Job No.: JNW0133
Route: I-35 & 69
County: Clinton

JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

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

Job No.: JNW0133
Route: I-35 & 69
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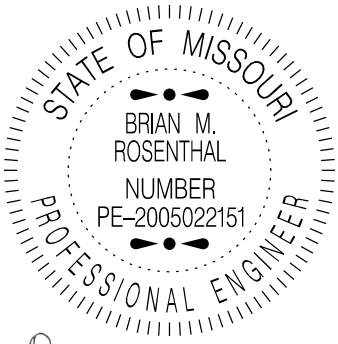
<td> 

Brian M. Rosenthal
09/19/2024 9:57:17 AM
BRIAN M. ROSENTHAL - CIVIL
MO-PE-2005022151</td>
<td>MISSOURI HIGH/WAYS AND TRANSPORTATION COMMISSION
105 W. CAPITOL AVE.
JEFFERSON CITY, MO 65102
Phone 1-888-275-6636

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

JOB NUMBER: JNW0133
CLINTON COUNTY, MO
DATE PREPARED: 09/10/2024

ADDENDUM DATE:</td>
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<td colspan="2">Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: All</td>
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Job No.: JNW0133
Route: I-35 & 69
County: Clinton

JOB
SPECIAL PROVISION

A. General - Federal JSP-09-02K

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

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

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

General Provisions & Supplemental Specifications

Supplemental Plans to July 2024 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-13-01D

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

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

Notice to Proceed: December 9, 2024
Contract Completion Date September 1, 2026

2.1 Calendar Days and Completion Dates. Completion of the project is required as specified herein. The count of calendar days will begin on the date the contractor starts any construction operations on the project.

Project	Calendar Days	Daily Road User Cost
JNW0133	N/A	$5,400

3.0 Liquidated Damages for Contract Administrative Costs. Should the contractor fail to complete the work on or before the contract completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of $3,000 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 specified contract completion date or calendar days.

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

C. Work Zone Traffic Management JSP-02-06N

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

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

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

2.0 Traffic Management Schedule.

2.1 Traffic management schedules shall be submitted to the engineer for review prior to the start of work and prior to any revisions to the traffic management schedule. The traffic management

schedule shall include the proposed traffic control measures, the hours traffic control will be in place, and work hours.

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

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

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

2.5 Traffic Congestion

2.5.1 Traffic Congestion for Interstate 35 Lane Closures. 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.

2.5.2 Traffic Congestion for US 69 Lane Closures. The contractor shall, upon approval of the engineer, take proactive measures to reduce traffic congestion in the work zone. The contractor shall immediately implement appropriate mitigation strategies whenever traffic congestion reaches an excess of 10 minutes to prevent congestion from escalating to 15 minute or above threshold. If disruption of the traffic flow occurs and traffic is backed up in queues of 15 minute delays or longer, then the contractor shall immediately review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from reoccurring. Traffic delays may be monitored by physical presence on site or by utilizing real-time travel data through the work zone that generate text and/or email notifications where available. The engineer monitoring the work zone may also notify the contractor of delays that require prompt mitigation. The contractor may work with the engineer to determine what other alternative solutions or time periods would be acceptable.

2.5.3 Traffic Safety.

2.5.3.1 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.

2.5.3.2 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 Transportation Management Plan. The contractor Work Zone Specialist (WZS) shall review the Transportation Management Plan (TMP), found as an electronic deliverable on MoDOT's Online Plans Room and discuss the TMP with the engineer during the preconstruction conference. Throughout the construction project, the WZS is responsible for updating any changes or modifications to the TMP and getting those changes approved by the engineer a minimum of two weeks in advance of implementation. The WZS shall participate in the post construction conference and provide recommendations on how future TMPs can be improved.

3.0 Work Hour Restrictions.

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

Memorial Day
Labor Day
Thanksgiving
Christmas
New Year's Day

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

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

3.2 The contractor shall not 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.

3.2.1 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 intervals of time required for emergency operations and/or pavement repair. 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: 1-800-525-5555
Lathrop Fire Protection District: 816-528-4254
Clinton County Sheriff: 816-539-2156

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.

Brian Rosenthal, Project Contact
Northwest District
3602 N. Belt Hwy
St. Joseph, MO 64506

Telephone Number: 816-387-2499
Email: Brian.Rosenthal@modot.mo.gov

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

F. Utilities

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:

Utility Name	**Known Required Adjustment**	**Type**
Brightspeed 1120 South Tryon Street Charlotte, NC 28203 Phone: (833) 363-2360	**None**	Communications

Clinton County PWSD 3 1209 North Ashland Drive Cameron, MO 64429 Phone: (816) 632-2055	**None**	Water
Clinton County PWSD 4 8544 Southeast V Highway Lathrop, MO 64465 Phone: (816) 580-7211	**None**	Water
Lathrop Telephone Company 1001 Kentucky Street Princeton, MO 64673 Phone: (816) 528-4211	**None**	Electric
Lumen 100 CenturyLink Drive Monroe, LA 71203 Phone: (877) 366-8344	**See Section 2.0**	Communications
Mediacom 115 North Industrial Park Road Excelsior Springs, MO 64024 Phone: (816) 797-0809	**None**	Communications
MoDOT Northwest District 3602 North Belt Highway St. Joseph, MO 64506 Phone: (816) 387-2956	**None**	Communications/Electric
Platte-Clay Electric Cooperative 1000 West 92 Highway Kearney, MO 64060 Phone: (816) 628-3121	**See Section 3.0**	Electric
Platte Pipeline 441 Landmark Drive, Suite 200 Casper, WY 82609 Phone: (660) 388-5445	**See Section 4.0**	Pipeline
Spectrum 8221 West 119th Street Overland Park, KS 66213 Phone: (913) 643-1927	**None**	Communications
Tallgrass Energy 370 Van Gordon Street Lakewood, CO 80228 Phone: (816) 664-2025	**See Section 5.0**	Pipeline

TransCanada Keystone Pipeline 5407 Providence Hill Drive Saint Joseph, MO 64503 Phone: (816) 232-1761	**See Section 6.0**	Pipeline

1.1 The existence and approximate location of utility facilities known to exist, as shown on the plans, are based upon the best information available to the Commission at this time. This information is provided by the Commission "as-is" and the Commission expressly disclaims any representation or warranty as to the completeness, accuracy, or suitability of the information for any use. Reliance upon this information is done at the risk and peril of the user, and the Commission shall not be liable for any damages that may arise from any error in the information. It is, therefore, the responsibility of the contractor to verify the above listing information indicating existence, location, and status of any facility. Such verification includes direct contact with the listed utilities.

2.0 Lumen has an existing buried fiber line running down the median of Interstate 35. The construction of this project will require Lumen's existing fiber optic line and handholes to be lowered to provide a minimum depth of cover of 42 inches below final grade. However, the contractor shall use caution while working near the lowered fiber optic cable and handholes. The utility has indicated their facilities are expected to be relocated by stage 2 of this project. The contractor shall contact and have Missouri 811 locate Lumen's interstate median fiber optic cable. The contractor shall inform Rick Redel, of Lumen, to be on site for all work within two feet of this fiber optic cable. All work within two feet of this fiber optic cable shall be done with approval of the Engineer, after consultation with Rick Redel, the on-site Lumen representative. The contractor shall exercise caution around all fiber optic cable of Lumen throughout the life of the project. **Rick Redel** can be reached at (816) 518-2804.

3.0 Platte-Clay Electric Cooperative has an existing buried power line and padmount transformer serving MoDOT roadway lighting on the east side of Interstate 35 at Route 69. The contractor shall contact Platte-Clay Electric to de-energize and remove Platt-Clay's equipment serving the lighting circuit on the east side of Interstate 35. The contractor shall contact Platte-Clay 30 days prior to the required removal date. Platte-Clay has an existing buried power line and padmount transformer serving existing MoDOT roadway lighting on the west side of Interstate 35 at Route 69. The contractor shall contact Platte-Clay Electric to remove the existing padmount transformer and install a new padmount transformer to provide single-phase, 480 Volt, three-wire, electrical power service to MoDOT's proposed lighting power supply assembly. The contractor shall notify Platte-Clay Electric in writing 30 days prior to date service will be required. Jacob Behrendt can be reached at (816) 807-7502.

4.0 Platte Pipeline has an existing petroleum pipeline crossing Interstate 35 at approximately Station 574+00. The contractor shall inform Platte Pipeline 30 days prior to pavement breaking operations in the vicinity of this pipeline. All work within the vicinity of this pipeline shall be done with approval of the Engineer, after consultation with the Platte Pipeline representative. The contractor shall exercise caution around the pipeline throughout the life of the project. Platte Pipeline can be reached at (660) 388-5445.

5.0 Tallgrass Energy has an existing gas pipeline crossing Interstate 35 at approximately Station 574+00. The contractor shall inform Tallgrass Energy 30 days prior to pavement breaking operations in the vicinity of this pipeline. All work within the vicinity of this pipeline shall be done with approval of the Engineer, after consultation with the Tallgrass Energy representative. The

contractor shall exercise caution around the pipeline throughout the life of the project. Tallgrass Energy can be reached at (816) 664-2025.

6.0 TransCanada Keystone Pipeline has an existing petroleum pipeline crossing Interstate 35 at approximately Station 574+00. The contractor shall inform TransCanada Keystone Pipeline 30 days prior to pavement breaking operations in the vicinity of this pipeline. All work within the vicinity of this pipeline shall be done with approval of the Engineer, after consultation with the TransCanada Keystone Pipeline representative. The contractor shall exercise caution around the pipeline throughout the life of the project. TransCanada Keystone Pipeline can be reached at (816) 232-1761.

G. Quality Management NJSP-15-22

1.0 Quality Management. The contractor shall provide Quality Management as specified herein to ensure the project work and materials meets or exceeds all contract requirements.

1.1 The contractor shall provide Quality Control (QC) of the work and material, as specified herein, to ensure all work and material is in compliance with contract requirements. QC staff shall perform and document all inspection and testing. The QC inspectors and testers may be employed by the contractor, sub-contractor, or a qualified professional service provided by the contractor.

1.2 The engineer will provide Quality Assurance (QA) inspection. The role of QA is to verify the performance of QC and provide confidence that the product will satisfy given requirements for quality.

1.3 The contractor shall designate a person to serve as the project Quality Manager (QM). The QM shall be knowledgeable of standard testing and inspection procedures for highway and bridge construction, including a thorough understanding of the Missouri Standard Specifications. The QM shall be responsible for the implementation and execution of the Quality Management Plan and shall oversee all QC responsibilities, including all sub-contract work. The QM shall be the primary point of contact for all quality related issues and responsibilities, and shall ensure qualified QC technicians and inspectors are assigned to all work activities. The QM should be separate from the manager of the work activities to effectively manage a QC program.

1.4 Any QC personnel determined in sole discretion of the engineer to be incompetent, derelict in their duties, or dishonest, shall at a minimum be removed from the project. Further investigation will follow with a stop work notification to be issued until the contractor submits a corrective action report that meets the approval of the engineer.

2.0 Quality Management Plan. The contractor shall develop, implement and maintain a Quality Management Plan (QMP) that will ensure the project quality meets or exceeds all contract requirements, and provides a record for acceptance of the work and material. A sample QMP, which shows minimum requirements, is provided on the MoDOT website at: www.modot.org/quality.

2.1 The QMP shall address all QC inspection and testing requirements of the work as described herein. A draft QMP shall be submitted to the Resident Engineer for review at least two weeks prior to the pre-construction conference. An approved QMP is required at least two weeks prior

to the start of work, unless otherwise allowed by the engineer. Physical work on the project shall not begin prior to approval of the QMP by the engineer.

2.2 The approved QMP shall be considered a contract document and any revisions to the QMP will require approval from the engineer.

2.3 The following items shall be included in the Quality Management Plan:

a) Organizational structure of the contractor's project management, production staff, and QC staff, specific to this project.

b) Name, qualifications, and job duties of the Quality Manager.

c) A list of all certified QC testers who will perform QC duties on the project, including sub-contract work, and the tests in which they are certified.

d) A list of all QC inspectors who will perform QC inspection duties on the project, including sub-contract work, and the areas of inspection that they will be assigned.

e) A procedure for verifying documentation is accurate and complete as outlined in Section 3.

f) A procedure describing QC Inspections as outlined in Section 4.

g) A procedure describing QC Testing, as outlined in Section 5, including a job specific Inspection and Test Plan (ITP).

h) A procedure describing Material Receiving as outlined in Section 6.

i) A list of Hold Points that are not included in the checklist forms, as outlined in Section 8.

j) A procedure for documenting and resolving Non-Conforming work as outlined in Section 9.

k) A procedure for tracking and documenting revisions to the QMP.

l) A list of any approved changes to the Standard Specifications or ITP, including a reference to the corresponding change order.

m) Format for the Weekly Schedule and Work Plans as outlined in Section 10, including a list of activities that will require pre-activity meetings.

3.0 Project Documentation. The contractor shall establish a Document Control Procedure for producing and uploading the required Quality Management documents to a MoDOT-provided server. The document management software used by MoDOT is Microsoft SharePoint®. Contractors do not need to purchase Microsoft SharePoint®, however, it is recommended that new users acquire some basic training to better understand how to use this software. MoDOT does not provide the software training, but there are several online vendors who do. Contractors are required to use Microsoft Excel® and Microsoft Word® with some documents.

3.1 The contractor shall utilize the file structure and file naming convention provided by MoDOT. A sample file structure is available on the MoDOT website.

3.2 Documents (standard forms, reports, and checklists) referenced throughout this provision are considered the minimum documentation required. They shall be obtained from MoDOT at the following web address: www.modot.org/quality. The documents provided by MoDOT are required to be used in the original format, unless otherwise approved by the engineer. Any alteration to these forms shall be approved by the engineer.

3.3 Timely submittal of the required documents to the MoDOT document storage location is essential to ensure payment can be processed for the completed work. Submittal of the documents is required within 12 hours of the work shift that the work was performed, or on a document-specific schedule approved by the engineer and included in the QMP.

3.4 The contractor shall establish a verification procedure that ensures all required documents are submitted to the engineer within the specified time, and prior to the end of each pay period for the work that was completed during that period. Payment will not be made for work that does not include all required documents. Minimum documents that might be required prior to payment include: Test Reports, Inspection Checklists, Materials Receiving Reports, and Daily Inspection Reports.

3.5 The contractor shall perform an audit at project closeout to ensure the final collection of documents is accurate and complete.

4.0 Quality Control Inspections. The QMP shall identify a procedure for performing QC inspections. QC inspections shall be performed for all project activities to ensure the work is in compliance with the contract, plans and specifications.

4.1 The QM shall identify the QC inspectors assigned to each work activity. The QC inspectors shall inspect the work to ensure the work is completed in accordance with the plans and specifications, and shall document the inspection by completing the required inspection checklists, forms, and reports provided by MoDOT. Depending on the type of work, the checklists may be necessary daily, or they may follow a progressive work process. The frequency of each checklist shall be stated in the QMP. The contractor may propose alternate versions of checklists that are more specific to the work.

4.2 A Daily Inspection Report (DIR) is required to document pertinent activity on the project each day. This report shall include a detailed diary that describes the work performed as well as observations made by the inspection staff regarding quality control. The report shall include other items such as weather conditions, location of work, installed quantities, tests performed, and a list of all subcontractors that performed work on that date. The report shall include the full name of the responsible person who filled out the report and shall be digitally signed by an authorized contractor representative.

4.3 External fabrication of materials does not require further QC inspection if the product is currently under MoDOT inspection or an approved QC/QA program. QC inspection and testing required in the production of concrete for the project shall be the responsibility of the contractor.

4.4 The contractor shall measure, and document on the DIR, the quantity for all items of work that require measurement. Any calculations necessary to support the measurement shall be

included with the documentation. The engineer will verify the measurements prior to final payment.

5.0 Quality Control Testing. The QMP shall identify a procedure for QC testing. The contractor shall perform testing of the work at the frequency specified in the Inspection and Test Plan (ITP).

5.1 MoDOT will provide a standard ITP and the contractor shall modify it to include only the items of work in the contract, including adding any Job Special Provision items. The standard ITP is available on the MoDOT website at www.modot.org/quality. The contractor shall not change the specifications, testing procedures, or the testing frequencies, from the standard ITP without approval by the engineer and issuance of a change order.

5.2 Test results shall be recorded on the standard test reports provided by the engineer, or in a format approved by the engineer. Any test data shall be immediately provided to the engineer upon request at any time, including prior to the submission of the test report.

5.3 The contractor shall ensure that all personnel who perform sampling and/or testing are certified by the MoDOT Technician Certification Program or a certification program that has been approved by MoDOT for the sampling and testing they perform.

5.4 If necessary, an independent third party will be used to resolve any significant discrepancies between QC and QA test results. All dispute resolution testing shall be performed by a laboratory that is accredited in the AASHTO Accreditation Program in the area of the test performed. The contractor shall be responsible for the cost to employ the third party laboratory if the third party test verifies that the QA test was accurate. The Commission shall be responsible for the cost if the third party test verifies that the QC test was accurate.

6.0 Material Receiving. The QMP shall identify a procedure for performing material receiving. Standard material receiving forms will be provided by the engineer.

6.1 The procedure shall address inspections for all material delivered to the site (excluding testable material such as concrete, asphalt, aggregate, etc.) for general condition of the material at the time it is delivered. The material receiving procedure shall record markings and accompanying documentation indicating the material is MoDOT accepted material (MoDOT-OK Stamp, PAL tags, material certifications, etc.).

6.2 All required material documentation must be present at the time of delivery. If the material is not MoDOT accepted, the contractor shall notify the engineer immediately and shall not incorporate the material into the work.

7.0 Quality Assurance. The engineer will perform Quality Assurance inspection and testing (QA) to verify the performance of QC inspection and testing. The frequency of the QA testing will be as shown in the ITP, but may be more frequent at the discretion of the engineer. The engineer will record the results of the QA testing and inspection and will inform the contractor of any known discrepancies.

7.1 QA is responsible for verifying the accuracy of the final quantity of all pay items in the contract. This includes taking measurements on items that require measurement and other items that are found to have appreciable errors.

7.2 QA inspection and test results shall not be used as a substitute for QC inspection and testing.

7.3 QA will be available for Hold Point inspections at the times planned in the Weekly Schedule. The inspections may be re-scheduled as needed, but a minimum 24-hour advance notification from the contractor is required unless otherwise approved by the engineer.

8.0 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 the succeeding work depends on a QA review of the preceding work before work can continue.

8.1 A list of minimum Hold Points will be provided by the engineer and shall be included in the QMP. The engineer may make changes to the Hold Point list at any time.

8.2 Prior to all Hold Point inspections, QC shall provide the engineer with the Daily Inspection Reports, Inspection Checklists, Test Reports, and Material Receiving Reports for the work performed leading up to the Hold Point. 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.

9.0 Non-Conformance Reporting. Non-conformance reports shall be issued by the contractor for work that does not meet the contract requirements. Non-conforming work includes work, testing, materials and processes that do not meet contract requirements. The contractor shall establish a procedure for identifying and resolving non-conforming work as well as tracking the status of the reports.

9.1 Contractor QC staff or production staff should identify non-conforming work and document the details on the Non-Conformance Report form provided by MoDOT. QA staff may also initiate a non-conformance report.

9.2 In-progress work that does not meet the contract requirements may not require a non-conformance report if production staff is aware of the issue and corrects the problem during production. QC or QA may issue a non-conformance report for in-progress work when documentation of the deficiency is considered beneficial to the project record.

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

9.4 For recurring non-conformance work of the same or similar nature, a written Corrective Action Request will be issued by QC or QA. The contractor shall then establish a procedure for tracking the corrective action from issuance of the request to implementation of the solution. Approval from the engineer is required prior to implementation of the proposed corrective action. The contractor shall notify the engineer after the approved corrective action has been implemented.

10.0 Work Planning and Scheduling. The contractor shall include Quality Management in all aspects of the work planning and scheduling. This shall include providing a Weekly Schedule, a Work Plan for each work activity, and holding pre-activity meetings for each new activity.

10.1 A Weekly Schedule shall be provided to the engineer each week that outlines the planned project activities for the following two-week period. This schedule shall include all planned work, identification of all new activities, traffic control events, and requested Hold Point inspections for

the period. Planned quantity of materials, along with delivery dates should also be included in the schedule.

10.2 A Work Plan shall be submitted to the engineer at least one week prior to the pre-activity meeting. The Work Plan shall include the following: a safety plan, list of materials to be used, work sequence, defined responsibilities for QC testing and inspection personnel, and stages of work that will require Hold Point inspections.

10.3 A pre-activity meeting is required prior to the start of each new activity. The purpose of this meeting is to discuss details of the Work Plan and schedule, including all safety precautions. Those present at the meeting shall include: the production supervisor for the activity, the Quality Manager, QC inspection and testing staff, and QA. The Quality Manager will review the defined responsibilities for QC testing and inspection personnel and will address any quality issues with the production staff. Attendees may join the meeting in person or by phone or video conference.

11.0 Basis of Payment. Payment for all costs associated with developing, implementing and maintaining the Quality Management Plan, providing Quality Control inspection and testing, and all other costs associated with this provision, will be considered included in the unit price of each contract item. No direct pay will be made for this provision.

H. Contract Schedule of Work

1.0 Description. The contractor shall be required to complete items of work as directed in the following schedule of work and as prescribed by the Notice to Proceed dates listed.

1.1 Stage 1: Notice to Proceed is December 9, 2024: See Contract Liquidated Damages JSP, Section 2.0.

A. Tree clearing requirements.
B. Widening and resurfacing of Route 69.
C. Construction of I-35 temporary median crossovers.
D. Complete necessary pavement repairs to I-35 southbound lanes.
E. Installation of emergency detour signing.

1.2 Stage 2- Notice to Proceed is after full completion of Stage 1: See Accelerating the Completion of Closure Work (Incentive/Disincentive Clause) JSP, Section 7.0, with a completion date of November 1, 2025.

A. Reducing I-35 traffic to two lanes of traffic in a head-to-head condition in the existing southbound lanes.
B. Removal and reconstruction of the existing northbound lanes of I-35.
C. Completion of stage 2 earthwork operations.
D. Completion of all signing adjacent to stage 2 construction.
E. Opening all lanes of I-35 (including the reconstructed northbound lanes) within the project limits and no further work requiring lane restrictions.

1.3 Stage 3 – Notice to Proceed is April 1, 2026.

A. Reducing I-35 traffic to two lanes of traffic in a head-to-head condition in the northbound lanes.
B. Removal and reconstruction of the existing southbound lanes of I-35.

C. Completion of stage 3 earthwork operations.
D. Completion of all signing adjacent to stage 3 construction.
E. Completion of all lighting at the I-35 / Route 69 interchange.
F. Removal and reconstruction of the asphalt overlay in the existing southbound lanes of I-35.
G. Opening all lanes of I-35 (including the reconstructed southbound lanes) within the project limits and no further work requiring lane restrictions.

1.4 Stage 4
A. Removal of median crossovers.
B. Final pavement marking of I-35.

I. Coordination of Contracts

1.0 Description. This contract is one of two improvements within the I-35 project corridor from mile marker 40.4 and 48.6 that will be occurring during the construction seasons of 2024, 2025, 2026. The contractor shall be required to coordinate all proposed improvements with the following project and in accordance with the requirements of Section 105.6.

JNW0129 – 240419_A03
Scope: Full Depth Repairs of I-35 Existing Unbonded Concrete Overlay
Contractor: Phillips Hardy, Inc.
Letting Date: April 19, 2024
Contract Completion Date: December 1, 2024

2.0 Preliminary Maintenance. This contract has provided quantities of full depth repair of I-35 existing unbonded concrete overlay to satisfy the specifications of Section 104.7.3.1 of the Missouri Standard Specifications for Highway Construction. The contractor shall work with the engineer as maintenance responsibilities are transferred and coordinate the completion of all necessary repairs prior to Stage 2 of Job. No. JNW0133.

3.0 Basis of Payment. No direct payment will be made for any additional cost associated with the necessary coordination with engineer or other contractors involved.

J. Accelerating the Completion of Closure Work (Incentive/Disincentive Clause)

1.0 Description. This provision contains modifications to the standard specifications for accelerating the construction of Stage 2 and need to minimize the closure time of the Northbound lanes of I-35.

1.1 Unless otherwise stated, specification section references are to the Missouri Standard Specifications for Highway Construction and its supplements in effect at the time of this contract.

2.0 Definition of Terms.

2.1 For this project the following terms are used as defined below:

(a) Closure Time

Closure time is defined as any day or other unit of time, including Saturdays, Sundays and legal holidays, when any lanes are closed due to the contractor's operation of reconstruction in Stage 2. Closure time shall begin when traffic is placed in a head-to-head condition and shall end when all lanes of I-35 (including the reconstructed northbound lanes) are open within the project limits and there is no further work requiring lane restrictions.

Under no circumstances will the closure time bid be allowed to extend the actual closure of the northbound lanes of I-35 beyond 105 Calendar Days.

(b) Average Daily Road-User Cost

The $18,000 amount shown in the bid, determined by the Commission, that interference and inconvenience to highway traffic will cost the road-users for each unit of closure time of the I-35 Northbound Lane closure. The average daily road-user cost cannot be changed by the bidder. Bidder and its surety stipulate to the reasonableness and accuracy of that amount and expressly waive any right they may have to contest that amount in any claim, litigation or otherwise.

(c) Contract Amount

The total amount bid for all items of work to be performed by the contractor. This amount is the summation of the products of the approximate quantities shown in the bid schedule multiplied by the contract unit price. The contract amount does not include the amount produced by this acceleration of work clause.

3.0 Preparation of Bid.

3.1 In addition to the requirements of Sec 102.7, the bidder shall specify in the bid the closure time which it determines is required to complete the work. The bidder shall show the product of the closure time and the average daily road-user cost in the amount column provided for that purpose. This amount will be added to the contract amount. The sum will be read as the bid total.

3.2 A bidder may alter or correct the units of closure time entered in the bid, provided the bidder follows the same requirements set forth for altering or correcting bid prices in Sec 102.7.1.

4.0 Bid Guaranty. For this project the amount of guaranty required by Sec 102.9 shall be not less than five percent of the contract amount as defined above in 2.1 (c) of these provisions.

5.0 DBE Goal. The DBE contract goal percentage, if any, applies to the contract amount as defined in 2.1 (c) of these provisions.

6.0 Award and Execution of Contract. Delete Sec 103.1 and substitute the following:

6.1 Consideration of Bids. After the bids are opened and the bid totals read, they will be compared on the basis of the contract amount, to which has been added the product of the closure time submitted by the bidder and the average daily road-user cost shown in the bid. This total amount will be used to determine the lowest responsive and responsible bid for the project. The Commission reserves the right to reject any and all bids including those which, in the sole judgment of the Commission, contain too few or too many units of closure time.

7.0 Prosecution and Progress.

7.1 Subletting of Contract. For this project the total contract cost referred to in Sec 108.1.1 shall be considered as the summation of the products of the approximate quantities shown in the bid schedule multiplied by the contract unit price.

7.2 Prosecution of Work. Assessment of closure time will begin on the first day of head-to-head traffic.

7.2.1 Prior to beginning work causing lane closure, the engineer may require the contractor to submit a schedule and written narrative for the lane closure work. The schedule shall be provided in accordance with Sec 108.4, or by the Critical Path Method if that is the schedule method specified by the contract. This schedule is required to reflect the effect of all constraints on the lane closure work.

7.2.2 This schedule requirement is in addition to any other schedule requirement of the contract. The cost for this requirement will be considered fully covered by the contract prices for the lane closure work.

7.2.3 The contractor is advised of the following matters which may be constraints upon the lane closure work and effect the schedule, order of work and cost of lane closure work:

1. The contractor shall not proceed with Stage 2 before the completion of Stage 1 as directed by the Engineer.
2. The contractor shall complete Stage 2 with traffic being removed from head-to-head traffic by November 1, 2025.
3. Calendar days for closures shall be assessed regardless of weather conditions or date.

7.3 Liquidated Damages for Failure or Delay in Completing Work on Time. Sec 108.8 is modified as follows:

7.3.1 If the contractor fails to complete all Stage 2 work, as defined in Contract Schedule of Work JSP, including opening all lanes of I-35 (including the reconstructed northbound lanes) within the project limits with no further lane restrictions, within the closure time specified by the bidder, or by November 1, 2025, whichever date is earlier, the amount shown in the bid as the $18,000 average daily road-user cost per day will be deducted from the contractor's payment for each unit of closure time, including Saturdays, Sundays and legal holidays more than the closure time bid until such time as all lanes of traffic (including the reconstructed Northbound Lanes) are open within the project limits.

7.3.2 This deduction will be made as liquidated damages from any money due or to become due to the contractor under the contract. The contractor and surety shall be liable for any liquidated damages assessed in excess of any amount due the contractor.

7.3.3 This deduction will continue until such time as all lanes of Northbound I-35 are open to traffic. Liquidated damages as described elsewhere in the contract will be assessed on any work, excluding the Stage 2 reconstruction of the northbound lanes of I-*35,* if not complete by November 1, 2025.

7.4 Credit for Completion of Work Ahead of Time. If the contractor completes all work required within Stage 2 and has all lanes of I-35 opened to traffic in less than the closure time specified by

the bidder, the amount shown in the bid as the $18,000 average daily road-user cost per day will be added to the contractor's payment for each unit of closure time, including Saturdays, Sundays and legal holidays less than the closure time specified in the bid.

7.4.1 Computation of this payment will begin on the first full unit of closure time that all lanes (including the reconstructed Northbound lanes) of I-35 are opened to traffic within the project limits and there is no further work requiring lane restrictions. This credit will be added to the amount of money due or to become due the contractor under the contract. The total amount of this credit shall not exceed one percent of the original contract amount.

7.4.2 An extension of the closure time may be granted for changes in the work as specified in Sec 104.3 or for excusable, non-compensable and compensable delays as specified in Sec 108.14 only to the extent, as determined by the engineer, they actually affect the then major item of work or the critical path of the work.

7.4.3 In the event of an excusable delay, an extension of the closure time specified by the bidder will not be made for determining any liquidated savings or incentive payment. Further, in the event of an excusable delay, if the contractor completes the work within the closure time specified by the bidder, that shall not constitute a basis to claim acceleration costs in addition to the liquidated savings or incentive that may be earned.

8.0 Measurement and Payment. Sec 109.2 is supplemented by the following:

8.1 Scope of Payment. The average daily road-user cost, shown in the bid, will be used only for bid comparisons and as a deduction from money due the contractor in accordance with section 7.3, "Liquidated Damages for Failure or Delay in Completing Work on Time", or as a credit for additional money due the contractor in accordance with section 7.4, "Credit for Completion of Work Ahead of Time", and for no other purpose.

K. Liquidated Damages for Winter Months JSP-04-17A

Delete Sec 108.8.1.3 (a)

Liquidated damages for failure to complete the work on time shall not be waived from December 15 to March 15, both dates inclusive.

L. Optional Pavements for I-35 Temporary Median Crossovers

1.0 Description. This work shall consist of a pavement composed of either Portland cement concrete or asphaltic concrete constructed on a prepared subgrade for temporary median crossovers. This work shall be performed in accordance with the standard specifications and as shown on the plans or established by the engineer.

2.0 The quantities shown reflect the total square yards of pavement surface designated for each pavement type as computed and shown on the plans.

2.1 No additional payment will be made for asphaltic concrete mix quantities to construct the required 1:1 slope along the edge of the pavement, or for tack coat applied between lifts of asphalt.

2.2 No additional payment will be made for aggregate base quantities outside the limits of the final surface area as computed and shown on the plans. When A2 shoulders are specified, payment for aggregate base will be as shown on the plans.

2.3 The grading shown on the plans was designed for the thinner pavement option. For projects with grading in the contract, there will be no adjustment of the earthwork quantities due to adjusting the roadway subgrade for optional pavements.

2.4 The contractor shall comply with Sections 401 through 403 for the asphalt option and Sections 501 and 502 for the concrete option.

2.5 Pavement options composed of Portland cement concrete shall have contrast pavement marking for intermittent markings (skips), dotted lines, and solid intersection lane lines. The pavement markings shall be in accordance with Section 620. No additional payment will be made for the contrast pavement markings.

3.0 Method of Measurement. The quantities of concrete pavement will be measured in accordance with Section 502.14. The quantities of asphaltic concrete pavement will be measured in accordance with Section 403.22.

4.0 Basis of Payment. The accepted quantity of the chosen option will be paid for at the contract unit bid price for Item 401-99.05, Misc. Optional Pavement for I-35 Temporary Median Crossovers, per square yard.

4.1 Price Adjustment for Fuel. If the contractor accepts the option for fuel adjustment in the bid proposal, a fuel adjustment will be applied in accordance with Sec 109.14 for the type of pavement constructed.

M. Optional Base Widening (10 IN.) for Route 69 & Ramps 2 & 3 Curb Islands

1.0 Description. This work shall consist of excavation for and construction of optional base widening (10 Inch). Base widening shall be composed of either portland cement concrete or hot mix asphalt, as described herein. This work shall be performed in accordance with the standard specifications and as shown on the plans or established by the engineer.

2.0 Base Widening Pavement Options.

2.1 Hot Mix Asphalt Option. For the hot mix asphalt option, 10" BITUMINOUS PAVEMENT MIXTURE (PG58-28H) shall be used in accordance with Sec 401.

2.1.1 No additional payment will be made for tack coat applied between lifts of bituminous pavement.

2.2 Portland Cement Concrete Option. For the Portland cement concrete option, 10" CONCRETE PAVEMENT (15' JOINTS, 1.25" DOWELS) shall be used in accordance with Sec 502.

2.2.1 Tack Coat (non-tracking) shall be applied to the surface of the concrete in lieu of concrete cure. No additional payment will be made for this application. A second application of Tack Coat

(non-tracking) is required immediately prior to placement of the BP-1 surface course. Payment will be made for this second application.

3.0 Method of Measurement. The accepted quantity of OPTIONAL BASE WIDENING (10 IN.) shall be measured to the nearest square yard.

4.0 Basis of Payment. The accepted quantity of Optional Base Widening shall be paid for at the contract unit price for 401-99.05 Misc. Optional Base Widening (10 in.) for Route 69 and Ramp 2 and 3 Curb Islands. All excavation necessary for this optional base widening, including off-site hauling and disposal, shall be considered included in the cost of Misc. Optional Base Widening (10 in.) for Route 69 and Ramp 2 and 3 Curb Islands.

4.1 Price Adjustment for Fuel. If the contractor accepts the option for fuel adjustment in the bid proposal, a fuel adjustment will be applied in accordance with Sec 109.14 for the type of pavement constructed.

N. Optional Rumble Strips for I-35 Temporary Median Crossovers

1.0 Description. This work shall consist of constructing rumble strips as shown on the plans or as directed by the engineer. Rumble strips shall be milled into bituminous or concrete shoulders to produce a neat and uniform finish.

2.0 The contractor shall comply with Section 626 for the installation of either the Bituminous Rumble Strip or the Portland Cement Concrete Rumble Strip.

3.0 Basis of Payment. The accepted quantity of the chosen option will be paid for by the contract unit bid price for Item 626-99.09, Misc. Optional Rumble Strips for I-35 Temporary Median Crossovers, per station.

O. Pavement Marking Log for Route 69

1.0 Description. The contractor shall log the locations of existing pavement marking prior to any construction operations that may affect the existing pavement marking. The log shall contain all existing pavement marking and shall include center stripes, lane lines, and intersecting roadway markings (where applicable.) The contractor shall provide a copy of the existing pavement marking log to the engineer. The contractor shall place the new pavement marking at the same locations as the existing pavement marking, unless otherwise directed by the engineer or shown on the plans.

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

P. Permanent Aggregate Edge Treatment NJSP-15-40B

1.0 Description. This work shall consist of furnishing and installing a permanent aggregate edge treatment along the edge of shoulder or pavement as shown on the plans or as directed by the engineer.

2.0 Construction Requirements. Aggregate shall be simultaneously deposited and spread on the sub-grade and shall not be deposited on the pavement or shoulder and bladed into place. Aggregate material shall be shaped according to the typical section and compacted until there is no visible evidence of further consolidation.

3.0 Material Requirements. Material used for the aggregate edge treatment shall be Type 1, 5, or 7 Aggregate in accordance with Sec 1007 or an allowable substitute approved by the engineer. Bituminous cold millings meeting the gradation for Type 1, 5 or 7 Aggregate may be used in lieu of aggregate. Limestone screenings or other material with excessive fines will not be allowed. Material will be accepted based on certification in lieu of testing contingent upon satisfactory results being obtained in the field.

4.0 Measurement by Weight. Measurement of the aggregate edge treatment material shall be per ton and in accordance with Sec 310.5.3.

5.0 Basis of Payment. The accepted quantities of aggregate edge treatment will be paid for at the contract unit price for 304-99.10, MISC. PERMANENT AGGREGATE EDGE TREATMENT, per ton and will be full compensation for all labor, equipment, and material to complete the described work. No fuel adjustment will be made for Permanent Aggregate Edge Treatment.

Q. Removal and Delivery of Existing Signs

1.0 Description. All Commission-owned signs removed from the project shall be disassembled, stored, transported, and disposed of as specified herein. Sign supports, structures and hardware removed from the project shall become the property of the contractor.

2.0 Disassembly and Delivery.

2.1 All Commission-owned signs, (excluding abandoned billboard signs), designated for removal in the plans, or any other signs designated by the Engineer, shall be removed from the sign supports and structures, disassembled, stored, transported, and delivered by the contractor to the recycling center for destruction.

2.2 The contractor shall coordinate and make arrangements with the recycling center for delivery of the signs. Sign panels shall be disassembled and/or cut into sizes as required by the recycling center.

2.3 The contractor shall provide the Engineer with a “Sign Delivery Certification” attesting to completion of delivery of all existing sign material from the project to the recycler. In addition, the contractor shall provide to the Engineer a final “Sign Certification of Destruction” from the recycler that documents the total pounds of scrap sign material received from the project and attests that all such material will not be re-purposed and will be destroyed in a recycling process. The contractor can locate the required certification statements from the Missouri Department of Transportation website:

https://www.modot.org/forms-contractor-use

2.4 Funds received from the disposal of the signs from the recycling center shall be retained by the contractor.

3.0 Basis of Payment. All costs associated with removing, disassembling and/or cutting, storing, transporting, and disposing of signs shall be considered as completely covered by the contract unit price for Item No. 903-99.01, Misc. Removal of Improvements – Signing, per lump sum.

R. Removal, Storage, and Reinstallation of Existing Signs

1.0 Description. All Commission-owned signs designated for relocation shall be removed prior to lane closure for reconstruction. Installations shall be disassembled, stored at a designated area at the Lathrop Maintenance area, and reinstalled before lanes are reopened to traffic for each stage. The contractor shall evaluate and replace any signposts and/or bases that are not satisfactory for reuse at no cost to the Commission.

2.0 Storage.

2.1 The contractor shall exercise care in the storage of these signs during each stage of construction. Items damaged during storage shall be replaced by contractor, at no cost to the Commission.

2.2 If storage during staged construction is not feasible, the contractor may elect to dispose of and replace the designated items (sheeting, panels, post, etc.) at no cost to the Commission.

3.0 Basis of Payment. All costs associated with the disassembling, storing, and reinstallation of signs shall be considered as completely covered by the contract unit price for Item No. 903-99.01, Misc. Relocation of Improvements - Signing, per lump sum.

S. Adjusting I-35 Drop Inlets

1.0 Description. This work shall consist of adjusting I-35 drop inlets to finished grades on newly graded slopes and ditches, as indicated on the plans. The new flow line elevations shall be as determined by the engineer. The contractor shall clean out adjusted drop inlets and attached pipes to the extent that the drainage system will function properly and as approved by the engineer. Existing grates and frames for adjusted drop inlets shall be salvaged, as specified on the plans.

2.0 Construction Requirements. The contractor shall cover all unfinished adjusted drop inlets when adjustments to the inlet are not being performed and protection of the unfinished inlet is not otherwise provided. The method of covering the drop inlets shall be as approved by the engineer. All excavated areas, required to make adjustments to drop inlets, shall be backfilled at the end of each day or when work on each inlet is complete, whichever occurs first.

3.0 Basis of Payment. All expense incurred by the contractor in adjusting drop inlets, inlet and pipe clean out, excavation required to make adjustments to drop inlets, removal / salvage of existing grates and frames, installation of salvaged grates and frames, and backfilling all excavated areas shall be considered covered by the unit price for Item No. 604-20.20, Adjusting Basin or Inlet, per each.

T. Type 2 and Type 3 Object Markers

1.0 Description. The contractor shall be required to provide and install Type 2 and 3 object markers as per plan quantity.

2.0 Construction Requirements. All object markers shall be installed as per the following standards:

- Geometric Layout - 903.17.2 of MoDOT Engineering Policy Guide.
- Signing Material Specification (Flat Sheet Fluorescent)–MoDOT Standard Plan 903.02AP
- Sign Mounting Detail 903.03BR Sheet 7 of 16 with 2.5" PSST with driven anchor.

3.0 Basis of Payment. All costs associated with the installation of plan quantity for Type 2 and 3 Object Markers shall completely be covered by the contract unit price for:

- Item No. 616-10.47, Type III Object Marker, per each
- Item No. 616-99.02, Misc. Type II Object Marker, per each

U. Temporary Pavement Marking Paint

1.0 Description. The contractor shall be required to provide and install temporary pavement marking paint as per plan quantity per stage.

2.0 Construction Requirements. All temporary pavement marking paint shall be installed as per the following standards:

- Geometric Layout – 620.00N of Missouri Standard Plans for Highway Construction.
- Specifications - Section 620.10 of Missouri Standard Specifications for Highway Construction
- Supplemental Revisions – JSP-18-01CC Section entitled Pavement Marking Paint Requirements for Standard Waterborne and Temporary.

3.0 Basis of Payment. All costs associated with the installation of temporary pavement marking paint shall completely be covered by the contract unit price for:

- Item No. 620-80.76, 4 in. Temporary Pavement Marking Paint, per L.F.
- Item No. 620-99.03, Misc. 6 in. Temporary Pavement Marking Paint, per L.F.
- Item No. 620-99.03, Misc. 8 in. Temporary Pavement Marking Paint, per L.F.
- Item No. 620-99.03, Misc. 24 in. Temporary Pavement Marking Paint, per L.F.

V. Earthwork and Pavement Removal Operations

1.0 Description. The contractor shall perform all earthwork operations necessary to complete each stage of construction as dictated in the plans and provision below:

2.0 Earthwork and Pavement Removal Requirements By Stage. Are summarized as:

2.1 Stage 1.

- Route 69 shoulder grading (excavation and shaping of slopes for widening). Final payment shall be per plan quantity (per 100 ft.). Construction requirements as per Missouri Standard Specifications for Highway Construction.

- I-35 temporary median crossovers construction (excavation and removals as per typical section 6 of 18). Final payment shall be per plan quantity (per 100 ft). Construction requirements as per Missouri Standard Specifications for Highway Construction.

- The contractor shall process the existing stockpile of concrete pavement slabs located at the intersection Route 69 and I-35. This material must meet a gradation consistent with specification of one of the following. Section 303 for Rock Base or Section 214 for Rock Fill.

2.2 Stage 2 & 3.

- Removal of existing pavement and base within the roadbed of I-35 per stage for construction of the proposed typical section. Final payment shall be a lump sum payment (per plan cubic yardage of pavement and base). All pavement removals shall require the breaking of pavement to meet the specification for "Special Fill". All reinforcement must be removed from material prior to placement as embankment and/or stockpile.

- Class A excavation for benching along interstate ramps and Route 69 as per typical section sheet 18 of 18. Final payment to be field measured by contractor furnished survey per cubic yard.

- Placement of "Special Fill". Final payment shall be per Design Services plan quantity with no field measurement. "Special Fill" shall meet all requirements noted in Section 214 of the Missouri Standard Specifications for Highway Construction.

- Placement of embankment in place to construct all embankment within 20' of proposed culvert sections. Final payment shall be field measured by contractor furnished survey, per cubic yard.

- Placement of compacting embankment to encapsulate "Special Fill" as per typical section 18 of 18. Final payment to be field measured by contractor furnished survey, per cubic yard.

- Stockpile of removed excess material from removal of improvements. All excess material shall meet the requirements noted in Section 214 of the Missouri Standard Specifications for Highway Construction. The material shall be stockpiled at the location designated in the plan and shall become the property of the commission. Final Payment to be as determined by the Design Services plan quantity with no field measurement. The contractor may have the option to eliminate the quantity for stockpile of removed excess material and choose to dispose the material off of right of way as per specifications for removal of improvements.

3.0 Basis of Payment. All costs associated with the earthwork and/or pavement removal shall be completely covered by the contract unit price for:

- Item No. 202-20.10, Removal of Improvements, per LS
- Item No. 212-99.00, Misc. Shoulder Grading for Route 69, per 100 ft

- Item No. 215-20.00A, Shaping Slopes, Class II, per 100 ft
- Item No. 203-10.00, Class A Excavation, per CY
- Item No. 203-20.00, Class C Excavation, per CY
- Item No. 203-60.00, Compacting Embankment, per CY
- Item No. 203-55.00, Embankment in Place, per CY
- Item No. 214-99.07, Misc. Placing Special Fill, per CY
- Item No. 304-99.07, Misc. Concrete Pavement Processing, per CY
- Item No. 611-99.07, Misc. Stockpile of Excess Removed Material, per CY

W. Shoulder Grading for Route 69

1.0 Description. This work shall consist of excavating and grading the existing shoulder to facilitate placement of aggregate shoulder, as well as backfilling the shoulder and shaping the fore slope following placement of the shoulder pavement.

2.0 Construction Requirements. The shoulder shall be excavated and graded as shown on the typical section with minimal disturbance of the existing sub-grade and fore slope. Density shall be obtained from reasonable compaction efforts consisting of no less than three passes with a roller until no further visible compaction can be achieved, or by other methods approved by the engineer.

2.1 Following placement of the aggregate shoulder, the shaping of the fore slope shall be done to backfill the shoulder edge as shown on the typical section.

2.2 It may be necessary to go outside the limits of the right of way to obtain additional material or to dispose of excess material. All costs for providing additional material or disposing of excess material shall be included in Shoulder Grading.

2.3 Included in this work is any pavement edge treatment that might be necessary in order to stay in compliance with the Standard Plans. The need for edge treatment is determined by the contractor's method of operations.

3.0 Method of Measurement. Final measurement will not be made except where appreciable errors are found in the contract quantity.

3.1 Where required, measurement will be made to the nearest 10 feet, separately for the length of shoulder along each side of the roadway, measured along centerline of the traveled way and totaled to the nearest 100 feet for the sum of all segments.

4.0 Basis of Payment. Payment for Shoulder Grading for Route 69 as described in this provision will be made at the contract unit price for pay item 212-99.00 Misc. Shoulder Grading for Route 69, per 100 ft. No direct payment shall be made for pavement edge treatment for the shoulder grading operation.

X. Design Service Operations

1.0 Description. In coordination with the requirements specified for Modified Contractor Furnished Survey, the contractor shall be required to provide the following Design Service Operations. All reports for staking and/or payment shall be submitted to the engineer for approval.

1.1 Develop Grading Plan. The contractor shall be required to develop a grading plan to facilitate the grading operations detailed within Earthwork and Pavement Removal Operations JSP. This plan shall meet the requirements of the typical sections provided in the contract document and as specified in Division 200 for Grading and Removal in Missouri Standard Specifications for Highway Construction.

1.1.1 Items to Include in Grading Plan: The required grading plan shall include the following items:

- Volumetric grading calculations for payment and proposed staking report for Item 203-10.00, Class A Excavation, per CY
- Volumetric grading calculations for payment and proposed staking report for Item 203-60.00, Compacting Embankment, per CY
- Volumetric grading calculations for payment and proposed staking report for Item 203-55.00, Embankment in Place, per CY
- Volumetric grading calculations for planning and proposed staking report for Item 214-99.07, Misc. Placing Special Fill, per CY
- Volumetric calculations for the stockpile of excess removed material for Item 611-99.07, Misc. Stockpile of Excess Removed Material, per CY

1.2 Concrete Pavement Processing Calculation for Payment: The contractor shall be required to calculate final payment for Bid Item 304-99.07, Misc. Concrete Pavement Processing, per CY.

1.3 Sign Section Verification For Fabrication: The contractor shall be required to verify all sign post quantities. Verification shall insure accordance with the following standards for sign mounting.

- Missouri Standard Plans for Highway Construction. Standard 903.03BR Sheet 3 of 16.
- MoDOT Engineering Policy Guide. Figure 903.2.18.1

2.0 Basis of Payment. All work necessary to fulfill the requirements of this provision shall be paid for at the contract unit price for Item 627-99.01, Misc. Design Services, per lump sum.

Y. Modified Contractor Furnished Survey

1.0 Description. The contractor shall be required to meet all required specifications for contractor furnished survey and staking as specified in Section 627 of the Missouri Standard Specifications for Highway Construction. In addition to those requirements, the contractor shall be responsible for the following survey operations:

1.1 Establish Vertical and Horizontal Control for Construction Operations. The contractor shall be required to submit a control tie report to the engineer for the following corridors for as-built documentation:

- Interstate 35 from Station 409+00 to 837+36
- Route 69 from Station 265+60.00 to 305+00.00
- Ramps 1-4 of I-35 Interchange (Exit 48)

1.2 Re-Establish Plan Alignments for Construction Operations. The contractor shall be required to re-establish plan alignments as per electronic deliverables and submit a coordinate geometry report to the engineer for the following corridors for as-built documentation:

- Interstate 35 from Station 409+00 to 837+36
- Route 69 from Station 265+60.00 to 305+00.00
- Ramps 1-4 of I-35 Interchange (Exit 48)

1.3 Stake Clearing Limits for Improvements along Route 69. The contractor shall be required to stake the limits of clearing and grubbing as illustrated in the plans and provided by the electronic deliverables along Route 69 from Station 265+00.00 to Station 305+00.00 and the adjacent ramp to I-35 (Exit 48)

1.4 Three Dimensional Models for Payment. The contractor shall conduct three-dimensional topography for payment of the following items in the before and after condition:

- Item 203-10.00, Class A Excavation, per CY
- Item 203-60.00, Compacting Embankment, per CY
- Item 304-99.07, Misc. Concrete Pavement Processing, per CY

1.5 Modified Profile Requirements for Concrete Overlay. The contractor shall be required to meet all requirements with Sec 506.20 Unbonded Concrete Overlays of Concrete Pavements, except as specified herein.

Delete Sec 506.20.4.1.1 and substitute with the following:

506.20.4.1.1 Field Established Profile. The contractor shall establish the roadway profile prior to the overlay. The existing and proposed final profile shall be submitted to the engineer for final approval. Submittal shall also include edge of pavement elevations, centerline elevations at 50-foot intervals in tangent sections, 25-foot intervals in curve sections, and the cubic yards required for placement. This quantity will be the field established plan quantity.

1.6 Edge Drain Outlet Locations. The current locations outlet locations are tentative and low points at vertical curves within the contractor furnished profile shall be identified by survey. Final locations of outlet pipes and splash pads shall ensure proper low point drainage.

1.7 Field Survey for Sign Fabrication. The contractor shall be required to create an as-built sign section for each proposed sign prior to fabrication.

1.8 Field Survey for Culvert Extension. The contractor shall be required to create an existing culvert section for each proposed culvert extension prior to fabrication.

2.0 Basis of Payment. All work necessary to fulfill the requirements of this provision shall be paid for at the contract unit price for Item 627-99.01, Misc. Modified Contractor Furnished Survey, per lump sum.

Z. Temporary Long-Term Rumble Strips JSP-13-04C

1.0 Description. The work shall include furnishing, installing, maintaining, and removing long-term rumble strips, as shown in the plans, or as designated by the engineer.

2.0 Material.

2.1 The long-term rumble strips shall be 10 feet to 12 feet in length, fabricated from a polymer material, and be orange in color.

2.2 The long-term rumble strips shall have a minimum width of 4 inches, but no greater than 6 inches. The long-term rumble strips shall have a minimum thickness of 0.25 inch, but no greater than 0.50 inch.

2.3 The long-term rumble strips shall have a pre-applied adhesive backing for securing to the asphalt or concrete roadway surface.

3.0 Construction. Long-term rumble strips layout and spacing shall be in accordance with the plans or as approved by the engineer. The long-term rumble strips shall be installed and removed in accordance with manufacturer's recommendation. The contractor shall monitor and repair, and maintain if necessary the long-term rumble strips until removed.

3.1 Each set shall consist of five individual strips spaced ten to twelve feet on center.

3.2 The long-term rumble strips removal process shall not damage the roadway surface. If any damage occurs to the pavement during the removal of long-term rumble strips, the contractor shall replace or repair the damaged pavement at no cost to the Commission.

4.0 Method of Measurement. Measurement of long-term rumble strips will be per each complete set of five strips.

5.0 Basis of Payment. The accepted quantity of Temporary Long-Term Rumble Strips sets will be paid for at the contract unit price for 616-20.02, Temporary Long-Term Rumble Strips, per each set. The long-term rumble strips unit bid price shall include the cost of all labor, equipment, and materials to install, maintain, and remove the rumble strips.

AA. Tree Clearing Restriction

1.0 Description. The project is within the known range of several federally protected bat species. These bats are known to roost in trees with suitable habitat characteristics during summer months.

1.1 MoDOT has determined that suitable trees for one or more of these bat species exist within the project area.

1.2 To avoid negative impacts to these bat species, removal of any trees/limbs greater than three (3) inches in diameter shall only occur between October 16 and March 31.

2.0 Basis of Payment. No direct pay shall be provided for any labor, equipment, time, or materials necessary to complete this work.

BB. Revisions to Sec 506.20 Unbonded Concrete Overlays of Concrete Pavements

1.0 Delete Sec 506.20.1 and substitute the following:

506.20.1 Description. This work shall consist of placing an interlayer material on an existing concrete pavement and constructing an unbonded concrete overlay in accordance with the details and locations shown on the plans. The standard unbonded concrete overlay design thickness is **10** inches. The **10-inch** overlays are constructed similarly to new concrete pavement in terms of joint spacing and use of dowel bars and tie bars. The overlay shall be placed in accordance with Section 502, except as herein stated.

2.0 Delete Sec 506.20.3.4.2.6 and substitute the following:

506.20.3.4.2.6 Fabric shall extend throughout the traveled way to the outside edges of the pipe aggregate pavement edge drains.

3.0 Further revisions to Sec 506.20 are made in Modified Contractor Furnished Survey JSP.

CC. Aggregate For Concrete

Delete Section 1005 in its entirety and replace with the following:

1005.1 Scope. This specification covers aggregate to be used for concrete construction.

1005.2 Coarse Aggregate.

1005.2.1 All coarse aggregate for concrete shall consist of sound, durable rock, free from objectionable coatings and frozen and cemented lumps. The percentage of deleterious substances shall not exceed the following values, and the sum of percentages of all deleterious substances, exclusive of the material passing No. 200 sieve (Gradations D and E), and thin or elongated materials, shall not exceed 6.0 percent. For crushed stone, the percentage of wear shall not exceed 50 when tested in accordance with AASHTO T 96.

Deleterious Material	Percent by Weight
Deleterious Rock	6.0
Shale	1.0
Chert in Limestone	4.0
Other Foreign Material	0.5
Material Passing No. 200 Sieve Gradations D & E	2.5[a]
Thin or Elongated	5.0

[a] Value may be raised to 3.0 percent, providing the material passing the #200 sieve in the fine aggregate is less than or equal to 1.0 percent.

1005.2.1.1 The above requirements shall apply to each size or fraction of aggregate produced.

1005.2.1.2 Crushed stone shall be obtained from rock of uniform quality. Rock tested for initial approval, source samples, and production samples shall meet the requirements below. The absorption and soundness test results may be waived provided a durability factor of 90 percent

or higher is achieved. Concrete pavement aggregate approval will be based on maximum aggregate size produced that meets durability requirements.

Test Method[3]	Concrete Masonry Aggregate	Concrete Pavement Aggregate, additional Source Approval Samples
Los Angeles Abrasion, AASHTO T 96, percent loss, max.[1]	50	50
Absorption, AASHTO T 85, percent, max.[1]	3.5	2.0
Soundness, MoDOT Test Method TM 14, percent loss, max.[1]	18.0	16.0
Durability Factor, AASHTO T 161 Procedure B, percent, min.	N/A	80
Micro Deval, AASHTO T327, percent loss, max.[1]	N/A	Value of the First Source Approval +5.0[2]
Reactivity, MoDOT Test Method TM 93	passes	passes

[1] Evaluated every year
[2] When the Micro-Deval percent abrasion loss is 5.0 higher or more than the Micro-Deval abrasion loss of the first source approval, new T 161 B and TM-93 tests are required
[3]The engineer may require additional testing based on variable test results

1005.2.1.3 All tests in 1005.2.1.2 shall be run for each source approval. The absorption, durability factor, and TM-93 test results may be waived for concrete pavement approval by the State Construction and Materials Engineer provided sufficient evidence of field performance is submitted. The aggregate producer or contractor, shall provide the following to the State Construction and Materials Engineer prior to any consideration of waiver of test requirements:

(a) The ledge combination aggregate has been previously used on a minimum of three different Missouri mainline pavement roadways,

(b) The minimum individual age of the three concrete pavements shall be 25 years,

(c) The minimum individual quantity of the three concrete pavements shall be 14,000 square yards mainline concrete pavement. Ramps shall not be used to meet this requirement.

The required documentation for a field performance waiver shall include the job number or contract ID, route, direction, specific location (e.g., log mile or station), and year(s) paved. Neither MoDOT nor the Commission is responsible for providing this required documentation.

1005.2.1.4 Gravel shall be washed and shall be in accordance with the criteria below for initial approval. Source approval and production samples shall also meet the following criteria:

Property	Value
Los Angeles Abrasion, AASHTO T 96, percent loss, max.	45
Absorption, AASHTO T 85, percent, max.	4.5
Soundness, MoDOT Test Method TM 14, percent loss, max.	18.0

1005.2.1.5 The engineer reserves the right to use additional test methods, such as ASTM C25, ASTM C1105, ASTM C1260, or other appropriate tests, to measure the soundness and durability of aggregate for use in concrete when deemed necessary.

1005.2.2 Coarse aggregate for concrete pavement or base course shall be crushed stone or porphyry.

1005.2.3 Grade F Aggregate. Coarse aggregate for Portland cement concrete pavement, base and approach slabs for bridges that is not produced from the Burlington, Keokuk, Cedar Valley (formerly Callaway) or Warsaw limestone formations, which is obtained from sources in the following areas shall have a maximum top size of ¾ inch:

(a) State of Kansas, Iowa and Nebraska.

(b) Counties of Missouri – Adair, Andrew, Atchison, Bates, Benton, Buchanan, Caldwell, Carroll, Cass, Cedar, Chariton, Clay, Clinton, Daviess, DeKalb, Gentry, Grundy, Harrison, Henry, Holt, Jackson, Johnson, Lafayette, Linn, Livingston, Mercer, Macon, Nodaway, Pettis, Platte, Putnam, Randolph, Ray, St. Clair, Saline, Schuyler, Sullivan, Vernon and Worth.

1005.2.4 Grade F shall be obtained from rock of uniform quality. Rock tested for initial approval, source samples, and production samples, shall meet the requirements below. The absorption, soundness, and bulk specific gravity test results may be waived provided a durability factor of 90 percent or higher is achieved.

Property	Value
Los Angeles Abrasion, AASHTO T 96, percent loss, max.	50
Absorption, AASHTO T 85, percent, max.	1.5
Soundness, MoDOT TM 14, percent loss, max.	10.0
Bulk Specific Gravity, AASHTO T 85, min.	2.58
Durability Factor, AASHTO T 161 Procedure B, percent, min:	80[a]

[a] Approval will be based on maximum aggregate size produced that meets durability requirements.

1005.2.5 Coarse aggregate for concrete for structures, except as specified in Sec 1005.2.6, may be gravel or crushed stone. Coarse aggregate for Class B, B-1, B-2, MB-2 or Seal concrete shall

be in accordance with either Gradation D or E. Coarse aggregate for Class A-1 concrete shall be in accordance with Gradation E.

Gradation D	Percent by Weight
Passing 1-inch sieve	100
Passing 3/4-inch sieve	85-100
Passing 3/8-inch sieve	15-55
Passing No. 4 sieve	0-10

Gradation E	Percent by Weight
Passing 3/4-inch sieve	100
Passing 1/2-inch sieve	70-100
Passing 3/8-inch sieve	30-70
Passing No. 4 sieve	0-20
Passing No. 8 sieve	0-6

1005.2.6 Coarse aggregate for ornamental concrete shall be crushed stone in accordance with Sec 1005.2.5, Gradation E. However, the use of coarse aggregate containing more than 2 percent chert will not be permitted.

1005.3 Fine Aggregate.

1005.3.1 Fine aggregate for concrete shall be a fine granular material naturally produced by the disintegration of rock of a siliceous nature, or shall be manufactured from an approved limestone or dolomite source as defined in Sec 1005.2. By specific approval from the engineer, chat sand produced from flint chat in the Joplin area or fines manufactured from igneous rock or chert gravel may be used. Fine aggregate shall be free from cemented or conglomerated lumps and shall not have any coating of injurious material. The percentage of deleterious substances shall not exceed the following values:

Deleterious Material	Percent by Weight
Clay Lumps and Shale	0.25
Coal and Lignite	0.50
Total Lightweight Particles, including Coal and Lignite	0.50
Material Passing No. 200 Sieve (a) Natural Sand (b) Manufactured Sand	 2.0 4.0
Other Deleterious Substances	0.10

1005.3.2 The total lightweight particle requirement will not apply to angular chert sand or manufactured sand.

1005.3.3 Fine aggregate shall produce a mortar having a seven-day compressive strength of at least 90 percent of a control mortar developed at the same proportions, using standard Ottawa sand. Tests shall be performed in accordance with AASHTO T 106. Cement used in the tests shall be Type I, in accordance with Sec 1019. AASHTO T 106 may be waived provided the fine aggregate produces a glass color standard lighter than Organic Platte No. 3, in accordance with AASHTO T 21.

1005.3.4 Fine aggregate for ornamental concrete shall be free from coal and lignite material when tested in accordance with AASHTO T 113.

1005.3.5 All fine aggregate for PCCM shall meet the following gradation requirements:

Sieve	Percent by Weight
Passing 3/8-inch sieve	100
Passing No. 4 sieve	95-100
Passing No. 8 sieve	70-100
Passing No. 16 sieve	45-90
Passing No. 30 sieve	15-65
Passing No. 50 sieve	5-30
Passing No. 100 sieve	0-10

1005.4 Lightweight Aggregates.

1005.4.1 Lightweight aggregates shall be prepared by expanding, calcining, or sintering argillaceous material such as clay, shales, and slates.

1005.4.2 Grading. The grading shall be uniform and conform to the requirements given in Table I.

1005.4.3 Unit Weight. The unit weight of lightweight aggregates shall not exceed the following:

Dry, Loose Weight, Max. lb/cu ft	
Fine Aggregate	70
Coarse Aggregate	55

1005.4.3.1 Uniformity of Weight. If the unit weight of any shipment of lightweight aggregate when tested in accordance with AASHTO T 19 is found to vary by more than 10 percent from that of the sample submitted for source approval, the aggregate shipment may be rejected.

1005.4.4 Soundness. When tested in accordance with AASHTO T 104, the loss of lightweight fine or coarse aggregate in 5 cycles of the accelerated soundness test shall not exceed 8 percent if sodium sulfate is used or 10 percent if magnesium sulfate is used.

1005.4.5 Drying Shrinkage. The drying shrinkage of concrete specimens prepared and tested in accordance with AASHTO M 195, shall not exceed 0.07 percent.

1005.4.6 Sampling. Samples of fine and coarse aggregate shall be furnished by the contractor for source approval. Other samples shall be taken from shipments at intervals specified by the engineer.

Table I
Grading Requirements for Lightweight Aggregate

Grade	Size	Percent Passing Sieve Sizes 1 1/2"	1"	3/4"	1/2"	3/8"	No. 4	No. 8	No. 16	No. 50	No. 100
Fine Aggregate											
	No. 4 to 0	---	---	---	---	100	85-100	---	40-80	10-35	5-20
Coarse Aggregate											
1	1" to 1/2"	100	90-100	20-55	0-10	0-5	---	---	---	---	---
2	1" to No. 4	100	95-100	---	25-60	---	0-10	0-5	---	---	---
3	3/4" to No. 4	---	100	90-100	---	20-55	0-10	0-5	---	---	---
4	1/2" to No. 4	---	---	100	90-100	40-70	0-15	0-5	---	---	---
5	3/8" to No. 8	---	---	---	100	85-100	10-30	0-10	0-5	---	---

DD. Optimized Mix Design for Concrete Pavement and Unbonded Concrete Overlay

1.0 Description. An optimized mix, as specified herein, shall be used in the mix designs for all Concrete Pavements (I-35 mainline), Unbonded Concrete Overlays (I-35 mainline), and Concrete Approach Pavements (I-35 mainline). Use of an optimized mix is required for the portion of concrete shoulders placed monolithically with the pavement or unbonded overlay and paid for as concrete pavement or unbonded overlay. An optimized mix is not required for A2 shoulders constructed with concrete. All other requirements for Concrete Pavement shall remain per Sec 502, all other requirements for Concrete Approach Pavements shall remain per Sec 504, and all other requirements for Unbonded Concrete Overlay shall remain per Sec 506.

2.0 Optimized Mix Design. The concrete pavement mix shall be optimized in accordance with Sec 501.3 and the tarantula curve method for aggregate gradation, as specified in Table 1, shall be utilized.

Table 1 – Tarantula Curve Method - Optimized Aggregate Gradation

Sieve Size	Percent Retained (Per Sieve)
2 inch	0
1 ½ inch	≤ 5
1 inch	≤ 16
¾ inch	< 20
3/8 inch	4 – 20
No. 4	4 – 20
No. 8	4 – 20
No. 16	< 12
No. 30	< 12
No. 50	4 - 20
No. 100	4 - 20
No. 200	< 10
Fine Aggregate Requirements	Percent Retained

No. 8 to No. 30 Sieve	> 15
No. 30 to No. 200 Sieve	24 - 34

2.1 Water to Cement Ratio The minimum water to cement ratio of the concrete pavement mix shall be 0.38.

2.2 Trial Batch. The contractor shall prepare and test a trial batch mixture at the mixing facility to verify that the optimized mix complies with the design criteria. The trial batch shall be prepared and tested in the presence of the Engineer.

3.0 Optional E5 Additives. At the contractor's option, E5-Internal Cure, and E5-Liquid Fly Ash, may be utilized in the concrete pavement mix, as specified herein. When E5 additives are utilized, Sealing Concrete Joints, as specified elsewhere in these provisions, will not be required. If the contractor chooses to include E5 additives, a manufacturer representative shall be on site during the first day of placement and during trial batches.

3.1 E5-Liquid Fly Ash. In Portland cement, or a Binary cementitious system, E5-Liquid Fly Ash shall have a minimum dosage rate of 8 oz/cwt of cementitious. In a ternary system (with two SCMs), the dosage rate of E5-Liquid Fly Ash shall be determined by the E5 manufacturer representative.

3.2 E5-Internal Cure. The dosage rate of E5-Internal Cure shall be a minimum of 4 oz/cwt of cementitious. E5-Internal Cure does not eliminate or replace the requirement for liquid membrane curing compound. No water shall be applied to the plastic concrete surface. Products marketed as "evaporative retardants" or "evaporation reducers" shall not be used.

4.0 Basis of Payment. No additional payment will be made for use of an optimized mix or for utilizing E5 additives. All costs for compliance with this provision shall be considered included in the cost for concrete pavements and concrete overlays.

4.1 Payment for Concrete Pavements (I-35 mainline), shall be made per Sec 502 at the contract unit price for Item No. 502-99.05, Misc. Concrete Pavement (10 ½ in. Non-Reinforced, 15 FT. Joints, Optimized), per SY.

4.2 Payment for Concrete Approach Pavements (I-35 mainline) shall be made per Sec 504 at the contract unit price for Item No. 504-99.05, Misc. Concrete Approach Pavement (Optimized), per SY.

4.3 Payment for Unbonded Concrete Overlays (I-35 mainline), shall be made per Sec 506 at the contract unit price for the following items:

- Item No. 502-99.07, Misc. Furnishing Unbonded Concrete Overlay (Optimized), per CY
- Item No. 502-99.05, Misc. Unbonded Concrete Overlay Placement, 10 in., per SY
- Item No. 506-, Unbonded Concrete Overlay Interlayer, per SY

EE. Sealing Concrete Joints

1.0 Description. All sawed and non-sawed transverse and longitudinal joints, including adjacent surfaces, shall be surface-prepared and sealed with a penetrating concrete sealer in accordance with Section 703.3.8 and as specified herein. This provision applies to all concrete pavements,

unbonded concrete overlays, optional (PCC) pavements, and portions of concrete shoulders, as defined herein. The longitudinal joint between the full-depth concrete pavement or concrete overlay slab and the shoulder is included. Sealing of transverse joints shall extend six inches onto the shoulder, beyond the longitudinal joint between the pavement slab and shoulder, when the shoulder is concrete. When the shoulder is asphalt, sealing of the asphalt surface is not required.

2.0 Construction Requirements. At a minimum, surface preparation for sealing includes pressure washing all slurry and curing membrane from the sawed joints and the adjacent pavement/shoulder surfaces that are within 6 inches of each side of the joints. Any additional surface prep instructions from the sealer manufacturer shall also be followed.

2.1 Sealer Application. Allow the pavement surface and joints to dry per manufacturer's instructions prior to application of sealer. Apply sealer such that it coats the interior of the sawed joint and covers no less than 6 inches of the pavement/shoulder surface on each side of the joint. Broadcast spraying of the surface will not be considered a sufficient method to penetrate the joints.

2.2 Preparation work for sealing including pressure washing shall be done after the pavement has been textured or diamond ground.

3.0 Material Requirements. The approved penetrating sealer shall be in accordance with Section 1053.

4.0 Option to Sealing. In lieu of these sealing requirements, the contractor has the option to utilize E5 additives in the concrete mix, as specified elsewhere in these provisions. When E5 additives are used, joint sealing will not be required.

5.0 Basis of Pavement. No additional payment will be made for Sealing Concrete Joints or for using E5 additives. All costs for compliance with this provision shall be considered included in the cost for concrete pavements and concrete overlays.

FF. Pavement Repair Scope

1.0 Description. The contractor shall be required to conduct pavement repair operations as per plan quantity and shall meet all construction requirements noted in this provision.

2.0 Construction Requirements Repair Type:

- Full Depth and Partial Depth Pavement Repairs inside the limits of widening on Route 69 prior to resurfacing (Stage 1) shall meet requirements of Sec 613.10 and Sec 613.35 respectively. These repairs are to be completed prior to the overlay on Route 69.

- Full Depth Repair of I-35 Existing Unbonded Concrete Overlay (Stage 1, see typical section 16 of 18) shall meet requirements of Missouri Standard Specifications for Highway Construction Section 613.10. The contractor shall be required to place a Unbonded Concrete Overlay Interlayer prior to repair placement. These repairs will be identified by the Engineer and shall be completed in the Southbound lanes prior to placing traffic head-to-head. These repairs are in the existing unbonded concrete overlay only and will be in addition to other repairs within the corridor as noted in this special provision.

- Full Depth I-35 Pavement Repair (Stage 2 & 3 to address bonded pavement repairs not breakable by standard methods) shall meet requirements of Missouri Standard Specifications for Highway Construction Section 613.10. These repairs include removal and replacement of the underlying existing concrete pavement only in the areas where the existing unbonded overlay is bonded to the pavement beneath and must be identified and agreed upon by the Engineer during the unbonded removal process.

- Emergency I-35 Pavement Repair Event (Stage 2 in head-to-head traffic) shall meet all requirements of "Full Depth Repair of I-35 Existing Unbonded Concrete Overlay" with a 24-hour completion upon notification by the engineer. Locations of these repairs to be determined by the engineer. This Emergency I-35 Pavement Repair Event shall also include activation of the emergency detour. Quantity of pavement repair per event shall vary.

- Repair of Existing I-35 Underlying Concrete Pavement after the removal of the Existing I-35 Unbonded Concrete Overlay. Any surface defects of the existing I-35 underlying concrete pavement and any damage to the existing I-35 underlying concrete pavement as a result of the removal of the existing I-35 unbonded concrete overlay shall be repaired (meeting the approval of the engineer) by the contractor at no additional payment as per Missouri Standard Specifications for Highway Construction Sections 506.20.2.1 and 506.20.3.2.

3.0 Basis of Payment. All costs associated with the Pavement Repair by Stage are completely covered by the contract unit price for:

Stage 1 (Route 69) Full and Partial Depth Repairs:

- Item No. 613-10.10, Furnishing and Placing Concrete Material for Full Depth Pavement Repair, per SY
- Item No. 613-10.12, Subgrade Compaction (6 in. Depth) Pavement Repair, per SY
- Item No. 613-10.13, Type 1 or 5 Aggregate for Base (4 in. Thick) (Pavement Repair), per SY
- Item No. 613-10.14, Full Depth Pavement Repair Saw Cut (For Perimeter and Internal Saw Cuts), per LF
- Item No. 613-10.15, Dowel Bar (Drilling, Furnishing and Installation) for Full Depth Pavement Repair, per each
- Item No. 613-30.21, Removal for Class C Partial Depth Pavement Repair, per SY
- Item No. 613-30.20, Furnishing and Placing Bituminous Material for Class C Partial Depth Pavement Repair, per ton

Stage 1 (I-35) Full Depth Repairs of Existing Unbonded Overlay:

- Item No. 613-99.02, Misc. Dowel Bar (Furnishing and Installation with Baskets) for Full Depth Repairs of Existing Unbonded Overlay, per each
- Item No. 613-99.02, Misc. dowel bar (drilling, furnishing, and installation) for full depth repairs of existing unbonded overlay, per each
- Item No. 613-99.02, Misc. Tie Bar (Furnishing and Installation with Baskets) for Full Depth Repairs of Existing Unbonded Overlay (Type L Joints), per each
- Item No. 613-99.03, Misc. Full Depth Repairs of Existing Unbonded Overlay Sawcut (for Perimeter and Internal Saw Cuts), per LF
- Item No. 506-99.05, Misc. Unbonded Concrete Overlay Interlayer (Pavement Repair), per SY

- Item No. 613-99.07, Misc. Furnishing and Placing Concrete Material for Full Depth Repairs of Unbonded Overlay, per CY

Stage 2 & 3 (I-35) Full Depth Pavement Repairs:

- Item No. 613-10.10, Furnishing and Placing Concrete Material for Full Depth Pavement Repair, per SY
- Item No. 613-10.12, Subgrade Compaction (6 in. Depth) Pavement Repair, per SY
- Item No. 613-10.13, Type 1 or 5 Aggregate for Base (4 in. Thick) (Pavement Repair), per SY
- Item No. 613-10.14, Full Depth Pavement Repair Saw Cut (for Perimeter and Internal Saw Cuts), per LF
- Item No. 613-10.15, Dowel Bar (Drilling, Furnishing and Installation) for Full Depth Pavement Repair, per each
- Item No. 613-10.17, Dowel Bar (Furnishing and Installation with Baskets) for Full Depth Pavement Repair, per each
- Item No. 613-10.18, Tie Bar (Drilling, Furnishing and Installation) for Full Depth Pavement Repair (Type L Joints), per each

Stage 2 (I-35) Emergency Pavement Repair Event:

- Item No. 613-99.02, Misc. Emergency Pavement Repair Event, per each

GG. Concrete Pavement Processing

1.0 Description. This work shall consist of reprocessing of an existing stockpile of non-reinforced concrete pavement repairs that can be found adjacent to Ramp 1 of the interchange of Route 69 and I-35 at exit 48 as depicted in the plans. This stockpile is not included in the removal of improvements for this project. Photographs of existing stockpile may be found in the electronic deliverables.

2.0 Construction Requirements. The reprocessed material shall meet the specifications and / or requirements noted in Section 214 of the Missouri Standard Specifications for Highway Construction. It is noted that this material is not anticipated to be used in sections of “Special Fill” and will be stockpiled in place for future Commission use. All metal dowel and/or tie bars shall be removed from the processed material and shall be disposed of by contractor.

3.0 Measurement . Measurement of the reprocessed material shall be per CY and shall be measured as per the requirements of Design Service Operations JSP.

4.0 Basis of Payment. The accepted quantities of Concrete Pavement Processing will be paid for at the contract unit price for 304-99.07, Misc. Concrete Pavement Processing, per CY and will be full compensation for all labor, equipment, and material to complete the described work.

HH. Non-Tracking Tack Coat

1.0 Description. This work requires application of tack in accordance with Sec 407 and prevention of tack loss from the surface as specified herein. Tack loss prevention shall be accomplished with successful usage of a MoDOT-approved non-tracking tack, or other acceptable non-tracking means, as approved by the engineer.

2.0 MoDOT-Approved Non-Tracking Tack. A list of MoDOT-approved non-tracking tack products is available at MoDOT.org under the Materials Qualified List.

https://www.modot.org/materials-qualified-lists

Upon request from the contractor, the MoDOT Division of Construction & Materials will consider allowance of other non-tracking products. To be approved, the contractor must successfully demonstrate that the proposed product meets the non-tracking requirements specified in section 3.0. The location of a contractor demonstration will only be allowed in areas approved by the engineer. The engineer will make final determination of product acceptance based on observation of the results of the contractor's demonstration.

3.0 Non-Tracking Requirements. Non-tracking tack shall remain adhered to the pavement surface when exposed to any wheeled or tracked vehicles. The tack shall not track off the surface within 30 minutes of being applied, and shall not stick to the tires, tracks or other parts of paving equipment or vehicles such that the underlying surface becomes visible or void of tack prior to the placement of the hot mix asphalt. The tack shall not track onto any adjacent lanes, pavement markings, driveways, sideroads, etc.

3.1 The contractor shall be responsible for cleaning all tracked tack from adjacent lanes, driveways, sideroads, etc., and shall replace all pavement markings that become coated with tracked tack. This cleaning and replacement requirement applies to both approved and proposed non-tracking products.

4.0 Basis of Payment. Measurement and payment shall be in accordance with Sec 407. The accepted quantity of non-tracking tack coat will be paid for per gallon at the contract unit price for 407-99.12, Misc. Non-Tracking Tack Coat. No additional payment will be made for the cost to demonstrate proposed products, for cleaning surfaces due to tracking of tack, or for replacement of pavement marking damaged by tracked tack.

II. Relocated Guardrail

1.0 Description. This work shall consist of removing and reusing existing MASH-compliant guardrail, end anchors, height and block transitions, bridge approach transition sections, and type A crashworthy end terminals within the project limits as required to construct the project.

2.0 Construction Requirements. Existing MASH-compliant items are to be removed and stored by the contractor until they are used and set in their new plan locations. Reused guardrail, end anchors, height and block transitions, and bridge approach transitions are to be installed as per Sec 606.10. except that they shall not be required to be of new stock. Reused type A crashworthy end terminals are to be installed as per Sec 606.30. except that they shall not be required to be of new stock.

2.1 Existing MASH-compliant items that are already damaged prior to removal or are damaged as part of the removal and storing process shall not be permitted to be reused. Estimation of damaged sections are already accounted for in the plan quantities (approximately 20%). Items damaged as part of the removal and storing process beyond this 20% shall be replaced with new stock at no direct pay to the commission.

2.2 The contractor may elect to instead replace all relocated guardrail items with new stock. All costs for MGS-compliant item removals and furnishing new items under this option shall be considered included in the cost of relocated guardrail items.

2.3 No pre-MASH guardrail items will be permitted to be reused, and shall instead be removed as per plan quantities.

3.0 Measurement. Measurement of relocated guardrail, end anchors, height and block transitions, and bridge approach transitions are to be as per Sec 606.10.3. Measurement of relocated Type A crashworthy end terminals is to be as per Sec 606.30.4

4.0 Basis of Payment. The accepted quantities of relocated guardrail will be paid for at the contract unit price for the following items.

- Item No. 606-99.02 - Misc. MGS End Anchor (Relocated), per each
- Item No. 606-99.02 - Misc. MGS Height and Block Transition (Relocated), per each
- Item No. 606-99.02 - Misc. Type A Crashworthy End Terminal (Mash) (Relocated), per each
- Item No. 606-99.02 - Misc. MGS Bridge Approach Transition Section (Regular/No Curb) (Relocated), per each
- Item No. 606-99.03 - Misc. MGS Guardrail (Relocated), per LF

JJ. Type 5 or 7 Aggregate for Base

1.0 Description. This work shall consist of constructing 4 inch or 6 inch Type 5 or Type 7 aggregate bases under new pavements or shoulders.

2.0 Construction Requirements. The contractor shall choose to construct either Type 5 or Type 7 base as per the plans. Type 5 aggregate maybe used for one item, and type 7 may be used for the other item; or both items may use type 5 aggregate, or both items may use type 7 aggregate. The contractor shall inform the engineer which type of aggregates will be used prior to its construction.

2.1 Type 5 or 7 aggregate for base shall meet the requirements of Sec 304.

2.2 The contractor may elect to use reclaimed concrete from project Removal of Improvements to furnish type 5 or 7 aggregate for base. Reclaimed material used as type 5 or 7 aggregate for base shall meet the requirements in Sec 1007. Estimated quantities of reclaimed material required to construct the plan quantity of Type 5 or 7 aggregate for base are shown on summary of quantities sheet 3 of 40. The quantities shown are approximate, and no direct pay will be allocated for any reclamation of material to be used as Type 5 or 7 aggregate for base.

3.0 Measurement. Measurement of Type 5 or 7 aggregate for base is to be as per Sec 304.5.

4.0 Basis of Payment. The accepted quantities of Type 5 or 7 aggregate for base will be paid for at the contract unit price for the following items.

- 304-99.05 - Misc. Type 5 or 7 aggregate for base (6 in. Thick), per SY
- 304-99.05 - Misc. Type 5 or 7 aggregate for base (4 in. Thick), per SY

KK. Supplemental Revisions JSP-18-01CC

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

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

Stormwater Compliance Requirements

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

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

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

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

2.1 Duties of the WPCM:

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

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

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

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

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

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

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

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

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

5.0 Stormwater Deficiency Corrections. All stormwater deficiencies identified in the Inspection Report shall be corrected by the contractor within 7 days of the inspection date or any extended period granted by the engineer when weather or field conditions prohibit the corrective work. If

the contractor does not initiate corrective measures within 5 calendar days of the inspection date or any extended period granted by the engineer, all work shall cease on the project except for work to correct these deficiencies, unless otherwise allowed by the engineer. All impact costs related to this halting of work, including, but not limited to stand-by time for equipment, shall be borne by the contractor. Work shall not resume until the engineer approves the corrective work.

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

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

Delete Sec 106.9 in its entirety and substitute the following:

106.9 Buy America Requirements.
Buy America Requirements are waived if the total amount of Federal financial assistance applied to the project, through awards or subawards, is below $500,000.

106.9.1 Buy America Requirements for Iron and Steel.
On all federal-aid projects, the contractor's attention is directed to Title 23 CFR 635.410 *Buy America Requirements*. Where steel or iron products are to be permanently incorporated into the contract work, steel and iron material shall be manufactured, from the initial melting stage through the application of coatings, in the USA except for "minimal use" as described herein. Furthermore, any coating process of the steel or iron shall be performed in the USA. Under a general waiver from FHWA the use of pig iron and processed, pelletized, and reduced iron ore manufactured outside of the USA will be permitted in the domestic manufacturing process for steel or iron material.

106.9.1.1 Buy America Requirements for Iron and Steel for Manufactured items.
A manufactured item will be considered iron and steel if it is "predominantly" iron or steel. Predominantly iron or steel means that the cost of iron or steel content of a product is more than 50 percent of the total cost of all its components.

106.9.2 Any sources other than the USA as defined will be considered foreign. The required domestic manufacturing process shall include formation of ingots and any subsequent process. Coatings shall include any surface finish that protects or adds value to the product.

106.9.3 "Minimal use" of foreign steel, iron or coating processes will be permitted, provided the cost of such products does not exceed 1/10 of one percent (0.1 percent) of the total contract cost or $2,500.00, whichever is greater. If foreign steel, iron, or coating processes are used, invoices to document the cost of the foreign portion, as delivered to the project, shall be provided and the engineer's written approval obtained prior to placing the material in any work.

106.9.4 Buy America requirements include a step certification for all fabrication processes of all steel or iron materials that are accepted per Sec 1000. The AASHTO Product Evaluation and Audit Solutions compliance program verifies that all steel and iron products fabrication processes conform to 23 CFR 635.410 Buy America Requirements and is an acceptable standard per 23 CFR 635.410(d). AASHTO Product Evaluation and Audit Solutions compliant suppliers will not be required to submit step certification documentation with the shipment for some selected steel and iron materials. The AASHTO Product Evaluation and Audit Solutions compliant supplier shall maintain the step certification documentation on file and shall provide this documentation to the engineer upon request.

106.9.4.1 Items designated as Category 1 will consist of steel girders, piling, and reinforcing steel installed on site. Category 1 items require supporting documentation prior to incorporation into the project showing all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements. This includes the Mill Test Report from the original producing steel mill and certifications documenting the manufacturing process for all subsequent fabrication, including coatings. The certification shall include language that certifies the following. That all steel and iron materials permanently incorporated in this project was procured and processed domestically and all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410.

106.9.4.2 Items designated as Category 2 will include all other steel or iron products not in Category 1 and permanently incorporated in the project. Category 2 items shall consist of, but not be limited to items such as fencing, guardrail, signing, lighting and signal supports. The prime contractor is required to submit a material of origin form certification prior to incorporation into the project from the fabricator for each item that the product is domestic. The Certificate of Materials Origin form (link to certificate form) from the fabricator must show all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements and be signed by a fabricator representative. The engineer reserves the right to request additional information and documentation to verify that all Buy America requirements have been satisfied. These documents shall be submitted upon request by the engineer and retained for a period of 3 years after the last reimbursement of the material.

106.9.4.3 Any minor miscellaneous steel or iron items that are not included in the materials specifications shall be certified by the prime contractor as being procured domestically. Examples of these items would be bolts for sign posts, anchorage inserts, etc. The certification shall read "I certify that all steel and iron materials permanently incorporated in this project during all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements procured and processed domestically in accordance with CFR Title 23 Section 635.410 Buy America Requirements. Any foreign steel used was submitted and accepted under minor usage". The certification shall be signed by an authorized representative of the prime contractor.

106.9.5 When permitted in the contract, alternate bids may be submitted for foreign steel and iron products. The award of the contract when alternate bids are permitted will be based on the lowest total bid of the contract based on furnishing domestic steel or iron products or 125 percent of the lowest total bid based on furnishing foreign steel or iron products. If foreign steel or iron products are awarded in the contract, domestic steel or iron products may be used; however, payment will be at the contract unit price for foreign steel or iron products.

106.9.6 Buy America Requirements for Construction Materials other than iron and steel materials. Construction materials means articles, materials, or supplies that consist of only one of the items listed. Minor additions of articles, materials, supplies, or binding agents to a construction material do not change the categorization of the construction material. Upon request by the engineer, the contractor shall submit a domestic certification for all construction materials listed that are incorporated into the project.

(a) Non-ferrous metals
(b) Plastic and Polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables)
(c) Glass (including optic glass)
(d) Fiber optic cable (including drop cable)
(e) Optical fiber
(f) Lumber
(g) Engineered wood
(h) Drywall

106.9.6.1 Minimal Use allowance for Construction Materials other than iron or steel.
"The total value of the non-compliant products is no more than the lesser of $1,000,000 or 5% of total applicable costs for the project." The contractor shall submit to the engineer any non-domestic materials and their total material cost to the engineer. The contractor and the engineer will both track these totals to assure that the minimal usage allowance is not exceeded.

106.9.7 Buy America Requirements for Manufactured Products.
Manufactured products means:

(a) Articles, materials, or supplies that have been:
    (i) Processed into a specific form and shape; or
    (ii) Combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies.
(b) If an item is classified as an iron or steel product, a construction material, or a section 70917(c) material under § 184.4(e) and the definitions set forth in this section, then it is not a manufactured product. However, an article, material, or supply classified as a manufactured product under § 184.4(e) and paragraph (1) of this definition may include components that are construction materials, iron or steel products, or section 70917(c) materials.

106.9.7.1 Manufactured products are exempt from Buy America requirements. To qualify as a manufactured product, items that consist of two or more of the listed construction materials that have been combined together through a manufacturing process, and items that include at least one of the listed materials combined with a material that is not listed through a manufacturing process, should be treated as manufactured products, rather than as construction materials.

106.9.7.2 Manufactured items are covered under a general waiver to exclude them from Buy America Requirements. To qualify for the exemption the components must comprise of 55% of the value of materials in the item. The final assembly must also be performed domestically.

Pavement Marking Paint Requirements for Standard Waterborne and Temporary

1.0 Description. High Build acrylic waterborne pavement marking paint shall be used in lieu of standard acrylic waterborne pavement marking paint for all Standard Waterborne Pavement Marking Paint items and all Temporary Pavement Marking Paint items. Paint thickness, bead type, bead application rate, retroreflectivity requirements, and all other specifications shall remain as stated in the Missouri Standard Specifications for Highway Construction, except as otherwise amended in the contract documents.

2.0 Material Requirements. Material requirements for Sec 620.20.2.5 Standard Waterborne Paint, and Sec 620.10.2 Temporary Pavement Marking Paint shall be per Sec 1048.20.1.2 High Build Acrylic Waterborne Pavement Marking Paint.