

E. Norfolk Southern – Special Provisions for Protection of Railway Interests

1. AUTHORITY OF RAILROAD ENGINEER AND SPONSOR ENGINEER:

Norfolk Southern Railway Company, hereinafter referred to as "Railroad", and their authorized representative shall have final authority in all matters affecting the safe maintenance of railroad traffic including the adequacy of the foundations and structures supporting the railroad tracks. For Public Projects impacting the Railroad, the Railroad's Public Improvements Engineer or Engineer Planning, hereinafter referred to as "Railroad Engineer", will serve as the authorized representative of the Railroad.

A general engineering consultant may be utilized to assist the Railroad Engineer in handling the Project, hereinafter referred to as "Construction Engineering Representative".

Other designated personnel by the Railroad Engineer shall hereinafter be referred to as "Railroad Representative".

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

The Sponsor's Prime Contractor, hereinafter referred to as "Contractor" shall be responsible for completing any and all work in accordance with the terms prescribed herein and in the Project Specifications. This shall include the qualified protective services of a contractor directly hired by the Contractor to protect their workers and construction activities while working on or adjacent to Railroad property, hereinafter referred to as "Contractor Protective Services".

This document titled E. Norfolk Southern – Special Provisions for Protection of Railway Interests shall hereinafter be referred to as "Special Provisions".

These terms and conditions are subject to change without notice at the sole discretion of the Railroad. The Contractor must request the latest version of these Special Provisions from the Railroad prior to commencing work and must follow the requirements outlined therein.

2. AUTHORIZATION TO PROCEED:

- A. The Contractor shall not commence mobilizing to the Premises, as defined in the Norfolk Southern Contractor Right of Entry Agreement, until the Contractor has complied with the following conditions:
 1. Signed and received a fully executed copy of the required Norfolk Southern Contractor Right of Entry Agreement. Contractor Right of Entry Agreements to be submitted via email to the Railroad Engineer.
 2. Obtained written approval from the Railroad of Railroad Protective Liability Insurance coverage as required by paragraph 15 herein. It should be noted that the Railroad does not accept notation of Railroad Protective insurance on a certificate of liability insurance form or Binders as Railroad must have the full original countersigned policy. Further, please note that mere receipt of the policy is not the only issue but review for compliance. Due to the number of projects system-wide, it typically takes a minimum of 30-45 days for the Railroad to review.

3. Held a preconstruction meeting between the Contractor, the Sponsor, Railroad Engineer and/or their Construction Engineering Representative and the Railroad Representative(s). NOTE: Railroad Representative(s) may choose to not attend the preconstruction meeting at their discretion.
 4. Obtained Contractor Protective Services as required by Section 8 herein.
 5. Furnished a schedule for all construction activities which may impact the Railroad's property or operations. NOTE: Contractor Protective Services shall be provided any time construction activities are taking place on or adjacent to the Railroad Property and/or has the potential to foul the Railroad's track or operations as required by Section 8 herein.
 6. Schedule an onsite start-of-work meeting between the Contractor, Contractor Protective Services personnel, Railroad Engineer and/or their Construction Engineering Representative and the Railroad Representative(s). NOTE: Railroad Representative(s) may choose to not attend the start-of-work meeting at their discretion.
 7. Obtained written authorization to proceed from the Railroad to begin mobilization to the Premises, as defined in the Norfolk Southern Contractor Right of Entry Agreement, such authorization to include an outline of specific conditions with which the Contractor must comply. Written Authorization will be issued by the Railroad once all items on the Norfolk Southern Checklist for Construction - Direct Hire have been completed.
- B. The Railroad's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railroad Representative(s) and any specific Construction Engineering Representative who shall be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.
- C. All project-related utility work that is to occur on, over, or under Railroad right-of-way must be coordinated with the Norfolk Southern Pipe and Wire Program. The Contractor must receive approval from the Norfolk Southern Pipe and Wire Program prior to commencing any utility work.
3. NOTICE OF STARTING WORK:
- A. Before undertaking any construction activities on the Premises, as defined in the Norfolk Southern Contractor Right of Entry Agreement, the Contractor shall:
1. Notify the Railroad Representative(s) at least 72 hours in advance of any construction activities that Contractor Protective Services have been obtained for use.
 2. Hold an onsite start-of-work meeting between the Contractor, Contractor Protective Services personnel, Railroad Engineer and/or their Construction Engineering Representative and the Railroad Representative(s). NOTE: Railroad Representative(s) may choose to not attend the start of work meeting at their discretion.

3. Receive assurance from the qualified protective services contractor that the Contractor Protective Services are properly equipped and have been site specific trained by the Railroad Representative prior to performing the full duties of protecting the Contractor. Until assurance from the qualified protective services contractor is obtained, Contractor Protective Services may act as an observer until such Contractor Protective Services are site specific trained by the Railroad Representative. The reference to an "observer" is defined as a person who has the authority to deny access to Contractor's workers and machinery to a specified Railroad operation zone as directed to the qualified protective services contractor by Railroad and prevent those potential to foul work events which may put the Contractor's workers and machinery at risk for injury or damage.

4. INTERFERENCE WITH RAILROAD OPERATIONS:

- A. The Contractor shall so arrange and conduct the Contractor's work that there will be no interference with Railroad's operations, including train, signal, telephone and telegraphic services, or damage to the property of the Railroad or to poles, wires, and other facilities of tenants on the rights-of-way of the Railroad. Whenever work is liable to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad Engineer for approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor which requires Construction Engineering Representative inspection services shall be deferred by the Contractor until the Construction Engineering Representative inspection services are available at the job site. Contractor Protective Services shall be provided onsite any time construction activities are taking place on or adjacent to the Railroad Property and/or has the potential to foul the Railroad's track or operations
- B. Whenever work within Railroad's rights-of-way is of such a nature that impediment to Railroad's operations such as use of runaround tracks or necessity for reduced speed is unavoidable, the Contractor shall schedule and conduct the Contractor's operations so that such impediment is reduced to the absolute minimum.
- C. Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations and property of the Railroad, the Contractor shall make such provisions. If in the judgment of the Railroad Engineer, or in the Railroad Engineer's absence, the Railroad's Division Engineer, such provisions are insufficient, either may require or provide such provisions as the Railroad deems necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost to the Railroad or the Sponsor.
- D. "One Call" Services do not locate buried Norfolk Southern Signals and Communications Lines. The contractor shall contact the Railroad's representative 7 days in advance of work at those places where excavation, pile driving, or heavy loads may damage the Railroad's underground facilities. Upon request from the Contractor or Sponsor, Railroad forces will locate and paint mark or flag the Railroad's underground facilities. The Contractor shall avoid excavation or other disturbances of these facilities. If disturbance or excavation is required near a buried Railroad facility, the Contractor shall coordinate with the Railroad to have the facility potholed manually with careful hand excavation. The facility shall be protected by the Contractor during the course of the disturbance under the supervision and direction of the Railroad's Representative.

5. TRACK CLEARANCES:

A. The minimum track clearances to be maintained by the Contractor during construction are shown on the Project Plans. If temporary clearances are not shown on the project plans, the following criteria shall govern the use of falsework and formwork above or adjacent to operated tracks.

1. A minimum vertical clearance of 22'-0" above top of highest rail shall be maintained at all times.
2. A minimum horizontal clearance of 13'-0" from centerline of tangent track or 14'-0" from centerline of curved track shall be maintained at all times. Additional horizontal clearance may be required in special cases to be safe for operating conditions. This additional clearance will be as determined by the Railroad Engineer.
3. All proposed temporary clearances which are less than those listed above must be submitted to Railroad Engineer for approval prior to construction and must also be authorized by the regulatory body of the State if less than the legally prescribed clearances.
4. The temporary clearance requirements noted above shall also apply to all other physical obstructions including, but not limited to: stockpiled materials, parked equipment, placement or driving of piles, and bracing or other construction supports.

6. CONSTRUCTION PROCEDURES:

A. General:

1. Construction work and operations by the Contractor on Railroad property shall be:
 - a. Subject to the inspection and approval of the Railroad Engineer or their designated Construction Engineering Representative.
 - b. In accordance with the Railroad's written outline of specific conditions.
 - c. In accordance with the Railroad's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment.
 - d. In accordance with these Special Provisions.
2. Submittal Requirements
 - a. The Contractor shall submit all construction related correspondence and submittals electronically to the Railroad Engineer and/or their designated Construction Engineering Representative.
 - b. The contractor should anticipate a minimum of 45 days for Railroad and their Construction Engineering Representative to complete the review of all construction submittals. Time frames for reviews can vary significantly depending on the complexity of the project and the quality of submittals. Submittals requiring input from other departments may require additional time.

- c. All work in the vicinity of the Railroad's property that has the potential to affect the Railroad's train operations or disturb the Railroad's property must be submitted and approved by the Railroad prior to work being performed.
- d. All submittals and calculations must be signed and sealed by a registered engineer licensed in the state of the project work.
- e. All submittals shall first be approved by the Sponsor's Engineer prior to submission to the Railroad Engineer for review. Submittals are reviewed by the Railroad for impacts to Railroad operations only; therefore, approval from the Railroad Engineer shall not relieve the Contractor from liability.
- f. For all construction projects, the following submittals, but not limited to those listed below, shall be provided for review and approval when applicable:
 - (1) General Means and Methods
 - (2) Ballast Protection
 - (3) Construction Excavation & Shoring
 - (4) Pipe, Culvert, & Tunnel Installations
 - (5) Demolition Procedure
 - (6) Erection & Hoisting Procedure
 - (7) Debris Shielding or Containment
 - (8) Blasting
 - (9) Formwork for the bridge deck, diaphragms, overhang brackets, and protective platforms
 - (10) Bent Cap Falsework. A lift plan will be required if the contractor want to move the falsework over the tracks.
- g. For Undergrade Bridges (Bridges carrying the Railroad) the following submittals in addition to those listed above shall be provided for review and approval:
 - (1) Girder Shop Drawings including welding/fabrication procedures
 - (2) Bearing Shop Drawings and Material Certifications
 - (3) Shop Drawings for drainage, handrails/fencing, and expansion dams
 - (4) Concrete Mix Design
 - (5) Structural Steel, Rebar, and/or Strand Certifications
 - (6) 28-day Cylinder Test for Concrete Strength
 - (7) Waterproofing Material Certification
 - (8) Dampproofing materials
 - (9) Test Reports for all steel
 - (10) Foundation Construction Reports

Other submittals may be required upon request from the Railroad. Fabrication may not begin until the Railroad has approved the required shop drawings.

- h. The Contractor shall include in all submissions a detailed narrative indicating the progression of work with the anticipated timeframe to complete each task. Work will not be permitted to commence until the Contractor has provided the Railroad with a satisfactory plan that the project will be undertaken without scheduling, performance, or safety related issues. Submissions shall also provide: a listing of the anticipated equipment to be used, plan and profile views showing the location of all equipment to be used relative to the track centerline(s) shown, and a contingency plan of action covering the event that a primary piece of equipment malfunctions.

B. Ballast Protection

1. The Contractor shall submit the proposed ballast protection system detailing the specific filter fabric and anchorage system to be used during all construction activities.
2. The ballast protection is to extend 25' beyond the proposed limit of work, be installed at the start of the project and be continuously maintained to prevent all contaminants from entering the ballast section of all tracks for the entire duration of the project.

C. Excavation:

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

D. Excavation for Structures and Shoring Protection:

1. The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles or sheeting for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material.
2. The use of shoring systems utilizing tiebacks shall not be permitted without written approval from the Railroad Engineer.
3. Shoring systems utilizing trench boxes shall not be permitted within the Theoretical Railroad Embankment (Zones 1, 2, or 3) as shown on NS Typical Drawing No. 4 – Shoring Requirements without written approval from the Railroad Engineer.
4. All plans and calculations for shoring shall be prepared, signed, and sealed by a Registered Professional Engineer licensed in the state of the proposed project, in accordance with Norfolk Southern's Overhead Grade Separation Design Criteria, subsection H.1.6 - Construction Excavation (Refer to Norfolk Southern Public Improvement Projects Manual Appendix H). The Registered Professional Engineer will be responsible for the accuracy for all controlling dimensions as well as the selection of soil design values which will accurately reflect the actual field conditions.

5. The Contractor shall provide a detailed installation and removal plan of the shoring components. Any component that will be installed via the use of a crane or any other lifting device shall be subject to the guidelines outlined in Section 6.G of these Special Provisions.
6. The Contractor shall be required to survey the track(s) and Railroad embankment and provide a cross section of the proposed excavation in relation to the tracks.
7. Calculations for the proposed shoring should include deflection calculations. The maximum deflection for excavations within 18'-0" of the centerline of the nearest track shall be 3/8". For all other cases, the max deflection shall not exceed 1/2".
8. Additionally, the Railroad will require the installation of an OSHA approved handrail and orange construction safety fencing for all excavations of the Railroad right-of-way.
9. The front face of shoring located closest to the NS track for all shoring setups located in Zone 2 (shown on NS Typical Drawing No. 4 – Shoring Requirements in Appendix I) shall remain in place and be cut off 2'-0" below the final ground elevation. The remaining shoring in Zone 2 and all shoring in Zone 1 may be removed and all voids must be backfilled with flowable fill.

E. Pipe, Culvert, & Tunnel Installations

1. Pipe, Culvert, & Tunnel Installations shall be in accordance with the appropriate Norfolk Southern Design Specification as noted below:
 - a. For Open Cut Method refer to Norfolk Southern Public Improvement Projects Manual Appendix H.4.6.
 - b. For Jack and Bore Method refer to Norfolk Southern Public Improvement Projects Manual Appendix H.4.7.
 - c. For Tunneling Method refer to Norfolk Southern Public Improvement Projects Manual Appendix H.4.8.
2. The installation methods provided are for pipes carrying storm water or open flow run-off. All other closed pipeline systems shall be installed in accordance Norfolk Southern's Pipe and Wire Program and the NSCE-8.

F. Demolition Procedures

1. General
 - a. Demolition plans are required for all spans over the track(s), for all spans adjacent to the track(s), if located on (or partially on) Railroad right-of-way; and in all situations where cranes will be situated on, over, or adjacent to Railroad right-of-way and within a distance of the boom length plus 15'-0" from the centerline of track.
 - b. Railroad tracks and other Railroad property must be protected from damage during the procedure.

- c. A pre-demolition meeting shall be conducted with the Sponsor, the Railroad Engineer and/or the Construction Engineering Representative, and the key Contractor's personnel prior to the start of the demolition procedure.
- d. The Railroad Engineer and/or the Construction Engineering Representative must be present at the site during the entire demolition procedure period.
- e. Demolition of existing bridge decks in spans over the Railroad shall be performed in a controlled manner (i.e. saw-cutting). No impact equipment (track-mounted hoe-ram, jackhammers, etc.) may be used over the Railroad without approval by the Railroad Engineer.
- f. Existing, obsolete, bridge piers shall be removed to a sufficient depth below grade to enable restoration of the existing/proposed track ditch, but in no case less than 2'-0" below final grade.

2. Submittal Requirements

- a. In addition to the submittal requirements outlined in Section 6.A.2 of these Special Provisions, the Contractor shall submit the following for approval by the Railroad Engineer:
 - (1) A plan showing the location of cranes, horizontally and vertically, with proposed boom lengths, operating radii, counterweights, and delivery or disposal locations shown. The location of all tracks and other Railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.
 - (2) Rating sheets showing that cranes or lifting devices are adequate for 150% of the actual weight of the pick, including all rigging components. A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted. Safety factors that may have been "built-in" to the crane charts are not to be considered when determining the 150% factor of safety.
 - (3) Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the existing structure showing complete and sufficient details with supporting data for the demolition of the structure. If plans do not exist, lifting weights must be calculated from field measurements. The field measurements are to be made under the supervision of the Registered Professional Engineer submitting the procedure and calculations.

- (4) The Contractor shall provide a sketch of all rigging components from the crane's hook block to the object being hoisted. Catalog cuts or information sheets of all rigging components with their lifting capacities shall be provided. All rigging must be adequate for 150% of the actual weight of the pick. Safety factors that may have been "built-in" to the rating charts are not to be considered when determining the 150% factor of safety. All rigging components shall be clearly identified and tagged with their rated lifting capacities. The position of the rigging in the field shall not differ from what is shown on the final plan without prior review from the Sponsor and the Railroad.
- (5) A complete demolition procedure, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.
- (6) Design and supporting calculations for the temporary support of components, including but not limited to the stability of the superstructure during the temporary condition, temporary girder tie-downs and falsework.

3. Overhead Demolition Debris Shield

- a. The demolition debris shield shall be installed prior to the demolition of the bridge deck or other relevant portions of the superstructure over the track area to catch all falling debris.
- b. The demolition debris shield shall provide a minimum vertical clearance as specified in Section 5.A.1 of these Special Provisions or maintain the existing vertical clearance if the existing clearance is less than that specified in Section 5.A.1.
- c. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed demolition procedure submission.
- d. The Contractor shall submit the demolition debris shield design and supporting calculations for approval by the Railroad Engineer.
- e. The demolition debris shield shall have a minimum design load of 50 pounds per square foot plus the weight of the equipment, debris, personnel, and other loads to be carried.
- f. The Contractor shall include the proposed bridge deck removal procedure in its demolition means and methods and shall verify that the size and quantity of the demolition debris generated by the procedure does not exceed the shield design loads.
- g. The Contractor shall clean the demolition debris shield daily or more frequently as dictated either by the approved design parameters or as directed by the Railroad Engineer.

4. Vertical Demolition Debris Shield

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

G. Erection & Hoisting Procedures

1. General

- a. Erection plans are required for all spans over the track(s), for all spans adjacent to the track(s), if located on (or partially on) Railroad right-of-way; and in all situations where cranes will be situated on, over, or adjacent to Railroad right-of-way and within a distance of the boom length plus 15'-0" from the centerline of track.
- b. Neither crane handoffs nor "walking" of cranes with suspended load will be permitted for erection on or over Railroad right-of-way.
- c. Railroad tracks and other Railroad property must be protected from damage during the erection procedure.
- d. A pre-erection meeting shall be conducted with the Sponsor, the Railroad Engineer and/or the Construction Engineering Representative, and the key Contractor's personnel prior to the start of the erection procedure.
- e. The Railroad Engineer and/or the Construction Engineering Representative must be present at the site during the entire erection procedure period.
- f. For field splices located over Railroad property, a minimum of 50% of the holes for each connection shall be filled with bolts or pins prior to releasing the crane. A minimum of 50% of the holes filled shall be filled with bolts. All bolts must be appropriately tightened. Any changes to previously approved field splice locations must be submitted to the Railroad for review and approval. Refer to Norfolk Southern's Overhead Grade Separation Design Criteria for additional splice details (Norfolk Southern Public Improvement Projects Manual Appendix H.1, Section 4.A.3.).

2. Submittal Requirements

- a. In addition to the submittal requirements outlined in Section 6.A.2 of these provisions, the Contractor shall submit the following for approval by the Railroad Engineer:
 - (1) As-built beam seat elevations - All as-built bridge seats and top of rail elevations shall be furnished to the Railroad Engineer for review and verification at least 30 days in advance of the erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.
 - (2) A plan showing the location of cranes, horizontally and vertically, with proposed boom lengths, operating radii, counterweights, and delivery or staging locations shown. The location of all tracks and other Railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.

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

H. Blasting:

1. The Contractor shall obtain advance approval of the Railroad Engineer and the Sponsor Engineer for use of explosives on or adjacent to Railroad property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with additional provisions as designated by the Railroad Engineer.

I. Track Monitoring

1. At the direction of the Railroad Engineer, any activity that has the potential to disturb the Railroad track structure may require the Contractor to submit a detailed track monitoring program for approval by the Railroad Engineer.

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

J. Maintenance of Railroad Facilities:

1. The Contractor will be required to maintain all ditches and drainage structures free of silt or other obstructions which may result from the Contractor's operations and provide and maintain any erosion control measures as required. The Contractor will promptly repair eroded areas within Railroad rights-of-way and repair any other damage to the property of the Railroad or its tenants.
2. If, in the course of construction, it may be necessary to block a ditch, pipe or other drainage facility, temporary pipes, ditches, or other drainage facilities shall be installed to maintain adequate drainage, as approved by the Railroad Engineer. Upon completion of the work, the temporary facilities shall be removed, and the permanent facilities restored.
3. All such maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

K. Storage of Materials and Equipment:

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

L. Cleanup:

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

7. DAMAGES:

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

8. CONTRACTOR PROTECTIVE SERVICES:

A. Requirements:

1. Qualified protective services are those services of a contractor, directly hired by the Prime Contractor, that have been vetted through the Railroad and are allowed to be performed on Railroad property.
2. Contractor Protective Services shall be onsite anytime construction activities are taking place on or adjacent to the Railroad Property and/or have the potential to foul the Railroad's track or operations.
3. Contractor Protective Services shall be those services of a subcontractor to the Contractor who have the ability to fully protect the Contractor's workers and machinery once the qualified protective services contractor confirms the Contractor Protective Services are properly equipped and site specific trained by the Railroad Representative. Contractor Protective Services may act as an observer until such Contractor Protective Services are site specific trained by the Railroad Representative. The reference to an "observer" is defined as a person who has the authority to deny access to Contractor's workers and machinery to a specified Railroad operation zone as directed to the qualified protective services contractor by Railroad and prevent those potential to foul work events which may put the Contractor's workers and machinery at risk for injury or damage.
4. Contractor Protective Services will not be allowed on the property until all items on the Norfolk Southern Checklist for Construction- Direct Hire have been completed and the authorization to proceed is given by the Railroad Engineer.
5. Under the terms of the agreement between the Sponsor and the Railroad, the Railroad has sole authority to determine the need for any Railroad Protective Services required to protect its operations or work designated to be done by the Railroad through the force account estimate.

9. HAUL ACROSS RAILROAD TRACK:

- A. Where the plans show or imply that materials of any nature must be hauled across the Railroad's track, unless the plans clearly show that the Sponsor has included arrangements for such haul in its agreement with the Railroad, the Contractor will be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad's track. The Contractor or Sponsor will be required to bear all costs incidental to such crossings whether services are performed by the Contractor's own forces or by Railroad personnel.
- B. No crossing may be established for use by the Contractor for transporting materials or equipment across the tracks of the Railroad unless specific authority for its installation, maintenance, use, until the Contractor has a fully executed a temporary private crossing agreement between the Contractor and Railroad. The approval process for an agreement normally takes 90 days.

10. WORK FOR THE BENEFIT OF THE CONTRACTOR:

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

11. COOPERATION AND DELAYS:

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

12. TRAINMAN'S WALKWAYS:

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

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

- A. The Contractor and/or the Sponsor's personnel authorized to perform work on the Railroad's property as specified in Section 2 above are not required to complete Norfolk Southern Roadway Worker Protection Training; However, the Contractor and the Sponsor's personnel must be familiar with Norfolk Southern's standard operating rules and guidelines, should conduct themselves accordingly, and may be removed from the property for failure to follow these guidelines.
- B. All persons shall wear hard hats. Appropriate eye and hearing protection must be used. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip-on type boots is prohibited. Hard-sole, lace-up footwear, zippered boots or boots cinched up with straps which fit snugly about the ankle are adequate. Wearing of safety boots and reflective vests are required.
- C. No person is allowed to perform construction activities which may impact the Railroad's property or operations without specific authorization from the Contractor Protective Services.
- D. All persons working near track while train is passing are to lookout for dragging bands, chains and protruding or shifted cargo.
- E. No person is allowed to cross tracks without specific authorization from the Contractor Protective Services.
- F. All welders and cutting torches working within 25' of track must stop when train is passing.
- G. No steel tape or chain will be allowed to cross or touch rails without permission from the Contractor Protective Services.

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

- A. No crane or boom equipment will be allowed to set up to work or park within boom distance plus 15' of centerline of track without specific permission from Railroad Representative and Contractor Protective Services personnel.
- B. No crane or boom equipment will be allowed to foul track or lift a load over the track without the authorization from the Contractor Protective Services personnel who are site specific trained and properly equipped.
- C. All employees will stay with their machines when crane or boom equipment is pointed toward track.
- D. All cranes and boom equipment under load will stop work while train is passing (including pile driving).
- E. Swinging loads must be secured to prevent movement while train is passing.
- F. No loads will be suspended above a moving train.
- G. No equipment will be allowed within 25' of centerline of track without specific authorization of the Railroad Representative and Contractor Protective Services personnel.

- H. Trucks, tractors, or any equipment will not touch ballast line without specific permission from Railroad Representative and Contractor Protective Services personnel. At the beginning of each project that involves the Contractor working within 25' of the centerline of any track, orange construction fencing must be established. Orange construction fencing shall be established in accordance with the minimum temporary horizontal clearances contained in Section 5.A.2 and shall be maintained for the duration of construction.
- I. No equipment or load movement is permitted within 25' or above a standing train or Railroad equipment without specific authorization of the Contractor Protective Services personnel.
- J. All operating equipment within 25' of track must halt operations when a train is passing. All other operating equipment may be halted by the Contractor Protective Services personnel if said personnel views the operation to be dangerous to the passing train.
- K. All equipment, loads and cables are prohibited from touching rails.
- L. While clearing and grubbing, no vegetation will be removed from Railroad embankment with heavy equipment without specific permission from the Railroad Engineer, Railroad Representative and Contractor Protective Services personnel.
- M. No equipment or materials will be parked or stored on Railroad's property unless specific authorization is granted from the Railroad Engineer.
- N. All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it cannot be moved by unauthorized persons.
- O. All cranes and boom equipment will be turned away from track after each workday or whenever unattended by an operator.
- P. Prior to performing any crane operations, the Contractor shall establish a single point of contact for the Contractor Protective Services personnel to remain in communication with at all times. Contractor Protective Services personnel must also be in direct contact with the individual(s) directing the crane operation(s).

15. INSURANCE:

- A. In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Prime Contractor will be required to carry insurance of the following kinds and amounts:
 - 1. A Commercial General Liability ("CGL") policy containing products and completed operations, bodily injury, property damage, and contractual liability coverage, with a combined single limit of not less than \$5,000,000 for each occurrence with a general aggregate limit of not less than \$5,000,000. Any portion of this requirement may be satisfied by a combination of General Liability and/or Excess/Umbrella Liability Coverage. The CGL policy shall provide additional insured coverage equivalent to at least as broad as ISO CG 20 10 11/85.

2. Automobile Liability Insurance with a current ISO occurrence form policy (or equivalent) and apply on an "any auto" (Symbol 1) basis, including coverage for all vehicles used in connection with the Work or Services on the leased property, providing annual limits of at least \$1,000,000 per occurrence for bodily injury and property damage combined including uninsured and underinsured motorist coverage, medical payment protection, and loading and unloading. This policy shall be endorsed to include Transportation Pollution Liability Broadened Coverage ISO CA 99 48 03 06 or MCS-90 if vehicles are subject to Federal jurisdiction. If this coverage is on a claims-made form, the Retro Active Date must be prior to the date of this Agreement and the policy endorsement must be maintained for not less than seven (7) years.
3. Workers' Compensation Insurance to meet fully the requirement of any compensation act, plan, or legislative enactment applicable in connection with the death, disability or injury of Licensee's officers, agents, servants, or employees arising directly or indirectly out of the performance of the work.
4. Employers' Liability Insurance with limits of not less than \$1,000,000 each accident, \$1,000,000 policy limit for disease, and \$1,000,000 each employee for disease.
5. All insurance required in Section 15.A (excluding any Workers' Compensation policy) shall name Norfolk Southern Railway and its parent, subsidiary, and affiliated companies as additional insureds with an appropriate endorsement to each policy.
6. All policies secured by Contractor, whether primary, excess, umbrella or otherwise, and providing coverage to the Railroad as an additional insured (i) are intended to take priority in responding and to pay before any insurance policies Railroad may have secured for itself must respond or pay and (ii) may not seek contribution from any policies the Railroad may have secured for itself.
7. No cross-liability exclusions are permitted that would apply to the additional insureds, and there may not be any restrictions in any policy that limits coverage for a claim brought by an additional insured against a named insured.
8. To the fullest extent permitted by law, all insurance furnished by Contractor in compliance with Section 15.A shall include a waiver of subrogation in favor of Railroad with an appropriate endorsement to each policy.
9. All policies required in Section 15.A shall not be subject to cancellation, termination, modification, changed, or non-renewed except upon thirty (30) days' prior written notice to the additional insureds.
10. The insurance coverages maintained by Contractor shall not limit any indemnity obligations or other liabilities. The insurance available to Railroad and its parent, subsidiary and affiliated companies as additional insureds shall not be limited by these requirements should Licensee maintain higher coverage limits.
11. Any deductibles or retentions in excess of \$50,000 maintained on any insurance required in 15.A shall be disclosed and approved by Railroad with a request made for approval to NSRISK3@nscorp.com.

12. Anyone subcontractor providing work on this project must extend CG 20 38 (or broader coverage) additional Insured endorsement to provide coverage for up stream parties.
 13. Contractor shall require all subcontractors who are not covered by the insurance carried by Contractor to obtain commercially reasonable insurance coverage, but not less than the requirements of 15.A.
- B. In addition to the insurances required in Section 15.A, the Contractor shall also procure on behalf of the Railroad for the entirety of the project:
1. Railroad Protective Liability (RPL) Insurance having a combined single limit of not less than \$5,000,000 each occurrence and \$10,000,000 in the aggregate applying separately to each annual period. Said policy shall provide coverage for all loss, damage or expense arising from bodily injury and property damage liability, and physical damage to property attributed to acts or omissions at the job site.

The standards for the Railroad Protective Liability Insurance are as follows:

- a. The insurer must be rated A- or better by A.M. Best Company, Inc.
- b. The policy must be written using one of the following combinations of Insurance Services Office ("ISO") RPL Insurance Form Numbers:
 - (1) CG 00 35 01 96 and CG 28 31 10 93; or
 - (2) CG 00 35 07 98 and CG 28 31 07 98; or
 - (3) CG 00 35 10 01; or
 - (4) CG 00 35 12 04; or
 - (5) CG 00 35 12 07; or
 - (6) CG 00 35 04 13.
- c. The named insured shall read:

Norfolk Southern Corporation and its subsidiaries and affiliates
650 West Peachtree Street NW – Box 46
Atlanta, GA 30308
Attn: Risk Manager

(NOTE: Railroad does not share coverage on RPL with any other entity on this policy)

- d. The description of operations must appear on the Declarations, must match the project description in this agreement, and must include the appropriate Sponsor project and contract identification numbers.
- e. The job location must appear on the Declarations and must include the city, state, and appropriate highway name/number. **NOTE: Do not include any references to milepost, valuation station, or mile marker on the insurance policy.**
- f. The name and address of the prime Contractor must appear on the Declarations.

- g. The name and address of the Sponsor must be identified on the Declarations as the "Involved Governmental Authority or Other Contracting Party."
- h. Endorsements/forms that are **required** are:
 - (1) Physical Damage to Property Amendment
 - (2) Terrorism Risk Insurance Act (TRIA) coverage must be included
- i. Other endorsements/forms that will be accepted are:
 - (1) Broad Form Nuclear Exclusion – Form IL 00 21
 - (2) 30-day Advance Notice of Non-renewal or cancellation
 - (3) Required State Cancellation Endorsement
 - (4) Quick Reference or Index Form CL/IL 240
- j. Endorsements/forms that are NOT acceptable are:
 - (1) Any Pollution Exclusion Endorsement except CG 28 31
 - (2) Any Punitive or Exemplary Damages Exclusion
 - (3) Known injury or Damage Exclusion form CG 00 59
 - (4) Any Common Policy Conditions form
 - (5) An Endorsement that limits or excludes Professional Liability coverage
 - (6) A Non-Cumulation of Liability or Pyramiding of Limits Endorsement
 - (7) An Endorsement that excludes TRIA coverage
 - (8) A Sole Agent Endorsement
 - (9) Any type of deductible endorsement or amendment
 - (10) Any other endorsement/form not specifically authorized in item no. 2.h above.

SPONSOR:

RAILROAD:

Risk Management
Norfolk Southern Corporation and its subsidiaries
650 West Peachtree Street NW – Box 46
Atlanta, GA 30308
NSRISK3@NSCORP.COM

- C. All insurance required under Section 15.A and 15.B shall be underwritten by insurers and be of such form and content, as may be acceptable to the Railroad. Prior to entry on Railroad right-of-way, the original electronic RPL Insurance Policy shall be submitted by the Prime Contractor to the Railroad at NSRISK3@NSCORP.COM for review and approval. In addition, certificates of insurance evidencing the Prime Contractor's insurance compliant with the requirements in 15.A shall be issued to the Railroad at NSRISK3@NSCORP.COM at the same time the RPL Policy is submitted.
- D. The insurance required herein shall in no way serve to limit the liability of Sponsor or its Contractors under the terms of this agreement.

E. Insurance Submission Procedures

1. The Railroad will only accept initial insurance submissions via email to NSRISK3@NSCORP.COM. The Railroad will NOT accept initial insurance submissions via hard copies that would be sent either US Mail or Overnight carrier or faxes as only electronic versions only are to be submitted to Railroad. **Please provide point of contact information with the submission including a phone number and email address.**

For email insurance submissions, the subject line should follow the format provided unless otherwise directed by the Railroad Engineer:

Insurance Submittal: City, State – NS File Number – NS Milepost – Project Name – Sponsor Project #

2. Railroad requires the following two (2) forms of insurance in the initial electronic insurance submission to NSRISK3@NSCORP.COM to be submitted under a cover letter providing details of the project and containing the contact information:
 - a. The full original or certified true electronic countersigned copy of the RPL Insurance Policy in its entirety inclusive of all declarations, schedule of forms and endorsements along with the policy forms and endorsements as required in Section 15.B.
 - b. A certificate of insurance from the Contractor evidencing the Contractor's insurance in Section 15.A (i.e. the Contractor's commercial general, automobile, and workers' compensation liability insurance, etc.). The certificate must show Norfolk Southern Railroad and its subsidiaries and affiliated companies as an additional insured on the General Liability and Auto policies. The certificate should also indicate that the Workers' Compensation policy waives subrogation against Norfolk Southern Corporation and its subsidiaries. See Appendix J for a Sample Certificate of Insurance.

16. FAILURE TO COMPLY:

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

17. PAYMENT FOR COST OF COMPLIANCE:

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

18. PROJECT INFORMATION

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