Job No.: J6P3510D
Route: MO 100
County: St. Louis

JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

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

Job No.: J6P3510C
Route: Various
County: Various

	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636
	Engineering Design Source, Inc. 16305 Swingley Ridge Road, #500 Chesterfield, MO 63017 Certificate of Authority: #001523 Consultant Phone: 636-537-5585
	If a seal is present on this sheet, JSP's have been electronically sealed and dated.
	JOB NUMBER:J6P3510C ST. LOUIS COUNTY AND ST. CHARLES COUNTY, MO DATE PREPARED::09/09/2025
	ADDENDUM DATE:

Job No.: J6P3510D
Route: MO 100
County: St. Louis

JOB
SPECIAL PROVISION

A. General - Federal JSP-09-02L

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 2025 Missouri Standard Plans
For Highway Construction

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

B. Contract Liquidated Damages JSP- 13-01D

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

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

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

Notice to Proceed: May 18, 2026
Contract Completion Date: December 1, 2027

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

Project	Calendar Days	Daily Road User Cost
J6P3510D	**329**	**$5,400.00**

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 **$1,500.00** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the specified contract completion date or calendar days.

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

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

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

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

subject to unannounced inspections by the engineer and other departmental staff to corroborate the validity of the WZS's review and may require immediate corrective measures and/or additional work zone monitoring.

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

2.0 Traffic Management Schedule.

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

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

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

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

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

2.5.1 Traffic Safety.

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

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

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

2.7 Traffic Management Center (TMC) Coordination. The Work Zone Specialist (WZS) or their designee shall contact by phone the MoDOT Traffic Management Center (KC Scout TMC at #816-347-2250 or Gateway Guide TMC at #314-275-1513) within five minutes of a lane or ramp closure beginning and within five minutes of a lane or ramp closure being removed. The WZS shall make this phone call 24 hours a day, 365 days of the year since the MoDOT Traffic Management Centers are always staffed.

3.0 Work Hour Restrictions.

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

Memorial Day
Labor Day
Thanksgiving
Christmas
New Year's Day

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

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

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

3.3 Any work requiring a reduction in the number of through lanes of traffic shall not be performed between 6:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m.

3.3.1 Specific working hours for each corridor segment are as follows:

MO 30
- Between Valcour-Laclede Station:
  - 6AM-3PM
- Between Laclede Station-Sappington
  - 8:30AM-3PM

MO 340 (all three segments)
- 8:30AM-3PM

Route K (St. Charles)
- 9AM-3PM

Route DD (St. Charles)
- 8:30AM-3PM

3.4 The contractor shall not alter the start time, ending time, or a reduction in the number of through lanes of traffic or ramp closures without advance notification and approval by the engineer. The only work zone operation approved to begin 30 minutes prior to a reduction in through traffic lanes or ramp closures is the installation of traffic control signs. Should lane closures be placed or remain in place, prior to the approved starting time or after the approved ending time, the Commission, the traveling public, and state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delays, with a resulting cost to the traveling public. These damages are not easily computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of **$1,000 per 10 minute increment** for each 15 minutes that the temporary lane closures are in place and not open to traffic in excess of the limitation as specified elsewhere in this special provision. It shall be the responsibility of the engineer to determine the quantity of unapproved closure time.

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

4.0 Detours and Lane Closures.

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

4.2 During day time operations at least two lanes of traffic in each direction shall be maintained. During nighttime operations one lane of traffic in each direction shall be maintained at all times, unless a rolling closure has been approved by the engineer. This provision shall apply 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. Coordination with Other Projects in the Vicinity

1.0 Description. The contractor shall be aware that other contracts may be administered in the vicinity and timeframe as this project.

2.0 Construction Requirements. The contractor shall coordinate work to prevent interference with or hinder the project or completion of work being done by the other contractors. The contractor shall also coordinate work to minimize impacts to the traveling public.

3.0 Basis of Payment. No direct payment or additional time 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.

E. Emergency Provisions and Incident Management JSP-90-11A

1.0 The contractor shall have communication equipment on the construction site or immediate

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

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

Wentzville Fire District
8210 Orf Rd
Lake St. Louis, Missouri 63367
(636)-332-9869

O'Fallon Police Department
1019 Bryan Rd
O'Fallon, Missouri 63366
(636)-240-3200

Progress West Hospital
2 Progress Point Pkwy
O'Fallon, Missouri 63368
(636)-344-1000

O'Fallon Fire District
600 Laura Hill Rd
O'Fallon, Missouri 63366
(636)-272-3493

O'Fallon Police Department
1019 Bryan Rd
O'Fallon, Missouri 63366
(636)-240-3200

Progress West Hospital
2 Progress Point Pkwy
O'Fallon, Missouri 63368
(636)-344-1000

SSM Health St. Joseph Hospital – Lake Saint Louis
100 Medical Plaza
Lake St. Louis, Missouri 63367
(636)-625-5200

Metro West Fire District
16060 Clayton Rd
Ellisville, Missouri 63011

(636)-779-5000

Monarch Fire District
15700 Baxter Rd
Chesterfield, Missouri 63017
(314)-514-0900

Ellisville Police Department
37 Weis Ave
Ellisville, Missouri 63011
(636)-227-7777

Mercy Hospital
15945 Clayton Rd #230c
Ballwin, Missouri 63011
(314)-251-6000

Metro West Fire District
14835 Manchester Rd
Ballwin, Missouri 63011
(314)-779-5000

Ellisville Police Department
37 Weis Ave
Ellisville, Missouri 63011
(636)-227-7777

Ballwin Police Department
302 Kehrs Mill Rd
Ballwin, Missouri 63011
(636)-227-9636

Mercy Hospital
15945 Clayton Rd #230c
Ballwin, Missouri 63011
(314)-251-6000

Creve Coeur Fire District
11720 Olive Blvd
St. Louis, Missouri 63141
(314)-432-0403

Creve Coeur Police Department
350 N New Ballas Rd
Creve Coeur, Missouri 63141
(636)-432-8000

Barnes-Jewish West County Hospital
12634 Olive Blvd

St. Louis, Missouri 63141
(314)-996-8000

Mercy Hospital St. Louis
615 S New Ballas Rd
St. Louis, Missouri 63141
(314)-251-6000

Missouri Baptist Medical Center
3015 N Ballas Rd
St. Louis, Missouri 63131
(314)-996-5000

University City Fire District
1045 North and South Rd
University City, Missouri 63130
(314)-505-8769

University City Fire District
863 Westgate Ave
University City, Missouri 63130
(314)-505-8591

University City Police Department
601 Trinity Ave
University City, Missouri 63130
(314)-725-2211

SSM Health St. Mary's Hospital – St. Louis
6420 Clayton Rd
Richmond Heights, Missouri 63117
(314)-768-8000

Barnes-Jewish Hospital
One Barnes Jewish Hospital Plaza
St. Louis, Missouri 63110
(314)-747-3000

Fenton Fire District
845 Gregory Ln
Fenton, Missouri 63026
(636)-343-4188

Mehlville Fire District
4811 S Lindbergh Blvd
Sappington, Missouri 63126
(314)-505-8769

Crestwood Fire District

1 Detjen Dr
Sappington, Missouri 63126
(314)-729-4742

Fenton Police Department
625 New Smizer Mill Rd
Fenton, Missouri 63026
(636)-349-8120

Sunset Hills Police Department
3905 S Lindbergh Blvd
St. Louis, Missouri 63127
(314)-849-4400

St. Louis County Police Department
7900 Forsyth Blvd
Clayton, Missouri 63105
(636)-529-8210

SSM Health St. Clare Hospital - Fenton
1015 Bowles Ave
Fenton, Missouri 63026
(636)-496-2000

Mercy Hospital South
10010 Kennerly Rd
St. Louis, Missouri 63128
(314)-525-1000

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.

F. Project Contact for Contractor/Bidder Questions JSP-96-05

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

Anastasia Smith, P.E.
Project Manager
MoDOT – St. Louis District
1590 Woodlake Drive
Chesterfield, MO 63017

Telephone Number: (314) 453-5084
Email: anastasia.smth@modot.mo.gov

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

G. Supplemental Revisions JSP-18-01KK

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

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

- Stormwater Compliance Requirements

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

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

1.2 Reporting of Off-Site Land Disturbance. If the project includes any planned land disturbance on the project site, prior to the start of work, the contractor shall submit a written

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

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

2.1 Duties of the WPCM:

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

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

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

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

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

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

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

compliance with the Stormwater requirements that could arise in the course of construction activity at the project.

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

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

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

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

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

- ***Delete Sec 106.9 in its entirety and substitute the following:***

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

106.9.1 Buy America Requirements for Iron or Steel Products.
The contractor's attention is directed to Title 23 CFR 635.410 *Buy America Requirements*. Where articles, materials or supplies that consist wholly or predominantly of iron or steel or a combination of both 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. Predominantly of iron or steel or a combination of both means that the cost of the iron and steel content exceeds 50 percent of the total cost of all its components. Under a general waiver from FHWA the use of pig iron and processed, pelletized, and reduced iron ore manufactured outside of the USA will be permitted in the domestic manufacturing process for steel or iron material.

106.9.1.1 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.

106.9.1.2 "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.

106.9.1.3 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.

106.9.1.3.1 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 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.

106.9.1.3.2 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.

106.9.1.3.3 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.

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

106.9.2 Buy America Requirements for Construction Materials other than iron or steel products.
Construction materials mean 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

106.9.3 Buy America Requirements for Manufactured Products.
Manufactured products mean articles, materials or supplies that have been processed into a specific form and shape, or combined with other articles, materials or supplies to create a product with different properties than the individual articles, materials or supplies. If an item is classified as an iron or steel product, an excluded material, or other product category as specified by law or in 2 CFR part 184, then it is not a manufactured product. However, an article, material or supply classified as a manufactured product may include components that are iron or steel products, excluded materials, or other product categories as specified by law or in 2 CFR part 184. Mixtures of excluded materials delivered to a work site without final form for incorporation into a project are not a manufactured product.

106.9.3.1 Produced in the United States, in the case of manufactured products, means:
(A) For projects obligated on or after October 1, 2025, the product was manufactured in the United States; and
(B) For projects obligated on or after October 1, 2026, the product was manufactured in the United States and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product.

106.9.3.2 (i) With respect to precast concrete products that are classified as manufactured products, components of precast concrete products that consist wholly or predominantly of iron or steel or a combination of both shall meet the requirements of paragraph (b) of this section. The cost of such components shall be included in the applicable calculation for purposes of determining whether the precast concrete product is produced in the United States.
(ii) With respect to intelligent transportation systems and other electronic hardware systems that are installed in the highway right of way or other real property and classified as manufactured products, the cabinets or other enclosures of such systems that consist wholly or predominantly of iron or steel or a combination of both shall meet the requirements of paragraph (b) of this section. The cost of cabinets or other enclosures shall be included in the applicable calculation for purposes of determining whether systems referred to in the preceding sentence are produced in the United States.

106.9.4 Waiver for De Minimis Costs for Manufactured and Construction Materials other than iron or steel products.
"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.

- Third-Party Test Waiver for Concrete Aggregate

1.0 Description. Third party tests may be allowed for determining the durability factor for concrete pavement and concrete masonry aggregate.

2.0 Material. All aggregate for concrete shall be in accordance with Sec 1005.

2.1 MoDOT personnel shall be present at the time of sampling at the quarry. The aggregate sample shall be placed in an approved tamper-evident container (provided by the quarry) for shipment to the third-party testing facility.

2.2 AASHTO T 161 Method B Resistance of Concrete to Rapid Freezing and Thawing, shall be used to determine the aggregate durability factor. All concrete beams for testing shall be 3-inch wide by 4-inch deep by 16-inch long or 3.5-inch wide by 4.5-inch deep by 16-inch long. All beams for testing shall receive a 35-day wet cure fully immersed in saturated lime water prior to initiating the testing process.

2.3 Concrete test beams shall be made using a MoDOT approved concrete pavement mix design.

3.0 Testing Facility Requirements. All third-party test facilities shall meet the requirements outlined in this provision.

3.1 The testing facility shall be AASHTO accredited.

3.1.1 For tests ran after January 1, 2025, accreditation documentation shall be on file with the Construction and Materials Division prior to any tests being performed.

3.1.2 Construction and Materials Division may consider tests completed prior to January 1, 2025, to be acceptable if all sections of this provision are met, with the exception of 3.1.1. Accreditation documentation shall be provided with the test results for tests completed prior to January 1, 2025. No tests completed prior to September 1, 2024, will be accepted.

3.2 The testing facility shall provide their testing process, list of equipment, equipment calibration documentation, and testing certifications or qualifications of technicians performing the AASHTO T 161 Procedure B tests. The testing facility shall provide details on their freezing and thawing apparatus including the time and temperature profile of their freeze-thaw chamber. The profile shall include the temperature set points throughout the entirety of the freeze-thaw cycle. The profile shall show the cycle time at which the apparatus drains/fills with water and the cycle time at which the apparatus begins cooling the specimens.

3.3 Results, no more than five years old, from the third-party test facility shall compare within ±2.0 percent of an independent test from another AASHTO accredited test facility or with MoDOT test records, in order to be approved for use (e.g. test facility results in a durability factor of 79, MoDOT's recent durability test factor is 81; this compared within +2 percent). The independent testing facility shall be in accordance with this provision. The comparison test can be from a different sample of the same ledge combination.

3.4 When there is a dispute between the third party durability test results and MoDOT durability test results, the MoDOT durability test result shall govern.

3.5 Test results shall be submitted to MoDOT's Construction and Materials division electronically for final approval. Test results shall include raw data for all measurements of relative dynamic modulus of elasticity and percent length change for each individual concrete specimen. Raw data shall include initial measurements made at zero cycles and every subsequent measurement of concrete specimens. Raw data shall include the cycle count and date each measurement was taken. Test results shall also include properties of the concrete mixture as required by AASHTO T 161. This shall include the gradation of the coarse aggregate sample. If AASHTO T 152 is used to measure fresh air content, then the aggregate correction factor for the mix determined in accordance with AASHTO T 152 shall also be included.

4.0 Method of Measurement. There is no method of measurement for this provision. The testing requirements and number of specimens shall be in accordance with AASHTO T 161 Procedure B.

5.0 Basis of Payment. No direct payment will be made to the contractor or quarry to recover the cost of aggregate samples, sample shipments, testing equipment, labor to prepare samples or test samples, or developing the durability report.

- ***Delete paragraph 15.0 of the General Provision Disadvantaged Business Enterprise (DBE) Program Requirements and substitute the following*:**

15.0 Bidder's List Quote Summary. MoDOT is a recipient of federal funds and is required by 49 CFR 26.11 to provide data about its DBE program. All bidders who seek to work on federally assisted contracts must submit data about all DBE and non-DBEs in accordance with Sec 102.7.9. MoDOT will not compare the submitted Bidder's List Quote Summary to any other documents or submittals, pre or post award. All information will be used by MoDOT in accordance with 49 CFR 26.11 for reporting to USDOT and to aid in overall DBE goal setting.

- ***Add Sec 102.7.9 to include the following:***

102.7.9 Bidder's List Quote Summary. Each bidder shall submit with each bid a summary of all subcontractors, material suppliers, and service providers (e.g. hauling) considered on federally funded projects pursuant to 49 CFR 26.11. The bidder will provide the firm's name, the corresponding North American Industry Classification System (NAICS) code(s) the firm(s) were considered for, and whether or not they were used in the bid. The information submitted should be the most complete information available at the time of bid. The information shall be disclosed on the Bidder's List Quote Summary form provided in the bidding documents and submitted in accordance with Sec 102.10. Failure to disclose this information may result in a bid being declared irregular.

H. Utilities JSP-93-26F

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

Utility Name	**Known Required Adjustment**	**Type**
Ameren Missouri Ken Lake Telephone: 314.285.7293 Email: klake@ameren.com	No	Electric

Charter Communications(Spectrum) Victor Evans Telephone: 314.713.5541 Email: victor.evans@charter.com	Yes	Communications
AT&T Distribution Kevin Hesemann Telephone: 636.541.5779 Email: KH2017@att.com	No	Communications
I3 Broadband Jon Gibson Telephone: 309.670.0400 engineering@i3broadband.net	No	Communications
Lumen Rich Obremski Telephone: 314.378.9931 Email: Richard.Obremski@lumen.com	No	Communications
MoDOT St. Louis District Telephone: 314.275.1500	Yes	E,FO,SL,TS
MCI/Verizon Domenic Nicastro Telephone: 636.459.1600 Email: domenic.nicastro@verizon.com	No	Communications
Everstream Robert Sewell Telephone: 314.546.7927 Email: rsewell@everstream.net	No	Communication
Missouri American Water Company Dave Pruitt Telephone:314.996.2396 Email: dave.pruitt@amwater.com	Yes	Water
Metropolitan Sewer District Jason Welker Telephone: 636.861.6722 Email: jawelk@stlmsd.com	No	Sewer

Spire Energy Brian Langenbacher Telephone: 314.768.7767 Email:brian.langenbacher@spireenergy.com	Yes	Gas

1.1 The Contractor shall be aware there are numerous utilities present along the routes in this contract. Utility locates were not performed during the design phase of the project; therefore, the extent of buried conflicts with utilities are unknown. While no utility conflicts are anticipated, it is the inherent risk of the work under this contract that the contractor may encounter these utilities above and/or below the ground or in the vicinity of any given work item which may interfere with their operations. The contractor expressly acknowledges and assumes this risk even though the nature and extent are unknown to both the contractor and the Commission at the time of bidding and award of the contract.

2.0 If utility facilities are discovered the contractor shall contact the MoDOT Area Utility Coordinator, Ron Leible (CMT) at (314) 744-1662, rleible@cmtengr.com. The engineer will determine whether relocation of the utility is necessary to accommodate construction or if the work can be installed in accordance with Missouri Standard Plans for Highway Construction for the item of work specified. The Contractor shall be aware there are numerous utilities present along the routes in this contract. The locations listed below are not to be considered all inclusive.

3.0 Ameren's existing facilities within the project limits:

Ameren has existing aerial facilities along the entire project limits. Ameren has relocated poles along Route 100.

4.0 AT&T-d existing facilities within the project limits:

AT&T-d has existing buried copper and fiber along the entire project limits and also some aerial facilities on Ameren's poles.

AT&T-d completed the aerial transfers on Ameren's relocated poles.

AT&T-d may need adjust manhole grades as necessary. AT&T-d requested two weeks notice of any manholes or hand holes that need to be adjusted.

5.0 Charter has existing facilities within the project limits:

Charter facilities advised they plan to complete their aerial transfer work by May 1, 2026.

6.0 MCI, Lumen, I3 Broadband and Everstream have facilities in the project limits but no conflicts are anticipated with the planned improvements.

7.0 Missouri American Water has existing facilities within the project limits. Adjustments to valves are included in the road contract.

8.0 MoDOT St. Louis District existing facilities within the project limits:
Facilities include pull box adjustments and/or replacements. This work shall be included in the contract.

9.0 Spire has existing facilities within the project limits and some gas valves may need to be adjusted. Spire requested 5 working days notice to be on site to adjust any valves.

10.0 Metropolitan Sewer District existing facilities within the project limits, no conflicts are anticipated with the planned improvements.

I. Pot Holing Utility Facilities

1.0 Description. The contractor is advised the Utility Companies in the project limits will not "pot hole" their underground utilities facilities for the contractor on this project. The contractor shall be responsible to "pot hole" any existing utilities under the pavement or outside the pavement for all the contractor's needs to construct work associated with the project. Core drilling pavement prior to pot holing may be necessary.

2.0 Basis of Payment. All labor, equipment, materials and restoration necessary to pot hole buried utilities shall be paid for under:

Item Number	Unit	Description
902-99.02	Each	Pot Holing Utility Facilities

J. Adjust to Grade Items

1.0 Description. This work shall consist of adjusting water valves, water meters, basins/inlets, manholes, lighting pull boxes, and signal pull boxes that are within areas where either new sidewalks, curb ramps, approaches or pavements are to be constructed as shown on the plans. The contractor shall verify the type of frame and cover in the field before performing the work. The adjustments shall be made to match the final proposed grade. Various pull boxes are called out to be relocated and adjusted to grade. The relocation of these pull boxes is included in the adjust to grade pay item.

1.1 Contractor shall, where indicated on plans, remove existing concrete MoDOT pull boxes and replace with new Class 1 Pull Box and adjust to grade as necessary.

1.2 Contractor shall replace concrete apron around pull boxes in kind as necessary.

1.3 Contractor shall, where indicated on plans, adjust existing drainage structures as necessary to meet proposed finished grade. This work shall include the removal of any necessary concrete/asphalt and reinforcing steel. This work shall include forming new concrete and installing reinforcing steel as needed to adjust the new drainage structure to grade.

2.0 Construction Requirements. Adjusting manholes and adjusting basins or inlets shall be done in accordance with Sec 604 except as modified herein.

2.1 Adjustments, extensions, and/or lowering of utility and any related excavation and backfill shall be constructed as approved by the Engineer. For MoDOT-owned facilities, adjustments shall conform to current Missouri Standard Specifications for Highway Construction. For MSD owned facilities, adjustments shall conform to current MSD Standards and Specifications. Adjustments for inlets require the top lid slopes to be adjusted to less than 2% slope in all directions and some of these inlets need to be raised to the final sidewalk grade. These are called out in the plans as "adjust inlet top". Adjustments shall be completed so that the finished sidewalk, ramp, approach, or pavement meets current ADA standards.

2.2 Contractor responsible for adjusting water valves to grade. Contractor shall coordinate with Missouri American Water for Water Meter Adjustments.

3.0 Basis of Payment.

3.1 All costs for materials, equipment, labor and installation shall be included in the cost for adjusting the water valves, water meters, basins/inlets, manholes, and pull boxes.

Item Number	Unit	Description
603-99.02	Each	Water (Adjust Water Valve to Grade)
603-99.02	Each	Water (Adjust Meter to Grade)
902-99.02	Each	MISC (Remove and Replace Conc. Pull Box w/ Preformed Class 1 Pull box)
902-99.02	Each	MISC (Adjust Pull Box to Grade)
604-20.10	Each	Adjusting Manhole
604-20.20	Each	Adjusting Basin or Inlet

K. Lump Sum Temporary Traffic Control

1.0 Description. This work consists of installing, relocating, and maintaining all necessary traffic control devices, providing flaggers, as indicated within the construction plans, and as directed by the Engineer. This work shall be in accordance with Section 616 along with the following provisions which shall govern.

616.11.1 Lump Sum Temporary Traffic Control. No measurement will be made for temporary traffic control items grouped and designated to be paid per lump sum. The list of lump sum items provided in the plans or contract is considered an approximation and may be subject to change based on field conditions. This is not a complete list and may exclude quantities for duplicate work zone packages used in simultaneous operations. The contractor shall provide all traffic control devices required to execute the provided traffic control plans for each applicable operation, stage, or phase. No measurement will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer.

2.0 Delete Sec 616.12 and insert the following:

616.12 Basis of Payment. All temporary traffic control devices authorized for installation by the engineer will be paid for at the contract lump sum, no direct payment will be made for the following:

(a) Incidental items necessary to complete the work, unless specifically provided as a pay item in the contract.

(b) Installing, operating, maintaining, cleaning, repairing, removing, or replacing traffic control devices.

(c) Covering and uncovering existing signs and other traffic control devices.

(d) Relocating temporary traffic control devices, including permanent traffic control devices temporarily relocated, unless specifically included as a pay item in the contract.

(e) Worker apparel.

(f) Flaggers, AFADs, PFDs, pilot vehicles, and appurtenances at flagging stations.

(g) Furnishing, installing, operating, maintaining, and removing construction-related vehicle and equipment lighting.

(h) Construction and removal of temporary equipment crossovers, including restoring pre-existing crossovers.

(i) Provide and maintaining work zone lighting and work area lighting.

616.12.1 Lump Sum Temporary Traffic Control. Traffic control items grouped together in the contract or plans for lump sum payment shall be paid incrementally per Sec 616.12.1.1. Alternately, upon request from the contractor, the engineer will consider a modified payment schedule that more accurately reflects completion of traffic control work. No payment will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer. Additional items directed by the engineer will be paid for in accordance with Sec 109.4. No adjustment to the price will be made for overruns or underruns of other work or for added work that is completed within existing work zones.

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

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

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

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

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

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

Item Number	Unit	Description
616-99.01	Lump Sum	MISC (Traffic Control)

L. ADA Compliant Moveable Barricades

1.0 Description. This work shall consist of providing moveable barricades to satisfy the requirements of the pedestrian traffic control plans as shown in the bidding documents. The contractor will be responsible for moving the pedestrian barricades to coincide with their planned order of work.

2.0 Construction Requirements. The contractor shall use a movable barricade that meets the requirements as established by the ADA. The pedestrian barricades shall be of self-supporting type having a minimum length of 6 feet per unit. The face of the barricade shall not extend into adjacent sidewalk considered open for pedestrian use. The contractor will be responsible for setting and maintaining the pedestrian barricades until all of the proposed improvements have been constructed.

3.0 Method of Measurement. No direct measurement will be made for pedestrian moveable barricades.

4.0 Basis of Payment. Payment for all work necessary to fulfill the requirements noted above shall be considered completely covered in the contract unit price for Temporary traffic control will be paid for at the contract lump sum price for Item:

Item Number	Unit	Description
616-99.01	LS	MISC (Traffic Control)

4.1 Basis of Payment. No direct payment will be made for any necessary relocation of the ADA compliant barricade.

M. Pavement Marking Removals

1.0 Description. Pavement Marking Removal shall be in accordance with Section 620.50 and specifically as follows.

2.0 Construction Requirements. Removal of all pavement marking within the project limits that conflict with the new pavement markings designated on the plans. Pavement marking shall be completely removed to the satisfaction of the engineer with minimal damage to the pavement.

The contractor shall use an approved **water blasting method** to remove the pavement marking on concrete surfaces. No more than five percent of the existing marking shall remain. The pavement surface shall not be left scarred with an image that might mislead traffic. Any excess damage or scarring of the pavement shall be repaired at the contractor's expense. It shall be the contractor's responsibility to determine what type of material needs to be removed.

3.0 Method of Measurement. Final measurement will be made to update the contract quantity as needed for approved field modifications. The revision or correction will be computed and added to or deducted from the contract quantity.

4.0 Basis of Payment. The accepted quantity of pavement marking removal including all labor, equipment, and material necessary to remove the existing marking will be paid for at the contract unit price for the following pay item:

Item Number	Unit	Description
620-70.01	LF	Pavement Marking Removal

N. Concrete Washout

1.0 Description. Concrete washout BMPs shall be established in designated areas for this project if concrete production or delivery is occurring. Washout BMPs can be non-leaking plastic or clay/bentonite lined pits, a straw bale enclosure lined with plastic, a storage tank or prefabricated BMP or other structure approved by the engineer or inspector. Designated washout areas should be located at least 50 feet away from storm drains, ditches, streams, or other water bodies. Washouts should be monitored like other BMPs to ensure there are no leaks and that they are operating effectively. They should be cleaned out when they reach 75% of their design capacity. Care should be taken to ensure these structures do not overflow during storm events. Upon completion of concrete washout on the project, the engineer or inspector should ensure proper disposal of washout materials. Washout liquids can be allowed to evaporate or be pumped out and properly disposed of. They cannot be discharged into storm drains, ditches, streams or other bodies of water. Dried concrete can be broken up and used as clean fill on the project, recycled or properly disposed of by other means.

2.0 Basis of Payment. No direct payment will be made to the contractor for installing, maintaining, and removing concrete washout facilities or for properly disposing of materials. The cost of complying with this requirement shall be completely covered in the contract unit price of the concrete pay items included in the contract.

O. Damage to Existing Pavement, Shoulders, Side Roads, and Entrances

1.0 Description. This work shall consist of repairing any damage to existing pavement, shoulders, side roads, and entrances caused by contractor operations. This shall include, but not be limited to, damage caused by the traffic during contractor operations within the project limits including the work zone signing.

2.0 Construction Requirements. Any cracking, gouging, or other damage to the existing pavement, shoulders, side roads, or entrances resulting 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 areas shall be as approved by the engineer.

3.0 Method of Measurement. No measurement of damaged pavement, shoulders or side roads, or entrances as described above shall be made.

4.0 Basis of Payment. No payment will be made for repairs to existing pavement, shoulders, side roads or entrances damaged by contractor operation.

P. Contractor Quality Control NJSP-15-42

1.0 Description. 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.

Q. 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: Public Rights of Way Accessibility Guidelines (PROWAG) dated August 8, 2023, 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.

R. Conduit

1.0 Description. This work shall consist of installing new conduit into an existing pull box or installing a new pull box into an existing conduit.

2.0 Intercept Existing Conduit with Proposed Pull Box.

2.1 Determine whether the conduit is occupied. If so, disconnect the cables at one end of the cables and pull them back so that they are not damaged when the conduit is cut. Alternatively, they can be removed entirely and replaced with new, identical cables. Notify the engineer if any of the cables appear to be in poor condition.

2.2 Excavate a pit big enough for the pull box and drain material, with at least an additional foot on each side with conduit.

2.3 Install the drain material. From the top of the drain material, measure the vertical distance to the bottom the conduit at the points corresponding to the walls of the box.

2.4 If the conduit is PVC or metal, cut it in two places such that the distance between the cuts is longer than the box. Be sure the ends are cut squarely. If the conduit is HDPE, cut it in the center of the pit. Ensure that the pit is long enough that the conduit can be bent out of the way when the box is installed, and can be bent enough to insert the conduit through the wall of the box.

2.5 Make a hole in the wall of the box at each point that the conduit will enter. Use the distances measured earlier to determine how far from the box's bottom to make the holes.

2.6 Set the pull box in the pit with the holes aligned with the conduits.

2.7 Pass the conduits through the wall of the box so that they end about one inch inside the wall. For PVC conduit, extend the existing conduit using a short length of new PVC conduit that includes a socket end. For metal conduit, thread the existing conduit, apply a threaded coupling, and add a short length of new conduit. For HDPE, bend the existing conduit to pass through the box wall, then cut it to length inside the box.

2.8 Use non-shrink grout to completely fill the space between the conduit and box wall.

2.9 Backfill the pit and restore the area as with any pull box installation.

2.10 Reinstall, reconnect, and test the cables that were pulled back at the beginning of the procedure. Alternatively, replace them in kind and test them.

3.0 Install Conduit into Existing Pull Box.

3.1 Carefully expose the outside of the existing pull box without disturbing any existing conduits or cabling.

3.2 Make the appropriate sized hole for the entering conduit at a location within the pull box that will not disturb the existing cabling and that will not hinder the installation of new cabling within the installed conduit.

3.3 Install the conduit.

3.4 Fill any void area between the drilled hole and the conduit with an engineer-approved filling material to protect against conduit movement and the entry of fill material.

3.5 Backfill shall be carefully tamped in place. All disturbed areas shall be restored.

4.0 Basis of Payment.

4.1 No direct payment will be made to provide conformance to the specifications in this section. Payment is to be included as part of the respective pull box installation and conduit installation.

S. Conduit Splicing

1.0 Description. At locations noted on the plans, trenched conduit shall be spliced to existing conduit.

2.0 Requirements. At locations where connection of the new trenched conduit to existing conduit is shown, a watertight connection shall be made using a mechanical coupler. The coupler shall be designed by the manufacturer to join conduits of the type and size to be joined. The splicing device shall be approved by the engineer.

3.0. Construction Requirements. Construction requirements shall conform to Sec 902.16.

4.0 Basis of Payment. No direct payment will be made to provide conformance to this section. Payment is to be included as part of the respective conduit pay item.

T. Removal and Delivery of Existing Signs JSP-12-01C

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

2.0 Disassembly and Delivery.

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

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

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

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

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

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

Item Number	Unit	Description
202-20.10	Lump Sum	Removal of Improvements

U. Remove and Relocate Existing Ground Mounted Sign

1.0 Description. Existing traffic signs that are designated to be moved shall be reused at the new location. The when applicable, posts shall be driven anchor installations, for pipe post new concrete foundations shall be installed with a break-away assembly. The installation shall be performed the same day as the removal or temporary signs utilized in the interim. The Contractor shall install the signs in a straight and neat condition.

2.0 Basis of Payment. All costs associated with removing, disassembling, transporting, break-away assemblies, concrete footings, and reinstallation and assembly shall be considered as completely covered by the contract unit price for Item No. 903-99.02, “Remove and Relocate Existing Ground Mounted Sign, per each”.

Item Number	Unit	Description
903-99.02	Each	MISC (Remove and Relocate Existing Ground Mounted Sign)

V. Disposal of Existing MoDOT Assets

1.0 Existing assets shall be removed and delivered to a designated MoDOT facility as described herein. Existing assets, including signal cabinet assemblies and ITS facilities shall be removed by the contractor, tagged with the time and date of removal and intersection name, and transported to the Missouri Department of Transportation's maintenance lot located at 2309a Barrett Station Road, Ballwin, Missouri 63021 within 48 hours. The contractor shall notify the following MoDOT signal shop Supervisors 24 hours prior to each delivery:

Ron Mize, Cell 314-565-6727, Office 314-205-7320

Dennis Hixson, Cell 314-565-6726, Office 314-205-7319.

All other existing signal and lighting equipment to be removed as shown on plans or as directed by Engineer shall be removed and disposed of by the contractor.

2.0 The contractor shall exercise reasonable care in the handling of existing assets and the signal cabinet assemblies during removal and transportation. Should any of the equipment be damaged by the contractor's negligence, it shall be replaced at the contractor's expense. All other equipment removed from the intersections shall become the property of the contractor and be removed from MoDOT right-of-way.

3.0 The contractor shall restore those areas disturbed by the equipment removal or installation according to specifications herein. This work will be considered included in the unit contract price for Removal of Improvements.

W. ADA Curb Ramps

1.0 Description. This work shall consist of constructing new concrete curb ramps that are compliant with current Americans with Disabilities Act (ADA) and MoDOT guidelines at locations shown on the plans and as directed by the engineer.

1.1 The contractor shall ensure that the persons establishing the grades of the ADA facilities have a copy of ADA related provisions at hand for reference. If it is found that written provisions for ADA facilities are not at hand, the engineer may cause ADA work to be ceased until a copy arrives.

2.0 Construction Requirements. Except as noted herein, all applicable provisions in Sec 608 of the Standard Specifications shall apply to the construction of the curb ramps.

2.1 The following shall be included in the cost of a new ADA ramp:

- Excavation and preparing of the subgrade prior to placement of the aggregate base.
- 4” Type 5 Aggregate Base underneath the new ramp.
- Everything shown in the various figures of ADA ramp curb types on Standard Plan 608.50 shall be poured as 7” concrete. This includes all area of ramp, level landing pads and any flares included in the per each ADA Ramp.
- Variable height curb along the roadway within the limits of the new ADA ramp
- Variable height curb along the backside of the new ADA ramp.
- Concrete median used to separate direction of travel within a dual perpendicular ramp.
- Furnishing and installing any reinforcement needed as shown in the plans for curbs taller than 8”.
- Tinting, and surface texturing, of concrete surface to match existing conditions as required in the plans and in accordance with the requirements of JSP for Concrete Sidewalk, 4 IN – Decorative Concrete.
- Saw Cuts needed for the removal of the existing concrete area where the new ADA ramp is being constructed.
- Removal of the existing concrete area where the new ADA ramp is being constructed.

2.1.1 Regardless of the number of ramp areas or surfaces having a maximum ramp slope of 1V:12H (8.33%) that are constructed for a particular type of ADA Curb Ramp, the contractor **will not** be paid for additional number of ramps at that location. See special sheet for curb ramp pay limits. Exception: **Dual Perpendicular Ramps and Blended Transitions** will be paid as 2 each.

2.2 The following shall be paid for separately in the cost of a new ADA ramp:

- Truncated Domes

2.2.1 Detectable warning surfaces shall be provided, where a curb ramp, landing, or blended transition connects to a street. Where commercial or private driveways are provided with traffic control devices or otherwise are permitted to operate like public streets, detectable warnings should be provided at the junction between the pedestrian route and the street. See plans for additional details.

2.2.2 The truncated domes shall be yellow in color where the curb ramps are tinted red.

2.2.3 The truncated domes shall come from Materials' Pre-Qualified List FS-1067 Table 1 from the following link:

https://www.modot.org/materials

2.3 Gutter Correction. The contractor shall establish the grade of the flow line of the gutter before establishing the grades of ADA facilities. The gutter line shall be free flowing with no ponding next to the curb. Under-performing gutters shall be replaced with a concrete curb and gutter or a minimum 1.75-inch thick asphalt mill and fill. Running or standing storm water shall not be pushed out into the roadway where it may be splashed on pedestrians by passing vehicles or cause a hydroplaning hazard. An asphalt mill and fill shall be a minimum of 1.75 inches thick and the edges shall be at a smooth milled butt joint. The contractor shall use an approved BP-1 mix for all corner asphalt mill and fill work unless another surface asphalt mix is specified elsewhere in the contract. Asphalt mill and fill is included in the work of ADA Curb Ramps. If asphalt mill and fill is needed at a corner without any other ADA work, it will be found as a separate line item in this contract.

2.4 Design Plans

2.4.1 Recommendations for the design type of each curb ramp to be built on this project are shown on the plans. Curb ramps constructed by the contractor may vary from the original design, with approval from the engineer, in size, shape, and location as necessary to comply with ADA laws. It is the contractor's responsibility to inspect locations in the field before bidding to verify quantities needed to satisfy this provision. No additional pay will be made to the contractor if the original design is adjusted, and a different ramp type is constructed instead of the recommended/suggested in the plans.

2.4.2 ADA provides some exceptions to ramp slope where space limitations exist. The apparent construction limits shown on the plans are not considered a space limitation. The contractor shall not place any ADA exceptions without consulting the Engineer on a case-by-case basis.

2.4.3 Special Sheet. A special sheet shows the pay limits for each standard ADA ramp type used by MoDOT. This special sheet is not intended to replace the Standard Plans, Standard

specifications or MoDOT's ADA checklist but is intended only to provide consistency regarding pay lengths/limits within the St. Louis District.

As shown on this special sheet, 15 feet beyond the landing is considered part of the ADA ramp. Payment for the ramp will be 15 feet beyond the landing and no adjustment in sidewalk length/quantity will be made if this 15-foot ramp length is adjusted by the contractor in the field.

2.4.4 When a project **is only** replacing ADA Curb Ramps at intersections, a warping panel shall be included and considered incidental to the cost of the new ADA Curb Ramp. When a project is also constructing new sidewalk tied into the new ADA Curb Ramp, this warping panel shall be paid for within the sidewalk pay item. A warping panel consists of tying in an ADA compliant cross slope to an existing cross slope.

2.5 Median or Median Island Cut-throughs. If there is an actual ramp with a slope not exceeding 8.33% (1V:12H) that provides access to the **raised portion** of the island or median instead of cutting through a portion of the island or median, then that area of concrete will be paid for separately as an ADA Curb Ramp, per each, as noted below. If the pedestrian path cuts through an island or median, then this area is not considered a ramp and will be paid for with individual items necessary to construct this pedestrian path.

2.6 Prosecution of Work. The contractor shall have all necessary personnel, equipment, and materials at hand for all work at each location before the work begins so that work may proceed without delay.

3.0 Method of Measurement. Final measurement will not be made for each ramp except for authorized changes during construction or where appreciable errors are found in the contract quantity. The revision or correction will be computed and added to or deducted from the contract quantity.

4.0 Basis of Payment. The accepted quantity of ADA compliant curb ramps will be paid at the contract unit price for the following items:

Item Number	Unit	Description
608-10.12	SF	Truncated Domes
608-99.02	Each	MISC (Concrete Curb Ramp)

X. Accessible Pedestrian Pushbutton and Signing

1.0 Description. This work shall consist of furnishing, installing and placing into operation an Accessible Pedestrian Signal (APS) that assist the pedestrian who has visual or physical disabilities in activating the pedestrian phase. The APS shall be installed per the manufacturer's recommendations and specifications. Cable runs shall be continuous and unspliced. Audible pedestrian pushbuttons and signing will be required for all pedestrian indications at all intersections.

2.0 Installation. The APS shall be installed as part of a pushbutton assembly and shall have both audible and vibrotactile walk indications.

2.1 Material. The following systems in the list below are the only systems that are tested, fully functional, and approved for use in the St. Louis District. All necessary equipment for use of the systems below, shall be provided to the Commission for adequate maintenance of the system.

- PedSafety Guardian Mini
- Polara iDS/iNS Accessible Pedestrian Signal (2 wire System)
- Guardian with Bluetooth and Wayfinding Sign

3.0 Equipment.

3.1 Vibrotactile. Vibrotactile walk indications shall be provided by a tactile arrow on the pushbutton that vibrates during the walk interval have high visual contrast (light on dark or dark on light), and shall be aligned parallel to the direction of travel on the associated crosswalk.

3.2 Audible. The APS shall have an audible walk indication during the walk interval only. The audible walk indication shall be audible from the beginning of the associated crosswalk.

3.3 Pushbutton Signage. In addition to standard pedestrian sign requirements, all pushbuttons shall have additional signage to indicate crosswalk direction by use of a tactile arrow and the name of the street containing the crosswalk served by the audible pedestrian signal. The sign shall be located immediately above the push button mechanism and parallel to the crosswalk controlled by the button. The street name shall be the name of the street or reasonable abbreviation whose crosswalk is controlled by the push button. Signage shall comply with ADA Accessibility Guidelines (ADAAG) 703.2 specifications for Braille and raised print.

3.4.1 Arrow. Signs shall include a tactile arrow aligned parallel to the crosswalk direction. The arrow shall be raised 0.8 mm (.03 inch) minimum and shall be 4 mm (1.5 in) minimum in length. The arrowhead shall be open at 45 degrees to the shaft and shall be 33 percent of the length of the shaft. Stroke width shall be 10 percent minimum and 15 percent maximum of arrow length. The arrow shall contrast with the background.

3.4.2 Street Name. The APS shall include street name information aligned parallel to the crosswalk direction and shall comply with Guidelines for Accessible Public Rights-of-Way R308.3.2 or shall provide street name information in audible format.

4.0 Performance.

4.1 Audible Locator Tone. Locator tone tells the pedestrian that the intersection is equipped with APS and where it is. Pushbutton locator tones shall have duration of 0.15 seconds or less, and shall repeat at 1-second intervals. Pushbutton locator tones shall

be intensity responsive to ambient sound, and be audible 6 to 12 feet from the pushbutton, or to the building line, whichever is less. 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.

4.2 Verbal Wait Message. If available, the acknowledge tone feature shall not be used. A verbal wait message shall provide a clear message to the pedestrian they have placed a call. The verbal information informational message “Wait to cross” street name at intersecting street name shall be used..

4.3 Verbal Walk Message. If available, the audio tone feature shall not be used. The verbal messages shall provide a clear message that the walk interval is in effect, as well as to which crossing it applies. The verbal message shall be provided at regular intervals throughout the timing of the walk interval and shall be the term “walk sign,” which will be followed by the name of the street to be crossed.

4.4 Volume. Automatic volume adjustment in response to ambient traffic sound level shall 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.

5.0 Documentation and Support.

5.1 Operation and Maintenance Manuals. Two copies of the operation and maintenance manuals for each location shall be provided to the Commission.

5.2 USB with Audible Messages. The Contractor shall provide two copies of USB data cards, to the Engineer, that contains files for the manufacturer’s audible messages for complete operation of all APS at all locations.

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

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

8.0 Basis of Payment. Accepted “Accessible Pedestrian Pushbuttons and Signing” will be paid for at the contract unit price. Payment will be considered full compensation for all labor, equipment and material to complete the described work. Payment for signing will be included in the contract unit price for Accessible Pedestrian Signals.

Item Number	Type	Description
902-99.02	Each	Accessible Pedestrian Pushbutton and Signing

Y. Countdown Pedestrian Signal Heads

1.0 Description. This work shall consist of furnishing, installing and placing into operation any countdown, pedestrian signal heads.

2.0 System Requirements. Delete Sec. 1092.1.9 in its entirety and substitute the following:

1092.1.9 Pedestrian Signal Heads. Pedestrian signal heads shall be in accordance with ITE specifications and standards for pedestrian traffic control signal indications and the following:

(a) Pedestrian signal head housings shall be constructed of a one-piece, 0.250-inch (6 mm) thick, polycarbonate material as shown on the plans. The housing shall include an integral mounting bracket designed for side-of-pole mounting on all makes of signal poles with a terminal compartment and minimum 5-position, double-row terminal block.

(b) The door, lens and any openings in the housing shall have gaskets or seals to exclude dust and moisture from the inside of the compartment.

(c) Lenses shall be constructed of polycarbonate material.

(d) Pedestrian signal head units shall be provided with a manufactured preformed rectangular visor or screen-type louver.

(e) All plastic material shall be ultraviolet stabilized.

(f) Indications shall be ITE Class 3 symbol messages. The "UPRAISED HAND" symbol shall be illuminated with a filled, Portland orange LED module. The "WALKING PERSON" symbol shall be illuminated with a filled, white LED module. The “Countdown” display numbers shall be illuminated with a Portland orange LED module. The LED modules shall be in accordance with applicable portions of Sec 1092.1.

(g) Pedestrian traffic control signal faces shall be constructed such that all messages are displayed from the same message-bearing surface having a black opaque background. The "Countdown" display shall be located to the right of the "UPRAISED HAND" and “WALKING PERSON” symbols, which will be overlaid.

(h) Pedestrian signal heads require “Countdown” displays and shall have the following features:

1. Display numbers must be two digits at least 9 inches in height.

2. Shall only display the “Countdown” time during the pedestrian change interval. Time displayed shall be in seconds and begin only at the beginning of the pedestrian change interval. The flashing “UPRAISED HAND” symbol shall be concurrently displayed during the pedestrian change interval. The total time displayed at the start of the pedestrian change interval shall be automatically adjusted by the pedestrian signal head and not require any manual settings or additional wiring to the signal cabinet.

3. Once the “Countdown” display reaches “0”, the “Countdown” display shall blank-out until the next pedestrian change interval begins.

4. If the pedestrian change interval is interrupted or shortened as part of a transition into a preemption sequence, the “Countdown” display shall go dark immediately upon activation of the preemption transition.

5. A test switch shall be provided in order to test the “Countdown” display.

Item Number	Unit	Description
902-99.02	Each	MISC (Countdown Pedestrian Signal Head, Type 1S)

Z. Pushbutton Extension

1.0 Description. This work shall consist of furnishing and installing a pushbutton extension as indicated in the plans. The new pushbutton shall be placed on an extension that is within a horizontal reach range of less than 10” and a vertical reach of 42”. The Contractor shall submit shop drawings of the proposed pushbutton extensions for approval before installing.

2.0 Construction Requirements. Work shall be in accordance with Sec 902 and the manufacturer’s requirements.

3.0 Basis of Payment. Payment for furnishing and installing the pushbutton extension shall include all materials, equipment, tools, labor, and work incidental thereto, and shall be considered to be completely covered by the contract unit price for Item Number 902-99.02, “MISC (Pedestrian Pushbutton Extension), per each” as indicated on the plans.

Item Number	Type	Description
902-99.02	Each	MISC (Pushbutton Extension)

AA. Pedestrian Pushbutton Stanchion, 4 FT

1.0 Description. This work shall consist of installing pushbutton stanchions at the locations shown on the plans.

2.0 Material Requirements.

2.1 Post. Posts shall be 48-inch long 4-inch diameter (4.5-inch O.D) schedule 40 aluminum pipe.

2.2 Foundation. Concrete and reinforcing shall comply with Sec 902.

3.0 Construction Requirements. The post shall be installed on top of a breakaway pedestal base mounted to a foundation in the sidewalk or raised median. The foundation shall be constructed as part of the sidewalk or raised median and have an 18-inch diameter and 12-inch

depth. The breakaway pedestal base shall be mounted to the sidewalk or raised median 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 pushbutton 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 pedestrian pushbutton stanchion 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, including all items listed in paragraph 4.0 Method of Measurement necessary to place pedestrian pushbutton posts shall be completely covered by the
contract unit price for:

Item Number	Unit	Description
902-99.02	Each	MISC (Pedestrian Pushbutton Stanchion, 4 FT.)

BB. Median Island Cut-throughs

1.0 Description. This work shall consist of providing a median or median island cut-through that is compliant with current Americans with Disabilities Act (ADA) and MoDOT guidelines at locations shown on the plans and as directed by the Engineer.

2.0 Construction Requirements. The contractor shall be responsible for removing the existing median and if necessary, the existing pavement and base prior to installing the new cut-through as shown in the plans and as per Section 608 in both the Standard Plans and Standard Specifications. If new pavement/sidewalk is to be installed, it shall be minimum 7" Concrete Sidewalk on a 4" Type 5 Aggregate Base with new median island doweled into this new sidewalk. Truncated domes installed within the island or median cut-throughs shall be placed flush with the face of the curb/island.

2.1 ADA Ramps. If there is an actual ramp that provides access to the raised portion of the island or median instead of cutting through a portion of the island or median, then that area of concrete will be paid for separately as an ADA Curb Ramp, per each, and not per quantities noted below.

2.2 Cross Slope through Cut-Throughs. The contractor shall meet ADA requirements regarding cross slope through the cut-through.

3.0 Method of Measurement. Final measurement will not be made except for authorized changes during construction or where appreciable errors are found in the contract quantity. The

revision or correction will be computed and added to or deducted from the contract quantity for each item listed in the Basis of Payment.

4.0 Basis of Payment. Payment for furnishing and installing a new median or median island cut-through shall include all excavation, base compaction, saw cuts, removal of existing pavement and median island, new sidewalk and base, new median island, new truncated domes, and all materials, equipment, tools, labor, and work incidental thereto, and shall be considered to be completely covered by the contract unit price for items listed below as indicated in the plans.

Item Number	Unit	Description
202-20.10	Lump Sum	Removal of Improvements
304-05.04	SY	Type 5 Aggregate for Base (4 In. Thick)
608-60.07	SY	Concrete Sidewalk, 7 In.
608-30.06	SY	6 In. Concrete Median Strip
608-10.12	SF	Truncated Domes

CC. Curb Reflectors

1.0 Description. This work consists of furnishing, transporting, and installing curb reflectors of the type and spacing specified in the roadway plans. All work shall comply with 620 of the Missouri Standard Specification Book for Highway Construction, performed to the satisfaction of the Engineer, and include the cost of equipment, labor, materials, and time required to complete said work.

2.0 General. The surface of the curb to which the reflector shall be applied shall be free of dirt, curing compound, moisture, paint, or any other material that would adversely affect the bond of the adhesive. Cleaning of the surface shall be to the satisfaction of the Engineer. An adhesive meeting the reflector manufacturer's specifications shall be placed either on the surface or the bottom of the reflector in sufficient quantity to ensure complete coverage of the contact area with no voids present and with a slight excess after the reflector is pressed firmly in place. The installed height of the prismatic curb reflector shall be a maximum of 3/4" inch above the mounting surface. The unit shall have one reflective surface that is placed approximately perpendicular to the mounting surface.

2.0 Basis of Payment. Payment for furnishing all labor, equipment, and materials necessary to install the reflectors shall be made and considered completely covered by the contract unit price bid for:

Item Number	Unit	Description
602-99.02	Each	MISC (Curb Reflectors)

DD. Tubular Marker

1.0 Description. Tubular markers shall be mounted on raised islands at the locations indicated in the plans.

2.0 Requirements. Island tubular markers shall have a height 18-inches and located as depicted on the plans, shall have 2 reflective bands with super high intensity prismatic sheeting in accordance to Section 1042 and be constructed from thermoplastic polyurethane. Color of the island tubular marker and reflective bands shall match the pavement marking in which it is placed. Post shall be in the shape of a "T" with a width of 3 inches and depth of 2 inches. Post shall be capable of recovering from repeated vehicle impacts. Post shall insert and be secured into the plastic base with horizontal locking pins. When the post is no longer serviceable, it shall be able to be removed and a new post can be manually inserted and locked into the existing base.

3.0 Construction Requirements. Shall be surface mounted on the radius points of the island noses. The roadway shall be cleaned of dirt and gravel before installation. Island tubular markers shall be mounted using proper-sized anchor bolts according to the manufacturer's instructions.

4.0 Method of Measurement. Measurement for installation of tubular marker with base will be made per each.

5.0 Basis of Payment. All labor, equipment and materials necessary to install these markers will be paid for under:

Item Number	Unit	Description
620-99.02	Each	TUBULAR MARKERS

EE. Driveway Entrance Replacement

1.0 Description. While working on entrances or adjacent properties, the contractor shall make every reasonable effort to minimize any interference to the properties and to complete 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 by the property owner and engineer. The contractor is to be aware that some parcels may have property owner agreements.

2.0 Construction Requirements. On all commercial and residential entrances, the contractor shall keep one-half of the entrance open at all times. On commercial entrances, less than 20' wide, it may be necessary for the contractor to provide temporary aggregate to provide access to the property. The contractor shall remove and dispose of the temporary aggregate following completion of the entrance. For properties with more than one entrance the contractor may construct one entire entrance at a time with the approval of the property owner and the engineer.

Excavations beyond the limits of the plan improvements utilized to facilitate construction activities are to be replaced with in-kind materials. Grass areas to be replaced with soil and

sod. Asphalt areas to be replaced with asphalt material in accordance with Special Provision for Asphalt Sidewalk. See the typical application plan sheets for construction requirements.

2.1 The contractor shall complete the entrances as quickly as possible and shall take no longer than 10 days to complete any one entrance.

3.0 Method of Measurement. Final measurement will be made and be computed for the constructed area for each item listed in the Basis of Payment. Measurement of excavations beyond the limits of the plan improvements will be limited to 2'.

3.1 Basis of Payment. Driveway entrance replacement is paid for as PAVED APPROACH. Over excavation repairs are paid for as ASPHALT SIDEWALK and TYPE 5 AGGREGATE for asphalt, and SODDING for grass areas.

Item Number	Unit	Description
608-50.07	SY	PAVED APPROACH, 7 IN
608-50.08	SY	PAVED APPROACH, 8 IN
304-05.04	SY	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)
401-99.05	SY	ASPHALT SIDEWALK
803-10.00A	SY	TURF TYPE TALL FESCUE SODDING

FF. Asphalt Sidewalk

1.0 Description. This work shall consist of providing an asphalt sidewalk at the locations and to the limits shown in the plans.

2.0 Construction Requirements. The contractor shall be responsible for installing 4" Type 5 Aggregate Base, a 4" thick PMBB mix and 1-3/4" BP-1 mix asphalt as shown in the typical section. Each lift of material is to be installed in accordance with the requirements to construct an A2 Shoulder.

3.0 Method of Measurement. Final measurement will be made and be computed for the constructed area for each item listed in the Basis of Payment.

4.0 Basis of Payment. Payment for furnishing and installing a new asphalt sidewalk and include all materials, equipment, tools, labor, and work incidental thereto, and shall be considered to be completely covered by the contract unit price for items listed below as indicated in the plans.

Item Number	Unit	Description
401-99.05	SY	ASPHALT SIDEWALK
304-05.04	SY	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)
407-1005	GAL	TACK COAT

GG. Asphalt Repair

1.0 Description. This work shall consist of repairing the over excavated pavement beyond the driveway replacement limits as depicted in the plans. Additionally, this work covers repairs to existing asphalt entrances that are damaged due to the construction of the proposed improvements. The repairs will be made to the limits of the excavation or areas that are deemed by the engineer to be damaged during construction activities as outlined in section 3.0.

2.0 Construction Requirements. The contractor shall be responsible for installing 4" Type 5 Aggregate Base, a 4" thick PMBB mix and 1-3/4" BP-1 mix asphalt as shown in the typical section. Each lift of material is to be installed in accordance with the requirements to construct an A2 Shoulder.

3.0 Method of Measurement. Final measurement will be made and be computed for the constructed area for each item listed in the Basis of Payment. The pay item will apply to a maximum distance of 2' from the limits of the concrete driveway improvement as well as 2' from the edge of existing radii. Any excavation repairs beyond the 2' maximum distance shall be repaired at the contractor's expense.

4.0 Basis of Payment. Payment for furnishing and installing the asphalt repair includes all materials, equipment, tools, labor, and work incidental thereto, and shall be considered completely covered by the contract unit price for items listed below as indicated in the plans.

Item Number	Unit	Description
401-99.05	SY	ASPHALT REPAIR
304-05.04	SY	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)
407-10.05	GAL	TACK COAT

HH. Sidewalk Edge Grinding

1.0 Description. This provision applies to locations depicted on the plans that require sidewalk grinding. Horizontal saw cutting is an acceptable option to diamond grinding. This work shall consist of saw-cutting concrete sidewalk to mitigate, correct, and eliminate trip hazards caused by vertical joint deflections (displacements) over (0.25" up to 2.0") in accordance with the general conditions, plans, and these specifications or as directed by the Engineer.

2.0 Diamond Grinding/Horizontal Saw Cutting. Diamond grinding of the concrete sidewalk shall be performed to remove the trip hazard lip of the existing sidewalk a minimum 10" wide for the width of the sidewalk. Joint displacement or corrections, via the preferred method of horizontal saw cutting, shall be made to provide a maximum running slope of 1 vertical to 12 horizontal (1:12), or 8.33%, to comply with current ADA Specifications. Horizontal Saw Cutting may be used as an option to Diamond Grinding. The horizontal saw cutting equipment shall be able to cut flush to the ground and capable of working at any angle to perform joint displacement mitigation in hard-to-reach areas, around obstacles such as signs, posts or benches, on narrow walkways, next to fences, and along retaining walls or buildings. Corrections made shall not leave ridges or grooves in the concrete sidewalk panel that could inhibit or prevent drainage. Vertical joint displacements shall be completely removed from one end of the joint deflection to the other, leaving zero vertical deflection between adjacent concrete panels in either direction.

3.0 Measurement. The sidewalk grinding or horizontal saw cutting shall be measured per width of the sidewalk grinding performed.

4.0 Basis of Payment. Payment for the Diamond Grinding Sidewalk Edge as described in this provision will be made at the contract unit price for:

Item Number	Unit	Description
622-99-03	LF	MISC (Sidewalk Edge Grinding)

II. Concrete Sidewalks Installed Against Buildings

1.0 Description. This provision applies to locations that require concrete to be installed against an existing building.

2.0 Construction Requirements. During excavation of existing structures and construction operations the contractor shall take care to prevent damage to the existing building. Any damage to the building will be the responsibility of the contractor to repair to the satisfaction of the property owner. When concrete is poured against an existing building the contractor shall install 6” wide x 1/2” thick expansion board between the building and the new concrete.

3.0 Measurement. There is no direct measurement of this item.

4.0 Basis of Payment. The cost of the conformance to this provision is incidental to the sidewalk construction. No direct payment will be made for any materials or labor, which is performed under this provision.

JJ. Linear Grading Class 2-Modified

1.0 Description. Modified Linear Grading, Class 2 shall consist of any necessary clearing and grubbing in accordance with Sec 201, preparing the subgrade for shoulder, pavement widening, sidewalk, curb and gutter, roadside retaining wall, or other roadside appurtenance by excavating, compacting, fine-grading, and shaping existing shoulder and ditch fore-slope, conforming to the typical section shown on the plans. It may be necessary to haul material.

2.0 Construction Requirements. The shoulder, pavement widening, sidewalk, curb and gutter, roadside retaining wall, or other roadside appurtenance shall be excavated and graded as shown on the typical section with minimal disturbance of the existing sub-grade and fore slope. Density shall be obtained from reasonable compactive efforts consisting of no less than three passes with a roller until no further visible compaction can be achieved, or by other methods approved by the Engineer. Subgrade preparation and compaction shall also be in accordance with Sections 203, 209 and 210.

2.1 All ditches shall be graded to drain and maintain existing flow capacity, unless approved by the engineer. If fill material for the shoulder widening work impacts the ditch capacity, the contractor shall re-grade the backslope to maintain the flow capacity of the ditch. Fore slopes

and back slopes shall be constructed at a 3:1, except as noted on the plans or approved otherwise by the engineer.

2.2 It may be necessary to go outside the limits of the right of way to obtain additional material or to dispose of excess material. All costs for providing additional material or disposing of excess material shall be included at the contract unit price for pay item 207-99.09, Modified Linear Grading, Class 2. All contractor furnished material shall be approved by the Engineer prior to being incorporated into the project. Quarry screenings will not be considered an approved contractor furnished material.

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

3.0 Method of Measurement. Measurement will be made to the nearest 1/10 station separately for the length of pavement edge along each side of the roadway, measured along centerline of the traveled way and totaled to the nearest Station for the sum of all segments in accordance with Section 207.

4.0 Basis of Payment. Payment for Modified Linear Grading, Class 2 as described in this provision will be made at the contract unit price for:

Item Number	Unit	Description
207-99.09	Station	MISC (Linear Grading, Class 2 - Modified)

KK. Site Restoration

1.0 Description. Restore to its original condition any disturbed area at sites including, but not limited to, sidewalks, driveways, guardrail, pull box, conduit, and pole base installations. Restoration shall be accomplished by placing material equivalent to that of the adjacent undisturbed area. Disturbed unpaved areas shall be fertilized and sodded as directed by the Engineer. The Engineer will have the final authority in determining the acceptability of the restoration work.

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

2.1 Unless quantities and pay items for removal and subsequent replacement of improvements are contained in the plans for a specific location of removal work, no direct payment will be made for full depth saw cutting and the removal and subsequent replacement of asphalt or concrete slope protection, sidewalk, pavement, shoulders, islands, medians, sod and the

required dowel and tie bars removed and replaced by the contractor as a result of his election to vary the location of conduit runs and pull boxes. This work will be considered as included in the various unit bid prices for conduit and pull boxes established in contract, and no additional payment will be made.

2.2 Sidewalks and sidewalk ramps that are disturbed as described in this provision shall be replaced to meet current ADA standards at the contractor's expense.

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

3.0 Basis of Payment. The cost of restoration of disturbed areas will be incidental to the unit price of sidewalk, driveway, guardrail, pole base, conduit, and/or pull box. No direct payment will be made for any materials or labor, which is performed under this provision.

LL. Positive Drainage

1.0 Description. The contractor is made aware that the grade both behind and in front of the new sidewalk is being altered and care shall be taken during construction to provide proper drainage to prevent localized ponding issues.

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. The contractor shall also be required to dewater any areas of ponding or flooding within the project limits that are caused by the contractor's operations and construction methods as determined by the Engineer.

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 items in the contract.

MM. Metro Bus Service

1.0 The Contractor shall be aware Metro Bus Service operates routes in the project area with The Contractor shall be responsible for notifying Metro when project activities will require disruption in bus service. The contact persons for Metro are:

Lance Peterson
Metro Transit
Email: llpeterson@MetroStLouis.org

Natilie Siebert
Metro Transit
Email: nmsiebert@MetroStLouis.org

2.0 The Contractor shall notify Metro 30 days in advance of when work is scheduled to close sidewalks or reconstruct bus stop pads on routes that have active bus lines.

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

NN. Small Block Wall

1.0 Description. This work consists of furnishing and constructing precast small block reinforced retaining walls with soil reinforcement in accordance with these specifications, as shown on the plans, or as directed by the engineer.

2.0 Material Requirements. The materials shall be in accordance with Division 1000, Material Details, and specifically as follows:

Item	Section
Concrete	501
Select Granular Backfill for Structural Systems	1010
Geotextile	1011
Miscellaneous Drainage Material	1013
Resin Anchor System	1039
Small Block Wall Systems – Concrete Blocks	1052.40

2.1 The unit fill shall consist of a granular backfill in accordance with Gradation D or E of Sec 1005.

2.1 Class B or B-1 concrete shall be used for cast-in-place concrete leveling pads.

3.0 Design and Construction Requirements

3.1 Only the small block wall systems shown in the bridge prequalified products listing will be allowed for use by the contractor. The bridge prequalified products list may be obtained through Bridge or MoDOT's web site. Any deviations from the prequalified wall system details previously submitted to Bridge shall be specifically outlined in the cover letter submitted with the design plans, details, and computations.

3.2 The wall materials, design, and construction shall meet the requirements of MoDOT Specifications Section 720 Mechanically Stabilized Earth Wall Systems. The wall system includes the design, block facing, geotextile, select granular backfill for structural systems, drainage rock, drainage pipe, cap units, anchor system, concrete leveling pad, and excavation.

4.0 Method of Measurement. Measurement of the Small Block Wall System will be made to the nearest square foot. The quantity to be paid for will be measured from the wall outline as shown on the plans. No adjustments in the measured quantity will be permitted for additional wall area required to meet the minimum wall elevations shown on the plans for any particular wall system.

4.0 Basis of Payment. The accepted quantity of small block retaining wall system, complete in place, will be paid for at the contract unit price per square foot.

Item Number	Unit	Description
720-99.04	SF	Small Block Wall

OO. Irrigation Systems

1.0 Description. This work includes relocation or replacement of all sprinkler heads and sprinkler system pipes that are impacted by construction activities and installation of improvements.

The contractor is advised that various properties along the project length may have irrigation systems whose sprinkler heads and associated pipe systems are located within or in close proximity to the proposed sidewalk. The contractor shall relocate undamaged sprinkler heads or replace damaged sprinkler heads as directed by the engineer.

The contractor shall check with individual property owners to shut off watering as necessary and be aware of the location of said systems. Any damage to the watering system, sprinkler heads, etc. will be repaired or replaced at the contractor's expense and at no direct cost to the MoDOT.

The contractor is strongly advised to drive the project to determine the extent of impact to the existing sprinkler systems located along the route and adjust the bid accordingly.

2.0 Method of Measurement: No measurement shall be made.

3.0 Basis of Payment: No direct payment will be made for the relocation or replacement of sprinkler systems located along the project limits. All costs associated with this work shall be considered incidental to other pay items provided in the contract.

PP. 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.

QQ. Coordination with ITS Staff and Utility Locates

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

1.1 MoDOT is a member of MO-One-Call System. Prior to any excavation or work within MoDOT Right-Of-way, the contractor must contact MO-One Call at 1-800-DIG-RITE and request for Utility Locates within noted project limits. If the scope of work contains modification, addition and/or expansion of existing underground MoDOT ITS, lighting, or signal facilities, the contractor must notify the MoDOT Utilities Locate staff prior to any work, in order for MoDOT to update MoDOT utility location records with Missouri One Call.

2.0 Contact. The contractor shall notify the ITS group via an email to SLITS@modot.mo.gov at least 2 days before any work that may impact the existing network communications. The contractor shall include the Job#, location and brief scope of work in the email's subject line. The engineer shall be notified prior to making contact with ITS staff. For MoDOT Utility location updates, the contractor must contact MoDOT TMC at 314-275-1500 and ask for Utility Locate Section at least seven calendar days before performing any work.

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

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

RR. Coordination with MoDOT Signal Shop for Cabinet Entry

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

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

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

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

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

SS. Traffic Signal Detection Zones

1.0 Description. This work shall consist of providing all necessary hardware, software, equipment, labor and resources to install traffic signal detection zones for signal installation and be operational with the Commission's Adaptive Signal Control Technology (ASCT) system that operates the traffic signals along Route 67. The detectors shall be in accordance with the standard specifications, plan details, and other Job Special Provisions of this project and installed to provide detection at locations as shown on the plans or as specified by the Engineer.

Each ASCT system has a preferred traffic signal detection zone strategy to meet the requirements at each intersection along this corridor. This work will vary based on the ASCT detector being impacted and will include all equipment, hardware, labor and resources to construct, integrate, and demonstrate accurate traffic detection zones to satisfy all requirements. As necessary, this work will include: furnish and install foundations, support structures, cabinet equipment cabinet modifications, electrical service, cables, loops, non-intrusive sensors, video image, probe, radar, radios, repeaters, all necessary brackets, cabinet equipment, and cabling.

2.0 Options. The Contractor can choose from the following list of detector types according to the exceptions noted below:

Stop Bar Detection:

- Inductive loop
- Probe *

- Video image

*Probe based stop bar detection is allowable for data collection (by lane volume information). At the stop bar locations, probe based detection zones will only be allowed with a single probe per lane, no multiple probes per lane will be accepted for the stop bar locations.

Advanced/Mid Block Detection:

- Radar
- Inductive Loop
- Non-Invasive Side Fire
- Probe
- Video Image

Materials include all detectors, detector cards, wiring, wireless or wired communications devices, and training.

2.1 Exceptions. The Contractor shall verify that any shadows cast over detection zones will not affect performance of a video detection system before “video image” can be used as an option.

2.2 Unless otherwise specified on the plan sheets, the Contractor will be able to supply more than one type of detector and customize the installation based on the field conditions. Any customization shall require approval from the Engineer.

3.0 System Requirements. The traffic signal detection components will be per the manufacturer’s latest requirements, as described in the requirements and as identified in the plans.

4.0 Construction Requirements. Construction requirements shall conform to Section 902 and 1092, in addition to requirements as set forth by the manufacturer. The Contractor shall notify the Engineer three (3) working days in advance of performing work at the impacted site locations. The Contractor shall not begin work prior to approval from the Engineer.

4.1 The Contractor shall setup, install, and configure all necessary traffic signal detection zones. The Contractor shall maintain existing advance and stop bar detection until the Contractor is ready to switch operation to the newly installed detection system. Any modifications to the advance or stop bar detection at the existing signalized intersections shall be approved by the Engineer. The Commission will be given the opportunity to validate detection before acceptance of the project. The Contractor will have 10 working days to complete any requested adjustments, at which time the Commission will be allowed to repeat the validation testing.

4.2 The Contractor shall integrate the new traffic signal detection zones within the project limits with the ASCT system at the Commission’s Traffic Management Center (TMC). The Contractor shall maintain the existing traffic signal detection at each signalized intersection. The Contractor is responsible to demonstrate the traffic signal detection zone functionality at the TMC. The Contractor shall demonstrate that the existing advance and stop bar detection is operational after installation of the new detection systems. The existing advance and stop bar

detection shall also be properly configured and operational within the Commission's Advanced Traffic Management System (ATMS) software. The contractor shall verify and demonstrate the operation of existing and new traffic signal detection zones through ATMS and ASCT, respectively.

5.0 Acceptance Testing. The Contractor shall be responsible for making sure all traffic signal detection zones are installed, configured, tested and integrated into the existing cabinet and at the TMC.

a. **Device Accuracy.** The Contractor shall configure, test and demonstrate the accuracy of all new traffic signal detection zones prior to placing into ASCT system operation. The Contractor shall document the accuracy of each detection zone and submit such report to the Engineer for review.

6.0 Basis of Payment. No direct payment will be made for Traffic Signal Detection Zones.

TT. Traffic Signal Maintenance, Programming and Adjustment

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

2.0 Qualified Traffic Engineer

2.1 The contractor shall have an experienced traffic engineer with a Professional Engineer's (PE) license in Missouri as well as a Professional Traffic Operations Engineer (PTOE) certification (hereafter referred to as "contractor's traffic engineer") with the noted experience defined below.

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

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

2.1.1.2 Controller Programming: Ability to hand program Phase, TBC, and Coordination levels of various advanced traffic controllers.

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

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

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

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

3.0 Existing Traffic Signals and Communication System

3.1 The contractor shall notify the engineer 3 weeks prior to the date any signal improvements including modifications for pedestrian accommodations are planned to begin.

3.2 Once work begins at any signalized intersection as part of J6P3510C, the contractor shall then be solely responsible for the following signals' controller programming until work has been completed and improvements are complete.

3.3 The engineer shall provide to the approved contractor's traffic engineer a report on the existing phasing and timing of each traffic signal at the intersections of Winghaven Boulevard & Technology Boulevard, Route K & Mexico Loop Road, Route K & Hutchings Farm Drive, and Route K & Waterbury Falls Drive at the Pre-Construction Meeting. The engineer shall be available to the contractor before any changes are made to a signal or controller to answer any questions about the report. Once the approved contractor's traffic engineer has modified a signal or controller for any reason, the contractor shall be solely responsible for the existing timing plans and all subsequent timing changes.

3.4 The approved contractor's traffic engineer will notify the engineer or representative of the changes no later than 1 working day after changes are programmed if unable to provide advance notice as specified in 902.2.

3.5 The approved contractor's traffic engineer shall be solely responsible for maintaining the coordination at any affected signal to the satisfaction of the engineer or representative until paragraph 5.0 below has been satisfied. Maintenance of coordination may include the synchronization of the affected controller's internal time clocks to the second using an atomic clock, or other means approved by the engineer. If time clock synchronization is used, the contractor shall verify all affected controllers are synchronized at least 1 time per week with a report to the engineer or representative. This report will be in the form of a documentation record as spelled out in the Work Zone Traffic Management Plan.

4.0 Existing Traffic Signal Maintenance and Response.

4.1 The approved contractor's traffic engineer shall respond to any signal timing complaints or malfunction complaints for those locations detailed in Section 3.0 of this provision and as specified in Section 902.21.1. Response time shall be 1 hour for complaints received by the contractor between 6 AM and 6 PM on non-holiday weekdays, and 2 hours for all other times. These timeframes will replace the '24 hour' response time in Section 105.14 for any signal-related incidents, where the entire cost of the work, if performed by MoDOT personnel or a third

party, will be computed as described in Sec 108.9 and deducted from the payments due the contractor.

4.1.1 Responding to a signal timing complaint shall be defined as the following: Arrive on site, make observations, and, if appropriate, implement changes; OR utilizing the Commission's ITS network to observe and/or implement changes. Immediately following their response, the approved contractor's traffic engineer shall follow-up with the engineer and the originator of the complaint, if different, with their observation and analysis of the complaint and whether any changes were made. The Commission's ITS network should only be used if the affected signals can be adequate viewed remotely.

4.1.2 The contractor must supply the contact name and phone number of the approved contractor's traffic engineer who will be responsible for receiving and responding to signal timing complaints from the engineer. These complaints may be forwarded directly to the contractor by someone other than the engineer (i.e. MoDOT's Customer Service representatives) and will not relieve the contractor from properly responding based on the response times of this Provision. The contractor shall submit to the engineer a weekly report of complaints received and remedies performed throughout the duration of this project.

5.0 Signal Controller Programming and Acceptance.

5.1 The contractor will be responsible for proposing and implementing signal timing and coordination plans after completion of improvements at the intersections of Winghaven Boulevard & Technology Boulevard, Route K & Mexico Loop Road, Route K & Hutchings Farm Drive, and Route K & Waterbury Falls Drive. The engineer shall provide the contractor with the existing controller files so that the contractor can propose new programming and timing plans for the above referenced locations. The contractor will be relieved of signal programming maintenance once 48 consecutive hours have passed without a programming malfunction. If an agency desires any changes from an original plan, the agency will assume immediate maintenance of the signal in order to implement desired changes.

5.2 In addition to 5.1, The Contractor's traffic engineer shall compile/install the new signal timing at the intersections of Winghaven Boulevard & Technology Boulevard, Route K & Mexico Loop Road, Route K & Hutchings Farm Drive, and Route K & Waterbury Falls Drive.

6.0 Post Project Report

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

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

7.1 Covering Signal Heads and Adjusting Signal Indications. Any covering of signal heads and adjustments or changes to signal indications necessary for safe traffic operations along routes within project limits of project J6P3510C when traffic is being routed through the

Workzone shall be the responsibility of the contractor as directed by Engineer. Any changes to or covering of existing signal heads shall be coordinated with both the Engineer and the contractor's traffic engineer prior to making any of these adjustments. The contractor shall also be responsible for uncovering any covered signal heads and restoring any adjusted signal indications that were changed prior to re-opening the roadway(s) to traffic. No direct payment will be made for compliance with this specification.

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

9.0 Basis of Payment. Payment will be considered full compensation for all contractor services, installation, and labor to complete the described work.

Item No.	Type	Description
902-99.01	Lump Sum	Traffic Signal Maintenance, Programming & Adjustment

UU. Property Owner Notification

1.0 Description. It shall be the contractor's responsibility to inform and notify the adjacent property owner 48 hours prior to starting any construction activities that may impact driveway and parking lot access or occur along the frontage of the property owner's parcel. Notification shall be in written form and include the contractor's contact information, the Engineer's contact information, and an estimated schedule of work and the associated impacts.

2.0 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.

VV. Access to Commercial and Private Entrances

1.0 Description. While working on entrances or adjacent properties, the contractor shall make every reasonable effort to minimize interference to the properties and to complete 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 by the property owner and the Engineer.

2.0 Construction Requirements. On all entrances the contractor shall keep one-half of the entrance open at all times. On narrow entrances it may be necessary for the contractor to provide temporary aggregate for property access. The contractor shall remove and dispose of the temporary aggregate following completion of the entrance. For properties with more than one entrance the contractor may construct one entire entrance at a time with the approval of the property owner and the Engineer.

3.0 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.

WW. Delayed Access to Parcels Pending Acquisition

1.0 Description. Acquisition is pending for the parcels listed below on the project. The contractor shall not be permitted to begin work within any designated Permanent Easement or Temporary Easement on any of these parcels until the Right of Way acquisition has been completed. An anticipated date of possession has been provided for each parcel to assist with scheduling purposes.

2.0 Construction Requirements. The contractor shall verify with the engineer prior to beginning work on any of the parcels listed in this provision. The contractor will not be permitted access to work on any of these parcels until notification has been given by the engineer that the parcel has been cleared from this list.

3.0 Parcels. The following is the list of the parcels where acquisition is pending.

Anticipated possession by July 7, 2026: 501, 507, 520, 523, 533, 538, 539, 542, 544, 545, 546, 549, 554, 562, 563, 566, 578, 579, 582A, 587

Anticipated possession by October 15, 2026: 502, 506, 510, 521, 532, 534, 536, 561, 565, 567, 580A, 582, 583, 584

XX. Property Owner Agreements

1.0 Description. During the negotiations of easements and rights of way, MoDOT entered into agreements with certain property owners. The Contractor shall abide by the following commitments:

Corridor 23 -- Route 100

Parcel 500, 15846 Manchester Road

- Contractor will provide the owner with at least two (2) weeks' notice prior to constructing the driveway. Please contact JJ (James Otis) at 314-304-9357.

Parcel 501, 25 Clarkson Road

- Driveway entrance centered at Station 03+41 LT is to be constructed one-half at a time.

Parcel 503, 15828 Manchester Road

- Driveway entrance centered at Station 05+08 RT is to be constructed one-half at a time. Contractor will provide the owner with at least two (2) weeks' notice prior to constructing the driveway. Please contact JJ (James Otis) at 314-304-9357.

Parcel 505, 15800 Manchester Road

- Driveway entrances centered at Station 08+51 RT and Station 12+43 RT are to be constructed one-half at a time.

Parcel 508, 15736 Manchester Road

- Driveway entrance centered at Station 15+60 RT and driveway entrance centered at Station 18+39 RT are to be constructed one-half at a time. Only 1 entrance can be under construction at any time. Contractor will provide the owners with at least two (2) weeks' notice prior to constructing the driveway. Please contact Mike Simms at 314-620-7179 (msimms@bommarito.net) and Neal Ewing at 636-219-6960 (newing@bommarito.net).

Parcel 516, 15601 Manchester Road

- Driveway entrance centered at Station 38+28 LT is to be constructed one-half at a time. Contractor will provide the owner with at least two (2) weeks' notice prior to constructing the driveway. Please contact Joe Fresta at 314-393-1550.

Parcel 518, 15570 Manchester Road

- Driveway entrances centered at Station 40+48 RT and centered at Station 41+09 RT are to be constructed one at a time, allowing cars to access the property via the other entrance at all times during construction. Contractor will provide the owner with at least two (2) weeks' notice prior to constructing the driveway. Please contact Angela Burtelow at 314-651-3397.

Parcel 521, 15567 Manchester Road

- Driveway entrance centered at Station 47+57 LT is to be constructed one-half at a time.

Parcel 522, 15493 Manchester Road

- Driveway entrance centered at Station 52+35 LT is to be constructed one-half at a time.

Parcel 524, 15468 Manchester Road

- Driveway entrance centered at Station 55+79 RT is to be constructed one-half at a time.

Parcel 525, 15464 Manchester Road

- Driveway entrance centered at Station 56+51 RT is to be constructed one-half at a time.

Parcel 531, 15310 Manchester Road

- No work to be done on this property during the months of November and December.

Parcel 532, 15287 Manchester Road

- Driveway entrance centered at Station 80+61 LT is to be constructed one-half at a time.
- No work to be done during the months of October – December.

Parcel 538, 15110 Manchester Road

- Driveway entrance centered at Station 102+52 RT is to be constructed one-half at a time.

Parcel 540, 15115 Manchester Road

- Driveway entrance centered at Station 97+66 LT and driveway entrance centered at Station 99+56 LT are to be constructed one-half at a time.

Parcel 545, 15025 Manchester Road

- Driveway entrance centered at Station 110+42 LT is to be constructed one-half at a time.
- No work to be done during the months of October – December.

Parcel 547, 14960 Manchester Road

- Driveway entrance centered at Station 115+54 RT is to be constructed one-half at a time.

Parcel 551, 14935 Manchester Road

- Driveway entrance centered at Station 117+50 LT is to be constructed one-half at a time.

Parcel 553, 14925 Manchester Road

- Driveway entrance centered at Station 119+73 LT is to be constructed one-half at a time.

Parcel 554, 14919 Manchester Road

- Driveway entrance centered at Station 120+59 LT and driveway entrance centered at Station 121+08 RT are to be constructed one-half at a time. One-half of each driveway will remain open at all times.
- The Contractor shall not utilize any other portion of the property without the tenant's prior written consent.
- Contractor shall provide clear and conspicuous signage directing customers on how to enter and exit the premises.

Parcel 557, 14835 Manchester Road

- Driveway entrance centered at Station 127+38 LT is to be constructed all at same time.

Parcel 562, 14808 Manchester Road

- Contractor will relocate or replace sprinkler heads and system, if disturbed.

Parcel 564, 14787 Manchester Road

- Driveway entrance centered at Station 140+72 RT is to be constructed one-half at a time.

Parcel 565, 14780 Manchester Road

- Driveway entrance centered at Station 141+34 RT is to be constructed one-half at a time. Contractor will provide the owner with at least two (2) weeks' notice prior to constructing the driveway. Please contact David Reddout at 469-610-1320.

Parcel 565A, 14795 Manchester Road

- Driveway entrance centered at Station 143+61 LT is to be constructed one-half at a time.

Parcel 567, 14772 Manchester Road

- Contractor will provide the owner with at least two (2) weeks' notice prior to construction at the property. Please contact David Reddout at 469-610-1320.

Parcel 570, 14747 Manchester Road

- Driveway entrance centered at Station 150+06 LT and driveway entrance centered at Station 154+18 LT are to be constructed one-half at a time. Only 1 entrance can be

under construction at any time. Contractor will provide the owners with at least two (2) weeks' notice prior to constructing the driveway. Please contact Scott Lindwald at 636-628-5446 (slindwall@bommarito.net) and Neal Ewing at 636-219-6960 (newing@bommarito.net).

Parcel 571,14738 Manchester Road

- Driveway entrance centered at Station 153+72 RT is to be constructed one-half at a time.

Parcel 577, 14643 Manchester Road

- Driveway entrance centered at Station 160+59 LT is to be constructed one-half at a time.

Parcel 578, 14637 Manchester Road

- Driveway entrance centered at Station 161+48 LT is to be constructed one-half at a time.

Parcel 579, 14633 Manchester Road

- Driveway entrance centered at Station 162+40 LT is to be constructed one-half at a time.

Parcel 580, 14622 Manchester Road

- Driveway entrance centered at Station 164+09 RT is to be constructed one-half at a time.

Parcel 582, 14606 Manchester Road

- Contractor will provide the owners with at least three (3) weeks' notice prior to constructing the driveway. Please contact Hai Tang at 314-397-6238 (Honeybeetea429@gmail.com). See JSP CCC.

Parcel 582A, 14560 Manchester Road

- Driveway entrance centered at Station 168+18 RT is to be constructed one-half at a time.

Parcel 584, 14575 Manchester Road

- Driveway entrance centered at Station 170+53 LT is to be constructed one-half at a time.
- Entrance is shared with parcel 585. Construct each half at a time.

Parcel 585, 14571 Manchester Road

- Driveway entrance centered at Station 47+57 LT is to be constructed one-half at a time.
- Entrance is shared with parcel 584. Construct each half at a time.

Parcel 588, 14559 Manchester Road

- Driveway entrance centered at Station 174+26 LT is to be constructed one-half at a time. Contractor will provide the owner with at least two (2) weeks' notice prior to constructing the driveway. Please contact James Yard at 636-212-0370.

YY. Delayed Notice to Proceed

1.0 Description. The Notice to Proceed date for this contract shall be July 7, 2026.

2.0 All contract forms shall be executed and returned to the Commission prior to the Notice to Proceed being issues. Submittal and signatures for all executed contract forms will be by standard electronic methods.

3.0 Basis of Payment. No direct pay shall be provided for any labor, equipment, time, or materials necessary to complete this work. The contractor shall have no claim, or basis for any claim or suit whatsoever, resulting from compliance with the provision. No time extensions will be granted due to the contractor's failure to comply with the provision.

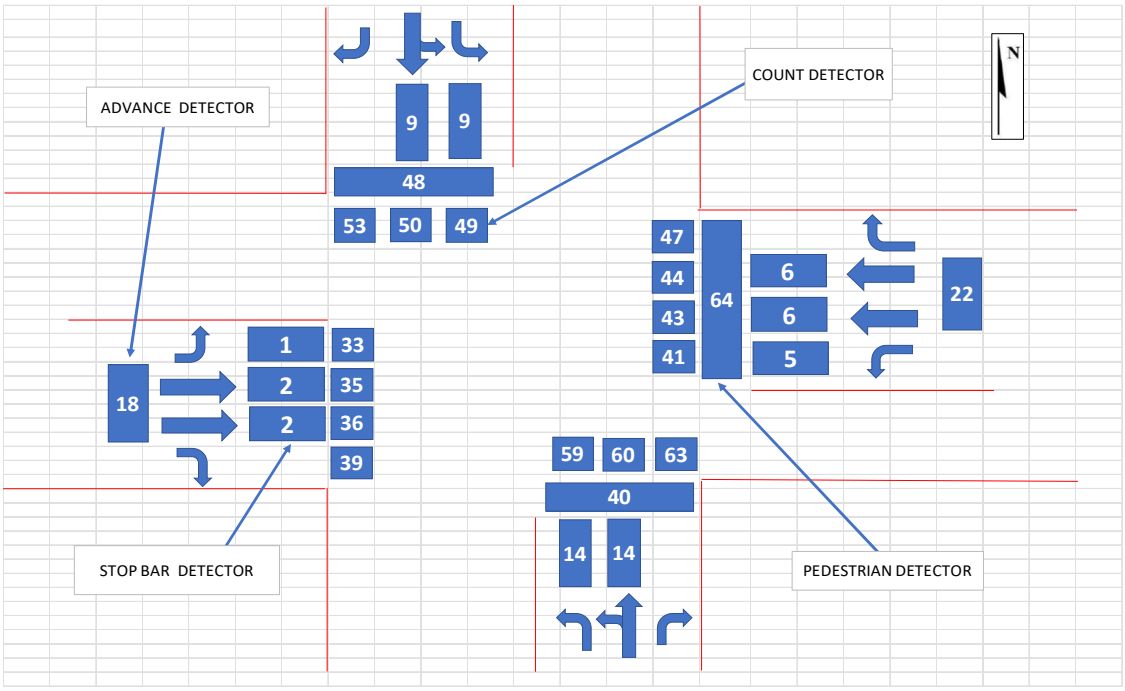
ZZ. SL District Traffic Signal Detection System

1.0 Description. This work shall consist of providing detectors for signalized intersections that will support advance traffic signal performance measures (ATSPM) on the Commission's St. Louis District roadways. Detectors shall be in accordance with the Missouri Standard Specifications for Highway Construction (latest version) and installed to provide detection at locations as shown on the plans or as directed by the Engineer in accordance with Section 902. If any information conflicts between Section 902 and this JSP, the JSP shall supersede.

2.0 Detector Zones. The following detector zones shall be placed as shown in the plans:

- Stop Bar Detection
- Advance Upstream (Performance Measures)
- Dilemma Zone
- Turn Counts
- Advance Video Zones (if applicable)
- Radar Zones (if applicable)
- Advance Data Collector (if applicable)
- Bicycle/Pedestrian (see Section 2.1)

MO 100 @ New Ballwin Rd



2.1 Bicycle/Pedestrian Zones. Bicycle and/or pedestrian zones shall be provided as directed by the Engineer. Specific zone placement and description as required by vendor shall be reviewed and approved by the Engineer.

3.0 Performance Measures. In addition to presence detection, the detection system shall be capable of providing data to an advanced traffic signal controller that can perform at a minimum the following calculations in real time for each detection zone without the addition of another device:

- Speed
- Volume
- Lane Occupancy
- Vehicle Classification
- Other available performance measures

For speed calculations thru movements are required for all detection installations. Turning movement measurements are required for all detection installations. For volume measurements/calculations both mainline thru and all turning movements are required. All values are to be assigned to detector channels within the controller. Other performance measures must be clearly defined. In all cases all performances measures must be ultimately available in an easily usable, exportable format. Turning movement counts shall be installed per the detector setup diagram(s) above to include all lanes. The Contractor shall provide documentation to the Engineer to confirm the volumes are configured and operational through the detection system. The Contractor shall also provide a final schedule of detector assignments in the .pdf format to the Engineer and the Commission's signal maintenance supervisor. Performance measurement data must be configured and fed into the Commission's

ATSPM platform with data storage confirmed, see Section 5.0. If utilized on the project, the Contractor's Traffic Engineer shall assist in this task.

4.0 Material. The Contractor can choose from the following list of detector types according to the exceptions noted below:

- Video Image
- Radar

Reference each detection type's subsection for specific allowable models. Unless otherwise specified on the plans, the Contractor may supply more than one type of detector and customize the installation based on field conditions, as approved by the Engineer.

4.1 Video Detection. If video detection is selected, the following provisions shall also apply.

4.1.1 Description. The Contractor shall furnish and install all equipment, materials, software and other miscellaneous items that are required to provide a fully functional Video Detection System for the control of vehicular and pedestrian traffic signals.

4.1.2 Material. The video detection system shall consist of power supply, hard-wired video cameras, all necessary video and power cabling with end connectors, mounting brackets, surge protection as recommended by the manufacturer, video detection processors/extension modules capable of processing the number of camera and phase combination video sources shown on the project plans. The video detection system will be defined as the complete assembly of all required equipment and components for detection of vehicles. Each video detection system shall consist of the video camera(s), lightning arrester for video cabling, processor unit(s), control device (track ball or keypad; no mouse allowed), software and license for system control via a computer (if applicable), communication components, and a color monitor. The video detection system shall have the most current available firmware installed. All camera views shall be obtainable without requiring the disconnection and reconnection of cables within the system. The video detection systems in the list below are the only systems that are tested, fully functional, and approved for use in the St. Louis District.

- Autoscope Vision
- Iteris Vantage Next
- Aldis Gridsmart Smart mount Camera (Performance Module to be included)

4.1.3 Installation Requirements. The video detection system shall be installed per the manufacturer's recommendations. The installer shall be certified by the video detection system's manufacturer to install the system. All CAT5 cable runs (if used) shall be continuous without splice from the cabinet to the camera. If requested by the engineer, a factory certified representative from the supplier shall be available for on-site assistance for a minimum of one day during installation. The bottom of the video camera shall be mounted per the manufacturer's recommendations, unless otherwise indicated on the plans or approved by the Engineer. The video detection system shall not be installed on pedestal signals unless otherwise directed by the Engineer. The video detection system shall not be installed on a 15' luminaire arm unless otherwise directed by the Engineer.

A separate grounded 120 VAC service outlet shall be provided in the controller cabinet for supplying power to the parts of the video detection system requiring AC power. Use of the

grounded service outlet located on the cabinet door will not be permitted. The video detection system must integrate/be compatible with an Advanced Transportation Signal Controller (ATC).

4.1.4 Detection Zones. The detection zones shall be created by drawing the detection zones on the video image. A graphical user interface shall be built into the video detection system and displayed on a video monitor or computer. It shall be possible to edit previously defined detector configurations to fine-tune detection zone placement. When a vehicle is detected by crossing a detection zone, there shall be a visual change on the video display, such as a flashing symbol or a change in color or intensity to verify proper operation of the video detection system.

4.1.5 Performance. Overall performance of the video detection system shall be comparable to inductive loops. Using camera optics and in the absence of occlusion, the video detection system shall be able to detect vehicle presence with 98% accuracy under normal day and night conditions with only slight deterioration in performance under adverse weather conditions, including fog, snow and rain. When visibility exceeds the capabilities of the camera, the video detection system shall default to placing a call on all detectors. Supportive documentation is required to meet this specification and shall be provided to the Engineer before installation.

4.1.6 Monitor. The monitor shall be an LCD active matrix with a minimum 7” diagonal screen color monitor, an NTSC-M system and BNC video in-out connections built into the housing. The unit shall be compact and lightweight, securely mounted to the cabinet shelving, have low power consumption, constructed to operate under extreme temperature conditions, and run on AC power. AC adaptor shall be included. The monitor shall be installed to automatically power on when the cabinet door is opened and automatically power off when the cabinet door is closed. A manual on/off switch shall be provided.

4.1.7 Video Camera and Housing. The camera shall produce a color video image of vehicles during daylight hours, with an optional production of black and white images during nighttime hours. The video shall produce a clear image for scenes with a luminance from a minimum range of 0.18 to 929 foot-candles (2.0 to 10,000 lux). The camera shall provide a minimum resolution of 430 lines horizontal (TVL) and 350 lines vertical under NTSC operation. The camera shall include an electronic shutter or auto iris control based on average scene luminance and shall be equipped with an auto iris lens. sun shield that prevents sunlight from directly entering the lens. The sun shield shall include a provision for water diversion to prevent water from flowing in the camera field of view and shall be able to slide forward and back.

4.1.8 Video Detection System Connections. All bus connections in the video detection system shall be corrosion resistant. Serial communications to a computer shall be through an RS-232/RS-422 serial port through a subminiature “D” connector with a computer running supplied system software. The port shall have the capability to access detection system data as well as the real-time imagery needed to show detector actuations. The processor shall have a RJ-45 plug using Ethernet 10/100 protocols. The equipment shall be provided with either a NEMA TS1 or NEMA TS2 interface as shown on the plans.

For TS2 systems, the video detection system shall be equipped with a TS2 Type 1 detector interface, where detector information is transmitted serially via an RS-485 data path. A 15-pin sub-miniature "D" connector, meeting the requirements of the TS2 standard, shall be used for the serial detector output. A minimum of 32 detector outputs is required, with the capability of expansion to 64 outputs if required based on the design plans.

The contractor shall be responsible for any changes or additions to either an existing or new cabinet in order to provide a properly functional video detection system and monitor display. This may include, but is not limited to, additional SDLC connectors, an MMU (malfunction management unit), shelf relocation and component reorganization. No direct pay for any changes or additions. All required connections will be considered part of the video detection system installation.

4.1.9 Documentation. The contractor shall provide one bound copy and one electronic version (pdf format) of the user's manual.

4.2 Radar Detection. If radar detection is selected, the following provisions shall also apply.

4.2.1 Description. Provide, install and test continuous tracking advance detector (CTAD) units and cabinet interface to detect range, speed, and vehicle estimated
time of arrival (ETA) to the stop bar for vehicles or clusters of vehicles moving in the user selected direction of travel. The CTAD shall also detect instantaneous roadway efficiency. This specification sets forth the provisions for a radar detection system that detects vehicles, pedestrians, bicycles, and motorcycles on roadways and provides vehicle presence and full-motion tracking.

4.3.2 Material

4.3.2.1 Stop Bar Detector. The radar detection systems in the list below are the only systems approved for use in the St. Louis District. Installation of radar detection systems shall follow both the specifications below and the manufacturer's instructions.

- WAVETRONIX SmartSensor
    - Matrix

Provide a radar detection system with the following features.

- Shall be able to track/detect a minimum of 64 objects
- Shall be able to operate in a temperature range between -30 degrees and 165 degrees F
- The detection zones shall be configurable based off several factors such as classification, ETA, speed, presence, and delay.
- The radar sensor shall be forward fire
- The sensor shall operate in the 25 GHz band
- The sensor shall be housed in a sealed IP-67 enclosure

4.3.2.2 Advance Detector. The radar detection systems in the list below are the only systems approved for use in the St. Louis District. Installation of radar detection systems shall follow both the specifications below and the manufacturer's instructions.

- WAVETRONIX SmartSensor
    - Advance
    - Advance Extended
- Iteris Vector

- In addition to the specifications listed in Section 4.3.2.1, the detection range shall also cover the dilemma zone distances prescribed in section 2.1.

4.3.2.3 Power and Communications.

- Power and communications cabling shall be installed per manufacturer specifications
- The radar sensor shall operate at 24 VDC
- Power consumption shall be no more than 38 watts
- If required, the advance detection System shall include all equipment to communicate wirelessly.

4.3.2.4 Contact Closure Card. Any contact closure card shall be compatible with a NEMA detector rack and shall be installed by manufacturer specifications.

4.3.2.5 Lightning Surge Protection. The CTAD shall include surge protection hardware installed per manufacturer specifications. The hardware shall be accepted by the engineer before installation in the cabinet.

4.3.3 Construction Requirements.

4.3.3.1 Mounting Location. All mounting hardware shall be installed by manufacturers specifications. The CTAD shall be mounted as follows:

- at a height that is within the manufacturer's recommended mounting heights.
- The radar shall be positioned so that all detection zones needed for an approach can be captured.
- in a forward-fire position, looking towards either approaching or departing traffic.

4.3.3.2 Induction Card Rack Interface. {Install the contact closure card in the existing induction card rack} ***or*** {Install a 4-position induction card rack with power supply} and configure based on manufacturer's instructions to provide all needed detection outputs. Any power supply cards for the induction card rack needed for proper operation of the CTAD shall be provided and installed by the contractor.

4.3.3.3 Support. A factory-certified representative from the supplier shall be available for on-site assistance for a minimum of one day during installation and shall provide two (2) days of local training after the CTAD has been installed and are operational.

4.3.3.4 Acceptance Testing. The contractor shall develop a proposed test procedure for the CTAD and submit it to the Engineer for approval. It must include visual verification of vehicle detections being received. Each detector shall be tested separately. Revise the proposed test procedure until it is acceptable to the Engineer. Provide all equipment and personnel needed to safely conduct the tests. Arrange for the Engineer's representative to witness the tests. Give the Engineer a report documenting the result of the tests.

4.3.4 Documentation and Software.

4.3.4.1 Prior to purchasing the CTAD system, the contractor shall submit five copies of catalog cut sheets and the environmental testing results to the Engineer for approval.

4.3.4.2 The contractor shall provide five copies of the operation and maintenance manuals for the CTAD system.

4.3.4.3 Contractor shall provide one copy of the software and any cables needed to interface with the system.

4.3.4.4 Contractor shall provide the CTAD installation kit, if applicable, to the Commission upon completion and acceptance of the project.

5.0 Communication with Advanced Transportation Management System (ATMS). The detection systems and all performance measure data should be fed directly into the Commission's current ATSPM platform (currently through TransSuite). All data must be online and verified by contractor to be fully operational and available for data output reporting via the Commission's ATSPM platform. In addition, data storage for long-term storage use should be configured properly on the Commission's ATSPM platform. The Contractor shall be responsible for ensuring the firmware of all detection works with the Commission's ATSPM platform. If utilized on the project, the Contractor's Traffic Engineer shall assist in this task.

6.0 Technical Support for Detection System. The detection system(s) chosen for installation shall be free of defects in material and workmanship. For five (5) years, technical support from factory certified personnel or factory certified installers shall be available from the supplier. Ongoing software support by the supplier shall include updates for the processor unit and computer software and shall be provided at no cost during this two-year period. The update of the processor unit software to be NTCIP compliant shall be included. Detection system(s) must not be within 5 years of end of support or sale by manufacturer.

7.0 Construction Requirements. Construction requirements shall conform to Sec 902.

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

9.0 Basis of Payment. Measurement and payment for work covered by this specification shall include all equipment, materials, tools, labor, programming, testing, and documentation necessary to provide a detection system **per intersection** and shall be paid at the contract unit price as follows:

Item No.	Unit	Description
902-99.02	Each	Misc. SL District Traffic Signal Detection System

AAA. Landscaping Restoration

1.0 Description. This work shall consist of restoring existing landscaped areas that are disturbed by construction activities as shown on the plans or as directed by the Engineer.

In "cut" areas, the existing landscape material (decorative rock, mulch, etc.), fabric and vegetation shall be removed within the grading limits and then the existing ground shall be cut to

grade. After the existing ground is cut to grade, the existing fabric, vegetation, and landscape material shall be placed back in their original locations as directed by the Engineer.

In “fill” areas, additional “in-kind” landscape material shall be added to the existing landscape material to bring it up to the proposed grade as directed by the Engineer. Existing vegetation may need to be removed and replanted in order to bring it up to proposed grade as directed by the Engineer.

Any existing landscape material, fabric or vegetation damaged by the Contractor during construction shall be replaced “in-kind” at his/her expense as directed by the Engineer.

2.0 Method of Measurement and Basis of Payment. Landscaping restoration will be measured and paid for at the unit bid price per square yard. Payment will be considered full compensation for all labor, equipment and material to complete the described work. All expense incurred by the contractor in compliance with the above requirements shall be considered as completely covered by unit prices for:

Item No.	Unit	Description
803-99.05	Sq Yd	Misc. Landscaping Restoration

BBB. Pipe Bollard, 3.5 FT.

1.0 Description. This work shall consist of installing steel pipe bollards at the locations shown on the plans.

2.0 Material Requirements.

2.1 Post. Posts shall be 78-inch long 4-inch diameter (4.5-inch O.D) steel pipe filled with concrete. Concrete shall comply with Sec 902.

2.2 Foundation. Concrete shall comply with Sec 902.

2.3 Paint. Surface preparation of the steel surface for the aliphatic polyurethane finish coat shall be in accordance with the product specifications for the finish coat. The exterior of shall be coated with an aliphatic polyurethane finish coat to provide a total dry film thickness of 4 mils minimum and 6 mils maximum. The color of the finish coat shall be yellow (Federal Standard #33538).

3.0 Construction Requirements. The post shall be installed in a foundation within the sidewalk or pavement. The foundation shall have a 16-inch diameter and 42-inch depth. The post shall be installed 36 inches below finished grade; leaving 6 inches of concrete below the post. The paint shall be applied after installation.

4.0 Method of Measurement. Final measurement of steel pipe bollard, 3.5 ft will be made per each. This shall include the dome cap, steel pipe, concrete forming tube, concrete, removal of existing concrete or asphalt pavement, additional concrete to restore a smooth finished grade surrounding the bollard, and all miscellaneous appurtenances to construct the bollard as shown on the plans.

5.0 Basis of Payment. Payment for furnishing all labor, equipment, materials, labor, and tools, including all items listed in paragraph 4.0 Method of Measurement necessary to place steel pipe bollards shall be completely covered by the contract unit price for:

Item Number	Unit	Description
902-99.02	Each	MISC (STEEL PIPE BOLLARD, 3.5 FT.)

CCC. Paved Approach, High Early Strength

1.0 Description. This work shall consist of providing a concrete mix design with 24 hour high early strength to be placed as specified in the contract documents or as directed by the Engineer. The high early strength properties shall be in accordance with this provision.

1.1 This job special provision shall apply to 14606 Manchester Road, Parcel 582.

1.2 The contractor shall have a 24 hour consecutive time period to remove and replace the existing paved approach as outlined herein.

1.3 The contractor shall notify the property owner 3 weeks prior to the commencement of construction activities related to vehicular access to Parcel 582.

1.4 This work shall include placing concrete pavement for the driveway approach and ADA pedestrian access route across the driveway as indicated on the plans.

2.0 Liquidated Damages. The contractor shall be subject to liquidated damages specified in the amount of **$1,000 per hour increment** after the specified 24 hour consecutive time period that vehicle access has not been reestablished to Parcel 582.

3.0 Materials. All material, proportioning, air-entraining, mixing and transporting of concrete shall be in accordance with Sec 501 as applicable to pavement concrete, except as noted herein.

3.1 High Early Cement Requirements. The cement shall meet the requirements of ASTM C1600 for Type VRH or Type URH. Other cement types are not allowed.

3.2 High Early Cement Admixtures. The use of chemical admixtures is allowed and shall be in accordance with AASHTO M 194. Chloride accelerators are not allowed.

3.3 High Early Mix Requirements. The concrete mix design shall meet a minimum compressive strength of 3000 psi within the 24 hour consecutive time period; while maintaining initial workability to effectively place the concrete and meet the requirements of this specification.

3.4 High Early Certification. In addition to the mix design information required in Sec 501.3; the contractor shall submit ASTM C 666 – Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing test results from an independent laboratory with a concrete mixture containing similar cement type and amount in comparison to the approved mix design.

For acceptance, the concrete mixture tested, shall meet a minimum durability factor of 80 percent.

4.0 Construction. All construction requirements shall be in accordance with Sec 502 except as follows:

4.1 General Inspection. All materials shall be subject to inspection and sampling by MoDOT at the source of manufacture, intermediate shipping terminal or destination. MoDOT will be allowed free access to all facilities and records as required for inspection and sampling.

4.2 Compressive Strength Requirements. The concrete opening strength to all traffic shall be a minimum compressive strength of 3000 psi. Light construction traffic is allowed when the concrete achieves a minimum compressive strength of 2000 psi.

4.3 Curing. After concrete placement and after surface irregularities have been removed, the concrete surface shall be given a uniform finished by broom or other methods approved by the engineer. Immediately after texturing, the concrete shall have a white pigmented membrane applied in accordance with Sec 502.

4.4 Testing. The concrete mixture shall be within the specified limits for compressive strength, pavement thickness, and air content. The QC and QA test frequencies shall follow Sec 613.10.

5.0 Payment. The contract unit price shall be considered as full compensation for all the labor, equipment, materials, and other construction involved to complete the work. The following is the Pay Item Number:

Pay Item Number	Description	Unit
608-99.05	Misc. Paved Approach, 8 In., High Early Strength	Square Yards

DDD. Inlet Cleanout

1.0 Description Some storm sewer inlets in the improvement locations are filled with debris. At the direction of the Engineer, the Contractor shall clean out inlets and dispose of the debris.

4.0 Basis of Payment: The Inlet Cleanout will be paid for as EACH.

Item Number	Unit	Description
604-99.02	Each	MISC (Inlet Cleanout)

EEE. Inlet Top Replacement (In Kind)

1.0 Description. This work shall consist of removing and replacing (in kind) the existing inlet tops/ stones, grates, lids/frames/covers and bearing plates as shown on the plans.

2.0 Construction Requirements. The contractor shall field verify the size of the inlet and required grate/lid/frame opening area prior to ordering the corresponding curved vane grate covers, drop inlet tops/stones, lids/frames/covers and grate and bearing plates. The contractor shall saw-cut the existing pavement, median or shoulder around the inlet to provide the concrete

pad around the inlet top/stone in accordance with the dimensions shown in the plans. If needed, the inlet shall be adjusted to the proper elevation. The contractor shall also repair any damage to the inlet, inlet invert, or pipe connection to the inlet.

3.0 Method of Measurement. Measurement for replacing drop inlet tops/stones will be per each and will include, but not limited to, saw-cutting, removing pavement, removing median, removing curb, removals of the existing inlet tops/stones and grate and bearing plates, and furnishing and installing the new inlet tops/stones, lids/frames/covers, grates, bearing plates, and concrete curb.

4.0 Basis of Payment. Payment for furnishing the labor, materials, equipment, and excavation necessary to install the new inlet top and grate and bearing plates shall be considered completely covered by the contract unit price for:

Item No.	Unit	Description
731-99.02	Each	Inlet Top Replacement (In Kind)

FFF. Grated Trench Drain

1.0 Description. This work shall consist of removing and replacing a new trench drain, grates and connection to drop inlets. Trench drain assembly can be POLYCAST Series 900 Pre-Sloped
Trench Drain System with POLYCAST Heavy Duty Ductile Iron Grate & Frame (NonRemovable); or approved equal.

1.1 Trench drain shall have a nominal width of 6 inches.

2.0 Material. All material shall be in accordance with Division 1000, Material Details, and specifically as follows.

2.1 Trench Drain. All materials shall meet or exceed AASHTO H-20 loading criteria.

2.1.1 Grates. Grates shall be ductile iron or other durable material that meets or exceeds AASHTO H-20 loading criteria. Grates shall have a minimum open area of 60%

3.0 Construction Requirements. All work shall be performed in accordance with the Trench Drain manufacturer's recommendations and as approved by the engineer.

3.2 Contractor is required to install non-removable grates within the limits shown on the plans. Grates shall be affixed in a manner that reduces the chance of being dislodged by traffic. Bolting or other locking devices are not acceptable.

3.3 Contractor is required to provide a drainage connection from the trench drain to facilitate drainage into the existing or proposed drainage system as shown on the plans. Contractor shall also flush pipe run to ensure proper drainage.

3.4 Trench drain finished grade should match the grade of the proposed entrance.

4.0 Method of Measurement. Trench Drains shall be measured complete in place and will be made to the nearest foot along the geometrical center of the trench. The revision or correction will be computed and added to or deducted from the contract quantity.

5.0 Basis of Payment. Payment will be made for compliance with this provision including all labor, excavation, equipment, and material necessary with installation of the trench drain assembly at the contract unit price for the following pay item:

Item Number	Unit	Description
604-99.03	LF	MISC (Grated Trench Drain)