

Job No.: J613540  
Route: Various  
County: Various

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

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  04/13/2023	<b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636
	<b><i>Gonzalez Companies</i></b> 1750 S. Brentwood Blvd, Suite 700 St. Louis, Mo 63144 Certificate of Authority: 20050383353 314-961-1888
	If a seal is present on this sheet, JSP's have been electronically sealed and dated.
	Job Number: J6I3550 St. Louis & St. Charles Counties & St. Louis City Date Prepared: 02/03/2023
	ADDENDUM DATE:
Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: All	

JOB  
SPECIAL PROVISION

A. General - Federal JSP-09-02H

**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](http://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](http://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 2022 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 JSP-13-01B

**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 shall be completed on or before the date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.1.

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Notice to Proceed: July 10, 2023  
Completion Date: December 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
J6I3550	N/A	\$3,200

**3.0 Liquidated Damages for Contract Administrative Costs.** Should the contractor fail to complete the work on or before the 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 **\$1,500** 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 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 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 JSP-02-06M

**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 contractor shall request permission at least two weeks prior to lane closures or shifting traffic onto detours, and 14 calendar days prior to the imposition of height, width, or weight restrictions. This is to ensure closures do not conflict with other work within the zone of influence and the work zone information on the MoDOT's website can remain real-time. In accordance with Management of Traffic (MOT) procedures, the contractor will need to submit lane closure for the following week by Monday 3:00 pm.

**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 15 minutes to prevent congestion from escalating beyond this delay threshold. If disruption of the traffic flow occurs and traffic is backed up in queues equal to or greater than the delay time threshold listed above, 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. When a Work Zone Analysis Spreadsheet is provided, the contractor will find it in the electronic deliverables on MoDOT's Online Plans Room. The contractor may refer to the Work Zone Analysis Spreadsheet for detailed information on traffic delays.

#### **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.

**2.6 Traffic Management Center (TMC) Coordination.** The Work Zone Specialist (WZS) or their designee shall contact by phone the MoDOT Traffic Management Center (Gateway Guide TMC at #314-275-1513) within five minutes of a lane or ramp closure beginning and within five minutes

of a lane or ramp closure being removed. The WZS shall make this phone call 24 hours a day, 365 days of the year since the MoDOT Traffic Management Centers are always staffed.

### **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:

12:00 noon June 30, 2023 – 6:00 a.m. July 5, 2023  
12:00 noon July 3, 2024 – 6:00 a.m. July 5, 2024  
12:00 noon July 3, 2025 – 6:00 a.m. July 7, 2025

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

**3.3** The contractor shall be aware that traffic volume data indicates construction operations on the roadbed between the following hours will likely result in traffic queues greater than 15 minutes. Based on this, the contractor's operations will be restricted accordingly unless it can be successfully demonstrated the operations can be performed without a 15 minute queue in traffic. It shall be the responsibility of the engineer to determine if the above work hours may be modified. Working hours for evenings, weekends and holidays will be determined by the engineer.

Route DD over I-64 (Bridge A5962)

Nightly Lane Closures Allowed: 7:00 p.m. – 5:00 a.m., Monday through Friday

MO-94 over Little Femme Osage Creek (Bridge A5985)

Flagging operation allowed: 7:00 a.m. – 4:00 p.m., Monday through Friday

Route 364 @ Creve Coeur Mill Road (Bridges A6014 & A6052):

Nightly Lane Closures Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

Route 364 @ Route 141 (Bridges A6083 & A6190):

Nightly Lane Closures Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

I-64 over Dardenne Creek (Bridges A6752 and A6753)

Nightly Lane Closures Allowed: 8:00 p.m. – 5:00 a.m.

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Route 100 over BNSF and UP RR. (Bridge A7046 & A7122):  
Nightly Lane Closures Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

I-64 @ Compton Ave.. (Bridge A7080 & A7081):  
Nightly Full Closure Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

Route N over I-64 (Bridge A7323)  
Nightly Lane Closures Allowed: 8:00 p.m. – 5:00 a.m., Monday through Friday

I-64 @ Hanley Rd. (Bridge A8004 & A8016):  
Nightly Lane Closures Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

I-64 @ Big Bend Rd. (Bridge A8020):  
Nightly Lane Closures Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

I-64 @ Bellevue (Bridge A8022):  
Full closure over the weekend allowed. Use Posted detour.

I-64 @ Hampton Ave. (Bridge A8028 & A8029):  
Nightly Full Closure Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

I-64 @ Kingshighway Blvd. (Bridge A8033 & A8036):  
Nightly Lane Closures Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

**3.5** The contractor shall not alter the start time, ending time, or a reduction in the number of through lanes of traffic or ramp closures without advance notification and approval by the engineer. The only work zone operation approved to begin 30 minutes prior to a reduction in through traffic lanes or ramp closures is the installation of traffic control signs. Should lane closures be placed or remain in place, prior to the approved starting time or after the approved ending time, the Commission, the traveling public, and state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delays, with a resulting cost to the traveling public. These damages are not easily computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of **\$1000 per 15-minute increment** for each 15 minutes that the temporary lane closures are in place and not open to traffic in excess of the limitation as specified elsewhere in this special provision. It shall be the responsibility of the engineer to determine the quantity of unapproved closure time.

**3.5.1** The said liquidated damages specified will be assessed regardless if it would otherwise be charged as liquidated damages under the Missouri Standard Specification for Highway Construction, as amended elsewhere in this contract.

#### **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 JSP-90-11A

**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 636-537-7000			
Bridge No.	Location	Fire	Police
A4169	St. Charles County	636-228-4481	636-949-3000
A5962	Wentzville	636-332-9869	636-327-5105
A5985	St. Charles County	636-329-1515	636-949-3000
A6014 A6052	Maryland Heights	314-878-7001	314-298-8700
A6083 A6190	Maryland Heights	314-878-7001	314-298-8700
A6475	New Melle	636-828-5528	636-398-5500
A6657	New Melle	636-828-5528	636-398-5500
A6752 A6753	Wentzville	636-327-6239	636-327-5105
A7046 A7122	St. Louis City	314-533-3406	314-231-1212
A7080 A7081	St. Louis City	314-533-3406	314-231-1212



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A7233	Wentzville	636-332-9869	636-327-5105
A7323	Wentzville	636-332-9869	636-327-5105
A8004 A8016	Richmond Heights	314-645-0404	314-645-3000
A8020	Richmond Heights	314-645-0404	314-645-3000
A8022	Richmond Heights	314-645-0404	314-645-3000
A8028 A8029	St. Louis City	314-533-3406	314-231-1212
A8033 A8036	St. Louis City	314-533-3406	314-231-1212
St. Louis City Police: 314-231-1212			
St. Louis County Police: 636-529-8210			
St. Charles County Police: 636-949-3000			
MoDOT Transportation Management Center: 314-275-1500			

**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 JSP-96-05**

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

Shirley Norris, Project Manager St. Louis District  
1590 Woodlake Drive  
Chesterfield, MO 63017-5712t  
Telephone Number: 314-453-5032  
E-mail: [Shirley.Norris@modot.mo.gov](mailto:Shirley.Norris@modot.mo.gov)

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

F. Supplemental Revisions JSP-18-01X

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](http://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

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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:

<b>Table 1 – GTR Material Properties</b>		
<b>Property</b>	<b>Test Method</b>	<b>Criteria</b>
Specific Gravity	ASTM D1817	1.02 to 1.20
Metal Contaminates	ASTM D5603	$\leq 0.01\%$
Fiber Content	ASTM D5603	$\leq 0.5\%$
Moisture Content	ASTM D1509	$\leq 1.0\%^*$
Mineral Filler	AASHTO M17	$\leq 4.0\%$

\*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.

<b>Table 2 – GTR Gradation</b>	
<b>Sieve</b>	<b>Percent Passing by Weight</b>
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  $\pm 3$  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  $\pm 3$  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** VMA shall be calculated as follows:

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

where:

$P_s$  = percent aggregate by total mixture weight

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

$G_{sb}$  = bulk specific gravity of the combined aggregate

$G_{GTR}$  = 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.

**Delete Sec 107 in its entirety and substitute the following:**

**107.1 Laws to be Observed** The contractor shall know, observe and comply with all federal and state laws, local laws, codes, ordinances, orders, decrees and regulations existing at the time of or enacted subsequent to the execution of the contract that in any manner affect the prosecution of the work, except as specified in the contract or as directed by the engineer. The Contractor shall also ensure that any subcontractor know, observe and comply with all federal and state laws, local laws, codes, ordinances, orders, decrees and regulations as outlined above. The contractor and surety shall indemnify and save harmless the State, the Commission, the Commission's agents, employees and assigns from any claim or liability arising from or based on the violation of any such law, code, ordinance, regulation, order or decree, except any local regulations, decrees, orders, codes or ordinances directed by the contract.

**107.1.1 Contract and Legal Inconsistency** The engineer shall be notified immediately in writing if any discrepancy or inconsistency is discovered between the contract and any law, ordinance, regulation, order or decree.

**107.1.2 Local Building and Zoning Codes or Ordinances** The projects of the Commission are not typically subject to local building or zoning codes or ordinances. Therefore, the contractor usually need not obtain a local building or zoning permit or variance for work done exclusively as the Commission's contractor on the Commission's project and the Commission's right of way. Other local codes or ordinances may not apply to the Commission, and thus to the contractor as well. If any questions arise concerning whether the contractor shall comply with a local code, ordinance, decree or order of any type, the contractor shall advise the engineer of the problem immediately, for resolution by the engineer. This provision will not exempt the contractor from the requirement of thoroughly researching and determining, before submitting a bid on the contract and from complying with, all federal, state or local laws, regulations, codes, ordinances, decrees

or orders that may apply to the contract work. The Commission will not be responsible for the contractor's failure to be informed before bidding as to the federal, state and local laws, regulations, codes, ordinances, decrees or orders that may govern the contract work, or for the contractor's failure to determine before bidding which of these do not govern the contract work.

**107.1.3 Authentication of Certain Documents** If plans, plats, detailed drawings or specifications for falsework, cofferdams or any other work are required to be submitted to the engineer, the documents shall be signed, sealed and stamped in accordance with the laws relating to the practice of architecture and professional engineering in the State of Missouri (Chapter 327, RSMo).

**107.2 Permits, Licenses and Taxes** Except as otherwise provided in the contract, the contractor shall procure all permits and licenses, shall pay all charges, fees and taxes, and shall give all notices necessary and incidental to the due and lawful prosecution of the work. No direct payment will be made for the cost of complying with this requirement.

**107.3 Patented or Copyrighted Devices, Material and Processes.** If the contractor is required or desires to use any design, device, material or process covered by letters, patent, copyright, service or trademark, the contractor shall arrange and provide for such use by suitable agreement with the patentee or owner, and a copy of the agreement may be required by the Commission. The contractor and surety shall indemnify and save harmless the State, the Commission, the Commission's agents, employees and assigns from any suits, claims or damages arising from the infringement upon or use of any patented, copyrighted or registered design, device, material, process or mark.

**107.4 Safety and Sanitary Provisions** The contractor shall at all times take necessary precautions to protect the life and health of all persons employed on the project or, who at the direction of the contractor are present on the right of way. The contractor shall be familiar with the latest accepted accident prevention methods and shall provide necessary safety devices and safeguards accordingly. The Commission will refuse to provide inspection services at plants or work sites where adequate safety measures are not provided and maintained.

**107.4.1 Apparel.** All workers within highway right of way shall wear approved ANSI/ISEA 107 Performance Class 2 or 3 safety apparel and more specifically as follows:

**107.4.1.1** During daytime activities, flaggers shall wear a high visibility hard hat, safety glasses, a Performance Class 3 top OR a Performance Class 2 top, and safety footwear. Hard hats other than high visibility orange or green shall be covered with a high visibility covering.

**107.4.1.2** During daytime activities, workers shall wear a hard hat, safety glasses, a Performance Class 3 top OR a Performance Class 2 top, and safety footwear.

**107.4.1.3** During nighttime activities, flaggers shall wear a high visibility/reflective hard hat, safety glasses, a Performance Class 3 top AND Class E bottoms, OR Performance Class 2 top AND Class E bottoms, and safety footwear. Hard hats shall be reflective or covered with a high visibility covering.

**107.4.1.4** During nighttime activities, workers shall wear a hard hat, safety glasses, a Performance Class 3 top OR Performance Class 2 top AND Class E bottoms, and safety footwear.



**107.4.2** The contractor shall provide and maintain in a neat and sanitary condition, such accommodations for the use of employees as may be necessary to comply with the requirements and regulations of any agency having jurisdiction over public health and sanitation. The contractor shall permit no public or private nuisance.

**107.4.3** All sanitary facilities and safety devices shall be furnished free to employees and no direct payment will be made for such facilities or devices.

**107.5 Public Convenience and Safety** The contractor shall conduct the work in a manner that will ensure, as far as practical, the least obstruction to traffic and shall provide for the convenience and safety of the general public and residents along and adjacent to the highway in an adequate and satisfactory manner.

**107.5.1 Obstructions Prohibited** Fire hydrants on and adjacent to the highway shall be kept accessible to firefighting apparatus at all times, and no obstruction shall be placed within 15 feet of any such hydrant. Footways, gutters, sewers, outlets, inlets and portions of highways adjoining the work under construction shall not be obstructed. Pavements over which hauling is performed shall be kept clean of spilled or tracked-on material at all times when in use by traffic.

**107.5.2 Objects Potentially Affecting Navigable Airspace.** The contractor shall comply with all federal regulations pertaining to constructing, erecting or installing any object, temporary or permanent, which could potentially affect navigable airspace.

**107.5.3 Material and Equipment.** During construction hours, equipment, material and vehicles utilized in construction of the project will only be permitted on shoulders, medians or pavements where the locations are closed to traffic, properly signed and occupied by ongoing construction operations, unless otherwise approved by the engineer. Except in cases of emergency, construction equipment, material and vehicles will not be permitted on pavements or shoulders being utilized by traffic. If the contract specifies time periods the contractor will not be permitted to perform work, construction equipment or vehicles shall not enter or leave the construction area via the pavements handling traffic nor be operated on the pavements handling traffic within the construction area during the restricted time periods. During non-construction hours, construction equipment, material and vehicles will not be permitted within 30 feet of the edge of the pavement or shoulders carrying traffic unless the equipment, material and vehicles are located in a properly protected area, an off-site storage area or as otherwise directed by the engineer.

**107.5.4 Distractions to the Traveling Public in Work Zones.** In order to avoid distracting operators of vehicles traveling on the roadway, the Contractor and its sub-contractors shall not bring or display any signs, flags, logos, emblems, advertising, or any other communicative device on construction equipment that is large enough to be legible from the main traveled way of the highway in the work zone or on highway right of way. This prohibition does not apply to any sign, logo or emblem placed on Contractor equipment identifying the owner or manufacturer of the equipment or to any official highway signs approved by the Commission pursuant to 227.220 RSMo.

**107.6 Bridges over Navigable Waters.** All work on navigable waters shall be conducted such that free navigation of the waterways will not be interfered with and that existing navigable depths will not be impaired except as allowed by permit issued by the USCG or the USACE.

**107.7 Use of Explosives.** All blasting operations shall be conducted under the direct supervision of a licensed blaster as required by the Missouri Blasting Safety Act. When explosives are used

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in the prosecution of the work, the contractor shall use the utmost care to prevent bodily injury and property damage. The contractor shall be responsible for damage resulting from the use of explosives. The engineer will have the authority to suspend any unsafe blasting operation. The contractor shall be familiar and comply with the rules and regulations of any city, county, state or federal agency or any other agency that may have jurisdiction in the handling, loading, transporting, storage and use of explosives. All places used for explosives storage shall be marked clearly "DANGEROUS EXPLOSIVES".

**107.7.1** Before beginning work, the contractor shall furnish the engineer letters of approval for the proposed operation from the appropriate regulating agencies. The contractor shall notify in writing the appropriate fire protection jurisdiction of the intent to store, transport or use explosives and shall provide proof of notice to the engineer. The contractor shall provide the engineer with copies of all permits, blasting logs and seismic monitoring data.

**107.7.2** The contractor shall notify in advance each property owner, tenant and public utility company having structures or facilities close to the work of any intention to use explosives.

**107.7.3** Removal of any item or material of any nature by blasting shall be done in such a manner and at such time as to avoid damage affecting the integrity of the design and to avoid damage to any new or existing structure, whether on Commission right of way or private property, included in or adjacent to the work. Unless the contract documents or the engineer restricts such operation, the contractor shall be responsible for determining a method of operation to ensure the desired results and the integrity of the completed work.

**107.7.4** The contractor and surety shall indemnify and save harmless the State, the Commission, the Commission's agents, employees and assigns from any claim related to the possession, transportation, storage or use of explosives.

#### **107.8 Preservation of Monuments and Artifacts.**

**107.8.1 Monuments.** The contractor shall not disturb or damage any land monument or property landmark unless authorized by the engineer.

**107.8.2 Human and Archaeological Remains.** The contractor shall report to the engineer the discovery of human remains, artifacts, fossils and other items of historical, archaeological or geological significance discovered within the right of way during construction. Such items will remain in the Commission's custody and shall not be removed from the site unless directed by the engineer. The preservation and handling of such items shall be in accordance with [Sec 203.4.8](#).

**107.9 Forest and Park Protection.** Environmental and sanitary laws and regulations regarding the performance of work within or adjacent to state or national forests or parks shall be obeyed. The contractor shall keep the project site in an orderly condition, dispose of all refuse, obtain permits for the construction and maintenance of all construction camps, stores, warehouses, residences, latrines, cesspools, septic tanks and other structures in accordance with the regulations and instructions issued by the forest or park supervisor. The contractor shall require employees and subcontractors, independently, and at the request of forest officials, to prevent and suppress forest fires, and to notify a forest official of the location and extent of any fire.

**107.10 Environmental Protection.** The contractor shall comply with all federal, state and local laws and regulations controlling pollution of the environment. Pollution of streams, lakes, ponds

and reservoirs with fuels, oils, bitumens, chemicals or other harmful material and pollution of the atmosphere from particulate and gaseous matter shall be avoided.

**107.10.1** Fording of streams and fill for temporary work not specified on design plans will not be permitted unless the plan for such operation is authorized by the Corps of Engineers, meets the approval of the engineer, complies with the current MoDOT Pollution Plan and results in minimum siltation to the stream. Temporary stream crossings shall not be constructed unless specifically designated as a condition of the Corps of Engineers Section 404 permit or a permit is obtained, and the temporary stream crossing is in accordance with [Sec 806](#).

**107.10.2** When work areas or pits are located in or adjacent to streams, the areas shall be separated from the main stream by a dike or barrier to keep sediment from entering the stream. Care shall be taken during the construction and removal of such barriers to minimize siltation of the stream.

**107.10.3** Disposal of Portland cement concrete residue and wash water, water from aggregate washing, or other operations producing sediment laden runoff shall be treated in accordance with Sec 806.

**107.10.4** Oil distributors or tanker trucks used for the transport or application of any petroleum-based products, and that have a capacity greater than 1,320 gallons, shall not be left unattended on MoDOT right of way within the project limits during non-construction hours unless secondary containment is deployed as per the Spill Prevention Control and Countermeasure rule. Parking of these vehicles on MoDOT right of way outside of the project limits, or on any MoDOT owned property, shall not be allowed without the aforementioned secondary containment and prior authorization from the engineer.

**107.11 Responsibility for Claims for Damage or Injury.** The contractor and insurance company shall indemnify and save harmless the State, the Commission, the Commission's agents, employees and assigns from all claims or suits made or brought for bodily injury, death or property damage, arising from performance of the work to the extent of:

(a) The negligent acts or omissions of the contractor, subcontractors, suppliers or their respective officers, agents or employees.

(b) The creation or maintenance of a dangerous condition of or on the Commission's property or right of way, which condition occurred due to the acts or omissions of the contractor, subcontractors, suppliers or their respective officers, agents or employees or for which the contractor had knowledge of or could have had knowledge of the condition in time to warn of or repair said condition.

(c) The failure of the contractor, subcontractors, suppliers or their respective officers, agents or employees, to perform the work in accordance with the plans and specifications.

**107.11.1** The contractor will not be required to defend, indemnify or hold harmless any other person, including the State, the Commission, or the Commission's agents, employees or assigns for any acts, omissions or negligence of other persons.

**107.11.2** Neither the Commission nor the contractor, by execution of a contract, shall intend to or create a new or enlarge an existing cause of action in any third party. This provision shall not be interpreted to create any new liability that does not exist under the law, or to waive or extinguish

any defense that either party to this contract or their respective agents and employees may have to an action or suit by a third party.

**107.12 Contractor's Responsibility for Work** From the earlier of the date of commencement of the work or the effective date of the notice to proceed, and until any work is accepted by the engineer, the work shall be in the custody and under the charge and care of the contractor. Issuance of a payment estimate on any part of the work done will not be considered as final acceptance of any work completed up to that time.

**107.12.1** Damages to any portion of the work before the work is completed and accepted, caused by the action of the elements or from any other reason, shall be repaired or replaced at the contractor's expense. The contractor, at the contractor's option, may insure against any such damages. The Commission may, in its discretion, make such a payment, determined in accordance with [Sec 109.4](#), for damage to the work due to unforeseeable causes beyond the control of, and without fault or negligence on the part of the contractor, unless the contractor has been reimbursed for such damages by the contractor's insurer. Prior to reimbursement, the contractor shall furnish documentary evidence of all efforts to recover such repair costs.

**107.12.2** The contractor shall immediately give written notice to the engineer of any pedestrian, worker and/or vehicular accident. The contractor may be directed by the engineer to repair permanent Commission facilities that have been damaged by events that are beyond the control of the contractor. Reimbursement will be provided by the Commission, determined in accordance with [Sec 109.4](#), for the actual direct cost of labor, equipment and material, exclusive of overhead, indirect or consequential costs of profit. The Commission may elect to make such repairs in lieu of the contractor.

**107.13 General Insurance Requirements.** The Contractor shall procure and maintain at the Contractor's expense until Final Acceptance of the project by the engineer, insurance for all damages and losses imposed by law and assumed under the contract, of the kinds and in the amounts specified in [Secs 107.13.1](#) through [107.13.8](#).

**107.13.1 Sovereign Immunity Limits for Missouri Public Entities.** The Contractor shall procure and maintain at least minimum insurance coverages to meet the sovereign immunity limits for Missouri public entities as calculated by the Missouri Department of Insurance and published annually in the Missouri Register pursuant to Section 537.610 RSMo., for [Secs 107.13.2](#) through [107.13.5](#), unless specified otherwise for each type of insurance coverage. Each policy shall provide additional insured status for the Missouri Highways and Transportation Commission (Commission), the Missouri Department of Transportation (MoDOT) and its employees up to Missouri's sovereign immunity limits.

**107.13.2 Commercial General Liability Insurance.** The Contractor shall procure, and maintain during the term of the project, commercial general liability insurance with coverage at least as broad as Insurance Services Office (ISO) policy form CG 00 01. The general aggregate limit shall, by endorsement or otherwise, provide a designated aggregate limit solely for this project using ISO form CG 25 03 05 09 or an equivalent form. General liability policies shall be endorsed to add the Commission, MoDOT, and its employees as additional insureds (the "Additional Insureds") using Insurance Services Office forms CG 20 10 or the equivalent under such policy. For construction contracts, an endorsement providing completed operations coverage to the Additional Insureds, ISO form CG 20 37 or the equivalent, is also required. This form, CG 20 37, shall be endorsed on each subsequent commercial general liability policy issued to the Contractor for three (3) years after final acceptance of the project. The contractor could provide extended

completed operations for specific project needs. Discontinued operations coverage shall be provided for three (3) years when applicable. Coverage shall not be reduced by insured versus insured exclusions or by explosion, collapse and underground (XCU) exclusions.

**107.13.3 Commercial Automobile Liability Insurance.** The Contractor shall procure and maintain automobile liability coverage at least as broad as ISO policy form CA 00 01 covering owned, hired, and non-owned autos. The policy shall include as insureds anyone liable for the conduct of an insured as described by policy provision or by endorsement added to the policy.

**107.13.4 Contractor's Pollution Liability (CPL) Insurance.** The Contractor performing excavation, remediation, hazardous materials removal, or any other work involving potential pollution arising from construction operations shall procure and maintain contractor's pollution liability insurance for liability arising out of sudden, accidental, and gradual pollution and remediation. The policy shall have minimum limits of \$1,000,000 and the Commission, MoDOT and its employees shall be endorsed as additional insureds under such policy. The policy shall provide coverage for the hauling of waste from the project site to the final disposal location, including non-owned disposal sites. Products/completed operations coverage for pollution liability insurance shall extend a minimum of three (3) years after final acceptance of the project. Coverage shall be included on behalf of the insured for covered claims arising out of the actions of independent contractors. If the insured is using subcontractors, the Policy must include work performed "by or on behalf" of the insured. Policy shall specifically provide for a duty to defend on the part of the insurer.

**107.13.5 Aircraft Liability Insurance.** If aircraft, including unmanned aircraft, will be used on the project, Contractor shall provide, or cause to be provided, aircraft liability insurance protecting against claims for damages resulting from such use in all cases where any aircraft that is owned, leased or chartered by any Contractor-Related Entity used on the Project. The policy shall have minimum limits of \$1,000,000 and the Commission, MoDOT and its employees shall be additional insureds on the policy by endorsement or policy provision. The use of any aircraft in performance of the Work, the aircraft crew, flight path and altitude, including landing of any aircraft on the Site or on any property owned by the Commission, MoDOT or other parties at interest, shall be subject to review and written acceptance by the Commission prior to any such usage. If any aircraft are leased or chartered with crew and/or pilot, evidence of non-owned aircraft liability insurance will be acceptable to meet these requirements but must be provided prior to use of the aircraft. For use of unmanned aircraft vehicles, the contractor may provide insurance either through an aircraft liability insurance policy, or by endorsement to the Contractor's commercial general liability insurance policy and excess liability policies. Use of unmanned aircraft must comply with all state and federal rules and regulations, including FAA requirements.

**107.13.6 Excess or Umbrella Liability Insurance.** The Contractor may satisfy the required limits for Secs 107.13.2 through 107.13.5 by use of excess or umbrella liability insurance policies in any combination that meets the contract limits requirements. Such policies shall include as insureds, the Missouri Highways and Transportation Commission (Commission), the Missouri Department of Transportation (MoDOT) and its employees.

**107.13.7 Workers' Compensation Insurance.** The Contractor shall provide evidence to the engineer that the Contractor has obtained workers' compensation insurance and employers liability insurance as required by the state or is exempt and provides proper documentation to the engineer. Coverage shall include all statutory workers' compensation benefits to Contractor employees who may sustain work-related injury, death or disease. If applicable, commensurate with the requirements of the U.S. Longshore and Harbor Workers' Compensation Act (USL&H) and the Jones Act, with a minimum limit of \$2,000,000 per occurrence and in the aggregate, or



as may be specified by law, for each. The required insurance must be endorsed to include a waiver of subrogation in favor of the Commission, MoDOT and its employees.

**107.13.8 Railroad Protective Liability Insurance.** In addition to other forms of required insurance, the Contractor shall provide railroad protective liability insurance when any of the Contractor's work is to be performed within any railroad right of way and in some cases may be required when the project improvements are near a railroad right of way. The name or names of the railroad companies known to be in the vicinity of the contract improvements will be specified in each contract, but the contractor shall confirm the railroad companies impacted and the final insurance needed with each railroad. The minimum limits of the insurance indicated by each railroad to the Commission will be included in the contract bid documents for informational purposes, but the contractor shall be bound by each individual railroad company requirements. Each railroad agency has final determination in the content and coverage limits of the policies required. No work will be permitted within any railroad's right of way until the railroad involved has reviewed and approved the insurance policy. Any day upon which the Contractor cannot perform work due to such a policy not being approved by the railroad will not be counted as a contract day under [Sec 108.7](#).

**107.13.9 Evidence of Insurance.** Required evidence of insurance providing confirmation of compliance with these requirements shall consist of a certificate of insurance, an endorsement to any workers compensation policy waiving the subrogation by the insurer, and any endorsements adding the Commission, MoDOT and its employees as additional insureds where specified. "Blanket" or "automatic" additional insured endorsements providing additional insured coverage "where required by contract," may be used, provided that such forms provide coverage at least as broad as provided by the specified endorsement forms required. The contractor and any subcontract work shall not commence under the contract until the contractor obtains the applicable insurance coverage required and receives approval for such insurance from the engineer. All evidence of insurance for the prime contractor, including certificates of insurance and required endorsements, and notices shall be submitted electronically by the insurance agent to [ContractorSupport@MoDOT.mo.gov](mailto:ContractorSupport@MoDOT.mo.gov). The Contractor shall promptly furnish the engineer with a complete copy of its policy upon request. Failure to furnish evidence of proper insurance, or complete insurance policies when requested, may result in the suspension of work as provided in [Sec 108](#), and may result in other claims or actions for breach of contract or otherwise, as may be recognized at law or in equity.

**107.13.9.1 Work Performed by Subcontract.** Prior to its commencement of the applicable work, the contractor shall cause each of its subcontractors to provide insurance that complies with the requirements for contractor-provided insurance. Contractor's determination of such insurance shall not be interpreted as relieving Contractor or its insurer of any liability otherwise imposed on Contractor or its insurers under these Contract Documents. The Contractor shall promptly furnish the engineer with a complete copy of its subcontractor policies upon request. Failure to furnish evidence of proper insurance, or complete insurance policies when requested, may result in the suspension of work as provided in [Sec 108](#), and may result in other claims or actions for breach of contract or otherwise, as may be recognized at law or in equity.

#### **107.13.10 Other Conditions and Requirements**

**107.13.10.1 Acceptability of Insurance Companies.** All insurers must be authorized to transact business under the laws of the State of Missouri and hold an AM Best rating of no less than A-: VI.

**107.13.10.2 Waiver of Right of Recovery.** All insurance coverage maintained or procured pursuant to this agreement shall be endorsed to waive subrogation against the Commission, MoDOT and its employees or shall specifically allow the Contractor, or others providing insurance evidence in compliance with these specifications, to waive their right of recovery prior to a loss. Contractor hereby waives its own right of recovery against the Commission, MoDOT and its employees.

**107.13.10.3 Enforcement of Contract Provisions (non estoppel).** Contractor acknowledges and agrees that any actual or alleged failure on the part of the Commission, MoDOT or its employees to inform Contractor of non-compliance with any requirement imposes no additional obligations on the Commission, MoDOT or its employees, nor does it waive any rights hereunder.

**107.13.10.4 Primary and Non-contributory.** For any claims related to this contract, the Contractor's insurance coverage shall be primary insurance with respects to the Commission, MoDOT and its employees as the additional insureds. Any other insurance or self-insurance maintained by any of these parties shall be excess of the Contractor's insurance and shall not contribute with the Contractor's insurance.

**107.13.10.5 Specifications not Limiting.** Requirements of specific coverage features, or limits contained in this Section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only as it pertains to a given issue and is not intended by any party or insured to be all inclusive, or to the exclusion of other coverage, or a waiver of any type.

**107.13.10.6 Notice of Cancellation and Change in Insurance Carrier.** Contractor agrees to oblige its insurance agent or broker, and insurers by endorsement to the policy, to provide to the engineer with thirty (30) days advance notice of cancellation, except for nonpayment for which ten (10) days' notice is required, or nonrenewal of coverage for each required coverage. If any policy is canceled or the insurance carrier is planned to change before the contract work is complete, a satisfactory replacement policy shall be obtained and in force, with notice and evidence of insurance submitted to the engineer, prior to the effective date of cancellation of the former policy.

**107.13.10.7 Self-insured Contractors and Self-insured Retentions.** A self-insured contractor will not be considered to comply with these specifications unless approved by the engineer prior to beginning work. A contractor with insurance policies arranged with self-insured retentions must be declared to and approved by the engineer prior to beginning work. The Commission reserves the right to require that self-insured retentions be eliminated, lowered, or replaced by a deductible or other policy type.

**107.13.10.8 Timely Notice of Claims.** Contractor shall give the engineer prompt and timely notice of claims made or suits instituted that arise out of or result from Contractor's performance under this Agreement, and that involve or may involve coverage under any of the required liability policies. The Commission and MoDOT will provide timely notice to the contractor of any claims or lawsuits that it receives. If the Commission demands that the contractor defend the suit and/or indemnify the Commission, the contractor or its insurance company shall acknowledge that demand within 20 days of receiving it and the contractor shall respond within a total of 45 days of the claim receipt the intent of the contractor to defend.

**107.13.10.9 Exhaustion of Policy Limits.** It shall be the contractor's responsibility to notify the engineer promptly when any provided insurance limits are not able to be maintained during the contract period or provide verification that additional coverage or excess coverage is also available.

**107.14 Cooperation in Defense.** The indemnified party shall cooperate with the indemnifying party in the defense of a third-party claim subject to the foregoing, (1) the indemnified party shall not have any obligation to participate in the defense of or to defend any third-party claim, and (2) the indemnified party's defense of or its participation in the defense of any third-party claim shall not in any way diminish or lessen its right to indemnification as provided in this section.

**107.15 Third Party Liability.** Neither the State of Missouri, including the Commission, nor the contractor, by execution of the contract including these specifications, intend to create a right of action in a third-party beneficiary, except as specifically set out in these specifications and the contract. It is not intended by any required contractual liability in the contract or in these specifications that any third-party beneficiary has a cause of action arising out of the condition of the project when completed in accordance with the plans and accepted by the Commission.

**107.16 Personal Liability of Public Officials.** There shall be no personal liability upon the Chief Engineer, or any member, employee, or agent of the Commission in carrying out any of the provisions of the contract or in exercising any power or authority granted to the individual, it being understood that in such matters the individual acts as an agent and representative of the State, with official and public duty doctrine immunity. If any provision of the contract appears to impose a duty on such an individual, the duty will remain exclusively that of the Commission and will not be a personal duty or obligation of the individual.

**107.17 Contractors That Are Not Resident In Missouri.** Any contractor that is not a permanent resident of or domiciled in Missouri shall provide to the Commission proof of compliance with the Missouri "nonresident employers" financial assurance laws at Sections 285.230 to 285.234, RSMo, before the contractor performs any work on a project.

**107.17.1** A nonresident contractor that is a "transient employer" as that term is defined in Section 285.230.1, RSMo, and 12 CSR 10-2.017(1)(A), shall file with the Commission a photocopy of the contractor's current transient employer's certificate of registration issued by the Missouri Department of Revenue before performing any work on a project. A nonresident contractor that is not classified by the Missouri Department of Revenue as a "transient employer" because the nonresident contractor has properly registered with the Missouri Department of Revenue and the Missouri Division of Employment Security, and has filed and paid Missouri state income taxes for more than 24 consecutive months, shall file with the Commission a photocopy of the contractor's certificate of registration, issued by the Missouri Department of Revenue, that it is not a "transient employer" before performing any work on a project.

**107.17.2** The contractor shall require a nonresident subcontractor to file with the Commission a photocopy of the subcontractor's current transient employer's or alternate certificate of registration, as issued by the Missouri Department of Revenue, before that subcontractor performs any work on a project.

**107.17.3** Any nonresident contractor or subcontractor that fails to file the financial assurance forms with the Missouri Department of Revenue as required by Missouri law will be prohibited from contracting for or performing labor on any project for a period of one year.



**107.18 Basis of Payment.** No direct payment will be made for compliance with [Sec 107](#), except as provided by [Sec 618](#).

## 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 617.20.3 and substitute the following:***

**617.20.3 Certification.** Prior to use the contractor shall submit to the engineer a manufacture's certification of crashworthiness per NCHRP 350 or MASH 2016 for portable concrete barrier or other approved temporary barrier. Type F three-loop temporary concrete barrier is required to meet NCHRP 350 requirements regardless of manufacturing date and may be used until January 1, 2030. All other temporary barriers manufactured prior to January 1, 2023 may be used until January 1, 2030. All other temporary barriers manufactured after January 1, 2023 shall meet MASH 2016 crash test requirements.

***Delete Sec 1063.2 and substitute the following:***

**1063.2 General Requirements.** All temporary traffic control devices shall be manufactured as shown on the plans and as specified, in accordance with MUTCD requirements and shall be NCHRP 350 or MASH 2016 compliant. FHWA Category 1 temporary traffic control devices are not required to be crash tested unless modified. Non MASH 2016 FHWA Category 2 temporary traffic control devices and appurtenances manufactured prior to January 1, 2023 may be used until January 1, 2026. Non MASH 2016 FHWA Category 3 temporary traffic control devices and appurtenances manufactured prior to January 1, 2023 may be used until January 1, 2030. All other FHWA Category 2 and Category 3 temporary traffic control devices and appurtenances manufactured after January 1, 2023 shall meet MASH 2016 Test Level 3 crash test requirements. Type F three-loop temporary concrete barrier is required to meet NCHRP 350 requirements regardless of manufacturing date and may be used until January 1, 2030. MASH 2016 FHWA Category 4 temporary traffic control devices should be used when available. Nominal dimensions will be permitted for dimensional lumber where applicable. All temporary traffic control devices shall exhibit good workmanship and shall be free of objectionable marks or defects that affect appearance or serviceability. The brand name or model number shall be permanently identified on each traffic control device.

Alternate Weather Limitations for Plant Mix Bituminous Surface Leveling

**1.0 Description.** Weather limitations for Plant Mix Bituminous Surface Leveling mixtures shall be as specified in Sec 402.10.1 except as otherwise allowed herein.

**1.1** When all remedial actions listed in Section 2.0 have been implemented by the contractor, at no additional cost to the Commission, the alternate weather limitations in Section 1.2 shall apply in lieu of Sec 402.10.1

**1.2 Alternate Weather Limitations.** Bituminous mixtures shall not be placed (1) when either the air temperature or the temperature of the surface on which the mixture is to be placed is below 40 F, or (2) on any wet surface or frozen pavement. Temperatures shall be obtained in accordance with MoDOT Test Method TM 20.

**2.0 Remedial Actions.**

- a) Reclaimed Asphalt Pavement (RAP) content in the mix does not exceed 20% asphalt binder replacement.
- b) No Reclaimed Asphalt Shingles (RAS) are added to the mix.
- c) A material transverse vehicle is utilized to transfer the mix from the haul trucks to the paver.
- d) Warm mix technology shall be incorporated into the mix (either by chemical additive or foaming), as approved by the engineer.

**G. Airport Requirements JSP-15-09**

**1.0 Description.** The project is located near a public use airport or heliport or is more than 200 feet above existing ground level, which requires adherence to Federal Aviation Regulation Part 77 (FAA Reg Part 77). "Near" to a public use airport or heliport is defined as follows:

20,000 feet (4 miles) from an airport with a runway length of at least 3,200 feet  
10,000 feet (2 miles) from an airport with runway length less than 3,200 feet  
5,000 feet (1 mile) from a public use heliport

**2.0** The maximum height of the improvement and the equipment operating while performing the improvements was assumed to be 27 feet for interstates and 25 feet for all other roadways above the current travelway during the process of evaluating the project for compliance with FAA Reg Part 77.

**2.1** If the contractor's height of equipment or if the improvement itself is beyond the assumed height as indicated in Sec 2.0, the contractor will work with the resident engineer to fill out the Form 7460-1, or revise the original Form 7460-1 based upon the proposed height and resubmit, if necessary, for a determination by FAA on compliance with FAA Reg Part 77. Further information can be found in MoDOT's Engineering Policy Guide 235.8 Airports. If the Form 7460-1 must be filed, the associated work shall not be performed prior to the FAA determination, which could take up to 45 days.

**2.2** If the contractor's height of equipment and the improvement itself is below the assumed height as indicated in Sec 2.0, no further action is necessary to fulfill the requirements set forth in FAA Reg Part 77.

**3.0 Basis of Payment.** There will be no direct payment for any work associated with this provision. Contract time extension will be given for the time necessary to obtain or revise the FAA permit. Any delays or costs incurred in obtaining the revised permit will be noncompensable.

H. 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](http://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.

## **I. Traffic Signal Maintenance and Programming**

**1.0 Description.** Traffic signal maintenance and timing for this project shall be in accordance with Section 902 of the Standard Specifications, and specifically as follows.

### **2.0 Qualified Traffic Engineer**

**2.1** The Contractor shall have an experienced traffic engineer with a Professional Engineer's

(PE) license in Missouri as well as a Professional Traffic Operations Engineer (PTOE) certification (hereafter referred to as "Contractor's traffic engineer") with the noted experience defined below. The Engineer shall approve the traffic engineer prior to them being hired.

**2.2 Experience.** Any proposed Contractor traffic engineer shall be able to demonstrate personal successful previous experience in the following tasks:

**2.2.1 Response.** The Contractor's traffic engineer shall have the ability to be on site within one (1) hour of being requested.

**2.2.2 Corridor Management:** Time/space diagram manipulation in order to successfully adjust offsets and splits for rapidly changing traffic demands.

**2.2.3 Controller Programming:** Ability to program by hand and by software Phase, TBC, and Coordination levels of any Commission-owned Advanced Traffic Signal Controller.

**2.2.4 Intersection Programming:** Implementation of adjusted and/or new timing plans as a result of changing traffic demand.

**2.2.5 Signal Software:** Use and understanding of TransCore traffic control software.

**2.3** The Contractor shall submit the names(s) of proposed traffic engineer(s) and the name(s) of all other personnel on their proposed staff along with detailed experience in all tasks outlined in Paragraph 2.2 above. The Engineer reserves the right to reject any Contractor traffic engineer, before the start of work, who does not have sufficient experience or, at any point during the project, which does not satisfy the requirements set forth within this Job Special Provision. A list of potential traffic engineers shall be submitted for review to the Commission prior to bid.

**2.4 VPN Access.** The Commission operates the noted signals through a central signal system which is capable of remote adjustments to controller programming.

**2.4.1** The approved contractor's traffic engineer and any staff assigned to manage the traffic signals during the project is encouraged to apply for VPN (Virtual Private Network) access with the Engineer once the project is awarded. If approved, the Engineer will assign a unique IP address to the Contractor's traffic engineering staff, which will allow for remote access to the Commission's central signal control system as appropriate and the ability to interface with the noted signals on this project.

### **3.0 Existing Traffic Signals and Communication System**

**3.1** The Contractor shall notify the Engineer three (3) weeks prior to the date of bridge closure and detour implementation. The contractor shall meet with the Engineer's representatives along with representatives of any other agency whose signals are controlled by this provision to discuss their traffic mitigation plan at least one (1) week before the date of the first closure and as needed between construction stages. The traffic mitigation plan should at a minimum include:

- Proposed Timing Plan changes and any models
- Anticipated locations of concern
- A map in electronic format displaying the locations and names of the signals as detailed in Paragraphs 3.2 and 3.3 below.
- Other traffic mitigation efforts

**3.2** Once the bridge closure has been implemented by the Contractor, the Contractor shall then be solely responsible for the following signals' controller programming until completion of all closures necessary to complete the Contractor's work. Maintenance at these locations for items other than controller programming issues or incidents caused by controller programming or other construction done by the Contractor shall remain with the Commission. If any part of an existing traffic signal or its controller within the limits of this project has otherwise been modified or adjusted by the Contractor, or the Contractor makes any roadway changes to reduce the traffic capacity through a signalized intersection within the limits of the project, or the Contractor begins work at an intersection with signals already in operation, the Contractor shall then be solely responsible for that signal's controller programming and all signal maintenance as specified in 902.2 and 902.3, except for power costs, until Final Acceptance of the project.

**J6I3550 Commission Signals:**

- I-64 at Route DD (Winghaven Blvd) Interchange, Two Signalized Intersections
- I-64 at Route N (Town Square Ave) Interchange, One Signalized Intersections
- I-64 at Hanley Rd., Two Signalized Intersections.
- I-64 at Bellevue Ave., One Signalized Intersection.
- I-64 at Hampton Ave., Two Signalized Intersections.
- I-64 at Kingshighway Blvd., One Signalized Intersection.
- Route 100 over the BNSF and UP RR, Two Signalized Intersections.
- I-64 at Compton Ave., Two Signalized Intersections
- Route 364 at 141 (Maryland Heights Expressway) Interchange, Two Signalized Intersections

**3.3** The Engineer shall provide to the Contractor with two (2) weeks' notice an electronic report on the existing phasing and timing of each traffic signal which may be the Contractor's responsibility to program. The Engineer shall be available to the Contractor before any changes are made to a signal or controller to answer any questions about the report. In lieu of the report, the Contractor's traffic engineer may obtain this information from the Commission's central signal control system. Once the Contractor has modified a signal or controller for any reason, the Contractor shall be solely responsible for the existing timing plans and all subsequent timing changes.

**3.4** The Contractor shall notify the Engineer of the changes no later than (1) working day after changes are programmed if unable to provide advance notice as specified in 902.2.

**3.5** The Contractor shall be solely responsible for maintaining the coordination at any affected signal to the satisfaction of the Engineer until completion of work as set forth in section 3.2 of this provision. Maintenance of coordination may include the synchronization of the affected controller's internal time clocks to the second using an atomic clock, or other means approved by the Engineer. If time clock synchronization is used, the Contractor shall verify all affected controllers are synchronized at least one (1) time per week with a report to the Engineer. This report will be in the form of a documentation record as spelled out in the Work Zone Traffic Management Plan.

**4.0 Existing Traffic Signal Maintenance and Response**

**4.1** The Contractor shall respond to any signal timing complaints or malfunction complaints for those locations detailed in Section 3.0 of this provision and as specified in Section 902.21.1.

Response time shall be one (1) hour for complaints received by the contractor between 6 AM and 6 PM on non-holiday weekdays, and two (2) hours for all other times. For some cases (due to travel times or other extenuating circumstances) additional time may be acceptable within reason, but must be approved by the Engineer. These timeframes will replace the '24 hour' response time in Section 105.14 for any signal-related incidents, where the entire cost of the work, if performed by Commission personnel or a third party, will be computed as described in Section 108.9 and deducted from the payments due the Contractor.

**4.2** The Contractor must supply a contact name and phone number who will be responsible for receiving signal timing complaints for the Engineer. These complaints may be forwarded directly to the Contractor by someone other than the Engineer, including but not limited to the Commission's Customer Service Representatives, and will not relieve the Contractor from properly responding based on the response times of this Provision. The Contractor shall respond to the Engineer within 12 hours of the complaint as to the remedy. The Contractor shall submit to the Engineer a weekly report of complaints received and remedies performed throughout the duration of the project.

## **5.0 Original Signal Controller Programming and Acceptance**

**5.1** The Contractor will be responsible for restoring the original signal controller programming at existing intersections and coordination plans for each intersection immediately upon bridge reopening. The Engineer shall preserve and house the original controller files and provide the Contractor with access to those files in order to perform the restoration of the original plans. Normal plan restoration can be done by a manual command in the signal control system or a preprogrammed time-of-day command change. For any locations rendered offline at the time of re-opening, these locations shall be returned to normal operation by hand. The contractor will be relieved of signal programming maintenance at an existing restored intersection once 48 consecutive hours have passed without a programming malfunction, including restoring normal signal programming to the satisfaction of the Commission.

## **6.0 Post Project Report**

**6.1** The Contractor shall submit to the Engineer a post project report, four to six weeks after the final signal adjustments have been completed. The report shall include at a minimum an observation report, summary of timing changes and locations, summary of complaints, and any other pertinent information regarding the contractor's efforts for managing these signal corridors in one electronic document.

## **7.0 Deliverables**

**7.1** All deliverables mentioned in this provision shall be submitted to the Engineer in a timely manner to the satisfaction of the Engineer prior to receiving full compensation for this work.

- Experience submittal
- Preliminary Traffic Mitigation Plan
- Notification of Detour Implementation
- Time Base Reports, As Needed
- Complaint Resolutions
- Notification of Restoration to Normal Operations
- Post Project Report

**8.0 Construction Requirements.** Construction requirements shall conform to Sections 902,



1061 and 1092.

**9.0 Method of Measurement.** Method of measurement shall conform to Section 902.

**10.0 Basis of Payment.** Payment will be considered full compensation for all Contractor services, installation, and labor to complete the described work for each project:

Item No.	Type	Description
616-99.01	Lump Sum	Traffic Signal Maintenance and Programming

J. St. Louis County, St Louis City, St. Charles City, St. Charles County Traffic Signal Equipment

**1.0 Description.** The contractor shall coordinate their work schedule with the engineer and with the St. Louis County, St. Louis City, others staff contact listed below. The contractor shall take care not to damage any existing St. Louis County traffic signal equipment. St. Louis County will notify the engineer when they have completed their inspection.

St. Louis County  
Contact: Scott Halter  
Phone: 314-615-0202  
Email Address: [SHalter@stlouisco.com](mailto:SHalter@stlouisco.com)

St. Louis City  
Contact:  
Phone:  
Email Address:

St. Charles City  
Contact: Brad Temme  
Phone: 636-940-4617  
Email Address: [brad.temme@stcharlescitymo.gov](mailto:brad.temme@stcharlescitymo.gov)

St. Charles County  
Contact: Jacob Becher  
Phone: 636-949-7900 ext. 7230  
Email Address: [jbecher@sccmo.gov](mailto:jbecher@sccmo.gov)

**2.0 Basis of Payment.** No direct payment shall be made for compliance with this provision.

K. NTCIP Compliant Changeable Message Sign (Contractor Furnished and Retained)

**1.0 Description.** All solar powered changeable message signs, hereinafter referred to as a CMS, shall be in accordance with these specifications.

**2.0 Material.** Each CMS shall consist of an all LED (light emitting diode) matrix message board, solar/battery power supply and a user-operated interface, as specified, all mounted on a heavy duty, towable trailer.

**2.1** Each CMS shall be either Full Matrix or Character Matrix, and have the following minimum characteristics:

- (a) Full Matrix - Each CMS shall be the Full Matrix type with the capability of providing one, two, and three lines of individual changeable characters with minimum heights of 52 (1300), 28 (700), and 18 (450) inches (mm), respectively. Full Matrix signs shall be capable of both static and dynamic graphics, and full display sized messages.
- (b) Character Matrix (Three Line) – Each CMS shall consist of a minimum of three lines containing eight individual changeable characters per line. Each character shall be a minimum of 12 inches wide and 18 inches (450 mm) high.
- (c) Sign firmware shall comply with the current FHWA and DOT (Department of Transportation) NTCIP standards and support all NTCIP mandatory objects.
- (d) The sign controller shall be remotely accessible by the MoDOT St Louis District Transportation Management Center (TMC) through the Commission's ATMS (Advanced Traffic Management System) software, currently TransSuite provided by TransCore. The contractor will be responsible for ensuring the CMS is added to the ATMS software.
- (e) The CMS shall have a cellular data modem compatible with the district's current cellular IP (packet data) service provider and be capable of allowing the MoDOT St Louis District TMC ATMS software to have full control of the NTCIP compliant CMS controller remotely. Modem shall be capable of being programmed with a static IP.
- (f) The sign shall have a GPS unit that can assist in locating the sign's position when polled by the TMC. The GPS unit must be remotely accessible by the TMC and be part of or work with the provided communication modem.
- (g) Physical access to the onboard computer shall be protected by a padlock or other locking handle mechanism. Electronic access to the onboard computer shall be protected by a username and password.

Full matrix CMS and character matrix CMS shall meet the following:

- (h) The overall sign dimensions shall not be less than 72 inches (1800 mm) high x 126 inches (3150 mm) wide.
- (i) The CMS shall be legible up to a distance of 650 feet (200 m) for both day and night operations and shall be visible for ½-mile (800 m) with 18 inch (450 mm) characters.
- (j) When fully raised in the display position, the bottom of the CMS board shall be at least a height of 7 feet (2100 mm) from the ground and shall be able to rotate a complete 360 degrees atop the lift mechanism. A sight tube, used to aim the CMS board to oncoming traffic, shall be installed on the CMS board or mast. The CMS shall have an electrical- hydraulic lifting mechanism that includes a manual lifting and lowering relief mechanisms as a backup. It also must be able to be locked into various viewing angles as determined best for the motorists by the CMS operator.

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Route: Various  
County: Various

- (k) All LED displays and control circuitry shall be operational from -20 F (6 C) to 120 F (50 C). The LED's shall have a rated life of 100,000 hours. The LED's shall be ITE amber in color on a flat black background.
- (l) The CMS face shall be constructed that if an individual panel or pixel fails the rest of the face shall continue to display the message.
- (m) All costs and coordination needed for testing to verify modem communication, sign NTCIP compliance, remote GPS status polling, ability to control the sign via the St Louis District's ATMS software provided by TransCore shall be the sole responsibility of the Contractor. Full integration into TransCore's ATMS shall be completed at least 5 business days prior to use of the CMS in the project. TransCore contact information will be provided to the contractor by contacting MoDOT's Gateway Guide staff at 314-275-1526 or via email at ggtech@modot.mo.gov with details of the request. No other support shall be provided by MoDOT other than TransCore contact information. Information provided shall include, at a minimum, CMS make and model, IP address, and proposed locations and messages.
- (n) The Contractor shall be responsible for all monthly cellular service fees for the duration of the project.
- (o) The unit shall be able to withstand a 65-mph (105-kmph) maximum road wind speed. The trailer shall be able to support the fully extended CMS board in an 80-mph (130-kmph) wind load.
- (p) Solar charging system shall allow for total autonomy of 24/7/365 continuous operation.
- (q) All exterior surfaces except the sign face shall be cleaned, primed, and finished with two coats of Highway Safety Orange and the sign interior itself shall be cleaned and finished with one coat of corrosion inhibiting primer and two coats of flat black. The sign face shall be covered with a rigid translucent material to prevent damage to the sign face caused by the environment.

**3.0 Construction Requirements.** Prior to placing a CMS on a project, the engineer shall verify proposed CMS location is void of conflict with another DMS or CMS locations presently established. If a conflict is present, the engineer shall contact the Traffic Management Center (TMC) at 314-275-1526 to mitigate. If no conflict is present, engineer shall provide Traffic Management Center (TMC) with the Job Number, Route, County, specific CMS location, and a CMS identification number that is permanently affixed to the CMS. The engineer and contractor shall verify the message displayed on board is compliant with CMS messaging policies. The contractor shall place the CMS 6 feet [2 meters] off of the right edge of shoulder at the location shown on the plans or as directed by the engineer. The CMS shall be placed so that the right side of the unit is advanced approximately 3 degrees ahead with the direction of traffic. CMS shall not be located in medians. CMS shall be delineated with a minimum of five non-metallic channelizing devices. Installation, including location and placement, shall be approved by the engineer. If needed, the contractor shall relocate the CMS as directed by the engineer. When not in use, the CMS shall be stored no closer than 30 feet [10 meters] to the edge of pavement carrying traffic, unless it is in a properly protected area or an off-site storage area or as otherwise directed by the engineer.

**4.0 Basis of Payment.** All expenses incurred by the contractor in integrating, maintaining,

Job No.: J6I3540  
Route: Various  
County: Various

relocating, operating, and protecting the changeable message signs as outlined above shall be paid for at the contract unit price for the following:

Item No.	Type	Description
616-99.02	Each	NTCIP Compliant Changeable Message Sign (Contractor Furnished and Retained

L. Coordination with Other Projects

**1.0 Description.** The contractor shall coordinate traffic management between this project and any other projects within the limits of work, including future projects. Each Contractor shall conduct their work so as not to interfere with or hinder the progress or completion of the work being performed by other Contractors. In case of dispute, the Engineer shall be the referee and the Engineer's decision shall be final and binding on all.

**2.0 Coordination.** The Contractor shall coordinate work within the limits of the project with the following Missouri Department of Transportation projects:

- Job No. J6S3509
- Job No. J6S3302

This list of projects is not all inclusive. The contractor shall be aware that there may be other projects including, but not limited to, utility, private, MoDOT maintenance, permit, or other projects that may impact project construction or traffic control in the vicinity of this project. It shall be the responsibility of the contractor to determine what, if any, projects other than the ones listed above may impact this project and work to coordinate construction and traffic management efforts between this project and any other project involved.

**4.0 Site Construction.** The Contractor shall arrange the work and shall place and dispose of the materials being used so as not to interfere with the operations of the other contractor.

**5.0 Basis of Payment.** No direct payment will be made to the contractor to recover the cost of the equipment, labor, materials, or time required to for this coordination with other projects.

M. Slurry and Residue Produced During Surface Treatment of PCCP and Bridge Decks  
JSP-06-05A

**1.1 Description.** This work covers the requirements for controlling residue or slurry produced by milling, grinding, planing, grooving or other methods of surface treatments on new or existing PCCP and bridge decks in addition to Section 622.

**2.0 Construction Requirements.** The following shall be considered the minimum requirements for performing this work within the project limits.

**2.1** The contractor shall submit to the Engineer for approval in writing prior to the pre-construction meeting, the best management practices (BMP's) to be used to protect the environment, including the method of disposal of the residue whether on right of way or off-site.

**2.2** When slurry is dispersed on the right of way, BMP's shall be installed to keep slurry or residue from entering paved ditches or structures discharging within the areas restricted by Section 622.303.8.6, from entering any waterways or from leaving the right of way.

**2.3** Upon approval of the contractor's BMP and residue disposal plan and prior to the contractor beginning surface treatment operations, the Engineer will identify slurry or residue "no discharge zones".

**2.4** Operations may be suspended by the Engineer during periods of rainfall or during freezing temperatures.

**3.0 Basis of Payment.** No direct payment for slurry or residue control requirements for BMP's will be made. Compliance with this specification along with the cost of all materials, labor and equipment necessary for the surface treatment work shall be included in and completely covered by the unit price bid for each of the items of work for surface treatment included in contract.

N. Coordination with MoDOT Signal Shop for Cabinet Entry

**1.0 Description.** Commission-furnished color-coded pad locks have been placed on all of MoDOT's signal cabinets in addition to the key used to unlock the door handle. To gain access to the appropriate cabinets during the project all contractors shall coordinate with MoDOT's signal shop to obtain the proper keys and locks.

**1.0.1 Keys & Locks.** Red locks & keys are provided when a contractor has modified the signal cabinet and MoDOT staff shall not have access to the cabinet until it is accepted for maintenance. The blue keys are provided for entry into the cabinet where MoDOT's Signal Shop group deems the access to be minor in nature (entry to the cabinet to make a simple network switch connection, for example).

**1.0.2 Completion of Project.** At the completion of the project all keys and pad locks distributed to contractor during the project shall be returned to the Signal Shop supervisor or their representative and keys shall not be reproduced.

**2.0 Contact.** Initial contact must be made at least seven calendar days before work begins, preferably when the project has the notice to proceed or during the pre-construction meeting, if applicable. MoDOT's Signal Shop supervisors shall be notified prior to work beginning. Contact the signal shop via email at [sltrs@modot.mo.gov](mailto:sltrs@modot.mo.gov) to coordinate which padlocks are to be used.

**3.0 Basis of Payment.** No direct payment shall be made for compliance with this provision.

O. Utilities JSP-93-26F

**1.0** For informational purposes only, the following is a list of names, addresses, and telephone numbers of the known utility companies in the area of the construction work for this improvement:

Job No.: J613540  
Route: Various  
County: Various

<u>Utility Name</u>	<u>Known Required Adjustment</u>	<u>Type</u>
<b>Ameren Missouri</b> Construction Hotline Telephone: (314) 992-6619 Email: <a href="mailto:constructionhotline@ameren.com">constructionhotline@ameren.com</a>	None	Power
<b>City of St. Louis—Signals/Lights</b> Len Efthim Phone: (314) 647-3111 ext. 1105 Email: <a href="mailto:efthiml@stlouiscity.com">efthiml@stlouiscity.com</a>	None	Communications and Lighting
<b>City of St. Louis—Water</b> Mark Nankivil Telephone: (314) 633-9023 Email: <a href="mailto:mnankivil@stlwater.com">mnankivil@stlwater.com</a>	None	Water
<b>Lumen</b> Rich Obremski Telephone: (314) 378-9931 Email: <a href="mailto:william.carpenter@lumen.com">william.carpenter@lumen.com</a>	None	Communications
MoDOT ITS Anna Privitt Telephone: (314) 624-7466 Email: <a href="mailto:Anna.Privitt@modot.mo.gov">Anna.Privitt@modot.mo.gov</a>	None	Communications

**1.1 The Contractor shall be aware there are numerous utilities present along the routes in this contract.** Utility locates were not performed during the design phase of the project; therefore, the extent of conflicts with utilities are unknown. It is the inherent risk of the work under this contract that the contractor may encounter these utilities above and/or below the ground or in the vicinity of any given work item which may interfere with their operations. The contractor expressly acknowledges and assumes this risk even though the nature and extent are unknown to both the contractor and the Commission at the time of bidding and award of the contract.

**1.2 Guardrail Locations:** The contractor shall be aware there are numerous utilities present along the route in this contract. The full extent of conflicts with utilities are unknown. There may be underground utilities that run parallel or cross the routes that are in close proximity to guardrail work locations. The contractor shall take necessary precautions and measures to verify locations and depths of utilities by any necessary means to determine exact impacts to their work.

**1.3 Records indicate that Ameren has electrical conduits attached to structures on this project (see section 2.0 attachments on Bridges).** The contractor shall discuss the planned work as it relates to any Ameren Missouri facilities and coordinate with Ameren Missouri for the installation of protective measures and/or any other designated requirements. The contractor is advised to contact Ameren Missouri regarding the current policy and so that the anticipated cost to the contractor can be estimated and when payment is required. The Contractor shall contact Ameren Missouri in advance of when construction work is scheduled to begin requesting

protection of Ameren's facilities and to coordinate Ameren's work with the project schedule at a given location. **The contractor is responsible for any charges from Ameren Missouri for this provision and payment will be directly to Ameren Missouri.**

**2.0 Attachments on Bridges:** While the proposed work does not appear to conflict with the conduits attached to the Structures in this project, the Contractor shall take necessary precautions and measures to verify locations of the conduit and to protect in place existing facilities during construction.

**2.1 Bridge A6014, 364 over CCMR & UPRR:** Records indicate that are four (4) 24" diameter pipes attached to the structure at bays 2,5,7, and 9 before passing through the diaphragms.

**2.2 Bridge A6052, 364 over CCMR & UPRR:** Records indicate that are four (4) 24" diameter pipes attached to the structure at bays 2,5,7, and 9 before passing through the diaphragms.

**2.3 Bridge A6752, I-64/ US-40 over Dardenne Creek:** Records indicate that there are two (2) 2" conduits mounted to the exterior of the south barrier.

**2.4 Bridge A7046, Chouteau Ave over BNSF:** Records indicate that there is one (1) 12" water pipe supported in a hanger system under the structure.

**2.5 Bridge A7122, Chouteau Ave over BNSF:** Records indicate that there is one (1) 12" Ductal Iron water pipe attached to the south side of the structure.

**2.6 Bridge A7080, Compton Ave over I-64:** Records indicate that there are three (3) 3" electrical, three (3) 2" electrical, and one (1) 1.5" lighting conduits attached to the structure.

**2.6.1** NWC of Compton & Market, north of 64. St Louis University has a multiple way duct package, and the St. Louis City Water Division has a thirty (30) inch water main crossing perpendicular to proposed guard rail at this location. St Louis Water also has a six (6) inch water line that crosses perpendicularly at this location. Additional length of guard rail was added to the project at this location so that the contractor can adjust the post spacing to avoid this conflict. The Contractor shall take necessary precautions and measures to verify locations of the conduit and to protect in place existing facilities during construction. **The contractor shall coordinate through the District Utility Coordinator (see section 3.0) two (2) weeks before working at this location so that the Utility Companies can have a technician field verify the facility locations and monitor work over their facilities.**

**2.7 Bridge A7081, Compton Ave over I-64:** records that there are no attachments on this structure.

**2.7.1** St. Louis City has a wooden traffic signal posts for the intersection of Compton & Spruce located right behind the existing guardrail. The City anticipates having the signal poles adjusted during construction of this project. **The contractor shall coordinate through the District Utility Coordinator (see section 3.0) to have this work done.**

**2.8 Bridge A8004, Hanley Road over I-64:** Records indicate that there are two (2) 2" lighting conduits attached to the north abutment, fourteen (14) 4" black coated fiberglass conduits four (4) at bay 6 with the remaining ten (10) at bay 7, and One (1) 2" conduit also at bay 7.

**2.9 Bridge A8016, Hanley Road over I-64:** Records indicate that there is under bridge lighting

attached to the structure by a hanging system with the lights mounted to the wall coping. Records also indicate that there are sixteen (16) 4" conduits attached to the structure by a hanger system.

**2.10 Bridge A8028, Hampton Ave over I-64:** Records indicate that there are three (3) 4" Ameren conduits attached to the structure and two (2) 2" MoDOT ITS conduits attached to the structure.

**2.11 Bridge A8029, Hampton Ave over I-64:** Records indicate that there are six (6) 2" electrical conduits attached to the bottom of bays 1, 6, and 11.

**2.12 Bridge A8033, Kingshighway Blvd over I-64:** Records indicate that there are three (3) 3" lighting conduits attached to the structure. Records also indicate that there are one (1) 6" and seven (7) 2" conduits attached to the precast deck panels.

**2.12.1 CenturyLink DTI;** The contractor shall be aware that the DTI line along I-64 was not picked up during the design phase of this project. This line historically was installed outside of the utility corridor and the contractor shall take necessary precautions and measures to verify locations of Lumen's fiber line and to protect in place their existing facilities during construction.

**2.13 Bridge A8036, Kingshighway Blvd over I-64:** Records indicate that there are three (3) 1" lighting conduits attached to this structure as well as two (2) other 2" conduits.

**2.14 No Utility attachments Bridges in order of appearance on list:** Bridge A4169, F over Callaway Fork Creek, Bridge A5962, DD over I-64/US-40, Bridge A5985, MO-94 over Lil' Femme Osage, Bridge A6083, 364 over Route 141, Bridge A6190, 364 over Route 141, Bridge A6475, Z over Dardenne Creek, Bridge A6657, F over Callaway Fork Creek, Bridge A6753, I-64/US-40 over Dardenne Crk, Bridge A7233, DD over Dardenne Creek, Bridge A7323, N over I-64/US-40, Bridge A8020, Big Bend Blvd & Bellevue Ave, Bridge A8022, Big Bend & Bellevue Ave:

**3.0 If utility facilities are discovered the contractor shall contact the MoDOT Area Utility Coordinator,** Chris Duffner at (314) 624-5383. The engineer will determine whether relocation of the utility is necessary to accommodate construction or if the work can be installed in accordance with Missouri Standard Plans for Highway Construction for the item of work specified.

**4.0 Basis of Payment:** No direct payment shall be made for compliance with this provision.

P. Lump Sum Temporary Traffic Control JSP-22-01

**1.0 Delete Sec 616.11 and insert the following:**

**616.11 Method of Measurement.** Measurement for relocation of post-mounted signs will be made to the nearest square foot of sign area only for the signs designated for payment on the plans. All other sign relocations shall be incidental. Measurement for construction signs will be made to the nearest square foot of sign area. Measurement will be made per each for each of the temporary traffic control items provided in the contract.

**616.11.1 Lump Sum Temporary Traffic Control.** No measurement will be made for temporary traffic control items grouped and designated to be paid per lump sum. The list of lump sum items provided in the plans or contract is considered an approximation and may be subject to change



based on field conditions. This is not a complete list and may exclude quantities for duplicate work zone packages used in simultaneous operations. The contractor shall provide all traffic control devices required to execute the provided traffic control plans for each applicable operation, stage, or phase. No measurement will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer.

**2.0 Delete Sec 616.12 and insert the following:**

**616.12 Basis of Payment.** All temporary traffic control devices authorized for installation by the engineer will be paid for at the contract unit price for each of the pay items included in the contract. Whether the devices are paid individually, or per lump sum, no direct payment will be made for the following:

- (a) Incidental items necessary to complete the work, unless specifically provided as a pay item in the contract.
- (b) Installing, operating, maintaining, cleaning, repairing, removing, or replacing traffic control devices.
- (c) Covering and uncovering existing signs and other traffic control devices.
- (d) Relocating temporary traffic control devices, including permanent traffic control devices temporarily relocated, unless specifically included as a pay item in the contract.
- (e) Worker apparel.
- (f) Flaggers, AFADs, PFDs, pilot vehicles, and appurtenances at flagging stations.
- (g) Furnishing, installing, operating, maintaining, and removing construction-related vehicle and equipment lighting.
- (h) Construction and removal of temporary equipment crossovers, including restoring pre-existing crossovers.
- (i) Provide and maintaining work zone lighting and work area lighting.

**616.12.1 Lump Sum Temporary Traffic Control.** Traffic control items grouped together in the contract or plans for lump sum payment shall be paid incrementally per Sec 616.12.1.1.

Alternately, upon request from the contractor, the engineer will consider a modified payment schedule that more accurately reflects completion of traffic control work. No payment will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer. Additional items directed by the engineer will be paid for in accordance with Sec 109.4. No adjustment to the price will be made for overruns or underruns of other work or for added work that is completed within existing work zones.

**616.12.1.1 Partial payments.** For purposes of determining partial payments, the original contract amount will be the total dollar value of all original contract line items less the price for Lump Sum Temporary Traffic Control (LSTTC). If the contract includes multiple projects, this determination will be made for each project. Partial payments will be made as follows:

Job No.: J613540  
Route: Various  
County: Various

(a) The first payment will be made when five percent of the original contract amount is earned. The payment will be 50 percent of the price for LSTTC, or five percent of the original contract amount, whichever is less.

(b) The second payment will be made when 50 percent of the original contract amount is earned. The payment will be 25 percent of the price for LSTTC, or 2.5 percent of the original contract amount, whichever is less.

(c) The third payment will be made when 75 percent of the original contract amount is earned. The payment will be 20 percent of the price for LSTTC, or two percent of the original contract amount, whichever is less.

(d) Payment for the remaining balance due for LSTTC will be made when the contract has been accepted for maintenance or earlier as approved by the engineer.

**616.12.1.2** Temporary traffic control will be paid for at the contract lump sum price for Item:

Item No.	Type	Description
616-99.01	LS	Misc. (Traffic Control Bridge A4169)
616-99.01	LS	Misc. (Traffic Control Bridge A5962)
616-99.01	LS	Misc. (Traffic Control Bridge A5985)
616-99.01	LS	Misc. (Traffic Control Bridge A6014/A6052)
616-99.01	LS	Misc. (Traffic Control Bridge A6083/A6190)
616-99.01	LS	Misc. (Traffic Control Bridge A6475)
616-99.01	LS	Misc. (Traffic Control Bridge A6657)
616-99.01	LS	Misc. (Traffic Control Bridge A6752/A6753)
616-99.01	LS	Misc. (Traffic Control Bridge A7046/A7122)
616-99.01	LS	Misc. (Traffic Control Bridge A7080/A7081)
616-99.01	LS	Misc. (Traffic Control Bridge A7233)
616-99.01	LS	Misc. (Traffic Control Bridge A7323)
616-99.01	LS	Misc. (Traffic Control Bridge A8004/A8016)
616-99.01	LS	Misc. (Traffic Control Bridge A8020)
616-99.01	LS	Misc. (Traffic Control Bridge A8022)
616-99.01	LS	Misc. (Traffic Control Bridge A8028/A8029)
616-99.01	LS	Misc. (Traffic Control Bridge A8033)
616-99.01	LS	Misc. (Traffic Control Bridge A8036)

No direct payment will be made for the following:

- Incidental items necessary to complete the work, unless specifically provided as a pay item in the contract.
- Installing, operating, maintaining, cleaning, repairing, removing, or replacing traffic control devices.
- Covering and uncovering existing signs and other traffic control devices.
- Relocating temporary traffic control devices, including permanent traffic control devices temporarily relocated, unless specifically included as a pay item in the contract.

- e) Providing channelizers.
- f) Provide barricades.
- g) Provide flashing arrow panels.
- h) Worker apparel.
- i) Flaggers, pilot vehicles, and appurtenances at flagging stations.
- j) Temporary chain-link fence and gates.
- k) Orange construction fencing.
- l) Furnishing, installing, operating, maintaining, and removing construction-related vehicle and equipment lighting.
- m) Construction and removal of temporary equipment crossovers, including restoring pre-existing crossovers.
- n) Removing existing pavement markings, installing temporary pavement markings, and removing and relocating temporary pavement markings as necessary for staging operations.
- o) Installing regional temporary construction Signs. Contractor required to provide post & footing design.
- p) Installing "Drive Smart" and "Points of Presence" signs.

**3.0** Any additional work deemed necessary by the engineer that requires temporary traffic control and is not covered by the contract plans will be included in the cost change order for the additional work. However, if the added work is required in a stage where temporary traffic control is already in place, no additional traffic control pay will be allowing in this case.

Q. Site Restoration

**1.0 Description.** Restore to its original condition any disturbed area at sites including, but not limited to items such as: fencing, pavement markings, guardrail, sidewalks, ramp, bus stop pad, sprinklers, pull box, conduit, and pole base installations. Restoration shall be accomplished by placing material equivalent to that of the adjacent undisturbed area. Disturbed unpaved areas shall be fertilized and either seeded and mulched or sodded as directed by the engineer. The engineer will have the final authority in determining the acceptability of the restoration work.

**2.0 Materials.** Any areas of concrete paved ditch, pavement and shoulders as well as any similar improvements shall be replaced with improvements of similar composition and thickness. Removals shall be achieved by means of full depth saw cut, the resulting subgrade compacted to minimum density requirements and topped with 4 inches of compacted aggregate base course prior to replacement of surface materials. Concrete materials used in replacement shall be approved by the engineer. A commercial asphalt mix may be used for replacement of asphaltic surfacing upon approval of the engineer.

**2.1** Unless quantities and pay items for removal and subsequent replacement of improvements are contained in the plans for a specific location of removal work, no direct payment will be made for full depth saw cutting and the removal and subsequent replacement of asphalt, pavement, shoulders etc. This work will be considered as included in the various unit bid prices established in the contract, and no additional payment will be made.

**2.2** If the contractor elects and receives approval from the engineer for alternate trench and/or pull box locations, any areas of concrete slope protection, sidewalk, pavement, shoulders, islands and medians – as well as any similar improvements consisting of asphaltic concrete materials – removed in conjunction with their construction shall be replaced with improvements of similar composition and thickness. Removals shall be achieved by means of full depth saw cuts, the resulting subgrade compacted to minimum density requirements and topped with 4 inches of compacted aggregate base course prior to replacement of surface materials. Concrete materials used in replacement, shall be approved by the engineer. A commercial asphalt mix may be used for replacement of asphaltic surfacing upon approval of the engineer.

**2.3** All guardrail post holes remaining from the removal of existing guardrail posts in existing concrete or asphalt pavement or ditch shall be backfilled with a granular material and sealed with a ½ inch hot-poured elastic type material in accordance with Section 1057 or as approved by the Engineer. Any concrete or asphalt pavement or ditch damaged in the process of fulfilling this provision shall be replaced in kind and considered incidental to the installation of the new guardrail at the disturbed location

**2.5** Areas that are used by the contractor for jobsite trailers, equipment and materials storage, or used for project staging areas that are disturbed shall be cleaned up and restored to a condition that is both acceptable to the engineer and, at a minimum, equivalent to the existing site condition.

**3.0 Basis of Payment.** The cost of restoration of disturbed areas will be incidental to the unit price of the items associated with the disturbance. No direct payment will be made for any materials, equipment, time, or labor, which is performed under this provision.

R. Miscellaneous Construction Requirements

**1.0 Fencing.** The contractor shall be permitted to remove fencing under the bridges in order to access bridge bents, substructures, and to perform excavation / rock work under the bridges. The fencing shall be reinstalled when construction is completed as per existing condition when removed. Fencing damaged by the contractors activities shall be replaced in kind at the contractor's expense as approved by the Engineer.

**2.0 Guardrail.** Any new guardrail to be installed shall be installed in accordance with the Standard Plans. Existing concrete may need to be removed and replaced with gravel or approved material to allow post flexure as shown in the Standard Plans.

**3.0 Hauling over Streets.** Streets over which hauling is performed shall be kept reasonably clean of spills or tracked-on materials at all times and shall be thoroughly cleaned of such materials daily, within one hour after the suspension of hauling operations if said street is used by the traveling public. The contractor shall be aware that emergency vehicles may be required to pass during hauling operations and the contractor shall be in a position to allow passage of such emergency vehicles. No direct payment shall be made for any expense incurred by the contractor for his/her compliance with this provision.

**4.0 Access to Creeks and Contract Work.** Contractor will be required to access the creek locations near the bridges in order to complete the noted work in the plans. All access shall be reviewed with the engineer prior to work starting no less than **Two Weeks** prior to work beginning. Erosion Control items have been set up for this work along for any disturb areas in contract to provide this access and to be maintained. It should also be noted that the contractor shall stay within the footprint of the bridge locations and with R/W limits as per existing bridge plans.

Any and all work which is started shall be completed in same day operation. Therefore, excavation for Rock Blanket, shall follow up with complete installation of Rock Blanket within same day operation. Work then shall proceed until work is complete, with no disturbed area present or open cut.

Disturbed areas for access, around bridge, etc. shall be restored to its original condition any sites including, but not limited to items such as, guardrail, pull box, conduit, and pole base installations, etc. Restoration shall be accomplished by placing material equivalent to that of the adjacent undisturbed area. Removal of trees shall be also replaced per like kind or that approved by engineer.

Disturbed unpaved areas shall be fertilized and either seeded and mulched or sodded as directed by the engineer. The engineer will have the final authority in determining the acceptability of the restoration work.

**5.0** All materials, time, equipment and labor required to comply with this special provision shall be considered completely covered by the bid items provided in the contract or at no pay.

S. Guardrail Grading Requirements JSP-17-02B

**1.0 Description.** Guardrail installation and grading shall be in accordance with Missouri Standard Specifications for Highway Construction, Missouri Standard Plans for Highway Construction, and as described herein.

**2.0 Construction Requirements.** When guardrail and/or end treatment removal and replacement requires grading of the shoulder and/or slopes, Section 606.3.1(b), (c), and 606.3.1.1 of the Missouri Standard Specifications shall be waived and the following shall apply:

- a) Along roadways and shoulders, remove no more guardrail than can be reconstructed within seven (7) calendar days, including weekends and holidays. The seven day counting period shall start when the first piece of safety hardware is removed.
- b) The active work zone area that encompasses the guardrail and/or end treatment reconstruction, shall not exceed one (1) mile in length. The contractor shall be required to provide and maintain approved channelizing devices adjacent to the reconstruction area.
- c) Only one-side of the roadway shall be worked on at the same time. Divided facilities shall be limited to work on one-side of each direction at the same time.
- d) When the removal of any existing safety hardware device exposes non-breakaway obstacles, the reconstruction of the safety hardware device protecting the obstacle shall

Job No.: J613540  
Route: Various  
County: Various

be replaced within 48 hours of removal or an approved temporary crashworthy device shall be provided, installed and maintained at the contractor's expense until the non-breakaway obstacle is permanently protected. The 48 hour counting period shall start when the first piece of safety hardware is removed.

e) Areas where guardrail and/or end treatments have been removed, but not yet replaced, shall be delineated in accordance with plans or as directed by the Engineer.

**3.0 Non-Compliance.** Non-compliance with this provision shall result in the immediate suspension of work in accordance with Sec 105.1.2. No work, including but not limited to additional guardrail removal and grading, shall be allowed to proceed except for work necessary to restore guardrail installation.

**4.0 Basis of Payment.** No direct payment will be made for compliance with this provision. Guardrail items, grading, and temporary traffic control devices will be paid for as provided in the contract.

T. Multi-Year, Multi-Location Project – Special Requirements NJSP-22-02

**1.0 Description.** Whereas this project is identified by a single Job Number, and the project requires work be performed at multiple Locations, and the contract allows for work to be performed in multiple calendar years, these special requirements and allowances shall apply. A Location is generally identified in the contract or plans by Route and County but may be otherwise identified.

**2.0 Winter Shut-Down Period.** A Winter Shut-Down Period is required if all work on the project is not completed prior to December 1 of the calendar year in which the Notice to Proceed is made. The date range of the Winter Shut-Down Period shall be determined by the contractor and shall be shown on the contractor's most current Progress Schedule. The contractor's designated Winter Shut-Down Period shall begin no later than December 1 of the calendar year in which the Notice to Proceed is made and shall end on or after March 15 of the following year. No work shall be performed during the Winter Shut-Down Period, except for maintenance work that may be required per Sec 104.7 or 105.13 unless approved by the Engineer. Regardless of the length of the Winter Shut-Down Period, all work shall be complete prior to the contract Completion Date. All weather limitations specified elsewhere in the contract shall apply.

**3.0 Completion of Work per Location.** This contract includes work at multiple Locations, with non-contiguous project limits defined at each Location. Once work begins at a Location, the contractor shall diligently pursue completion of the work at that Location until all work is complete. If work at a Location begins prior to the Winter Shut-Down Period, all work at that Location shall be fully completed prior to the Winter Shut-Down Period, including permanent or temporary pavement marking. Work shall not begin at a Location if the long-range forecast is not conducive for completion of all work at that Location prior to the Winter Shut-Down Period.

**3.1 Partial Acceptance per Location.** Upon request by the contractor, a Location of work will be evaluated by the engineer for partial acceptance in accordance with Sec 105.15.1 after completion of all work at that Location.

**4.0 Administration of Calendar Days.** The total number of Calendar Days allowed to complete the work on this project and administration of Calendar Days shall be as specified in the Contract Liquidated Damages job special provision, except as specified herein. The count of Calendar

Days will be paused during the Winter Shut-Down Period. The count of Calendar Days will be paused when work is complete at all Locations in which work had begun.

**5.0 Pavement Marking.** Pavement marking shall be as specified elsewhere in the contract, except as specified herein.

**5.1 Temporary Raised Pavement Markers.** All Temporary Raised Pavement Markers shall be removed as part of the Temporary Pavement Marking prior to the Winter Shut-Down Period. If Temporary Pavement Marking is required during the Winter Shut-Down Period, the contractor shall use and maintain Temporary Pavement Marking Paint at the contractor's expense.

**5.2 Cold Weather Pavement Marking Paint.** If permanent pavement marking paint cannot be completed due to weather limitations specified in Sec 620.20.2.4, the contractor shall apply cold weather paint, as specified in Sec 620.10.6, in lieu of Standard Waterborne Paint, at no additional cost to the Commission. Retroreflectivity acceptance requirements and payment adjustments for Standard Waterborne Paint shall apply when using Cold weather paint. Cold weather paint that meets all contract requirements will be accepted in lieu of Standard Waterborne Paint and paid for as such. If retroreflectivity does not meet the minimum requirements for Standard Waterborne Paint but does meet the minimum requirements for Temporary Pavement Marking Paint, the Cold weather paint shall be considered Temporary Pavement Marking Paint and shall be re-marked with Standard Pavement Marking Paint when temperatures allow. No payment will be made until the Standard Pavement Marking Paint or Cold Weather Paint is accepted.

**6.0 Basis of Payment.** No additional payment will be made for compliance with these Special Requirements and Allowances provisions.

U. Repair and Protect Foundations

**1.0 Description.** The contractor shall repair existing structure foundations to be used- in- place as shown in the contract plans and provide an epoxy sealer for new and existing sign structure foundations as shown on the plans.

**2.0 Construction Requirements.**

**2.1** Loose grout or heavily cracked grout shall be removed using normal effort and hand tools as needed. No power tools will be allowed.

**2.1.1** Grout will not be replaced. The intent is to only remove deteriorated grout to allow water to drain and evaporate more easily.

**2.2** Concrete shall be repaired in accordance with Sec 704.

**2.3** The exposed areas of new and existing structure foundations shall be coated with epoxy in accordance with Sec 711.

**2.3.1** The exposed surfaces of grout shall also be coated.

**3.0 Method of Measurement.** Measurement for the removal of loose grout will be made per each base plate. Measurement of concrete repairs will be per square foot. Measurement of protective coating will not be made.

Job No.: J613540  
Route: Various  
County: Various

**4.0 Basis of Payment.** All labor, equipment, and material to complete the described work will be paid for at the contract unit price for:

Item No.	Type	Description
216-99.02	Each	Remove Loose Grout
704-01.01	Sq. Ft.	Substructure Repair (formed)
711-02.00	LS	Protective Coating- Concrete Bents and Piers (Epoxy)

V. Maintenance of Existing ITS Facilities

**1.0 Description.** MoDOT owned fiber optic and conduit, critical MoDOT power supplies and power cables, and pull boxes with fiber and power cabling, are present within the limits of this project. Damage or interruption of these items can cause extensive outages to the MoDOT network.

**2.0 Construction Requirements.** The contractor shall exercise reasonable care while completing work near these facilities and shall take steps necessary to protect these facilities from damage for all items that are not specifically identified as being removed and/or relocated in the plans. Should any of the existing wiring or conduit be damaged by the contractor, it shall be replaced by at the contractor's expense and the system in full operation within **4 hours** of when the damage occurred. If it is mutually agreed upon between the Commission and the Contractor that the repairs will require more than **4 hours**, a mutually agreed upon time for repairs to be complete shall be determined.

**3.0 Liquidated Damages.** If the system is not repaired and in full operation within **4 hours** of the damage occurring, or within the timeframe agreed upon, the contractor will be charged with a liquidated damage specified in the amount of \$100.00 per hour for each full hour that the system is not fully operational. This damage will be assessed independently of the liquidated damages specified elsewhere in the contract.

**3.1** The engineer will also have the option of issuing a work order for MoDOT's on-call ITS Maintenance contractor to make repairs, if it is the engineer's opinion that the contractor creating the damage will not be able to make repairs in a timely manner. The ITS Maintenance contractor will then bill the contractor causing the damage directly.

**4.0 Basis of Payment.** No direct payment will be made to the contractor to recover the cost of equipment, labor, materials, or time required for compliance with this provision.

W. Coordination with MoDOT SLITS Group and Utility Locates

**1.0 Description.** Any work that will impact the existing communications network must be coordinated with the Commission's St. Louis District ITS staff. This includes but not limited to removal and replacement of any existing communications equipment, adding new devices and changes to power sources or disconnects. Minor modifications to the existing communications network can have significant impacts on the system and operation of other ITS and traffic signal systems.

**1.1** MoDOT is a member of MO-One-Call System. Prior to any excavation or work within MoDOT Right-Of-way, the contractor must contact MO-One Call at 1-800-DIG-RITE and request for Utility Locates within noted project limits. If the scope of work contains modification, addition and/or



expansion of existing underground MoDOT ITS, lighting, or signal facilities, the contractor must notify the MoDOT Utilities Locate staff prior to any work, in order for MoDOT to update MoDOT utility location records with Missouri One Call.

**2.0 Contact.** Initial contact must be made at least seven calendar days before work that may impact the existing communications network commences. Contact the ITS staff via an email at [SLITS@modot.mo.gov](mailto:SLITS@modot.mo.gov). The engineer shall be notified prior to making contact with ITS staff. For MoDOT Utility location updates, the contractor must contact MoDOT TMC at 314-275-1500 and ask for Utility Locate Section at least seven calendar days before performing any work.

**3.0** The ITS and network devices located within the project limits are a crucial part of the traffic operation system for this area. It is imperative that the downtime be kept to a minimum when adding, removing, or modifying any existing ITS and network devices. This may require the contractor to perform work that will affect existing network devices during nighttime and/or weekend hours, at the discretion of the Engineer. Allowable timeframes for this work will be subject to the need for ITS devices in the area to be used to manage other traffic impacting workzones.

**4.0 Basis of Payment.** No direct payment shall be made for compliance with this provision.

X. MoDOT ITS Assets Relocation

**1.0 Description.** The work consist of relocating existing MoDOT Intelligent Transportation System (ITS) facilities (conduit, cable, and/or pull boxes) that may be in conflict with this project construction sections as noted in the plans.

**2.0 Materials.** The materials used for relocating MoDOT ITS facilities shall be per MoDOT Approved Product List (APL) and meet all MoDOT Specifications. If the material is not in the APL, the contractor shall submit material specification documents to the Engineer and the MoDOT ITS group (via an email in advance to [SLITS@modot.mo.gov](mailto:SLITS@modot.mo.gov)) for review and approval.

**3.0 Construction Requirements.** The Contractor shall be aware there are numerous utilities present along the route in this contract. Utility locates were not performed during the design phase of the project; therefore, the extent of conflicts with utilities are unknown.

**3.1** The contractor shall exercise reasonable care relocating MoDOT ITS Assets. Damage to any MoDOT facilities within the area of work caused by the contractor will be deemed by the Engineer as either “non-emergency” or “emergency” upon notification of the damages. Repair to damages will be performed as follows:

- a) Non-Emergency: Contractor will have 4 hours to propose a repair plan to the Engineer for a complete repair within 3 business days.
- b) Emergency: Upon notification of the damage, Contractor must immediately submit a repair plan to the Engineer which will take no more than 4 hours to respond on- site and complete repairs within 48 hours of notification of damage. In either case, if the proposed plan is unacceptable for any reason to MoDOT, repairs will be made by MoDOT with all costs billed to the Contractor.

**3.2** The ITS In-Ground Facilities located within the project limits are a crucial part of the traffic operation system for this area. It is imperative that the downtime be kept to a minimum when replacing, removing, or modifying any existing ITS In-Ground Facilities.

**3.3** Prior to any in-ground work, the Contractor shall request for utility locates by contacting Missouri One Call (1-800 DIG-RITE or mo1call.com) for any in-ground installation locations as per plans. If there are any conflicts with MoDOT ITS Assets, the Contractor is responsible for relocation to the satisfaction of the Engineer prior to any in-ground work.

**3.4** In the case of a conduit conflict, the Contractor shall trench an area beyond the in-ground work limits, install one or two conduits (must be the same quality as the existing conduit) using Split Duct Method, relocate the existing cables into the new conduit, and seal the conduit joints per manufacturer specifications.

**3.5** The Contractor shall coordinate this work with the MoDOT ITS group and have the Engineer's approval prior to performing this task.

**3.6** The contractor shall perform a fiber testing (see below requirements) before and after relocating MoDOT fiber cables at the nearest Node Cabinet at each site as shown on the plans and submit that report to the SLITS Group for review and approval.

**3.6.01 Test Procedure.** For each fiber link, follow this procedure:

- (a) If the link includes fiber installed by others, use an optical loss test set to measure and record the optical loss over that portion of the link before it is spliced to new fiber.
- (b) Calculate the maximum allowable loss for the completed link, both at 1310 nm and at 1550 nm. Use the following formula:

$$\begin{aligned} \text{Maximum link loss} = & \text{Measured loss over portion installed by others} \\ & + (\text{Fiber length in km}) \times (0.35 \text{ for } 1310 \text{ nm and } 0.25 \text{ for } 1550 \text{ nm}) \\ & + (\text{Number of fusion splices}) \times (0.05) \\ & + (\text{Number of mechanical splices [for temp. connection]}) \times (0.3) \\ & + (\text{Number of connections}) \times (0.5) \end{aligned}$$

Provide this calculation to the engineer along with the test results.

- (c) Calibrate an optical loss test set and provide evidence satisfactory to the engineer that the set produces accurate results at both wavelengths. This can be a demonstration that the set correctly measures the loss of a test fiber whose loss is known.
- (d) Use the test set to measure the loss of the link under test. Record the result at both 1310 nm and 1550 nm. Arrange for the engineer or his representative to witness these tests.
- (e) If the measured loss exceeds the calculated maximum, use an optical time domain reflectometer and other test equipment to troubleshoot the link. Take whatever corrective action is required, including cable replacement, to achieve a loss less than the calculated maximum.

**3.6.02 Test Result Documentation.** Prepare a diagram showing all of the links tested in this

project. For the portions installed in this project, show the equipment cabinets, splices, and pigtails. On each line representing a link, show the maximum allowable loss and the actual loss. The actual loss shall be the one measured after all corrective actions have been taken. Submit 5 copies of this diagram to the engineer, along with the calculations for the maximum allowable loss. Submit the diagrams and calculations in an electronic format acceptable to the engineer.

**3.6.03 Documentation.** Provide the engineer mark-ups of the plans, neat and legible, illustrating as-built versions of the splice and connection diagrams that are contained in the plans.

**3.6.04 Certifications.** The fiber optic cable shall be factory certified to meet the requirements in this specification. In addition, the manufacturer shall certify that the fiber optic cable has a life expectancy of 20 years.

**3.7** The Contractor shall trench an area beyond the in-groundwork limits, install one or two conduits (must be the same quality as the existing conduit) using Split Duct Method, relocate the existing cables into the new conduit, and seal the conduit joints per manufacturer specifications.

**3.8** Upon completion of this work, the Contractor shall contact the MoDOT ITS group (via email at [slits@modot.mo.gov](mailto:slits@modot.mo.gov) or by calling 314-275-1526) to verify that all existing MoDOT ITS devices are online and request inspection of this work. Acceptance of this work shall be the sole judgment of the Engineer and the MoDOT ITS group's engineer.

**3.9** The contractor shall restore those areas disturbed by this work or installation according to specifications herein.

**4.0 Basis of Payment.** Payment for "MoDOT ITS Assets Relocation" shall be paid as Linear Feet and shall include the trenching, conduit installation, conduit coupling, pull boxes, sealing materials, cable relocation, needed fiber testing, restoration of all disturbed area, all labor and work incidental thereto, and shall be considered to be completely covered by the contract unit price for the following pay item:

Item No.	Unit	Description
910-99.03	Linear Feet	MoDOT ITS Assets Relocation

Y. ITS Asset Management Tool

**1.0 Description.** For all locations where any ITS (Intelligent Transportation System) components are existing, modified, or added to, the contractor shall be responsible for populating and updating Commission's fiber management tool to reflect the final condition of the entire ITS system within the project limits as shown on the plans. Updating shall be performed by Commission approved staff (currently NexusWorx).

**2.0 Construction Requirements.**

**2.1** Contractor shall provide any relevant notes to a specific location that can be entered into the tool to aid in the understanding of the device configuration and location. At a minimum, this will include providing the required latitude and longitude coordinates of each pull box, DMS, CCTV, node cabinet, conduit, cable, and fiber, along with any serial numbers and/or identification information. The Contractor shall locate the conduit every 100 feet using a GIS locating device that is accurate to the nearest foot. The Contractor shall provide a GIS based map of the conduit

route and a complete listing of all of map coordinates in an electronic format. Population of the fiber management tool will be required for all devices that have been installed to date as well as any devices installed under this contract.

**2.2** The contractor shall furnish to Commission approved staff a copy of the final plans relevant to all of the ITS components in Visio and/or Microstation formats, if relevant.

**2.3** The contractor shall be provided one licensed read-only access login by Commission before work begins.

**3.0 Acceptance Testing.**

**3.1** All entries and updates shall be completely entered and available for use within 30 days from final acceptance of the project.

**3.2** Commission staff shall verify population of the fiber management tool, including accuracy and completeness of details for each component prior to acceptance and payment.

**4.0 Measurement and Payment.** Measurement and Payment for items covered by this specification include the population and acceptance testing, in addition to all materials and equipment necessary for a fully operational system.

Item No.	Type	Description
910-99.01	Lump Sum	Fiber Management Tool

**Z. Restrictions for Migratory Birds NJSP-16-06A**

**1.0 Description.** Swallows or other bird species protected by the Migratory Bird Treaty Act may be nesting under the bridge or bridges that will be repaired under this contract.

**2.0 Restrictions.** To comply with the Migratory Bird Treaty Act, nests of protected species cannot be disturbed when active (eggs or young are present). Generally, nests are active between April 1 and July 31, but active nests can be present outside of these dates.

**2.1 MoDOT to Maintain Prior to the Notice to Proceed.** The bridge, or bridges, associated with the work for this contract have been evaluated and any inactive nests found have been removed by MoDOT staff. MoDOT staff will maintain the structures to be free of nests until the Notice to Proceed date. At the notice to proceed, the contractor shall be responsible to maintain the structures to be free of nests until the work on the applicable bridge, or bridges, is complete.

**3.0 Avoidance Measures.** The contractor shall not disturb active nests or destroy adults, eggs or young birds. In an effort to comply with the Migratory Bird Treaty Act, the contractor operations will be limited to the options established in the following sections.

**3.1 Inactive or Partially Constructed Nests.** If nests are present and MoDOT determines that the nests are inactive or partially constructed, the contractor may remove the nests provided that the colony's inactive or partially constructed nests are completely removed by March 15 and the contractor maintains a nest free condition until the bridge work is complete. Dry removal methods shall be used when practicable. If dry removal is not practicable, hydro cleaning may be used if approved by the Engineer and only if water is free of blasting grit, chemicals, or detergents, and

applied using pressure less than 5,000 PSI. Clean water such as that from municipal water treatment plants or wells shall be used. Use of source water from Waters of the State (i.e., streams or lakes), is allowable, if the appropriate methods to prevent the possible spread of invasive aquatic species are implemented.

**3.2 Water and Equipment Used for Hydro cleaning.** Aquatic invasives such as zebra mussels and some algae species have infested several bodies of water in the United States and can be transported by vessels (barges, boats, tugs, tankers, etc.) and equipment (tanks, tubing, pumps, etc.) that have been used in areas that contain these invasive species. If equipment is not properly inspected and treated to prevent the spread of invasives, these species can be introduced into areas not currently known to have a population. These invasive species are detrimental to existing ecosystems and can outcompete native species. To assist in preventing the introduction and spread of aquatic invasive species through MoDOT projects in Missouri streams and lakes, the following precautions shall be followed.

**3.2.1 Use of Water from Streams, Lakes or Ponds.** Contractors shall not use water for nest removal from streams, lakes or ponds, unless they have implemented appropriate methods to prevent the possible spread of invasive aquatic species. Water sources from municipal water treatment plants or wells may be used without following these measures provided the equipment to be used has not previously contained waters from streams, lakes or ponds. If the equipment has previously contained waters from other streams or lakes, the following measures must be implemented prior to use.

**3.2.1.1 Equipment Washing.** Prior to the use or re-use of equipment following any use with water from streams, lakes or ponds, all equipment shall be washed and rinsed thoroughly with hard spray (power wash) and hot (minimum 120° F) water, for at least one minute.

**3.2.1.2 Equipment Treating or Drying.** Equipment shall be treated or dried in one of the following manners.

**3.2.1.2.1** Equipment interior and/or other surfaces shall be treated with a 10% bleach solution to kill any aquatic nuisance species. This solution must also be run through all intake lines and hoses, to sterilize interior components. When chlorine treatment is used, all chlorine runoff from equipment washing must be collected and properly treated and/or disposed of in accordance with Sec 806.

**3.2.1.2.2** Equipment interior and/or other surfaces shall be treated with 140° F water for a minimum of 10 seconds contact on all surfaces. 140 ° F water must also be run through all intake lines and hoses, to purge any standing water.

**3.2.1.2.3** Equipment shall be flushed of all non-municipal water, and dried thoroughly, in the sun before using in or transporting between streams and lakes. Dry times will depend on the season the equipment is being used. Equipment must dry a minimum of 7 days for June-September, 18 days for March-May; 18 days for October-November, and 30 days for December-February. The drying method should be reserved as a last resort option.

**3.2.2** Prior to use of equipment, contractors shall provide the MoDOT inspector written documentation of the equipment's geographic origin (including the water body it was last used in), as well as defining the specified treatment method used to adequately ensure protection against invasive species. The written documentation will include a statement indicating the

Job No.: J6I3540  
Route: Various  
County: Various

contractor is aware of these provisions and will also treat the equipment appropriately after completion of the project.

**3.3 Active Nests.** The contractor may work on the bridge if active nests are present, as long as the work does not impact or disturb the birds and/or nests. At a minimum, work shall not be performed within 10 feet of an active nest; however, the contractor is responsible for ensuring their activities do not impact the nests, eggs, or young.

**4.0 Additional Responsibilities.** If active bird nests remain after all reasonable avoidance measures have been taken, or if bird nests are observed during project construction, the contractor shall notify the Resident Engineer and contact the MoDOT Environmental Section (573-526-4778) to determine if there are other allowable options.

AA. Special Provisions for Protection of Terminal Railroad Association of St. Louis Railway Interests

To Report an Emergency on property of the Terminal Railroad Association of St. Louis (hereinafter "Railroad"), call: (618) 451-8478. This project includes crack sealing the bridge deck of the I-55/64 Poplar Street bridge over the TRRA Merchant Subdivision; MoDOT Project J6I3540.

**1.0 Authority of Railroad Engineer and Commission's Representative.**

**1.1** Railroad's authorized representative, herein called "Railroad Engineer", shall have final authority in all matters affecting the safe maintenance and operation of railroad traffic including the adequacy of the foundations and structures supporting Railroad tracks. The Railroad Engineer for this Project is identified below, with current contact information:

Mr. Eric Fields  
Chief Engineer  
Terminal Railroad Association of St. Louis  
1017 Olive Street, 5<sup>th</sup> Floor  
St. Louis, Missouri 6310  
Office: (618) 451-8428

**1.2** The Commission's authorized representative, herein called "Engineer", shall have authority over all other matters as prescribed herein and in the Project specifications.

**2.0 Contractor's Indemnity Obligations to Railroad.**

**2.1** The term "Contractor" as used in these special provisions (the "Railroad Job Special Provisions") means the Commission's contractor for the construction of the proposed work on the grade separation structure (the "Project"), and includes any and all subcontractors. The Contractor shall indemnify, defend and hold Railroad harmless from and against any and all loss, damage, claims, demands, causes of action, costs and expenses of any nature arising out of injury to or death of any person, or out of damage to or destruction of any property, including, without limitation, damage to fiber optic, communication and other cable lines and systems, where this injury, death, damage or destruction results from any cause arising out of work performed by the Contractor pursuant to the agreement between Railroad and Commission for this Project, and shall also release Railroad from, and shall waive any claims for, injury or damage to equipment

or other property, which may result from the construction, maintenance and operation of railroad tracks, wire lines, fiber optic cable, pipe lines and other facilities on Railroad's right of way by the Contractor. The Contractor's liability will not be affected if any damage or claim was occasioned by or contributed to by the negligence of Railroad, Railroad's agents, servants, employees or otherwise, except to the extent that any damage or claim has been proximately caused by the intentional misconduct or sole or gross negligence of Railroad, or any of Railroad's officers, employees, agents, subcontractors, successors or assigns. The Contractor's indemnity shall include loss of profits or revenue arising from damage or destruction to fiber optic, communication and other cable lines and systems.

**2.2** In addition to the indemnity obligations contained in the preceding paragraph, the Contractor shall indemnify, defend and hold Railroad harmless from any claims, expenses, costs, actions, demands, losses, fines, penalties, and fees, arising from, related to or connected, in whole or in part, with the removal of the Contractor's agents, servants, employees or invitees from Railroad's property for safety reasons.

**2.3** The Contractor shall also indemnify, defend and hold Railroad harmless with reference to all fines or penalties imposed or assessed by federal, state and local governmental agencies against Railroad as the proximate result of contractor's work under this contract, including these Railroad Job Special Provisions.

**3.0 Notice of Starting Work.** The Contractor shall not commence any work on Railroad's right of way until the Contractor has complied with the following conditions:

**3.1** At least thirty (30) days before beginning any work upon Railroad's right of way, the Contractor shall furnish to Railroad and Commission a schedule for all work required to complete the portion of the Project within Railroad's right of way, and shall arrange for a job site meeting between the Contractor, the Engineer, and Railroad Engineer. Railroad may withhold providing any flaggers until the Contractor has conducted the job site meeting and scheduled the Contractor's work.

**3.2** At least 30 days before the Contractor proposes to begin work on Railroad's right of way, the Contractor shall give Railroad written notice of intent to begin work on Railroad's right of way, to Railroad Engineer.

**3.3** The Contractor shall obtain written or electronic authorization from Railroad to begin work on Railroad's right of way, including an outline of specific conditions with which contractor shall comply. Railroad shall not unreasonably withhold this authorization. The contractor shall obtain from the Railroad and complete the Terminal Railroad Association of St. Louis License for Right of Entry On or Near Operational Railroad Property.

**3.4** The Contractor shall obtain the insurance coverage required in Section 14.0 of these Railroad Job Special Provisions. Contractor shall submit written evidence of such coverage to Railroad prior to commencing any work.

**3.5 Safety Orientation:** The Contractor shall ensure that all of its employees, subcontractors or invitees enroll with e-railsafe Shortline at [www.ers-shortline.com](http://www.ers-shortline.com) and that any and all such employees, subcontractors or invitees obtain and have on their person at all times while on Railroad Property, the appropriate credentials. The Contractor shall certify that each of contractor's employees, subcontractors or invitees who will be working Railroad's right of way have received the same safety orientation through sessions conducted by the contractor or through the Internet before any work shall be done on the Railroad's right of way.

**3.6** Railroad's written authorization to proceed with the work, with a copy to the Engineer, will include the names, addresses and telephone numbers of Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

#### **4.0 Interference with Railroad Operations.**

**4.1** The Contractor shall arrange and conduct all work so that there shall be no interference with Railroad's operations, including train, signal, telephone and telegraphic services; or damage to Railroad's property; poles, wires and other facilities of tenants, licensees, easement grantees and invitees on Railroad's right of way. Whenever work may affect the operations or safety of trains, the Contractor shall first submit the method of doing this work to Railroad Engineer for approval, but such approval shall not relieve the Contractor from liability. The Contractor shall defer any of its work that requires flagging service or inspection service until the flagging service required by Railroad is available at the job site.

**4.2** Whenever the Contractor's work within Railroad's right of way makes an impediment to Railroad's operations unavoidable, such as use of runaround tracks or necessity for reduced speed, the Contractor shall schedule and conduct these operations so that the impediment is reduced to the absolute minimum.

**4.3** Should conditions arising from, or in connection with the work require immediate and unusual provisions to protect Railroad's operations and property, the Contractor shall make such provisions. If in the judgment of Railroad Engineer, or the Engineer if Railroad Engineer is absent, such provision is insufficient, Railroad Engineer or Engineer may require or provide such provisions as deem necessary. In any event, such provisions shall be at the Contractor's expense and without cost to Railroad or Commission.

**4.4** The Contractor shall be responsible for any damage to Railroad as a result of work on the Project, which shall include but not be limited to interference with the normal movement of trains caused exclusively by the work performed by the Contractor. The Contractor shall be responsible for damages for Railroad's train delays that are caused exclusively by the Contractor. Railroad agrees not to perform any act to unnecessarily cause any train delay. The damages for train delays per freight hour will be billed at an average rate per hour as determined from Railroad's records. Railroad shall provide these records Railroad, upon request, to Commission or Commission's contractor.

#### **5.0 Track Clearances.**

**5.1** The minimum track clearances to be maintained by the Contractor during construction are shown on the Project plans. However, before undertaking any work within Railroad's right of way, or before placing any obstruction over any track, the Contractor shall:

- (a) Notify Railroad Engineer at least 72 hours in advance of the work.
- (b) Receive assurance from Railroad Engineer that arrangements have been made for flagging service as may be necessary.
- (c) Receive permission from Railroad Engineer to proceed with the work.



(d) Ascertain that the Engineer has received copies of notice to Railroad and of Railroad's response.

**5.2** The Contractor shall fully comply with any horizontal and vertical clearance requirements imposed by Missouri state statutes and regulations and Federal statutes and regulations regarding the placement of structures or equipment near or over railroad tracks.

## **6.0 Construction Procedures.**

**6.1 General.** Construction work on Railroad's property shall be:

- (a) Subject to Railroad's inspection and review; and
- (b) In accordance with these Railroad Job Special Provisions.

**6.2 Falsework.** The Contractor shall be required to take special precaution and care to prevent any material from falling on Railroad's right of way. The procedure for preventing material from falling, including need of and plans for temporary falsework, shall first be approved by Railroad Engineer, but such approval shall not relieve the Contractor from liability. Before submission of plans to Railroad Engineer for approval, the Engineer will first review such plans.

**6.3 Storage of Materials.** The Contractor shall not store or stockpile construction materials or equipment closer than 25 feet to the centerline of the nearest railroad track or on Railroad's property not covered by construction easement, contractor's permit, lease or agreement. Additionally, the Contractor shall not store or leave materials or equipment within 250 feet of the edge of any highway/rail at-grade crossings. Further, both sides of a main track shall remain unobstructed for a distance of 10 feet from the exterior edge of the track at all times to allow for stopped train inspection.

**6.4 Cleanup.** Upon completion of the work, the Contractor shall remove from within the limits of Railroad's right of way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the Contractor, and leave said right of way in a neat condition satisfactory to Railroad Engineer.

**7.0 Damages.** Railroad will not assume liability for any damages to the Contractor, contractor's work, employees, servants, equipment and materials caused by railroad traffic, except to the extent that any damage or claim has been proximately caused by Railroad's intentional misconduct or sole or gross negligence. Any cost incurred by Railroad for repairing damages to Railroad's property or to property of Railroad's tenants, licensees, easement grantees and invitees caused by or resulting from the Contractor's operations shall be paid directly to Railroad by the Contractor.

## **8.0 Flagging Services.**

**8.1 When Railroad Requires Flagging.** Railroad shall have sole authority to determine when flagging is necessary to protect Railroad's operations from the Contractor's activities relating to this Project. Whenever Railroad reasonably determines that flagging is needed, Railroad shall provide all necessary flagging services in accordance with these Railroad Job Special Provisions and the Agreement between Commission and Railroad. The Contractor shall be responsible for arranging flagging services with Railroad, as required by Railroad, to accomplish the highway improvement. Railroad shall not unreasonably withhold or delay providing any flagging service

that is needed pursuant to these Railroad Job Special Provisions.

**8.1.1** In general, Railroad may require flagging services whenever the Contractor's personnel or equipment are, or are likely to be, working on Railroad's right of way within 25 feet of the centerline of any track, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or Railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging, or reasonable probability of accidental hazard to Railroad's operations or personnel. Normally, Railroad will assign one flagger to a project; but in some cases, more than one may be necessary, such as yard limits where 3 flaggers may be required.

**8.1.2** However, if the Contractor works upon Railroad's right of way within distances that violate instructions given by Railroad Engineer, or performs work upon Railroad's right of way that has not been scheduled with Railroad Engineer, then Railroad may reasonably require one or more flaggers to be assigned full time until the contractor has completed all its work upon Railroad's right of way relating to this Project.

## **8.2 Scheduling and Notification of Flagging.**

**8.2.1** Not less than thirty (30) days before beginning work upon Railroad's right of way pursuant to this Project, the Contractor shall give Railroad Engineer advance written notice of the Contractor's intent to begin work within Railroad's right of way in accordance with these Railroad Job Special Provisions. These notices shall include sufficient details of the proposed work to enable the Railroad Engineer to determine if the Railroad will require flagging. If the Railroad requires flagging, the Contractor shall not perform any work until the flagger or flaggers are present at the job site. Arrangements for flagging shall be confirmed no later than 5:00 p.m. the Wednesday prior to the week before flagging services are needed. If any notices required to be given by this paragraph are in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally, the Contractor shall confirm that notice in writing with copy to the Engineer. The Contractor should address notification for flagging to:

Mr. Asim S. Raza  
Chief Legal Officer, Director of Corporate Affairs  
Terminal Railroad Association of St. Louis  
1017 Olive Street, 5<sup>th</sup> Floor  
St. Louis, Missouri 63101  
Office: (314) 241-4729

After flagging begins, the flagger is assigned to work at the Project site on a continual basis until no longer needed and cannot provide flagging on a spot basis. If flagging becomes temporarily unnecessary and Railroad suspends flagging services, it may take up to 30 days after the Contractor's request to resume flagging services for this Project. Due to Railroad labor agreements, Railroad may require the Contractor to give ten (10) working days' notice before Railroad discontinues flagging services and ends the Contractor's responsibility for payment.

**8.2.2** The Railroad flagger assigned to the Project shall notify the Engineer upon arrival at the job site on the first day, or as soon thereafter as possible, that flagging services have begun, and on the last day that flagger performs such services for each separate period that Railroad provides flagging services. The Engineer will document such notification in the Project records.

**8.2.3** If, after the Railroad assigns a flagger to the Project site, emergencies arise which require

the reassignment of the flagger elsewhere, then the Contractor shall delay work on Railroad's right of way until a flagger is again available. The Contractor, not Railroad, shall bear any additional costs resulting from this delay. Railroad shall resume flagging for this Project as soon as possible after the emergency has ended.

**8.2.4** The Contractor shall provide a temporary structure to provide shelter from weather conditions for the person(s) providing flagging protection service on behalf of Railroad as described herein. The structure shall be provided in an area immediately accessible to Railroad's main track and the construction site, and be equipped with telephone service, lighting and desk.

### **8.3 Process for ordering on-track protection.**

Once approval has been granted by Licensor for access to railroad property and/or operating right-of-way, a person to serve as an Employee in Charge of on-track safety (EIC) will be necessary at the work site to comply with federal regulations, railroad safety rules, and to protect track structure and signal assets.

To order EIC services please follow the instructions below:

Contact **RailPros Field Services**, Licensor's authorized EIC service provider using the contact information shown below:

RailPros Field Services, Inc.

Email: [trrainfo@railpros.com](mailto:trrainfo@railpros.com) or call; Phone: (877) 315-0513 x116

Once the project information is received, RailPros will send a quote for EIC services. To accept the cost and terms of service simply sign the quote and return it to RailPros via email to [trrainfo@railpros.com](mailto:trrainfo@railpros.com). RailPros will work with your team and TRRA to schedule access to the railroad and for the EIC.

Advanced notice is greatly appreciated and will ensure greater availability to match your needs. We suggest contacting RailPros no less than ten (10) business days before your projected start date. If your start date is closer than that, please contact RailPros ASAP and they will work with you to see if they can accommodate your requested start date.

At the end of the month or the end of the project (whichever comes first), RailPros will send you an invoice directly for the services provided.

Please contact RailPros Field Services for additional information or to answer any questions.

### **9.0 Haul Across Railroads.**

**9.1** Where the plans show or imply that the Contractor or its suppliers must haul materials of any nature across Railroad's tracks, unless the plans clearly show that Commission has included arrangements for the haul in the agreement with Railroad, the Contractor shall be required to make all necessary arrangements with Railroad regarding means of transporting such materials across Railroad's tracks. The Contractor shall bear all costs incidental to these crossings, including flagging, whether services are performed by contractor's own forces or by Railroad's personnel.

**9.2** The Contractor shall not establish any crossing for transporting materials or equipment across

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County: Various

the tracks of Railroad unless specific authority for the installation, maintenance, necessary watching and flagging thereof and removal, all at the expense of the Contractor, is first obtained from the Railroad Engineer.

**10.0 Work for the Contractor's Benefit.** All temporary or permanent changes in wire lines or other facilities which are considered necessary to the Project are shown on the plans, and are included in the agreement between Commission and Railroad, or will be covered by appropriate revisions to those documents, which shall be initiated and approved by Commission and/or Railroad. Should the Contractor desire any changes in addition to the above, then contractor shall make separate arrangements with Railroad for same to be accomplished at the Contractor's expense.

**11.0 Cooperation and Delays.** The Contractor shall cooperate with Railroad in scheduling any staged construction involving work by Railroad or its tenants, licensees, easement grantees and invitees. The Contractor shall ascertain in advance, from Railroad, the lead-time required for assembling crews and materials, and include sufficient time for that in its work scheduling. The Contractor may not assert any charge or claim against Commission or Railroad resulting from any hindrance or delay the Contractor experiences because of railway traffic relating to any construction work by Railroad, or any other delay that is reasonable or necessary to protect the safety of railway traffic, or any other delay resulting from any person's compliance with these Railroad Job Special Provisions.

**12.0 Trainman's Walkways.** The Contractor shall maintain an unobstructed continuous space suitable for trainman's use in walking along trains, which shall extend to a line not less than 12 feet from centerline of track, along the outer side of each exterior track of multiple operated track and on each side of single operated track. Before the close of each workday, the Contractor shall remove all temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railway's protective service is provided. Beside any excavation near the walkway, the Contractor shall install a handrail with a 12 feet minimum horizontal clearance from centerline of track.

**13.0 Railroad Percentage of Contractor's Total Project Bid.** The amount of work to be performed upon, over or under Railroad's right of way is estimated to be one (1%) percent of the Contractor's total bid for the Project.

#### **14.0 Insurance Requirements.**

Licensee shall procure and maintain for the duration of the contract, and for 3 years thereafter, insurance as noted below, against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Licensee, his agents, representatives, employees, or subcontractors.

**14.1 Commercial General Liability.** Insurance having a limit of not less than \$5,000,000 per Occurrence and \$10,000,000 in the Aggregate applying to each annual period for all loss or liability, including but not limited to attorneys' fees, Products and Completed Operations, Property Damage, Bodily Injury and Personal & Advertising Injury. Coverage must be purchased on Insurance Services Office Occurrence Form CG 00 01 or the equivalent. If the required minimum limits can only be met when applying an umbrella/excess liability policy, the umbrella/excess liability policy must follow form of the underlying policy and be endorsed to "drop down" to become primary in the event the primary limits are exhausted.

Commercial General Liability Policy shall include the following:

- Bodily Injury (including death) and Property Damage
- Definition of bodily injury shall include mental anguish
- Personal Injury and Advertising Injury
- Fire legal liability
- Products and Completed Operations (endorsed for 3 years after completion of work)
- “explosion, collapse, and underground hazard” (“XCU”) coverage
- Include a severability of interests provision
- The definition of insured contract must not include any exclusion or other limitation for any services being done within 50 feet of Railroad’s tracks (Endorsement CG 2417)
- Policies must not contain any punitive damages exclusion
- A per project aggregate limit must apply
- It is agreed that any workers’ compensation exclusion does not apply to Railroad’s payments related to the Federal Employers Liability ACT or a Railroad Wage Continuation Program or similar programs and any payments made are deemed not to be either payments made or obligations assumed under any workers’ compensation, disability benefits, or unemployment compensation law or similar law.

**14.2 Workers Compensation Insurance** must include coverage for:

Licensee’s statutory liability under the worker’s compensation laws of the state(s) in which the services are to be performed.

Employers’ Liability (Part B) with limits of at least \$1,000,000 each accident, \$1,000,000 by disease policy limit, \$1,000,000 by disease each employee.

**14.3 Commercial Automobile Liability** insurance must contain the following coverage and limits:

A minimum limit of \$2,000,000 per accident applying to each annual period written on Insurance Services Office Form Number CA 0001 covering Bodily Injury and Property Damage.

Any and all motor vehicles owned, non-owned, used or hired must be covered (Symbol 1) and mobile equipment must be covered to the extent it may be excluded from the general liability insurance.

All policies must be endorsed with the following:

- CA 2070 or equivalent
- MCS-90 endorsement (if applicable for contract)

**14.4 Professional Liability Insurance** with limits of not less than \$2,000,000 Per Claim and \$2,000,000 aggregate applying to each annual period, subject to a deductible or self-insured

retention not to exceed \$50,000 per occurrence (unless approved in advance by TRRA) covering claims arising out of alleged or actual negligence in the rendering or failure to render professional services related to the Work under this Agreement. Coverage shall be written on a claim-made form with a retroactive date preceding the date this Agreement was executed. Licensee shall use best efforts to renew this coverage with the same terms, conditions and limits for at least three years following the termination of this Agreement. Defense costs shall be included within the limits of liability specified above.

**14.5 Licensee's Pollution Liability Insurance** of not less than \$10,000,000 Per Claim and \$10,000,000 aggregate applying to each annual period, subject to a deductible or self-insured retention not to exceed \$25,000 per occurrence (unless approved on advance by TRRA) covering bodily injury, property damage including Natural Resource Damage) environmental damage, cleanup costs and defense of third-party claims caused by pollution conditions arising out of the Work under this Agreement. Coverage may be written on an occurrence or claims-made form, but if claims-made coverage is provided, Licensee agrees to use best efforts to renew the coverage with the same terms, conditions and limits for at least three years following the termination of this Agreement. Coverage shall be provided for claims arising out of pollution conditions occurring at non-owned disposal sites and for transportation of materials, including wastes to or from a site where covered operations are conducted.

**14.6 Railroad Protective Liability Insurance** having a combined single limit of not less than \$5,000,000 each occurrence and \$10,000,000 in the aggregate applying separately to each annual period. Said policy shall provide coverage for all loss, damage or expense arising from bodily injury and property damage liability, and physical damage to property attributed to acts or omissions at the job site. The standards for the Railroad Protective Liability Insurance are as follows:

- The policy shall be written on a standard ISO form CG 0035 or equivalent.
- The named Insured shall be identified as the Railroad
- Policy shall be endorsed to include broad form coverage for property damage "Physical Damage to Property Definition Amendment"
- Sudden and Accidental Pollution
- Evacuation Expenses

**14.7 Property Insurance**, insuring Licensee's property of every kind and description and of persons claiming by or through Licensee against those risks normally encompassed in an "all-risk" policy, including, but not limited to, (1) loss or damage by fire; (2) loss or damage from such other risk or hazards now or hereafter embraced by an "extended coverage endorsement," (3) loss for flood if the area/property upon which Licensee is working is a designated flood or flood insurance area; and (4) such other risks as reasonably prudent owner of similar property in the locality where the work area is located would normally insure against. Such insurance shall provide for the full replacement cost in the event of a total destruction of Licensee's property.

#### **14.8 Other Requirements**

- Railroad its officers, officials, employees, and volunteers must be identified as an additional insured on all policies except workers compensation and Professional Liability and be the named

insured on the railroad protective policy.

- No Punitive Damages Exclusions:** All policies must not contain an exclusion for punitive damages.

- Waivers of Recovery and Subrogation:** Licensee agrees to waive its right of recovery against Railroad for all claims and suits against Railroad with the exception of the Professional Liability claims. In addition, its insurers with the exception of the Professional Liability insurers, through the terms of the policy or policy endorsement, must waive their right of subrogation against Railroad for all claims and suits. The certificate of insurance must reflect the waiver of subrogation. Licensee further waives its right of recovery, and its insurers must also waive their right of subrogation against Railroad for loss of its owned or leased property or property under Licensee's care custody and control.

- Primary and Non-contributory:** Licensee's insurance policies through policy endorsement must include wording which states that the policy is primary and non-contributory with respect to any insurance carried by Railroad. The certificate of insurance must reflect that the above wording is included in evidenced policies.

- Separation of insureds.** All policies must contain a separation of insureds provision except workers compensation. Separation of insureds must be indicated on the certificate of insurance.

- Each insurance policy required by this clause shall provide that coverage shall not be canceled, except with notice to the Railroad.

**14.9 Acceptability of Insurers:** Insurance is to be placed with insurers with a current A.M. Best rating of no less than A: VII, unless otherwise acceptable to the Railroad.

**14.10 Self-Insurance:** Licensee is not allowed to self-insure without the prior written consent of Railroad. If granted by Railroad, any deductible, self-insured retention or other financial responsibility for claims must be covered directly by Licensee in lieu of insurance. Any and all Railroad liabilities that would otherwise in accordance with the provisions of the Agreement, be covered by Licensee's insurance will be covered as if Licensee elected not to include a deductible, self-insured retention or other financial responsibility for claims.

**14.11 Independent Associates, Consultants and Subcontractors:** If any portion of the services are to be subcontracted by contractor, Licensee must require that the independent associates consultant and/or subcontractor provide and maintain the insurance coverages set forth herein, naming Railroad as an additional insured and requiring that the independent associate, consultant, and/or subcontractor release, defend and indemnify Railroad to the same extent and under the same terms and conditions as Licensee is required to release, defend and indemnify Railroad herein.

**14.12 No Limits:** The fact that insurance (including without limitation, self-insurance) is obtained by Licensee will not be deemed to release or diminish the liability of Licensee including, without limitation, liability under the indemnity provisions of the agreement. Damages recoverable by Railroad will not be limited by the amount of the required insurance.

**14.13 Verification of Coverage:** Licensee shall furnish the Railroad with original certificates and amendatory endorsements, or copies of the applicable insurance language, effecting coverage required by this contract. All certificates and endorsements are to be received and approved by the Railroad before work commences. However, failure to obtain the required

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documents prior to the work beginning shall not waive the Licensee's obligation to provide them. The Railroad reserves the right to require complete, certified copies of all required insurance policies, including endorsements, required by these specifications, at any time.

**14.14** Prior to entry on Railroad's Property, the original Railroad Protective Liability Insurance Policy shall be submitted by the prime Contractor to the Railroad at the address below for review and approval by the Railroad. In addition, certificates of insurance evidencing the Contractor's and any subcontractor's Commercial General Liability Insurance shall be issued to the Railroad and the Commission at the addresses below. The certificates of insurance shall state that the insurance coverage will not be suspended, voided, canceled, or reduced in coverage or limits without 30 days advanced written notice to Railroad and the Commission. No work will be permitted on the Railroad's Property until the Railroad has reviewed and approved the evidence of insurance required herein.

Railroad

Mr. Asim S. Raza  
Chief Legal Officer, Director of  
Corporate Affairs  
Terminal Railroad Assoc. of St. Louis  
1017 Olive Street, 5<sup>th</sup> Floor  
St. Louis, MO 63101

Commission

Ms Brandi Baldwin  
State Construction and Materials Engineer  
MoDOT  
P.O. Box 270  
Jefferson City, MO 65102

**15.0 Guidelines for Personnel on Railroad's Right of Way.**

**15.1** All persons shall wear hard hats. Appropriate eye and hearing protection shall be used. Working in shorts shall be prohibited. Shirts shall cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip-on type boots shall be prohibited. Hard-sole, lace-up footwear, zippered boots or boots cinched up with straps which fit snugly about the ankle shall be adequate. Safety boots are strongly recommended.

**15.2** No one shall be allowed within 25 feet of the centerline of track without specific authorization from the flagger.

**15.3** All persons working near track while train is passing shall lookout for dragging bands, chains and protruding or shifted cargo.

**15.4** No one shall be allowed to cross tracks without specific authorization from the flagger.

**15.5** All welders and cutting torches working within 25 feet of track shall stop when train is passing.

**15.6** No steel tape or chain shall be allowed to cross or touch rails without permission.

**16.0 Guidelines for Equipment on Railroad's Right of Way.**

**16.1** No crane or boom equipment shall be allowed to set up to work or park within boom distance plus 15 feet of centerline of track without specific permission from the Railroad Engineer and flagger.

**16.2** No crane or boom equipment shall be allowed to foul track or lift a load over the track without flag protection and track time.



**16.3** All employees shall stay with their machines when crane or boom equipment is pointed toward track.

**16.4** All cranes and boom equipment under load shall stop work while train is passing, including pile driving.

**16.5** Swinging loads shall be secured to prevent movement while train is passing.

**16.6** No loads shall be suspended above a moving train.

**16.7** No equipment shall be allowed within 25 feet of centerline of track without specific authorization of the flagger.

**16.8** Trucks, tractors or any equipment shall not touch ballast line without specific permission from Railroad Engineer and flagger.

**16.9** No equipment or load movement shall be within 25 feet or above a standing train or railroad equipment without specific authorization of the flagger.

**16.10** All operating equipment within 25 feet of track shall halt operations when a train is passing. The flagger may halt all other operating equipment if the flagger views the operation to be dangerous to the passing train.

**16.11** All equipment, loads and cables shall be prohibited from touching rails.

**16.12** While clearing and grubbing, no vegetation shall be removed from railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagger.

**16.13** No equipment or materials shall be parked or stored on the Railroad's Property unless specific authorization is granted from the Railroad Engineer.

**16.14** All unattended equipment that is left parked on the Railroad's Property shall be effectively immobilized so that unauthorized persons cannot move it.

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

**17.0** Legal Compliance and Hazardous Materials Reporting. Contractor shall comply with all applicable federal, state and local governmental laws and regulations—including the Resource Conservation and Recovery Act, the Clean Water Act, the Oil Pollution Act, the Hazardous Materials Transportation Act, the Comprehensive Environmental Response, Compensation and Liability Act, and other environmental, health and safety laws and regulations to the extent these requirements are applicable to the Contractor's work performed under this contract. Notwithstanding the preceding sentence, the Contractor will not be liable for pre-existing hazardous materials or hazardous substances discovered on Railroad's property or right of way so long as the Contractor's work, acts or omissions did not cause them to be there. If the Contractor discovers any hazardous waste, hazardous substance, petroleum or other deleterious material, including any non-containerized commodity or material, on or adjacent to Railroad's property, in or near any surface water, swamp, wetlands or waterways, while performing any work under this special provision, the Contractor shall immediately:

- (a) Notify Railroad of such discovery, by telephoning (618) 451-8478.
- (b) Take safeguards necessary to protect employees, subcontractors, agents and/or third parties.
- (c) Exercise due care with respect to the release, including the taking of any appropriate measure to minimize the impact of the release.

**18.0 Personal Injury Reporting.** Railroad must report certain injuries as a part of compliance with Federal Railroad Administration ("FRA") reporting requirements. The Contractor immediately shall report any personal injury to any employee of the Contractor, subcontractor or contractor's invitees while on Railroad's property, by phone, mail or preferably in person, to the Railroad Engineer. The Contractor shall complete the Non-Employee Personal Injury Data Collection Form and send it by Fax to Railroad Engineer no later than the close of shift on the date of the injury.

**19.0 Failure to Comply.** If the Contractor violates or fails to comply with any of the requirements of these Railroad Job Special Provisions, the Railroad may act as authorized in paragraphs (a) and (b) of this section, until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

- (a) The Railroad Engineer may require the Contractor to vacate Railroad's property.
- (b) The Engineer may withhold all monies due to the Contractor until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

**20.0 Payment for Cost of Compliance.** Commission shall not separately pay for any extra cost the Contractor or Railroad incurs on account of compliance with these Railroad Job Special Provisions. The Contractor and Railroad shall include all such cost in the contract unit price for other items included in the contract. Railroad will not pay the Contractor for any work it performs to comply with these Railroad Job Special Provisions.

**BB. Preformed Thermoplastic Pavement Marking, Lane Drop Arrows (LT/RT)**

**1.0 Description.** Lane Drop Arrows to be placed as noted in the contract documents.

**2.0 Construction Requirements.** Shall be measured by each acceptable lane drop pavement marking in place. It shall follow the current version of the Manual on Uniform Traffic Control Devices (MUTCD) and shall include all required surface preparation and application techniques needed to provide a finished product as intended by the Contract Documents.

**3.0 Method of Measurement.** Measurement shall be by EACH. All other work necessary shall be considered subsidiary to this item.

**4.0 Basis of Payment.** The accepted quantities of Preformed Thermoplastic Pavement Marking, Lane Drop Arrows (LT/RT) will be paid for at the contract unit price.

**CC. Damage to Newly Placed Overlays**

**1.0 Description.** Pavement Markings shall be in accordance with Section 620.50 and specifically as follows.

**2.0 Construction Requirements.** Pavement marking to be placed on any new overlay, the preparation shall be completed in a means as not to damage the newly placed overlay, including but not limited to Epoxy Polymer Wearing Surface or Crack Seal.

Care shall be taken to not damage the newly placed overlays during any prep or application methods which will cause damage to the overlays.

It shall be the contractor's responsibility to determine what type of method to be used for any preparation work needed for the application of pavement markings. The contractor shall make it known to the engineer 2 weeks prior to applications.

**3.0 Method of Measurement.** Final measurement will not be made.

**4.0 Basis of Payment.** The accepted application of pavement marking, including all labor, equipment, and material necessary to protect the newly placed overlay for this contract is included in the cost of pavement markings.

DD. Protection of Metrolink Facilities and Traffic

## **METRO RAILWAY REQUIREMENTS STANDARD OPERATING PROCEDURES**

**1.0 PURPOSE AND SCOPE.** The purpose of the following requirements is to maintain a safe environment and efficient transit system for MetroLink customers, employees, and Contractors when work is being performed on the MetroLink Right-of-Way (ROW). The following procedures must be followed and all requirements fulfilled before permission will be granted to any individual or group requesting access to the MetroLink Right-of-Way (ROW) to perform work. This includes all work on, under, above, or adjacent to the MetroLink Right-of-Way that has the potential to impact train operations. MetroLink Right-of-Way is defined as Metro owned property along MetroLink's Light Rail System, including main line tracks, yard track, shop tracks, and stations. Work performed on the Right-Of -Way outside of the alignment or area where trains operate that **will not** impact train operations, e.g. park and ride lots etc., is excluded from the scope detailed in the following procedures.

This procedure is applicable to Contractors and Metro Employees.

MetroLink Land Maps defining Metro property lines and a MetroLink Alignment Schematic are available from the Maintenance Of Way (MOW) Department upon request.

## **2.0 ATTACHMENTS/EXHIBITS**

EXHIBIT A: MetroLink - Contractor Right-of-Way Temporary Work Permit

EXHIBIT B: Metro Permit Fee Schedule

EXHIBIT C: MetroLink Alignment Schematic (available upon request)

EXHIBIT D: Indemnification Agreement and Required Insurance Coverage

EXHIBIT E: Metro Personnel Right of Way Work Permit (For Metro Employees Only)

EXHIBIT F: MetroLink Rail Systems Department Employee Safety Standards (available upon request)

EXHIBIT G: Operations Rule Book (available upon request)

Note: See paragraph 7.0 for information on how to obtain Exhibits above.

### 3.0 DEFINITIONS

**Flag Person** is a Tier 2 qualified Contractor or Metro Employee that is assigned as a dedicated flagger to protect work crews, personnel, and equipment working on or near the tracks to ensure safe passage of trains as described in SOP 103.04. Contractor will be responsible for providing Tier 2 qualified flaggers.

**Fouling a Track** means placement of an individual, material or equipment in such proximity to the track that the individual, material or equipment could be struck by a moving train or on-track equipment, or in any case is within 8' 6" from the centerline of nearest track.

**Lookout** is a Tier 2 qualified Metro employee who is qualified to provide warning to ROW workers of approaching trains or on-track equipment. Lookout should be equipped with the necessary equipment to warn ROW workers of approaching trains, as well as flagging equipment to be used if it is necessary to warn approaching trains. The Lookout's sole duty is to look for approaching trains or on-track equipment and provide advanced warning to employees before arrival of the trains or on-track equipment.

**No Clearance Zone** areas along the MetroLink Right of Way where there **is not** 8' 6" clearance from centerline of nearest track to nearest fixed object, e.g. wall, fence, bridge, steep embankment. Within these areas it **is not** possible for personnel to safely clear from fouling train movement. These areas are designated with reflective **No Clearance** signs on the right-of-way and by markings on the MetroLink Alignment Schematic.

**Operating Right-of-Way (ROW)** is the area within twenty (20) feet of the centerline of any track on the main line or yard.

**Pilot** is a Tier 3 qualified Metro employee assigned to facilitate track car or on-track equipment movement when the operator or driver is not qualified on the physical characteristics or rules of the portion of the alignment over which movement is to be made. The pilot will be responsible for the safe movement of on-track equipment for the work crew to which they are assigned.

**Right-of-Way (ROW)** is land, property and interests therein, acquired by the Agency.

**Train Detection** is a procedure by which a worker acquires ROW access safely by seeing approaching trains and leaving the track before the train arrives at the location at which they are working and which may be used only under certain conditions authorized by OCC.

### GENERAL REQUIREMENTS FOR ACCESS TO METROLINK RIGHT-OF- WAY

To access the MetroLink ROW all Contractor and Metro Employees must have a minimum of Tier 1 Safety Training and each work group must be accompanied by at least one person that is Tier 2 qualified to serve as a flag person or lookout. For unforeseen work for short durations, MetroLink Operations may authorize unqualified persons access to the ROW if accompanied by a qualified Metro Lookout.

**4.0** The work crew must have in their possession a copy of an approved work permit describing the work being performed. Contractor must also meet all additional requirements for ROW access described within this SOP and the referenced documents. Prior to the start of any proposed work

the Contractor must submit a MetroLink - Contractor Right-of-Way Temporary Work Permit, and Metro Employees must submit a Metro Personnel Right of Way Work Permit. If Metro requires a detailed work plan, that plan must be approved prior to permit submittal. Once the work plan is approved, the permit can be submitted. For unforeseen work for short durations, MetroLink Operations can authorize access to the ROW without an approved work permit. Work permits are not required for LRV equipment maintenance performed on the mainline or in the yard & shops.

**4.1** Operators of track cars or on-track equipment must be Tier 3 qualified, unless a qualified Metro Pilot accompanies them. In that situation, the Operator must be at a minimum, Tier 1 qualified.

**4.2** A Metro Tier 3 qualified pilot must accompany Contractor track cars. The pilot is responsible to ensure the Contractor's track car and on-track equipment is operated in compliance with Metro operating and safety rules. The contractor requirement for the Metro pilot can be waived by Metro, if it has been determined that the Contractor's operator has sufficient experience with Metro operating and safety rules.

## 5.0 ROW SAFETY TRAINING QUALIFICATIONS

The following table summarizes the required ROW Safety Training necessary before any Contractor or Metro Employee will be allowed to perform any work on the ROW. Annual recertification is required for Tier 1, 2 & 3 Training.

Work or Duties	Training Required
Any work within MetroLink Right-of-Way	Tier 1
Flagging to protect work crews, personnel and equipment in the Right-of-Way	Tier 1, and Tier 2
Operating a track car on MetroLink	Tier 1, Tier 2, and Tier 3

If Metro employees are not qualified at a minimum Tier 2 (Flagging and Radio Use), they must be escorted by another employee qualified to Tier 2.

*The Safety Department will maintain a list of ROW Safety Trained qualified persons and their level of qualification (e.g. Tier 1, 2, or 3). An updated list will be kept on file in the Rail Dispatcher's Office. Dates, times and locations of Training class can be obtained by contacting Metro Safety Dept. or MetroLink Operations.*

## 6.0 METRO REQUIREMENTS FOR CONTRACTOR

**6.1** Contractor must, if requested by Metro, submit a detailed work plan to MetroLink Operations to be reviewed and approved by MetroLink Operations, Maintenance of Way, and Safety. After acceptance of the work plan, Contractor will obtain, through the procedure defined in this SOP, an approved **EXHIBIT A: MetroLink - Contractor Right-of-Way Temporary Work Permit** before any work can be performed and they must have their Metro approved Permit available at all times on the work site.

**6.2** Contractor may be required to reimburse Metro for all expenses as defined in EXHIBIT B: Metro Permit Fee Schedule. **Metro reserves the right to waive fees at its sole discretion.**

**6.3** Method of payment from Contractor to Metro will be determined by Metro. All Metro

expenses for a particular Contractor shall then be accumulated under the associated permit number.

**6.4** Contractor will complete annual required ROW Safety Training as described in **Section V – ROW SAFETY TRAINING QUALIFICATIONS**. Annual recertification is required for Tier 1,2 &3 Training.

**6.5** Contractors will immediately stop any work that deviates from their approved Right-of-Way Temporary Work Permit or detailed work plan submitted. Metro should be contacted and must approve any alternate work procedures.

**6.6** Contractor work activities can be terminated immediately by MetroLink Operations, Maintenance of Way or Safety, at any time without notice. Typical conditions under which this may occur include, but are not limited to:

- a) Failure to comply with any of the requirements identified in this SOP or other documents referred to within.
- b) Safety related reasons.
- c) Operations schedule-related reasons.
- d) If work in progress deviates from the written work proposal approved by the Metro.
- e) Flag person(s) not available.
- f) Contractors' work interferes with the constant, continuous use of the tracks, property and facilities of MetroLink system, its employees, its customers or other Contractors working within the right-of-way.
- g) Accidents, injuries, near misses, or vehicle damage.
- h) Metro rule violations

**6.7** All on track equipment (including Hi-Rail Vehicles) must meet Federal Register 49 CFR, Part 214 standards, related to Roadway Maintenance Machine Safety. Contractor will be required to submit a list of qualified operators and which Roadway Maintenance Machines that they are qualified to operate on Metro. The Contractor will provide, for Metro approval, documentation of their training and qualification process.

**6.8** Contractor must satisfy all safety requirements including, but not limited to, those found in Exhibit F: METROLINK RAIL SYSTEMS DEPARTMENT EMPLOYEE SAFETY STANDARDS dated January 1996 and Exhibit G: MetroLink Operations Rule Book. Copies are available upon request from the MOW Department.

**6.9** Under no circumstances will Contractor access tracks with vehicles, equipment, or machinery, without explicit written permission of Metro. Each individual working on the ROW is responsible to supply their own personal protective equipment, including a reflective safety vest, hard hat, safety glasses, and work shoes with less than ½ inch heels (open toe or heel shoes are prohibited).

**6.10** These requirements should be followed for excavations:

- Excavations to either side of tracks must be at least **twenty feet** from the centerline of track.
- Excavation under, between or within the track structure or the removal of ballast is prohibited unless approved by Metro.
- Under-track cable installations must be directionally bored using the following procedures.
- A minimum depth of 8 feet below top of ties shall be maintained at all times or 8 feet

- below flow line of ditch, whichever is greater, must be maintained to top of conduit(s).
- Conduit schedule Fiberglass Reinforced Epoxy (FRE) or equivalent is required.
  - Excavations within 5 feet of either side of buried MetroLink signal, power, and communication cables must be performed by hand digging and with MOW personnel present at the dig site.
  - When cable work is being performed parallel to MetroLink right-of-way, cables shall be laid at the same depth as MetroLink cables. The location of the cables shall be between MetroLink cables and the property line, **not** towards the track.
  - If cable locates are required the Missouri One Call System, Inc. locate procedure for Missouri and Julie, Inc. procedures for Illinois must be followed.

**Note:** Any deviation from these requirements will only be allowed with written consent from Metro.

**6.11** Over-track crossings will be considered on a case-by-case basis. All over-track crossings must comply with both National Electric Safety Code (NESC) clearances and any MetroLink requirements imposed.

**6.12** Contractor shall only enter MetroLink Right-of-Way with an approved Work Permit, unless otherwise approved by MetroLink Operations.

**6.13 Work performed by a Contractor on MetroLink Right-of-Way within 20 feet of the centerline of a main line or yard track will require a Temporary Restriction to be issued on the Daily Operating Clearance.**

**6.13** If the Contractor is performing work outside of 20 feet of the center line of any main line or yard, and it is possible for equipment e.g. boom, or hoisted equipment etc, to foul the operating ROW or has potential of making contact with the catenary, a temporary restriction will be required.

**6.14** The temporary restriction will require a dedicated flag person to provide flag protection for the work crew(s). Speed Restriction Signs will need to be posted to identify the work zone to approaching trains. Refer to SOP 103.04 for more information on flagging requirements.

**6.15** In the event that the Contractor disturbs, or modifies Metro's property in any manner, the Contractor must restore the property to the same condition it was in before the Contractor performed work. Such restoration must be to the satisfaction of the Superintendent of Operations and the Superintendent of Rail ROW Maintenance. Contractor will be billed for all work required to restore property to original condition.

**6.16** Contractor must comply with all applicable federal, state, and local laws, regulations, and standards affecting their work.

**6.17** As a limitation to any rights or licenses that may be granted to the Contractor, Metro reserves the right to use and maintain its entire property. This includes Metro's right to construct, maintain, repair, renew, use, operate, change, modify, or relocate railroad tracks, roadways, station platforms, signal, communication, fiber optics, power, or other wire lines, pipelines, and other facilities upon, along or across any or all parts of its property. All or any of the above mentioned use and maintenance may be done at any time or times by Metro without liability to the Contractor or to any other party for compensation or damages.

**6.18** The Contractor is required to comply with Metro's Exhibit D "Insurance Specifications for MetroLink Contractors"

**6.19** Metro reserves the right to fully investigate all Contractor accidents, injuries, near misses, or vehicle damage and the Contractor and its employees agree to comply and assist Metro in all aspects of these investigations. This includes, but is not limited to, drug and alcohol testing, employee interviews, written reports, and requests for documentation.

Contractor employees who work on the MetroLink ROW will be required to comply with the Metro Drug and Alcohol Policy

## **7.0 CONTRACTORS PROCEDURE TO ACCESS METROLINK R.O.W.**

**7.1** Contractor will request a Right-of-Way Work Permit packet of information from:

Control Center Manager  
MetroLink Operations  
700 South Ewing  
St. Louis, MO 63103  
314-982-1400 X2851  
[rowworkpermits@metrostlouis.org](mailto:rowworkpermits@metrostlouis.org)  
Fax 314-335-3429

**7.2** MetroLink Operations will distribute SOP 101.17 with Exhibits A, B, and D to the Contractor. Contractor may request Exhibits C, F, and G. Exhibit E is for Metro employee use only.

**7.3** Contractor then submits their Permit Application Fee and MetroLink Contractor Right-of-Way Temporary Work Permit (Exhibit A). All other required documents should be submitted a minimum of 14 days prior to their proposed start date. This may include a detailed work plan and project drawings, indemnification agreement and required insurance coverage as described in the Description of Insurance Specifications (Exhibit D).

**7.4** MetroLink Operations distributes Permit and detailed work plan if required, to Real Estate, Risk Management and Safety Departments for approval and facilitates a pre-project planning meeting with Contractor(s).

**7.5** MetroLink Operations contacts Contractor with approval, permit number and necessary requirements for Tier 1-3 safety training. Permit numbers are assigned by MetroLink Operations as described in SOP 101.23.

**7.6** Contractor completes required safety training:

- Tier 1 Training: Persons working on or next to the MetroLink Right-of-Way.
- Tier 2 Training: Flagging and Radio Use.
- Tier 3 Training: Track Car Operation and Operating Rules

### **Notes:**

1. Contractors are required to be trained at a minimum of Tier 1 to enter ROW. All work performed by the Contractor on the operating ROW must be protected by a qualified flagperson. An unqualified Contractor may be authorized to enter the alignment by Operations if escorted by a Metro Lookout.

2. Operators of track cars or on-track equipment on the MetroLink light rail system must be qualified to Tier 3, unless they are to be piloted by a qualified Metro Pilot (in this case, the Operator



will be Tier 1 qualified at a minimum). A Metro Tier 3 qualified Pilot is required to direct the operation of Contractor's track cars and on-track equipment, unless otherwise approved by Metro.

**3.** Flaggers must be Metro Safety trained to a minimum of Tier 2. Work within the Metrolink Operating ROW (within 20ft of the centerline of an in service track) will require a restriction and flag protection per Metrolink SOP 101.17. **Contractor will be responsible for providing Tier 2 qualified flaggers.**

**4.** Work within 10 feet of the overhead lines (catenary) or that otherwise could come in contact with the overhead lines requires de-energization of the lines. Exceptions must be approved by Metro. Refer to paragraph 8.0 below for Allowed Work Windows.

**7.7** Contractor **track cars must be piloted by a Metro Pilot qualified to Tier 3 of safety training.** The pilot will communicate with OCC and control the movement of track cars or group of track cars assigned to a single work crew. The Metro Pilot will be responsible for the safe movement of the on track equipment or track cars. The Metro Pilot requirement may be waived by Metro if it is determined that the operator has sufficient training and experience on the MetroLink alignment to safely operate track cars and on-track equipment, and the Operator is Tier 3 qualified.

**7.8** Contractor submits Right-of-Way Temporary Work Permit (Exhibit A) with permit number no later than **Wednesday 12 Noon**, prior to the week the work will be accomplished. Permit must be resubmitted every week during the length of the proposed project.

**Note:** If there is a Metro recognized holiday on Thursday, the work permits are due on Tuesday 12 Noon.

**Note:** If the project proposal changes significantly, a new MetroLink Right-of-Way Temporary Work Permit (Exhibit A) must be submitted. A new Permit Number will be assigned after the Permit is approved.

**7.9** Contractor or a Metro Designee is required to attend weekly Track Allocation meetings held at the Metrolink Ewing Facility (Room MO9) on Thursdays at 8:30 am with MetroLink Operations and Maintenance of Way to respond to questions regarding proposed work. The Contractor's Metro Designee may represent the Contractor at this meeting if previously arranged. Metro SOP 101.23 describes the track allocation process.

**Note:** When the week includes a Metro recognized holiday on Thursday, the Track Allocation Planning meeting is scheduled for Wednesday.

All work requests are subject to Metro Approval

**Note:** Scheduling of work activities is subject to availability of Maintenance of Way, Operations and Safety personnel, as well as the effect it will have on customer service based on the impact the proposed work has on service quality and train schedules.

**7.10** Metro Project Manager or MetroLink Operations will provide the Contractor with a copy of their approved temporary permit (Exhibit A), which must be available on the project site at all times during work activities to confirm permission to occupy MetroLink Right-of-Way.

**7.11** Contractor must contact OCC and request permission prior to accessing the ROW. OCC has authority over all activity along the ROW at all times.

**7.12** Once work is complete, and the work area is cleared of materials, equipment, tools, and personnel, the Contractor must contact OCC to confirm that they are clear of the ROW.

**7.13** Metro provides Contractor an invoice for appropriate fees upon completion of the work or on a monthly basis as necessary.

**7.14** Contractor submits payments to the Metro Accounts Receivable.

## **8.0 Allowed Work Windows**

**8.1** Work under a Restriction (Work performed within 20 feet of the track, but not requiring de-energization of overhead wire, without risk of falling debris onto track way)

- Work under a restriction is allowed from 7:30AM to 3:30PM. Other times may be approved by Metro
- Headway: Peak 12 minutes (M-F 5AM-10AM and 2PM-8PM)/ Off-Peak 15 minutes on each track.
- Work over Metro with potential of falling debris or other construction runoff will need to be performed after revenue service when trains are not operating. Additionally, it may be necessary to put track or overhead wire protection in place, to eliminate risk of damage or fouling by debris.

**8.2** Work with Both Tracks Out of Service Nightly (After Revenue Service)

- Work with both tracks out of service is allowed nightly after revenue service 1:30AM-4:15AM nightly.
- If work is within 10 feet of the overhead power line or that has the potential to come in contact with the line, a power down of the overhead lines will be required. Allow twenty (20) minutes each for a power down and a power up. Power UP/Power Down fee is \$1,000 (for each power down/quantity as required).
- If there is potential of falling debris or runoff, it will be necessary to put track or overhead wire protection in place, to eliminate risk of damage or fouling by debris.

Job No.: J613550  
Route: Various  
County: Various

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 <p>04/13/2023</p>	<p><b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b>  105 W. CAPITOL AVE.  JEFFERSON CITY, MO 65102  Phone 1-888-275-6636</p>
	<p><b>Gonzalez Companies</b>  <b>1750 S. Brentwood, Suite 400</b>  <b>St. Louis, MO 63144</b>  Certificate of Authority: 20050383353  Consultant Phone: 314-961-1888</p>
	<p>If a seal is present on this sheet, JSP's  have been electronically sealed and  dated.</p>
	<p>Job Number: J6I3550  St. Louis &amp; St. Charles Counties &amp;  St. Louis City  Date Prepared: 02/03/2023</p>
<p>ADDENDUM DATE:</p>	
<p>Only the following items of the Job Special Provisions (Roadway) are  authenticated by this seal: All</p>	

JOB  
SPECIAL PROVISION

A. General - Federal JSP-09-02H

**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](http://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](http://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 2022 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 JSP-13-01B

**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 shall be completed on or before the date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.1.

Job No.: J6I3550  
Route: Various  
County: Various

Notice to Proceed: July 10, 2023  
Completion Date: December 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
J6I3550	N/A	\$3,200

**3.0 Liquidated Damages for Contract Administrative Costs.** Should the contractor fail to complete the work on or before the 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 **\$1,500** 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 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 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 JSP-02-06M

**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 contractor shall request permission at least two weeks prior to lane closures or shifting traffic onto detours, and 14 calendar days prior to the imposition of height, width, or weight restrictions. This is to ensure closures do not conflict with other work within the zone of influence and the work zone information on the MoDOT's website can remain real-time. In accordance with Management of Traffic (MOT) procedures, the contractor will need to submit lane closure for the following week by Monday 3:00 pm.

**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 15 minutes to prevent congestion from escalating beyond this delay threshold. If disruption of the traffic flow occurs and traffic is backed up in queues equal to or greater than the delay time threshold listed above, 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. When a Work Zone Analysis Spreadsheet is provided, the contractor will find it in the electronic deliverables on MoDOT's Online Plans Room. The contractor may refer to the Work Zone Analysis Spreadsheet for detailed information on traffic delays.

#### **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.

**2.6 Traffic Management Center (TMC) Coordination.** The Work Zone Specialist (WZS) or their designee shall contact by phone the MoDOT Traffic Management Center (Gateway Guide TMC at #314-275-1513) within five minutes of a lane or ramp closure beginning and within five minutes

of a lane or ramp closure being removed. The WZS shall make this phone call 24 hours a day, 365 days of the year since the MoDOT Traffic Management Centers are always staffed.

### **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:

12:00 noon June 30, 2023 – 6:00 a.m. July 5, 2023  
12:00 noon July 3, 2024 – 6:00 a.m. July 5, 2024  
12:00 noon July 3, 2025 – 6:00 a.m. July 7, 2025

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

**3.3** The contractor shall be aware that traffic volume data indicates construction operations on the roadbed between the following hours will likely result in traffic queues greater than 15 minutes. Based on this, the contractor's operations will be restricted accordingly unless it can be successfully demonstrated the operations can be performed without a 15 minute queue in traffic. It shall be the responsibility of the engineer to determine if the above work hours may be modified. Working hours for evenings, weekends and holidays will be determined by the engineer.

Route DD over I-64 (Bridge A5962)

Nightly Lane Closures Allowed: 7:00 p.m. – 5:00 a.m., Monday through Friday

MO-94 over Little Femme Osage Creek (Bridge A5985)

Flagging operation allowed: 7:00 a.m. – 4:00 p.m., Monday through Friday

Route 364 @ Creve Coeur Mill Road (Bridges A6014 & A6052):

Nightly Lane Closures Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

Route 364 @ Route 141 (Bridges A6083 & A6190):

Nightly Lane Closures Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

I-64 over Dardenne Creek (Bridges A6752 and A6753)

Nightly Lane Closures Allowed: 8:00 p.m. – 5:00 a.m.



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Route 100 over BNSF and UP RR. (Bridge A7046 & A7122):  
Nightly Lane Closures Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

I-64 @ Compton Ave.. (Bridge A7080 & A7081):  
Nightly Full Closure Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

Route N over I-64 (Bridge A7323)  
Nightly Lane Closures Allowed: 8:00 p.m. – 5:00 a.m., Monday through Friday

I-64 @ Hanley Rd. (Bridge A8004 & A8016):  
Nightly Lane Closures Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

I-64 @ Big Bend Rd. (Bridge A8020):  
Nightly Lane Closures Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

I-64 @ Bellevue (Bridge A8022):  
Full closure over the weekend allowed. Use Posted detour.

I-64 @ Hampton Ave. (Bridge A8028 & A8029):  
Nightly Full Closure Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

I-64 @ Kingshighway Blvd. (Bridge A8033 & A8036):  
Nightly Lane Closures Allowed: 9:00 p.m. – 5:00 a.m., Monday through Friday

**3.5** The contractor shall not alter the start time, ending time, or a reduction in the number of through lanes of traffic or ramp closures without advance notification and approval by the engineer. The only work zone operation approved to begin 30 minutes prior to a reduction in through traffic lanes or ramp closures is the installation of traffic control signs. Should lane closures be placed or remain in place, prior to the approved starting time or after the approved ending time, the Commission, the traveling public, and state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delays, with a resulting cost to the traveling public. These damages are not easily computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of **\$1000 per 15-minute increment** for each 15 minutes that the temporary lane closures are in place and not open to traffic in excess of the limitation as specified elsewhere in this special provision. It shall be the responsibility of the engineer to determine the quantity of unapproved closure time.

**3.5.1** The said liquidated damages specified will be assessed regardless if it would otherwise be charged as liquidated damages under the Missouri Standard Specification for Highway Construction, as amended elsewhere in this contract.

#### **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 JSP-90-11A

**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 636-537-7000			
Bridge No.	Location	Fire	Police
A4169	St. Charles County	636-228-4481	636-949-3000
A5962	Wentzville	636-332-9869	636-327-5105
A5985	St. Charles County	636-329-1515	636-949-3000
A6014 A6052	Maryland Heights	314-878-7001	314-298-8700
A6083 A6190	Maryland Heights	314-878-7001	314-298-8700
A6475	New Melle	636-828-5528	636-398-5500
A6657	New Melle	636-828-5528	636-398-5500
A6752 A6753	Wentzville	636-327-6239	636-327-5105
A7046 A7122	St. Louis City	314-533-3406	314-231-1212
A7080 A7081	St. Louis City	314-533-3406	314-231-1212

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A7233	Wentzville	636-332-9869	636-327-5105
A7323	Wentzville	636-332-9869	636-327-5105
A8004 A8016	Richmond Heights	314-645-0404	314-645-3000
A8020	Richmond Heights	314-645-0404	314-645-3000
A8022	Richmond Heights	314-645-0404	314-645-3000
A8028 A8029	St. Louis City	314-533-3406	314-231-1212
A8033 A8036	St. Louis City	314-533-3406	314-231-1212
St. Louis City Police: 314-231-1212			
St. Louis County Police: 636-529-8210			
St. Charles County Police: 636-949-3000			
MoDOT Transportation Management Center: 314-275-1500			

**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 JSP-96-05**

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

Shirley Norris, Project Manager St. Louis District  
1590 Woodlake Drive  
Chesterfield, MO 63017-5712t  
Telephone Number: 314-453-5032  
E-mail: [Shirley.Norris@modot.mo.gov](mailto:Shirley.Norris@modot.mo.gov)

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

F. Supplemental Revisions JSP-18-01X

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

Job No.: J613550  
Route: Various  
County: Various

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:

<b>Table 1 – GTR Material Properties</b>		
<b>Property</b>	<b>Test Method</b>	<b>Criteria</b>
Specific Gravity	ASTM D1817	1.02 to 1.20
Metal Contaminates	ASTM D5603	$\leq 0.01\%$
Fiber Content	ASTM D5603	$\leq 0.5\%$
Moisture Content	ASTM D1509	$\leq 1.0\%^*$
Mineral Filler	AASHTO M17	$\leq 4.0\%$

\*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.

<b>Table 2 – GTR Gradation</b>	
<b>Sieve</b>	<b>Percent Passing by Weight</b>
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  $\pm 3$  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  $\pm 3$  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** VMA shall be calculated as follows:

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

where:

$P_s$  = percent aggregate by total mixture weight

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

$G_{sb}$  = bulk specific gravity of the combined aggregate

$G_{GTR}$  = 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.

**Delete Sec 107 in its entirety and substitute the following:**

**107.1 Laws to be Observed** The contractor shall know, observe and comply with all federal and state laws, local laws, codes, ordinances, orders, decrees and regulations existing at the time of or enacted subsequent to the execution of the contract that in any manner affect the prosecution of the work, except as specified in the contract or as directed by the engineer. The Contractor shall also ensure that any subcontractor know, observe and comply with all federal and state laws, local laws, codes, ordinances, orders, decrees and regulations as outlined above. The contractor and surety shall indemnify and save harmless the State, the Commission, the Commission's agents, employees and assigns from any claim or liability arising from or based on the violation of any such law, code, ordinance, regulation, order or decree, except any local regulations, decrees, orders, codes or ordinances directed by the contract.

**107.1.1 Contract and Legal Inconsistency** The engineer shall be notified immediately in writing if any discrepancy or inconsistency is discovered between the contract and any law, ordinance, regulation, order or decree.

**107.1.2 Local Building and Zoning Codes or Ordinances** The projects of the Commission are not typically subject to local building or zoning codes or ordinances. Therefore, the contractor usually need not obtain a local building or zoning permit or variance for work done exclusively as the Commission's contractor on the Commission's project and the Commission's right of way. Other local codes or ordinances may not apply to the Commission, and thus to the contractor as well. If any questions arise concerning whether the contractor shall comply with a local code, ordinance, decree or order of any type, the contractor shall advise the engineer of the problem immediately, for resolution by the engineer. This provision will not exempt the contractor from the requirement of thoroughly researching and determining, before submitting a bid on the contract and from complying with, all federal, state or local laws, regulations, codes, ordinances, decrees

or orders that may apply to the contract work. The Commission will not be responsible for the contractor's failure to be informed before bidding as to the federal, state and local laws, regulations, codes, ordinances, decrees or orders that may govern the contract work, or for the contractor's failure to determine before bidding which of these do not govern the contract work.

**107.1.3 Authentication of Certain Documents** If plans, plats, detailed drawings or specifications for falsework, cofferdams or any other work are required to be submitted to the engineer, the documents shall be signed, sealed and stamped in accordance with the laws relating to the practice of architecture and professional engineering in the State of Missouri (Chapter 327, RSMo).

**107.2 Permits, Licenses and Taxes** Except as otherwise provided in the contract, the contractor shall procure all permits and licenses, shall pay all charges, fees and taxes, and shall give all notices necessary and incidental to the due and lawful prosecution of the work. No direct payment will be made for the cost of complying with this requirement.

**107.3 Patented or Copyrighted Devices, Material and Processes.** If the contractor is required or desires to use any design, device, material or process covered by letters, patent, copyright, service or trademark, the contractor shall arrange and provide for such use by suitable agreement with the patentee or owner, and a copy of the agreement may be required by the Commission. The contractor and surety shall indemnify and save harmless the State, the Commission, the Commission's agents, employees and assigns from any suits, claims or damages arising from the infringement upon or use of any patented, copyrighted or registered design, device, material, process or mark.

**107.4 Safety and Sanitary Provisions** The contractor shall at all times take necessary precautions to protect the life and health of all persons employed on the project or, who at the direction of the contractor are present on the right of way. The contractor shall be familiar with the latest accepted accident prevention methods and shall provide necessary safety devices and safeguards accordingly. The Commission will refuse to provide inspection services at plants or work sites where adequate safety measures are not provided and maintained.

**107.4.1 Apparel.** All workers within highway right of way shall wear approved ANSI/ISEA 107 Performance Class 2 or 3 safety apparel and more specifically as follows:

**107.4.1.1** During daytime activities, flaggers shall wear a high visibility hard hat, safety glasses, a Performance Class 3 top OR a Performance Class 2 top, and safety footwear. Hard hats other than high visibility orange or green shall be covered with a high visibility covering.

**107.4.1.2** During daytime activities, workers shall wear a hard hat, safety glasses, a Performance Class 3 top OR a Performance Class 2 top, and safety footwear.

**107.4.1.3** During nighttime activities, flaggers shall wear a high visibility/reflective hard hat, safety glasses, a Performance Class 3 top AND Class E bottoms, OR Performance Class 2 top AND Class E bottoms, and safety footwear. Hard hats shall be reflective or covered with a high visibility covering.

**107.4.1.4** During nighttime activities, workers shall wear a hard hat, safety glasses, a Performance Class 3 top OR Performance Class 2 top AND Class E bottoms, and safety footwear.

**107.4.2** The contractor shall provide and maintain in a neat and sanitary condition, such accommodations for the use of employees as may be necessary to comply with the requirements and regulations of any agency having jurisdiction over public health and sanitation. The contractor shall permit no public or private nuisance.

**107.4.3** All sanitary facilities and safety devices shall be furnished free to employees and no direct payment will be made for such facilities or devices.

**107.5 Public Convenience and Safety** The contractor shall conduct the work in a manner that will ensure, as far as practical, the least obstruction to traffic and shall provide for the convenience and safety of the general public and residents along and adjacent to the highway in an adequate and satisfactory manner.

**107.5.1 Obstructions Prohibited** Fire hydrants on and adjacent to the highway shall be kept accessible to firefighting apparatus at all times, and no obstruction shall be placed within 15 feet of any such hydrant. Footways, gutters, sewers, outlets, inlets and portions of highways adjoining the work under construction shall not be obstructed. Pavements over which hauling is performed shall be kept clean of spilled or tracked-on material at all times when in use by traffic.

**107.5.2 Objects Potentially Affecting Navigable Airspace.** The contractor shall comply with all federal regulations pertaining to constructing, erecting or installing any object, temporary or permanent, which could potentially affect navigable airspace.

**107.5.3 Material and Equipment.** During construction hours, equipment, material and vehicles utilized in construction of the project will only be permitted on shoulders, medians or pavements where the locations are closed to traffic, properly signed and occupied by ongoing construction operations, unless otherwise approved by the engineer. Except in cases of emergency, construction equipment, material and vehicles will not be permitted on pavements or shoulders being utilized by traffic. If the contract specifies time periods the contractor will not be permitted to perform work, construction equipment or vehicles shall not enter or leave the construction area via the pavements handling traffic nor be operated on the pavements handling traffic within the construction area during the restricted time periods. During non-construction hours, construction equipment, material and vehicles will not be permitted within 30 feet of the edge of the pavement or shoulders carrying traffic unless the equipment, material and vehicles are located in a properly protected area, an off-site storage area or as otherwise directed by the engineer.

**107.5.4 Distractions to the Traveling Public in Work Zones.** In order to avoid distracting operators of vehicles traveling on the roadway, the Contractor and its sub-contractors shall not bring or display any signs, flags, logos, emblems, advertising, or any other communicative device on construction equipment that is large enough to be legible from the main traveled way of the highway in the work zone or on highway right of way. This prohibition does not apply to any sign, logo or emblem placed on Contractor equipment identifying the owner or manufacturer of the equipment or to any official highway signs approved by the Commission pursuant to 227.220 RSMo.

**107.6 Bridges over Navigable Waters.** All work on navigable waters shall be conducted such that free navigation of the waterways will not be interfered with and that existing navigable depths will not be impaired except as allowed by permit issued by the USCG or the USACE.

**107.7 Use of Explosives.** All blasting operations shall be conducted under the direct supervision of a licensed blaster as required by the Missouri Blasting Safety Act. When explosives are used

in the prosecution of the work, the contractor shall use the utmost care to prevent bodily injury and property damage. The contractor shall be responsible for damage resulting from the use of explosives. The engineer will have the authority to suspend any unsafe blasting operation. The contractor shall be familiar and comply with the rules and regulations of any city, county, state or federal agency or any other agency that may have jurisdiction in the handling, loading, transporting, storage and use of explosives. All places used for explosives storage shall be marked clearly "DANGEROUS EXPLOSIVES".

**107.7.1** Before beginning work, the contractor shall furnish the engineer letters of approval for the proposed operation from the appropriate regulating agencies. The contractor shall notify in writing the appropriate fire protection jurisdiction of the intent to store, transport or use explosives and shall provide proof of notice to the engineer. The contractor shall provide the engineer with copies of all permits, blasting logs and seismic monitoring data.

**107.7.2** The contractor shall notify in advance each property owner, tenant and public utility company having structures or facilities close to the work of any intention to use explosives.

**107.7.3** Removal of any item or material of any nature by blasting shall be done in such a manner and at such time as to avoid damage affecting the integrity of the design and to avoid damage to any new or existing structure, whether on Commission right of way or private property, included in or adjacent to the work. Unless the contract documents or the engineer restricts such operation, the contractor shall be responsible for determining a method of operation to ensure the desired results and the integrity of the completed work.

**107.7.4** The contractor and surety shall indemnify and save harmless the State, the Commission, the Commission's agents, employees and assigns from any claim related to the possession, transportation, storage or use of explosives.

#### **107.8 Preservation of Monuments and Artifacts.**

**107.8.1 Monuments.** The contractor shall not disturb or damage any land monument or property landmark unless authorized by the engineer.

**107.8.2 Human and Archaeological Remains.** The contractor shall report to the engineer the discovery of human remains, artifacts, fossils and other items of historical, archaeological or geological significance discovered within the right of way during construction. Such items will remain in the Commission's custody and shall not be removed from the site unless directed by the engineer. The preservation and handling of such items shall be in accordance with [Sec 203.4.8](#).

**107.9 Forest and Park Protection.** Environmental and sanitary laws and regulations regarding the performance of work within or adjacent to state or national forests or parks shall be obeyed. The contractor shall keep the project site in an orderly condition, dispose of all refuse, obtain permits for the construction and maintenance of all construction camps, stores, warehouses, residences, latrines, cesspools, septic tanks and other structures in accordance with the regulations and instructions issued by the forest or park supervisor. The contractor shall require employees and subcontractors, independently, and at the request of forest officials, to prevent and suppress forest fires, and to notify a forest official of the location and extent of any fire.

**107.10 Environmental Protection.** The contractor shall comply with all federal, state and local laws and regulations controlling pollution of the environment. Pollution of streams, lakes, ponds

and reservoirs with fuels, oils, bitumens, chemicals or other harmful material and pollution of the atmosphere from particulate and gaseous matter shall be avoided.

**107.10.1** Fording of streams and fill for temporary work not specified on design plans will not be permitted unless the plan for such operation is authorized by the Corps of Engineers, meets the approval of the engineer, complies with the current MoDOT Pollution Plan and results in minimum siltation to the stream. Temporary stream crossings shall not be constructed unless specifically designated as a condition of the Corps of Engineers Section 404 permit or a permit is obtained, and the temporary stream crossing is in accordance with [Sec 806](#).

**107.10.2** When work areas or pits are located in or adjacent to streams, the areas shall be separated from the main stream by a dike or barrier to keep sediment from entering the stream. Care shall be taken during the construction and removal of such barriers to minimize siltation of the stream.

**107.10.3** Disposal of Portland cement concrete residue and wash water, water from aggregate washing, or other operations producing sediment laden runoff shall be treated in accordance with Sec 806.

**107.10.4** Oil distributors or tanker trucks used for the transport or application of any petroleum-based products, and that have a capacity greater than 1,320 gallons, shall not be left unattended on MoDOT right of way within the project limits during non-construction hours unless secondary containment is deployed as per the Spill Prevention Control and Countermeasure rule. Parking of these vehicles on MoDOT right of way outside of the project limits, or on any MoDOT owned property, shall not be allowed without the aforementioned secondary containment and prior authorization from the engineer.

**107.11 Responsibility for Claims for Damage or Injury.** The contractor and insurance company shall indemnify and save harmless the State, the Commission, the Commission's agents, employees and assigns from all claims or suits made or brought for bodily injury, death or property damage, arising from performance of the work to the extent of:

(a) The negligent acts or omissions of the contractor, subcontractors, suppliers or their respective officers, agents or employees.

(b) The creation or maintenance of a dangerous condition of or on the Commission's property or right of way, which condition occurred due to the acts or omissions of the contractor, subcontractors, suppliers or their respective officers, agents or employees or for which the contractor had knowledge of or could have had knowledge of the condition in time to warn of or repair said condition.

(c) The failure of the contractor, subcontractors, suppliers or their respective officers, agents or employees, to perform the work in accordance with the plans and specifications.

**107.11.1** The contractor will not be required to defend, indemnify or hold harmless any other person, including the State, the Commission, or the Commission's agents, employees or assigns for any acts, omissions or negligence of other persons.

**107.11.2** Neither the Commission nor the contractor, by execution of a contract, shall intend to or create a new or enlarge an existing cause of action in any third party. This provision shall not be interpreted to create any new liability that does not exist under the law, or to waive or extinguish

any defense that either party to this contract or their respective agents and employees may have to an action or suit by a third party.

**107.12 Contractor's Responsibility for Work** From the earlier of the date of commencement of the work or the effective date of the notice to proceed, and until any work is accepted by the engineer, the work shall be in the custody and under the charge and care of the contractor. Issuance of a payment estimate on any part of the work done will not be considered as final acceptance of any work completed up to that time.

**107.12.1** Damages to any portion of the work before the work is completed and accepted, caused by the action of the elements or from any other reason, shall be repaired or replaced at the contractor's expense. The contractor, at the contractor's option, may insure against any such damages. The Commission may, in its discretion, make such a payment, determined in accordance with [Sec 109.4](#), for damage to the work due to unforeseeable causes beyond the control of, and without fault or negligence on the part of the contractor, unless the contractor has been reimbursed for such damages by the contractor's insurer. Prior to reimbursement, the contractor shall furnish documentary evidence of all efforts to recover such repair costs.

**107.12.2** The contractor shall immediately give written notice to the engineer of any pedestrian, worker and/or vehicular accident. The contractor may be directed by the engineer to repair permanent Commission facilities that have been damaged by events that are beyond the control of the contractor. Reimbursement will be provided by the Commission, determined in accordance with [Sec 109.4](#), for the actual direct cost of labor, equipment and material, exclusive of overhead, indirect or consequential costs of profit. The Commission may elect to make such repairs in lieu of the contractor.

**107.13 General Insurance Requirements.** The Contractor shall procure and maintain at the Contractor's expense until Final Acceptance of the project by the engineer, insurance for all damages and losses imposed by law and assumed under the contract, of the kinds and in the amounts specified in [Secs 107.13.1](#) through [107.13.8](#).

**107.13.1 Sovereign Immunity Limits for Missouri Public Entities.** The Contractor shall procure and maintain at least minimum insurance coverages to meet the sovereign immunity limits for Missouri public entities as calculated by the Missouri Department of Insurance and published annually in the Missouri Register pursuant to Section 537.610 RSMo., for [Secs 107.13.2](#) through [107.13.5](#), unless specified otherwise for each type of insurance coverage. Each policy shall provide additional insured status for the Missouri Highways and Transportation Commission (Commission), the Missouri Department of Transportation (MoDOT) and its employees up to Missouri's sovereign immunity limits.

**107.13.2 Commercial General Liability Insurance.** The Contractor shall procure, and maintain during the term of the project, commercial general liability insurance with coverage at least as broad as Insurance Services Office (ISO) policy form CG 00 01. The general aggregate limit shall, by endorsement or otherwise, provide a designated aggregate limit solely for this project using ISO form CG 25 03 05 09 or an equivalent form. General liability policies shall be endorsed to add the Commission, MoDOT, and its employees as additional insureds (the "Additional Insureds") using Insurance Services Office forms CG 20 10 or the equivalent under such policy. For construction contracts, an endorsement providing completed operations coverage to the Additional Insureds, ISO form CG 20 37 or the equivalent, is also required. This form, CG 20 37, shall be endorsed on each subsequent commercial general liability policy issued to the Contractor for three (3) years after final acceptance of the project. The contractor could provide extended

completed operations for specific project needs. Discontinued operations coverage shall be provided for three (3) years when applicable. Coverage shall not be reduced by insured versus insured exclusions or by explosion, collapse and underground (XCU) exclusions.

**107.13.3 Commercial Automobile Liability Insurance.** The Contractor shall procure and maintain automobile liability coverage at least as broad as ISO policy form CA 00 01 covering owned, hired, and non-owned autos. The policy shall include as insureds anyone liable for the conduct of an insured as described by policy provision or by endorsement added to the policy.

**107.13.4 Contractor's Pollution Liability (CPL) Insurance.** The Contractor performing excavation, remediation, hazardous materials removal, or any other work involving potential pollution arising from construction operations shall procure and maintain contractor's pollution liability insurance for liability arising out of sudden, accidental, and gradual pollution and remediation. The policy shall have minimum limits of \$1,000,000 and the Commission, MoDOT and its employees shall be endorsed as additional insureds under such policy. The policy shall provide coverage for the hauling of waste from the project site to the final disposal location, including non-owned disposal sites. Products/completed operations coverage for pollution liability insurance shall extend a minimum of three (3) years after final acceptance of the project. Coverage shall be included on behalf of the insured for covered claims arising out of the actions of independent contractors. If the insured is using subcontractors, the Policy must include work performed "by or on behalf" of the insured. Policy shall specifically provide for a duty to defend on the part of the insurer.

**107.13.5 Aircraft Liability Insurance.** If aircraft, including unmanned aircraft, will be used on the project, Contractor shall provide, or cause to be provided, aircraft liability insurance protecting against claims for damages resulting from such use in all cases where any aircraft that is owned, leased or chartered by any Contractor-Related Entity used on the Project. The policy shall have minimum limits of \$1,000,000 and the Commission, MoDOT and its employees shall be additional insureds on the policy by endorsement or policy provision. The use of any aircraft in performance of the Work, the aircraft crew, flight path and altitude, including landing of any aircraft on the Site or on any property owned by the Commission, MoDOT or other parties at interest, shall be subject to review and written acceptance by the Commission prior to any such usage. If any aircraft are leased or chartered with crew and/or pilot, evidence of non-owned aircraft liability insurance will be acceptable to meet these requirements but must be provided prior to use of the aircraft. For use of unmanned aircraft vehicles, the contractor may provide insurance either through an aircraft liability insurance policy, or by endorsement to the Contractor's commercial general liability insurance policy and excess liability policies. Use of unmanned aircraft must comply with all state and federal rules and regulations, including FAA requirements.

**107.13.6 Excess or Umbrella Liability Insurance.** The Contractor may satisfy the required limits for Secs 107.13.2 through 107.13.5 by use of excess or umbrella liability insurance policies in any combination that meets the contract limits requirements. Such policies shall include as insureds, the Missouri Highways and Transportation Commission (Commission), the Missouri Department of Transportation (MoDOT) and its employees.

**107.13.7 Workers' Compensation Insurance.** The Contractor shall provide evidence to the engineer that the Contractor has obtained workers' compensation insurance and employers liability insurance as required by the state or is exempt and provides proper documentation to the engineer. Coverage shall include all statutory workers' compensation benefits to Contractor employees who may sustain work-related injury, death or disease. If applicable, commensurate with the requirements of the U.S. Longshore and Harbor Workers' Compensation Act (USL&H) and the Jones Act, with a minimum limit of \$2,000,000 per occurrence and in the aggregate, or



as may be specified by law, for each. The required insurance must be endorsed to include a waiver of subrogation in favor of the Commission, MoDOT and its employees.

**107.13.8 Railroad Protective Liability Insurance.** In addition to other forms of required insurance, the Contractor shall provide railroad protective liability insurance when any of the Contractor's work is to be performed within any railroad right of way and in some cases may be required when the project improvements are near a railroad right of way. The name or names of the railroad companies known to be in the vicinity of the contract improvements will be specified in each contract, but the contractor shall confirm the railroad companies impacted and the final insurance needed with each railroad. The minimum limits of the insurance indicated by each railroad to the Commission will be included in the contract bid documents for informational purposes, but the contractor shall be bound by each individual railroad company requirements. Each railroad agency has final determination in the content and coverage limits of the policies required. No work will be permitted within any railroad's right of way until the railroad involved has reviewed and approved the insurance policy. Any day upon which the Contractor cannot perform work due to such a policy not being approved by the railroad will not be counted as a contract day under [Sec 108.7](#).

**107.13.9 Evidence of Insurance.** Required evidence of insurance providing confirmation of compliance with these requirements shall consist of a certificate of insurance, an endorsement to any workers compensation policy waiving the subrogation by the insurer, and any endorsements adding the Commission, MoDOT and its employees as additional insureds where specified. "Blanket" or "automatic" additional insured endorsements providing additional insured coverage "where required by contract," may be used, provided that such forms provide coverage at least as broad as provided by the specified endorsement forms required. The contractor and any subcontract work shall not commence under the contract until the contractor obtains the applicable insurance coverage required and receives approval for such insurance from the engineer. All evidence of insurance for the prime contractor, including certificates of insurance and required endorsements, and notices shall be submitted electronically by the insurance agent to [ContractorSupport@MoDOT.mo.gov](mailto:ContractorSupport@MoDOT.mo.gov). The Contractor shall promptly furnish the engineer with a complete copy of its policy upon request. Failure to furnish evidence of proper insurance, or complete insurance policies when requested, may result in the suspension of work as provided in [Sec 108](#), and may result in other claims or actions for breach of contract or otherwise, as may be recognized at law or in equity.

**107.13.9.1 Work Performed by Subcontract.** Prior to its commencement of the applicable work, the contractor shall cause each of its subcontractors to provide insurance that complies with the requirements for contractor-provided insurance. Contractor's determination of such insurance shall not be interpreted as relieving Contractor or its insurer of any liability otherwise imposed on Contractor or its insurers under these Contract Documents. The Contractor shall promptly furnish the engineer with a complete copy of its subcontractor policies upon request. Failure to furnish evidence of proper insurance, or complete insurance policies when requested, may result in the suspension of work as provided in [Sec 108](#), and may result in other claims or actions for breach of contract or otherwise, as may be recognized at law or in equity.

#### **107.13.10 Other Conditions and Requirements**

**107.13.10.1 Acceptability of Insurance Companies.** All insurers must be authorized to transact business under the laws of the State of Missouri and hold an AM Best rating of no less than A-: VI.



**107.13.10.2 Waiver of Right of Recovery.** All insurance coverage maintained or procured pursuant to this agreement shall be endorsed to waive subrogation against the Commission, MoDOT and its employees or shall specifically allow the Contractor, or others providing insurance evidence in compliance with these specifications, to waive their right of recovery prior to a loss. Contractor hereby waives its own right of recovery against the Commission, MoDOT and its employees.

**107.13.10.3 Enforcement of Contract Provisions (non estoppel).** Contractor acknowledges and agrees that any actual or alleged failure on the part of the Commission, MoDOT or its employees to inform Contractor of non-compliance with any requirement imposes no additional obligations on the Commission, MoDOT or its employees, nor does it waive any rights hereunder.

**107.13.10.4 Primary and Non-contributory.** For any claims related to this contract, the Contractor's insurance coverage shall be primary insurance with respects to the Commission, MoDOT and its employees as the additional insureds. Any other insurance or self-insurance maintained by any of these parties shall be excess of the Contractor's insurance and shall not contribute with the Contractor's insurance.

**107.13.10.5 Specifications not Limiting.** Requirements of specific coverage features, or limits contained in this Section are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only as it pertains to a given issue and is not intended by any party or insured to be all inclusive, or to the exclusion of other coverage, or a waiver of any type.

**107.13.10.6 Notice of Cancellation and Change in Insurance Carrier.** Contractor agrees to oblige its insurance agent or broker, and insurers by endorsement to the policy, to provide to the engineer with thirty (30) days advance notice of cancellation, except for nonpayment for which ten (10) days' notice is required, or nonrenewal of coverage for each required coverage. If any policy is canceled or the insurance carrier is planned to change before the contract work is complete, a satisfactory replacement policy shall be obtained and in force, with notice and evidence of insurance submitted to the engineer, prior to the effective date of cancellation of the former policy.

**107.13.10.7 Self-insured Contractors and Self-insured Retentions.** A self-insured contractor will not be considered to comply with these specifications unless approved by the engineer prior to beginning work. A contractor with insurance policies arranged with self-insured retentions must be declared to and approved by the engineer prior to beginning work. The Commission reserves the right to require that self-insured retentions be eliminated, lowered, or replaced by a deductible or other policy type.

**107.13.10.8 Timely Notice of Claims.** Contractor shall give the engineer prompt and timely notice of claims made or suits instituted that arise out of or result from Contractor's performance under this Agreement, and that involve or may involve coverage under any of the required liability policies. The Commission and MoDOT will provide timely notice to the contractor of any claims or lawsuits that it receives. If the Commission demands that the contractor defend the suit and/or indemnify the Commission, the contractor or its insurance company shall acknowledge that demand within 20 days of receiving it and the contractor shall respond within a total of 45 days of the claim receipt the intent of the contractor to defend.

**107.13.10.9 Exhaustion of Policy Limits.** It shall be the contractor's responsibility to notify the engineer promptly when any provided insurance limits are not able to be maintained during the contract period or provide verification that additional coverage or excess coverage is also available.

**107.14 Cooperation in Defense.** The indemnified party shall cooperate with the indemnifying party in the defense of a third-party claim subject to the foregoing, (1) the indemnified party shall not have any obligation to participate in the defense of or to defend any third-party claim, and (2) the indemnified party's defense of or its participation in the defense of any third-party claim shall not in any way diminish or lessen its right to indemnification as provided in this section.

**107.15 Third Party Liability.** Neither the State of Missouri, including the Commission, nor the contractor, by execution of the contract including these specifications, intend to create a right of action in a third-party beneficiary, except as specifically set out in these specifications and the contract. It is not intended by any required contractual liability in the contract or in these specifications that any third-party beneficiary has a cause of action arising out of the condition of the project when completed in accordance with the plans and accepted by the Commission.

**107.16 Personal Liability of Public Officials.** There shall be no personal liability upon the Chief Engineer, or any member, employee, or agent of the Commission in carrying out any of the provisions of the contract or in exercising any power or authority granted to the individual, it being understood that in such matters the individual acts as an agent and representative of the State, with official and public duty doctrine immunity. If any provision of the contract appears to impose a duty on such an individual, the duty will remain exclusively that of the Commission and will not be a personal duty or obligation of the individual.

**107.17 Contractors That Are Not Resident In Missouri.** Any contractor that is not a permanent resident of or domiciled in Missouri shall provide to the Commission proof of compliance with the Missouri "nonresident employers" financial assurance laws at Sections 285.230 to 285.234, RSMo, before the contractor performs any work on a project.

**107.17.1** A nonresident contractor that is a "transient employer" as that term is defined in Section 285.230.1, RSMo, and 12 CSR 10-2.017(1)(A), shall file with the Commission a photocopy of the contractor's current transient employer's certificate of registration issued by the Missouri Department of Revenue before performing any work on a project. A nonresident contractor that is not classified by the Missouri Department of Revenue as a "transient employer" because the nonresident contractor has properly registered with the Missouri Department of Revenue and the Missouri Division of Employment Security, and has filed and paid Missouri state income taxes for more than 24 consecutive months, shall file with the Commission a photocopy of the contractor's certificate of registration, issued by the Missouri Department of Revenue, that it is not a "transient employer" before performing any work on a project.

**107.17.2** The contractor shall require a nonresident subcontractor to file with the Commission a photocopy of the subcontractor's current transient employer's or alternate certificate of registration, as issued by the Missouri Department of Revenue, before that subcontractor performs any work on a project.

**107.17.3** Any nonresident contractor or subcontractor that fails to file the financial assurance forms with the Missouri Department of Revenue as required by Missouri law will be prohibited from contracting for or performing labor on any project for a period of one year.

**107.18 Basis of Payment.** No direct payment will be made for compliance with [Sec 107](#), except as provided by [Sec 618](#).

## 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 617.20.3 and substitute the following:***

**617.20.3 Certification.** Prior to use the contractor shall submit to the engineer a manufacture's certification of crashworthiness per NCHRP 350 or MASH 2016 for portable concrete barrier or other approved temporary barrier. Type F three-loop temporary concrete barrier is required to meet NCHRP 350 requirements regardless of manufacturing date and may be used until January 1, 2030. All other temporary barriers manufactured prior to January 1, 2023 may be used until January 1, 2030. All other temporary barriers manufactured after January 1, 2023 shall meet MASH 2016 crash test requirements.

***Delete Sec 1063.2 and substitute the following:***

**1063.2 General Requirements.** All temporary traffic control devices shall be manufactured as shown on the plans and as specified, in accordance with MUTCD requirements and shall be NCHRP 350 or MASH 2016 compliant. FHWA Category 1 temporary traffic control devices are not required to be crash tested unless modified. Non MASH 2016 FHWA Category 2 temporary traffic control devices and appurtenances manufactured prior to January 1, 2023 may be used until January 1, 2026. Non MASH 2016 FHWA Category 3 temporary traffic control devices and appurtenances manufactured prior to January 1, 2023 may be used until January 1, 2030. All other FHWA Category 2 and Category 3 temporary traffic control devices and appurtenances manufactured after January 1, 2023 shall meet MASH 2016 Test Level 3 crash test requirements. Type F three-loop temporary concrete barrier is required to meet NCHRP 350 requirements regardless of manufacturing date and may be used until January 1, 2030. MASH 2016 FHWA Category 4 temporary traffic control devices should be used when available. Nominal dimensions will be permitted for dimensional lumber where applicable. All temporary traffic control devices shall exhibit good workmanship and shall be free of objectionable marks or defects that affect appearance or serviceability. The brand name or model number shall be permanently identified on each traffic control device.

Alternate Weather Limitations for Plant Mix Bituminous Surface Leveling

**1.0 Description.** Weather limitations for Plant Mix Bituminous Surface Leveling mixtures shall be as specified in Sec 402.10.1 except as otherwise allowed herein.

**1.1** When all remedial actions listed in Section 2.0 have been implemented by the contractor, at no additional cost to the Commission, the alternate weather limitations in Section 1.2 shall apply in lieu of Sec 402.10.1

**1.2 Alternate Weather Limitations.** Bituminous mixtures shall not be placed (1) when either the air temperature or the temperature of the surface on which the mixture is to be placed is below 40 F, or (2) on any wet surface or frozen pavement. Temperatures shall be obtained in accordance with MoDOT Test Method TM 20.

**2.0 Remedial Actions.**

- a) Reclaimed Asphalt Pavement (RAP) content in the mix does not exceed 20% asphalt binder replacement.
- b) No Reclaimed Asphalt Shingles (RAS) are added to the mix.
- c) A material transverse vehicle is utilized to transfer the mix from the haul trucks to the paver.
- d) Warm mix technology shall be incorporated into the mix (either by chemical additive or foaming), as approved by the engineer.

**G. Airport Requirements JSP-15-09**

**1.0 Description.** The project is located near a public use airport or heliport or is more than 200 feet above existing ground level, which requires adherence to Federal Aviation Regulation Part 77 (FAA Reg Part 77). "Near" to a public use airport or heliport is defined as follows:

20,000 feet (4 miles) from an airport with a runway length of at least 3,200 feet  
10,000 feet (2 miles) from an airport with runway length less than 3,200 feet  
5,000 feet (1 mile) from a public use heliport

**2.0** The maximum height of the improvement and the equipment operating while performing the improvements was assumed to be 27 feet for interstates and 25 feet for all other roadways above the current travelway during the process of evaluating the project for compliance with FAA Reg Part 77.

**2.1** If the contractor's height of equipment or if the improvement itself is beyond the assumed height as indicated in Sec 2.0, the contractor will work with the resident engineer to fill out the Form 7460-1, or revise the original Form 7460-1 based upon the proposed height and resubmit, if necessary, for a determination by FAA on compliance with FAA Reg Part 77. Further information can be found in MoDOT's Engineering Policy Guide 235.8 Airports. If the Form 7460-1 must be filed, the associated work shall not be performed prior to the FAA determination, which could take up to 45 days.

**2.2** If the contractor's height of equipment and the improvement itself is below the assumed height as indicated in Sec 2.0, no further action is necessary to fulfill the requirements set forth in FAA Reg Part 77.

**3.0 Basis of Payment.** There will be no direct payment for any work associated with this provision. Contract time extension will be given for the time necessary to obtain or revise the FAA permit. Any delays or costs incurred in obtaining the revised permit will be noncompensable.

H. 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](http://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.

## **I. Traffic Signal Maintenance and Programming**

**1.0 Description.** Traffic signal maintenance and timing for this project shall be in accordance with Section 902 of the Standard Specifications, and specifically as follows.

### **2.0 Qualified Traffic Engineer**

**2.1** The Contractor shall have an experienced traffic engineer with a Professional Engineer's



(PE) license in Missouri as well as a Professional Traffic Operations Engineer (PTOE) certification (hereafter referred to as "Contractor's traffic engineer") with the noted experience defined below. The Engineer shall approve the traffic engineer prior to them being hired.

**2.2 Experience.** Any proposed Contractor traffic engineer shall be able to demonstrate personal successful previous experience in the following tasks:

**2.2.1 Response.** The Contractor's traffic engineer shall have the ability to be on site within one (1) hour of being requested.

**2.2.2 Corridor Management:** Time/space diagram manipulation in order to successfully adjust offsets and splits for rapidly changing traffic demands.

**2.2.3 Controller Programming:** Ability to program by hand and by software Phase, TBC, and Coordination levels of any Commission-owned Advanced Traffic Signal Controller.

**2.2.4 Intersection Programming:** Implementation of adjusted and/or new timing plans as a result of changing traffic demand.

**2.2.5 Signal Software:** Use and understanding of TransCore traffic control software.

**2.3** The Contractor shall submit the names(s) of proposed traffic engineer(s) and the name(s) of all other personnel on their proposed staff along with detailed experience in all tasks outlined in Paragraph 2.2 above. The Engineer reserves the right to reject any Contractor traffic engineer, before the start of work, who does not have sufficient experience or, at any point during the project, which does not satisfy the requirements set forth within this Job Special Provision. A list of potential traffic engineers shall be submitted for review to the Commission prior to bid.

**2.4 VPN Access.** The Commission operates the noted signals through a central signal system which is capable of remote adjustments to controller programming.

**2.4.1** The approved contractor's traffic engineer and any staff assigned to manage the traffic signals during the project is encouraged to apply for VPN (Virtual Private Network) access with the Engineer once the project is awarded. If approved, the Engineer will assign a unique IP address to the Contractor's traffic engineering staff, which will allow for remote access to the Commission's central signal control system as appropriate and the ability to interface with the noted signals on this project.

### **3.0 Existing Traffic Signals and Communication System**

**3.1** The Contractor shall notify the Engineer three (3) weeks prior to the date of bridge closure and detour implementation. The contractor shall meet with the Engineer's representatives along with representatives of any other agency whose signals are controlled by this provision to discuss their traffic mitigation plan at least one (1) week before the date of the first closure and as needed between construction stages. The traffic mitigation plan should at a minimum include:

- Proposed Timing Plan changes and any models
- Anticipated locations of concern
- A map in electronic format displaying the locations and names of the signals as detailed in Paragraphs 3.2 and 3.3 below.
- Other traffic mitigation efforts



**3.2** Once the bridge closure has been implemented by the Contractor, the Contractor shall then be solely responsible for the following signals' controller programming until completion of all closures necessary to complete the Contractor's work. Maintenance at these locations for items other than controller programming issues or incidents caused by controller programming or other construction done by the Contractor shall remain with the Commission. If any part of an existing traffic signal or its controller within the limits of this project has otherwise been modified or adjusted by the Contractor, or the Contractor makes any roadway changes to reduce the traffic capacity through a signalized intersection within the limits of the project, or the Contractor begins work at an intersection with signals already in operation, the Contractor shall then be solely responsible for that signal's controller programming and all signal maintenance as specified in 902.2 and 902.3, except for power costs, until Final Acceptance of the project.

**J6I3550 Commission Signals:**

- I-64 at Route DD (Winghaven Blvd) Interchange, Two Signalized Intersections
- I-64 at Route N (Town Square Ave) Interchange, One Signalized Intersections
- I-64 at Hanley Rd., Two Signalized Intersections.
- I-64 at Bellevue Ave., One Signalized Intersection.
- I-64 at Hampton Ave., Two Signalized Intersections.
- I-64 at Kingshighway Blvd., One Signalized Intersection.
- Route 100 over the BNSF and UP RR, Two Signalized Intersections.
- I-64 at Compton Ave., Two Signalized Intersections
- Route 364 at 141 (Maryland Heights Expressway) Interchange, Two Signalized Intersections

**3.3** The Engineer shall provide to the Contractor with two (2) weeks' notice an electronic report on the existing phasing and timing of each traffic signal which may be the Contractor's responsibility to program. The Engineer shall be available to the Contractor before any changes are made to a signal or controller to answer any questions about the report. In lieu of the report, the Contractor's traffic engineer may obtain this information from the Commission's central signal control system. Once the Contractor has modified a signal or controller for any reason, the Contractor shall be solely responsible for the existing timing plans and all subsequent timing changes.

**3.4** The Contractor shall notify the Engineer of the changes no later than (1) working day after changes are programmed if unable to provide advance notice as specified in 902.2.

**3.5** The Contractor shall be solely responsible for maintaining the coordination at any affected signal to the satisfaction of the Engineer until completion of work as set forth in section 3.2 of this provision. Maintenance of coordination may include the synchronization of the affected controller's internal time clocks to the second using an atomic clock, or other means approved by the Engineer. If time clock synchronization is used, the Contractor shall verify all affected controllers are synchronized at least one (1) time per week with a report to the Engineer. This report will be in the form of a documentation record as spelled out in the Work Zone Traffic Management Plan.

**4.0 Existing Traffic Signal Maintenance and Response**

**4.1** The Contractor shall respond to any signal timing complaints or malfunction complaints for those locations detailed in Section 3.0 of this provision and as specified in Section 902.21.1.

Response time shall be one (1) hour for complaints received by the contractor between 6 AM and 6 PM on non-holiday weekdays, and two (2) hours for all other times. For some cases (due to travel times or other extenuating circumstances) additional time may be acceptable within reason, but must be approved by the Engineer. These timeframes will replace the '24 hour' response time in Section 105.14 for any signal-related incidents, where the entire cost of the work, if performed by Commission personnel or a third party, will be computed as described in Section 108.9 and deducted from the payments due the Contractor.

**4.2** The Contractor must supply a contact name and phone number who will be responsible for receiving signal timing complaints for the Engineer. These complaints may be forwarded directly to the Contractor by someone other than the Engineer, including but not limited to the Commission's Customer Service Representatives, and will not relieve the Contractor from properly responding based on the response times of this Provision. The Contractor shall respond to the Engineer within 12 hours of the complaint as to the remedy. The Contractor shall submit to the Engineer a weekly report of complaints received and remedies performed throughout the duration of the project.

## **5.0 Original Signal Controller Programming and Acceptance**

**5.1** The Contractor will be responsible for restoring the original signal controller programming at existing intersections and coordination plans for each intersection immediately upon bridge reopening. The Engineer shall preserve and house the original controller files and provide the Contractor with access to those files in order to perform the restoration of the original plans. Normal plan restoration can be done by a manual command in the signal control system or a preprogrammed time-of-day command change. For any locations rendered offline at the time of re-opening, these locations shall be returned to normal operation by hand. The contractor will be relieved of signal programming maintenance at an existing restored intersection once 48 consecutive hours have passed without a programming malfunction, including restoring normal signal programming to the satisfaction of the Commission.

## **6.0 Post Project Report**

**6.1** The Contractor shall submit to the Engineer a post project report, four to six weeks after the final signal adjustments have been completed. The report shall include at a minimum an observation report, summary of timing changes and locations, summary of complaints, and any other pertinent information regarding the contractor's efforts for managing these signal corridors in one electronic document.

## **7.0 Deliverables**

**7.1** All deliverables mentioned in this provision shall be submitted to the Engineer in a timely manner to the satisfaction of the Engineer prior to receiving full compensation for this work.

- Experience submittal
- Preliminary Traffic Mitigation Plan
- Notification of Detour Implementation
- Time Base Reports, As Needed
- Complaint Resolutions
- Notification of Restoration to Normal Operations
- Post Project Report

**8.0 Construction Requirements.** Construction requirements shall conform to Sections 902,

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Route: Various  
County: Various

1061 and 1092.

**9.0 Method of Measurement.** Method of measurement shall conform to Section 902.

**10.0 Basis of Payment.** Payment will be considered full compensation for all Contractor services, installation, and labor to complete the described work for each project:

Item No.	Type	Description
616-99.01	Lump Sum	Traffic Signal Maintenance and Programming

J. St. Louis County, St Louis City, St. Charles City, St. Charles County Traffic Signal Equipment

**1.0 Description.** The contractor shall coordinate their work schedule with the engineer and with the St. Louis County, St. Louis City, others staff contact listed below. The contractor shall take care not to damage any existing St. Louis County traffic signal equipment. St. Louis County will notify the engineer when they have completed their inspection.

St. Louis County  
Contact: Scott Halter  
Phone: 314-615-0202  
Email Address: [SHalter@stlouisco.com](mailto:SHalter@stlouisco.com)

St. Louis City  
Contact:  
Phone:  
Email Address:

St. Charles City  
Contact: Brad Temme  
Phone: 636-940-4617  
Email Address: [brad.temme@stcharlescitymo.gov](mailto:brad.temme@stcharlescitymo.gov)

St. Charles County  
Contact: Jacob Becher  
Phone: 636-949-7900 ext. 7230  
Email Address: [jbecher@sccmo.gov](mailto:jbecher@sccmo.gov)

**2.0 Basis of Payment.** No direct payment shall be made for compliance with this provision.

K. NTCIP Compliant Changeable Message Sign (Contractor Furnished and Retained)

**1.0 Description.** All solar powered changeable message signs, hereinafter referred to as a CMS, shall be in accordance with these specifications.

**2.0 Material.** Each CMS shall consist of an all LED (light emitting diode) matrix message board, solar/battery power supply and a user-operated interface, as specified, all mounted on a heavy duty, towable trailer.

**2.1** Each CMS shall be either Full Matrix or Character Matrix, and have the following minimum characteristics:

- (a) Full Matrix - Each CMS shall be the Full Matrix type with the capability of providing one, two, and three lines of individual changeable characters with minimum heights of 52 (1300), 28 (700), and 18 (450) inches (mm), respectively. Full Matrix signs shall be capable of both static and dynamic graphics, and full display sized messages.
- (b) Character Matrix (Three Line) – Each CMS shall consist of a minimum of three lines containing eight individual changeable characters per line. Each character shall be a minimum of 12 inches wide and 18 inches (450 mm) high.
- (c) Sign firmware shall comply with the current FHWA and DOT (Department of Transportation) NTCIP standards and support all NTCIP mandatory objects.
- (d) The sign controller shall be remotely accessible by the MoDOT St Louis District Transportation Management Center (TMC) through the Commission's ATMS (Advanced Traffic Management System) software, currently TransSuite provided by TransCore. The contractor will be responsible for ensuring the CMS is added to the ATMS software.
- (e) The CMS shall have a cellular data modem compatible with the district's current cellular IP (packet data) service provider and be capable of allowing the MoDOT St Louis District TMC ATMS software to have full control of the NTCIP compliant CMS controller remotely. Modem shall be capable of being programmed with a static IP.
- (f) The sign shall have a GPS unit that can assist in locating the sign's position when polled by the TMC. The GPS unit must be remotely accessible by the TMC and be part of or work with the provided communication modem.
- (g) Physical access to the onboard computer shall be protected by a padlock or other locking handle mechanism. Electronic access to the onboard computer shall be protected by a username and password.

Full matrix CMS and character matrix CMS shall meet the following:

- (h) The overall sign dimensions shall not be less than 72 inches (1800 mm) high x 126 inches (3150 mm) wide.
- (i) The CMS shall be legible up to a distance of 650 feet (200 m) for both day and night operations and shall be visible for ½-mile (800 m) with 18 inch (450 mm) characters.
- (j) When fully raised in the display position, the bottom of the CMS board shall be at least a height of 7 feet (2100 mm) from the ground and shall be able to rotate a complete 360 degrees atop the lift mechanism. A sight tube, used to aim the CMS board to oncoming traffic, shall be installed on the CMS board or mast. The CMS shall have an electrical-hydraulic lifting mechanism that includes a manual lifting and lowering relief mechanism as a backup. It also must be able to be locked into various viewing angles as determined best for the motorists by the CMS operator.

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Route: Various  
County: Various

- (k) All LED displays and control circuitry shall be operational from -20 F (6 C) to 120 F (50 C). The LED's shall have a rated life of 100,000 hours. The LED's shall be ITE amber in color on a flat black background.
- (l) The CMS face shall be constructed that if an individual panel or pixel fails the rest of the face shall continue to display the message.
- (m) All costs and coordination needed for testing to verify modem communication, sign NTCIP compliance, remote GPS status polling, ability to control the sign via the St Louis District's ATMS software provided by TransCore shall be the sole responsibility of the Contractor. Full integration into TransCore's ATMS shall be completed at least 5 business days prior to use of the CMS in the project. TransCore contact information will be provided to the contractor by contacting MoDOT's Gateway Guide staff at 314-275-1526 or via email at ggtech@modot.mo.gov with details of the request. No other support shall be provided by MoDOT other than TransCore contact information. Information provided shall include, at a minimum, CMS make and model, IP address, and proposed locations and messages.
- (n) The Contractor shall be responsible for all monthly cellular service fees for the duration of the project.
- (o) The unit shall be able to withstand a 65-mph (105-kmph) maximum road wind speed. The trailer shall be able to support the fully extended CMS board in an 80-mph (130-kmph) wind load.
- (p) Solar charging system shall allow for total autonomy of 24/7/365 continuous operation.
- (q) All exterior surfaces except the sign face shall be cleaned, primed, and finished with two coats of Highway Safety Orange and the sign interior itself shall be cleaned and finished with one coat of corrosion inhibiting primer and two coats of flat black. The sign face shall be covered with a rigid translucent material to prevent damage to the sign face caused by the environment.

**3.0 Construction Requirements.** Prior to placing a CMS on a project, the engineer shall verify proposed CMS location is void of conflict with another DMS or CMS locations presently established. If a conflict is present, the engineer shall contact the Traffic Management Center (TMC) at 314-275-1526 to mitigate. If no conflict is present, engineer shall provide Traffic Management Center (TMC) with the Job Number, Route, County, specific CMS location, and a CMS identification number that is permanently affixed to the CMS. The engineer and contractor shall verify the message displayed on board is compliant with CMS messaging policies. The contractor shall place the CMS 6 feet [2 meters] off of the right edge of shoulder at the location shown on the plans or as directed by the engineer. The CMS shall be placed so that the right side of the unit is advanced approximately 3 degrees ahead with the direction of traffic. CMS shall not be located in medians. CMS shall be delineated with a minimum of five non-metallic channelizing devices. Installation, including location and placement, shall be approved by the engineer. If needed, the contractor shall relocate the CMS as directed by the engineer. When not in use, the CMS shall be stored no closer than 30 feet [10 meters] to the edge of pavement carrying traffic, unless it is in a properly protected area or an off-site storage area or as otherwise directed by the engineer.

**4.0 Basis of Payment.** All expenses incurred by the contractor in integrating, maintaining,

Job No.: J613550  
Route: Various  
County: Various

relocating, operating, and protecting the changeable message signs as outlined above shall be paid for at the contract unit price for the following:

Item No.	Type	Description
616-99.02	Each	NTCIP Compliant Changeable Message Sign (Contractor Furnished and Retained)

L. Coordination with Other Projects

**1.0 Description.** The contractor shall coordinate traffic management between this project and any other projects within the limits of work, including future projects. Each Contractor shall conduct their work so as not to interfere with or hinder the progress or completion of the work being performed by other Contractors. In case of dispute, the Engineer shall be the referee and the Engineer's decision shall be final and binding on all.

**2.0 Coordination.** The Contractor shall coordinate work within the limits of the project with the following Missouri Department of Transportation projects:

- Job No. J6S3509
- Job No. J6S3302

This list of projects is not all inclusive. The contractor shall be aware that there may be other projects including, but not limited to, utility, private, MoDOT maintenance, permit, or other projects that may impact project construction or traffic control in the vicinity of this project. It shall be the responsibility of the contractor to determine what, if any, projects other than the ones listed above may impact this project and work to coordinate construction and traffic management efforts between this project and any other project involved.

**4.0 Site Construction.** The Contractor shall arrange the work and shall place and dispose of the materials being used so as not to interfere with the operations of the other contractor.

**5.0 Basis of Payment.** No direct payment will be made to the contractor to recover the cost of the equipment, labor, materials, or time required to for this coordination with other projects.

M. Slurry and Residue Produced During Surface Treatment of PCCP and Bridge Decks  
JSP-06-05A

**1.1 Description.** This work covers the requirements for controlling residue or slurry produced by milling, grinding, planing, grooving or other methods of surface treatments on new or existing PCCP and bridge decks in addition to Section 622.

**2.0 Construction Requirements.** The following shall be considered the minimum requirements for performing this work within the project limits.

**2.1** The contractor shall submit to the Engineer for approval in writing prior to the pre-construction meeting, the best management practices (BMP's) to be used to protect the environment, including the method of disposal of the residue whether on right of way or off-site.

**2.2** When slurry is dispersed on the right of way, BMP's shall be installed to keep slurry or residue from entering paved ditches or structures discharging within the areas restricted by Section 622.303.8.6, from entering any waterways or from leaving the right of way.

**2.3** Upon approval of the contractor's BMP and residue disposal plan and prior to the contractor beginning surface treatment operations, the Engineer will identify slurry or residue "no discharge zones".

**2.4** Operations may be suspended by the Engineer during periods of rainfall or during freezing temperatures.

**3.0 Basis of Payment.** No direct payment for slurry or residue control requirements for BMP's will be made. Compliance with this specification along with the cost of all materials, labor and equipment necessary for the surface treatment work shall be included in and completely covered by the unit price bid for each of the items of work for surface treatment included in contract.

N. Coordination with MoDOT Signal Shop for Cabinet Entry

**1.0 Description.** Commission-furnished color-coded pad locks have been placed on all of MoDOT's signal cabinets in addition to the key used to unlock the door handle. To gain access to the appropriate cabinets during the project all contractors shall coordinate with MoDOT's signal shop to obtain the proper keys and locks.

**1.0.1 Keys & Locks.** Red locks & keys are provided when a contractor has modified the signal cabinet and MoDOT staff shall not have access to the cabinet until it is accepted for maintenance. The blue keys are provided for entry into the cabinet where MoDOT's Signal Shop group deems the access to be minor in nature (entry to the cabinet to make a simple network switch connection, for example).

**1.0.2 Completion of Project.** At the completion of the project all keys and pad locks distributed to contractor during the project shall be returned to the Signal Shop supervisor or their representative and keys shall not be reproduced.

**2.0 Contact.** Initial contact must be made at least seven calendar days before work begins, preferably when the project has the notice to proceed or during the pre-construction meeting, if applicable. MoDOT's Signal Shop supervisors shall be notified prior to work beginning. Contact the signal shop via email at [sltrs@modot.mo.gov](mailto:sltrs@modot.mo.gov) to coordinate which padlocks are to be used.

**3.0 Basis of Payment.** No direct payment shall be made for compliance with this provision.

O. Utilities JSP-93-26F

**1.0** For informational purposes only, the following is a list of names, addresses, and telephone numbers of the known utility companies in the area of the construction work for this improvement:

Job No.: J613550  
Route: Various  
County: Various

<u>Utility Name</u>	<u>Known Required Adjustment</u>	<u>Type</u>
<b>Ameren Missouri</b> Construction Hotline Telephone: (314) 992-6619 Email: <a href="mailto:constructionhotline@ameren.com">constructionhotline@ameren.com</a>	None	Power
<b>City of St. Louis—Signals/Lights</b> Len Efthim Phone: (314) 647-3111 ext. 1105 Email: <a href="mailto:efthiml@stlouiscity.com">efthiml@stlouiscity.com</a>	None	Communications and Lighting
<b>City of St. Louis—Water</b> Mark Nankivil Telephone: (314) 633-9023 Email: <a href="mailto:mnankivil@stlwater.com">mnankivil@stlwater.com</a>	None	Water
<b>Lumen</b> Rich Obremski Telephone: (314) 378-9931 Email: <a href="mailto:william.carpenter@lumen.com">william.carpenter@lumen.com</a>	None	Communications
MoDOT ITS Anna Privitt Telephone: (314) 624-7466 Email: <a href="mailto:Anna.Privitt@modot.mo.gov">Anna.Privitt@modot.mo.gov</a>	None	Communications

**1.1 The Contractor shall be aware there are numerous utilities present along the routes in this contract.** Utility locates were not performed during the design phase of the project; therefore, the extent of conflicts with utilities are unknown. It is the inherent risk of the work under this contract that the contractor may encounter these utilities above and/or below the ground or in the vicinity of any given work item which may interfere with their operations. The contractor expressly acknowledges and assumes this risk even though the nature and extent are unknown to both the contractor and the Commission at the time of bidding and award of the contract.

**1.2 Guardrail Locations:** The contractor shall be aware there are numerous utilities present along the route in this contract. The full extent of conflicts with utilities are unknown. There may be underground utilities that run parallel or cross the routes that are in close proximity to guardrail work locations. The contractor shall take necessary precautions and measures to verify locations and depths of utilities by any necessary means to determine exact impacts to their work.

**1.3 Records indicate that Ameren has electrical conduits attached to structures on this project (see section 2.0 attachments on Bridges).** The contractor shall discuss the planned work as it relates to any Ameren Missouri facilities and coordinate with Ameren Missouri for the installation of protective measures and/or any other designated requirements. The contractor is advised to contact Ameren Missouri regarding the current policy and so that the anticipated cost to the contractor can be estimated and when payment is required. The Contractor shall contact Ameren Missouri in advance of when construction work is scheduled to begin requesting



protection of Ameren's facilities and to coordinate Ameren's work with the project schedule at a given location. **The contractor is responsible for any charges from Ameren Missouri for this provision and payment will be directly to Ameren Missouri.**

**2.0 Attachments on Bridges:** While the proposed work does not appear to conflict with the conduits attached to the Structures in this project, the Contractor shall take necessary precautions and measures to verify locations of the conduit and to protect in place existing facilities during construction.

**2.1 Bridge A6014, 364 over CCMR & UPRR:** Records indicate that are four (4) 24" diameter pipes attached to the structure at bays 2,5,7, and 9 before passing through the diaphragms.

**2.2 Bridge A6052, 364 over CCMR & UPRR:** Records indicate that are four (4) 24" diameter pipes attached to the structure at bays 2,5,7, and 9 before passing through the diaphragms.

**2.3 Bridge A6752, I-64/ US-40 over Dardenne Creek:** Records indicate that there are two (2) 2" conduits mounted to the exterior of the south barrier.

**2.4 Bridge A7046, Chouteau Ave over BNSF:** Records indicate that there is one (1) 12" water pipe supported in a hanger system under the structure.

**2.5 Bridge A7122, Chouteau Ave over BNSF:** Records indicate that there is one (1) 12" Ductal Iron water pipe attached to the south side of the structure.

**2.6 Bridge A7080, Compton Ave over I-64:** Records indicate that there are three (3) 3" electrical, three (3) 2" electrical, and one (1) 1.5" lighting conduits attached to the structure.

**2.6.1** NWC of Compton & Market, north of 64. St Louis University has a multiple way duct package, and the St. Louis City Water Division has a thirty (30) inch water main crossing perpendicular to proposed guard rail at this location. St Louis Water also has a six (6) inch water line that crosses perpendicularly at this location. Additional length of guard rail was added to the project at this location so that the contractor can adjust the post spacing to avoid this conflict. The Contractor shall take necessary precautions and measures to verify locations of the conduit and to protect in place existing facilities during construction. **The contractor shall coordinate through the District Utility Coordinator (see section 3.0) two (2) weeks before working at this location so that the Utility Companies can have a technician field verify the facility locations and monitor work over their facilities.**

**2.7 Bridge A7081, Compton Ave over I-64:** records that there are no attachments on this structure.

**2.7.1** St. Louis City has a wooden traffic signal posts for the intersection of Compton & Spruce located right behind the existing guardrail. The City anticipates having the signal poles adjusted during construction of this project. **The contractor shall coordinate through the District Utility Coordinator (see section 3.0) to have this work done.**

**2.8 Bridge A8004, Hanley Road over I-64:** Records indicate that there are two (2) 2" lighting conduits attached to the north abutment, fourteen (14) 4" black coated fiberglass conduits four (4) at bay 6 with the remaining ten (10) at bay 7, and One (1) 2" conduit also at bay 7.

**2.9 Bridge A8016, Hanley Road over I-64:** Records indicate that there is under bridge lighting

attached to the structure by a hanging system with the lights mounted to the wall coping. Records also indicate that there are sixteen (16) 4" conduits attached to the structure by a hanger system.

**2.10 Bridge A8028, Hampton Ave over I-64:** Records indicate that there are three (3) 4" Ameren conduits attached to the structure and two (2) 2" MoDOT ITS conduits attached to the structure.

**2.11 Bridge A8029, Hampton Ave over I-64:** Records indicate that there are six (6) 2" electrical conduits attached to the bottom of bays 1, 6, and 11.

**2.12 Bridge A8033, Kingshighway Blvd over I-64:** Records indicate that there are three (3) 3" lighting conduits attached to the structure. Records also indicate that there are one (1) 6" and seven (7) 2" conduits attached to the precast deck panels.

**2.12.1 CenturyLink DTI;** The contractor shall be aware that the DTI line along I-64 was not picked up during the design phase of this project. This line historically was installed outside of the utility corridor and the contractor shall take necessary precautions and measures to verify locations of Lumen's fiber line and to protect in place their existing facilities during construction.

**2.13 Bridge A8036, Kingshighway Blvd over I-64:** Records indicate that there are three (3) 1" lighting conduits attached to this structure as well as two (2) other 2" conduits.

**2.14 No Utility attachments Bridges in order of appearance on list:** Bridge A4169, F over Callaway Fork Creek, Bridge A5962, DD over I-64/US-40, Bridge A5985, MO-94 over Lil' Femme Osage, Bridge A6083, 364 over Route 141, Bridge A6190, 364 over Route 141, Bridge A6475, Z over Dardenne Creek, Bridge A6657, F over Callaway Fork Creek, Bridge A6753, I-64/US-40 over Dardenne Crk, Bridge A7233, DD over Dardenne Creek, Bridge A7323, N over I-64/US-40, Bridge A8020, Big Bend Blvd & Bellevue Ave, Bridge A8022, Big Bend & Bellevue Ave:

**3.0 If utility facilities are discovered the contractor shall contact the MoDOT Area Utility Coordinator,** Chris Duffner at (314) 624-5383. The engineer will determine whether relocation of the utility is necessary to accommodate construction or if the work can be installed in accordance with Missouri Standard Plans for Highway Construction for the item of work specified.

**4.0 Basis of Payment:** No direct payment shall be made for compliance with this provision.

P. Lump Sum Temporary Traffic Control JSP-22-01

**1.0 Delete Sec 616.11 and insert the following:**

**616.11 Method of Measurement.** Measurement for relocation of post-mounted signs will be made to the nearest square foot of sign area only for the signs designated for payment on the plans. All other sign relocations shall be incidental. Measurement for construction signs will be made to the nearest square foot of sign area. Measurement will be made per each for each of the temporary traffic control items provided in the contract.

**616.11.1 Lump Sum Temporary Traffic Control.** No measurement will be made for temporary traffic control items grouped and designated to be paid per lump sum. The list of lump sum items provided in the plans or contract is considered an approximation and may be subject to change

based on field conditions. This is not a complete list and may exclude quantities for duplicate work zone packages used in simultaneous operations. The contractor shall provide all traffic control devices required to execute the provided traffic control plans for each applicable operation, stage, or phase. No measurement will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer.

**2.0 Delete Sec 616.12 and insert the following:**

**616.12 Basis of Payment.** All temporary traffic control devices authorized for installation by the engineer will be paid for at the contract unit price for each of the pay items included in the contract. Whether the devices are paid individually, or per lump sum, no direct payment will be made for the following:

- (a) Incidental items necessary to complete the work, unless specifically provided as a pay item in the contract.
- (b) Installing, operating, maintaining, cleaning, repairing, removing, or replacing traffic control devices.
- (c) Covering and uncovering existing signs and other traffic control devices.
- (d) Relocating temporary traffic control devices, including permanent traffic control devices temporarily relocated, unless specifically included as a pay item in the contract.
- (e) Worker apparel.
- (f) Flaggers, AFADs, PFDs, pilot vehicles, and appurtenances at flagging stations.
- (g) Furnishing, installing, operating, maintaining, and removing construction-related vehicle and equipment lighting.
- (h) Construction and removal of temporary equipment crossovers, including restoring pre-existing crossovers.
- (i) Provide and maintaining work zone lighting and work area lighting.

**616.12.1 Lump Sum Temporary Traffic Control.** Traffic control items grouped together in the contract or plans for lump sum payment shall be paid incrementally per Sec 616.12.1.1.

Alternately, upon request from the contractor, the engineer will consider a modified payment schedule that more accurately reflects completion of traffic control work. No payment will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer. Additional items directed by the engineer will be paid for in accordance with Sec 109.4. No adjustment to the price will be made for overruns or underruns of other work or for added work that is completed within existing work zones.

**616.12.1.1 Partial payments.** For purposes of determining partial payments, the original contract amount will be the total dollar value of all original contract line items less the price for Lump Sum Temporary Traffic Control (LSTTC). If the contract includes multiple projects, this determination will be made for each project. Partial payments will be made as follows:

Job No.: J613550  
Route: Various  
County: Various

(a) The first payment will be made when five percent of the original contract amount is earned. The payment will be 50 percent of the price for LSTTC, or five percent of the original contract amount, whichever is less.

(b) The second payment will be made when 50 percent of the original contract amount is earned. The payment will be 25 percent of the price for LSTTC, or 2.5 percent of the original contract amount, whichever is less.

(c) The third payment will be made when 75 percent of the original contract amount is earned. The payment will be 20 percent of the price for LSTTC, or two percent of the original contract amount, whichever is less.

(d) Payment for the remaining balance due for LSTTC will be made when the contract has been accepted for maintenance or earlier as approved by the engineer.

**616.12.1.2** Temporary traffic control will be paid for at the contract lump sum price for Item:

Item No.	Type	Description
616-99.01	LS	Misc. (Traffic Control Bridge A4169)
616-99.01	LS	Misc. (Traffic Control Bridge A5962)
616-99.01	LS	Misc. (Traffic Control Bridge A5985)
616-99.01	LS	Misc. (Traffic Control Bridge A6014/A6052)
616-99.01	LS	Misc. (Traffic Control Bridge A6083/A6190)
616-99.01	LS	Misc. (Traffic Control Bridge A6475)
616-99.01	LS	Misc. (Traffic Control Bridge A6657)
616-99.01	LS	Misc. (Traffic Control Bridge A6752/A6753)
616-99.01	LS	Misc. (Traffic Control Bridge A7046/A7122)
616-99.01	LS	Misc. (Traffic Control Bridge A7080/A7081)
616-99.01	LS	Misc. (Traffic Control Bridge A7233)
616-99.01	LS	Misc. (Traffic Control Bridge A7323)
616-99.01	LS	Misc. (Traffic Control Bridge A8004/A8016)
616-99.01	LS	Misc. (Traffic Control Bridge A8020)
616-99.01	LS	Misc. (Traffic Control Bridge A8022)
616-99.01	LS	Misc. (Traffic Control Bridge A8028/A8029)
616-99.01	LS	Misc. (Traffic Control Bridge A8033)
616-99.01	LS	Misc. (Traffic Control Bridge A8036)

No direct payment will be made for the following:

- Incidental items necessary to complete the work, unless specifically provided as a pay item in the contract.
- Installing, operating, maintaining, cleaning, repairing, removing or replacing traffic control devices.
- Covering and uncovering existing signs and other traffic control devices.
- Relocating temporary traffic control devices, including permanent traffic control devices temporarily relocated, unless specifically included as a pay item in the contract.

- e) Providing channelizers.
- f) Provide barricades.
- g) Provide flashing arrow panels.
- h) Worker apparel.
- i) Flaggers, pilot vehicles, and appurtenances at flagging stations.
- j) Temporary chain-link fence and gates.
- k) Orange construction fencing.
- l) Furnishing, installing, operating, maintaining, and removing construction-related vehicle and equipment lighting.
- m) Construction and removal of temporary equipment crossovers, including restoring pre-existing crossovers.
- n) Removing existing pavement markings, installing temporary pavement markings, and removing and relocating temporary pavement markings as necessary for staging operations.
- o) Installing regional temporary construction Signs. Contractor required to provide post & footing design.
- p) Installing "Drive Smart" and "Points of Presence" signs.

**3.0** Any additional work deemed necessary by the engineer that requires temporary traffic control and is not covered by the contract plans will be included in the cost change order for the additional work. However, if the added work is required in a stage where temporary traffic control is already in place, no additional traffic control pay will be allowing in this case.

Q. Site Restoration

**1.0 Description.** Restore to its original condition any disturbed area at sites including, but not limited to items such as: fencing, pavement markings, guardrail, sidewalks, ramp, bus stop pad, sprinklers, pull box, conduit, and pole base installations. Restoration shall be accomplished by placing material equivalent to that of the adjacent undisturbed area. Disturbed unpaved areas shall be fertilized and either seeded and mulched or sodded as directed by the engineer. The engineer will have the final authority in determining the acceptability of the restoration work.

**2.0 Materials.** Any areas of concrete paved ditch, pavement and shoulders as well as any similar improvements shall be replaced with improvements of similar composition and thickness. Removals shall be achieved by means of full depth saw cut, the resulting subgrade compacted to minimum density requirements and topped with 4 inches of compacted aggregate base course prior to replacement of surface materials. Concrete materials used in replacement shall be approved by the engineer. A commercial asphalt mix may be used for replacement of asphaltic surfacing upon approval of the engineer.

**2.1** Unless quantities and pay items for removal and subsequent replacement of improvements are contained in the plans for a specific location of removal work, no direct payment will be made for full depth saw cutting and the removal and subsequent replacement of asphalt, pavement, shoulders etc. This work will be considered as included in the various unit bid prices established in the contract, and no additional payment will be made.

**2.2** If the contractor elects and receives approval from the engineer for alternate trench and/or pull box locations, any areas of concrete slope protection, sidewalk, pavement, shoulders, islands and medians – as well as any similar improvements consisting of asphaltic concrete materials – removed in conjunction with their construction shall be replaced with improvements of similar composition and thickness. Removals shall be achieved by means of full depth saw cuts, the resulting subgrade compacted to minimum density requirements and topped with 4 inches of compacted aggregate base course prior to replacement of surface materials. Concrete materials used in replacement, shall be approved by the engineer. A commercial asphalt mix may be used for replacement of asphaltic surfacing upon approval of the engineer.

**2.3** All guardrail post holes remaining from the removal of existing guardrail posts in existing concrete or asphalt pavement or ditch shall be backfilled with a granular material and sealed with a ½ inch hot-poured elastic type material in accordance with Section 1057 or as approved by the Engineer. Any concrete or asphalt pavement or ditch damaged in the process of fulfilling this provision shall be replaced in kind and considered incidental to the installation of the new guardrail at the disturbed location

**2.5** Areas that are used by the contractor for jobsite trailers, equipment and materials storage, or used for project staging areas that are disturbed shall be cleaned up and restored to a condition that is both acceptable to the engineer and, at a minimum, equivalent to the existing site condition.

**3.0 Basis of Payment.** The cost of restoration of disturbed areas will be incidental to the unit price of the items associated with the disturbance. No direct payment will be made for any materials, equipment, time, or labor, which is performed under this provision.

R. Vegetation Removal and Trimming

**1.0** This work shall consist of removing or trimming back all trees, brush and other vegetation such that the bridge structures shall be cleared of vegetation within twenty (20) feet of the outside edge of the bridge barrier structure or as directed on the plans. This work shall also include transporting and disposing of this material off of the right of way at a waste disposal site.

**2.0 Construction Requirements.** This work shall be done in accordance with the Sec 201, except hereinafter.

**2.1 Limits of Removal.**

**Bridge A5962:** The area of vegetation removal and trimming shall include the four corners of the bridge near the abutments.

**Bridge A7323:** The area of vegetation removal and trimming shall include the four corners of the bridge, extending one hundred (100) feet from the shoulder or as directed by the engineer.

Job No.: J613550  
Route: Various  
County: Various

**2.2 Existing Right of Way.** The contractor shall exercise caution when trees, brush or other vegetation is near the limits of MoDOT's right of way and verify any ownership of vegetation prior to the start of this work.

**3.0 Method of Measurement.** No final measurement shall be made.

**4.0 Basis of Payment.** The work for this provision will be paid for at the contract unit bid price for:

Item No.	Type	Description
201-99.19	Acre	Vegetation Removal and Trimming

S. Miscellaneous Construction Requirements

**1.0 Fencing.** The contractor shall be permitted to remove fencing under the bridges in order to access bridge bents, substructures, and to perform excavation / rock work under the bridges. The fencing shall be reinstalled when construction is completed as per existing condition when removed. Fencing damaged by the contractors activities shall be replaced in kind at the contractor's expense as approved by the Engineer.

**2.0 Guardrail.** Any new guardrail to be installed shall be installed in accordance with the Standard Plans. Existing concrete may need to be removed and replaced with gravel or approved material to allow post flexure as shown in the Standard Plans.

**3.0 Hauling over Streets.** Streets over which hauling is performed shall be kept reasonably clean of spillores or tracked-on materials at all times and shall be thoroughly cleaned of such materials daily, within one hour after the suspension of hauling operations if said street is used by the traveling public. The contractor shall be aware that emergency vehicles may be required to pass during hauling operations and the contractor shall be in a position to allow passage of such emergency vehicles. No direct payment shall be made for any expense incurred by the contractor for his/her compliance with this provision.

**4.0 Access to Creeks and Contract Work.** Contractor will be required to access the creek locations near the bridges in order to complete the noted work in the plans. All access shall be reviewed with the engineer prior to work starting no less than **Two Weeks** prior to work beginning. Erosion Control items have been set up for this work along for any disturb areas in contract to provide this access and to be maintained. It should also be noted that the contractor shall stay within the footprint of the bridge locations and with R/W limits as per existing bridge plans.

Any and all work which is started shall be completed in same day operation. Therefore, excavation for Rock Blanket, shall follow up with complete installation of Rock Blanket within same day operation. Work then shall proceed until work is complete, with no disturbed area present or open cut.

Disturbed areas for access, around bridge, etc. shall be restored to its original condition any sites including, but not limited to items such as, guardrail, pull box, conduit, and pole base installations, etc. Restoration shall be accomplished by placing material equivalent to that of the adjacent undisturbed area. Removal of trees shall be also replaced per like kind or that approved by engineer.

Disturbed unpaved areas shall be fertilized and either seeded and mulched or sodded as directed by the engineer. The engineer will have the final authority in determining the acceptability of the restoration work.

**5.0** All materials, time, equipment and labor required to comply with this special provision shall be considered completely covered by the bid items provided in the contract or at no pay.

**T. ADA Compliance and Final Acceptance of Constructed Facilities JSP-10-01C**

**1.0 Description.** The contractor shall comply with all laws pertaining to the Americans with Disabilities Act (ADA) during construction of pedestrian facilities on public rights of way for this project. An ADA Checklist is provided herein to be utilized by the contractor for verifying compliance with the ADA law. The contractor is expected to familiarize himself with the plans involving pedestrian facilities and the ADA Post Construction Checklist prior to performing the work.

**2.0 ADA Checklist.** The contractor can locate the ADA Checklist form on the Missouri Department of Transportation website:

[www.modot.org/business/contractor\\_resources/forms.htm](http://www.modot.org/business/contractor_resources/forms.htm)

**2.1** The ADA Checklist is not to be considered all-inclusive, nor does it supersede any other contract requirements. The ADA checklist is a required guide for the contractor to use during the construction of the pedestrian facilities and a basis for the commission's acceptance of work. Prior to work being performed, the contractor shall bring to the engineer's attention any planned work that is in conflict with the design or with the requirement shown in the checklist. This notification shall be made in writing. Situations may arise where the checklist may not fully address all requirements needed to construct a facility to the full requirements of current ADA law. In those situations, the contractor shall propose a solution to the engineer that is compliant with current ADA law using the following hierarchy of resources: 2010 ADA Standards for Accessible Design, Draft Public Rights of Way Accessibility Guidelines (PROWAG) dated November 23, 2005, MoDOT's Engineering Policy Guidelines (EPG), or a solution approved by the U.S. Access Board.

**2.2** It is encouraged that the contractor monitor the completed sections of the newly constructed pedestrian facilities in attempts to minimize negative impacts that his equipment, subcontractors or general public may have on the work. Completed facilities must comply with the requirements of ADA and the ADA Checklist or have documented reasons for the non-compliant items to remain.

**3.0 Coordination of Construction.**

**3.1** Prior to construction and/or closure on an existing pedestrian path of travel, the contractor shall submit a schedule of work to be constructed, which includes location of work performed, the duration of time the contractor expects to impact the facility and an accessible signed pedestrian detour compliant with MUTCD Section 6D that will be used during each stage of construction. This plan shall be submitted to the engineer for review and approval at or prior to the pre-construction conference. Accessible signed detours shall be in place prior to any work being performed that has the effect of closing an existing pedestrian travel way.



**3.2** When consultant survey is included in the contract, the contractor shall use their survey crews to verify that the intended design can be constructed to the full requirements as established in the 2010 ADA Standards. When 2010 ADA Standards do not give sufficient information to construct the contract work, the contractor shall refer to the PROWAG.

**3.3** When consultant survey is not included in the contract, the contractor shall coordinate with the engineer, prior to construction, to determine if additional survey will be required to confirm the designs constructability.

**4.0 Final Acceptance of Work.** The contractor shall provide the completed ADA Checklist to the engineer at the semi-final inspection. ADA improvements require final inspection and compliance with the ADA requirements and the ADA Checklist. Each item listed in the checklist must receive either a "YES" or an "N/A" score. Any item receiving a "NO" will be deemed non-compliant and shall be corrected at the contractor's expense unless deemed otherwise by the engineer. Documentation must be provided about the location of any non-compliant items that are allowed to remain at the end of the construction project. Specific details of the non-compliant items, the ADA requirement that the work was not able to comply with, and the specific reasons that justify the exception are to be included with the completed ADA Checklist provided to the engineer.

**4.1** Slope and grade measurements shall be made using a properly calibrated, 2 foot long, electronic digital level approved by the engineer.

**5.0 Basis of Payment.** The contractor will receive full pay of the contract unit cost for all sidewalk, ramp, curb ramp, median, island, approach work, cross walk striping, APS buttons, pedestrian heads, detectible warning systems and temporary traffic control measures that are completed during the current estimate period as approved by the engineer. Based upon completion of the ADA Checklist, the contractor shall complete any necessary adjustments to items deemed non-compliant as directed by the engineer.

**5.1** 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 documents.

U. Guardrail Grading Requirements JSP-17-02B

**1.0 Description.** Guardrail installation and grading shall be in accordance with Missouri Standard Specifications for Highway Construction, Missouri Standard Plans for Highway Construction, and as described herein.

**2.0 Construction Requirements.** When guardrail and/or end treatment removal and replacement requires grading of the shoulder and/or slopes, Section 606.3.1(b), (c), and 606.3.1.1 of the Missouri Standard Specifications shall be waived and the following shall apply:

- a) Along roadways and shoulders, remove no more guardrail than can be reconstructed within seven (7) calendar days, including weekends and holidays. The seven day counting period shall start when the first piece of safety hardware is removed.
- b) The active work zone area that encompasses the guardrail and/or end treatment reconstruction, shall not exceed one (1) mile in length. The contractor shall be required

to provide and maintain approved channelizing devices adjacent to the reconstruction area.

c) Only one-side of the roadway shall be worked on at the same time. Divided facilities shall be limited to work on one-side of each direction at the same time.

d) When the removal of any existing safety hardware device exposes non-breakaway obstacles, the reconstruction of the safety hardware device protecting the obstacle shall be replaced within 48 hours of removal or an approved temporary crashworthy device shall be provided, installed and maintained at the contractor's expense until the non-breakaway obstacle is permanently protected. The 48 hour counting period shall start when the first piece of safety hardware is removed.

e) Areas where guardrail and/or end treatments have been removed, but not yet replaced, shall be delineated in accordance with plans or as directed by the Engineer.

**3.0 Non-Compliance.** Non-compliance with this provision shall result in the immediate suspension of work in accordance with Sec 105.1.2. No work, including but not limited to additional guardrail removal and grading, shall be allowed to proceed except for work necessary to restore guardrail installation.

**4.0 Basis of Payment.** No direct payment will be made for compliance with this provision. Guardrail items, grading, and temporary traffic control devices will be paid for as provided in the contract.

V. Shaping Slopes Class III (Modified Material Requirements) NJSP-20-03B

**Delete Sec 215.1.3 and 215.1.3.1 and substitute the following:**

**215.1.3** Shaping Slopes, Class III, shall consist of providing rock fill material and shaping slopes to construct additional shoulder width for the installation of guardrail and Type A crashworthy end terminals in accordance with Missouri Standard Plans for Highway Construction. The rock fill material used shall meet the requirements specified in Sec 215.1.3.1. The shoulder surface shall be finished smooth such that it is traversable and without significant voids or depressions.

**215.1.3.1 Material Requirements.** Rock fill material used for Shaping Slopes, Class III, shall consist of a durable crushed stone, shot rock or broken concrete, with a predominant size of 3 inches and a maximum size of 6 inches. Acceptance by the engineer will be made by visual inspection.

**215.4 Basis of Payment.** The accepted quantity will be paid at the contract unit bid price for 215-99.10 Misc. Shaping Slopes Class III – Modified Material Requirement, per 100F.

W. Multi-Year, Multi-Location Project – Special Requirements NJSP-22-02

**1.0 Description.** Whereas this project is identified by a single Job Number, and the project requires work be performed at multiple Locations, and the contract allows for work to be performed in multiple calendar years, these special requirements and allowances shall apply. A Location is generally identified in the contract or plans by Route and County but may be otherwise identified.

**2.0 Winter Shut-Down Period.** A Winter Shut-Down Period is required if all work on the project is not completed prior to December 1 of the calendar year in which the Notice to Proceed is made. The date range of the Winter Shut-Down Period shall be determined by the contractor and shall be shown on the contractor's most current Progress Schedule. The contractor's designated Winter Shut-Down Period shall begin no later than December 1 of the calendar year in which the Notice to Proceed is made and shall end on or after March 15 of the following year. No work shall be performed during the Winter Shut-Down Period, except for maintenance work that may be required per Sec 104.7 or 105.13 unless approved by the Engineer. Regardless of the length of the Winter Shut-Down Period, all work shall be complete prior to the contract Completion Date. All weather limitations specified elsewhere in the contract shall apply.

**3.0 Completion of Work per Location.** This contract includes work at multiple Locations, with non-contiguous project limits defined at each Location. Once work begins at a Location, the contractor shall diligently pursue completion of the work at that Location until all work is complete. If work at a Location begins prior to the Winter Shut-Down Period, all work at that Location shall be fully completed prior to the Winter Shut-Down Period, including permanent or temporary pavement marking. Work shall not begin at a Location if the long-range forecast is not conducive for completion of all work at that Location prior to the Winter Shut-Down Period.

**3.1 Partial Acceptance per Location.** Upon request by the contractor, a Location of work will be evaluated by the engineer for partial acceptance in accordance with Sec 105.15.1 after completion of all work at that Location.

**4.0 Administration of Calendar Days.** The total number of Calendar Days allowed to complete the work on this project and administration of Calendar Days shall be as specified in the Contract Liquidated Damages job special provision, except as specified herein. The count of Calendar Days will be paused during the Winter Shut-Down Period. The count of Calendar Days will be paused when work is complete at all Locations in which work had begun.

**5.0 Pavement Marking.** Pavement marking shall be as specified elsewhere in the contract, except as specified herein.

**5.1 Temporary Raised Pavement Markers.** All Temporary Raised Pavement Markers shall be removed as part of the Temporary Pavement Marking prior to the Winter Shut-Down Period. If Temporary Pavement Marking is required during the Winter Shut-Down Period, the contractor shall use and maintain Temporary Pavement Marking Paint at the contractor's expense.

**5.2 Cold Weather Pavement Marking Paint.** If permanent pavement marking paint cannot be completed due to weather limitations specified in Sec 620.20.2.4, the contractor shall apply cold weather paint, as specified in Sec 620.10.6, in lieu of Standard Waterborne Paint, at no additional cost to the Commission. Retroreflectivity acceptance requirements and payment adjustments for Standard Waterborne Paint shall apply when using Cold weather paint. Cold weather paint that meets all contract requirements will be accepted in lieu of Standard Waterborne Paint and paid for as such. If retroreflectivity does not meet the minimum requirements for Standard Waterborne Paint but does meet the minimum requirements for Temporary Pavement Marking Paint, the Cold weather paint shall be considered Temporary Pavement Marking Paint and shall be re-marked with Standard Pavement Marking Paint when temperatures allow. No payment will be made until the Standard Pavement Marking Paint or Cold Weather Paint is accepted.

**6.0 Basis of Payment.** No additional payment will be made for compliance with these Special Requirements and Allowances provisions.

X. Repair and Protect Foundations

**1.0 Description.** The contractor shall repair existing structure foundations to be used- in- place as shown in the contract plans and provide an epoxy sealer for new and existing sign structure foundations as shown on the plans.

**2.0 Construction Requirements.**

**2.1** Loose grout or heavily cracked grout shall be removed using normal effort and hand tools as needed. No power tools will be allowed.

**2.1.1** Grout will not be replaced. The intent is to only remove deteriorated grout to allow water to drain and evaporate more easily.

**2.2** Concrete shall be repaired in accordance with Sec 704.

**2.3** The exposed areas of new and existing structure foundations shall be coated with epoxy in accordance with Sec 711.

**2.3.1** The exposed surfaces of grout shall also be coated.

**3.0 Method of Measurement.** Measurement for the removal of loose grout will be made per each base plate. Measurement of concrete repairs will be per square foot. Measurement of protective coating will not be made.

**4.0 Basis of Payment.** All labor, equipment, and material to complete the described work will be paid for at the contract unit price for:

Item No.	Type	Description
216-99.02	Each	Remove Loose Grout
704-01.01	Sq. Ft.	Substructure Repair (formed)
711-02.00	LS	Protective Coating- Concrete Bents and Piers (Epoxy)

Y. Concrete Curb (misc.)

**1.0 Description.** This work shall consist of placing a variety of concrete curb types of varying heights in the locations shown on the plans.

**2.0 Construction Requirements.** The contractor shall have the option of using the most practical curb type in each location that curb is required. Where curb is used next to an existing gutter line, the performance of the gutter will be maintained or improved. The contractor shall inform the engineer of the types of curbs that will be used and in what locations before work begins. The contractor shall resolve any concerns expressed by the engineer. Construction shall be in accordance with Section 609 of the Missouri Standard Specifications for Highway Construction of the version current at the time of the bid opening, as applicable along with Section 1036 for Reinforcing Steel for Concrete Structures, Section 1055.2 for Concrete Curing Materials and

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Route: Various  
County: Various

Section 1057 for Material for Joints. Any special materials that may be used shall be tested and approved by MoDOT Materials prior to commencing this work. The final product shall meet or exceed Americans with Disabilities Act (ADA) requirements where curbs are used in conjunction with pedestrian facilities.

**3.0 Construction Requirements.** Required reinforcement and tie bars for the modified curb shall be held in the specified position during the placing of concrete by bar chairs or other devices approved by the engineer. Joints shall be constructed at intervals and locations shown on the plans or as directed by the engineer.

**4.0 Method of Measurement.** Final measurement of completed curb will not be made except for authorized changes during construction or where appreciable errors are found in the contract quantity. Where required, curb will be measured to the nearest linear foot along the curb face. The revision or correction will be computed and added to or deducted from the contract quantity.

**5.0 Basis of Payment.** Payment for furnishing all labor, equipment, materials, and incidentals necessary to place all curbs shall be completely covered by the contract unit price for the following pay item:

Item No.	Type	Description
609-99.03	L.F.	Concrete Curb (Misc)

Z. Replace Manhole/Inlet Top to New Grade

**1.0 Description.** This work shall consist of **removing and/or replacing** existing manhole or inlet tops, parallel bar grates, bearing plates and surrounding concrete due to the installation of either manhole, 2'x3' or 2'x4' grates and inlet tops at various locations. The existing manhole or inlet shall remain in place. The locations of adjusting manholes or inlets to grade and or replacing the tops are shown within the plans for each bridge location.

**2.0 Construction Requirements.** The contractor shall field verify the size and type of the inlet, manhole frame and cover and required grate opening area prior to ordering for proper size and fit. The contractor shall saw cut the existing pavement or shoulder if necessary around the inlet to provide the concrete pad around the inlet top in accordance with the dimensions shown in the plans/standards. If needed, the manhole cover or inlet shall be adjusted to the proper elevation for drainage or surrounding grade. The contractor shall also repair any damage to the manhole, inlet, inlet invert, or pipe connection to the structure at time of work.

**3.0 Method of Measurement.** Measurement for replacing drop inlet tops will be per each and will include full depth saw cutting, removing pavement, removing or replacing existing manhole covers, inlet tops, grates, bearing plates and any necessary surrounding concrete / or shaping of any earth material as well as furnishing and installing the new manhole frame and cover, inlet tops and grates and bearing plates.

**4.0 Basis of Payment.** Payment for furnishing the labor, materials, equipment, and excavation necessary to install the new manhole frame and covers, inlet top and grates and bearing plates shall be paid for by the contract unit price for the following pay items:

Item No.	Type	Description
731-99.02	Each	Replace Manhole/Inlet Top

**5.0** Pull boxes, valves or manholes not owned by MoDOT or specified as required work by the Contractor may require adjustment due to work in the contract. The Contractor shall contact the respective utility owners regarding any questions about the adjustment of these facilities. The Contractor shall contact the respective utility owner, at least 3 weeks prior to adjustment of these facilities to allow the utility owner to make necessary adjustments. The Contractor shall coordinate with the respective utility owners for scheduling and providing the necessary grade requirements for each adjustment. Payment for all necessary work required for the coordination for the scheduling, grade requirements and adjustments of these utility facilities shall be at no direct pay.

**6.0** Contractor shall directly contact Utility companies to verify location of facilities and status of relocation/adjustment work. The contractor shall coordinate construction activities with Utility Companies and take measures to ensure the integrity of the existing facilities are not disturbed until such time as the Utility Companies have completed the adjustment work.

AA. Maintenance of Existing ITS Facilities

**1.0 Description.** MoDOT owned fiber optic and conduit, critical MoDOT power supplies and power cables, and pull boxes with fiber and power cabling, are present within the limits of this project. Damage or interruption of these items can cause extensive outages to the MoDOT network.

**2.0 Construction Requirements.** The contractor shall exercise reasonable care while completing work near these facilities and shall take steps necessary to protect these facilities from damage for all items that are not specifically identified as being removed and/or relocated in the plans. Should any of the existing wiring or conduit be damaged by the contractor, it shall be replaced by at the contractor's expense and the system in full operation within **4 hours** of when the damage occurred. If it is mutually agreed upon between the Commission and the Contractor that the repairs will require more than **4 hours**, a mutually agreed upon time for repairs to be complete shall be determined.

**3.0 Liquidated Damages.** If the system is not repaired and in full operation within **4 hours** of the damage occurring, or within the timeframe agreed upon, the contractor will be charged with a liquidated damage specified in the amount of \$100.00 per hour for each full hour that the system is not fully operational. This damage will be assessed independently of the liquidated damages specified elsewhere in the contract.

**3.1** The engineer will also have the option of issuing a work order for MoDOT's on-call ITS Maintenance contractor to make repairs, if it is the engineer's opinion that the contractor creating the damage will not be able to make repairs in a timely manner. The ITS Maintenance contractor will then bill the contractor causing the damage directly.

**4.0 Basis of Payment.** No direct payment will be made to the contractor to recover the cost of equipment, labor, materials, or time required for compliance with this provision.

BB. Coordination with MoDOT SLITS Group and Utility Locates

**1.0 Description.** Any work that will impact the existing communications network must be coordinated with the Commission's St. Louis District ITS staff. This includes but not limited to removal and replacement of any existing communications equipment, adding new devices and

changes to power sources or disconnects. Minor modifications to the existing communications network can have significant impacts on the system and operation of other ITS and traffic signal systems.

**1.1** MoDOT is a member of MO-One-Call System. Prior to any excavation or work within MoDOT Right-Of-way, the contractor must contact MO-One Call at 1-800-DIG-RITE and request for Utility Locates within noted project limits. If the scope of work contains modification, addition and/or expansion of existing underground MoDOT ITS, lighting, or signal facilities, the contractor must notify the MoDOT Utilities Locate staff prior to any work, in order for MoDOT to update MoDOT utility location records with Missouri One Call.

**2.0 Contact.** Initial contact must be made at least seven calendar days before work that may impact the existing communications network commences. Contact the ITS staff via an email at [SLITS@modot.mo.gov](mailto:SLITS@modot.mo.gov). The engineer shall be notified prior to making contact with ITS staff. For MoDOT Utility location updates, the contractor must contact MoDOT TMC at 314-275-1500 and ask for Utility Locate Section at least seven calendar days before performing any work.

**3.0** The ITS and network devices located within the project limits are a crucial part of the traffic operation system for this area. It is imperative that the downtime be kept to a minimum when adding, removing, or modifying any existing ITS and network devices. This may require the contractor to perform work that will affect existing network devices during nighttime and/or weekend hours, at the discretion of the Engineer. Allowable timeframes for this work will be subject to the need for ITS devices in the area to be used to manage other traffic impacting workzones.

**4.0 Basis of Payment.** No direct payment shall be made for compliance with this provision.

#### CC. MoDOT ITS Assets Relocation

**1.0 Description.** The work consist of relocating existing MoDOT Intelligent Transportation System (ITS) facilities (conduit, cable, and/or pull boxes) that may be in conflict with this project construction sections as noted in the plans.

**2.0 Materials.** The materials used for relocating MoDOT ITS facilities shall be per MoDOT Approved Product List (APL) and meet all MoDOT Specifications. If the material is not in the APL, the contractor shall submit material specification documents to the Engineer and the MoDOT ITS group (via an email in advance to [SLITS@modot.mo.gov](mailto:SLITS@modot.mo.gov)) for review and approval.

**3.0 Construction Requirements.** The Contractor shall be aware there are numerous utilities present along the route in this contract. Utility locates were not performed during the design phase of the project; therefore, the extent of conflicts with utilities are unknown.

**3.1** The contractor shall exercise reasonable care relocating MoDOT ITS Assets. Damage to any MoDOT facilities within the area of work caused by the contractor will be deemed by the Engineer as either “non-emergency” or “emergency” upon notification of the damages. Repair to damages will be performed as follows:

- a) Non-Emergency: Contractor will have 4 hours to propose a repair plan to the Engineer for a complete repair within 3 business days.
- b) Emergency: Upon notification of the damage, Contractor must immediately submit a repair plan to the Engineer which will take no more than 4 hours to respond on- site and

complete repairs within 48 hours of notification of damage. In either case, if the proposed plan is unacceptable for any reason to MoDOT, repairs will be made by MoDOT with all costs billed to the Contractor.

**3.2** The ITS In-Ground Facilities located within the project limits are a crucial part of the traffic operation system for this area. It is imperative that the downtime be kept to a minimum when replacing, removing, or modifying any existing ITS In-Ground Facilities.

**3.3** Prior to any in-ground work, the Contractor shall request for utility locates by contacting Missouri One Call (1-800 DIG-RITE or mo1call.com) for any in-ground installation locations as per plans. If there are any conflicts with MoDOT ITS Assets, the Contractor is responsible for relocation to the satisfaction of the Engineer prior to any in-ground work.

**3.4** In the case of a conduit conflict, the Contractor shall trench an area beyond the in-ground work limits, install one or two conduits (must be the same quality as the existing conduit) using Split Duct Method, relocate the existing cables into the new conduit, and seal the conduit joints per manufacturer specifications.

**3.5** The Contractor shall coordinate this work with the MoDOT ITS group and have the Engineer's approval prior to performing this task.

**3.6** The contractor shall perform a fiber testing (see below requirements) before and after relocating MoDOT fiber cables at the nearest Node Cabinet at each site as shown on the plans and submit that report to the SLITS Group for review and approval.

**3.6.01 Test Procedure.** For each fiber link, follow this procedure:

- (a) If the link includes fiber installed by others, use an optical loss test set to measure and record the optical loss over that portion of the link before it is spliced to new fiber.
- (b) Calculate the maximum allowable loss for the completed link, both at 1310 nm and at 1550 nm. Use the following formula:

$$\begin{aligned} \text{Maximum link loss} = & \text{Measured loss over portion installed by others} \\ & + (\text{Fiber length in km}) \times (0.35 \text{ for } 1310 \text{ nm and } 0.25 \text{ for } 1550 \text{ nm}) \\ & + (\text{Number of fusion splices}) \times (0.05) \\ & + (\text{Number of mechanical splices [for temp. connection]}) \times (0.3) \\ & + (\text{Number of connections}) \times (0.5) \end{aligned}$$

Provide this calculation to the engineer along with the test results.

- (c) Calibrate an optical loss test set and provide evidence satisfactory to the engineer that the set produces accurate results at both wavelengths. This can be a demonstration that the set correctly measures the loss of a test fiber whose loss is known.
- (d) Use the test set to measure the loss of the link under test. Record the result at both 1310 nm and 1550 nm. Arrange for the engineer or his representative to witness these tests.



- (e) If the measured loss exceeds the calculated maximum, use an optical time domain reflectometer and other test equipment to troubleshoot the link. Take whatever corrective action is required, including cable replacement, to achieve a loss less than the calculated maximum.

**3.6.02 Test Result Documentation.** Prepare a diagram showing all of the links tested in this project. For the portions installed in this project, show the equipment cabinets, splices, and pigtails. On each line representing a link, show the maximum allowable loss and the actual loss. The actual loss shall be the one measured after all corrective actions have been taken. Submit 5 copies of this diagram to the engineer, along with the calculations for the maximum allowable loss. Submit the diagrams and calculations in an electronic format acceptable to the engineer.

**3.6.03 Documentation.** Provide the engineer mark-ups of the plans, neat and legible, illustrating as-built versions of the splice and connection diagrams that are contained in the plans.

**3.6.04 Certifications.** The fiber optic cable shall be factory certified to meet the requirements in this specification. In addition, the manufacturer shall certify that the fiber optic cable has a life expectancy of 20 years.

**3.7** The Contractor shall trench an area beyond the in-groundwork limits, install one or two conduits (must be the same quality as the existing conduit) using Split Duct Method, relocate the existing cables into the new conduit, and seal the conduit joints per manufacturer specifications.

**3.8** Upon completion of this work, the Contractor shall contact the MoDOT ITS group (via email at [slits@modot.mo.gov](mailto:slits@modot.mo.gov) or by calling 314-275-1526) to verify that all existing MoDOT ITS devices are online and request inspection of this work. Acceptance of this work shall be the sole judgment of the Engineer and the MoDOT ITS group's engineer.

**3.9** The contractor shall restore those areas disturbed by this work or installation according to specifications herein.

**4.0 Basis of Payment.** Payment for "MoDOT ITS Assets Relocation" shall be paid as Linear Feet and shall include the trenching, conduit installation, conduit coupling, pull boxes, sealing materials, cable relocation, needed fiber testing, restoration of all disturbed area, all labor and work incidental thereto, and shall be considered to be completely covered by the contract unit price for the following pay item:

Item No.	Unit	Description
910-99.03	Linear Feet	MoDOT ITS Assets Relocation

DD. ITS Asset Management Tool

**1.0 Description.** For all locations where any ITS (Intelligent Transportation System) components are existing, modified, or added to, the contractor shall be responsible for populating and updating Commission's fiber management tool to reflect the final condition of the entire ITS system within the project limits as shown on the plans. Updating shall be performed by Commission approved staff (currently NexusWorx).

**2.0 Construction Requirements.**

**2.1** Contractor shall provide any relevant notes to a specific location that can be entered into the tool to aid in the understanding of the device configuration and location. At a minimum, this will include providing the required latitude and longitude coordinates of each pull box, DMS, CCTV, node cabinet, conduit, cable, and fiber, along with any serial numbers and/or identification information. The Contractor shall locate the conduit every 100 feet using a GIS locating device that is accurate to the nearest foot. The Contractor shall provide a GIS based map of the conduit route and a complete listing of all of map coordinates in an electronic format. Population of the fiber management tool will be required for all devices that have been installed to date as well as any devices installed under this contract.

**2.2** The contractor shall furnish to Commission approved staff a copy of the final plans relevant to all of the ITS components in Visio and/or Microstation formats, if relevant.

**2.3** The contractor shall be provided one licensed read-only access login by Commission before work begins.

### **3.0 Acceptance Testing.**

**3.1** All entries and updates shall be completely entered and available for use within 30 days from final acceptance of the project.

**3.2** Commission staff shall verify population of the fiber management tool, including accuracy and completeness of details for each component prior to acceptance and payment.

**4.0 Measurement and Payment.** Measurement and Payment for items covered by this specification include the population and acceptance testing, in addition to all materials and equipment necessary for a fully operational system.

Item No.	Type	Description
910-99.01	Lump Sum	Fiber Management Tool

## **EE. Restrictions for Migratory Birds NJSP-16-06A**

**1.0 Description.** Swallows or other bird species protected by the Migratory Bird Treaty Act may be nesting under the bridge or bridges that will be repaired under this contract.

**2.0 Restrictions.** To comply with the Migratory Bird Treaty Act, nests of protected species cannot be disturbed when active (eggs or young are present). Generally, nests are active between April 1 and July 31, but active nests can be present outside of these dates.

**2.1 MoDOT to Maintain Prior to the Notice to Proceed.** The bridge, or bridges, associated with the work for this contract have been evaluated and any inactive nests found have been removed by MoDOT staff. MoDOT staff will maintain the structures to be free of nests until the Notice to Proceed date. At the notice to proceed, the contractor shall be responsible to maintain the structures to be free of nests until the work on the applicable bridge, or bridges, is complete.

**3.0 Avoidance Measures.** The contractor shall not disturb active nests or destroy adults, eggs or young birds. In an effort to comply with the Migratory Bird Treaty Act, the contractor operations will be limited to the options established in the following sections.

**3.1 Inactive or Partially Constructed Nests.** If nests are present and MoDOT determines that the nests are inactive or partially constructed, the contractor may remove the nests provided that the colony's inactive or partially constructed nests are completely removed by March 15 and the contractor maintains a nest free condition until the bridge work is complete. Dry removal methods shall be used when practicable. If dry removal is not practicable, hydro cleaning may be used if approved by the Engineer and only if water is free of blasting grit, chemicals, or detergents, and applied using pressure less than 5,000 PSI. Clean water such as that from municipal water treatment plants or wells shall be used. Use of source water from Waters of the State (i.e., streams or lakes), is allowable, if the appropriate methods to prevent the possible spread of invasive aquatic species are implemented.

**3.2 Water and Equipment Used for Hydro cleaning.** Aquatic invasives such as zebra mussels and some algae species have infested several bodies of water in the United States and can be transported by vessels (barges, boats, tugs, tankers, etc.) and equipment (tanks, tubing, pumps, etc.) that have been used in areas that contain these invasive species. If equipment is not properly inspected and treated to prevent the spread of invasives, these species can be introduced into areas not currently known to have a population. These invasive species are detrimental to existing ecosystems and can outcompete native species. To assist in preventing the introduction and spread of aquatic invasive species through MoDOT projects in Missouri streams and lakes, the following precautions shall be followed.

**3.2.1 Use of Water from Streams, Lakes or Ponds.** Contractors shall not use water for nest removal from streams, lakes or ponds, unless they have implemented appropriate methods to prevent the possible spread of invasive aquatic species. Water sources from municipal water treatment plants or wells may be used without following these measures provided the equipment to be used has not previously contained waters from streams, lakes or ponds. If the equipment has previously contained waters from other streams or lakes, the following measures must be implemented prior to use.

**3.2.1.1 Equipment Washing.** Prior to the use or re-use of equipment following any use with water from streams, lakes or ponds, all equipment shall be washed and rinsed thoroughly with hard spray (power wash) and hot (minimum 120° F) water, for at least one minute.

**3.2.1.2 Equipment Treating or Drying.** Equipment shall be treated or dried in one of the following manners.

**3.2.1.2.1** Equipment interior and/or other surfaces shall be treated with a 10% bleach solution to kill any aquatic nuisance species. This solution must also be run through all intake lines and hoses, to sterilize interior components. When chlorine treatment is used, all chlorine runoff from equipment washing must be collected and properly treated and/or disposed of in accordance with Sec 806.

**3.2.1.2.2** Equipment interior and/or other surfaces shall be treated with 140° F water for a minimum of 10 seconds contact on all surfaces. 140 ° F water must also be run through all intake lines and hoses, to purge any standing water.

**3.2.1.2.3** Equipment shall be flushed of all non-municipal water, and dried thoroughly, in the sun before using in or transporting between streams and lakes. Dry times will depend on the season the equipment is being used. Equipment must dry a minimum of 7 days for June-September, 18

days for March-May; 18 days for October-November, and 30 days for December-February. The drying method should be reserved as a last resort option.

**3.2.2** Prior to use of equipment, contractors shall provide the MoDOT inspector written documentation of the equipment's geographic origin (including the water body it was last used in), as well as defining the specified treatment method used to adequately ensure protection against invasive species. The written documentation will include a statement indicating the contractor is aware of these provisions and will also treat the equipment appropriately after completion of the project.

**3.3 Active Nests.** The contractor may work on the bridge if active nests are present, as long as the work does not impact or disturb the birds and/or nests. At a minimum, work shall not be performed within 10 feet of an active nest; however, the contractor is responsible for ensuring their activities do not impact the nests, eggs, or young.

**4.0 Additional Responsibilities.** If active bird nests remain after all reasonable avoidance measures have been taken, or if bird nests are observed during project construction, the contractor shall notify the Resident Engineer and contact the MoDOT Environmental Section (573-526-4778) to determine if there are other allowable options.

FF. Flush Drop Inlet

**1.0 Description.** This work shall consist of flushing all existing inlets and drain basins, as noted, to be free of any debris or sediment found within them.

**2.0 Construction Requirements.** The contractor shall be responsible clearing the inlets specified in the contract documents through their own means and methods.

**3.0 Method of Measurement.** Measurement of Flush Drop Inlet will be by EACH.

**4.0 Basis of Payment.** The accepted quantities of Flush Drop Inlet will be paid for at the contract unit price.

GG. Special Provision for Protection of BNSF Railway Company Interests

To Report an Emergency on the railroad call: (800) 832-5452  
US DOT# 664210Y MP 2.6 BNSF Hannibal Sub in St. Louis, MO.

**1.0 Authority of Railroad Engineer and Commission's Representative.**

**1.1** The authorized representative of BNSF Railway Company, herein called "Railroad Engineer", shall have final authority in all matters affecting the safe maintenance and operation of railroad traffic including the adequacy of the foundations and structures supporting the railroad tracks.

**1.2** The authorized representative of the Missouri Highways and Transportation Commission, herein called "Engineer", shall have authority over all other matters as prescribed herein and in the project specifications.

**2.0 Contractor's indemnity Obligations to the Railroad.**

**2.1** The term “contractor” as used in this special provision includes any and all subcontractors. The contractor shall indemnify, defend and hold harmless the Railroad from and against any and all loss, damage, claims, demands, causes of action, costs and expenses of whatsoever nature arising out of injury to or death of persons whomsoever, or out of damage to or destruction of property whatsoever, including, without limitation, damage to fiber optic, communication and other cable lines and systems, where such injury, death, damage or destruction results from any cause arising out of work performed by the contractor pursuant to the agreement between Railroad and the Commission for the project, and shall also release the Railroad from and shall waive any claims for injury or damage to equipment or other property, which may result from the construction, maintenance and operation of railroad tracks, wire lines, fiber optic cable, pipe lines and other facilities on said right of way of the Railroad by the contractor. **THE LIABILITY ASSUMED BY THE CONTRACTOR WILL NOT BE AFFECTED BY THE FACT, IF IT IS A FACT, THAT THE DAMAGE, DESTRUCTION, INJURY, DEATH, CAUSE OF ACTION OR CLAIM WAS OCCASIONED BY OR CONTRIBUTED TO BY THE NEGLIGENCE OF THE RAILROAD, THE RAILROAD’S AGENTS, SERVANTS, EMPLOYEES OR OTHERWISE, EXCEPT TO THE EXTENT THAT SUCH CLAIMS ARE PROVEN BY ANY CLAIMANT TO HAVE BEEN PROXIMATELY CAUSED BY THE INTENTIONAL MISCONDUCT OR SOLE OR GROSS NEGLIGENCE OF THE RAILROAD.** The contractor’s indemnity shall include loss of profits or revenue arising from damage or destruction to fiber optic, communication and other cable lines and systems.

**2.2** In addition to the indemnity obligations contained in the preceding paragraph, the contractor shall indemnify, defend and hold harmless the Railroad from any claims, expenses, costs, actions, demands, losses, fines, penalties, and fees, of whatsoever nature arising from, related to or connected, in whole or in part, with the following:

- (a) The removal of the contractor’s agents, servants, employees or invitees from the Railroad’s property for safety reasons.
- (b) Contractor’s compliance or failure to comply with the provision of applicable law in connection with the performance of contractor’s work.

### **3.0 Notice of Starting Work.**

**3.1** The contractor shall not commence any work on Railroad’s right of way until the contractor has complied with the following conditions:

- (a) The contractor shall be required to apply for, execute and comply with all provisions of a permit obtained by accessing the following link: <http://bnsf.railpermitting.com>

**3.2** The Railroad's written authorization to proceed with the work, with a copy to the Engineer, will include the names, addresses and telephone numbers of the Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

### **4.0 Interference with Railroad Operations.**

**4.1** The contractor shall arrange and conduct all work so that there shall be no interference with the Railroad’s operations, including train, signal, telephone and telegraphic services; or damage to the Railroad’s property; poles, wires and other facilities of tenants, licensees, easement

grantees and invitees on the Railroad's right of way. Whenever work may 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 that requires flagging service or inspection service shall be deferred by the contractor until the flagging service required by the Railroad is available at the job site.

**4.2** Whenever work within the Railroad's right of way is of such a nature that impediment to the Railroad's operations is unavoidable, such as use of runaround tracks or necessity for reduced speed, the contractor shall schedule and conduct these 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 the Railroad's operations and property, the contractor shall make such provisions. If in the judgment of the Railroad Engineer, or the Engineer if the Railroad Engineer is absent, such provision is insufficient, the Railroad Engineer or Engineer may require or provide such provisions as deem necessary. In any event, such provisions shall be at the contractor's expense and without cost to the Railroad or the Commission.

**4.4** The contractor shall be responsible for any damage to the Railroad as a result of work on the project, which shall include but not be limited to interference with the normal movement of trains caused exclusively by the work performed by the contractor. The contractor shall be responsible for damages for the Railroad's train delays that are caused exclusively by the contractor. The Railroad agrees not to perform any act to unnecessarily cause any train delay. The damages for train delays per freight hour will be billed at an average rate per hour as determined from the Railroad's records. These records shall be provided by the Railroad, upon request, to the Commission or the Commission's contractor.

## **5.0 Track Clearances.**

**5.1** The minimum track clearances to be maintained by the contractor during construction are shown on the project plans. However, before undertaking any work within Railroad's right of way, or before placing any obstruction over any track, the contractor shall:

- (a) Notify the Railroad Engineer at least 72 hours in advance of the work.
- (b) Receive assurance from the Railroad Engineer that arrangements have been made for flagging service as may be necessary.
- (c) Receive permission from the Railroad Engineer to proceed with the work.
- (d) Ascertain that the Engineer has received copies of notice to the Railroad and of the Railroad's response.

**5.2** The contractor shall fully comply with any horizontal and vertical clearance requirements imposed by Missouri state statutes and regulations and Federal statutes and regulations regarding the placement of structures or equipment near or over railroad tracks.

## **6.0 Construction Procedures.**

**6.1 General.** Construction work on the Railroad's property shall be:

- (a) Subject to the inspection and review of the Railroad.
- (b) In accordance with the Railroad's written outline of specific conditions.
- (c) In accordance with this special provision.

**6.2 Excavation.** The subgrade of an operated track shall be maintained with the berm edge at least 12 feet from centerline of track and not more than 26 inches below top of the rail. The contractor will not be required to make existing section meet this specification if substandard, in which case the existing section will be maintained. The contractor shall cease all work and notify the Railroad immediately before continuing excavation in the work area if obstructions are encountered which do not appear on the drawings. If the obstruction is a utility and the owner of the utility can be identified, then the contractor shall also notify the owner immediately. If there is any doubt about the location of underground cables or lines of any kind, no work shall be performed until the exact location has been determined. There will be no exceptions to these instructions. Additionally, all excavations shall be conducted in compliance with applicable Occupational Safety and Health Act regulations and, regardless of depth, shall be shored where there is any danger to tracks, structures or personnel. Any excavations, holes or trenches on the Railroad's property shall be covered, guarded and/or protected when not being worked on. When leaving work site areas at night and over weekends, the areas shall be secured and left in a condition that will ensure that Railroad's employees and other personnel who may be working or passing through the area are protected from all hazards. All excavations shall be back filled as soon as possible.

**6.3 Excavation for Structure.** The contractor shall be required to take special precaution and care in connection with excavating, shoring pits and in driving piles for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which the tracks carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material. The procedure for doing such work, including need of and plans for shoring, shall be approved by the Railroad Engineer before work is performed, but such approval shall not relieve the contractor from liability. Before submission of plans to the Railroad Engineer for approval, the Engineer will first review such plans in accordance with the Missouri Standard Specifications for Highway Construction, hereinafter called "Standard Specifications". The responsibility for the design and construction of the sheeting rests solely with the contractor. The temporary shoring along the railroad tracks shall be designed for the Cooper E80 loading. The design shall insure that the shoring is braced or substantially securely to prevent movement. The contractor shall submit plans for the temporary shoring that shall be signed, sealed, and stamped in accordance with the laws relating to Architects and Professional Engineers, Chapter 327, RSMo. and then submitted for review by the Engineer.

**6.4 Demolition of Existing Structures.** The contractor shall be required to take special precaution and care in connection with demolition of existing structures. The procedure for doing such work, including need of and plans for temporary falsework, shall first be approved by Railroad Engineer before work is performed, but such approval shall not relieve the contractor from liability. Before submission of plans to the Railroad Engineer for approval, the Engineer will first review such plans.

**6.5 Falsework.** The contractor shall be required to take special precaution and care to prevent any material from falling on the Railroad's right of way. The procedure for preventing material from falling, including need of and plans for temporary falsework, shall first be approved by the Railroad Engineer, but such approval shall not relieve the contractor from liability. Before

submission of plans to the Railroad Engineer for approval, the Engineer will first review such plans.

## **6.6 Blasting.**

**6.6.1** The contractor shall obtain advance approval of the Railroad Engineer and the Engineer for use of explosives on or adjacent to the Railroad's property. If permission for use of explosives is granted, the contractor shall be required to comply with the following:

- (a) Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the contractor.
- (b) Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
- (c) No blasting shall be done without the presence of the Railroad Engineer. At least 72 hours advance notice to the person designated in the Railroad's notice of authorization to proceed as mentioned in Section 2.2 of this job special provision, the contractor shall be required to arrange for the presence of the Railroad Engineer and such flagging as the Railroad may require.
- (d) The contractor shall have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting, at contractor's expense, any track misalignment or other damage to the Railroad's property resulting from the blasting as directed by the Railroad Engineer. If contractor's actions result in delay of trains, the contractor shall bear the entire cost thereof.

**6.6.2** The Railroad Engineer will:

- (a) Determine the approximate location of trains and advise the contractor the approximate amount of time available for the blasting operation and clean-up.
- (b) Have the authority to order discontinuance of blasting if blasting is too hazardous or is not in accordance with this special provision.

**6.7 Maintenance of Railroad Facilities.** The contractor shall be required to maintain all ditches and drainage structures free of silt or other obstructions which may result from contractor's operations. The contractor shall promptly repair eroded areas within Railroad's right of way and repair any other damage to the Railroad's property, tenants, licensees, easement grantees and invitees. All such maintenance and repair of damages due to the contractor's operations shall be done at the contractor's expense.

## **6.8 Storage of Materials and Equipment.**

**6.8.1** The contractor shall not store or stockpile construction materials or equipment closer than 25 feet to the centerline of the nearest railroad track or on the Railroad's property not covered by construction easement, contractor's permit, lease or agreement. Additionally, the contractor shall not store or leave materials or equipment within 250 feet of the edge of any highway/rail at-grade crossings. Further, both sides of a main track shall remain unobstructed for a distance of 10 feet from the exterior edge of the track at all times to allow for stopped train inspection.



**6.8.2** Machines or vehicles shall not be left unattended with the engine running. Parked machines or equipment shall be in gear with brakes set and with blade, pan or bucket lowered to the ground if so equipped. All grading or construction machinery that is left parked near the track unattended shall be effectively immobilized so that unauthorized persons cannot move such equipment.

**6.9 Cleanup.** Upon completion of the work, the contractor shall remove from within the limits of the Railroad's right of way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the contractor, and leave said right of way in a neat condition satisfactory to the Railroad Engineer.

**6.10 Buried Cable and Other Buried Facilities.**

**6.10.1** The contractor is placed on notice that fiber optic, communication and other cable lines and systems, collectively the "Lines", owned by various telecommunications companies may be buried on Railroad's property or right of way. The locations of the buried Lines, pipelines or utility facilities have been included on the plans based on information from the telecommunications companies, pipeline operators, or utilities, as the case may be. The contractor shall be responsible for contacting the Railroad Engineer, the Railroad's 24-hour information number (1-800-533-2891), the telecommunications companies, pipeline operators and utilities and notifying them of any work that may damage the buried Lines, pipelines, utility facilities and/or interfere with their service. The contractor shall verify the location of all buried Lines, pipelines and utility facilities shown on the plans or marked in the field in order to establish their exact locations prior to or while doing work on the Railroad's property or right of way. The contractor shall also use all reasonable methods when working on the Railroad's property or right of way to determine if any other buried Lines, pipelines or utility facilities exist on the Railroad's property or right of way.

**6.10.2** Failure to mark or identify the buried Lines, pipelines or utility facilities will be sufficient cause for the Railroad Engineer to stop construction at no cost to the Commission or Railroad until these items are completed. The contractor shall be responsible for the rearrangement of any buried facilities, Lines, pipelines or utility facilities determined to interfere with the construction. The contractor shall cooperate fully with any telecommunications companies, pipeline operators and utility facility owners in performing such rearrangements.

**7.0 Damages.** The Railroad will not assume liability for any damages to the contractor, contractor's work, employees, servants, equipment and materials caused by railroad traffic. Any cost incurred by the Railroad for repairing damages to Railroad's property or to property of the Railroad's tenants, licensees, easement grantees and invitees caused by or resulting from the contractor's operations shall be paid directly to the Railroad by contractor.

**8.0 Flagging Services.**

**8.1 When Required.** Under the terms of the agreement between the Commission and the Railroad, the Railroad has sole authority to determine the need for flagging required to protect the Railroad's operations. In general, the requirements of such services will be whenever the contractor's personnel or equipment are, or are likely to be, working on the Railroad's right of way within 25 feet of the centerline of any track, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging, or reasonable probability of accidental hazard to Railroad's operations or personnel. Normally, the Railroad will assign one flagger to a project; but in some cases, more than one may

be necessary, such as yard limits where 3 flaggers may be required. However, if the contractor works within distances that violate instructions given by the Railroad Engineer or performs work that has not been scheduled with the Railroad Engineer, flaggers may be required full time until the project has been completed.

## **8.2 Scheduling and Notification.**

**8.2.1** Not later than the time that approval is initially requested to begin work on the Railroad's right of way (30 days), contractor shall furnish to the Railroad and the Commission a schedule for all work required to complete the portion of the project within Railroad's right of way and arrange for a job site meeting between the contractor, the Engineer, and the Railroad Engineer. Flaggers may not be provided until the job site meeting has been conducted and the contractor's work scheduled.

**8.2.2** The contractor shall be required to give the Railroad Engineer at least 30 days of advance written notice of intent to begin work within Railroad's right of way in accordance with this special provision. Once begun, if such work is then suspended at any time, or for any reason, the contractor shall be required to give the Railroad Engineer at least 5 working days of advance notice before resuming work on Railroad's right of way. Such notices shall include sufficient details of the proposed work to enable the Railroad Engineer to determine if flagging will be required. If such notice is in writing, the contractor shall furnish the Engineer a copy; if notice is given verbally, the notice shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagger or flaggers are present at the job site. Obtaining a flagger or flaggers may take up to 30 days to obtain initially from the Railroad. When flagging begins, the flagger is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, obtaining a flagger or flaggers may take up to 30 days to again obtain from the Railroad. Due to Railroad labor agreements, 10 working days notice may be necessary before flagging services may be discontinued and responsibility for payment stopped. Notification for flagging should be addressed to:

Mr. Joseph Wontor  
BNSF Railroad  
314-768-7030

**8.2.3** If, after the flagger is assigned to the project site, emergencies arise which require the flagger's presence elsewhere, then the contractor shall delay work on the Railroad's right of way until such time as the flagger is again available. Any additional costs resulting from such delay shall be borne by the contractor and not the Railroad.

## **8.3 Payment.**

**8.3.1** The Contractor will pay the Railroad or appropriate flagging contractor directly for the cost of flagging services associated with the project and notify the MoDOT Resident Engineer of such payments.

**8.3.2** The Contractor shall be responsible for arranging needing flagging services as required by the Railroad to accomplish the highway improvement.

**8.3.3** The cost of flagging service is approximately \$1,500 per day based on an 8-hour work day and a 40-hour work week. This cost includes the base pay for the flagger, overhead, and per

diem charge for travel expenses, meals and lodging. The charge to the contractor by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required. Work by a flagger in excess of 8 hours per day or 40 hours per week but not more than 12 hours a day will result in overtime pay at 1 1/2 times the appropriate rate. Work by a flagger in excess of 12 hours per day will result in overtime pay at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 1/2 times the normal rate. Railroad expenses incurred preparing and handling invoices will also be charged to the contractor and/or the Commission. Charges to the contractor and/or the Commission by the Railroad shall be in accordance with applicable provisions of Volume 1, Chapter 4, §3 and Volume 6, Chapter 6, §2, Subsection 1 of the Federal-Aid Highway Program Manual issued by the Federal Highway Administration, including all current amendments. Flagging costs are subject to change. The above estimates of flagging cost are provided for information only and are not binding in any way. Each time a flagger is called, the minimum period for billing will be the 8 hour basic day unless the flagger can be assigned to other Railroad work during the work day.

**8.3.4** In addition to the hours of providing flagging at the construction site, the flagger hours will include, but is not limited to, travel time to and from the project, time to complete paperwork for the flagging operations and time for setting warning signs/flags for the train traffic.

#### **8.4 Verification.**

**8.4.1** Any complaints concerning a flagger shall be resolved in a timely manner. If need for a flagger is questioned, please contact the Railroad Engineer and Mr. Jeremy Wegner, Manager of Public Projects at (320) 444-5719. All verbal complaints shall be confirmed in writing by the contractor within 5 working days with copy to the Railroad Engineer and Engineer. All written correspondence shall be addressed to Mr. Wegner as shown in Section 2.1 of this job special provision.

**8.4.2** The Railroad flagger assigned to the project will be responsible for notifying the Engineer upon arrival at the job site on the first day, or as soon thereafter as possible, that flagging services begin and on the last day that flagger performs such services for each separate period that services are provided. The Engineer will document such notification in the project records.

#### **9.0 Haul Across Railroads.**

**9.1** Where the plans show or imply that materials of any nature must be hauled across the Railroad's tracks, unless the plans clearly show that the Commission has included arrangements for such haul in the agreement with the Railroad, the contractor shall be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad's tracks. The contractor shall be required to bear all costs incidental to such crossings, including flagging, whether services are performed by contractor's own forces or by Railroad's personnel.

**9.2** No crossing may be established for use of the contractor for transporting materials or equipment across the tracks of the Railroad unless specific authority for the installation, maintenance, necessary watching and flagging thereof and removal, all at the expense of the contractor, is first obtained from the Railroad Engineer.

**10.0 Work for the Benefit of the Contractor.** All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans, and are

included in the agreement between the Commission and the Railroad or will be covered by appropriate revisions to same which will be initiated and approved by the Commission and/or the Railroad. Should the contractor desire any changes in addition to the above, then contractor shall make separate arrangements with the Railroad for same to be accomplished at the contractor's expense.

**11.0 Cooperation and Delays.** The contractor shall arrange a schedule with the Railroad for accomplishing staged construction involving work by the Railroad or tenants, licensees, easement grantees and invitees of the Railroad. In arranging a schedule, the contractor shall ascertain, from the Railroad, the lead time required for assembling crews, materials and make due allowance. No charge of claims of the contractor against the Railroad will be allowed for hindrance or delay on account of railway traffic for any work done by the Railroad, other delay incident to or necessary for safe maintenance of railway traffic, or for any delays due to compliance with this special provision.

**12.0 Trainman's Walkways.** 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 shall be maintained extending to a line not less than 12 feet from centerline of track. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railway's protective service is provided shall be removed before the close of each workday. Any excavation near the walkway, the contractor shall install a handrail with a 12 feet minimum clearance from centerline of track.

**13.0 Insurance.** The amount of work to be performed upon, over or under Railroad's right of way is estimated to be 1 percent of the contractor's total bid for the project.

**13.1** In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, Contractor must, at its sole cost and expense, procure and maintain during the life of this Agreement the following insurance coverage:

(a) Commercial General Liability insurance. This insurance shall contain broad form contractual liability with a combined single limit of a minimum of \$5,000,000 each occurrence and an aggregate limit of at least \$10,000,000 but in no event less than the amount otherwise carried by the contractor. Coverage must be purchased on a post 2004 ISO occurrence form or equivalent and include coverage for, but not limit to the following:

- Bodily Injury and Property Damage
- Personal Injury and Advertising Injury
- Fire legal liability
- Products and completed operations

This policy must also contain the following endorsements, which must be indicated on the certificate of insurance:

- The definition of insured contract must be amended to remove any exclusion or other limitation for any work being done within 50 feet of railroad property.
- Waiver of subrogation in favor of and acceptable to Railway.
- Additional insured endorsement in favor of and acceptable to Railway.
- Separation of insureds.

Job No.: J613550  
Route: Various  
County: Various

- The policy shall be primary and non-contributing with respect to any insurance carried by Railway.

It is agreed that the workers' compensation and employers' liability related exclusions in the Commercial General Liability insurance policy(s) required herein are intended to apply to employees of the policy holder and shall not apply to Railway employees.

No other endorsements limiting coverage as respects obligations under this Agreement may be included on the policy with regard to the work being performed under this agreement.

- (b) Business Automobile Insurance. This insurance must contain a combined single limit of at least \$1,000,000 per occurrence, and include coverage for, but not limited to the following:

- Bodily injury and property damage
- Any and all vehicles owned, used or hired

The policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- Waiver of subrogation in favor of and acceptable to Railway.
- Additional insured endorsement in favor of and acceptable to Railway.
- Separation of insureds.
- The policy shall be primary and non-contributing with respect to any insurance carried by Railway.

- (c) Workers Compensation and Employers Liability insurance including coverage for, but not limited to:

- Contractor's statutory liability under the worker's compensation laws of the state(s) in which the work is to be performed. If optional under State law, the insurance must cover all employees anyway.
- Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, \$500,000 by disease each employee.

This policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- Waiver of subrogation in favor of and acceptable to Railway.

- (d) Railroad Protective Liability insurance naming only the Railway as the Insured with coverage of at least \$5,000,000 per occurrence and \$10,000,000 in the aggregate. The policy Must be issued on a standard ISO form CG 00 35 10 93 and include the following:

- Endorsed to include the Pollution Exclusion Amendment (ISO form CG 28 31 10 93)
- Endorsed to include the Limited Seepage and Pollution Endorsement.
- Endorsed to remove any exclusion for punitive damages.

Job No.: J613550  
Route: Various  
County: Various

- No other endorsements restricting coverage may be added.
- The original policy must be provided to the Railway prior to performing any work or services under this Agreement

In lieu of providing a Railroad Protective Liability Policy, Licensee may participate in Licensor's Blanket Railroad Protective Liability Insurance Policy available to contractor.

### **13.2 Other Requirements:**

**13.2.1** All policies (applying to coverage listed above) must not contain an exclusion for punitive damages and certificates of insurance must reflect that no exclusion exists.

**13.2.2** Contractor agrees to waive its right of recovery against Railway for all claims and suits against Railway. In addition, its insurers, through the terms of the policy or policy endorsement, waive their right of subrogation against Railway for all claims and suits. The certificate of insurance must reflect the waiver of subrogation endorsement. Contractor further waives its right of recovery, and its insurers also waive their right of subrogation against Railway for loss of its owned or leased property or property under contractor's care, custody or control.

**13.2.3** Contractor is not allowed to self-insure without the prior written consent of Railway. If granted by Railway, any deductible, self-insured retention or other financial responsibility for claims must be covered directly by contractor in lieu of insurance. Any and all Railway liabilities that would otherwise, in accordance with the provisions of this Agreement, be covered by contractor's insurance will be covered as if contractor elected not to include a deductible, self-insured retention or other financial responsibility for claims.

**13.2.4** Prior to commencing the Work, contractor must furnish to Railway an acceptable certificate(s) of insurance including an original signature of the authorized representative evidencing the required coverage, endorsements, and amendments and referencing the contract audit/folder number if available. Contractor shall notify Railway in writing at least 30 days prior to any cancellation, non-renewal, substitution or material alteration. Upon request from Railway, a certified duplicate original of any required policy must be furnished. Contractor should send the certificate(s) to the following address:

Railroad:  
BNSF Railway Company  
P.O. Box 140528  
Kansas City, MO 64114  
Toll Free: 877-576-2378  
Fax number: 817-840-7487  
Email: BNSF@certfocus.com  
www.certfocus.com

Commission:  
Mr. Dave Ahlvers  
State Construction and Materials Engineer  
MoDOT  
P.O. Box 270  
Jefferson City, MO 65102

**13.2.5** Any insurance policy must be written by a reputable insurance company acceptable to Railway or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provide.

**13.2.6** Contractor represents that this Agreement has been thoroughly reviewed by contractor's insurance agent(s)/broker(s), who have been instructed by contractor to procure the insurance coverage required by this Agreement. Allocated Loss Expense must be in addition to all policy limits for coverages referenced above. Not more frequently than once every five years, Railway

may reasonably modify the required insurance coverage to reflect then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.

**13.2.7** If any portion of the operation is to be subcontracted by contractor, contractor must require that the subcontractor provide and maintain the insurance coverages set forth herein, naming Railway as an additional insured, and requiring that the subcontractor release, defend and indemnify Railway to the same extent and under the same terms and conditions as contractor is required to release, defend and indemnify Railway herein.

**13.2.8** Failure to provide evidence as required by this section will entitle, but not require, Railway to terminate this Agreement immediately. Acceptance of a certificate that does not comply with this section will not operate as a waiver of contractor's obligations hereunder.

**13.2.9** The fact that insurance (including, without limitation, self-insurance) is obtained by contractor will not be deemed to release or diminish the liability of contractor including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railway will not be limited by the amount of the required insurance coverage.

**13.2.10** For purposes of this section, Railway means "Burlington Northern Santa Fe LLC", "BNSF RAILWAY COMPANY" and the subsidiaries, successors, assigns and affiliates of each.

**13.2.11** Railroad will not accept binders as evidence of insurance, the original policy shall be provided. The named insured, description of the work and designation of the job site to be shown on the Policy are as follows:

- (a) Named Insured: BNSF Railway Company
- (b) Description and Designation:
  - Epoxy Polymer Overlay of bridge deck A7122
  - St. Louis City Route 100
  - Job No. J6I3550
  - US DOT# 664210Y MP 2.6 BNSF Hannibal in St. Louis, MO.

**13.2.12** The contractor must notify BNSF Manager of Public Projects at [Jeremy.Wegner@BNSF.com](mailto:Jeremy.Wegner@BNSF.com) when applying for railroad insurance coverage.

**13.3** If any part of the work is sublet, similar insurance and evidence thereof in the same amounts as required of the prime contractor, shall be provided by or in behalf of the subcontractor to cover the subcontractor's operations. Endorsements to the prime contractor's policies specifically naming subcontractors and describing their operations will be acceptable for this purpose.

**13.4** All Insurance hereinbefore specified shall be carried until all work required to be performed under the terms of the contract has been satisfactorily completed within the limits of the Railroad's right of way as evidenced by the formal acceptance by the Commission. Insuring Companies may cancel insurance by permission of the Commission and Railroad or on 30 days written notice to the Railroad and Commission.

**14.0 Hazardous Materials Compliance and Reporting.** Contractor shall be responsible for complying with all applicable federal, state and local governmental laws and regulations, including, but not limited to environmental laws and regulations (including but not limited to the Resource Conservation and Recovery Act, as amended; the Clean Water Act, as amended; the Oil Pollution Act, as amended; the Hazardous Materials Transportation Act, as amended; and the

Comprehensive Environmental Response, Compensation and Liability Act, as amended), and health and safety laws and regulations. In addition to the liability provisions contained elsewhere in this job special provision, the contractor hereby indemnifies, defends and holds harmless the Railroad for, from and against all fines or penalties imposed or assessed by federal, state and local governmental agencies against the Railroad which arise out of contractor's work under this special provision. Notwithstanding the preceding sentence, the contractor will not be liable for pre-existing hazardous materials or hazardous substances discovered on Railroad's property or right of way so long as such hazardous materials or hazardous substances were not caused by (in whole or in part) contractor's work, acts or omissions. If contractor discovers any hazardous waste, hazardous substance, petroleum or other deleterious material, including but not limited to any non-containerized commodity or material, on or adjacent to Railroad's property, in or near any surface water, swamp, wetlands or waterways, while performing any work under this special provision, the contractor shall immediately:

- (a) Notify the Railroad's Resource Operations Center at (800) 832-5452, of such discovery.
- (b) Take safeguards necessary to protect employees, subcontractors, agents and/or third parties.
- (c) Exercise due care with respect to the release, including the taking of any appropriate measure to minimize the impact of such release

**15.0 Personal Injury Reporting.** The Railroad is required to report certain injuries as a part of compliance with Federal Railroad Administration ("FRA") reporting requirements. Any personal injury sustained by any employee of the contractor, subcontractor or contractor's invitees while on the Railroad's property shall be reported immediately, by phone or mail if unable to contact in person, to the Railroad's representative in charge of the project. The Non-Employee Personal Injury Data Collection Form is to be completed and sent by Fax to the Railroad at (817) 352-7595 and to the Railroad's Project Representative no later than the close of shift on the date of the injury.

**16.0 Failure to Comply.** In the event the contractor violates or fails to comply with any of the requirements of this special provision, the below orders will be applied. Any such orders shall remain in effect until the contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

- (a) The Railroad Engineer may require that the contractor to vacate the Railroad's property.
- (b) The Engineer may withhold all monies due to the contractor until contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

**17.0 Payment for Cost of Compliance.** No separate payment will be made for any extra cost incurred on account of compliance with this special provision. All such cost shall be included in the contract unit price for other items included in the contract. Railroad will not be responsible for paying the contractor for any work performed under this special provision.

## HH. Union Pacific Railroad Requirements

### 1.0 Introduction.



**1.1** These Railroad Requirements set forth terms and conditions agreed upon between the Union Pacific Railroad Company (Railroad) and the Missouri Highways and Transportation Commission (Commission), under which the Railroad will allow the Commission's contractors to enter in and upon the Railroad's real property, right of way, tracks and other facilities (Railroad's Property) to perform the contractor's work relating to this project.

**1.2** To report an emergency on the Railroad, call: (888) 877-7267.

**1.3** The project location is at Railroad Milepost 2.91 on Railroads Jefferson City Subdivision, designated as USDOT Crossing # 424819B. **Current FRA data shows 14 daytime trains per day and 14 nighttime trains per day and 4 passenger trains per day.**

**1.4** Definitions of terms set forth in the current edition of the Missouri Standard Specifications for Highway Construction shall be applicable to those terms as used in these Railroad Requirements.

## **2.0 Authority of Railroad Representative and Engineer.**

**2.1** The authorized representative of the Railroad, herein called "Railroad Representative", shall have final authority in all matters affecting the safe maintenance and operation of railroad traffic including the adequacy of the foundations and structures supporting the railroad tracks.

**2.1.1** The Railroad designates the following individual as the Railroad Representative for this project. Except as otherwise provided in these Railroad Requirements, the contractor shall address all notices concerning this project to the Railroad Representative, as follows:

Nik Shepard,  
Public Projects Manager  
Telephone: Direct - (414) 978-0902 Mobile – (715) 379-4686  
E-mail: [nshepard@benesch.com](mailto:nshepard@benesch.com)

**2.1.2** The Railroad, or the individual identified above, may designate a different individual to act as the Railroad Representative for this project, and may change the address information stated above, by giving written notice of the changes to the contractor and to the Engineer, as provided in these Railroad Requirements.

**2.2** The authorized representative of the Commission (Engineer) shall have authority over all other matters as prescribed herein and in the project specifications.

## **3.0 Contractor's Indemnity Obligations to the Railroad.**

**3.1** The contractor agrees to indemnify, defend and hold harmless the Railroad from and against any injury or death of persons whomsoever, or from any loss or damage to the Railroad's Property, caused by acts or omissions of the contractor in performing work on this project, whether on, over, under or in the vicinity of the Railroad's Property. In the event the contractor shall fail to restore the Railroad's Property immediately to a condition acceptable to the Railroad when any such loss or damage to the Railroad's Property is called to the contractor's attention by the Railroad, then the Railroad may perform such corrective work at the cost of the contractor. The Railroad shall have the right to bring an action directly against the contractor to recover any loss or damage sustained by the Railroad by reason of the contractor's breach of agreements contained in these Railroad Requirements. In addition to such remedies of the Railroad, the Commission will withhold from final payment due to the contractor the amount reasonably necessary to reimburse

the Railroad for such loss or damage or for performing such work. The term "loss or damage" as used herein shall include, but not be limited to, the erosion and silting of, water damage to, and the accidental or intentional placing or dropping of objects on the Railroad's Property.

#### **4.0 Notice of Starting Work.**

**4.1** The contractor shall not commence any work on the Railroad's right of way until contractor has complied with the following conditions (no particular order):

**4.1.1** At least ten (30) days in advance of the date the contractor proposes to begin work on the Railroad's Property, the contractor has given written notice of the contractor's proposed start date and time to the Railroad Representative, and Railroad's Manager of Track Maintenance (see paragraph 12.2.3 below), with a copy to the Engineer.

**4.1.2** The Commission has obtained written approval from the Railroad's Representative for the contractor's insurance coverage as required by Section 17 of these Railroad Requirements, and authorization for the contractor to begin work on the Railroad's Property.

**4.1.3** The contractor has determined whether fiber optic cable systems are buried on the Railroad's Property. If fiber optic cable systems are buried on the Railroad's Property, then the contractor has contacted the Railroad at the 24 hour number, 800-336-9193, has contacted the telecommunications company involved, has arranged for a cable locator, and has made arrangements for relocation or other protection of the fiber optic cable system on the Railroad's Property.

**4.1.4** Union Pacific Property Access Training must have been completed by each person on UPRR right of way. A valid copy of certification must be with the individual anytime they are on the job site. For guidance on completing the training, visit the website provided:

<https://www.up.com/aboutup/community/safety/erailsafe/up-pat/index.htm>

**4.2 Right of Entry.** At least thirty (30) days in advance of the date the contractor proposes to begin work on the Railroad's Property, the contractor shall enter into a Contractor's Right of Entry Agreement (CROE) with Railroad prior to working on Railroad property. Submit the following information to the Railroad Representative:

- a. MoDOT manager contact information
- b. Contractor contact information
- c. Site location (include address, DOT#)
- d. Site map
- e. Brief description of scope of work
- f. Proposed schedule for work on UP right of way

**4.2.1** After reviewing the information, the Railroad Representative will send all of the information to UP Real Estate for processing. UP Real Estate will draft the CROE agreement and send it to the contractor for signature. The signed contract and administrative fee must then be returned to UP Real Estate.

**4.2.2 Administrative Fee.** Upon the execution and delivery of this CROE agreement, Contractor shall pay the Railroad One Thousand Twenty-five Dollars (\$1,025) as reimbursement for clerical, administrative and handling expenses in connection with the processing of this CROE agreement.

**4.2.3** If applicable to the project, the contractor must submit a demolition and falsework plan as well as means and methods to the Railroad for review and approval. These plans can be submitted along with the Right of Entry application; however, the Right of Entry will not be approved until the demolition and falsework plan is approved by the Railroad.

## **5.0 Interference with Railroad's Operations.**

**5.1** The Railroad's right of way is located within the limits of this project. The contractor shall take care to ensure that it will not drop any debris or material on the Railroad's Property.

**5.2** The contractor shall arrange and conduct all of the contractor's work so that it causes no interference with the Railroad's operations, including train, signal, telephone, telegraphic services, damage to the Railroad's Property, poles, wires and other facilities of tenants on the Railroad's Property. Whenever the contractor's work may directly affect the operations or safety of trains, the contractor shall submit a written description of the method of doing such work to the Railroad Representative for approval, but such approval shall not relieve the contractor from liability resulting from the contractor's work. Any work to be performed by the contractor that requires flagging service shall be deferred by the contractor until the flagging services are available at the job site.

**5.3** Whenever the contractor's work upon the Railroad's Property will unavoidably cause an impediment to the Railroad's operations, such as requiring the use of runaround tracks or reduced train speed, the contractor should schedule and conduct these operations so that this impediment is reduced to the absolute minimum.

**5.4** If conditions arising from, or in connection with the work require immediate and unusual provisions to protect the Railroad's operations and property, the contractor shall make such provisions. If in the judgment of the Railroad Representative, or the Engineer if the Railroad Representative is absent, such provision is insufficient, then the Railroad Representative or Engineer may require or provide such provisions as he/she deems necessary. In any event, the contractor shall make such provisions at the contractor's expense, and without cost to the Railroad or the Commission.

## **6.0 Track Clearances.**

**6.1** During construction, the contractor shall maintain not less than the minimum track clearances as shown on the project plans. However, before undertaking any work within the Railroad's Property and before placing any obstruction over any track, the contractor shall:

**6.1.1** Notify the Railroad Representative and the Railroad's Manager of Track Maintenance at least ten (10) days in advance of the proposed work.

**6.1.2** Receive assurance from the Railroad's Manager of Track Maintenance that arrangements have been made for flagging service as may be necessary.

**6.1.3.** Receive permission from the Railroad Representative to proceed with the work, as provided in section 4.0.

**6.1.4.** Confirm that the Engineer has received copies of the contractor's notice to the Railroad, and of the Railroads' response.

**6.1.5** Note that temporary Work Zone traffic control must not circumvent the active warning devices at this location.

**6.1.6** Temporary traffic control must comply with MUTCD standards. Any time work is within 25' of the track, the potential to foul the track exists or a pilot car is used traversing the crossing will require a Railroad flag person to be present. Traffic control must be returned to normal operations through the crossing area before releasing the Railroad's flag person.

## **7.0 Construction Procedures.**

**7.1. General.** The contractor's work on the Railroad's property shall be performed in accordance with these Railroad Requirements and shall be subject to the Railroad's inspection and review. The contractor shall submit plans that shall be signed, sealed, and stamped in accordance with the laws relating to Architects and Professional Engineers, Chapter 327, RSMo, for the demolition of any structure over Railroad right of way, and for temporary shoring and falsework that may affect the Railroad's facilities or traffic.

**7.2 Excavation.** The contractor shall maintain the subgrade of an operated track with the beam edge at least 12 feet from centerline of track and not more than 26 inches below top of rail, unless the existing section fails to meet this specification, in which case the contractor shall maintain the existing section.

**8.0 Maintenance of Railroad Facilities.** Within the project limits, the contractor shall maintain Railroad's Property, including all ditches and drainage structures, free of silt or other obstructions that may result from contractor's operations. The contractor shall promptly repair eroded areas within the Railroad's Property and repair any other damage to the Railroad's Property or the Railroad's tenants. The contractor shall perform all such maintenance and repair of damages due to the contractor's operations at the contractor's expense.

## **9.0 Storage of Materials and Equipment.**

**9.1** The contractor shall obtain permission from the Railroad Representative before storing any materials or equipment anywhere on Railroad's Property. The Railroad will not ordinarily permit storage within twenty-five feet (25') from the centerline of any track, or within three hundred feet (300') from any grade crossing. The Railroad will not be liable for damage to such material and equipment from any cause, and the Railroad Representative may move such material and equipment or require the contractor to move it, at the contractor's expense.

**9.2** The contractor shall not leave unattended any grading or construction machinery parked upon Railroad's Property, unless it is effectively immobilized so that unauthorized persons cannot move such machinery.

**10.0 Cleanup.** Upon completion of the work, the contractor shall remove from within the limits of the Railroad's Property all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the contractor's and shall leave Railroad's Property in a neat condition satisfactory to the Railroad Representative.

**11.0 Damages.** The Railroad shall not assume liability for any damages to the contractor, contractor's work, employees, servants, equipment and materials caused by the Railroad's traffic. However, the preceding sentence shall not exempt the Railroad from liability for any loss, damage or injury proximately caused by the Railroad's intentional misconduct or sole or gross negligence.

The contractor shall directly reimburse the Railroad for any cost the Railroad reasonably incurs for repairing damages to the Railroad's Property or to property of the Railroad's tenants, caused by or resulting from the operations of the contractor relating to this project.

## **12.0 Flagging Services.**

**12.1 When Flagging is Required.** The Railroad has sole authority to determine the need for flagging to protect the Railroad's operations. Whenever the Railroad requires flagging services with reference to any of the contractor's work on this project, the contractor shall not perform any such work until all required flaggers are present at the job site.

**12.1.1** In general, the Railroad may require flagging services whenever the contractor's personnel or equipment are, or are likely to be, working on the Railroad's Property, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging, to prevent unreasonable risks of accidental hazard to the Railroad's operations or personnel.

**12.1.2** Normally, the Railroad will assign one flagger to a project; but in some cases, more than one may be necessary, such as yard limits where the Railroad may assign up to three flaggers. However, if the contractor works within distances that violate instructions given by the Railroad Representative, or performs work upon or adjacent to Railroad's Property that has not been scheduled with the Railroad Representative, the Railroad may require flagging services full time until the project is completed.

**12.1.3** If flagging is determined to be required by the Manager of Track Maintenance (MTM), and the MTM advises that third party flagging is to be used, then third-party flagging must be used. If flagging is determined to be required by the MTM and the MTM advises that an agreement employee flagging is to be used, then an agreement flagger will be put up for bid (and scheduled accordingly).

John Helchowski - Manager of Track Maintenance  
805-298-0975  
[jvhelcho@up.com](mailto:jvhelcho@up.com)

UPRR Third Party Flagging Policy Link  
[https://www.up.com/real\\_estate/third-party-flagging/index.htm](https://www.up.com/real_estate/third-party-flagging/index.htm)

## **12.2 Scheduling and Notification of Flagging Services.**

**12.2.1** The contractor shall arrange with the Railroad all flagging services required by the Railroad to accomplish the contractor's work on this project.

**12.2.2** Before the contractor begins work on the Railroad's Property, the contractor shall furnish to the Railroad Representative and the Engineer a schedule for all work required to complete the contractor's portion of the project within the Railroad's Property, and shall arrange for a job site meeting between the contractor, the Engineer, and the Railroad Representative. Until the contractor has provided its work schedule and met on-site with the Railroad Representative and the Engineer, the Railroad may withhold all flagging services from the contractor's proposed job site.

**12.2.3** Before the contractor first begins any work upon or adjacent to the Railroad's Property, the contractor shall give not less than thirty (30) days advance notice to the Railroad, and to the Engineer, of its intent to begin such work. The contractor shall address all notices relating to flagging as instructed in the fully executed CROE agreement.

**12.2.4** The Railroad usually assigns one flagger to work at the job site on a continuous basis until the contractor no longer needs flagging services. The contractor shall not call for flagging services on a spot basis. The Railroad's assigned flagger shall notify the Engineer when flagging services have begun and ended. The flagger shall give these notices immediately upon arrival at the job site on the first day, and before departing from the job site on the last day of each separate period when the Railroad provides flagging services, or as soon as possible thereafter. The Engineer shall document these notifications in the project records.

**12.2.5** After the contractor has begun work that requires flagging services, the contractor shall give not less than ten (10) day's advance written notice to the Railroad before discontinuing flagging services and terminating the obligation to pay for flagging services. The contractor shall simultaneously provide a copy of this notice to the Engineer. If the contractor's work on or adjacent to the Railroad's Property is suspended at any time, or for any reason, then before the contractor resumes any work on or adjacent to the Railroad's Property, the contractor shall give advance, written notice to the Railroad and to the Engineer of its intent to resume such work. This notice shall provide sufficient details of the contractor's proposed work to enable the Railroad Representative to determine whether flagging services will be required before the contractor resumes its work on or adjacent to the Railroad's Property. The contractor shall give this required notice at least three (3) working days before it intends to resume such work; however. The Railroad may take up to thirty (30) days after the contractor has given this notice before resuming flagging services at the job site. The requirements of this paragraph 12.2.5 shall not apply if the suspension and resumption of the contractor's work were previously scheduled with the Railroad pursuant to paragraph 12.2.2 of these Railroad Requirements, or the suspension was caused by an emergency as provided in paragraph 12.2.6 of these Railroad Requirements.

**12.2.6** If, after the Railroad has assigned a flagger to the project site in accordance with section 12.0, any emergency requires the flagger's presence elsewhere, then the contractor shall suspend work on the Railroad's Property until the flagger is again available. Any additional costs to the contractor resulting from such delay shall be borne by the contractor and not by the Railroad.

### **12.3 Payment for Flagging Services.**

**12.3.1** The Commission will pay the Railroad directly for the cost of flagging services associated with this project by deducting the amount from the Commission's payments to the contractor. If a third-party flagger is used, the contractor has the option to pay the flagger directly but must notify the MoDOT Engineer of such payments for flagging.

**12.3.2** The estimated cost of flagging services is approximately \$1,500 per day, based on an 8-hour workday and a 40-hour work week. The Railroad shall charge not more than its actual cost of providing these flagging services, which includes the base pay for the flagger or flaggers who actually performed the required flagging services, the Railroad's reasonable overhead costs, and the reasonable costs actually incurred for the flagger's travel expenses, meals and lodging if required. The Railroad may charge a maximum of one hour of travel time each way per day per flagger, for travel to and from the job site. A flagger's work in excess of 8 hours per day or 40 hours per week, but not more than 12 hours per day, will result in overtime pay at 1.5 times that employee's regular hourly rate. A flagger's work in excess of 12 hours per day will result in

overtime pay at 2.0 times that employee's regular hourly rate. If a flagger performs required flagging services on a holiday, then the overtime pay rate shall be 2.5 times that employee's regular hourly rate. The Commission or contractor also shall reimburse the Railroad for its actual expenses reasonably incurred in preparing and handling invoices to the Commission or contractor for the cost of these flagging services. The Railroad's charges to the Commission or contractor shall comply with applicable provisions of the current FAPG issued by the FHWA.

**12.3.3** The Railroad shall submit progress invoices to the Engineer during the time the Railroad requires flagging services. The Railroad shall submit its final invoice for flagging services to the Engineer within one hundred eighty (180) days after the contractor has notified the Railroad and the Commission that all its work over the Railroad's Property is complete, in accordance with section 18.0 below. If the Commission does not receive the Railroad's final flagging invoice within this time period, then the Railroad shall obtain payment directly from the contractor.

**12.3.4** If a dispute arises between the Railroad, the Commission and the contractor concerning the amount charged for flagging service, then the Commission may deduct the full amount of the Railroad's invoice from the contractor's payment until the dispute is resolved.

**12.4 Flagging Complaints.** The contractor and the Railroad shall attempt to resolve any complaints concerning flagging services in a timely manner. If the contractor disputes the need for a flagger, the contractor shall notify the Railroad Representative and the Engineer. The contractor shall confirm any verbal complaints in writing within five (5) working days, by sending a copy to the Railroad Representative and to the Engineer.

### **13.0 Temporary Construction Grade Crossing.**

**13.1** When the contractor has no reasonable alternate method of transporting construction materials and personnel across the Railroad's track, the contractor shall make all necessary arrangements with the Railroad for the installation, maintenance, and removal of one temporary grade crossing for a construction haul road. The contractor shall bear all costs incidental to such crossings, including flagging, whether services are performed by contractor's own forces or by the Railroad's personnel. The contractor shall execute the Railroad's standard Road Crossing Agreement covering terms and conditions for the temporary crossing.

**13.2** Neither the contractor nor the Railroad shall construct any crossing for use by the contractor for transporting materials or equipment across the tracks of the Railroad until the Railroad Representative specifically authorizes the installation, maintenance, necessary watching and flagging thereof and removal, which shall be done at the contractor's expense.

**14.0 Work for the Benefit of the Contractors.** The project plans show all temporary or permanent changes in wire lines or other facilities that are necessary to complete the project, or these changes will be covered by appropriate plan revisions approved by the Commission and the Railroad. If the contractor desires any further changes, the contractor shall make separate arrangements with the Railroad for those changes, at the contractor's expense.

**15.0 Cooperation and Delays.** The contractor shall arrange a schedule with the Railroad for accomplishing staged construction involving work by the Railroad or tenants of the Railroad. In arranging a schedule, the contractor shall request information from the Railroad, and the Railroad shall promptly provide information, concerning the minimum lead time required for assembling crews and materials. The contractor shall schedule adequate time for those activities. The contractor shall not make any claim against the Railroad for hindrance or delay on account of railway traffic for:

**15.1** Any work the Railroad performs.

**15.2** Other delay incident to or necessary for the safe maintenance of railway traffic.

**15.3** Any delays due to compliance with these Railroad Requirements.

**16.0 Trainman's Walkways.** The contractor shall maintain along the outer side of each exterior track of multiple operated tracks, 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 12 feet from the centerline of the track. Before the close of each workday, the contractor shall remove all temporary impediments to walkways and track drainage encroachments or obstructions that were allowed during work hours when flagging services were available. Whenever the contractor excavates or maintains any excavation near the walkway, the contractor shall install a handrail with 12 feet minimum clearance from the centerline of the track.

## **17.0 Insurance.**

**17.1 General Insurance Provisions.** The contractor shall, at its sole cost and expense, procure and continuously maintain in force during this project, the insurance coverage required under this section 17 until the contractor has completed all project work on the Railroad's Property, has removed all equipment and materials from the Railroad's Property, and has cleaned and restored the Railroad's Property to the satisfaction of the Engineer and the Railroad Representative. The amount of work to be performed upon, over or under the Railroad's Property is estimated to be one percent (1%) of the contractor's total bid for the project.

**17.2 Commercial General Liability Insurance.** The contractor shall maintain commercial general liability ("CGL") insurance with a limit of not less than \$5,000,000 for each occurrence and an aggregate limit of not less than \$10,000,000. CGL insurance must be written on ISO occurrence form CG 00 01 12 04 (or a substitute form providing equivalent coverage). The policy must contain the following endorsement, which must be stated on the certificate of insurance: "Contractual Liability Railroad's" ISO form CG 24 17 10 01 (or a substitute form providing equivalent coverage) showing "Union Pacific Railroad Company Property" as the Designated Job Site.

**17.3 Business Automobile Coverage Insurance.** The contractor shall maintain business auto coverage written on ISO form CA 00 01 (or a substitute form providing equivalent liability coverage) with a combined single limit of not less than \$5,000,000 for each accident. The policy must contain the following endorsements, which must be stated on the certificate of insurance: "Coverage For Certain Operations In Connection With Railroad's" ISO form CA 20 70 10 01 (or a substitute form providing equivalent coverage) showing "Union Pacific Property" as the Designated Job Site; and Motor Carrier Act Endorsement - Hazardous Materials Clean Up (MCS-90) if required by law.

**17.4 Alternate Liability Insurance Limits.** Instead of the minimum limits of insurance coverage described above in subsections 17.2 and 17.3, Railroad will accept CGL insurance limits of at least \$2,000,000 for each occurrence or claim and an aggregate limit of at least \$2,000,000, and will accept Business Automobile Insurance containing a combined single limit of at least \$2,000,000 per occurrence or claim, if the contractor will secure Railroad Protective Liability Insurance coverage with a combined single limit of \$5,000,000 per occurrence and an aggregate limit of \$10,000,000. The contractor's election to maintain these alternate liability insurance limits



shall not affect the applicability of any other terms and conditions set forth in these Railroad Requirements.

**17.5 Workers' Compensation and Employers' Liability Insurance.** The contractor shall maintain workers' compensation insurance coverage, with not less than the minimum statutory liability required under the workers' compensation laws of the State of Missouri. The contractor shall maintain Employers' Liability (Part B) insurance coverage with limits of at least \$500,000 for each accident, a \$500,000 disease policy limit, and \$500,000 for each employee. If the contractor is self-insured, then the contractor shall provide evidence of state approval and excess workers' compensation coverage, which must include coverage for liability arising out of the U. S. Longshoremen's and Harbor Workers' Act, the Jones Act, and the Outer Continental Shelf Land Act, if applicable. The policy must contain the following endorsement, which must be stated on the certificate of insurance: "Alternate Employer Endorsement" ISO form WC 00 03 01 A (or a substitute form providing equivalent coverage) showing the Railroad in the schedule as the alternate employer (or a substitute form providing equivalent coverage).

**17.6 Railroad Protective Liability Insurance.** The contractor must maintain Railroad Protective Liability insurance written on ISO occurrence form CG 00 35 12 04 (or a substitute form providing equivalent coverage) on behalf of the Railroad as named insured, with a limit of not less than \$2,000,000 per occurrence and an aggregate limit of \$6,000,000. Before commencing any work on the Railroad's Property, the contractor shall submit the original insurance policy to the Railroad, or may submit a binder stating that the required Railroad Protective Liability policy is in place until the contractor delivers the original policy to the Railroad. The contractor shall cause the Railroad Protective Liability Insurance policy to include a description of the named insured, the work, and the job site, as follows:

**17.6.1** Named Insured: Union Pacific Railroad Company.

**17.6.2** Description and Designation:

Bridge deck Epoxy Polymer Overlay over UPRR

St. Louis City Route 100

Job No. J613550

USDOT # 424819B MP 2.91 Jefferson City Sub in St. Louis City, MO.

**17.7 Umbrella or Excess Insurance.** If the contractor utilizes umbrella or excess insurance policies, these policies must "follow form" and afford no less coverage than the primary policy.

**17.8 Pollution Liability Insurance.** The contractor shall maintain pollution liability insurance coverage, which must be written on ISO form Pollution Liability Coverage Form Designated Sites CG 00 39 12 04 (or a substitute form providing equivalent liability coverage), with limits of at least \$5,000,000 per occurrence and an aggregate limit of \$10,000,000. If the scope of work as defined in this Project includes the disposal of any hazardous or non-hazardous materials from the job site, the contractor must furnish to the Railroad evidence of pollution legal liability insurance maintained by the disposal site operator for losses arising from the insured facility accepting the materials, with coverage in minimum amounts of \$1,000,000 per loss, and an annual aggregate of \$2,000,000.

**17.9 Other Insurance Requirements.**

**17.9.1.** Each policy required above (except workers' compensation and employers' liability) must include the Railroad as "Additional Insured" using ISO Additional Insured Endorsements CG 20

26, and CA 20 48 (or substitute forms providing equivalent coverage). The coverage provided to the Railroad as an additional insured shall, to the extent provided under ISO Additional Insured Endorsement CG 20 26 and CA 20 48, provide coverage for the Railroad's negligence whether sole or partial, active or passive.

**17.9.2** Where allowable by law, the punitive damage exclusion shall be deleted, and the deletion shall be indicated on the certificate of insurance.

**17.9.3** The contractor waives all rights of recovery, and its insurers also waive all rights of subrogation of damages against the Railroad and its agents, officers, directors and employees, except that these waivers shall not apply to punitive damages, nor to any loss, damage or injury proximately caused by the Railroad's intentional misconduct or sole or gross negligence. The certificate of insurance shall acknowledge these waivers.

**17.9.4** Prior to commencing any work on the Railroad's Property, the contractor shall furnish the Railroad with one or more certificates of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements set forth in this Section 17.0.

**17.9.5** The contractor shall only obtain insurance policies written by a reputable insurance company acceptable to the Railroad, or which currently has a Best's Insurance Guide Rating of A- and Class VII or better, and which is authorized to do business in the State of Missouri.

**17.9.6** The fact that insurance is obtained by the contractor or by the Railroad on behalf of the contractor will not be deemed to release or diminish the liability of the contractor, including, without limitation, liability under the indemnity provisions contained in Section 3.0 of these Railroad Requirements. Damages recoverable by the Railroad from the contractor or any third party will not be limited by the amount of the required insurance coverage, except to the extent of any payments the Railroad has received pursuant to that insurance coverage obtained and paid for by the contractor.

**17.10 Evidence of Insurance.** The contractor shall provide evidence of insurance as required above to the addresses shown below, for review by the Commission and transmittal to the Railroad.

Railroad  
Mr. Casey Moore  
Real Estate  
Union Pacific Railroad Company  
1400 Douglas St., MS 1690  
Omaha, NE 68179-1690

Commission  
Ms. Brandi Baldwin  
State Construction and Materials Engineer  
Missouri Department of Transportation  
P.O. Box 270  
Jefferson City, MO 65102

**17.11** Except as otherwise specifically provided in these Railroad Requirements, the Railroad will not accept binders as evidence of insurance, and the contractor shall provide the Railroad with the original insurance policy.

**17.12 Insurance Required of Subcontractors.** If any part of the work is sublet, the contractor shall maintain and provide evidence of similar insurance, in the same amounts as required of the prime contractor, to cover the subcontractor's operations. The Railroad will accept endorsements to the prime contractor's policies specifically naming subcontractors and describing the subcontractor's operations, for this purpose.

Job No.: J613550  
Route: Various  
County: Various

**17.13 Cancellation of Insurance.** The contractor and its insurers shall not cancel any of the required insurance coverage, except by permission of the Commission and the Railroad, or after thirty (30) days' written notice to the Commission and the Railroad at the addresses shown in subsection 17.10.

**18.0 Completion of Work on Railroad's Property.** The contractor shall notify Engineer and Railroad's Representative when the contractor has completed its work on Railroad's Property.

**19.0 Failure to Comply.** If the contractor violates or fails to comply with any of the requirements of these Railroad Requirements, then the Railroad Engineer may require that the contractor vacate the Railroad's property and the Engineer may withhold all monies due to the contractor until the contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

**20.0 Payment for Cost of Compliance.** The contractor is not entitled to any separate payment for any extra cost it may incur on account of compliance with these Railroad Requirements. The contractor shall include all such costs in the contract unit price for items properly authorized in the contract.

II. Preformed Thermoplastic Pavement Marking, Symbol (Bike)

**1.0 Description.** Symbol (Bike) to be placed as noted in the contract documents.

**2.0 Construction Requirements.** Shall be measured by each acceptable bike lane symbol pavement marking in place. It shall follow the current Missouri Standard Plans for Highway Construction and shall include all required surface preparation and application techniques needed to provide a finished product as intended by the Contract Documents.

**3.0 Method of Measurement.** Measurement shall be by EACH. All other work necessary shall be considered subsidiary to this item.

**4.0 Basis of Payment.** The accepted quantities of Preformed Thermoplastic Pavement Marking, Symbol (Bike) will be paid for at the contract unit price.

JJ. Light Emitting Diode Wall Packs

**1.0 Description.** This specification is for furnishing and installing Light Emitting Diode (LED) Wall Pack.

**2.0 Construction Requirements.** The Light Emitting Diode Wall Pack shall be compatible with existing 240 voltage lighting system. The work shall consist of furnishing, installing, and placing Wall Packs according to Sec. 1091.7.2.1.1 with a 150-watt HPS equivalent LED Wall Pack. LED shall be approved by the engineer prior to purchase and installation.

**3.0 Payment.** Payment for all labor, equipment, materials, and incidental work will be for the following item:

Item Number	Type / Description	Unit
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Job No.: J613550  
Route: Various  
County: Various

901-99.02	Light Emitting Diode Wall Pack	Each
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KK. Damage to Newly Placed Overlays

**1.0 Description.** Pavement Markings shall be in accordance with Section 620.50 and specifically as follows.

**2.0 Construction Requirements.** Pavement marking to be placed on any new overlay, the preparation shall be completed in a means as not to damage the newly placed overlay, including but not limited to Epoxy Polymer Wearing Surface or Crack Seal. Care shall be taken to not damage the newly placed overlays during any prep or application methods which will cause damage to the overlays.

It shall be the contractor's responsibility to determine what type of method to be used for any preparation work needed for the application of pavement markings. The contractor shall make it know to the engineer 2 weeks prior to applications.

**3.0 Method of Measurement.** Final measurement will not be made.

**4.0 Basis of Payment.** The accepted application of pavement marking, is including all labor, equipment, and material necessary to protect the newly placed overlay for this this contract is included in the cost of pavement markings.

LL. Clean Water Act Requirements

**1.0 Description.** The Contractor shall be aware that any work within streams, wetlands, or special aquatic sites requires a Section 404 permit from the Corps of Engineers.

**2.0** The project meets the conditions of the following listed permits with no pre-construction notification to the Corps of Engineers:

Section 404 Nationwide Permit 14 (Linear Transportation Projects)

**3.0** The Contractor shall abide by all general conditions of Section 404 and 401 Permits, and specific conditions of the following listed Nationwide Permit found in the General Provisions and Supplemental Specifications to the current Missouri Standard Specifications for Highway Construction referenced in this contract.

Section 404 Nationwide Permit 14 (Linear Transportation Projects)

**3.1** If there are any changes to the scope or limits to the project, the Contractor must notify the Engineer who will then notify the MoDOT Environmental Section to verify that the project still meets permit conditions.

**3.2** No additional time will be added to the contract for the contractor to obtain any permits.

**4.0 Basis of Payment.** There will be no direct payment for compliance with this provision.