Job No.: JSR0056
Route: 248, 376, Bus. 65/76
County: Taney

JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

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

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

TREKK Design Group
1411 E 104th Street
Kansas City, MO 64131
Certificate of Authority: 2002010300
Consultant Phone: 816-874-4655

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

JOB NUMBER: JSR0056
TANEY COUNTY, MO
DATE PREPARED: 02/14/2024

ADDENDUM DATE:

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

Job No.: JSR0056
Route: 248, 376, Bus. 65/76
County: Taney

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 JSP-13-01C

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

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

Notice to Proceed Date: April 8, 2024
Contract Completion Date: July 1, 2025

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
JSR0056	266	$3200

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 **$1500** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified contract completion date or calendar days.

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

C. Work Zone Traffic Management 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. The contractor shall, upon approval of the engineer, take proactive measures to reduce traffic congestion in the work zone. The contractor shall immediately implement appropriate mitigation strategies whenever traffic congestion reaches an excess of **15 minutes** to prevent congestion from escalating beyond this delay threshold. If disruption of the traffic flow occurs and traffic is backed up in queues equal to or greater than the delay time threshold listed above, then the contractor shall immediately review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from reoccurring. Traffic delays may be monitored by physical presence on site or by utilizing real-time travel data through the work zone that generate text and/or email notifications where available. The engineer monitoring the work zone may also notify the contractor of delays that require prompt mitigation. The contractor may work with the engineer to determine what other alternative solutions or time periods would be acceptable. When a Work Zone Analysis Spreadsheet is provided, the contractor will find it in the electronic deliverables on MoDOT's Online Plans Room. The contractor may refer to the Work Zone Analysis Spreadsheet for detailed information on traffic delays.

2.5.1 Traffic Safety.

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

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

3.0 Work Hour Restrictions.

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

Memorial Day
Labor Day
Thanksgiving
Christmas
New Year's Day

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

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

3.2 The contractor shall not perform any construction operation on the roadway or sidewalk, 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 scheduled closures and 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.

4.2.1 Lane closures for Group A Pipe construction on Route 76 shall be limited to 1 lane 2-way operation, with flagger, between the hours of 8 PM and 6 AM. Two 10 foot lanes shall be open from 6 AM to 8 PM at a minimum.

4.2.2 The reconstruction of the entrance to Parcel 11, from Route 76, shall be completed between October 15 and November 30, 2024. The entrance shall remain fully open outside of these dates.

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 resident 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 (417) 895-6868
Branson Fire Department (417) 334-3300
Branson Police Department (417) 334-3300
Taney Co Sheriff’s Office (417) 546-7250
MoDOT Customer Service (417) 895-7600

Emergency Only Numbers
911 *55 cell phone – Missouri Highway Patrol 417-864-1160 – MoDOT Incident Management Coordinator

2.1 This list is not all inclusive. Notification of the need for wreckers 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.

Ray Cook, PE, Project Contact
MODOT - Southwest District
3025 E. Kearney St. Springfield, MO 65803
Telephone Number: 417-895-7644
Email: Darrell.Cook@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 sublot size shall be 1,000 tons. The maximum lot size shall be 4,000 tons for determination of pay factors. Sublots from incomplete lots shall be combined with the previous complete lot for determination of pay factors. When no previous lot exists, the mixture shall be treated in accordance with Sec 403.23.7.4.1. A new lot shall begin when the asphalt content of a mixture is adjusted in accordance with Sec 403.11.

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, addresses, and telephone numbers of the known utility companies in the area of the construction work for this improvement:

Job No.: JSR0056
Route: 248, 376, Bus. 65/76
County: Taney

Utility Name	Known Required Adjustment	Type
City of Branson Mike Woods 616 W. Pacific St, 2nd Floor Branson, MO 65616 Phone: 417-337-8566 Email: mwoods@bransonmo.gov	None	Sewer, Water
CenturyLink Garland Jones 11109 E Business 60 Mountain Grove, MO 65711 Phone: 417-327-9009 Email: garland.jones@centurylink.com	None	Communications
MoDOT – SW District Joe Dotson 2455 N. Mayfair Ave Springfield, MO 65803 Phone: 417-733-0664 Email: joseph.dotson@modot.mo.gov	None	Signals/Lighting/ITS
Liberty Utilities Shawn Stephens 3400 Kodiak Road Joplin MO 64804 Phone: 417-793-8163 Email: shawn.stephens@libertyutilities.com	None	Electric
Empire Connect Landon Dobbs 301 West Jackson St. Marshfield, MO 65706 Phone: 417-483-2460 Email: landon.dobbs@libertyutilities.com	None	Communications
Summit Natural Gas James Trujillo 272 Keystone Industrial Park Dr. Camdenton, MO 65020 Phone: (660) 473-1933 Email: jtrujillo@summitutilitiesinc.com	None	Gas
Altice (SuddenLink) Matthew Smith 769 N. 20th Street Ozark, MO 65721	None	Communications

Phone: (417) 231-2747
Email: matthew.smith@alticeusa.com

White River Valley Electric Cooperative Joe Donavant 2449 State Highway 76 E Branson, MO 65615 Phone: 417-294-0521 Email: jdonavant@whiteriver.org	None	Electric/Communications
Sho-Me Power Jeff McKeel 301 West Jackson St. P.O. Box D Marshfield, MO 65706 Phone: 417-859-2615 Email: jmckeel@shomepower.com	None	Electric/Communications
Taney County PWSD 3 Ed Young 507 Rinehart Rd. Branson, MO 65616 Phone: 417-337-8451 Email: generalmanager@taneywater3.com	None	Water
Taney County Regional Sewer District Brad Allbritton 507 Rinehart Rd. Branson, MO 65616 Phone: 417-544-0655 Email: ballbritton@tcrsd.org	None	Sewer
Lumen Leslie Dingman Email: Leslie.Dingman@Lumen.com File No. P-513672 MO	None	Communications
BrightSpeed Xan Marie Rypkema Sr Analyst for Road Moves 303 525 2994 704-314--2659 Email: Xan.rypkema@brightspeed.com File number P 140474	None	Communications

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 the existence, location and status of any facility. Such verification includes direct contact with the listed utilities.

2.0 Coordination with utility owners is ongoing and updates of known required adjustments and schedule of adjustments will be provided as available.

H. Temporary Construction Easements

1.0 Description. MODOT has obtained temporary construction easements from property owners in order to construct improvements for the project. Businesses within the project limits 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 or parking lot, located inside each temporary construction easement, unless shown as such on the plans. Business improvements include such things as, but not limited to, business signs and their electrical connections, landscaping, or sprinkler systems. The Contractor will be solely responsible to repair or replace any improvements disturbed that are not specifically marked on the plans for removal or adjustment, at the Contractor's cost.

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

I. 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:

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

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.

J. ADA Material Testing Frequency Modifications JSP-23-01

1.0 Description. This provision revises the Inspection and Testing Plan (ITP) for the construction of ADA compliant features to better match the nature of the work. The Quality Control (QC) testing frequency for the Sections identified below are to be revised as specified.

2.0 Compaction Test on Base Rock Under Sidewalk, Curb Ramps and Paved Approaches. (Revises ITP Sec 304.3.4) The required test frequency will be one per 600 tons.

3.0 Gradation Test on Base Rock Under Sidewalk, Curb Ramps and Paved Approaches. (Revises ITP Sec 304.4.1) The required frequency will be one per 500 tons.

4.0 Concrete Plant Checklists. (Revises ITP Sec 501) Submittal of the 501 Concrete Plant Checklist will be once per week when the contractor is only pouring curb, sidewalk, paved approaches, and curb ramps.

5.0 Concrete Median, Median Strip, Sidewalk, Curb Ramps, and Curb. (Revises ITP Sec 608) The required frequency will be the first truckload for the project and each 100 CUYDs for air and slump thereafter. Strength will be verified by use of cylinders or maturity meters at a minimum rate of one per 100 CUYD.

6.0 Paved Approaches. (ITP Sec 608) The required testing of one test from the first truckload per day and each 100 CUYDs for air and slump will remain per ITP. Strength will be verified by use of cylinders or maturity meters at a minimum rate of one per 100 CUYD.

7.0 Curb Concrete. (Revises ITP Sec 609) The required frequency will be the same as Sec 5.0 above.

8.0 Basis of Payment. No direct payment will be made to the contractor to fulfill the above requirements.

K. Detectable Pedestrian Channelizing Barricade

1.0 Description. This work shall consist of utilizing Detectable Pedestrian Channelizing Barricades as shown on the plans and 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, ADA Compliant Moveable Barricade, per each.

L. 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 completely block ingress/egress to and from businesses during the normal business hours of each business unless approved in writing, in advance, by the property owner and the engineer.

1.1 The contractor shall notify the engineer seven (7) calendar days prior to any area of sidewalk or entrance construction. After notification from the contractor, the engineer will 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 in writing. 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 2500 psi for light traffic (residential) and 3000 psi for commercial traffic before allowing access.

3.0 Liquidated Damages Specified. If the entire entrance is not complete and open to traffic within **seven (7) 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 **$250 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.

M. 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 payment will be made for repairs to existing pavement, curb, ramps and/or shoulders damaged by contractor operations

N. Pavement Edge Treatment for Drop Off Conditions - SW

1.0 Description. The contractor shall conduct construction operations so that there will be no drop off exceeding 2 inches adjacent to traffic. 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.

O. Contractor Furnished Surveying and Staking – SW

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. Any and 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 to cover the costs associated with these additional requirements. All costs will be considered completely covered by the unit bid price submitted for Contractor Furnished Surveying and Staking.

P. Curb Ramps and Sidewalk – SW

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 meet ADA requirements.

2.0 Construction Requirements. This work shall include, but is not limited to, sidewalk construction including landings, joint construction, aggregate base, compaction, apron modifications, transition area, curb ramp construction, Type S Curb or Type A Curb installation (as required), tie bars or dowel bars (as required), clean-up, etc. for each location shown on the plans.

The following requirements shall be applicable to construction of this project:

- 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/repaired to match existing materials and condition.

- Variable height curb 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.

- The transition area shall be 8” thick and tied to the existing roadway pavement and existing paved approach or sidewalk it is matching.

- 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.

- 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. Sod quantities are included for adjacent areas. More or less sod may be required depending on actual field conditions.

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.

Q. 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.

R. 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, per 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.

4.1 No direct payment will be made for “REMOVAL OF IMPROVEMENTS" associated with the removal and disposal of sidewalks, curbs, curb ramps, entrances, guardrail and other incidentals required for construction of the new sidewalk and/or curb ramps.

S. Sodding

1.0 Description. The contractor shall install sod on all disturbed areas except for surfaced areas, solid rock, and slopes consisting of primarily broken rock.

2.0 Construction Requirements. The contractor shall use sodding as specified for all disturbed areas shown in the plans. Seedbed preparation will be in accordance with Sec 801 and placement shall be accomplished in accordance with Sec 803. The contractor shall place the sodding **within 14 calendar days** of ground disturbance to reduce soil erosion or as approved by engineer. Disturbed area shall be reduced to a maximum of 1 acre at one time.

2.1 Temporary seeding may be utilized to fulfill maximum land disturbance requirement or at the discretion of the contractor. No direct payment will be made for temporary seeding.

2.2 Acceptance will be in accordance with Sec 803.4.

3.0 Basis of Payment. Payment for sod, including seedbed preparation will be considered completely covered by the contract **unit** price for Item No. 803-10.00A, “Turf Type Tall Fescue Sodding”, per square yard. Disturbed areas outside of authorized construction limits shall be sodded at the contractor’s expense at the direction of the Engineer.

T. Audible Pedestrian Push Buttons and Signing

1.0 Description. Audible pedestrian push buttons and signing will be required for all signalized pedestrian crosswalks at all intersections. Each audible pedestrian signaling system shall include all electronic control equipment, mounting hardware and push buttons necessary to provide audible tone and speech indications as well as a vibrating tactile indication for specific pedestrian signal functions. Each audible pedestrian system will also include the hardware and software needed for programming the system operational parameters.

2.0 Installation, Programming and Functionality. The contractor shall install the audible pedestrian system following manufacturer’s recommendations and Sec 902, and program each component for operation to provide the following functionality. Prior to activating each audible pedestrian system the contractor shall submit a listing of the values programmed for all variable system parameters to the engineer for review and approval. Use also Section 4E.09 – 4E.13 of the 2009 MUTCD for additional guidance of initial values for each programmable parameter.

2.1 Audible Locator Tone. The Locator tone tells the pedestrian that the intersection is equipped with an APS and where it is. The locator tone shall operate during the DON'T WALK and flashing DON'T WALK intervals only and shall be deactivated when the pedestrian signal is not operative. Push button locator tones shall be intensity responsive to ambient sound and be audible 6 to 12 feet from the push button, or the building line, whichever is less.

2.2 Verbal Wait Message. This acknowledgement message confirms for the pedestrian that their button press has placed a call. Each actuation shall be accompanied by the speech message “wait.”

2.3 Walk Message. Where two accessible pedestrian signals are separated by a distance of at least 10 feet, the audible walk indication shall be a percussive tone. Where two accessible pedestrian signals on one corner are not separated by a distance of at least 10 feet, the audible walk indication shall be a speech walk message.

2.3.1 Audible tone. Walk indications shall repeat at eight to ten ticks per second. Audible tones used as walk indications shall consist of multiple frequencies with a dominant component at 880 Hz.

2.3.2 Verbal walk. Message provides a clear message that the walk interval is in effect, as well as to which crossing it applies. The message shall be audible from the entrance of the associated crosswalk. Walk messages that are used at intersections having pedestrian phasing that is concurrent with vehicular phasing shall be patterned after the model: "Broadway. Walk sign is on to cross Broadway." Walk messages that are used at intersections having exclusive pedestrian phasing shall be patterned after the model: "Walk sign is on for all crossings."

2.4 Vibrotactile Message. Vibrotactile indications shall be provided by a tactile arrow on the push button that vibrates during the walk interval only. The arrow shall be located on the push button, have high visual contrast and shall be aligned parallel to the direction of travel on the associated crosswalk.

2.5 Volume. Automatic volume adjustment in response to ambient traffic sound level will be provided up to a maximum volume of 100 dB. The units shall be responsive to ambient noise level changes up to no more than 5 dB louder than ambient sound. Tone or voice volume measured at 36 inches from the unit shall be 2dB minimum and 5dB maximum above ambient noise level. At installation, signal system is to be adjusted to be audible at no more than 5 to 12 feet from the system.

2.6 Connectivity. All audible push button systems shall have Bluetooth interface and be password protected. Programming of the APS buttons shall be accessible through a field service application available on both iOS and Android platforms.

3.0 Equipment requirements. The audible pedestrian system and its components, in form and functionality, shall meet or exceed the requirements of the following documents and standards:

- 2009 MUTCD, Section 4E.09 – 4E.13
- NEMA 250 – 4X
- NEMA TS1, TS2, TS4,Type 170, Type 2070

2.0 Documentation and Support. Two copies of the operation and maintenance manuals for each installed system shall be included.

5.0 Construction Requirements. Construction requirements shall conform to Sec 902, 1061, and 1092.

6.0 Method of Measurement. Method of measurement shall conform to Sec 902.

7.0 Payment. Payment for the audible signals will be for each unit per bid item, 902-99.02, “Audible Pedestrian Push button”, per each. This will include all wiring, power adaptors, and installation hardware needed. Payment for signing will be included in the pay item 902-08.33.

U. Pedestrian Push Button Extension

1.0 Description. This work shall consist of installing new push button extensions to meet Americans with Disabilities Act (ADA) guidelines at the locations shown on the plans.

2.0 Construction Requirements. Push buttons extensions will be commercially available extensions, or other design as provided by the contractor and approved by the engineer before they are ordered or manufactured. Extensions up to 14 inches will be required, with various extension lengths necessary to meet ADA guidelines for push buttons located from the front face of adjacent curbs or raised medians.

The contractor shall be responsible to measure each push button location and determine the extension length needed at each location. The contractor shall also measure heights of push buttons and adjust the new height as needed to meet or exceed ADA requirements.

The contractor will be required to open traffic signal pull boxes as needed to pull cable for these extensions from the slack and extra cable coiled in adjacent pull boxes. Splices in the push button conductor cables will not be allowed.

The final product shall meet or exceed ADA requirements for pedestrian facilities.

The extension shall be modified as needed to meet requirements as indicated for Audible pedestrian push buttons. This may include additional mounting hardware for signs, tactile arrows, and any other items or equipment identified in the “Audible Pedestrian Push buttons and Signing" job special provision included in this contract.

3.0 Method of Measurement. Final measurement of push button with extensions will be made per each. This shall include extensions of up to 14 inches, pulling cable, mounting hardware, and all miscellaneous appurtenances to construct the push buttons extensions at locations shown on the plans.

4.0 Basis of Payment. Payment for furnishing all labor, equipment, materials, labor, and tools necessary to place push button extensions shall be completely covered by the contract unit price for:

Pay Item Number	Type / Description	Unit
902-99.02	Push Button Extension	Each

V. Remote Push Button Post

1.0 Description. This work shall consist of installing push button posts at the locations shown on the plans.

2.0 Requirements. Posts shaft be 48-inch long 4-inch diameter (4.5-inch O.D) schedule 40 aluminum pipe.

3.0 Construction Requirements. The post shall be installed on top of a breakaway pedestal base mounted to a foundation in the sidewalk. The sidewalk foundation shall be constructed as part of the sidewalk and have an 18-inch diameter and 12-inch depth. The breakaway pedestal base shall be mounted to the sidewalk foundation using proper sized anchor bolts according to manufacturer's instructions.

A slip form connection shall be provided on the wiring in the breakaway pedestal base to sever the connection in the event that the push button post is struck by a vehicle. Access to wiring shall be provided through an access panel in the breakaway pedestal base as well as the pipe post cap. The cap shall be secured and weather proofed when it is not opened for access.

The final product shall meet or exceed Americans with Disabilities Act (ADA) requirements for pedestrian facilities.

4.0 Method of Measurement. Final measurement of remote push button posts will be made per each. This shall include the dome cap, post, breakaway base, anchor rods, concrete forming tube, concrete, removal of existing concrete medians, median strips or concrete pavement, and all miscellaneous appurtenances to construct the post as shown on the plans.

5.0 Basis of Payment. Payment for furnishing all labor, equipment, materials, labor, and tools necessary to place remote pedestrian push button posts shall be completely covered by the contract unit price for:

Pay Item Number	Type / Description	Unit
902-99.02	Remote Push Button Post	Each

W. <u>Existing Push Button Cable</u>

1.0 This work includes disconnecting pedestrian push button cabling to existing pedestrian push buttons and pulling said cabling back to the nearest existing pull box to then be reinstalled in new conduit to new remote push button posts.

2.0 Prior to the construction of the new concrete footing required for the installation of the new remote push button posts, the contractor shall field verify that existing push button cabling, specified to be reinstalled, is sufficient in length and condition for reuse. If contractor finds that the existing cabling is sufficient in condition but not length, contractor shall notify engineer to determine if alternate post location is possible to maintain ADA compliance.

2.1 At several locations within the project limits it has been determined that the existing push button cabling will not be sufficient in length to achieve ADA compliance. However, the contractor does have the option to make final field verification at these locations to determine if enough slack is available to potentially reuse the existing cabling at these locations. If the contractor determines existing cabling is sufficient in length and condition for reuse, contractor shall notify engineer to obtain final approval for alternate designs.

2.2 The contractor is advised to take necessary precautions when disconnecting, pull backing and reinstalling any existing cabling to avoid damage to existing cables specified to be reinstalled per contract plans. The contractor is responsible for any damage incurred to any relocated cable.

3.0 Method of Measurement: No measurement shall be made.

4.0 Basis of Payment: No direct payment will be made for reinstalling existing push button cables in existing and new conduit systems or any work to reconnect said cables to new push buttons. All costs associated with this work shall be considered incidental to other pay items provided in the contract.

4.1 Payment for replacement of push button cables required due to existing condition, and not due to damage incurred by contractor, will be paid per linear foot, pay item 902-83.08, "Cable, 16 AWG 2 Conductor", per contract unit price.

4.2 Payment for work specified in 2.1 will be paid per contract unit price of cabling designated to be replaced, at each location where the contractor and engineer determine existing cabling is sufficient in length and condition for reuse. No additional payments or reimbursements will be made for alternate designs.

X. Miscellaneous Construction Requirements

The Contractor shall be required to provide the following project coordination efforts and miscellaneous project requirements for the successful completion of this project:

1. Saw cuts for pavement and sidewalks shall be a minimum of 6 inches.
2. A set number of ADA compliant barricades is included in the pay items. No direct pay will be made for additional ADA compliant barricades due to the contractor's preferred method of construction or acceleration of work.
3. A one (1) inch joint filler shall be placed between all new sidewalk and existing immovable improvements to remain in place such as power poles, fire hydrants, building foundations, pull boxes, manholes, use in place curbs, etc.
4. Extreme care shall be taken when removing sidewalk adjacent to existing building foundations. This may require additional saw cutting, handwork, time, equipment, materials etc. to not damage building foundations. The engineer shall approve the contractor's proposed method to remove sidewalk adjacent to buildings. All foundations damaged due to the contractor's activities will be completely repaired in kind as approved by the engineer.
5. Payment for compliance with the above requirements will be considered completely included in the items provided for in the contract.

Y. Adjusting Drop Inlets, Pull Boxes, and Water Meters

1.0 Description. This work shall consist of adjusting existing drop inlets and pull boxes that are within the new sidewalk, curb ramps, paved approaches, pavements, and project grading limits that are to be constructed or replaced.

2.0 Construction Requirements. Adjustments and/or lowering of drop inlets, pull boxes, water meters or any related excavation and backfill shall be constructed as approved by the Engineer. For City owned facilities, installation requirements shall be completed in accordance with the requirements stated in the City's specifications and standards. For Commission owned

facilities adjustments shall conform to current Missouri Standard Specifications for Highway Construction. Adjustments shall be completed to ensure the finished sidewalks, curb ramps, paved approaches and pavement surfaces will meet current ADA standards.

3.0 Basis of Payment. Payment for all labor, equipment, and material cost necessary for adjusting the height of existing manhole rings and drop inlet lids and pull boxes to be flush with the surface of the sidewalk, ramp, or proposed pavement grade shall be considered completely covered by the contract unit price for Item No. 604-20.20, "Adjusting Basin or Inlet", per each, 614-99.02, "Adjusting Pull Box", per each, and 603-99.02 "Adjusting Water Meter".

3.1 No direct payment will be made for any required cutting or joining of material, adjusting rings, hauling off or furnishing materials, or any other requirements necessary to fulfill this provision.

Z. Plug Pickholes

1.0 Description. This work shall consist of adjusting plugging the manhole pickholes that are within the new sidewalk, curb ramps, paved approaches, pavements, and project grading limits that are to be constructed or replaced.

2.0 Construction Requirements. Pickholes shall be plugged with a sturdy, removable material that complies with ADA requirements, while still allowing the manhole cover to be utilized.

3.0 Basis of Payment. Payment for all labor, equipment, and material cost necessary for plugging the pickholes shall be considered incidental to the work included in the contract, and will have no direct payment.

AA. Type T Inlet BUS 65/ROUTE 76

1.0 Description. The Type T inlet on BUS 65/ROUTE 76 shall be installed in the sidewalk and not at the face of curb. The opening shall face away (180˚) from the curb/roadway and drain the runoff from the existing flume before it flows across the sidewalk. The existing flume shall be reconstructed, as needed, to flow into the inlet opening.

2.0 Basis of Payment. All labor, equipment and materials required to construct the Type T inlet and flume shall be completely covered by Item No. 731-10.53 "Precast Concrete Drop Inlet 5 ft X 3 ft" per linear foot.

BB. Connecting to Existing Drop Inlets BUS 65/Route 76

1.0 Description. Two runs of proposed 12" pipe shall be connected to separate existing downstream drop inlets located on the East side of BUS 65/ROUTE 76.

2.0 Basis of Payment. All labor, equipment and materials required to connect proposed storm pipes to existing drop inlets shall be completely covered by Item No. 731-99.02 "Connect to Existing Drop Inlet" per each.

CC. Detectable Warning (Truncated Dome)

1.0 Description. Truncated domes, inside the city limits of the City of Branson, shall meet the City's technical specifications.

2.0 Construction Requirements. Truncated domes and all related installed surfaces to be installed according to manufacturer's specifications. All detectable warning surface installations shall be at minimum, at least as nonskid as the surrounding pedestrian surfaces.

2.1 Truncated dome material specifications:

A. Chemical Resistance -- Seven (7) day immersion test: Motor oil - no effect. Transmission fluid - no effect. Diesel fuel - no effect. Anti-freeze - no effect. Gasoline - no effect. Road salts - no effect.

B. Skid Resistance – Minimum 45 (ASTM E303) in units (British pendulum).

C. Reflectivity – 200 millicandella minimum initial reading.

D. Composition – Comprised of resins, reactive monomers, pigments, glass beads, and fillers. Exact composition is as the manufacturer's discretion. The material must be resistant to ultra-violet light. City of Branson 2200-6 Section 2200 Standard Sidewalks and Driveways January 2024.

E. Substrate Requirements:

1. Asphalt: Asphalt surfaces shall be composed of oil based bitumen. Asphalt must cure a minimum of 20 days prior to truncated dome installation to insure proper bonding of all surfaces. Any asphalt areas requiring detectable warning installations shall be compacted with vibratory rollers or approved compaction equipment to provide maximum compaction of asphalt allowing the greatest adhesion.
2. Seal Coat: Truncated dome products shall not be placed on asphalt or coal tar sealers. If surface has been sealed, grind entire area to be installed to remove all sealers.
3. Concrete: Minimum compressive strength 3000 PSI. Concrete must cure for 15 days prior to truncated dome installation to insure proper bonding. All concrete coloring/additives shall be integral, not surface applied. All "surface curing" compounds or sealers shall be removed by method of grinding on any concrete that is less than six (6) months old before truncated dome products are installed. Surface finish should be medium broom finish for maximum adhesion.
4. Surfaces: All surfaces to be clean and dry.
5. Temperatures: Surface temperatures should not exceed 88 degrees Fahrenheit, or be below 35 degrees Fahrenheit.

F. Detectable warning surfaces must be "black" in color unless otherwise approved by the director of public works/ engineering.

2.2 Contact information for the truncated domes specifications:

City of Branson
Mike Woods – Public Works/Engineering Director
Phone: 417-337-8566
Email: mwoods@bransonmo.gov

3.0 Basis of Payment. All labor, equipment and materials required to install Detectable Warnings (Truncated Domes) shall be completely covered by Item No. 608-10.12 “Truncated Domes” per square foot.