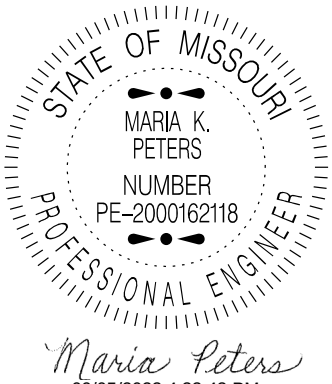
Job No.: JCD0025&JCD0026
Route: E & B
County:
Callaway/Montgomery

JOB SPECIAL PROVISIONS TABLE OF CONTENTS

(Job Special Provisions shall prevail over General Provisions whenever in conflict therewith.)



MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 W. CAPITOL AVE.
JEFFERSON CITY, MO 65102
Phone 1-888-275-6636

If a seal is present on this sheet, JSP's have been electronically sealed and dated.

JOB NUMBER: JCD0025 & JCD0026
CALLAWAY COUNTY, MO
DATE PREPARED: 7/11/2023

ADDENDUM:

Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: ALL

Job No.: JCD0025&JCD0026
Route: E & B
County:
Callaway/Montgomery

JOB
SPECIAL PROVISION

A. General - Federal JSP-09-02J

1.0 Description. The Federal Government is participating in the cost of construction of this project. All applicable Federal laws, and the regulations made pursuant to such laws, shall be observed by the contractor, and the work will be subject to the inspection of the appropriate Federal Agency in the same manner as provided in Sec 105.10 of the Missouri Standard Specifications for Highway Construction with all revisions applicable to this bid and contract.

1.1 This contract requires payment of the prevailing hourly rate of wages for each craft or type of work required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations and requires adherence to a schedule of minimum wages as determined by the United States Department of Labor. For work performed anywhere on this project, the contractor and the contractor's subcontractors shall pay the higher of these two applicable wage rates. State Wage Rates, Information on the Required Federal Aid Provisions, and the current Federal Wage Rates are available on the Missouri Department of Transportation web page at www.modot.org under "Doing Business with MoDOT", "Contractor Resources". Effective Wage Rates will be posted 10 days prior to the applicable bid opening. These supplemental bidding documents have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

1.2 The following documents are available on the Missouri Department of Transportation web page at www.modot.org under "Doing Business with MoDOT"; "Standards and Specifications". The effective version shall be determined by the letting date of the project.

General Provisions & Supplemental Specifications

Supplemental Plans to July 2023 Missouri Standard Plans
For Highway Construction

These supplemental bidding documents contain all current revisions to the published versions and have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

B. Contract Liquidated Damages

1.0 Description. Liquidated Damages for failure or delay in completing the work on time for this contract shall be in accordance with Sec 108.8. The liquidated damages include separate amounts for road user costs and contract administrative costs incurred by the Commission.

2.0 Period of Performance. Prosecution of work is expected to begin on the date specified below in accordance with Sec 108.2. Regardless of when the work is begun on this contract, all work on all

projects (job numbers) shall be completed on or before the Contract Completion date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.1.

Notice to Proceed Date: December 4, 2023
Contract Completion Date: September 1, 2024

2.1 Calendar Days. The count of calendar days will begin on the date the contractor starts any construction operations on the project.

Job Number	Calendar Days	Daily Road User Cost
JCD0025	30	$1,800
JCD0026	38	$1,800

3.0 Liquidated Damages for Contract Administrative Costs. Should the contractor fail to complete the work on or before the contract completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **$500** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified contract completion date or calendar days.

4.0 Liquidated Damages for Road User Costs. Should the contractor fail to complete the work on or before the contract completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged road user costs in accordance with Sec 108.8 in the amount specified in Section 2.1 for each calendar day, or partial day thereof, that the work is not fully completed. These damages are in addition to the contract administrative damages and any other damages as specified elsewhere in this contract.

C. Work Zone Traffic Management

1.0 Description. Work zone traffic management shall be in accordance with applicable portions of Division 100 and Division 600 of the Standard Specifications, and specifically as follows.

1.1 Maintaining Work Zones and Work Zone Reviews. The Work Zone Specialist (WZS) shall maintain work zones in accordance with Sec 616.3.3 and as further stated herein. The WZS shall coordinate and implement any changes approved by the engineer. The WZS shall ensure all traffic control devices are maintained in accordance with Sec 616, the work zone is operated within the hours specified by the engineer, and will not deviate from the specified hours without prior approval of the engineer. The WZS is responsible to manage work zone delay in accordance with these project provisions. When requested by the engineer, the WZS shall submit a weekly report that includes a review of work zone operations for the week. The report shall identify any problems encountered and corrective actions taken. Work zones are subject to unannounced inspections by the engineer and other departmental staff to corroborate the validity of the WZS's review and may require immediate corrective measures and/or additional work zone monitoring.

1.2 Work Zone Deficiencies. Failure to make corrections on time may result in the engineer suspending work. The suspension will be non-excusable and non-compensable regardless if road user costs are being charged for closures.

2.0 Traffic Management Schedule.

2.1 Traffic management schedules shall be submitted to the engineer for review prior to the start of work and prior to any revisions to the traffic management schedule. The traffic management schedule shall include the proposed traffic control measures, the hours traffic control will be in place, and work hours.

2.2 The traffic management schedule shall conform to the limitations specified in Sec 616 regarding lane closures, traffic shifts, road closures and other width, height and weight restrictions.

2.3 The engineer shall be notified as soon as practical of any postponement due to weather, material or other circumstances.

2.4 In order to ensure minimal traffic interference, the contractor shall schedule lane closures for the absolute minimum amount of time required to complete the work. Lanes shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed lane is opened to traffic.

2.5 Traffic Congestion. The contractor shall, upon approval of the engineer, take proactive measures to reduce traffic congestion in the work zone. The contractor shall immediately implement appropriate mitigation strategies whenever traffic congestion reaches an excess of 10 minutes to prevent congestion from escalating to 15 minute or above threshold. If disruption of the traffic flow occurs and traffic is backed up in queues of 15 minute delays or longer, then the contractor shall immediately review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from reoccurring. Traffic delays may be monitored by physical presence on site or by utilizing real-time travel data through the work zone that generate text and/or email notifications where available. The engineer monitoring the work zone may also notify the contractor of delays that require prompt mitigation. The contractor may work with the engineer to determine what other alternative solutions or time periods would be acceptable.

2.5.1 Traffic Safety.

2.5.1.1 Recurring Congestion. Where traffic queues routinely extend to within 1000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway, the contractor shall extend the advance warning area, as approved by the engineer.

2.5.1.2 Non-Recurring Congestion. When traffic queues extend to within 1000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway infrequently, the contractor shall deploy a means of providing advance warning of the traffic congestion, as approved by the engineer. The warning location shall be no less than 1000 feet and no more than 0.5 mile in advance of the end of the traffic queue on divided highways and no less than 500 feet and no more than 0.5 mile in advance of the end of the traffic queue on undivided highways.

3.0 Work Hour Restrictions.

3.1 Except for emergency work, as determined by the engineer, and long term lane closures required by project phasing, all lanes shall be scheduled to be open to traffic during the five major holiday periods shown below, from 12:00 noon on the last working day preceding the holiday until 6:00 a.m. on the first working day subsequent to the holiday unless otherwise approved by the engineer.

Memorial Day
Labor Day
Thanksgiving
Christmas
New Year's Day

3.1.1 Independence Day. The lane restrictions specified in Section 3.1 shall also apply to Independence Day, except that the restricted periods shall be as follows:

When Independence Day falls on:	The Holiday is Observed on:	Halt Lane Closures beginning at:	Allow Lane Closures to resume at:
Sunday	Monday	Noon on Friday	6:00 a.m. on Tuesday
Monday	Monday	Noon on Friday	6:00 a.m. on Tuesday
Tuesday	Tuesday	Noon on Monday	6:00 a.m. on Wednesday
Wednesday	Wednesday	Noon on Tuesday	6:00 a.m. on Thursday
Thursday	Thursday	Noon on Wednesday	6:00 a.m. on Friday
Friday	Friday	Noon on Thursday	6:00 a.m. on Monday
Saturday	Friday	Noon on Thursday	6:00 a.m. on Monday

3.2 The contractor shall not perform any construction operation on the roadway, roadbed or active lanes, including the hauling of material within the project limits, during restricted periods, holiday periods or other special events specified in the contract documents.

4.0 Detours and Lane Closures.

4.1 When a changeable message sign (CMS) is provided, the contractor shall use the CMS to notify motorists of future traffic disruption and possible traffic delays one week before traffic is shifted to a detour or prior to lane closures. The CMS shall be installed at a location as approved or directed by the engineer. If a CMS with Communication Interface is required, then the CMS shall be capable of communication prior to installation on right of way. All messages planned for use in the work zone shall be approved and authorized by the engineer or its designee prior to deployment. When permanent dynamic message signs (DMS) owned and operated by MoDOT are located near the project, they may also be used to provide warning and information for the work zone. Permanent DMS shall be operated by the TMC, and any messages planned for use on DMS shall be approved and authorized by the TMC at least 72 hours in advance of the work.

4.2 At least one lane of traffic in each direction shall be maintained at all times except for brief intervals of time required when the movement of the contractor's equipment will seriously hinder the safe movement of traffic. Periods during which the contractor will be allowed to interrupt traffic will be designated by the engineer.

5.0 Basis of Payment. No direct payment will be made to the contractor to recover the cost of equipment, labor, materials, or time required to fulfill the above provisions, unless specified elsewhere in the contract document. All authorized changes in the traffic control plan shall be provided for as specified in Sec 616.

D. Emergency Provisions and Incident Management

1.0 The contractor shall have communication equipment on the construction site or immediate access to other communication systems to request assistance from law enforcement or other emergency agencies for incident management. In case of traffic accidents or the need for law enforcement to direct or restore traffic flow through the job site, the contractor shall notify law enforcement or other emergency agencies immediately as needed. The area engineer's office shall also be notified when the contractor requests emergency assistance.

2.0 In addition to the 911 emergency telephone number for ambulance, fire or law enforcement services, the following agencies may also be notified for accident or emergency situation within the project limits.

Missouri Highway Patrol: 573-751-1000	
Callaway County	Montgomery County
Sheriff: 573-642-7291	Sheriff: 573-568-8084
Fire: 573-642-9144	Fire: 573-549-2500
Ambulance District: 573-642-7260	Fire: 573-684-2184
ALL EMERGENCIES: 911	

2.1 This list is not all inclusive. Notification of the need for wrecker or tow truck services will remain the responsibility of the appropriate law enforcement agency.

2.2 The contractor shall notify law enforcement and emergency agencies before the start of construction to request their cooperation and to provide coordination of services when emergencies arise during the construction at the project site. When the contractor completes this notification with law enforcement and emergency agencies, a report shall be furnished to the engineer on the status of incident management.

3.0 No direct pay will be made to the contractor to recover the cost of the communication equipment, labor, materials or time required to fulfill the above provisions.

E. Project Contact for Contractor/Bidder Questions

All questions concerning this project during the bidding process shall be forwarded to the project contact listed below.

Mia Peters, Project Contact
MoDOT - Central District
1511 Missouri Blvd., P.O. Box 718
Jefferson City, MO 65102

Telephone Number: 573-751-7690
Email: Maria.Peters@modot.mo.gov

All questions concerning the bid document preparation can be directed to the Central Office – Design at (573) 751-2876.

F. Contractor Quality Control NJSP-15-42

1.0 The contractor shall perform Quality Control (QC) testing in accordance with the specifications and as specified herein. The contractor shall submit a Quality Control Plan (QC Plan) to the engineer for approval that includes all items listed in Section 2.0, prior to beginning work.

2.0 Quality Control Plan.

(a) The name and contact information of the person in responsible charge of the QC testing.
(b) A list of the QC technicians who will perform testing on the project, including the fields in which they are certified to perform testing.
(c) A proposed independent third party testing firm for dispute resolution, including all contact information.
(d) A list of Hold Points, when specified by the engineer.
(e) The MoDOT Standard Inspection and Testing Plan (ITP). This shall be the version that is posted at the time of bid on the MoDOT website (www.modot.org/quality).

3.0 Quality Control Testing and Reporting. Testing shall be performed per the test method and frequency specified in the ITP. All personnel who perform sampling or testing shall be certified in the MoDOT Technician Certification Program for each test that they perform.

3.1 Reporting of Test Results. All QC test reports shall be submitted as soon as practical, but no later than the day following the test. Test data shall be immediately provided to the engineer upon request at any time, including prior to the submission of the test report. No payment will be made for the work performed until acceptable QC test results have been received by the engineer and confirmed by QA test results.

3.1.1 Test results shall be reported on electronic forms provided by MoDOT. Forms and Contractor Reporting Excel2Oracle Reports (CRE2O) can be found on the MoDOT website. All required forms,

reports and material certifications shall be uploaded to a Microsoft SharePoint® site provided by MoDOT, and organized in the file structure established by MoDOT.

3.2 Non-Conformance Reporting. A Non-Conformance Report (NCR) shall be submitted by the contractor when the contractor proposes to incorporate material into the work that does not meet the testing requirements or for any work that does not comply with the contract terms or specifications.

3.2.1 Non-Conformance Reporting shall be submitted electronically on the Non-Conformance Report form provided on the MoDOT Website. The NCR shall be uploaded to the MoDOT SharePoint® site and an email notification sent to the engineer.

3.2.2 The contractor shall propose a resolution to the non-conforming material or work. Acceptance of a resolution by the engineer is required before closure of the non-conformance report.

4.0 Work Planning and Scheduling.

4.1 Two-week Schedule. Each week, the contractor shall submit to the engineer a schedule that outlines the planned project activities for the following two-week period. The two-week schedule shall detail all work and traffic control events planned for that period and any Hold Points specified by the engineer.

4.2 Weekly Meeting. When work is active, the contractor shall hold a weekly project meeting with the engineer to review the planned activities for the following week and to resolve any outstanding issues. Attendees shall include the engineer, the contractor superintendent or project manager and any foreman leading major activities. This meeting may be waived when, in the opinion of the engineer, a meeting is not necessary. Attendees may join the meeting in person, by phone or video conference.

4.3 Pre-Activity Meeting. A pre-activity meeting is required in advance of the start of each new activity, except when waived by the engineer. The purpose of this meeting is to review construction details of the new activity. At a minimum, the discussion topics shall include: safety precautions, QC testing, traffic impacts, and any required Hold Points. Attendees shall include the engineer, the contractor superintendent and the foreman who will be leading the new activity. Pre-activity meetings may be held in conjunction with the weekly project meeting.

4.4 Hold Points. Hold Points are events that require approval by the engineer prior to continuation of work. Hold Points occur at definable stages of work when, in the opinion of the engineer, a review of the preceding work is necessary before continuation to the next stage.

4.4.1 A list of typical Hold Point events is available on the MoDOT website. Use of the Hold Point process will only be required for the project-specific list of Hold Points, if any, that the engineer submits to the contractor in advance of the work. The engineer may make changes to the Hold Point list at any time.

4.4.2 Prior to all Hold Point inspections, the contractor shall verify the work has been completed in accordance with the contract and specifications. If the engineer identifies any corrective actions needed during a Hold Point inspection, the corrections shall be completed prior to continuing work. The engineer may require a new Hold Point to be scheduled if the corrections require a follow-up inspection. Re-

scheduling of Hold Points require a minimum 24-hour advance notification from the contractor unless otherwise allowed by the engineer.

5.0 Quality Assurance Testing and Inspection. MoDOT will perform quality assurance testing and inspection of the work, except as specified herein. The contractor shall utilize the inspection checklists provided in the ITP as a guide to minimize findings by MoDOT inspection staff. Submittal of completed checklists is not required, except as specified in 5.1.

5.1 Inspection and testing required in the production of concrete for the project shall be the responsibility of the contractor. Submittal of the 501 Concrete Plant Checklist is required.

6.0 Basis of Payment. No direct payment will be made for compliance with this provision.

G. Removal and Delivery of Existing Signs JSP-12-01B (JCD0025)

1.0 Description. All Commission-owned signs removed from the project shall remain the property of the Commission and shall be disassembled and delivered as specified herein.

2.0 Disassembly and Delivery. All Commission-owned signs, not to include abandoned billboard signs, designated for removal in the plans, and any other signs designated by the engineer, shall be removed by the contractor and delivered to the address below. The contractor shall call the phone number listed below 48 hours prior to delivery and make arrangements for delivery during normal business hours.

Fulton Maintenance Lot
4975 County Road 304
Fulton, MO 65251
Phone: 573-629-7349

Attn: Lucas Ruppel, Maintenance Supervisor 573-592-4150

2.1 Signs shall be removed from sign supports and structures prior to delivery. Sign supports and structures shall become the property of the Contractor and removed from the project. Any oversized sign panels shall be disassembled or cut into widths of 8-feet or less with no restriction on length. Signs shall be stacked neatly in bins provided by MoDOT at the delivery site.

3.0 Basis of Payment. All costs associated with removing, disassembling, storing, and transporting of signs shall be considered as completely covered by the contract unit price for Item No. 202-20.10, “Removal of Improvements”, per lump sum.

H. Supplemental Revisions JSP-18-01Z

Compliance with 2 CFR 200.216 – Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment.

The Missouri Highways and Transportation Commission shall not enter into a contract (or extend or renew a contract) using federal funds to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as substantial or as critical technology as part of any system where the video surveillance and telecommunications equipment was produced by Huawei Technologies Company, ZTE Corporation, Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

Stormwater Compliance Requirements

1.0 Description. This provision requires the contractor to provide a Water Pollution Control Manager (WPCM) for any project that includes land disturbance on the project site and the total area of land disturbance, both on the project site, and all Off-site support areas, is one (1) acre or more. Regardless of the area of Off-site disturbance, if no land disturbance occurs on the project site, these provisions do not apply. When a WPCM is required, all sections within this provision shall be applicable, including assessment of specified Liquidated Damages for failure to correct Stormwater Deficiencies, as specified herein. This provision is in addition to any other stormwater, environmental, and land disturbance requirements specified elsewhere in the contract.

1.1 Definitions. The project site is defined as all areas designated on the plans, including temporary and permanent easements. The project site is equivalent to the "permitted site", as defined in MoDOT's State Operating Permit. An Off-site area is defined as any location off the project site the contractor utilizes for a dedicated project support function, such as, but not limited to, staging area, plant site, borrow area, or waste area.

1.2 Reporting of Off-Site Land Disturbance. If the project includes any planned land disturbance on the project site, prior to the start of work, the contractor shall submit a written report to the engineer that discloses all Off-site support areas where land disturbance is planned, the total acreage of anticipated land disturbance on those sites, and the land disturbance permit number(s). Upon request by the engineer, the contractor shall submit a copy of its land disturbance permit(s) for Off-site locations. Based on the total acreage of land disturbance, both on and Off-site, the engineer shall determine if these Stormwater Compliance Requirements shall apply. The Contractor shall immediately report any changes to the planned area of Off-site land disturbance. The Contractor is responsible for obtaining its own separate land disturbance permit for Off-site areas.

2.0 Water Pollution Control Manager (WPCM). The Contractor shall designate a competent person to serve as the Water Pollution Control Manager (WPCM) for projects meeting the description in Section 1.0. The Contractor shall ensure the WPCM completes all duties listed in Section 2.1.

2.1 Duties of the WPCM:

(a) Be familiar with the stormwater requirements including the current MoDOT State Operating Permit for construction stormwater discharges/land disturbance activities; MoDOT's statewide Stormwater Pollution Prevention Plan (SWPPP); the Corps of Engineers Section 404 Permit, when applicable; the project specific SWPPP, the Project's Erosion & Sediment Control Plan; all applicable special provisions, specifications, and standard drawings; and this provision;

(b) Successfully complete the MoDOT Stormwater Training Course within the last 4 years. The MoDOT Stormwater Training is a free online course available at MoDOT.org;

(c) Attend the Pre-Activity Meeting for Grading and Land Disturbance and all subsequent Weekly Meetings in which grading activities are discussed;

(d) Oversee and ensure all work is performed in accordance with the Project-specific SWPPP and all updates thereto, or as designated by the Engineer;

(e) Review the project site for compliance with the Project SWPPP, as needed, from the start of any grading operations until final stabilization is achieved, and take necessary actions to correct any known deficiencies to prevent pollution of the waters of the state or adjacent property owners prior to the engineer's weekly inspections;

(f) Review and acknowledge receipt of each MoDOT Inspection Report (Land Disturbance Inspection Record) for the Project within forty eight (48) hours of receiving the report and ensure that all Stormwater Deficiencies noted on the report are corrected as soon as possible, but no later than stated in Section 5.0.

3.0 Pre-Activity Meeting for Grading/Land Disturbance and Required Hold Point. A Pre-Activity meeting for grading/land disturbance shall be held prior to the start of any land disturbance operations. No land disturbance operations shall commence prior to the Pre-Activity meeting except work necessary to install perimeter controls and entrances. Discussion items at the pre-activity meeting shall include a review of the Project SWPPP, the planned order of grading operations, proposed areas of initial disturbance, identification of all necessary BMPs that shall be installed prior to commencement of grading operations, and any issues relating to compliance with the Stormwater requirements that could arise in the course of construction activity at the project.

3.1 Hold Point. Following the pre-activity meeting for grading/land disturbance and subsequent installation of the initial BMPs identified at the pre-activity meeting, a Hold Point shall occur prior to the start of any land disturbance operations to allow the engineer and WPCM the time needed to perform an on-site review of the installation of the BMPs to ensure compliance with the SWPPP is met. Land disturbance operations shall not begin until authorization is given by the engineer.

4.0 Inspection Reports. Weekly and post run-off inspections will be performed by the engineer and each Inspection Report (Land Disturbance Inspection Record) will be entered into a web-based Stormwater Compliance database. The WPCM will be granted access to this database and shall promptly review all reports, including any noted deficiencies, and shall acknowledge receipt of the report as required in Section 2.1 (f.).

5.0 Stormwater Deficiency Corrections. All stormwater deficiencies identified in the Inspection Report shall be corrected by the contractor within 7 days of the inspection date or any extended period granted by the engineer when weather or field conditions prohibit the corrective work. If the contractor does not initiate corrective measures within 5 calendar days of the inspection date or any extended period granted by the engineer, all work shall cease on the project except for work to correct these deficiencies, unless otherwise allowed by the engineer. All impact costs related to this halting of work, including, but not

limited to stand-by time for equipment, shall be borne by the Contractor. Work shall not resume until the engineer approves the corrective work.

5.1 Liquidated Damages. If the Contractor fails to complete the correction of all Stormwater Deficiencies listed on the MoDOT Inspection Report within the specified time limit, the Commission will be damaged in various ways, including but not limited to, potential liability, required mitigation, environmental clean-up, fines and penalties. These damages are not reasonably capable of being computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of $2,000 per day for failure to correct one or more of the Stormwater Deficiencies listed on the Inspection Report within the specified time limit. In addition to the stipulated damages, the stoppage of work shall remain in effect until all corrections are complete.

6.0 Basis of Payment. No direct payment will be made for compliance with this provision.

Anti-Discrimination Against Israel Certification

By signing this contract, the Company certifies it is not currently engaged in and shall not, for the duration of the contract, engage in a boycott of goods or services from the State of Israel, companies doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel, or persons or entities doing business in the State of Israel as defined by Section 34.600 RSMo. This certification shall not apply to contracts with a total potential value of less than One Hundred Thousand Dollars ($100,000) or to contractors with fewer than ten (10) employees.

Ground Tire Rubber (GTR) Dry Process Modification of Bituminous Pavement Material

1.0 Description. This work shall consist of the dry process of adding ground tire rubber (GTR) to modify bituminous material to be used in highway construction. Existing GTR requirements in Section 1015 pertain to the wet process method of GTR modification that blends GTR with the asphalt binder (terminal blending or blending at HMA plant). The following requirements shall govern for dry process GTR modification. The dry process method adds GTR as a fine aggregate or mineral filler during mix production. All GTR modified asphalt mixtures shall be in accordance with Secs 401, 402, or 403 as specified in the contract; except as revised by this specification.

2.0 Materials. The contractor shall furnish a manufacturer's certification to the engineer for each shipment of GTR furnished stating the name of the manufacturer, the chemical composition, workability additives, and certifying that the GTR supplied is in accordance with this specification.

2.1 Product Approval. The GTR product shall contain a Trans-Polyoctenamer (TOR) added at 4.5 % of the weight of the crumb rubber or an engineered crumb rubber (ECR) workability additive that has proven performance in Missouri. Other GTR additives shall be demonstrated and proven prior to use such as a five-year field performance history in other states or performance on a federal or state-sanctioned accelerated loading facility.

2.2 General. GTR shall be produced from processing automobile or truck tires by ambient or cryogenic grinding methods. Heavy equipment tires, uncured or de-vulcanized rubber will not be permitted. GTR shall also meet the following material requirements:

Table 1 – GTR Material Properties		
Property	**Test Method**	**Criteria**
Specific Gravity	ASTM D1817	1.02 to 1.20
Metal Contaminates	ASTM D5603	≤ 0.01%
Fiber Content	ASTM D5603	≤ 0.5%
Moisture Content	ASTM D1509	≤ 1.0%*
Mineral Filler	AASHTO M17	≤ 4.0%

*Moisture content of the GTR shall not cause foaming when combined with asphalt binder and aggregate during mix production

2.3 Gradation. The GTR material prior to TOR or ECR workability additives shall meet the following gradation and shall be tested in accordance with ASTM D5603 and ASTM D5644.

Table 2 – GTR Gradation	
Sieve	**Percent Passing by Weight**
No. 20	100
No. 30	98-100
No. 40	50-70
No. 100	5-15

3.0 Delivery, Storage, and Handling. The GTR shall be supplied in moisture-proof packaging or other appropriate bulk containers. GTR shall be stored in a dry location protected from rain before use. Each bag or container shall be properly labeled with the manufacturer's designation for the GTR and specific type, mesh size, weight and manufacturer's batch or Lot designation.

4.0 Feeder System. Dry Process GTR shall be controlled with a feeder system using a proportioning device that is accurate to within ± 3 percent of the amount required. The system shall automatically adjust the feed rate to always maintain the material within this tolerance and shall have a convenient and accurate means of calibration. The system shall provide in-process monitoring, consisting of either a digital display of output or a printout of feed rate, in pounds per minute, to verify feed rate. The supply system shall report the feed in 1-pound increments using

load cells that will enable the user to monitor the depletion of the GTR. Monitoring the system volumetrically will not be allowed. The feeder shall interlock with the aggregate weight system and asphalt binder pump to maintain correct mixture proportions at all production rates.

Flow indicators or sensing devices for the system shall be interlocked with the plant controls to interrupt mixture production if GTR introduction rate is not within ± 3 percent. This interlock will immediately notify the operator if GTR introduction rate exceeds introduction tolerances. All plant production will cease if the introduction rate is not brought back within tolerance after 30 seconds. When the interlock system interrupts production and the plant has to be restarted, upon restarting operations; the modifier system shall run until a uniform feed can be observed on the output display. All mix produced prior to obtaining a uniform feed shall be rejected.

4.1 Batch Plants. GTR shall be added to aggregate in the weigh hopper. Mixing times shall be increased per GTR manufacturer recommendations.

4.2 Drum Plants. The feeder system shall add GTR to aggregate and liquid binder during mixing and provide sufficient mixing time to produce a uniform mixture. The feeder system shall ensure GTR does not become entrained in the exhaust system of the drier or plant and is not exposed to the drier flame at any point after introduction.

5.0 Testing During Mixture Production. Testing of asphalt mixes containing GTR shall not begin until at least 30 minutes after production or per additive supplier's recommendation.

6.0 Construction Requirements. Mixes containing GTR shall have a target mixing temperature of 325 F or as directed by the GTR additive supplier. The additive supplier's recommendations shall be followed to allow for GTR binder absorption/reaction. This may include holding mix in the silo to allow time for binder to absorb into the GTR. Rolling operations may need to be modified.

7.0 Mix Design Test Method Modification. A formal mixing procedure from the additive supplier shall be provided to the contractor and engineer that details the proper sample preparation, including blending GTR with the binder or other additives. Samples shall be prepared and fabricated in accordance with this procedure by the engineer and contractor throughout the duration of the project.

8.0 Mix design Volumetrics. Mix design volumetric equations shall be modified as follows:

8.1 Additional virgin binder added to offset GTR absorption of binder shall be counted as part of the mix virgin binder

8.2 GTR shall be included as part of the aggregate when calculating VMA of the mix.

8.2.1 GTR SPG shall be 1.15

8.3 Mix G_{sb} used to determine VMA shall be calculated as follows:

$$G_{sb\ (JMF)} = \frac{(100 - P_{bmv})}{\left(\frac{P_s}{G_{sb}} + \frac{P_{GTR}}{G_{GTR}}\right)}$$

$where$:

$G_{sb\ (JMF)} = bulk\ specific\ gravity\ of\ the\ combined\ aggregate\ including\ GTR$

$P_{bmv} = percent\ virgin\ binder\ by\ total\ mixture\ weight$

$P_s = percent\ aggregate\ by\ total\ mixture\ weight\ (not\ including\ GTR)$

$P_{GTR} = percent\ GTR\ by\ total\ mixture\ weight$

$G_{sb} = bulk\ specific\ gravity\ of\ the\ combined\ aggregate\ (not\ including\ GTR)$

$G_{GTR} = GTR\ specific\ gravity$

8.4 G_{se} shall be calculated as follows:

$$G_{se} = \frac{(100 - P_b - P_{GTR})}{\left(\frac{100}{G_{mm}} - \frac{P_b}{G_b} - \frac{P_{GTR}}{G_{GTR}}\right)}$$

8.5 P_{be} shall be calculated as follows:

$$P_{be} = P_b - \frac{P_{ba}}{100} * (P_s + P_{GTR})$$

9.0 Minimum GTR Amount. The minimum dosage rate for GTR shall be 5 % by weight of total binder for an acceptable one bump grade or 10 % by weight of total binder for an acceptable two bump grade as detailed in the following table. Varying percentage blends of GTR and approved additives may be used as approved by the engineer with proven performance and meeting the specified requirements of the contract grade.

Contract Binder Grade	Percent Effective Virgin Binder Replacement Limits	Required Virgin Binder Grade	Minimum GTR Dosage Rate
PG 76-22	0 - 20	PG 70-22	5 %
		PG 64-22	10 %
PG 70-22	0 - 30	PG 64-22	5 %
		PG 58-28	10 %
PG 64-22	0 – 40*	PG 58-28	5 %
		PG 52-34	10 %
PG 58-28	0 – 40*	PG 52-34	5 %
		PG 46-34	10 %

* Reclaimed Asphalt Shingles (RAS) may be used when the contract grade is PG 64-22 or PG 58-28. RAS replacement shall follow the 2 x RAS criteria when calculating percent effective binder replacement in accordance Sec 401.

Buy America

In addition to Section 106.9 of the Missouri Standard Specifications for Highway Construction, the following requirements will also be in effect for this project.

1.0 Description. The Bipartisan Infrastructure Law (BIL) was enacted on November 15, 2021. The BIL includes Build America, Buy America Act Publication L. No. 117-58. This provision expands the Buy America requirements beyond what is currently only required for steel and iron products. The steel and iron provisions have not changed with the new bill. Cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives are excluded from this requirement. All other materials and manufactured products permanently incorporated into the project will be subject to Buy America requirements. There are three categories requiring Buy America Certification:

a) Iron and steel – no changes to the current specification requirements.

b) Manufactured products – these are currently exempted under the 1983 waiver from FHWA.

c) Construction materials consisting primarily of:
   - Non-ferrous metals;
   - Plastic and polymer-based products (including polyvinylchloride, composite build materials, and polymers used in fiber optic cables);
   - Glass (including optic glass);
   - Lumber; or
   - Drywall

1.1 All products and or materials will only be classified under one of these categories and not under multiple categories. It is the prime contractor's responsibility to assure all submittals required for Buy America are submitted to the Engineer prior to the products and or materials being incorporated in the job. The implementation of this policy will be in effect for all projects awarded after November 10, 2022.

1.2 New items designated as construction materials under this requirement will require the prime contractor to submit a material of origin form certification prior to incorporation into the project. The Certificate of Material origin form (link to certificate form) from the supplier and/or fabricator must show all steps of the manufacturing being completed in the United States. The Certificate of Material form shall be filed with the contract documents.

1.3 Any minor miscellaneous construction material items that are not included in the materials specifications shall be certified by the prime contractor as being procured domestically. The certification shall read "I certify all materials permanently incorporated in this project covered under this provision have been to the best of my knowledge procured and all manufactured domestically." The certification shall be signed by an authorized representative of the prime contractor.

1.4 The National Transportation Product Evaluation Program (NTPEP) compliance program verifies that some non-iron and steel products fabrication processes conform to 23 CFR 635.410 Buy America Requirements and an acceptable standard per 23 CFR 635.410(d). NTPEP compliant suppliers will not be required to submit step certification documentation with the shipment for some selected non-iron and steel materials. The NTPEP compliant supplier shall maintain the step certification documentation on file and shall provide this documentation to the engineer upon request.

2.0 Basis of Payment. Any costs incurred by the contractor by reason of compliance with the above requirements shall be considered as included in and completely covered by the unit price bid for the various items of work included in the contract.

Delete Sec 403.19.2 and substitute the following:

403.19.2 Lots. The lot size shall be designated in the contractor's QC Plan. Each lot shall contain no less than four sublots and the maximum sublot size shall be 1,000 tons. The maximum lot size shall be 4,000 tons for determination of pay factors. Sublots from incomplete lots shall be combined with the previous complete lot for determination of pay factors. When no previous lot exists, the mixture shall be treated in accordance with Sec 403.23.7.4.1. A new lot shall begin when the asphalt content of a mixture is adjusted in accordance with Sec 403.11.

I. Pavement Marking Log

1.0 Description. The contractor shall log the locations of existing pavement marking prior to any construction operations that may affect the existing pavement marking. The log shall contain all existing pavement marking and shall include but it not limited to: center stripes, no passing stripes, lane lines, turn arrows, hash bars, cross walks, railroad crossing and stop bars. The contractor shall provide a copy of the existing pavement marking log to the engineer two weeks in advance of paving operations. The

contractor shall place the new pavement marking at the same locations as the existing pavement marking, unless otherwise directed by the engineer or shown on the plans.

2.0 Method of Measurement. The quantities of pavement marking for which payment will be made will be those shown in the contract plans for the various pavement marking items. Final measurement will not be made except where appreciable errors are found in the contract quantity.

3.0 Basis of Payment. No direct payment will be made for logging of existing pavement marking.

J. Additional Flaggers

1.0 Additional flagger(s) and appropriate construction signs shall be provided at each of the specified locations when work zone extends through the following intersections and/or approaches:

All state routes, county roads, and city streets

2.0 Basis of Payment. There will be no direct pay for all labor and equipment necessary to provide additional flaggers. All cost shall be considered completely covered under the pay items provided in the contract.

K. Notice to Bidders of Funding by Third Party (JCD0025)

1.0 Bidders are advised that the City of Auxvasse is required to provide substantial funds for construction of Job No. JCD0025 from Logmile 12.611 to Logmile 13.158.

2.0 Bidders acknowledge that their bids are made with knowledge of and subject to the condition of the City of Auxvasse providing substantial funds prior to authorization of any award of a contract for this job by the Commission.

3.0 The quantities for the work within the limits defined in Section 1.0 may be totally underrun should the City of Auxvasse not concur in award or provide the necessary funds. The underrun of this work shall not be a basis for a claim by the contractor.

L. Protection of Norfolk Southern Railway Interests (JCD0026)

1.0 Authority of Railroad Engineer and Department Engineer:

1.1 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.

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

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

1.4 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.

1.5 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".

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

1.7 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.

2.0 Authorization to Proceed::

2.1 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:

2.1.1 Signed and received a fully executed copy of the required Norfolk Southern Contractor Non-Environmental Right of Entry obtained through te following link: http://www.nscorp.com/content/nscorp/en/real-estate/norfolk-southern-services/access-norfolk-southern-property.html There is a $1,500 application fee.

2.1.2 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.

2.1.3 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.

2.1.4 Obtained Railroad Protective Services as required by paragraph 7 herein.

2.1.5 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.

2.1.6 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.

2.1.7 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.

2.2 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.

2.3 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.

3.0 . NOTICE OF STARTING WORK:

3.1 Before undertaking any construction activities on the Premises, as defined in the Norfolk Southern Contractor Right of Entry Agreement, the Contractor shall.

3.1.1 Notify the Railroad Representative(s) at least 72 hours in advance of any construction activities that Contractor Protective Services have been obtained for use.

3.1.2 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.

3.1.3 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.

4.0 Interference with Railroad Operations:

4.1 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.

4.2 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.

4.3 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.

4.4 "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.

5.0 Track Clearances:

5.1 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.

5.1.1 A minimum vertical clearance of 22'-0" above top of highest rail shall be maintained at all times.

5.1.2 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.

5.1.3 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.

5.1.4 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.

6.0 Construction Procedures:

6.1 General:

6.1.1 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.

6.1.2 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 NS 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.

6.2 Ballast Protection

6.2.1 The Contractor shall submit the proposed ballast protection system detailing the specific filter fabric and anchorage system to be used during all construction activities.

6.2.2 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.

6.3 Excavation:

6.3.1 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.

6.3.2 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.

6.4 Excavation for Structures and Shoring Protection:

6.4.1 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.

6.4.2 The use of shoring systems utilizing tiebacks shall not be permitted without written approval from the Railroad Engineer.

6.4.3 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.

6.4.4 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.

6.4.5 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.

6.4.6 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.

6.4.7 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 ½".

6.4.8 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.

6.4.9 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.

6.5 Pipe, Culvert, & Tunnel Installations

6.5.1. Pipe, Culvert, & Tunnel Installations shall be in accordance with the appropriate Norfolk Southern Design Specification as noted below:

6.5.1.1 For Open Cut Method refer to Norfolk Southern Public Improvement Projects Manual Appendix H.4.6.

6.5.1.2. For Jack and Bore Method refer to Norfolk Southern Public Improvement Projects Manual Appendix H.4.7.

6.5.1.3. For Tunneling Method refer to Norfolk Southern Public Improvement Projects Manual Appendix H.4.8.

6.5.2. 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.

6.6 Demolition Procedures

6.6.1. General

6.6.1.1. 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.

6.6.1.2. Railroad tracks and other Railroad property must be protected from damage during the procedure.

6.6.1.3. A pre-demolition meeting shall be conducted with the Sponsor, the Railroad Engineer or their representative, and the key Contractor's personnel prior to the start of the demolition procedure.

6.6.1.4. The Railroad Engineer or the Railroad Engineer's designated representative must be present at the site during the entire demolition procedure period.

6.6.1.5. 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.

6.6.1.6. 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.

6.6.2. Submittal Requirements

6.6.2.1 In addition to the submittal requirements outlined in Section 6.1.2 of these Special Provisions, the Contractor shall submit the following for approval by the Railroad Engineer:

6.6.2.1.1. 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.

6.6.2.1.2. 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.

6.6.2.1.3. 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.

6.6.2.1.4. 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 whendeter mining 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.

6.6.2.1.5. 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.

6.6.2.1.6. 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.

6.6.3. Overhead Demolition Debris Shield

6.6.3.1. 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.

6.6.3.2. The demolition debris shield shall provide a minimum vertical clearance as specified in Section 5.1.1 of these Special Provisions or maintain the existing vertical clearance if the existing clearance is less than that specified in Section 5.1.1.

6.6.3.3. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed demolition procedure submission.

6.6.3.4. The Contractor shall submit the demolition debris shield design and supporting calculations for approval by the Railroad Engineer.

6.6.3.5. 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.

6.6.3.6. 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.

6.6.3.7. 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.

6.6.4. Vertical Demolition Debris Shield

6.6.4.1. 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.

6.7. Erection & Hoisting Procedures

6.7.1. General

6.7.1.1. 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.

6.7.1.2. Neither crane handoffs nor "walking" of cranes with suspended load will be permitted for erection on or over Railroad right-of-way.

6.7.1.3. Railroad tracks and other Railroad property must be protected from damage during the erection procedure.

6.7.1.4. 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.

6.7.1.5. The Railroad Engineer or the Railroad Engineer's designated representative must be present at the site during the entire erection procedure period.

6.7.1.6. 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.).

6.7.2. Submittal Requirements

6.7.2.1. In addition to the submittal requirements outlined in Section 6.1.2 of these provisions, the Contractor shall submit the following for approval by the Railroad Engineer.

6.7.2.1.1. 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.

6.7.2.1.2. 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.

6.7.2.1.3. 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.

6.7.2.1.4. 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.

6.7.2.1.5. 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.

6.7.2.1.6. 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.

6.7.2.1.7. Design and supporting calculations for the temporary support of components, including but not limited to temporary girder tie-downs and falsework.

6.8. Blasting

6.8.1 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:

6.9 Track Monitoring

6.9.1 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.

6.9.2 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.

6.9.3 The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Railroad Engineer for analysis.

6.9.4 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.

6.10 Maintenance of Railroad Facilities:

6.10.1 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.

6.10.2 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.

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

6.11 Storage of Materials and Equipment:

6.11.1 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.

6.11.2 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.

6.12 Cleanup:

6.12.1 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.

7.0 Damages:

7.1 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.

7.2 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.

8.0 RAILROAD PROTECTIVE SERVICES:

8.1 Requirements:

8.1.1 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.

8.1.2 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.

8.1.3 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.

8.1.4 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.

8.1.5 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.

8.2 Scheduling and Notification:

8.2.1 The Contractor's work requiring Railroad Protective Services should be scheduled to limit the presence of such personnel at the site. Railroad approval will be required for any Railroad Protective Services requests in excess of 40 hours per week, and in such cases, should be limited to a maximum of 50 hours per week.

8.2.2 Not later than the time that approval is initially requested to begin work on Railroad right-of-way, the Contractor shall furnish to the Railroad and the Sponsor a schedule for all work required to complete the portion of the project within Railroad right-of-way and arrange for a job site meeting between the Contractor, the Sponsor, and the Railroad's authorized representative. The Railroad Protective Services personnel may not be provided until the job site meeting has been conducted and the Contractor's work has been scheduled.

8.2.3 The Contractor will be required to give the Railroad representative at least 10 working days of advance written notice of the intent to begin work within Railroad right-of-way in accordance with this special provision, and must receive written or verbal confirmation of this request from the Railroad representative. Once begun, when such work is then suspended at any time, or for any reason, the Contractor will be required to give the Railroad representative at least 10 working days of advance notice before resuming work on Railroad right-of-way. Such notices shall include sufficient details of the proposed work to enable the Railroad representative to determine if Railroad Protective Services will be required. If such notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally, it shall be confirmed in writing with copy to the Engineer. If Railroad Protective Services are required, no work shall be undertaken until the Railroad Protective Services personnel is present at the job site. It may take 30 days or longer to obtain Railroad Protective Services initially from the Railroad. When Railroad Protective Services begin, the Railroad Protective Services personnel is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If Railroad Protective Services become unnecessary and are suspended, it may take 30 days or longer to again obtain Railroad Protective Services from the Railroad. Due to Railroad labor agreements, it is necessary to give 5 working days notice before Railroad Protective Service may be discontinued and responsibility for payment stopped.

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

8.3 Payment:

8.3.1 The Contractor will be responsible for paying the Railroad Protective Services Company directly for any and all costs of Railroad Protective Services which may be required to accomplish the construction.

9.0 Haul Across Railroad Track:

9.1 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.

9.2 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.

10.0 Work for the Benefit of the Contractor:

10.1 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.

10.2 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.

11.0 Cooperation and Delays:

11.1 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.

11.2 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.

12.0 Trainman's Walkways:

12.1 Along the outer side of each exterior track of multiple operated track, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains,

extending to a line not less than 10 feet from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railroad's Protective Service is provided shall be removed before the close of each 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.

13.0 Guidelines for Personnel on Railroad Right-of-Way:

13.1 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.

13.2 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.

13.3 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.

13.4 All persons working near track while train is passing are to lookout for dragging bands, chains and protruding or shifted cargo.

13.5 No person is allowed to cross tracks without specific authorization from the Contactor Protective Services.

13.6 All welders and cutting torches working within 25' of track must stop when train is passing.

13.7 No steel tape or chain will be allowed to cross or touch rails without permission from the Railroad.

14.0 Guidelines for Equipment on Railroad Right-of-Way:

14.1 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.

14.2 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.

14.3 All employees will stay with their machines when crane or boom equipment is pointed toward track.

14.4 All cranes and boom equipment under load will stop work while train is passing (including pile driving).

14.5 Swinging loads must be secured to prevent movement while train is passing.

14.6 No loads will be suspended above a moving train.

14.7 No equipment will be allowed within 25' of centerline of track without specific authorization of the Railroad official and Railroad Protective Services personnel.

14.8 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 5.1.2 and shall be maintained for the duration of construction.

14.9 No equipment or load movement is permitted within 25' or above a standing train or Railroad equipment without specific authorization of the Railroad Protective Services personnel.

14.10 All operating equipment within 25' of track must halt operations when a train is passing. All other operating equipment may be halted by the Railroad Protective Services personnel if said personnel views the operation to be dangerous to the passing train.

14.11 All equipment, loads and cables are prohibited from touching rails.

14.12 While clearing and grubbing, no vegetation will be removed from Railroad embankment with heavy equipment without specific permission from the Railroad Engineer and Railroad Protective Services personnel.

14.13 No equipment or materials will be parked or stored on Railroad's property unless specific authorization is granted from the Railroad Engineer.

14.14 All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it cannot be moved by unauthorized persons.

14.15 All cranes and boom equipment will be turned away from track after each workday or whenever unattended by an operator.

14.16 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).

15.0 Insurance:

15.1 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:

15.1.1 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.

15.1.2 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.

15.1.3 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.

15.1.4 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.

15.1.5 All insurance required in Section 15.1 (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.

15.1.6 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 itsel.

15.1.7 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.

15.1.8 To the fullest extent permitted by law, all insurance furnished by Contractor in compliance with Section 15.1 shall include a waiver of subrogation in favor of Railroad with an appropriate endorsement to each policy.

15.1.9 All policies required in Section 15.1 shall not be subject to cancellation, termination, modification, changed, or non-renewed except upon thirty (30) days' prior written notice to the additional insureds.

15.1.10 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.

15.1.11 Any deductibles or retentions in excess of $50,000 maintained on any insurance required in 15.1 shall be disclosed and approved by Railroad with a request made for approval to NSRISK3@nscorp.com.

15.1.12 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.

15.1.13 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 15.1.

15.2 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 15.1:

15.2.1 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.

15.2.2 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. 14.2.2.h above.

SPONSOR:
Mrs. Brandi Baldwin
State Construction & Materials Engineer
Missouri Department of Transportation
P.O. Box 270
Jefferson City, MO 65102

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

15.3 All insurance required under Section 15.1 and 15.2 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 15.1 shall be issued to the Railroad at NSRISK3@NSCORP.COM at the same time the RPL Policy is submitted.

15.4 The insurance required herein shall in no way serve to limit the liability of Sponsor or its Contractors under the terms of this agreement.

15.5 Insurance Submission Procedures

15.5.1 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**.

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

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

15.5.2 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 entirely inclusive of all declarations, schedule of forms and endorsements along with the policy forms and endorsements as required in Section 15.2.

b. A certificate of insurance from the Contractor evidencing the Contractor's insurance in Section 15.1 (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.

16.0 Failure to Comply:

16.1 In the event the Contractor violates or fails to comply with any of the requirements of these Special Provisions.

16.1.1 The Railroad Engineer may require that the Contractor vacate Railroad property.

16.1.2 The Sponsor's Engineer may withhold all monies due the Contractor on monthly statements.

16.2 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.

17.0 Payment for Cost of Compliance:

17.1 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.

18.0 Project Information:

Date: 07/26/2023

Job No.: JCD0025&JCD0026
Route: E & B
County:
Callaway/Montgomery

NS File No.: ?
NS Milepost: 85.19
Sponsor's Project No.: JCD0026