

Job No.: J5S3546


Route: Various

County: Various

JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

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

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	Klingner & Associates, P.C. 616 N. 24 TH Street Quincy, IL 62301 Certificate of Authority: 000866 Consultant Phone: 217-223-3670
	If a seal is present on this sheet, JSP's have been electronically sealed and dated.
	JOB NUMBER: J5S3546 VARIIOUS COUNTIES, MO DATE PREPARED: 12/05/2023
	ADDENDUM DATE:
Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: All	

JOB
SPECIAL PROVISION

A. General - Federal JSP-09-02J

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

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

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

General Provisions & Supplemental Specifications

Supplemental Plans to July 2023 Missouri Standard Plans
For Highway Construction

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

B. Contract Liquidated Damages

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

2.0 Period of Performance. Prosecution of work is expected to begin on the date specified below in accordance with Sec 108.2. Regardless of when the work is begun on this contract, all work on all projects shall be completed on or before the Contract Completion date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.1.

Job No.: J5S3546
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Notice to Proceed: May 6, 2024
Completion Date: November 1, 2024

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

Job Number	Calendar Days	Daily Road User Cost
J5S3546	111	\$3200

3.0 Liquidated Damages for Contract Administrative Costs. Should the contractor fail to complete the work on or before the completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **\$250** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified completion date or calendar days.

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

C. Work Zone Traffic Management

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 for managing work zone delay in accordance with these project provisions. When requested by the engineer, the WZS shall submit a weekly report that includes a review of work zone operations for the week. The report shall identify any problems encountered and corrective actions taken. Work zones are subject to unannounced inspections by the engineer and other departmental staff to corroborate the validity of the WZS's review and may require immediate corrective measures and/or additional work zone monitoring.

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

2.0 Traffic Management Schedule.

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

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

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

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

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

2.5.1 Traffic Safety.

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

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

3.0 Work Hour Restrictions.

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

holiday until 6:00 a.m. on the first working day subsequent to the holiday unless otherwise approved by the engineer.

Memorial Day
Labor Day
Thanksgiving
Christmas
New Year's Day

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

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

3.1.2 The contractor's working hours will be restricted for the Special Events as shown below. All lanes shall be scheduled to be open to traffic during these Special Events.

1. NEW FRANKLIN – SANTA FE TRAIL DAYS – SEPTEMBER 15-16.

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

4.0 Detours and Lane Closures.

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

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

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

D. Emergency Provisions and Incident Management

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

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

Missouri Highway Patrol- Troop F: 816-622-0800		
Boone County	City of Columbia	Howard County
Fire: 573-447-5000	Fire: 573-874-7391	Fire: 660-248-5198
Police: 573-875-1111	Police: 573-874-7652	Police: 660-248-2477

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

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

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

E. Project Contact for Contractor/Bidder Questions

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

Patrick J. Hake, Project Contact
Central District
105 W. Capitol Avenue
Jefferson City, MO 65101

Telephone Number: 573-526-5093

Email: Patrick.Hake@modot.mo.gov

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

F. Supplemental Revisions JSP-18-01AA

Compliance with [2 CFR 200.216 – Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment](#).

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

Stormwater Compliance Requirements

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

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

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

2.0 Water Pollution Control Manager (WPCM). The Contractor shall designate a competent person to serve as the Water Pollution Control Manager (WPCM) for projects meeting the

description in Section 1.0. The Contractor shall ensure the WPCM completes all duties listed in Section 2.1.

2.1 Duties of the WPCM:

- (a) Be familiar with the stormwater requirements including the current MoDOT State Operating Permit for construction stormwater discharges/land disturbance activities; MoDOT's statewide Stormwater Pollution Prevention Plan (SWPPP); the Corps of Engineers Section 404 Permit, when applicable; the project specific SWPPP, the Project's Erosion & Sediment Control Plan; all applicable special provisions, specifications, and standard drawings; and this provision;
- (b) Successfully complete the MoDOT Stormwater Training Course within the last 4 years. The MoDOT Stormwater Training is a free online course available at MoDOT.org;
- (c) Attend the Pre-Activity Meeting for Grading and Land Disturbance and all subsequent Weekly Meetings in which grading activities are discussed;
- (d) Oversee and ensure all work is performed in accordance with the Project-specific SWPPP and all updates thereto, or as designated by the engineer;
- (e) Review the project site for compliance with the Project SWPPP, as needed, from the start of any grading operations until final stabilization is achieved, and take necessary actions to correct any known deficiencies to prevent pollution of the waters of the state or adjacent property owners prior to the engineer's weekly inspections;
- (f) Review and acknowledge receipt of each MoDOT Inspection Report (Land Disturbance Inspection Record) for the Project within forty eight (48) hours of receiving the report and ensure that all Stormwater Deficiencies noted on the report are corrected as soon as possible, but no later than stated in Section 5.0.

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

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

4.0 Inspection Reports. Weekly and post run-off inspections will be performed by the engineer and each Inspection Report (Land Disturbance Inspection Record) will be entered into a web-based Stormwater Compliance database. The WPCM will be granted access to this

database and shall promptly review all reports, including any noted deficiencies, and shall acknowledge receipt of the report as required in Section 2.1 (f.).

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

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

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

Anti-Discrimination Against Israel Certification

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

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

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

2.0 Materials. The contractor shall furnish a manufacturer's certification to the engineer for each shipment of GTR furnished stating the name of the manufacturer, the chemical

composition, workability additives, and certifying that the GTR supplied is in accordance with this specification.

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

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

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

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

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

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

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

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

volumetrically will not be allowed. The feeder shall interlock with the aggregate weight system and asphalt binder pump to maintain correct mixture proportions at all production rates.

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

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

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

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

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

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

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

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

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

8.2.1 GTR SPG shall be 1.15

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

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

where:

$G_{sb (JMF)}$ = bulk specific gravity of the combined aggregate including GTR
 P_{bmv} = percent virgin binder by total mixture weight
 P_s = percent aggregate by total mixture weight (not including GTR)
 P_{GTR} = percent GTR by total mixture weight
 G_{sb} = bulk specific gravity of the combined aggregate (not including GTR)
 G_{GTR} = GTR specific gravity

8.4 G_{se} shall be calculated as follows:

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

8.5 P_{be} shall be calculated as follows:

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

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

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

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

Delete Sec 403.19.2 and substitute the following:

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

Delete Sec 106.9 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.

106.9.2 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 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.

G. Utilities

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

<u>Utility Name</u>	<u>Known Required Adjustment</u>	<u>Type</u>
AT&T Transmission Contact: Lenny Vohs Phone: (816) 275-4014 Email: lv2121@att.com	None	Communications
AT&T Distribution Contact: Andy Erickson Phone: (314) 223-2966 Email: ae4137@att.com	None	Communications
Ameren Missouri Gas Contact: Jake Martin Phone: (573) 291-1978 Email: jmartin7@ameren.com	None	Gas
Ameren Missouri Electric Contact: Derek Wekenborg Phone: (573) 680-2188 Email: dwekenborg@ameren.com	None	Electric
Brightspeed Contact: Tonjia Baldwin Phone: (573) 415-6308 Email: tonjia.baldwin@lumen.com	None	Communications
Charter Communications Contact: Terrel Bradshaw Phone: (314) 610-7798 Email: terrel.bradshaw@charter.com	None	Communications
City of Conway Phone: (417) 589-6672	None	Sewer, Water
City of Columbia Shawn Carrico – Water Phone: (573) 823-9124 Email: shawn.carrico@como.gov Kim Ingham – Sewer Phone: (573) 874-6380 Email: kim.ingham@como.gov Joe Kochert – Communications, Electric Phone: (573) 239-5164 Email: joe.kochert@como.com	None	Communications, Electric, Sewer, Water

City of Fayette, Contact: Danny Dougherty Phone: (660) 248-5202	See Section 2.0	Electric, Sewer, Water
City of New Franklin Contact: Tom Gunn Phone: (660) 848-2288	None	Sewer, Water
City of Stoutland Phone: (417) 286-4503	None	Sewer
Laclede County Public Water Supply District #1 Contact: Johnny Wood Phone: (417) 650-4324	None	Water
Laclede County Public Water Supply District #2 Contact: Alan Tramper Phone: (417) 286-3462	None	Water
Laclede Electric Cooperative Contact: David Archer Phone: (417) 532-3164	None	Electric
Mediacom Contact: Bob Boner Phone: (573) 489-1937 Email: bboner@mediacomcc.com	None	Communications
Missouricom Contact: Wes Libby Phone: (573) 835-4030 Email: wesl@rallynet.us	None	Communications
MNA-BlueBird Contact: Jamie Scott Phone: (314) 220-8996 Email: James.Scott@bluebirdnetwork.com	None	Communications
Sho-Me Technologies Contact: Brad McGoon Phone: (417) 830-6717 Email: DMcGoon@shomepower.com	None	Communications
Socket Telecom Contact: Todd Pulis Phone: 573-818-4778 Email: tpulis@socket.net	None	Communications

Spire MO West Contact: Jon Harrel Phone: (816) 969-2298 Email: jon.harrel@spireenergy.com	None	Gas
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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.

1.2 The contractor shall be aware there are numerous utilities under and near the existing and proposed ADA facilities. The contractor shall take necessary precautions and measures to verify locations and depths of utilities by any necessary means to determine exact impacts to their work. Any utilities determined to be in conflict or that appear to be in conflict with construction shall be brought to the attention of the Engineer immediately. The Engineer shall determine course of action to remedy the situation.

2.0 The City of Fayette has two water valves that will require the height of the covers to be adjusted as part of the proposed improvements. These valves are located at approximate Station 685+30 and 685+37 west of Route 240 and north of Lucky St.

3.0 Utility conflicts discovered and cleared before construction begins will help the contractor's progress on the project. MoDOT District Utility Manager Tim Oligschlaeger (573) 680-9788 will assist in the coordination of relocating utilities, if necessary.

4.0 Basis of Payment: No direct payment will be made for complying with this provision.

H. Contractor Quality Control NJSP-15-42

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

2.0 Quality Control Plan.

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

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

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

3.1.1 Test results shall be reported on electronic forms provided by MoDOT. Forms and Contractor Reporting Excel2Oracle Reports (CRE2O) can be found on the MoDOT website. All required forms, reports and material certifications shall be uploaded to a Microsoft SharePoint® site provided by MoDOT, and organized in the file structure established by MoDOT.

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

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

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

4.0 Work Planning and Scheduling.

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

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

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

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

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

4.4.2 Prior to all Hold Point inspections, the contractor shall verify the work has been completed in accordance with the contract and specifications. If the engineer identifies any corrective actions needed during a Hold Point inspection, the corrections shall be completed prior to continuing work. The engineer may require a new Hold Point to be scheduled if the corrections require a follow-up inspection. Re-scheduling of Hold Points require a minimum 24-hour advance notification from the contractor unless otherwise allowed by the engineer.

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

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

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

I. Seeding and Mulching Requirements

1.0 Seeding. All previously vegetated disturbed areas shall be seeded with a cool season mixture in accordance with Sec. 805. Cool season seed mixture and fertilizer rate shall be as specified in Standard Plan 805.

2.0 Mulching. Vegetative Mulch Overspray shall be applied in accordance with Sec. 802.

3.0 Method of Measurement. No measurement of disturbed areas as described above shall be made.

4.0 Basis of Payment. All labor, equipment, and materials necessary for compliance with this provision shall be completely covered under the unit bid price for item 805-99.01, Misc. Seeding and Mulching, per lump sum.

J. ADA Compliance and Final Acceptance of Constructed Facilities JSP-10-01C

1.0 Description. The contractor shall comply with all laws pertaining to the Americans with Disabilities Act (ADA) during construction of pedestrian facilities on public rights of way for this project. An ADA Checklist is provided herein to be utilized by the contractor for verifying compliance with the ADA law. The contractor is expected to familiarize himself with the plans involving pedestrian facilities and the ADA Post Construction Checklist prior to performing the work.

2.0 ADA Checklist. The contractor can locate the ADA Checklist form on the Missouri Department of Transportation website:

www.modot.org/business/contractor_resources/forms.htm

2.1 The ADA Checklist is not to be considered all-inclusive, nor does it supersede any other contract requirements. The ADA checklist is a required guide for the contractor to use during the construction of the pedestrian facilities and a basis for the commission's acceptance of work. Prior to work being performed, the contractor shall bring to the engineer's attention any planned work that is in conflict with the design or with the requirement shown in the checklist. This notification shall be made in writing. Situations may arise where the checklist may not fully address all requirements needed to construct a facility to the full requirements of current ADA law. In those situations, the contractor shall propose a solution to the engineer that is compliant with current ADA law using the following hierarchy of resources: 2010 ADA Standards for Accessible Design, Draft Public Rights of Way Accessibility Guidelines (PROWAG) dated November 23, 2005, MoDOT's Engineering Policy Guidelines (EPG), or a solution approved by the U.S. Access Board.

2.2 It is encouraged that the contractor monitor the completed sections of the newly constructed pedestrian facilities in attempts to minimize negative impacts that his equipment, subcontractors or general public may have on the work. Completed facilities must comply with the requirements of ADA and the ADA Checklist or have documented reasons for the non-compliant items to remain.

3.0 Coordination of Construction.

3.1 Prior to construction and/or closure on an existing pedestrian path of travel, the contractor shall submit a schedule of work to be constructed, which includes location of work performed, the duration of time the contractor expects to impact the facility and an accessible signed pedestrian detour compliant with MUTCD Section 6D that will be used during each stage of construction. This plan shall be submitted to the engineer for review and approval at or prior to the pre-construction conference. Accessible signed detours shall be in place prior to any work being performed that has the effect of closing an existing pedestrian travel way.

3.2 *When consultant survey is included in the contract, the contractor shall use their survey crews to verify that the intended design can be constructed to the full requirements as established in the 2010 ADA Standards. When 2010 ADA Standards do not give sufficient information to construct the contract work, the contractor shall refer to the PROWAG.*

3.3 When consultant survey is not included in the contract, the contractor shall coordinate with the engineer, prior to construction, to determine if additional survey will be required to confirm the designs constructability.

4.0 Final Acceptance of Work. The contractor shall provide the completed ADA Checklist to the engineer at the semi-final inspection. ADA improvements require final inspection and compliance with the ADA requirements and the ADA Checklist. Each item listed in the checklist must receive either a "YES" or an "N/A" score. Any item receiving a "NO" will be deemed non-compliant and shall be corrected at the contractor's expense unless deemed otherwise by the engineer. Documentation must be provided about the location of any non-compliant items that

are allowed to remain at the end of the construction project. Specific details of the non-compliant items, the ADA requirement that the work was not able to comply with, and the specific reasons that justify the exception are to be included with the completed ADA Checklist provided to the engineer.

4.1 Slope and grade measurements shall be made using a properly calibrated, 2 foot long, electronic digital level approved by the engineer.

5.0 Basis of Payment. The contractor will receive full pay of the contract unit cost for all sidewalk, ramp, curb ramp, median, island, approach work, cross walk striping, APS buttons, pedestrian heads, detectible warning systems and temporary traffic control measures that are completed during the current estimate period as approved by the engineer. Based upon completion of the ADA Checklist, the contractor shall complete any necessary adjustments to items deemed non-compliant as directed by the engineer.

5.1 No direct payment will be made to the contractor to recover the cost of equipment, labor, materials, or time required to fulfill the above provisions, unless specified elsewhere in the contract documents.

K. Detectable Pedestrian Channelizing Barricade

1.0 Description. This work shall consist of utilizing Detectable Pedestrian Channelizing Barricades as shown on the plans in accordance with the Manual for Uniform Traffic Control Devices. The pedestrian barricade is similar to the Type 2 Barricade indicated in Section 6F.63.

2.0 Basis of Payment. Payment for furnishing and installing the pedestrian barricades shall be completely covered by the contract unit price for Item No. 616-99.02, Detectable Pedestrian Barricade, per each.

L. Relocation/ Reinstalling Existing Signs

1.0 Description. Existing signs indicated for removal and reinstallation in the plans shall be carefully removed without damage, stored, and reinstalled as shown on the plans. Temporary stop and yield signs shall be utilized until the permanent signing is completed. New footings, anchor assemblies, and posts are provided in the contract to reinstall the existing signs.

2.0 Basis of Payment. Removal, storage, and reinstallation of the signs will be incidental to the payment for the new footings, anchor assemblies and posts:

Item 903-12.70A 2 inch PSST Post –12 Gage, per linear foot

Item 903-12.71A Driven Post Anchor for 2 inch PSST – 12 Gage, per each

Utilization of temporary signs will be covered under the contract unit price for Item 616-10.05, Construction Signs, per square foot.

M. Curb and Gutter Type B, Special

1.0 Description. This work shall consist of constructing combination curb and gutter with a varying gutter pan width and varying curb height, as shown in the plans. The gutter pan width and curb height shall vary in order to match the existing adjacent gutter pan width and/or curb height in the field.

2.0 Construction Requirements. All materials and work performed for this item shall be in accordance with Sec. 609.

3.0 Method of Measurement. Measurement will be made in accordance with Sec. 609.

4.0 Basis of Payment. Payment for the accepted quantity for "Curb and Gutter Type B, Special" will be made in accordance with the contract unit bid price for the item 609-99.03 and includes all labor, equipment, materials, and time required to comply with this provision.

N. Access to Commercial and Private Properties

1.0 Description. This improvement is located within a commercial and residential area. While working on entrances or adjacent properties, the contractor shall make every reasonable effort to minimize any interference to the properties and to pursue the work diligently. Under no circumstances shall the contractor block ingress/egress to and from businesses during the normal business hours of each business unless as approved in advance by the property owner and the engineer.

1.1 The contractor shall notify the engineer owner seven (7) calendar days prior to any area of sidewalk or entrance construction. The contractor shall contact each property owner at least one week prior to any sidewalk or entrance construction within their property limits to advise them of the work that will take place and the timeframe of the work.

2.0 Construction Requirements. If there exists more than one entrance to the property, the contractor shall keep a minimum of one entrance to that property completely open at all times unless approved in advance by the property owner and the engineer. If there is only one entrance, the contractor shall only construct one half of the entrance at a time. The minimum compressive strength of the concrete shall be 3500 psi prior to allowing any traffic on the concrete.

3.0 Liquidated Damages Specified. For properties with only one entrance, if the entire entrance is not complete and open to traffic within five (5) calendar days, 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 delay, with its resulting cost to the traveling public. 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 **\$500.00** per day for each full day that an entrance is not complete and open to traffic in excess of the limitation as specified elsewhere in the special provision.

4.0 Basis of Payment. No direct payment will be made to the contractor to recover the cost of equipment, labor, materials or time required to fulfill the above provisions, unless specified elsewhere in the contract documents.

O. Linear Grading for ADA Facilities

1.0 Description. This work shall consist of altering the existing roadside features to the required grade and cross sections shown in the plans (if applicable), or to comply with typical sections, running slopes, drop-off and side-slope standards, consistent with the guidelines set forth in the Americans with Disabilities Act (ADA). This work shall be in accordance with Sections 202 and 207 and accompanying provisions except as modified herein.

2.0 Construction Requirements. The roadside shall be brought to the required grade and cross section as established in Section 1.0 of this provision, to a uniform appearance, free of sharp breaks or humps. Minor deviations will be allowed, to take advantage of favorable topography, as approved by the engineer.

2.1 The contractor shall remove all existing roadside improvements necessary to facilitate the new sidewalk and curb ramp construction, along with any other roadside removal items at, or adjacent to the pedestrian pathway, as noted in the plans or as approved by the engineer. This shall include the removal and/or saw cutting at existing raised islands or median strips to construct the pedestrian pathway. The contractor shall pay special care to existing utility facilities to be used in place or relocated by others.

2.2 The contractor shall be responsible for all excavation and embankment work necessary to facilitate construction of new ADA compliant facilities; normally consisting of subgrade and subsequent finished grading for sidewalks, curbs, curb ramps; and may include miscellaneous grading work for items such as ditches, entrances, paved approaches, driveways and pipes, at or adjacent to proposed new sidewalk facilities.

2.3 By this provision, it may be necessary to excavate, stockpile, and haul some material within the project limits. Due to staging and/or Right-of-Way constraints, it may be necessary to waste unusable material off of Right-of-Way, and/or haul a replacement volume of material back to achieve the desired grades.

2.4 All removals of Portland or Asphaltic Concrete performed under this provision will require saw-cutting a neat/clean edge along the removal lines at no direct pay, unless otherwise provided for in the contract.

3.0 Method of Measurement. Measurement of Linear Grading for ADA Facilities will be made along the length of the new sidewalk and/or curb ramp installed, along each side of the roadway where sidewalk work is to be performed. Measurement will be made to the nearest 1-foot for each sidewalk work area, totaled, and paid to the nearest 1-foot for final pay. Final field measurement will not be required except where appreciable errors are found, or authorized changes have been made.

4.0 Basis of Payment. The accepted quantities of Linear Grading for ADA Facilities will be paid for at the contract unit price for item 207-99.03, Linear Grading for ADA Facilities, Linear Foot, and will be considered as full compensation for all labor, equipment, material, waste fees, disposal agreements, material acquisition, or other construction costs involved to complete the described work.

T. Temporary Construction Easements

1.0 Description. MODOT has obtained temporary construction easements from property owners in order to construct improvements for the project. The businesses will continue utilizing those construction easements to conduct their day-to-day business. The contractor shall coordinate with the business owners to minimize the amount of time and space needed to construct the improvements located inside each temporary construction easement.

2.0 Construction Requirements. The contractor shall not disturb any business improvements, besides the entrance itself, located inside each temporary construction easement. Business improvements include such things as, but not limited to, business signs and their electrical connections, landscaping, sprinkler systems. The contractor will be solely responsible for repairing or replacing any improvements they disturb that are not specifically marked on the plans for removal.

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

U. Excess Material

1.0 Description. Grading work for these improvements will result in excess material. It is the Contractor's responsibility to dispose of all excess material off of the right of way at locations furnished by the contractor.

2.0 Basis of Payment. Payment for this work, including all materials, equipment, labor and work will be made under the bid items for grading included in the contract.

V. Additional Flaggers

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

- a) State Route Intersections and City Street Intersections

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

W. Coordination Between Contractors

1.0 Description. The contractor shall be aware there is a pavement resurfacing project, J5P3517, that could interfere with this project.

2.0 Construction Requirements. The contractor shall establish contact with the Central District Office Construction personnel to determine if there are any scheduling conflicts with paving and/or striping operations on that project in the area.

J5P3517 Howard County Route 5 & Route 240 through New Franklin and Fayette

Project Contact: Jeffery Kroner, Resident Engineer
Columbia Construction Office
Phone: 573-522-5994

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

X. Pavement Edge Treatment for Drop-Off Conditions

1.0 Description. The contractor shall conduct construction operations so that there will be no drop off exceeding 2 inches adjacent to traffic during nonworking hours. Treatment of any drop-off greater than 2 inches shall be considered incidental to and completely covered by the other items in the contract. There will be no direct payment for Pavement Edge Treatment on this project.

Y. Contractor Furnished Surveying and Staking

In addition to the requirements of Section 627 of the Missouri Standard Specifications for Highway Construction, the following shall apply:

1.0 Description. The contractor will be responsible for all layout required on the project. All staking required to ensure that improvements installed on this project meet the ADA requirements is the sole responsibility of the contractor. This responsibility will include, but not limited to the following: Construction signs, curb ramp, landing, and sidewalk construction, truncated dome installation, quantity verification, curb construction, pavement marking, pedestrian signal modifications, median strip/island construction and modifications, etc.

1.1 The above list is not all inclusive. The contractor shall have the primary responsibility for these operations. The contractor shall provide the Resident Engineer with a staking plan layout for approval prior to the installation of signs. The RE will also provide assistance during this layout provided a request is submitted to the RE or Construction Project Manager 48 hours in advance. This will ensure that all permanently mounted traffic control devices remain consistent with District policy and avoid re-staking. If the contractor installs any signs without engineer approval, all costs associated with re-staking and/or relocation will be at the contractor's expense.

1.2 The intent of this provision is to increase the quality of our work zones and minimize negative impacts to the contractor's schedule that can result from delays in staking.

1.3 Any adjustments to the plan quantities or line numbers established in the contract shall be approved by the Engineer.

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

Z. Damage to Existing Pavement, Side Roads, and Entrances

1.0 Description. This work shall consist of repairing any damage to existing pavement, curb, ramps and/or shoulders caused by contractor operations. This shall include damage caused either directly or indirectly by contractor operations, including but not limited to, damage caused by the traffic during contractor operations.

2.0 Construction Requirements. Any cracking, gouging, or other damage to the existing pavement, curb, ramps and/or shoulders, side roads, or entrances from general construction shall be repaired within twenty-four (24) hours of the time of damage at the contractor's expense. Repair of the damaged pavement, shoulders, side roads, or entrances shall be as determined by the engineer.

3.0 Method of Measurement. No measurement of damaged pavement, curb, ramps or shoulder areas as described above shall be made.

4.0 Basis of Payment. No direct payment will be made to the contractor to recover the cost of equipment, labor, materials or time required to fulfill the above provisions, unless specified elsewhere in the contract documents.

AA. Curb Ramps and Sidewalk

1.0 Description. Construction of concrete curbs, aprons, curb ramps, transition areas, sidewalk and landings shall be in accordance with applicable portions of Sections 608 & 609 of the Standard Specification and Standard Plans for Highway Construction 608.10, as shown on the plans, and shall meet ADA requirements.

2.0 Construction Requirements. The following requirements shall be applicable to the construction of this project. The work shall include, but is not limited to, sidewalk and curb ramp construction including landings, joint construction, aggregate base, compaction, apron modifications, Type S Curb or Integral Curb installation (as required), tie bars or dowel bars (as required), clean-up, etc. for each location shown on the plans.

2.1 A one-half (1/2) inch joint filler shall be placed between all new pedestrian facilities and existing immovable improvements to remain in place such as power poles, fire hydrants, building foundations, pull boxes, manholes, etc.

2.2 Extreme care shall be taken when removing sidewalk adjacent of existing building foundations. This may require additional saw cutting, hand work, time, equipment, materials or other, to avoid damaging the building foundation. All foundations damaged due to the contractor's activities will be completely repaired in kind as approved by the engineer.

2.3 Existing curb, curb and gutter, sidewalk, shoulders, etc. that are adjacent to a designated curb ramp and/or sidewalk improvement area that is damaged during construction shall be replaced/repared to match existing materials and condition.

2.4 Variable height curbs along the roadside may be constructed monolithic or separate depending on construction operations. Integral curb shall be doweled to the existing gutter or pavement. Integral or Type S-curb shall be used along the existing right-of-way when constructing curb ramps as shown on the plans. The cost of the curb is included in pay limits of the curb ramp.

2.5 Curing compound for all concrete construction shall be a clear or translucent color. The white pigmented option or other colored compound will not be allowed.

2.6 Adjacent grass areas, landscaping, irrigation lines, pavement, etc. disturbed by curb ramp or sidewalk construction shall be repaired or replaced to match or exceed existing conditions.

2.7 Saw cuts for pavement and sidewalks shall be full depth or a minimum of 8 inches, whichever is less. Saw cuts are incidental to Removal of Improvements and Linear Grading for ADA Facilities.

2.8 Closed pedestrian facilities create barriers to access for non-motorized users and disrupt adjacent property owners. Therefore, the Contractor shall make every reasonable effort to minimize closures of sidewalk and curb ramps. Prior to the removal of existing pedestrian facilities, the contractor shall confirm crew availability and predicted weather conditions allow replacement and opening of the pedestrian facility within 14 days of closing.

3.0 Method of Measurement. Curb ramps and concrete sidewalk will be measured to the nearest 1/10 square yard. Measurement of incidental items required to complete all aspects of construction for the above noted items at each new curb ramp and sidewalk location will not be made individually unless specified elsewhere in the contract.

4.0 Basis of Payment. All costs incurred by the contractor by reason of compliance to satisfy the above requirements shall be considered incidental to and completely covered by the contract unit price for each of the pay items within the contract.

BB. Positive Drainage

1.0 Description. The contractor shall take care during construction to provide proper drainage during and after grading and sodding activities.

2.0 Construction Requirements. The contractor shall maintain positive drainage for all properties and shall not create locations of ponding or other drainage concerns to property owners. The contractor shall alert the engineer of any potential concerns during construction that may affect the ability to maintain positive drainage.

3.0 Basis of Payment. No direct payment will be made for compliance with this provision. All equipment and labor necessary for the work described shall be considered incidental to and completely covered by other bid items in the contract.

CC. Right of Way Requirements

1.0 Description. The Right of Way has been cleared on this project. However, there are some special requirements and conditions that have been agreed to in the negotiation process that the contractor shall adhere to.

2.0 Construction Requirements. All materials and work performed for this item shall be in accordance with applicable Standard Specifications. Please note that the list of special requirements below may not be all inclusive. The contractor shall consult the Right of Way Negotiator's Report for a full detail of any special requirements at each parcel.

2.1 Business Hours. A number of parcels within the project require minimal or no disruptions during business hours. If specific business hours are not listed or where multiple tenants share

a building, it shall be the responsibility of the contractor to verify the proper business hours with each business/tenant to plan the construction work accordingly. Where listed, business hours included in this JSP are current as of the time of the project's advertisement for bidders. However, business hours are subject to change and actual business hours may vary slightly from those hours listed herein, and may be temporarily adjusted during different times of the year. It shall be the responsibility of the contractor to verify the accuracy of the noted business hours and provide as little disruption as possible during construction operations.

3.0 Locations.

3.1 Parcel 8 – WF International LLC (Hungry Crab).

3.1.1 The Temporary Construction Easements for this parcel is for construction of the entrance for Parcel 8. Construction for this entrance shall be completed $\frac{1}{2}$ at a time, allowing access to a minimum of one lane of traffic at all times. Once work begins on this entrance, the contractor shall have a maximum of two (2) consecutive weeks' time to complete each half of the work, with the duration of work taking no more than 28 consecutive days to complete.

4.0 Basis of Payment. No direct payment will be made to the contractor for the labor, equipment, material, or time required to comply with this provision.