency or Contractor shall arrange a schedule with CSXT for accomplishing stage construction involving work by

CSXT. In arranging its schedule, Agency or Contractor shall ascertain, from CSXT, the lead time required for assembling crews and materials and shall make due allowance therefor

- B. Agency or Contractor may not charge any costs or submit any claims against CSXT for hindrance or delay caused by railroad traffic; work done by CSXT or other delay incident to or necessary for safe maintenance of railroad traffic; or for any delays due to compliance with these Special Provisions.
- C. Agency and Contractor shall cooperate with others participating in the construction of the Project to the end that all work may be carried on to the best advantage.
- D. Agency and Contractor understand and agree that CSXT does not assume any responsibility for work performed by others in connection the Project. Agency and Contractor further understand and agree that they shall have no claim whatsoever against CSXT for any inconvenience, delay or additional cost incurred by Agency or Contractor on account of operations by others.

VII. STORAGE OF MATERIALS AND EQUIPMENT

Agency and Contractor shall not store their materials or equipment on CSXT's property or where they may potentially interfere with CSXT's operations, unless Agency or Contractor has received CSXT Representative's prior written permission. Agency and Contractor understand and agree that CSXT will not be liable for any damage to such materials and equipment from any cause and that CSXT may move, or require Agency or Contractor to move, such material and equipment at Agency's or Contractor's sole expense. To minimize the possibility of damage to the railroad tracks resulting from the unauthorized use of equipment, all grading or other construction equipment that is left parked near the tracks unattended by watchmen shall be immobilized to the extent feasible so that it cannot be moved by unauthorized persons.

VIII. CONSTRUCTION PROCEDURES

A. General

- 1. Construction work on CSXT property shall be subject to CSXT's inspection and approval.
- 2. Construction work on CSXT property shall be in accord with CSXT's written outline of specific conditions and with these Special Provisions.
- 3. Contractor shall observe the terms and rules of the CSXT Safe Way manual, which Agency and Contractor shall be required to obtain from CSXT, and in accord with any other instructions furnished by CSXT or CSXT's Representative.

B. Blasting

- 1. Agency or Contractor shall obtain CSXT Representative's and Agency Representative's prior written approval for use of explosives on or adjacent to CSXT property. If permission for use of explosives is granted, Agency or Contractor must comply with the following:
 - a. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of Agency or Contractor.
 - b. Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
 - c. No blasting shall be done without the presence of an authorized representative of CSXT. At least 30 days' advance notice to CSXT Representative is required to arrange for the presence of an authorized CSXT representative and any flagging that CSXT may require.
 - d. Agency or Contractor must have at the Project site adequate equipment, labor and materials, and allow sufficient time, to (i) clean up (at Agency's expense) debris resulting from the blasting without any delay to trains; and (ii) correct (at Agency's expense) any track misalignment or other damage to CSXT's property resulting from the blasting, as directed by CSXT Representative, without delay to trains. If Agency's or Contractor's actions result in delay of any trains, including Amtrak passenger trains, Agency shall bear the entire cost thereof.
 - e. Agency and Contractor shall not store explosives on CSXT property.
- 2. CSXT Representative will:
 - a. Determine the approximate location of trains and advise Agency or Contractor of the approximate amount

of time available for the blasting operation and clean-up.

- b. Have the authority to order discontinuance of blasting if, in his or her opinion, blasting is too hazardous or is not in accord with these Special Provisions.

IX. MAINTENANCE OF DITCHES ADJACENT TO CSXT TRACKS

Agency or Contractor shall maintain all ditches and drainage structures free of silt or other obstructions that may result from their operations. Agency or Contractor shall provide erosion control measures during construction and use methods that accord with applicable state standard specifications for road and bridge construction, including either (1) silt fence; (2) hay or straw barrier; (3) berm or temporary ditches; (4) sediment basin; (5) aggregate checks; and (6) channel lining. All such maintenance and repair of damages due to Agency's or Contractor's operations shall be performed at Agency's expense.

X. FLAGGING / INSPECTION SERVICE

- A. CSXT has sole authority to determine the need for flagging required to protect its operations and property. In general, flagging protection will be required whenever Agency or Contractor or their equipment are, or are likely to be, working within fifty (50) feet of live track or other track clearances specified by CSXT, or over tracks.
- B. Agency shall reimburse CSXT directly for all costs of flagging that is required on account of construction within CSXT property shown in the Plans, or that is covered by an approved plan revision, supplemental agreement or change order.
- C. Agency or Contractor shall give a minimum of 30 days' advance notice to CSXT Representative for anticipated need for flagging service. No work shall be undertaken until the flag person(s) is/are at the job site. If it is necessary for CSXT to advertise a flagging job for bid, it may take up to 90-days to obtain this service, and CSXT shall not be liable for the cost of delays attributable to obtaining such service.
- D. CSXT shall have the right to assign an individual to the site of the Project to perform inspection service whenever, in the opinion of CSXT Representative, such inspection may be necessary. Agency shall reimburse CSXT for the costs incurred by CSXT for such inspection service. Inspection service shall not relieve Agency or Contractor from liability for its Work.
- E. CSXT shall render invoices for, and Agency shall pay for, the actual pay rate of the flagpersons and inspectors used, plus standard additives, whether that amount is above or below the rate provided in the Estimate. If the rate of pay that is to be used for inspector or flagging service is changed before the work is started or during the progress of the work, whether by law or agreement between CSXT and its employees, or if the tax rates on labor are changed, bills will be rendered by CSXT and paid by Agency using the new rates. Agency and Contractor shall perform their operations that require flagging protection or inspection service in such a manner and sequence that the cost of such will be as economical as possible.

XI. UTILITY FACILITIES ON CSXT PROPERTY

Agency shall arrange, upon approval from CSXT, to have any utility facilities on or over CSXT Property changed as may be necessary to provide clearances for the proposed trackage.

XII. CLEAN-UP

Agency or Contractor, upon completion of the Project, shall remove from CSXT's Property any temporary grade crossings, any temporary erosion control measures used to control drainage, all machinery, equipment, surplus materials, falsework, rubbish, or temporary buildings belonging to Agency or Contractor. Agency or Contractor, upon completion of the Project, shall leave CSXT Property in neat condition, satisfactory to CSXT Representative.

XIII. FAILURE TO COMPLY

If Agency or Contractor violate or fail to comply with any of the requirements of these Special Provisions, (a) CSXT may require Agency and/or Contractor to vacate CSXT Property; and (b) CSXT may withhold monies due Agency and/or Contractor; (c) CSXT may require Agency to withhold monies due Contractor; and (d) CSXT may cure such failure and the Agency shall reimburse CSXT for the cost of curing such failure.

APPENDIX

CSX Transportation

CRITERIA FOR OVERHEAD BRIDGES

Office of Director Fixed Plant Engineering

Jacksonville, FL

Date Issued: September 14, 2007

CRITERIA FOR OVERHEAD BRIDGES

CSX Transportation (CSXT) has minimum requirements for outside parties constructing, rehabilitating, or replacing bridges over CSXT's railroad tracks. These requirements are intended to provide safe and continuous passage of all train traffic during and after construction of bridges over its tracks. Part of these requirements is for the outside party to submit a detailed plan of the project as well as provide details of the construction methodology. This document provides information on the requirements by CSXT for overhead bridges.

Plans and specifications for new or reconstructed bridges over CSXT's railroad tracks or right-of-way shall meet the following requirements:

I. GENERAL REQUIREMENTS:

- A. CSXT's valuation station and the distance from the nearest milepost at the intersection of the centerline of the track and the centerline of the bridge shall be shown on the General Plan.
- B. The existing and proposed minimum horizontal and vertical clearances shall be marked clearly on the General Plan and Elevation.
- C. At least one subsurface exploration boring for each substructure unit adjacent to the track shall be furnished to CSXT's during the design submittal. Borings shall provide enough information to design shoring and foundations.
- D. Prior to construction activities, all overhead bridge projects will require the procurement of the appropriate property rights from CSX Real Property and other construction agreement(s) with CSX Transportation.
- E. All lifting equipment and connection devices shall have capacity for 150% of the actual lifting load. The factor of safety provided by the manufacturer in the lifting capacity data shall not be considered in the 150% requirement. A licensed professional engineer, familiar with lifting and rigging, in the State where the construction work is proposed must sign and seal all plans and calculations related to critical lifting on the project.

II. CLEARANCES:

- A. **Horizontal Clearance:** Standard horizontal clearance from centerline of the track to the face of the pier or abutment shall typically be 25'-0" or greater, but never less than 18'-0", measured perpendicular to the track. Provisions for future tracks, access roads, other CSXT facilities, and drainage may require the minimum clearance be increased or use of multi-span structures. The toe of footings shall not be closer than 11'-0" from centerline of the track to provide adequate room for sheeting.

- B. Vertical Clearance: A standard vertical clearance of 23'-0" shall be provided, measured from top of high rail to lowest point of structure in the horizontal clearance area which extends 6'-0" either side of the centerline of track.
- C. Temporary Construction clearances to be used shall be subject to approval by CSXT. Typically reductions in clearance for construction are not permitted.
- D. CSXT shall be furnished as-built drawings showing actual clearances as constructed.

III. CRASHWALLS:

AREMA Specifications, Chapter 8, Article 2.1.5 covers the requirements for crashwalls. Crashwalls are required when face of the pier is closer than 25'-0" from centerline of the track, measured perpendicular to the track, except as noted below.

Crashwalls shall meet the following requirements:

- A. Crashwalls for single column piers shall be minimum 2'-6" thick and shall extend a minimum of 6'-0" above the top of high rail for piers located between 18'-0" and 25'-0" from the centerline of the nearest track. The wall shall extend minimum 6'-0" beyond the column on each side in the direction parallel to the track.
- B. For multi-column piers, the columns shall be connected with a wall of the same thickness as the columns or 2'-6" whichever is greater. The wall shall extend a minimum of 2'-6" beyond the end of outside columns in a direction parallel to the track.
- C. Reinforcing steel to adequately anchor the crashwalls to the column and footing shall be provided.

For piers of heavy construction, crashwalls may be omitted. Solid piers with a minimum thickness of 2'-6" and length of 20'-0", single column piers of minimum 4'-0" X 12'-6" dimensions or any other solid pier sections with equivalent cross sections and minimum 2'-6" thickness are considered as heavy construction.

IV. DRAINAGE:

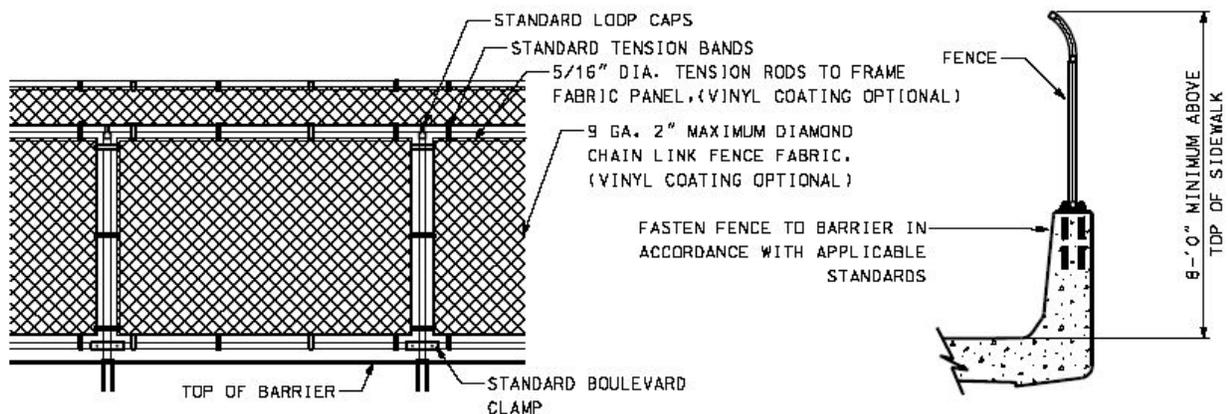
Drainage from the bridge shall be preferably collected with drain pipes and drained away from CSXT's right-of-way. When open scuppers are provided on the bridge, none shall be closer than 25'-0" of the centerline of nearest track. Flow from the scuppers shall be directed away from CSXT's drainage ditches.

Projects including stormwater systems shall be designed for a 100-year storm event as a minimum. If stormwater is drained on or to CSXT's right-of-way, calculations must be submitted to CSXT to verify the 100-year storm event is properly handled. Improvements to the adjacent drainage systems may be required at project expense, to ensure the impacted system will meet the 100-year storm event minimum condition.

During and after completion of construction, the outside party or its contractor must clear CSXT's drainage ditches of all debris to the satisfaction of CSXT's construction engineering and inspection representative

V. PROTECTIVE FENCING

All highway structures shall have a protective barrier fence to extend at least 8'-0" from the top of the sidewalk or driving surface adjacent to the barrier wall. The fence may be placed on top of the barrier wall. The fence shall be capable of preventing pedestrians from dropping debris onto CSXT's right-of-way, and in particular, passing trains. Openings in the fence shall not exceed 2"x2". Fencing should also include anti-climb shields or be of a configuration to minimize the likelihood of climbing on the outside of the protective fencing. A chain link fence option is shown below:



VI. STRUCTURE EXCAVATION AND SHORING:

Shoring protection shall be provided when excavating adjacent to an active track. Shoring will be provided in accordance with AREMA *Manual for Railway Engineering* Chapter 8 part 28, except as noted below.

Shoring will not be required if both the following conditions are satisfied:

1. Excavation does not encroach upon a 1 ½ horizontal: 1 vertical theoretical slope line starting 1'-6" below top of rail and at 12'-0" minimum from centerline of the track (live load influence zone).
2. Track is on level ground or in a cut section and on stable soil.

When the track is on an embankment, excavating the toe of the embankment without shoring may affect the stability of the embankment. Therefore, excavation of the embankment toe without shoring will not be permitted.

Preferred protection is the cofferdam type that completely encloses the excavation. Where dictated by conditions, partial cofferdams with open sides away from the track may be used. Cofferdams shall be constructed using steel sheet piling or steel soldier piles with timber lagging. Wales and struts shall be provided as needed. The following shall be considered when designing cofferdams:

- a. Shoring shall be designed to resist a vertical live load surcharge of 1,882 lbs. per square foot, in addition to active earth pressure. The surcharge shall be assumed to act on a continuous strip, 8'-6" wide. Lateral pressures due to surcharge shall be computed using the strip load formula shown in *AREMA Manual for Railway Engineering*, Chapter 8, Part 20.
- b. Allowable stresses in materials shall be in accordance with *AREMA Manual for Railway Engineering*, Chapter 7, 8, and 15.
- c. A construction procedure for temporary shoring shall be shown on the drawing.
- d. Safety railing shall be installed when temporary shoring is within 15'-0" of the centerline of the track.
- e. A minimum distance of 10 feet from centerline of the track to face of nearest point of shoring shall be maintained.

The contractor shall submit the following drawings and calculations for CSXT's review and approval.

1. Three (3) sets of detailed drawings of the shoring systems showing sizes of all structural members, details of connections, and distances from centerline of track to face of shoring. Drawing shall show a section showing height of shoring and track elevation in relation to bottom of excavation.
2. One set of calculations of the shoring design.

The drawings and calculations shall be prepared by a Licensed Professional Engineer in the State where shoring is to be constructed and shall bear his seal and signature. Shoring plans shall be approved by CSXT's construction engineering and inspection representative.

3. For sheeting and shoring within 18'-0" of the centerline of the track, the live load influence zone, and in slopes, the contractor shall use sheet pile. No sheet pile in slopes or within 18'-0" of the centerline of track shall be removed. Sheet piles shall be cut off 3'-0" below the finished ground line. The remaining 3'-0" shall be backfilled and compacted immediately after cut off.

VII. DEMOLITION OF EXISTING STRUCTURE:

The Contractor shall submit a detailed procedure for demolition of existing structures over or adjacent to CSXT's tracks or right-of-way. The procedure shall clearly indicate the capacity of cranes, location of cranes with respect to the tracks and calculated lifting loads (refer to Section I.E of this document). The demolition procedure must be approved by CSXT's construction engineering and inspection representative.

CSXT's tracks, signals, structures, and other facilities shall be protected from damage during demolition of existing structure or replacement of deck slab. As a minimum, both of the following methods shall be used:

- A. During demolition of the deck, a protection shield shall be erected from the underside of the bridge over the track area to catch falling debris. The protection shield shall be supported from girders or beams. The deck shall be removed by cutting it in sections and lifting each section out. The protection shield shall be designed, with supporting calculations, for a minimum of 50 pounds per square foot plus the weight of the equipment, debris, personnel, and other loads to be carried.

Large pieces of deck shall not be allowed to fall on the protection shield

- B. A ballast protection system consisting of geofabric or canvas shall be placed over the track structure to keep the ballast clean. The system shall extend along the track structure for a minimum of 25'-0" beyond the limits of the demolition work, or farther if required by CSXT's construction engineering and inspection representative.
- C. The Contractor shall submit detailed plans, with supporting calculations, of the protection shield and ballast protection systems for approval prior to the start of demolition.
- D. Blasting will not be permitted to demolish a structure over or within CSXT's right-of-way.

VIII. ERECTION PROCEDURE:

The Contractor shall submit a detailed procedure for erecting over or adjacent to CSXT's tracks or right-of-way. The procedure shall clearly indicate the capacity of cranes, location of cranes with respect to the tracks and calculated lifting loads (refer to Section I.E of this document). The erection procedure must be approved by CSXT's construction engineering and inspection representative.

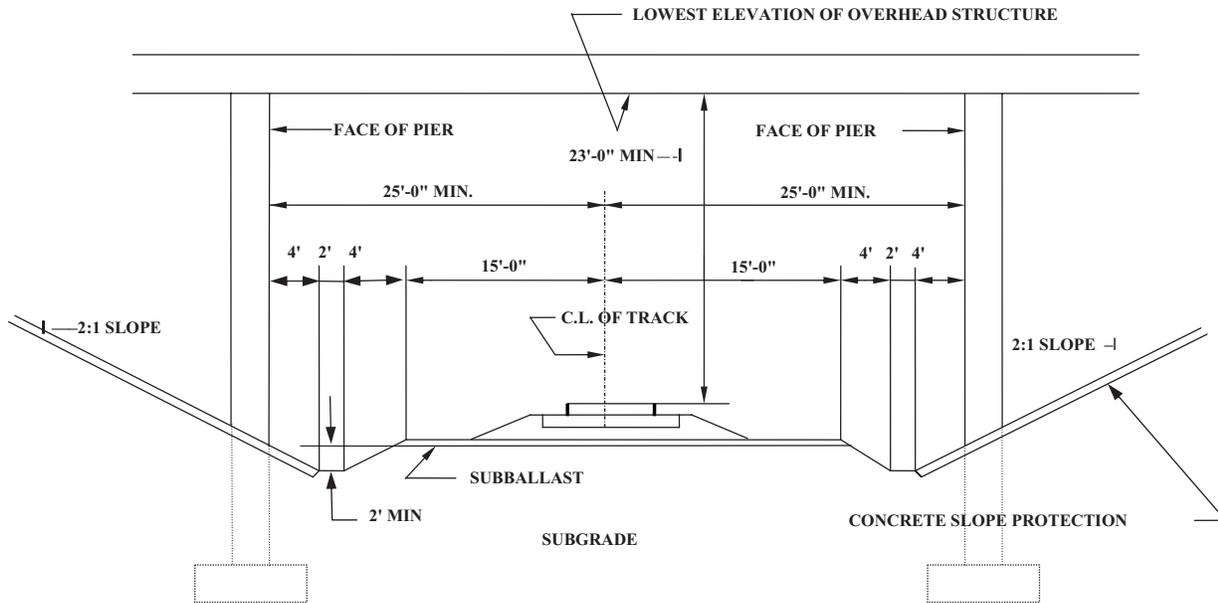
IX. PILE INSTALLATION

- A. For the installation of piles and sheeting for abutment foundations, pier foundations, retaining wall foundations, temporary and permanent shoring and other structures on or adjacent to CSXT's right-of-way, the contractor may be required to submit a detailed track monitoring program for CSXT's approval prior to performing any work near CSXT's right-of-way.
- B. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. CSXT shall have the capability of modifying the survey locations and monitoring frequency as needed during the project.
- C. If any settlement is observed, CSXT's construction engineering and inspection representative shall be immediately notified. CSXT, at its sole discretion, shall have the right to immediately require all contractor operations to be ceased, have the excavated area immediately backfilled and/or determine what corrective action is required. Any corrective action required by CSXT or performed by CSXT including the monitoring of corrective action of the contractor will be at project expense.

X. PEDESTRIAN OVERHEAD

Pedestrian overhead bridges shall be governed by this document in its entirety with the following exceptions:

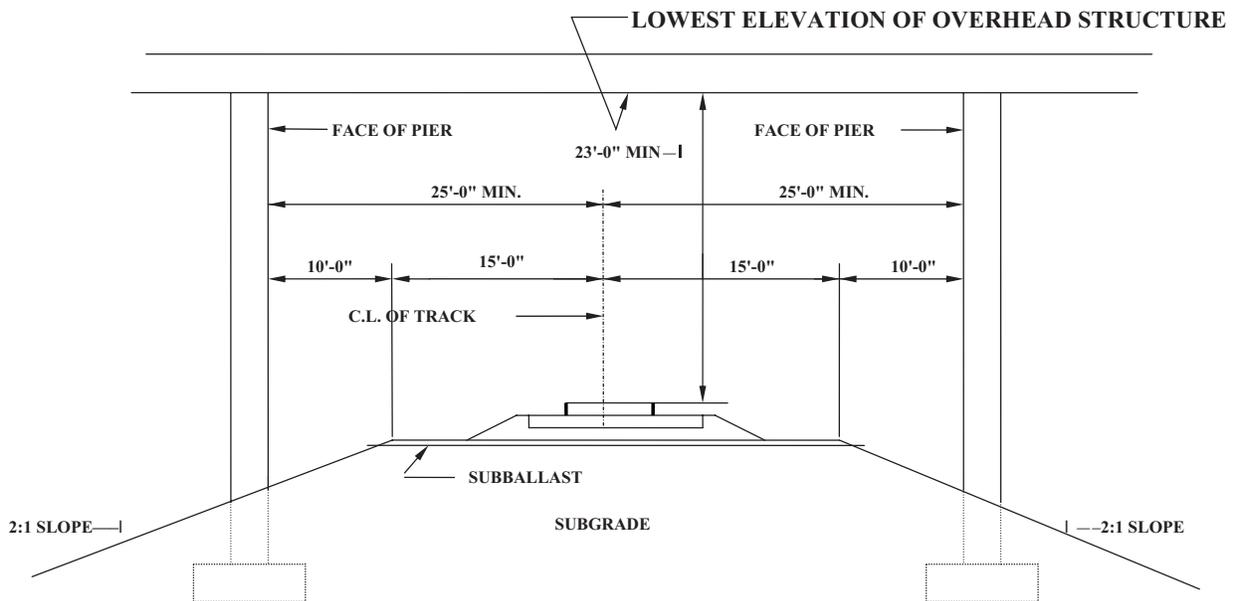
- A. Pedestrian overhead bridges shall span the entire width of CSXT's right-of-way. Intermediate piers or other supports will not be permitted.
- B. Pedestrian overhead bridges shall be completely enclosed with protective canopy or by other means to prevent users from dropping debris onto CSXT's right-of-way.



**CLEARANCES REQUIRED FOR OVERHEAD STRUCTURES
TYPICAL ROADBED SECTION WITH STANDARD DITCHES**

NOTE: FOR MULTIPLE TRACKS, STANDARD TRACK CENTERS IS 15'-0". AN ADDITIONAL 8'-0" WIDE ACCESS ROAD MAY BE REQUIRED TO PROVIDE 33'-0" MINIMUM DISTANCE FROM CENTERLINE OF TRACK TO FACE OF PIER.

CSX ENGINEERING DEPARTMENT
STANDARD CLEARANCES FOR OVERHEAD STRUCTURES



**CLEARANCES REQUIRED FOR OVERHEAD STRUCTURES
TYPICAL SECTION FOR ROADBED IN FILL**

(WHERE NO DEFINED DITCHES ARE NEEDED)

CSX ENGINEERING DEPARTMENT
STANDARD CLEARANCES FOR OVERHEAD STRUCTURES

APPENDIX

CSX Transportation

UNDERGRADE BRIDGE CRITERIA INCLUDING BALLAST DECKS

Public Projects Group
Jacksonville, FL
Date Issued: October 1, 1999

CRITERIA FOR BALLAST DECK RAILROAD BRIDGES

PURPOSE AND SCOPE

These criteria modify and supplement the applicable sections of the AREMA Manual of Recommended Practice in connection with the design of ballasted deck railway bridges.

I. SPECIFICATIONS:

A. Design Specifications: American Railway Engineering and Maintenance-of-Way Associations (AREMA) Manual for Railway Engineering, Current Edition.

Chapter 7.	Timber Structures
Chapter 8.	Concrete Structures and Foundations
Chapter 15.	Steel Structures
Chapter 29.	Waterproofing

B. Construction Specifications:

1. Use AREMA Manual recommendations for fabrication and erection of structural steel (Chapter 15).
2. Use AREMA Manual recommendations for Concrete Structures and foundations (Chapter 8).
3. Use AREMA Manual recommendations for dampproofing and deck waterproofing (Chapter 29).
4. CSXT Standard Specifications and Special Specifications shall be used where appropriate. Items not covered by CSXT Standard and Special Specifications should use the Standard Highway Specifications for the State where the bridge is being constructed.

II. BRIDGE LAYOUT

While preparing the initial layout of the bridge the following shall be considered:

- A. The layout of the bridge shall show the Railroad Valuation Stations at face of backwalls and at centerline of the bridge. Distance from centerline of the bridge to nearest milepost shall be shown on plan.
- B. For bridges on curves, the girders, abutments and piers shall be located with reference to chords.
- C. Provide horizontal clearance on the bridge as shown in Figure 1-1, Chapter 15 of the AREMA Manual. For curved track, increase the required clearance 1 ½ inches per degree of curvature. On the inside of the curve, the required clearance shall be measured from the centerline of the track projected at right angles to the plane of the superelevation. No reduction in required clearances shall be made on outside of the curve due to superelevation. If State legal clearance requirements exceed Railroad requirements; the State legal requirements shall govern. When bridge is on tangent track but the track is curved within 80 feet of the end of bridge, the lateral clearances in Figure 1-1 shall be increased as mentioned above.
- D. Bridges over public roadways shall have walkways on both sides of the track. Preferably bridges shall be made wide enough to accommodate walkways on inside of the bridge girders.
- E. For multiple track bridges, the width of the bridge must provide proper clearances measured from centerline of each outside track. In addition adequate room shall be provided for a future 15'-0" center to center of each track.
- F. On ballast deck bridges, timber roadway ties 7" thick, 9" wide and 8' 6" long, spaced at 1' 9" centers shall be used. Alternatively, concrete ties may be used at 2'-0" centers. Minimum ballast depth is 8" measured at the centerline of the low rail.

III. DESIGN LOADS

Railroad Bridges shall be designed for all loads specified in Chapters 8 and 15 of the AREMA Specifications. The following live loads shall be used.

Non Composite Design:	Coopers E-80 loading with full diesel impact and the Alternate Live Load.
Composite Design:	Coopers E-80 loading with full diesel impact and the Alternate Live Load. Coopers E-65 with full diesel impact for steel alone.

In computing dead load of structure, include the weight of an additional 6" of ballast. This allows for future track surfacing.

IV. MATERIAL REQUIREMENTS

A. STRUCTURAL STEEL:

1. Structural Steel shall be ASTM A709 Gr36, Gr50 or Gr50W. The toughness shall be T2 for non-fracture critical members or F2 for fracture critical members. Other types of steel may be used if approved by the CSX Director Structural Engineering. Thickness of flange plates shall not exceed 3 inches.
2. The engineer shall call out all fracture critical members on the plans.
3. Structural Steel shall be in accordance with CSX Transportation "Specifications for Structural Steel".
4. Structural Steel shall be painted in accordance with CSX Transportation "Specifications for Painting Structural Steel".

B. CONCRETE: Concrete shall be air entrained. Cement shall be Portland Cement, ASTM-C150, Type I or IA. Concrete shall have a minimum 28-day compressive strength of:

- 4000 psi – Substructure
- 5000 psi – Superstructure

Use of Fly Ash in concrete is not acceptable. Concrete admixtures other than air entrainment must be approved by CSX's Director Structural Engineering prior to use.

Concrete shall be in accordance with the current CSX Transportation Specifications for Cast-In-Place Concrete."

C. REINFORCING STEEL: Deformed bars of billet steel conforming to ASTM 615, Grade 60 shall be used.

V. SUPERSTRUCTURE

A. GENERAL

1. The thickness of steel deck plate shall be as follows:

<u>Plate Thickness</u>	<u>Max. Clear Distance Between Beams</u>
?"	1' - 6"
5/8"	2' - 0"
?"	2' - 4"

2. The steel deck plates shall be shop welded with a pair of 5/16" continuous fillet welds to each floorbeam or deck beam. Deck units shall be shop assembled with two or three beams per unit. Deck plates are not permitted to overhang the beam when these units are fabricated.
3. The closing deck plate between adjacent deck units shall be fillet welded to the beams with continuous 5/16" fillet weld at each beam. After deck plates are welded to beam, fill space between deck plates at joint with bituminous mastic.
4. For welded plate girders no more than two flange section transitions will be permitted without special permission. A full penetration groove weld shall be used for flange to web connection.
5. Intermediate stiffeners shall consist of two angles, one on each side of the web, and shall be bolted to the web. End bearing stiffeners may be plates or angles, welded or bolted.
6. Provide ?" thick, 31 ply, preformed elastomeric shock pads (MIL-C-882C specifications) between bearings and masonry.
7. Superstructures for multiple track bridges, constructed without detour tracks, shall be designed such that the superstructure can be rolled into place in segments while the temporary structure for at least one track remains intact.
8. The bottom lateral bracing system, if required by the AREMA Manual recommendations, shall be bolted to the girders.
9. Continuous spans will not be permitted.

- B. The following criteria apply to through plate girder bridges with steel deck plates and closely spaced floorbeams:
1. Floorbeam brackets (or knee braces) shall be weldments that are bolted to the top flange of the floorbeams and to vertical stiffeners on the girder. The slope of the bracket shall be 4 inches in 12 inches where possible.
 2. End floorbeams shall frame into the end stiffeners. An additional connection angle shall be provided where welded stiffener plates are used. End floorbeams and connections shall be designed such that the bridge can be jacked up by placing jacks under the end floorbeams. Jacking stiffeners shall be provided at points of jacking.
 3. Intermediate floorbeams shall frame into the girder web using double connection angles and high strength steel bolts. At brackets or at other locations where there is an intermediate stiffener, the stiffener on the inside of the girder shall be terminated 1" minimum above the top of the floorbeam.
 4. Through plate girder spans are limited to single and double track bridges only.
- C. The following criteria apply to bridges with multiple deck girders with steel deck plates.
1. Provide a welded field splice in the deck plates at or near the centerline of bearing of the girders. Provide a closing deck plate from the abutment to this field splice that is normal to the girders and normal to the long direction of the main deck plates. This will avoid splicing deck plates over the backwall.
 2. Steel fascia girders may be used in addition to the load carrying girders. The depth of fascia girders shall be 1/12 of the span length. The depth shall also be enough to place the top flange 3 inches above the top of high rail when a handrail is placed along the girder or 38 inches above the top of high rail when no handrail is used. The web of the fascia girder shall be 1/170 of the depth with ? inch minimum. The flanges shall be 12"x 1" minimum.
 3. If fascia girders are not used, girders shall be spaced such that deck plates will not overhang the flange of the outside girders by more than 2 inches and a concrete parapet wall shall be provided. The wall shall be securely anchored to the deck plate and have a minimum thickness of 12 inches at the top. The height of the wall shall be as specified for fascia girders.
- D. The following criteria apply to deck girder bridges with reinforced concrete deck slabs.
1. Minimum thickness of slabs shall be:
12" for composite design
8" for non composite design
The deck slab shall be wide enough to provide room for walkways. This may be accomplished by providing a full width ballast trough or ballast trough with raised concrete walkways.
 2. Epoxy coated reinforcing bars shall be used throughout the slab.
 3. The outside edge of the slab shall be not more than 1' - 6" from the centerline of the outside girder. Provide a ?" drip bead on the bottom face of slab.
 4. Provide a concrete parapet wall on each side of deck slab. Wall to have a minimum thickness of 12" at the top with reinforcing anchored into the slab. Top of wall shall be 3" above top of high rail if a handrail is provided and 38" above top of high rail without handrail.
 5. For composite design, the following minimum reinforcing shall be provided in the slab:
Transverse direction - #5 at 6" c. to c.
Longitudinal direction - #5 at 9" c. to c.

VI. DECK DRAINAGE

1. Top surface of waterproofing protection shall have a transverse slope of 1" with a crown under centerline of each track. Use an underlayment with a minimum thickness of 3 ?" of portland cement concrete with welded wire fabric or 1 ?" bituminous mastic underlayment to provide required slope on steel decks. Underlayments shall be in accordance with the requirements of AREMA, Chapter 29, Section 2.5 Underlayment. Concrete decks shall be cast to provide desired

slope. Use longitudinal half round deck drains and pans at ballast retainers and between tracks to collect discharge.

2. Top surface of waterproofing protection shall have a minimum longitudinal slope of 0.5%. When the deck is level or slopes less than 0.5%, underlayment be used to provide longitudinal slope also. Concrete decks shall be cast to provide required slope. Use longitudinal half round deck drains and pans at ballast retainers and between tracks.
3. Deck drains and bottom pans shall be 12 gage, galvanized and bituminous coated.
4. For concrete deck bridges where membrane waterproofing is not used, Ductile Iron pipe drains though the deck with Ductile Iron or stainless steel collection system may be used in lieu of the surface drainage system using half round drains.
5. For longer bridges, intermediate drains at the piers may be required. Use six-inch diameter; Schedule 40 steel pipe for these drains. All pipe, connections, hanger and brackets shall be galvanized or stainless steel. Field connections shall be made with Style 77 Victaulic coupling or equal. Each ballast drain shall have a downspout to a collector on the substructure. Provide a one-inch gap between downspouts and the collector piping.
6. Two feet of porous backfill, measured horizontally, shall be provided behind all abutments and wingwalls. Provide perforated pipe drains behind abutment at bottom to remove drainage. Half-round deck drains shall be connected by downspouts to the perforated pipe at the bottom of porous backfill. This pipe and downspouts shall be 8 inch, 16 gage corrugated metal pipe, galvanized and bituminous coated. The perforated pipe shall be connected to a non-perforated 8 inch, 16 gage corrugated metal, galvanized and bituminous-coated pipe prior to exiting from behind abutments. The non-perforated pipe shall be drained away from the bridge with a 1% minimum slope.

VII. DECK WATERPROOFING

A. GENERAL

1. All steel bridge decks shall be waterproofed using membrane waterproofing.
2. Concrete bridge decks shall be waterproofed using membrane waterproofing when the bridge is located in areas subject to frequent freeze and thaw cycles. In areas not subject to frequent freeze and thaw cycles, the deck surface may be dampproofed. Railroad's Director Structural Engineering shall have final authority as to which system will be used.
3. All deck joints between spans shall be watertight.
4. Waterproofing or dampproofing shall be applied to the entire surface of deck and inside faces of parapets or curb plates. Materials and construction to be in accordance with AREMA Manual recommendations, Chapter 29 plus requirements as follows.

B. MEMBRANE WATERPROOFING:

1. Use 3/32" thick Butyl Rubber Membrane waterproofing conforming to the requirements of Article 2.3.5 on the entire deck and ballast retainers.
2. Adhesive must be applied to the entire surface to be waterproofed.
3. No. 3, tongue and groove splice, shown in AREMA Chapter 29, Figure 2-2, shall be used for splicing Butyl Rubber Membrane.

C. WATERPROOFING PROTECTION:

Two layers of asphaltic panels, conforming to AREMA Article 2.4.7, total thickness not less than 1 inch and placed with staggered joints and set in compatible adhesive, shall be used to protect Butyl Rubber Membrane on deck and ballast retainers. Ballast shall be placed as soon as practicable following placement of the panels to prevent distortion from sunlight. Edges and protrusions of panels are to be coated in accordance with Article 2.9.4.6. (A).

VIII. SUBSTRUCTURE:

A. ABUTMENT:

1. The abutment shall be designed in accordance with requirements of Chapter 8 of the AREMA Manual
2. The abutment shall be wide enough to provide for a 15' – 0" shoulder measured from the centerline at the nearest track, on each side. In case of multiple track bridges, the abutment width shall be sufficient to provide for standard 15' – 0" shoulder on both sides and future 15' – 0" center to center between tracks. Wingwalls shall be designed to support 2 horizontal : 1 vertical embankment slope.
3. Provide four inches minimum clearance between end of structural steel and face of backwall.
4. Use front face of backwall and centerline of track as reference for abutment layout.
5. Provide waterstops of all construction joints. Waterstops shall be PVC 9" X 3/8" Hollow Bulb (Bulb ?" I. D., 1 ?" O. D.) continuous across joint.
6. Provide minimum edge distance of six inches from edge of masonry plate or shoe to edge of abutment.

B. PIER:

1. Provide a minimum edge distance of six inches from the front edge or back edge of masonry plate or shoe. In addition, provide a minimum edge distance of six inches from the corner of masonry plate or shoe
2. Provide four inches minimum clear between ends of structural steel.
3. Provide a minimum of eighteen inches beyond the outside edge of the masonry plate or shoe to the end of the pier.
4. Length of pier shall be sufficient to provide for future 15'-0" center to center of tracks, when multiple tracks are supported on one pier.
5. Thickness of pier shall be minimum 4'-0" width measured at the stem.

IX. MAINTENANCE OF RAILROAD TRAFFIC

A. GENERAL

1. It is essential that the construction be performed with a minimum interference with rail traffic. Continuity of safe rail operations will be required for the duration of the project.
2. The Design Engineer should contact Railroad's Division manager in the preliminary design stage to determine Railroad Operational requirements.
3. The most effective method of maintaining traffic is to temporarily reroute traffic around the construction site using detour tracks. Detour tracks will be required where feasible. Railroad's Chief Engineer Design and Construction, will furnish design requirements.
4. If detour tracks cannot be provided, the new superstructure shall be constructed adjacent to final location and rolled into place. Temporary bridges will be required to maintain traffic. Construction plans shall show complete details of temporary bridges and roll-in structure.
5. A detailed construction procedure for maintaining traffic shall be shown on the plans. When construction requires total interruption of rail traffic, an estimate of the time required will be shown in the procedure. This interval must be within the approved time frame furnished by Railroad's Division Manager.
6. Prior to the start of construction, written approval from the Railroad for the procedure of construction must be secured.

X. PLAN PREPARATION AND SUBMITTAL

A. PRELIMINARY PLANS

Provide four (4) sets of type, size and location (T.S.&L.) plans to Railroad for approval. The T.S.&L. plan shall show plan view, elevation and typical cross section of the proposed structure. Furnish cross sections or topographic map with contours and soil exploration data along with T.S.&L. plans. Obtain Railroad approval before proceeding with final design. Railroad will assign a bridge designation when T.S.&L. plans are reviewed. This bridge designation shall be shown on all drawings.

B. FINAL PLANS

Provide four (4) sets of detailed final plans and one set of design calculations for Railroad approval. Submit special provisions or special specifications along with final plans for Railroad approval.

After plans are approved and construction contract is awarded, a copy of the contract shall be provided to the Railroad.

Provide one (1) set of original plans or Mylar reproducible tracings (not sepias) of the as built design plans for the Railroad files, after job completion.

C. SHOP DRAWINGS

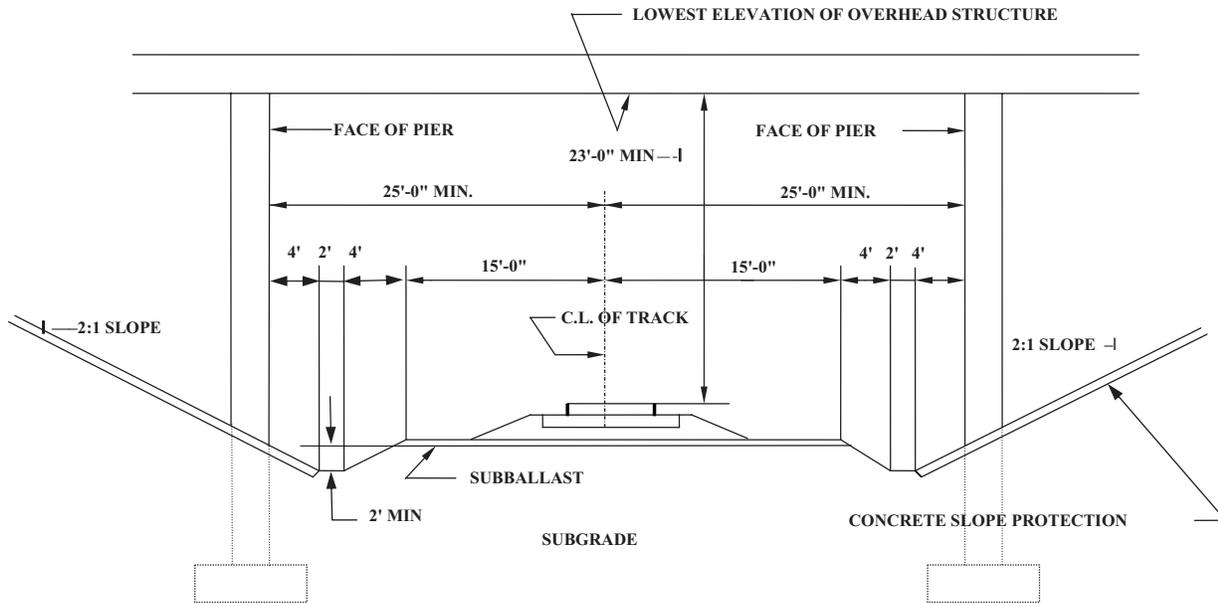
Provide two (2) complete sets of shop drawings for Railroad review. Welding procedures shall be submitted with the structural steel shop drawings.

After completion of the job, furnish one set of original or Mylar reproducible tracings of the shop drawings for Railroad Files.

D. COFFERDAMS AND SHORING PLANS

During construction of the bridge, shoring may be required to support detour track or cofferdams may be needed to construct abutments and piers. Contractor shall submit detailed plans of the cofferdams and/or shoring, along with the construction procedure and one set of calculations to the Railroad and shall secure approval in writing prior to the start of the construction. Plans shall be prepared by a registered Professional Engineer in the State where the cofferdam or shoring is being constructed and shall bear his seal and signature. All pertinent soil data shall be sent to Railroad along with the plans for the shoring or cofferdam.

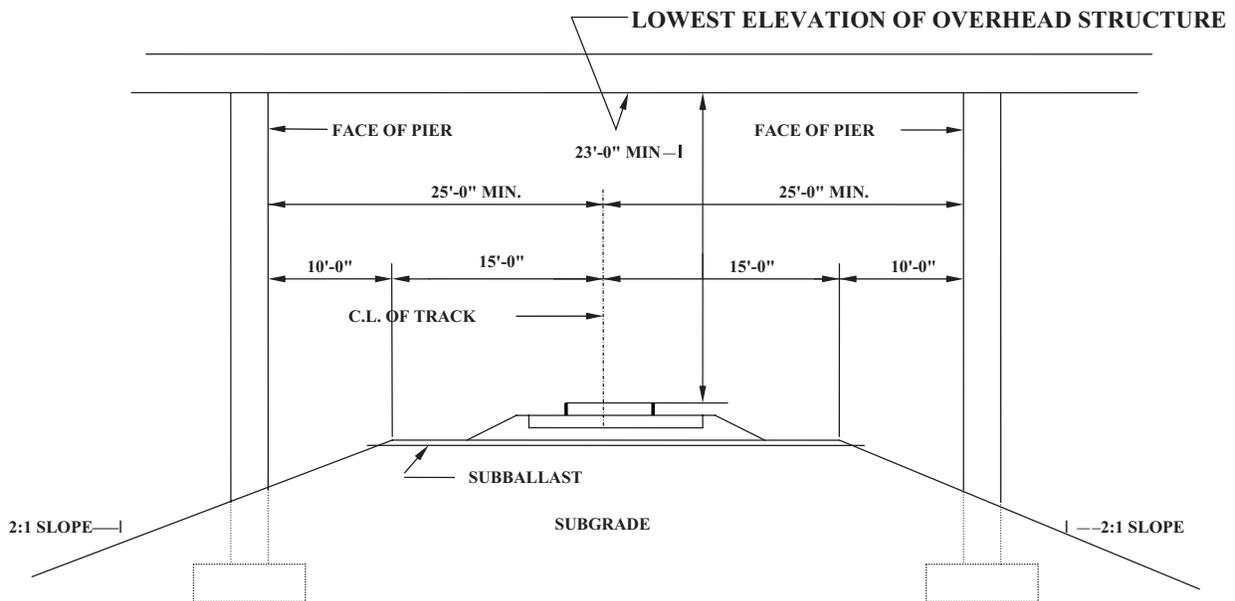
Shoring to protect Railroad traffic shall be designed to resist a vertical live load surcharge of 1800 lbs per square foot, in addition to active earth pressure. The surcharge shall be assumed to act on a continuous strip, 8'-6" wide. Lateral pressures due to surcharge shall be computed using the strip load formula shown in AREMA Manual, Chapter 8, part 20.



**CLEARANCES REQUIRED FOR OVERHEAD STRUCTURES
TYPICAL ROADBED SECTION WITH STANDARD DITCHES**

NOTE: FOR MULTIPLE TRACKS, STANDARD TRACK CENTERS IS 15'-0". AN ADDITIONAL 8'-0" WIDE ACCESS ROAD MAY BE REQUIRED TO PROVIDE 33'-0" MINIMUM DISTANCE FROM CENTERLINE OF TRACK TO FACE OF PIER.

CSX ENGINEERING DEPARTMENT
STANDARD CLEARANCES FOR OVERHEAD STRUCTURES



**CLEARANCES REQUIRED FOR OVERHEAD STRUCTURES
TYPICAL SECTION FOR ROADBED IN FILL**

(WHERE NO DEFINED DITCHES ARE NEEDED)

CSX ENGINEERING DEPARTMENT
STANDARD CLEARANCES FOR OVERHEAD STRUCTURES

APPENDIX

CSX Transportation

CONSTRUCTION SUBMISSION CRITERIA

Public Projects Group
Jacksonville, FL
Date Issued: May 8, 2009

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INTRODUCTION

The information in this document is intended to improve communication and clarify the CSXT criteria related to construction submissions that may involve CSXT property. All work must be performed in a manner as to not adversely impact existing CSXT operations. Please note that there are other standards associated with construction that must be adhered to including but not limited to the CSXT Special Provisions, CSXT Insurance Requirements as well as governing local, county, state and federal requirements. This document and other CSXT standards are subject to change without notice, and future revisions will be available at the CSXT website www.csx.com.

I. DEFINITIONS

Agency – The project sponsor.

AREMA – American Railway Engineering and Maintenance-of-Way Association – the North American railroad industry standards group.

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 and supporting calculations shall be signed/sealed by a Professional Engineer as defined below.

Controlled Demolition – Removal of the existing structure or subcomponents in a manner that prevents any portions from falling onto CSXT employees, equipment or property. The proposed procedures shall be detailed in the means and methods submission for CSXT review and acceptance.

Contractor – The Agency's or CSXT's representative retained to perform the project work.

Engineer – CSXT Engineering Representative or a GEC authorized to act on the behalf of CSXT.

GEC – General Engineering Consultant who has been authorized to act on the behalf of CSXT.

Professional Engineer – An engineer who is licensed in state or commonwealth (if required by the Agency) in which the project is to occur. The drawings and calculations shall be prepared by the Professional Engineer and shall bear his seal and signature.

Submission Review Period – a **minimum of 30 days in advance of start of work**. Up to 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.

Theoretical Railroad Live Load Influence Zone – A 1½ horizontal to 1 vertical theoretical slope line starting 1'-6" below top of rail elevation and 12'-0" from the centerline of the nearest track.

II. DEMOLITION PROCEDURE

The Agency or its contractor shall submit, as defined above, a detailed procedure for demolition of the structure over railroad tracks.

- A. The Agency or its Contractor shall submit the detailed procedure for demolition of existing structures over or adjacent to CSXT's tracks or right-of-way. This procedure shall include a plan showing the locations of cranes, horizontally and vertically, operating radii, with loading or disposal locations shown, with all dimensions referenced from the center line of the near track, including beam placement on ground or truck loading staging plan. The plan shall also include the location, with relevant dimensions, of all tracks, other railroad facilities; wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions. No crane or equipment may be set on the CSXT rails or track structure and no material may be dropped on CSXT property.

B. Also included with this submittal the following information:

1. Computations showing weight of picks must be submitted. Computations shall be made from field verified plans of the existing structure beams being removed and those plans or sections thereof shall also be included in the submittal; the weight shall include the weight of concrete or other materials including lifting rigging.
2. If the sponsor can prove to CSXT that plans do not exist and weights must be calculated from field measurements, the field measurements are to be made under the supervision of the Professional Engineer submitting the procedure and shall include sketches and estimated weight calculations with the procedure. If possible, field measurements shall be taken with a CSXT representative present.
3. Crane rating sheets showing cranes to be adequate for 150% of the actual weight of the pick. A complete set of crane charts, including crane, counterweight, maximum boom angle, 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. A data sheet shall be prepared listing the type, size and arrangements of slings, shackles, or other connecting equipment. Include copies of a catalog or information sheets for specialized equipment. All specific components proposed for use shall be clearly identified and highlighted in the submitted documents. The safe working load capacity of the connecting equipment shall be 150% above the calculated weight of the pick.
5. A complete written procedure is to be included that describes the sequence of events, indicating the order of lifts and any repositioning or rehitching of the crane or cranes.
6. A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical subtasks (i.e., torch/saw cutting various portions of the superstructure or substructure, dismantling splices, installing temporary bracing, etc.) shall be furnished so that the potential impact(s) to CSXT operations may be assessed and eliminated or minimized.
7. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.
8. Design and supporting calculations prepared by the Professional Engineer for items including the temporary support of components or intermediate stages shall be submitted for review. A guardrail will be required to be installed in a track where a temporary bent is located within twelve (12) feet from the centerline of that track. The guardrail will be installed by CSXT forces at the expense of the Agency or its contractor.
9. Existing, obsolete, bridge piers shall be removed to a minimum of 3'-0" below the finished grade, final ditch line invert, or as directed by the Engineer.
10. A minimum quantity of 25 tons of CSXT approved track ballast may be required to be furnished and stockpiled on site by the Contractor, or as directed by the Engineer.
11. CSXT's tracks, signals, structures, and other facilities shall be protected from damage during demolition of existing structure or replacement of deck slab.

NOTE: On-track or ground level debris shields such as crane mats are prohibited for use by CSXT.

- C. Overhead Demolition Debris Shield - Shall be installed prior to the demolition of the bridge deck or other relevant portions of the superstructure.
1. The demolition debris shield shall be erected from the underside of the bridge over the track area to catch all falling debris.
 2. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed Controlled Demolition procedure submission.
 3. The demolition debris shield shall provide 23'-0" minimum vertical clearance or maintain the existing vertical clearance if the existing clearance is less than 23'-0" as approved by CSXT. Horizontal clearance to the centerline of the track should not be reduced unless approved by the Engineer.
 4. The vertical clearance ATR (above top of rail) is measured from the top of rail to the lowest point on the overhead shielding system measured within a distance of 6'-0" out from each side of the track centerline.
 5. The demolition debris shield design and supporting calculations, all signed/sealed by a Professional Engineer, shall be submitted for review and acceptance.
 6. 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.
 7. 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.
 8. 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 Engineer.
- D. Vertical Demolition Debris Shield – This type of shield may be required for substructure removals in close proximity to CSXT track and other facilities, as determined by the Engineer.
1. Prior to commencing the demolition activity, the Contractor shall install a ballast protection system consisting of geotextile to keep the railroad ballast from becoming fouled with construction or demolition debris and fines. The geotextile ballast protection system shall be installed and maintained by the Contractor for the project duration in accordance with the attached plan, or with additional measures as directed by the Engineer.
 2. The Agency, or its Contractor, shall submit detailed plans, with detailed calculations, prepared and submitted by a Professional Engineer of the protection shield and ballast protection systems for approval prior to the start of demolition.
 3. Blasting will not be permitted to demolish a structure over or within CSXT's right-of-way.
- E. The Controlled Demolition procedure must be approved by the Engineer prior to undertaking work on the project.
- F. The Contractor shall provide timely communication to the Engineer when scheduling the demolition-related work so that the Engineer may be present during the entire demolition procedure.
- G. At any time during demolition activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances that may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.

III. ERECTION PROCEDURE

The Agency or its Contractor shall submit a detailed procedure for performing erection on/about CSXT property, as defined above.

- A. The Agency or its Contractor shall submit six (6) copies of the detailed procedure for erection of the proposed structures over or adjacent to CSXT's tracks or right-of-way. This procedure shall include a plan showing the locations of cranes, horizontally and vertically, operating radii, with staging locations shown, including beam placement on ground or truck unloading staging plan. Plan should also include the location of all tracks, other railroad facilities; wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions. No crane or equipment may be set on the CSXT rails or track structure.
- B. Also included with this submittal the following information:
1. As-built Bridge Seat Elevations - All as-built bridge seats and top of rail elevations shall be furnished to the Engineer for review and verification at least 30 days in advance of construction or erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.
 2. Computations showing weight of picks must be submitted. Computations shall be made from plans of the structure beams being erected, and those plans or sections thereof shall also be included in the submittal; the weight shall include the weight of concrete or other materials including lifting rigging.
 3. Crane rating sheets showing cranes to be adequate for 150% of the actual weight of the pick. A complete set of crane charts, including crane, counterweight, maximum boom angle, 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. A data sheet shall be prepared listing the type, size and arrangements of slings, shackles, or other connecting equipment. Include copies of a catalog or information sheets for specialized equipment. All specific components proposed for use shall be clearly identified and highlighted in the submitted documents. The safe working load capacity of the connecting equipment shall be 150% above the calculated weight of the pick.
 5. A complete written procedure is to be included that describes the sequence of events, indicating the order of lifts and any repositioning or rehitching of the crane or cranes.
 6. A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical sub tasks (i.e., performing aerial splices, installing temporary bracing, etc.) shall be furnished so that the potential impact(s) to CSXT operations may be assessed and eliminated or minimized.
 7. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.
 8. Design and supporting calculations prepared by the Professional Engineer for items including the temporary support of components or intermediate stages shall be submitted for review. A guardrail will be required to be installed in a track where a temporary bent is located within twelve (12) feet from the centerline of that track.
- C. The proposed Erection procedure must be approved by the Engineer prior to undertaking work on the project.
- D. The Contractor shall provide timely communication to the Engineer when scheduling the erection-related work so that the Engineer may be present during the entire erection procedure.

- E. At any time during construction activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances that may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.

IV. EXCAVATION AND SHORING

The Agency or its contractor shall submit, as defined above, a detailed procedure for the installing sheeting/shoring adjacent to Railroad Tracks.

- A. Shoring protection shall be provided when excavating adjacent to an active track or railroad facility or as determined by CSXT. Shoring will be provided in accordance with *AREMA Manual for Railway Engineering*, Chapter 8, Part 28, except as noted below.
- B. Shoring may not be required if all of the following conditions are satisfied:
1. Excavation does not encroach upon a 1½ horizontal: 1 vertical theoretical slope line starting 1'-6" below top of rail and at 12'-0" minimum from centerline of the track (live load influence zone).
 2. Track is on level ground or in a cut section and on stable soil.
 3. Excavation does not adversely impact the stability of a CSXT facility (i.e., signal bungalow, drainage facility, undergrade bridge, building, etc.).
 4. Shoring is not required by any governing construction code.
- C. When the track is on an embankment, excavating the toe of the embankment without shoring may affect the stability of the embankment. Therefore, excavation of the embankment toe without shoring will not be permitted.
- D. Trench boxes are prohibited for use on CSXT within the theoretical railroad live load influence zone.
- E. The required protection is the cofferdam type that completely encloses the excavation. Where dictated by conditions, partial cofferdams with open sides away from the track may be used. Cofferdams shall be constructed using steel sheet piling, or when approved by the Engineer, steel soldier piles with timber lagging. Wales and struts shall be provided and designed as needed. The following shall be considered when designing cofferdams:
1. Shoring shall be designed to resist a vertical live load surcharge of 1,880 lbs. per square foot, in addition to active earth pressure. The surcharge shall be assumed to act on a continuous strip, 8'-6" wide. Lateral pressures due to surcharge shall be computed using the strip load formula shown in *AREMA Manual for Railway Engineering*, Chapter 8, Part 20.
 2. Allowable stresses in materials shall be in accordance with *AREMA Manual for Railway Engineering*, Chapter 7, 8, and 15.
 3. A construction procedure for temporary shoring shall be shown on the drawing.
 4. All shoring systems on or adjacent to CSXT right-of-way shall be equipped with railings or other approved fall protection.
 5. A minimum horizontal clearance of 10'-0" from centerline of the track to face of nearest point of shoring shall be maintained, provided a 12'-0" roadbed is maintained with a temporary walkway and handrail system.

F. The contractor shall submit the following drawings and calculations (all shall be signed/sealed by a Professional Engineer) for CSXT's review and approval.

1. Six (6) sets of detailed drawings of the shoring systems showing sizes of all structural members, details of connections, and distances from centerline of track to face of shoring. Drawing shall show a section showing height of shoring and track elevation in relation to bottom of excavation.
2. Six (6) sets of calculations of the shoring design.

The drawings and calculations shall be prepared by a Licensed Professional Engineer in the state (if required by the Agency) where the shoring is to be constructed and shall bear his seal and signature. Shoring plans shall be approved by CSXT's construction engineering and inspection representative.

3. For sheeting and shoring within 18'-0" of the centerline of the track, the live load influence zone, and in slopes, the contractor shall use interlocked steel sheeting (sheet pile).
4. Sheet pile installed in slopes or within 18'-0" of the centerline of track shall not be removed.
5. Sheet piles shall be cut off a minimum of 3'-0" below the finished grade, ditch line invert, or as directed by the **Engineer**. The ground shall be backfilled and compacted immediately after sheet pile is cut off.
6. A procedure for cutting off the sheet pile and restoring the embankment shall be submitted to the Engineer for review and acceptance.

G. Blasting is not permitted on or adjacent to CSXT right-of-way without prior written approval from the **Engineer**. Mechanical and chemical means of rock removal must be explored before blasting is considered. If written permission for the use of explosives is granted, the Agency or Contractor must comply with all of the following:

1. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Agency or Contractor.
2. Electronic detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
3. No blasting shall be done without the presence of an authorized representative of CSXT. Advance notice to the Engineer as required by the CSXT Special Provisions is required to arrange for the presence of an authorized CSXT representative and any flagging that CSXT may require.
4. Agency or Contractor must have at the project site adequate equipment, labor and materials, and allow sufficient time, to clean up debris resulting from the blasting and correct any misalignment of tracks or other damage to CSXT property resulting from the blasting. Any corrective measures required must be performed as directed by the Engineer at the Agency's or Contractor's expense without any delay to trains. If Agency's or Contractor's actions result in the delay of any trains including passenger trains, the Agency or Contractor shall bear the entire cost thereof.
5. The Agency or Contractor may not store explosives on CSXT property.
6. At any time during blasting activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances that may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.

V. TRACK MONITORING

The Agency or its Contractor shall submit, for CSXT review and approval, a detailed track monitoring program to detect both horizontal and vertical movement of the CSXT track and roadbed, a minimum of 30 days in advance of start of work.

- A. For the installation of temporary or permanent shoring systems, including but not limited to soldier piles and lagging, and interlocked steel sheeting on or adjacent to CSXT's right-of-way, the contractor may be required to submit a detailed track monitoring program for CSXT's approval prior to performing any work near CSXT's right-of-way.
- B. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. CSXT reserves to the right to modify the survey locations and monitoring frequency as necessary during the project.
- C. The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Engineer for analysis.
- D. If any movement has occurred as determined by the Engineer, CSXT will be immediately notified. CSXT, at its sole discretion, shall have the right to immediately require all contractor operations to be ceased, have the excavated area immediately backfilled and/or determine what corrective action is required. Any corrective action required by CSXT or performed by CSXT including the monitoring of corrective action of the contractor will be at project expense.

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