

JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)

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

A.	General - Federal JSP-09-02G	1
B.	Contract Liquidated Damages JSP-13-01B	1
C.	Work Zone Traffic Management JSP-02-06J	2
D.	Emergency Provisions and Incident Management JSP-90-11A	5
E.	Project Contact for Contractor/Bidder Questions JSP-96-05	6
F.	Supplemental Revisions JSP-18-01R	7
G.	Utilities JSP-93-26F	10
H.	Utilities (City Utilities)	14
I.	Quality Management NJSP-15-22	15
J.	Optional Pavements JSP 06-06G	21
K.	Excess Material	22
L.	Fertilizing, Seeding, and Mulching	22
M.	Linear Grading for ADA Facilities - SW	23
N.	ADA Compliance and Final Acceptance of Constructed Facilities JSP-10-01B	24
O.	ADA Compliant Moveable Barricade	25
P.	Access to Commercial Properties - SW	26
Q.	Western Avenue Temporary Entrance	26
R.	Contact Information for the J8P3087D Parcel Owners	27
S.	Liquidated Damages Specified for Western Avenue Temporary Entrance JSP-93-28	27
T.	Liquidated Damages Specified for US160 Parallel ITS Fiber Relocation JSP-93-28	28
U.	Temporary Long-Term Rumble Strips JSP-13-04C	28
V.	Damage to Existing Pavement, Shoulders, Side Roads, and Entrances - SW	29
W.	Contractor Furnished Surveying and Staking - SW	29
X.	Contractor Furnished, Contractor Installed Radar Detection System	30
Y.	Temporary Traffic Signals and Lighting	31
Z.	Temporary Signal Timing	32
AA.	CCTV Camera Assembly	32
BB.	Ethernet Network Switch	35
CC.	ITS/Fiber Splice Cabinet	36
DD.	Cat 5e/Cat 6 Ethernet Cable	37
EE.	Uninterruptable Power Supply	37
FF.	Relocate Fiber Optic (FO) Cable	38
GG.	Removal and Delivery of Existing Signs JSP-12-01B	40
HH.	Relocate and Remount Existing Sign on New Post	41
II.	Modified Type A Gutter with Steel Plates	41
JJ.	Modified Type S Curb	42
KK.	Drainage System Inspection	42
LL.	Permanent Pavement Marking - SW	42
MM.	Flagging Procedure for Two-Lane Roadways (3-2-1 Cone Procedure) NJSP-17-03A	43
NN.	Signal Controllers	45

Job No.: J8P3087D

Route: 160 & 744

County: Greene

	<b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636
	If a seal is present on this sheet, JSP's have been electronically sealed and dated.
	JOB NUMBER: J8P3087D GREENE COUNTY, MO DATE PREPARED: August 2, 2021
	ADDENDUM DATE:
Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: All	

JOB  
SPECIAL PROVISION

A. General - Federal JSP-09-02G

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

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

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

General Provisions & Supplemental Specifications

Supplemental Plans to July 2021 Missouri Standard Plans  
For Highway Construction

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

B. Contract Liquidated Damages JSP-13-01B

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

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

Notice to Proceed: January 31, 2022  
Completion Date: December 1, 2022

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

Job Number	Calendar Days	Daily Road User Cost
J8P3087D	206	\$7,600
J8P3170*	108	\$7,600
J8S3168*	54	\$7,600

\*See J8P3170 & J8S3168 JSPs for further information on those projects.

**3.0 Liquidated Damages for Contract Administrative Costs.** Should the contractor fail to complete the work on or before the completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **\$1,500** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified completion date or calendar days.

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

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

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

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

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

## **2.0 Traffic Management Schedule.**

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

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

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

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

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

### **2.5.1 Traffic Safety.**

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

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

advance of the end of the traffic queue on divided highways and no less than 500 feet and no more than 0.5 mile in advance of the end of the traffic queue on undivided highways.

### **3.0 Work Hour Restrictions.**

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

Memorial Day  
Labor Day  
Thanksgiving  
Christmas  
New Year's Day

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

12:00 noon July 2, 2021 – 6:00 a.m. July 6, 2021  
12:00 noon July 1, 2022 – 6:00 a.m. July 5, 2022  
12:00 noon June 30, 2023 – 6:00 a.m. July 5, 2023

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

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

Route 160 Eastbound:

7:00 p.m. - 5:00 a.m. seven days a week

Route 160 Westbound:

7:00 p.m. - 5:00 a.m. seven days a week

**3.4** Any work requiring a reduction in the number of through lanes of traffic shall be completed during nighttime hours. Nighttime hours shall be considered to be **7:00 p.m. to 5:00 a.m.** for this project.

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

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

#### **4.0 Detours and Lane Closures.**

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

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

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

#### **D. Emergency Provisions and Incident Management JSP-90-11A**

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

Job No.: J8P3087D  
Route: 160 & 744  
County: Greene

area engineer's office shall also be notified when the contractor requests emergency assistance.

Resident Engineer – Brad Gripka: 417-895-6720 (Office) or 417-834-6976 (Mobile)
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**2.0** In addition to the 911 emergency telephone number for ambulance, fire or law enforcement services, the following agencies may also be notified for accident or emergency situation within the project limits.

Missouri Highway Patrol – Troop D: 417-895-6868	
MoDOT Customer Service: 417-895-7600	
Greene County Sheriff - 417-868-4040	Greene County Office of Emergency Management: 417-869-6040
City of Springfield Fire - 417-874-2300	City of Springfield Police - 417-864-1810

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

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

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

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

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

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

Jason Evenden, Project Contact  
Southwest District  
3025 E. Kearney Street  
Springfield, MO 65803

Telephone Number: 417-895-7742  
Email: [Jason.Evenden@modot.mo.gov](mailto:Jason.Evenden@modot.mo.gov)

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



F. Supplemental Revisions JSP-18-01R

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.

#### COVID-19 Safety

**1.0 Description.** The coronavirus disease 2019 or COVID-19 has reached a pandemic stage across the United States, including the State of Missouri. To reduce the impact of COVID-19 outbreak conditions on businesses, workers, customers and the public, the contractor shall be aware of all COVID-19 guidance from the Center for Disease Control (CDC) and other government health mandates. The contractor shall conduct all operations in conformance with these safety directives. The guidance may change during the project construction and the contractor shall change and adapt their operation and safety protocols accordingly.

**2.0 Safety Plan.** The contractor shall include these procedures in the project safety plan as called for in the contract documents and revise the safety plan as needed.

**3.0 Essential Work.** In accordance with any state or local Stay at Home Order, care for the infrastructure has been deemed essential and MoDOT is moving forward with construction projects, this project is considered essential and the contractor and their employees, subcontractors and suppliers are considered essential business and performing essential functions.

**4.0 Basis of Payment.** Compliance with regulations and laws pertaining to COVID-19 is covered under Sec 107 of the Missouri Standard Specifications for Highway Construction. No direct payment will be made for compliance with this provision.

#### Anti-Discrimination Against Israel Certification

By signing this contract the Company certifies it is not currently engaged in and shall not, for the duration of the contract, engage in a boycott of goods or services from the State of Israel, companies doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel, or persons or entities doing business in the State of Israel as defined

by Section 34.600 RSMo. This certification shall not apply to contracts with a total potential value of less than One Hundred Thousand Dollars (\$100,000) or to contractors with fewer than ten (10) employees.

G. 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:

<u>Utility Name</u>	<u>Known Required Adjustment</u>	<u>Type</u>
AT&T – Distribution Scott Hall 600 St. Louis, Room 630 Springfield, MO 65806 Phone: 417-849-8265 Email: <a href="mailto:sh4949@att.com">sh4949@att.com</a>	Yes (See Section 2.0)	Communications
City Utilities of Springfield - Electric T&D Jason Smith 301 E. Central St. Springfield, MO 65801 Phone: 417-831-8731 Email: <a href="mailto:jason.smith@cityutilities.net">jason.smith@cityutilities.net</a>	Yes (See Section 3.0)	Power
City Utilities of Springfield - Gas & Water Brandon Braun 301 E. Central St. Springfield, MO 65801 Phone: 417-831-8922 Email: <a href="mailto:brandon.braun@cityutilities.net">brandon.braun@cityutilities.net</a>	Yes (See Section 4.0)	Gas & Water
City Utilities of Springfield - SpringNet Bethany Forrester 301 E Central St. Springfield, MO 65801 Phone: 417-831-8529 Email: <a href="mailto:bforrester@springnet.net">bforrester@springnet.net</a>	Yes (See Section 5.0)	Communications
MoDOT – Signals, Lighting, ITS Joe Dotson 2455 N. Mayfair Ave. Springfield, MO 65803 Phone: 417-733-0664 Email: <a href="mailto:joseph.dotson@modot.mo.gov">joseph.dotson@modot.mo.gov</a>	Yes (See Section 6.0)	Signals, Lighting, ITS
City of Springfield – Traffic Tom Dancey	No	Signals/ITS

1107 W. Chestnut Expressway  
Springfield, MO 65802  
Phone: 417-864-1167  
Email: [tdancey@springfieldmo.gov](mailto:tdancey@springfieldmo.gov)

City of Springfield – Clean Water Services  
Matt Taylor  
840 Boonville Ave.  
Springfield, MO 65802  
Phone: 417-864-1934  
Email: [mtaylor@springfieldmo.gov](mailto:mtaylor@springfieldmo.gov)

Yes  
(See Section 7.0)

Sewer

Bluebird Network  
David Frazier  
800 NW Chipman Rd, Suite 5750  
Lee's Summit, MO 64063  
Phone: 816-807-0145  
Email: [david.frazier@bluebirdnetwork.com](mailto:david.frazier@bluebirdnetwork.com)

No

Communications

Mediacom  
Kyle Keller  
1533 S. Enterprise Ave.  
Springfield, MO 65804  
Phone: 417-496-8577  
Email: [kkeller@mediacomcc.com](mailto:kkeller@mediacomcc.com)

Yes  
(See Section 8.0)

Communications

Sho-Me Technologies  
Brad McGoon  
301 West Jackson St.  
Marshfield, MO 65706  
Phone: 417-859-3475  
Email: [dmcgoon@shomepower.com](mailto:dmcgoon@shomepower.com)

Yes  
(See Section 9.0)

Communications

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

**2.0 AT&T.** AT&T has existing aerial facilities attached to City Utilities' power poles along the north side of Kearney. CU's poles in the northwest and northeast quadrant of the Kearney and West Bypass intersection are being relocated to a point beyond the proposed roadway improvements. AT&T will transfer their existing aerial facilities to CU's new power poles once set. This transfer will be made within two weeks after CU electric completes their aerial primary electric relocation work.

NOTE: AT&T has a buried fiber line crossing Kearney near Sta 969+14. This line was potholed on the north side of Kearney and found to be below the flow line for the proposed drop inlet. The contractor shall exercise caution when excavating for the new drop inlet as this fiber line is not being relocated.

### **3.0 City Utilities Electric.**

**3.1 Overhead Primary.** City Utilities has a parallel aerial primary line running along the north side of Kearney. The existing aerial power is not in conflict with the new signal post/mast arms. However, the first supporting pole in the northwest and northeast quadrants of the intersection are being relocated outside of the proposed roadway improvements. CU will perform the power pole relocation ahead of the roadway construction.

**3.2 Underground Primary.** City Utilities has a buried three phase line in conflict with the proposed grading on the left side of Kearney near Sta 970+50. Roadway plans E1 (CU drawing 85613) contained within the bidding documents shows the existing and proposed buried alignment. The roadway contractor will be required to provide and install the new buried conduit along with installing the new junction cabinet indicated on the plans. Once the conduit and cabinet have been installed, CU crews will provide and install the new buried primary wire. The contractor shall refer to plan sheet E1 and City Utilities' job special provision for additional details and requirements.

**3.3 Whiteway Lighting.** The roadway contractor will be required to provide and install the conduit and bases for the new whiteway lighting. The plan for the whiteway lighting along with the associated bid items can be found on sheet E1 (CU drawing 85613). When the new conduit and bases have been installed, CU crews will provide and install the wire, light poles, and luminaires. Additional details and requirements regarding the whiteway lighting can be found in City Utilities' job special provision.

**3.4 New Secondary Electric Services.** MoDOT has two existing electric meters with CU in the northwest quadrant being impacted by the new southbound to westbound right turn lane. The contractor shall install both new Type 2 power supplies before disconnecting the existing electrical service. Before CU can set a new meter, they will require an electrical inspection to be performed by the City of Springfield. MoDOT will be responsible for uploading the electrical plans to PDox and securing the permit. The contractor will be responsible for paying the associated permit fees. The contractor shall be responsible for all necessary temporary traffic control while the new electrical services are being cut over. It should be noted that one of the electrical services being impacted provides the power to the signals and lighting at the I-44 and West Bypass interchange.

**4.0 City Utilities Gas & Water.** City Utilities of Springfield has a 12" water main crossing Kearney east of West Bypass and a 12" water main crossing West Bypass south of Kearney. Both water mains are clear of the proposed roadway improvements. In order to maintain future access, CU crews will be extending the existing steel casings out beyond the limits of the new roadway curb. The casing extension work will be done ahead of the roadway construction. There are no anticipated impacts to CU's existing gas facilities within the project limits.

**5.0 Springnet.** Similar to AT&T, Springnet has aerial fiber attached to City Utilities' power poles along the north side of Kearney. CU electric crews will be transferring the aerial fiber over to the new poles as part of their scope for the primary power relocation.

## **6.0 MoDOT Signals, Lighting, ITS.**

**6.1 Lighting and Signal Impacts.** City Utilities maintains the whiteway lighting along Kearney Street and along West Bypass. The contractor shall refer to Section 3.0 above, plan sheet E1, and City Utilities JSP for the new whiteway lighting requirements. The roadway lighting on the signal post and all signal equipment will be MoDOT owned and maintained. The contractor shall refer to the signal and lighting plan sheets for work to be performed as part of the roadway contract.

**6.2 MoDOT Power Supplies.** As noted in Section 3.4 above, both existing power supplies in the northwest quadrant are being impacted by the project. The power supply for the I-44/US160 interchange is being relocated to the north from its current location to aid the in the power cutover process. The contractor shall maintain the existing I-44/US160 power supply until the new Type 2 power supply has been energized. For the cutover, the contractor will be required to disconnect the wire from the existing power supply and pull back north to existing pullbox EX1 and reroute the existing wire to the new Type 2 power supply and make the necessary connections. The contractor will be responsible for all temporary traffic control at the I-44/US160 interchange until the cutover is complete. All cost associated with compliance of this specification shall be considered completely covered in the unit bid prices for the items included in the roadway contract.

**6.3 ITS Impacts.** From the existing fiber splice cabinet in the northwest quadrant of Kearney and West Bypass, MoDOT has a 24 count hybrid fiber going north to the I-44/US160 interchange, a 24 count hybrid fiber going east to the signal at Crethaven, and a 36 count SM fiber going south to the signal at Division Street. All three fibers are being impacted by the project. The contractor shall refer to the Relocate Fiber Optic Cable job special provision for requirements associated with the relocation of MoDOT's ITS fiber.

**7.0 City of Springfield Sanitary Sewer.** The City has an existing sanitary sewer manhole located 52.21ft left of Sta 966+15.58 (Kearney Street alignment). This manhole will be in the new southbound to westbound right turn lane. Based on the survey data and proposed surface, the cover/frame on this manhole will need to be lowered approximately 1.7ft. Site investigation shows the existing frame and cover sitting directly on top of the top conic/corbel section of the manhole. The contractor will be required to remove the top conic/corbel section in order to lower the cover/frame to the new roadway surface. The contractor shall be responsible for developing a plan to lower the cover/frame and having that plan approved by the City. The plan shall account for the drop in elevation as well as for the cross slope of the roadway surface. The contractor will be required to have a City inspector on site during the lowering process and comply with any directives given by the inspector. All cost associated with compliance of this specification shall be completely covered in bid item 604-20.10 Adjusting Manhole, per each.

**8.0 Mediacom.** Similar to AT&T, Mediacom has an aerial coaxial line attached to City Utilities' power poles along the north side of Kearney. Mediacom will transfer their existing aerial coaxial line to CU's new power poles once set. This transfer will be made within two weeks after CU electric completes their aerial primary work. Mediacom is located above AT&T on the power poles so their transfer will need to be completed before AT&T can transfer their facilities.

**9.0 Sho-Me Technologies.** Sho-Me Technologies has a 72 count parallel fiber running along the west side of West Bypass south of Kearney Street. This fiber turns west at the intersection and runs parallel along the south side of Kearney. The south leg of this fiber run is being impacted by the new 24" storm pipe being installed along the west side of West Bypass. Sho-

Me will be installing a new handhole over the top of the existing conduit run near Sta 103+05 (US160 south) then place a new parallel conduit run along the west R/W line going north to a new handhole set above their west conduit run. This west handhole will be the tie point for MoDOT ITS fiber south of Kearney. Sho-Me Technologies will have their relocation work completed prior to the start of the roadway construction.

#### H. Utilities (City Utilities)

**1.0 Description** City Utilities of Springfield (CU) will install new streetlight conductors, terminations, light poles, and led lights for all proposed foundation and conduit locations shown on CU electric sheets. Contractor shall install LED lights furnished by CU to be mounted on combination signal post light arms. CU will also be relocating CU primary underground electric facilities to accommodate proposed improvements.

#### **2.0 Construction Requirements.**

**2.1** Contractor shall coordinate to allow for existing streetlights to stay in service and minimize disruptions to lighting circuits as follows:

(a) Contractor shall install streetlight foundations and conduits prior to removal of existing streetlights. Contractor to coordinate with CU inspector prior to requesting poles be removed as to not leave intersection dark. Contractor shall notify CU a minimum of two weeks in advance of lighting foundation removal. Contact [jason.smith@cityutilities.net](mailto:jason.smith@cityutilities.net) or 417-831-8731 to provide notification.

**2.2** Contractor shall refer to CU electric line engineering drawing #85613 (drawing), included within the bid documents, for construction specifications for streetlight foundations and primary conduit relocations.

(a) Along Kearney, near station 970+00 to 971+00, a primary junction cabinet needs to be relocated. Contractor to notify CU inspector a minimum of two weeks in advance of this work being completed. CU will schedule a line crew to relocate primary electric and junction cabinet in conflict once CU inspector approves this work. Contractor shall coordinate with CU inspector before performing any work near the existing junction cabinet and the existing pole with primary riser.

(b) Contractor shall furnish and install conduit, install secondary pedestals furnished by CU (pull box), and streetlight foundations as specified on CU drawing. Contractor shall contact CU inspector seven days prior to beginning this work. After contractor installations have been inspected and approved by CU per the drawing general notes, CU will install secondary conductors, streetlight poles, and LED lights. Contractor shall complete the following items listed below:

(i) Contractor shall have anchor bolt form method approved prior to concrete pour by CU inspector.

(ii) Concrete streetlight foundations shall be level with a top smooth finish.

(iii) Anchor bolts shall be supported during concrete pour and shall be covered, to be kept free from debris and concrete.

(iv) Anchor bolts shall be perpendicular to the concrete top surface and properly supported during concrete pour to eliminate any movement. A



single form for the anchor bolts will not be accepted. Anchor bolts that are not perpendicular will be rejected.

(v)Anchor bolt square pattern shall have the nearest side parallel to the nearest roadway centerline, unless otherwise noted on the plans with orientation of light.

(vi)Contractor shall remove all forms, nuts, and washers from anchor bolts after work is complete.

**2.4** Contractor shall furnish all survey and staking as required to install infrastructure per CU drawing.

**2.5** For CU-furnished material, as indicated on CU drawing, contractor shall pickup material from CU facilities at 742 N. Belcrest, Springfield MO 65802 and transport material to the project location. At the material counter, contractor shall provide the activity number 794846 for CU-furnished material. The preferred times for material pickup are 9:00AM-3:00PM Monday – Friday, excluding holidays. The LED lights for the signal combination lights are located at 825 N. Belcrest, Springfield MO 65802. Material Counter is located on dock under roof along the south side of the building. At the material counter, contractor shall provide the activity number 794846 for CU- furnished material.

**2.6** Contractor shall notify CU inspector for inspection and approval of all Contractor installations prior to CU construction. Contact information and instructions are located in the General Notes on the CU drawing. Contractor shall not backfill prior to CU inspection and approval. Installation videos are available on the CU Youtube page for contractor reference at the following link: <https://www.youtube.com/user/CityUtilities/videos>

**2.7** CU has multiple overhead distribution crossings within the project limits.

(a) Contractor shall identify all overhead electric conductors within or near the project limits for any location.

Contractor shall maintain 10 feet of radial separation from all distribution conductors and comply with the Missouri Overhead Power Safety Act. Contractor shall familiarize themselves with The Missouri Overhead Powerline Safety Act. If necessary, Contractor shall contact CU Developer Services (417-831-8888) a minimum of ten days in advance, to make arrangements for line cover. Line cover is not an option for transmission line conductors. Contractor shall comply with any regulations imposed for working in proximity to transmission line conductors with a voltage of 69,000 volts or above.

**3.0** Missouri Department of Transportation (MoDOT) has two signal meters that will need relocated.

(a) Contractor shall call CU main number (417-863-9000) to request a meter to be set at a physical address supplied by the Contractor for roadway signals operated and maintained by the MoDOT. An approved electric inspection will be required prior to scheduling the electric meter transfer work.

**3.1 Basis of Payment.** – There is no direct payment for contractor compliance with provision described in this section.

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

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

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

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

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

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

**2.1** The QMP shall address all QC inspection and testing requirements of the work as described herein. A draft QMP shall be submitted to the Resident Engineer for review at least two weeks prior to the pre-construction conference. An approved QMP is required at least two weeks prior to the start of work, unless otherwise allowed by the engineer. Physical work on the project shall not begin prior to approval of the QMP by the engineer.

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

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

- a) Organizational structure of the contractor's project management, production staff, and QC staff, specific to this project.
- b) Name, qualifications and job duties of the Quality Manager.

- c) A list of all certified QC testers who will perform QC duties on the project, including sub-contract work, and the tests in which they are certified.
- d) A list of all QC inspectors who will perform QC inspection duties on the project, including sub-contract work, and the areas of inspection that they will be assigned.
- e) A procedure for verifying documentation is accurate and complete as outlined in Section 3.
- f) A procedure describing QC Inspections as outlined in Section 4.
- g) A procedure describing QC Testing, as outlined in Section 5, including a job specific Inspection and Test Plan (ITP).
- h) A procedure describing Material Receiving as outlined in Section 6.
- i) A list of Hold Points that are not included in the checklist forms, as outlined in Section 8.
- j) A procedure for documenting and resolving Non-Conforming work as outlined in Section 9.
- k) A procedure for tracking and documenting revisions to the QMP.
- l) A list of any approved changes to the Standard Specifications or ITP, including a reference to the corresponding change order.
- m) Format for the Weekly Schedule and Work Plans as outlined in Section 10, including a list of activities that will require pre-activity meetings.

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

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

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

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

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

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

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

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

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

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

**4.4** The contractor shall measure, and document on the DIR, the quantity for all items of work that require measurement. Any calculations necessary to support the measurement shall be included with the documentation. The engineer will verify the measurements prior to final payment.

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

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

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

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

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

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

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

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

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

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

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

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

**8.0 Hold Points.** Hold Points are events that require approval by the engineer prior to continuation of work. Hold Points occur at definable stages of work when the succeeding work depends on a QA review of the preceding work before work can continue.

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

**8.2** Prior to all Hold Point inspections, QC shall provide the engineer with the Daily Inspection Reports, Inspection Checklists, Test Reports, and Material Receiving Reports for the work performed leading up to the Hold Point. If the engineer identifies any corrective actions needed during a Hold Point inspection, the corrections shall be completed prior to continuing work. The engineer may require a new Hold Point to be scheduled if the corrections require a follow-up inspection.

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

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

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

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

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

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

**10.1** A Weekly Schedule shall be provided to the engineer each week that outlines the planned project activities for the following two-week period. This schedule shall include all planned work, identification of all new activities, traffic control events, and requested Hold Point inspections for the period. Planned quantity of materials, along with delivery dates should also be included in the schedule.

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

**10.3** A pre-activity meeting is required prior to the start of each new activity. The purpose of this meeting is to discuss details of the Work Plan and schedule, including all safety precautions. Those present at the meeting shall include: the production supervisor for the

activity, the Quality Manager, QC inspection and testing staff, and QA. The Quality Manager will review the defined responsibilities for QC testing and inspection personnel and will address any quality issues with the production staff. Attendees may join the meeting in person or by phone or video conference.

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

J. Optional Pavements JSP 06-06G

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

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

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

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

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

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

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

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

**4.0 Basis of Payment.** The accepted quantity of the chosen option will be paid for by the contract unit bid price for the following Pay Items.

Pay Item No. 401-99.05, Optional Pavement 11.5 In. Asphalt/9 In. PCCP, per square yard

K. Excess Material

**1.0 Description.** There will be excess material excavated on this project that will not be needed for completion of the J8P3087D. The contractor shall be responsible for disposing of this excess material off the right-of-way.

**2.0 Basis of Payment.** No direct payment will be made for overhaul, compaction, seeding or any other items needed for the disposal of this material.

L. Fertilizing, Seeding, and Mulching

**1.0 Description.** The contractor shall seed, mulch, and fertilize all areas disturbed during construction operations in accordance with Division 800 or as directed by the engineer.

**2.0 Construction Requirements.** The contractor shall use the seeding and fertilizing mixtures and rates shown below for all disturbed areas.

**2.1 Seeding.** In accordance with Section 805, the following seed mixtures shall be applied at the rate specified:

Cool Season Mixture Within the First 30 Feet Pounds Pure Live Seed (PLS) per Acre	
Tall fescue	80 lbs.
Teff grass	3 lbs.
Perennial ryegrass	6 lbs.
Annual ryegrass	5 lbs.
White clover	6 lbs.
Oats	5 lbs.
<b>TOTAL</b>	<b>105 PLS lbs./acre</b>

**2.2 Soil Neutralization.** In accordance with Section 801, the following fertilizing agents shall be applied at the rate specified:

	Pounds per Acre			
	Nitrogen (N)	Phosphorous (P205)	Potash (K2O)	Effective Neutralizing Material
Beyond 30'	40	160	80	0
Within 30'	80	320	160	0

**3.0 Mulch.** In accordance with Section 802 mulch overspray shall be used.

**4.0 Basis of Payment.** The accepted quantity of seeding will be paid for at the contract unit price for Item No. 805-10.00A, Seeding - Cool Season Mixtures. Items not specifically called out



in the contract for the completion of this item shall be considered subsidiary to other related items. No direct payment will be made for liming, fertilizing, mulching or seedbed preparation. All areas disturbed by the outside of the slope limits shall be seeded, mulched, and fertilized to these same specifications, at the contractor's expense.

M. Linear Grading for ADA Facilities - SW

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

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

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

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

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

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

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

**4.0 Basis of Payment.** The accepted quantities of Linear Grading for ADA Facilities will be paid for at the contract unit price for item 207-99.03, Linear Grading for ADA Facilities, per linear foot, and will be considered as full compensation for all labor, equipment, material, waste fees,

disposal agreements, material acquisition, or other construction costs involved to complete the described work.

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

N. ADA Compliance and Final Acceptance of Constructed Facilities JSP-10-01B

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

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

[www.modot.org/business/contractor\\_resources/forms.htm](http://www.modot.org/business/contractor_resources/forms.htm)

**2.1** The ADA Checklist is intended to be a helpful tool 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. Situations may arise where the checklist may not fully address all requirements needed to construct a facility to the full requirements of current ADA law. In those situations, the contractor shall propose a solution to the engineer that is compliant with current ADA law using the following hierarchy of resources: 2010 ADA Standards for Accessible Design, Draft Public Rights of Way Accessibility Guidelines (PROWAG) dated November 23, 2005, MoDOT’s Engineering Policy Guidelines (EPG), or a solution approved by the U.S. Access Board.

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

**3.0 Coordination of Construction.**

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

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

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

**4.0 Final Acceptance of Work.** The contractor shall provide the completed ADA Checklist to the engineer at the semi-final inspection. ADA improvements require final inspection and compliance with the ADA requirements and the ADA Checklist. Each item listed in the checklist must receive either a "YES" or an "N/A" score. Any item receiving a "NO" will be deemed non-compliant and shall be corrected at the contractor's expense unless deemed otherwise by the engineer. Documentation must be provided about the location of any non-compliant items that are allowed to remain at the end of the construction project. Specific details of the non-compliant items, the ADA requirement that the work was not able to comply with, and the specific reasons that justify the exception are to be included with the completed ADA Checklist provided to the engineer.

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

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

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

O. ADA Compliant Moveable Barricade

**1.0 Description.** The 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 moveable 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 the proposed improvements have been constructed.

**3.0 Method of Measurement.** Measurement for ADA Compliant Moveable Barricade will be made per each for each 6 feet (min.) unit provided.

**3.0 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 Pay Item No. 616-99.02 ADA Compliant Moveable Barricade, per each. No direct payment will be made for any necessary relocation of the ADA Compliant Moveable Barricade.

P. Access to Commercial Properties - SW

**1.0 Description.** While working on and around commercial entrances, the contractor shall make every reasonable effort to minimize any interference to business and to pursue the work diligently. Under no circumstances shall the contractor block ingress/egress to and from businesses during the normal business hours of each business unless approved by the property owner and the engineer.

**1.1** The contractor shall contact each business to advise them of the work that will take place before working around each business entrance. In some cases where a property has more than one entrance, the property owner may have a preference on whether to have one entrance closed while working around it or whether to have the entrances worked around one-half at a time. The contractor is required to do the work according to each individual property owner's preference. The contractor is not to disturb any existing trees, landscaping, small block walls or irrigation lines other than those items located within the limits of the new entrance at Western Avenue. See JSP Q for information on the Temporary Entrance requirements for Western Avenue. The contractor will solely be responsible for repairing any damage to the property caused by contractor operations.

**2.0 Basis of Payment.** No direct payment will be made to the contractor for all costs incurred with compliance of this provision.

Q. Western Avenue Temporary Entrance

**1.0 Description.** The Contractor shall construct a temporary entrance to replace the existing Western Avenue connection to Kearney (MO 744) when it becomes necessary to remove the existing access to Kearney to construct the new northeast right turn lane, deceleration lane, and Western Avenue paved approach. These items shall be constructed to the proposed final grade and dimensions of the Type 5 Aggregate, have Temporary Edge Treatment where necessary, be constructed simultaneously, meet all testing requirements, and have adequate drainage to properly drain the right turn area. Until final Optional Pavement and Paved Approach are constructed for this area, the Temporary Construction Entrance shall be covered with Temporary Surfacing per MoDOT Standards. Any additional Type 5 Aggregate placed above proposed final grade shall be considered incidental and must be removed prior to final paving operations. All trees and landscaping items located in the island at the entrance to Western Avenue that are affected by the proposed construction will be replanted in the grassy area just east of the island.

**1.1** The contractor shall contact the owners of the affected properties two (2) weeks prior to construction of the Temporary Entrance.

**2.0 Basis of Payment.** The accepted quantity of Temporary Surfacing will be paid for at the contract unit price for 104-10.00, Temporary Surfacing, per square yard. The accepted quantity of Type 5 Aggregate for Base (6 in. Thick) will be paid for at the contract unit price for 304-05.06, Type 5 Aggregate for Base (6 in. Thick), per square yard. The accepted quantity of Pavement Edge Treatment will be paid for at the contract unit price for 619-10.00, Pavement Edge Treatment per linear feet. The accepted quantity of Landscape Relocation at Western Avenue will be paid for at the contract unit price for 808-99.01, per lump sum. These item's unit

Job No.: J8P3087D  
Route: 160 & 744  
County: Greene

bid prices shall include the cost of all labor, equipment and materials to install, maintain, and remove the items during the construction of the project.

R. Contact Information for the J8P3087D Parcel Owners

Parcel-001

Seth Ruzi (General Counsel)  
678-335-6975  
12735 Morris Road Ext., Suite 400  
Alpharetta, GA 30004  
[sruzi@atriumhospitality.com](mailto:sruzi@atriumhospitality.com)

Kyle Bowman  
678-335-6936  
12735 Morris Road Ext., Suite 400  
Alpharetta, GA 30004

Parcel-002

Joe and Janie Corn (Property Managers)  
Joe: 417-839-2074  
Janie: 417-844-5323  
[Cornj47@gmail.com](mailto:Cornj47@gmail.com)

James Jura (Owner)  
816-492-6674  
1234 W. 58<sup>th</sup> Street  
Kansas City, MO 64113  
\*request to contact property

managers

Parcel-003

Chris Nattinger (Owner)  
417-838-4797  
1452 N. Cooper BLVD.  
Springfield, MO 65802  
[cnattinger@comcast.net](mailto:cnattinger@comcast.net)

Parcel-004

Karl Keller (Owner)  
417-861-8714  
1035 North State Highway 125  
Springfield, MO 65802-7244

S. Liquidated Damages Specified for Western Avenue Temporary Entrance JSP-93-28

**1.0 Description.** If construction of the Temporary Construction Entrance and suitable drainage at Western Avenue is not complete and open to traffic prior to **Seven (7) calendar days after full closure**, the Commission, the traveling public, and state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delay, with its resulting cost to the traveling public. These damages are not reasonably capable of being computed or quantified. Therefore, the contractor will be charged with

liquidated damages specified in the amount of **\$250 per day** for each full day that the construction of the Temporary Construction Entrance and suitable drainage at Western Avenue is not complete and 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 excess closure time.

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

T. Liquidated Damages Specified for US160 Parallel ITS Fiber Relocation JSP-93-28

**1.0 Description.** If the ITS fiber running parallel to US160 is not operational within **Three (3) calendar days of disconnection**, the Commission, the traveling public, and state and local police and governmental authorities will be damaged in various ways, including but not limited to, increased construction administration cost, potential liability, traffic and traffic flow regulation cost, traffic congestion and motorist delay, with its resulting cost to the traveling public. These damages are not reasonably capable of being computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of **\$500 per day** for each full day that the construction of the Temporary Construction Entrance and suitable drainage at Western Avenue is not complete and 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 excess closure time.

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

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

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

**2.0 Material.**

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

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

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

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

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

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

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

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

V. Damage to Existing Pavement, Shoulders, Side Roads, and Entrances - SW

**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 is not 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 from general construction shall be repaired within twenty-four (24) hours of the time of damage at the contractor's expense. Repair of the damaged pavement, shoulders, side roads, or entrances shall be as determined by the engineer.

**3.0 Method of Measurement.** No measurement of damaged pavement or shoulder areas or damaged 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 expenses.

W. Contractor Furnished Surveying and Staking - SW

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

**1.0 Description.** The contractor shall be responsible for all layout required on the project. This responsibility shall include, but not be limited to the following: Construction signing, transition milling, pavement marking, loop detectors, etc.

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

approval, all costs associated with re-staking and/or relocation will be at the contractor's expense.

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

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

**2.0 Basis of Payment.** No direct payment will be made to cover the costs associated with these additional requirements. All costs will be considered completely covered by the unit bid price submitted for Contractor Furnished Surveying and Staking.

X. Contractor Furnished, Contractor Installed Radar Detection System

**1.0 General.** Radar stop bar detection shall be installed for all approaches at the intersection of **MO 744** and **US 160**.

**2.0 Equipment.** All equipment related to radar detection will be provided by the contractor such as radar units, mounting brackets, and cables. Radar equipment must meet or exceed all the following requirements.

(a) Equipment must be FCC certified.

(b) Equipment must meet all NEMA TS2-2003 specifications for traffic control equipment.

(c) Each radar unit must be composed of multiple sensors to establish two-dimensional coverage.

(d) Radar Detection must be compatible with SDLC inputs.

**3.0 Construction Requirements.** The contractor shall be responsible for providing and installing all necessary items to make the new radar detection system operational. Input BIU 11 shall be used for radar detector inputs according to the chart below.

Radar Detection Inputs		
Input BIU 11		
Input	Phase	Detection Type
IO1	1	Stop Bar
IO2	2	Stop Bar
IO3	3	Stop Bar
IO4	4	Stop Bar
IO5	5	Stop Bar
IO6	6	Stop Bar
IO7	7	Stop Bar
IO8	8	Stop Bar



**4.0 Method of Measurement.** Method of measurement will be made per lump sum radar detection system installed by the contractor and acceptable by the engineer.

**5.0 Basis of Payment.** Payment for installation of the detection system will be completely covered by the contract unit price for Pay Item No. 902-99.02, Contractor Furnished, Contractor Installed Radar Detection System, per each.

Y. Temporary Traffic Signals and Lighting

**1.0 Description.** This work involves the furnishing, installation, maintenance and removal of temporary traffic signals and lighting through all phases of construction.

**2.0 Materials.** Temporary signals and lighting shall conform to Sec 902.

**2.1** At a minimum, installation of these temporary signals and lighting shall require connection to a power source and the following items:

- Vehicle Detection System
- Signal Heads, Type 3C (3-section head with Type I bracket)
- Wood Span Wire Poles
- Span Wire Assembly, Double Messenger
- LED A Luminaire
- Photoelectric Control
- Bracket Arms
- Controller Assembly Housing (see requirements below)
- Cable, 1 Conductor, Power (8 AWG minimum)
- Cable, 12 AWG 5 or 7 conductor (for signal heads)
- Cable, 12 AWG 2 conductor (for luminaries)
- Power Supply Assembly

This list is not intended to be all-inclusive and other items may be necessary for the proper operation of these signals.

**3.0 Construction Requirements.** Temporary signals and lighting shall be furnished, installed, relocated and maintained to properly handle traffic, as required, on Route 744 at the intersection of US 160 (West Bypass). Signals and lighting shall be installed as shown on the plans and as described in this special provision or as directed by the engineer. One luminaire will be required on each temporary signal pole.

**3.1** The temporary traffic signal installation and relocation during different phases of construction shall be maintained in operational condition until the new permanent signals and lighting are installed and operational.

**3.1.1** If the temporary signal installations become inoperable due to alterations, malfunctions or periods of shutdown for required maintenance or when one-way traffic control is required, the contractor shall provide adequate traffic control, including flaggers. In addition, adequate traffic control, including flaggers, shall be provided during the startup and shut down of this installation. Sign WO20-7b, Flagger (Symbol), shall be displayed in advance of the flaggers. The contractor shall submit traffic control plans to the engineer for approval.

**3.2** The temporary signals and lighting shall be removed after the new signals are up and operational. All equipment shall remain the property of the contractor.

**3.3** The contractor shall be responsible for arranging the electrical power needs required by this installation with City Utilities for US 160 and Route 744.

**4.0 Basis of Payment.** Payment for furnishing, installation, operation, relocation, maintenance and removal of this temporary signal and lighting installation, including all items required for proper operation of this installation, will be completely covered by the contract unit price for Pay Item No. 902-94.01, Temporary Traffic Signals and Lighting, per lump sum.

Z. Temporary Signal Timing

**1.0 Description.** The contractor is responsible for developing and inputting the timing for the temporary signals. MoDOT will provide the existing cycle lengths, splits, offsets and time of day information for the signals at Route 160 and Route 744. Signal timings shall be monitored and adjusted as required throughout construction. Assistance and coordination for timing with MoDOT staff as required or requested.

**2.0 Basis of Payment.** All expenses incurred by the contractor by reason of their compliance with this provision shall be considered as completely covered by the contract unit price for Pay Item No. 902-94.01, Temporary Traffic Signals and Lighting, per lump sum.

AA. CCTV Camera Assembly

**1.0 Description.** This Technical Special Provision establishes the requirements for the Closed Circuit Television (CCTV) Camera Assembly. This equipment consists of cameras with remotely controlled pan-tilt-zoom capability, and the ability to acquire video images of the various roadways within the corridor. Communications to the cameras are provided using the fiber optic and Ethernet cables designated in the contract.

**1.1 Camera.** The contractor shall provide and install the CCTV camera at the location designated in the plans. The camera shall be an Axis Q6074-E. All cabling necessary for camera operation shall be installed from the camera to the ITS cabinet and shall have lightning protection installed. These cameras are Power over Ethernet (POE) requiring just one cable installation to the camera no more than 100 meters (328 feet) from the ITS cabinet. The CCTV camera has been placed such that the cable shall be no longer than 328 feet. The contractor shall notify the engineer if placement of the CCTV pole or ITS cabinet is such that the cabling will exceed this distance. Camera installation shall be in accordance with all manufacturer specifications and recommendations. The contractor shall be responsible for installation of the camera and any subsidiary items necessary for the camera system to be complete and fully operational. The compression format shall be H.264, and shall be compatible with the camera software. The camera shall operate with a zoom of 35x and shall be IP addressable. Contact the engineer for the preferred communications parameters including IP address.

**1.2 Camera Pole Mounts.** The pole-mount camera assembly shall be mounted in a manner similar to that shown in the plans on new poles. It shall be possible to remove the camera for maintenance without disturbing the mounting assembly, and shall require the removal of only a

single multi-conductor connector. The support strut shown in the drawing is required to reduce undesirable movement of the camera assembly. All materials that make up the mounting assembly shall be galvanized or of stainless steel construction. Camera line-of-sight and location shall be verified with the engineer prior to installation.

**1.3 Video Surge Suppression.** The contractor shall provide surge suppression on all conductors entering the camera enclosures and equipment cabinets. The video suppressors shall meet the camera manufacturer's recommendations, which may include the following or approved equal:

1. EDCO for POE installations meeting camera manufacturer requirements

The contractor shall provide surge suppression on all conductors entering the signal cabinet. Video and data surge suppression shall utilize hybrid technology, employing a silicon avalanche diode. Power conductor surge suppressors shall be metal oxide varistors. Individual surge suppressor elements shall be isolated from each other with inductors. Resettable fuses shall be installed in series with all low voltage surge suppressors.

**1.4 Electrical Service.** Electrical service shall be provided by the electrical service present in the fiber optic splice cabinet.

**1.5 Qualified Personnel.** The contractor shall not perform any work until the manufacturer has certified that the contractor is qualified to install camera assemblies. Only personnel who have been trained by the manufacturer shall participate in the camera assembly installation, setup, and testing. The contractor shall include the Commission's representative as part of the manufactures training. The contractor shall notify Urban Traffic Supervisor Joe Dotson at 417-895-7599 (office) or 417-733-0664 (cell) a minimum of 7 days prior to any proposed scheduled training.

**1.6 Camera System Tests.** Each camera assembly furnished and installed by the contractor shall be tested per manufacturer and MoDOT specifications. These tests shall be conducted on each camera at the cabinet where the camera's local control capability is installed. The following shall be tested at these locations:

- Local operation of the camera via ethernet to a laptop computer web browser application.
- Demonstration that the pan and tilt speed, presets, and extent of movement meet requirements.
- Observing the camera output on a laptop while exercising the pan, tilt, zoom, focus, iris and power on/off functions.

**1.7 Camera System Configuration.** The contractor shall configure the cameras with the appropriate IP address, subnet, and gateway settings. These settings shall be provided by the engineer.

## **2.0 Materials.**

**2.1** The camera and pole mount shall be contractor furnished.

**2.2** The contractor shall provide cables for power, grounding, video, and camera control in accordance with the camera manufacturer's recommendations.

**2.3 Wiring.** All required power, grounding and Ethernet cable shall be furnished and installed by the contractor. The camera vendor must concur that the cable is compatible with the camera model used.

**2.3.1 Ethernet Cable.** Any Ethernet cable run outside of the signal cabinet shall be environmentally hardened, shielded, and outdoor rated 350 MHz Category 5e cable. The cable shall be riser rated, 24 AWG solid copper, have Polyolefin insulation, UV and oil resistant PVC jacket. Pair 1 shall be Blue, White/Blue, Pair 2 shall be Orange, White/Orange, Pair 3 shall be Green, White/Green and Pair 4 shall be Brown, White/Brown. The operating temperature shall be from -40° C to +70° C. The cable shall conform to the following standards: ISO/IEC 11801 Category 5e, NEMA WC 63, and ANSI/TIA-568-B.2 Category 5e. The cable shall be without splicing or joints for any single run. The contractor shall obtain instructions from the manufacturer about alternate architecture when length of a single run of CAT 5e cable exceeds 320 feet.

**2.3.2 RJ-45.** The RJ-45 plug connectors shall be used at both the CCTV camera and signal cabinet ends. The supplier of the CCTV camera shall approve the Category 5e cable, RJ-45 connector and crimping tool, and the manufacturer's instructions must be followed to insure proper connection.

**2.3.3 Media Converter.** The contractor shall supply and install a media converter in the relocated splice cabinet at Independence and in the existing splice cabinet at WB60. The purpose of the media converter is to transfer the camera controls/image from ethernet cable to fiber optic line and vice versa. By intended use, the converters will be used in pairs for the two way communications with 2 pairs in each splice cabinet. The converter shall be capable of transferring 10-/100-Mbps copper to 100-Mbps single-strand fiber, single mode, 1550-nm TX/1310-nm RX, SC, 20km. Acceptable products include but not limited to LHC028A-R2 and LHC029A-R2 as manufactured by Black Box Network Services.

### **3.0 Construction Requirements.**

**3.1** The contractor shall install the camera in the orientation shown on the plans to maximize the camera's view of traffic.

**3.2** The contractor shall connect the bottom of the pole to two or more ground rods using a bare, solid AWG # 6 copper wire. The contractor shall use exothermic welding for all ground wire connections, except for the connection to the pole which shall use the pole's grounding lug. The contractor shall use a device that measures resistance to ground using the three-point fall-of-potential method to ensure that the resistance from the air terminal to ground does not exceed 8 ohms. More ground rods shall be added if necessary to achieve this requirement.

**3.3** All cables shall be terminated on surge protectors.

**3.4** The contractor shall restrict the camera's field of view, if necessary, so that a user cannot use the cameras to look in the windows of dwellings. To the extent that it does not interfere with the use of the camera for traffic management purposes, the contractor shall ensure that a camera cannot be used to view residential property. Prior to creating these restrictions, the contractor shall submit to the engineer a written description of the proposed restrictions to be installed at each camera, and the proposed method of achieving them. It shall not be possible for an operator to override these restrictions without intervention by his or her supervisor.

Affixing a mask to the inside of the clear dome shall be an acceptable method to achieve this restriction. The contractor shall highlight situations in which there is a conflict between the need to protect privacy and the need to know about traffic situations. The contractor shall revise the field of view restrictions as directed by the engineer. The contractor shall coordinate all proposed camera restrictions with the Commission assigned representative from the Springfield Traffic Management Center.

#### **4.0 Acceptance Testing.**

**4.1** Upon delivery of a shipment of camera assemblies, the manufacturer's representative shall conduct a visual inspection and test of the camera assemblies to check for manufacturing defects and shipping damage. The camera assembly shall be powered during this testing, and tests shall follow procedures developed by the manufacturer and approved by the engineer. The engineer shall witness this testing and the contractor may witness this testing if he or she chooses. The manufacturer shall be responsible for replacing all defective units discovered by this testing.

**4.2** After installing the camera assembly, the contractor shall test it using the same procedures as the manufacturer's representative used when the camera assemblies were delivered. In addition, the contractor shall demonstrate that the agreed upon viewing restrictions have been implemented. If the installed camera assembly fails to operate properly, and the problem cannot be fixed by changing the wiring or setup parameters, the camera assembly will be deemed defective and the contractor shall return it to the manufacturer for replacement. Except for costs borne by the manufacturer under the warranty agreement, the cost of replacement shall be borne entirely by the contractor.

**5.0 Method of Measurement.** Final measurement shall be based on per each for item 910-37.00, CCTV CAMERA ASSEMBLY, INSTALLED, and per linear foot for item 910-99.03, CCTV ETHERNET CABLE.

#### **6.0 Basis of Payment**

**6.1** All costs incurred by the contractor for furnishing and installing the CCTV camera assembly, including all costs for cameras, mounting brackets and hardware, air terminal, surge suppression, conduit, grounding, network configuration, testing, training, and all other incidentals required for a fully functional CCTV camera system shall be considered as included in and completely covered by the contract unit price for item 910-37.00, CCTV CAMERA ASSEMBLY, INSTALLED, per each.

**6.2** All costs incurred by the contractor for furnishing, installing and connecting the Ethernet cable, including all incidentals, shall be considered as included in and completely covered by the contract unit price for item 910-99.03, CCTV ETHERNET CABLE, per linear foot.

#### **BB. Ethernet Network Switch**

##### **1.0 Ethernet Network Switch for Single mode fiber optics.**

##### **2.0 Ethernet Network Switch Requirements.**

The Ethernet network switch requirements shall include a managed Cisco 2960C-8TC-L switch for full compatibility with upstream devices. Two SFP gigabit fiber port adapters shall be

included. Two LC – ST singlemode fiber jumpers will be required for connection to the Fiber Distribution Unit.

The Cisco switch shall include all hardware necessary for mounting in 19" rack within the ITS/Fiber Splice Cabinet.

CC. ITS/Fiber Splice Cabinet

**1.0 ITS/Fiber Splice Cabinet.**

**1.1 ITS/Fiber Splice Cabinet Requirements.** The cabinet shall be a Type 332 in accordance with the Traffic Signal Control Specifications published by the California Transportation and Housing Agency, Department of Transportation (Caltrans). The aluminum housing material shall be a minimum of 0.125 inches in thickness. All cabinets shall have a natural aluminum finish, free from blemishes. All seams shall be continuously welded and ground smooth. All fasteners must be stainless steel.

The housing shall feature two doors with latches, hinges and door gaskets. One cabinet door shall have louvers in the lower quarter and a replaceable filter for ventilation. All cabinet doors shall be equipped with No. 2 Corbin locks. Two keys shall be provided with each cabinet. An EIA 19-inch rack shall be installed including side panels where cabinet power distribution components will be mounted.

A thermostatically controlled fan shall be installed in the top of the cabinet capable of moving 100 CFM of ventilation airflow.

LED lighting fixtures suitable for mounting at the top of the 19-in rack shall be installed in both the front and rear of the cabinet. Each shall be wired through door activated switches.

One aluminum 19-inch rack mountable shelf shall be provided. The shelf shall be secured to the rack rails at all four corners.

**1.2 ITS/Fiber Splice Cabinet Electrical Distribution.** A cabinet electrical distribution system consisting of the following elements shall be installed. Components shall be neatly arranged, mounted and wired on the lower quarter of the hinge-side rack side panel.

- One power wiring block for service conductors

- One 20 Amp single pole unit mount, feed-through circuit breaker

- One Edco SHA1210 surge suppressor or approved equivalent

- One 2 – gang outlet box with duplex outlets installed (quadraplex) with cover plate

- One 12 position minimum barrier type terminal strip providing access to AC+ where cabinet fan and light circuits will be landed

- One 12 position minimum copper AC neutral buss with set screws

- One 12 position minimum copper earth ground buss with set screws

**1.3 Fiber Distribution Unit (FDU).** Each cabinet shall be equipped with a 19-inch rack mounted fiber distribution unit to provide a termination, splicing and connection point for fiber optic cables. The fiber distribution unit shall be modular in design and support a minimum termination/connection capacity of 48 fibers, four splice trays and strain relief for up to four cables.

The connector panels shall be designed to accommodate ST connectors. ST couplings with ceramic inserts shall be provided to accommodate either multi-mode or single mode fibers as appropriate. The unit shall provide both front and rear hinged door access.

The unit shall be constructed of aluminum. Plastic access doors will be permitted. The unit shall be positioned in the 19-inch rack as to allow fiber cables to be routed with bending radii exceeding manufacturer's recommendation. The unit shall not conflict with other cabinet components or panels.

**1.4 Acceptance Testing.** Acceptance testing shall include a visual inspection and testing of lights, fan, power outlets. Use a device that measures resistance to ground using the three point fall-of-potential method to ensure that the resistance from the cabinet's earth ground buss to ground does not exceed 5 ohms. Install additional ground rods if necessary to achieve this requirement. Provide all equipment and personnel needed to safely conduct the tests, arrange for the Engineer's representative to witness the tests, and provide a written summary indicating test results.

**1.5 Basis of Payment.** Payment for the above items shall include all costs necessary to complete the work including installation, incidentals, and testing of a fully functional system, shall be paid for under Pay Item No. 910-43.95, Splice Cabinet.

DD. Cat 5e/Cat 6 Ethernet Cable

**1.0 Cat 5e/Cat 6 Ethernet Cable Requirements.** The cable shall be outside plant rated (OSP), consisting of four (4) balanced twisted pairs of solid copper conductors, surrounded by a water blocking gel and designed for use in 10BASE-T through 1000BASE-T Ethernet networks. It shall be jacketed with a sunlight and abrasion resistant black, polyethylene outer jacket. The following performance compliance standards apply:

ANSI/TIA-568-C.2  
ANSI/ICEA S-107-704-2012  
RoHS-compliant/RoHS 2-compliant  
REACH-compliant

EE. Uninterruptable Power Supply

**1.0 Description.** This work shall consist of providing and installing an "Uninterruptible Power Supply" (UPS) system at the Route 744 and Route 160 intersection. The system shall be specifically constructed and approved for the use with the 2070 signal controller.

**1.1** In order to match other systems used in the area, the UPS shall be an Alpha FXM 1100 system. The system shall be comprised of the following items:

- 1 each Alpha outdoor enclosure S6, w/Generator option ATS/MBS & Auto GTS, battery

- cable kit (ALPHA-026-53-26)
- 1 each Novus FXM 1100 Battery backup unit without Ethernet (ALPHA-017-230-21)
- 1 each 48V Alpha guard battery monitor (ALPHA-012-306-21)
- 4 each Alpha Gel battery 195GXL (ALPHA-181-230-10)

**2.0 Installation.** The UPS system shall be installed as per the manufacturer's recommendations. The system shall be mounted to the new Power Disconnect (paid as a Type 2 power supply) as designated in the project plans. The UPS cabinet shall contain circuitry to separate auxiliary equipment (lighting) from primary equipment (signal controller cabinet) during battery backup operation. In addition, the cabinet shall have circuitry to switch the signal from normal operation to flash operation during battery backup operation.

### **3.0 Communications.**

**3.1** The UPS cabinet shall have Ethernet connection capability.

**3.1.1 Ethernet Cable.** Any Ethernet cable run outside of the signal cabinet shall be environmentally hardened, shielded, and outdoor rated 350 MHz Category 5e cable. The cable shall be riser rated, 24 AWG solid copper, have Polyolefin insulation, UV and oil resistant PVC jacket. Pair 1 shall be Blue, White/Blue, Pair 2 shall be Orange, White/Orange, Pair 3 shall be Green, White/Green and Pair 4 shall be Brown, White/Brown. The operating temperature shall be from -40°C to +70°C. The cable shall conform to the following standards: ISO/IEC 11801 Category 5e, NEMA WC 63, and ANSI/TIA/EIA 568-B.2 Category 5e. The cable shall be without splicing or joints for any single run. The contractor shall obtain instructions from the manufacturer about alternate architecture when length of a single run of CAT 5e cable exceeds 320 feet.

**3.1.2 RJ-45.** The RJ-45 plug connectors shall be used at the UPS and signal cabinet. The supplier of the UPS shall approve the Category 5e cable, RJ-45 connector and crimping tool, and the manufacturer's instructions must be followed to insure proper connection.

**4.0 Construction Requirements.** Construction requirements shall conform to Sec 902.

**5.0 Method of Measurement.** Method of measurement shall conform to Sec 902.

**6.0 Basis of Payment.** All costs incurred by the contractor for furnishing, installing, configuring and placing the UPS into operation, furnishing, installing and connecting the Ethernet cable, including all incidentals shall be considered as included in and completely covered by the contract unit price for item 902-99.02, Uninterruptible Power Supply, per each.

**6.1** No direct payment will be made for programming the UPS.

### **FF. Relocate Fiber Optic (FO) Cable**

**1.0 Description.** MoDOT owns existing fiber optic cable at the intersection of Route 160 and Route 744 in Springfield. This cable is used for ITS purposes (signal interconnect, automated traffic counts, CCTV camera, etc.). The fiber optic cable is being impacted by the proposed roadway improvements. This work shall consist of disconnecting the fiber optic cable from the existing splice cabinet, pulling the fiber back to a point beyond the roadway impacts, reinstalling



the existing cable back through a new conduit system, and reconnecting the fiber back up to a new fiber splice cabinet.

## **2.0 Construction Requirements.**

**2.1 North FO Run.** There is an existing 18SM/6MM fiber running north out of the splice cabinet in the NW quadrant of US160/MO744. This fiber runs north to the splice cabinet at the I-44/US160 interchange. The contractor shall disconnect the fiber from the existing splice cabinet in the NW quadrant of the US160/MO744 intersection then pull the fiber back north to existing pullbox EX2, then reinstall this fiber going south in the new conduit run through new pullboxes 10 and 6 back to the new fiber optic splice cabinet and make the necessary connections as shown in the plan sheet.

**2.1.1 Timeline for North FO Relocation.** The ITS fiber running parallel to US160 is a primary link for MoDOT's ITS systems along I-44. Because this fiber is critical to the safety monitoring functions on I-44, the contractor will be limited to a maximum of 3 days to perform this relocation. The 3 day requirement applies to the amount of time the ITS system is off line (dark) and does not apply to the installation of the new conduit and pullboxes necessary for the actual fiber relocation.

**2.2 East FO Run.** There is an existing 18SM/6MM fiber running east out of the splice cabinet in the NW quadrant of US160/MO744. This fiber runs east and ends in the signal cabinet at the MO744/Cresthaven Ave. intersection. The contractor shall disconnect the fiber from the existing splice cabinet in the NW quadrant of the US160/MO744 intersection then pull the fiber back east to new pullbox 13, then reinstall this fiber going west in the new conduit run through new pullboxes 12, 3, 2, and 6 back to the new fiber optic splice cabinet and make the necessary connections as shown in the plan sheet.

**2.3 South FO Run.** There is an existing 36SM fiber running south out of the splice cabinet in the NW quadrant of US160/MO744. This fiber runs south and ends in the splice cabinet in the NE quadrant of US160/Route EE intersection. The contractor shall disconnect the fiber from the existing splice cabinet in the NW quadrant of the US160/MO744 intersection then pull the fiber back south to new handhole 9 set by Sho-Me Technologies. Handhole 9 will be on the left side near Sta 103+05. The contractor shall reinstall the existing 36SM fiber going north through Sho-Me's conduit run to new handhole 8 also set by Sho-Me Technologies. From handhole 8, the contractor shall install the existing 36SM fiber through the new conduit system and end in new pullbox 7. Based on the reel numbers, the existing 36SM fiber is too short to reach the new fiber splice cabinet in the NW quadrant of US160/MO744. MoDOT will supply the contractor with a section of 18SM/6MM fiber to complete the circuit. The contractor shall splice the two fibers in new pullbox 7 then install the 18SM/6MM in the new conduit system going through pullbox 6 to the new splice cabinet and make the necessary connection as shown in the plan sheet. The contractor shall call Mark Mais (417-895-7621) to arrange pickup for the MoDOT provided 18SM/6MM fiber.

**2.3.1 Timeline for North FO Relocation.** The ITS fiber running parallel to US160 is a primary link for MoDOT's ITS systems along I-44. Because this fiber is critical to the safety monitoring functions on I-44, the contractor will be limited to a maximum of 3 days to perform this relocation. The 3 day requirement applies to the amount of time the ITS system is off line (dark) and does not apply to the installation of the new conduit and pullboxes necessary for the actual fiber relocation.

**2.4 Construction Operations.** The contractor shall be responsible for furnishing and installing the new conduit, pullboxes, the concrete base, and the fiber optic splice cabinet along with any necessary interface equipment. The contractor shall perform the fiber optic cable relocation as shown in the plans making all connections within the fiber optic splice cabinet. This include splicing the 36SM to the 18SB/6MM fiber in pullbox 7. The contractor shall leave 10ft of coil in each in-line pullbox with the remaining slack placed in the first pullbox from the splice cabinet. In the event the fiber is to be disconnected for an extended period of time, the contractor shall coil the fiber at the last pullbox and delineate the coil to prevent accidental damage.

**2.5 Expectation.** The contractor shall exercise reasonable care in the handling of the fiber optic cable during the extraction, storage and reinstallation of the fiber optic cables. MoDOT currently has a fully functional ITS network at this location. MoDOT will require a fully functional system after the contractor has performed the fiber optic relocation work. Failure to meet this expectation will result in complete replacement of the fiber optic cable in kind (24 count – 18SM/6MM and/or 36 count SM) and length from splice cabinet to splice cabinet solely at the contractor's expense. With the exception of the intended splice in new pullbox 7, under no circumstance will the contractor be allowed to make a repair using an in-line splice between fiber splice cabinets.

**3.0 Method of Measurement.** Measurement for fiber relocation will be made for one direction only to the nearest linear foot. If 500ft of fiber is being pulled back and that same 500ft is reinstalled through a new conduit run, the measurement will be for 500ft. Measurement for additional one-way fiber pull will be made to the nearest linear foot.

**4.0 Basis of Payment.** Payment for furnishing and installing the conduit, pullboxes, and splice cabinet will be made for each respective bid item included in the roadway contract. The cost for relocating the existing ITS fiber cable and necessary splicing shall be paid for at the contract unit bid price for Pay Item No. 902-99.03 Fiber Optic Relocation, per Linear Feet.

GG. Removal and Delivery of Existing Signs JSP-12-01B

**1.0 Description.** All Commission-owned signs removed from the project shall remain the property of the Commission and shall be disassembled and delivered as specified herein.

**2.0 Disassembly and Delivery.** All Commission-owned signs, not to include abandoned billboard signs, designated for removal in the plans, and any other signs designated by the engineer, shall be removed by the contractor and delivered to the address below. The contractor shall call the phone number listed below 48 hours prior to delivery and make arrangements for delivery during normal business hours.

Springfield Maintenance Lot  
2455 North Mayfair Avenue  
Springfield, MO 65803  
Phone: 417-895-6724

**2.1** Signs shall be removed from sign supports and structures prior to delivery. Sign supports and structures shall become the property of the Contractor and removed from the project. Any oversized sign panels shall be disassembled or cut into widths of 8-feet or less with no restriction on length. Signs shall be stacked neatly in bins provided by MoDOT at the delivery site.

**3.0 Basis of Payment.** All costs associated with removing, disassembling, storing, and transporting 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.

HH. Relocate and Remount Existing Sign on New Post

**1.0 Description.** This item provides for relocating and mounting existing signs of various sizes to new posts at locations shown on the signing sheets.

**2.0 Construction Requirements.** The contractor shall install new posts at the locations shown and then mount existing signs to the appropriate post type as summarized on sheet D-29 and D-30 of the signing sheets. All work shall be in accordance with the construction requirements of Section 903.

**3.0 Method of Measurement.** Measurement will be made per each for relocating and mounting existing signs to new posts. Measurement for any concrete footings, structural steel posts, pipe posts, perforated square steel tubes and anchor sleeves, and breakaway assemblies will be made in accordance with Section 903.

**4.0 Basis of Payment.** All cost incurred for relocating and mounting existing signs to new posts at the locations shown, complete in place, will be paid for at the contract unit price for Pay Item 903-99.02, Relocate Sign, per each. Payment for all other labor, equipment, material, and incidental items will be made in accordance with Section 903 and paid for at the contract unit price for each of the pay items included in the contract.

II. Modified Type A Gutter with Steel Plates

**1.0 Description.** This work shall consist of constructing Modified Type A Gutter with Steel Plates as shown on the plans and in accordance with Section 609 of the Standard Specifications, and specifically as follows.

**2.0 Construction Requirements.** The contractor shall refer to the special sheets detailing the locations with Modified Type A Gutter and Steel Plates. The contractor shall also pay special attention during construction to ensure proper drainage is achieved upon completion of construction.

**2.1** The ½" steel slip-resistant plate shall be installed flush with the top of the Modified Type A Gutter and secured to the top of the angle iron. The steel slip-resistant plate shall have a minimum static coefficient of friction of 0.6 and be ADA compliant since it is installed in the pedestrian access route.

**3.0 Method of Measurement.** Modified Type A Gutter will be measured to the nearest linear foot. Measurement will be made along the flow line of the limits of the Modified Type A Gutter. The Steel Plates will be measured by each.

**4.0 Basis of Payment.** All labor, equipment and materials required to construct the Modified Type A Gutter and Steel Plate as designated on the plans and by this specification, complete in place with all incident costs included, shall be included in the unit bid price for the following:

Item No. 604-99.02, Steel Plate, per each  
Item No. 609-10.41, Concrete Gutter Type A , per linear foot

JJ. Modified Type S Curb

**1.0 Description.** This work shall consist of constructing curb as shown on the plans or as directed by the engineer. This work shall be in accordance with Sec 609 and standard drawing 609.00 except as modified by the project drawings or by these provisions.

**2.0 Construction Requirements.**

**2.1** Type S Curbs without reinforcement shall be constructed to a maximum height of 12 inches.

**2.2** Modified Type S Curbs constructed with a height exceeding 12 inches but less than or equal to 30 inches shall be constructed and reinforced as shown on the plans. Additional bury depth will be required for heights exceeding 18 inches.

**3.0 Method of Measurement.** Curb will be measured to the nearest linear foot along the face of the curb.

**4.0 Basis of Payment.**

**4.1** The accepted quantities of Type S Curbs with a height exceeding 6 inches but less than or equal to 12 inches will be paid for at the contract unit price for Pay Item No. 609-10.11, Concrete Curb (Over 6 IN. Height) Type S, Linear Foot.

**4.2** The accepted quantities of Modified Type S Curbs with a height exceeding 12 inches but less than or equal to 30 inches will be paid for at the contract unit price for Pay Item No. 609-99.03, Modified Type S Curb, per linear foot.

**4.3** No direct payment will be made for the following:

- (a) Excavation below the upper surface of the concrete of these items.
- (b) Any work necessary for backfilling the completed items.
- (c) Furnishing or installing reinforcement.

KK. Drainage System Inspection

**1.0 Drainage System Inspection Requirements.** All drainage systems shall be inspected by video method before paving completed surface over drainage structures.

LL. Permanent Pavement Marking - SW

**1.0 1.0 Description.** This work shall consist of furnishing and placing permanent centerline, edge line, lane line markings, and preformed thermoplastic pavement marking, as specified, at locations shown on the plans or as approved by the engineer. The preformed thermoplastic pavement marking includes, but not limited to, 24" White (Stop Bars) and 24" Yellow (Hash Mark), 6" White for Crosswalks, Turn Arrows, Railroad Crossings, Yield Markings, and the word "ONLY". This work shall be in accordance with Section 620 and specifically as follows.

**2.0 Construction Requirements.** On roadways open to traffic, permanent centerline, edge line, and lane line markings shall be in place no later than five days after the final paving operations. This requirement applies per individual route if multiple routes are included in a contract or if a 15-mile section of an individual route is open to traffic within a contract. To fulfill this requirement, the contractor may have to mobilize more than once for the installation of permanent centerline, edge line, and lane line markings. The contractor will also need to coordinate the permanent pavement marking with the installation of rumble strips. The contractor shall place the preformed thermoplastic pavement marking after the permanent centerline, edge line, and lane line marking is installed by the contractor or by others. The contractor will have 5 five days after the permanent centerline, edge line, and lane line markings are placed to start the preformed thermoplastic pavement marking installation and shall be placed in accordance with manufacturer's recommendations or as approved by the engineer.

**3.0 Basis of Payment.** The accepted quantity of permanent pavement marking paint and preformed thermoplastic pavement marking will be paid for at the contract unit price for each of the pay items include in the contract. Payment will be considered full compensation for all labor, equipment, material or time necessary to complete the described work including any other incidental items.

MM. Flagging Procedure for Two-Lane Roadways (3-2-1 Cone Procedure) NJSP-17-03A

**1.0 Description.** Flagging operations shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) Chapter 6, Section 107 and 616 in Missouri Standard Specifications for Highway Construction, Missouri Standard Plans for Highway Construction, temporary traffic control plans, and as described herein.

**2.0 Procedures for Flagging Short, Intermediate, or Long-Term Stationary Operations.** This procedure includes the use of three traffic cones or other channelizing devices.

**2.1 Step 1.** The flagger shall place three cones across the lane of traffic to be stopped, from centerline to shoulder. When no vehicles are present, the flagger should remain on the shoulder with the stop paddle visible.

**2.2 Step 2.** When traffic has stopped, the flagger shall move towards the centerline of the roadway, keeping the stop paddle visible, and keeping a visual contact with the stopped drivers. Once the flagger has confirmed that opposing traffic is clear, the flagger shall prepare to release the stopped traffic.

**2.3 Step 3a.** If the vehicles are to travel in the current lane, the flagger shall remove the center cone from the center of the lane.

**2.4 Step 3b.** If the vehicles are to travel in the opposite lane, the three cones shall remain across the closed lane.

**2.5 Step 4.** If opening the lane (Step 3a above) the flagger shall walk back to the shoulder with the cone, turn the stop paddle to slow, and then release traffic using a hand signal to direct vehicles between the two remaining cones. If releasing traffic to the other lane (Step 3b above) the flagger shall remain near the centerline of the roadway, turn the stop paddle to slow, and use a hand signal to direct the traffic around the cones into the open lane.

**2.6** Once all traffic has cleared, the flagger shall return the slow paddle to stop. The flagger shall replace the cone to the center of the lane or leave the cones across the lane. The flagger then returns to the shoulder and repeats the steps.

**2.7** If the roadway width is less than 12 feet, the number of cones may be reduced to two or one, or other channelizing devices may be used.

**3.0 Basis of Payment.** No direct payment will be made for any cost associated with this provision.

**Pictorial Representation of Steps for Flagging Procedure for Two-Lane Roadways (3-2-1 Cone Procedure)**



**STEP 1**



**STEP 2**



**STEP 3**



**STEP 4**

**NN. Signal Controllers**

**1.0 Description.** This work shall consist of providing and installing a new 2070 controller with cabinet at the intersection of US160 and MO744.

**2.0 Material Requirements.** The new controllers installed with this project shall consist of ATC eX 2070 controllers with OMNI-eX software as manufactured by McCain, Inc. placed inside a 332 cabinet.

**2.1** The contractor shall be responsible for providing and installing all necessary items to make the new signal controllers operational. This includes but is not limited to the 2070 controller, the OMNI-eX software, and the 332 cabinet. The engineer will provide the existing cycle lengths,

Job No.: J8P3087D  
Route: 160 & 744  
County: Greene

but the contractor shall ultimately be responsible for programming the timings into the new controllers.

**3.0 Method of Measurement.** Method of measurement will be made per each controller installed by the contractor and acceptable by the engineer.

**4.0 Basis of Payment.** Accepted signal controllers will be paid for at the contract unit price for item 902-99.02, Misc 2070 Controller, per each.



**JOB SPECIAL PROVISIONS TABLE OF CONTENTS (ROADWAY)**

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

A.	General - Federal JSP-09-02G	1
B.	Contract Liquidated Damages JSP-13-01B	1
C.	Work Zone Traffic Management JSP-02-06J	2
D.	Emergency Provisions and Incident Management JSP-90-11A	5
E.	Project Contact for Contractor/Bidder Questions JSP-96-05	6
F.	Supplemental Revisions JSP-18-01R	6
G.	Flagging Procedure for Two-Lane Roadways (3-2-1 Cone Procedure) NJSP-17-03A	9
H.	Optional Temporary Pavement Marking Paint NJSP-18-07B	11
I.	Quality Management NJSP-15-22	13
J.	Utilities JSP-93-26F J8P3170 J8S3168	18
K.	Bridge End Transitions	21
L.	Contractor Furnished Surveying and Staking - SW	21
M.	Damage to Existing Pavement, Shoulders, Side Roads, and Entrances	22
N.	Pavement Marking Log - SW	22
O.	Permanent Pavement Marking - SW	23
P.	Contractor Furnished, Contractor Installed Radar Detection System	23
Q.	Low-Tracking or Non-Tracking Tack Coat NJSP-15-15H	24
R.	Temporary Short-Term Rumble Strips JSP-13-05E	27

	<b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 W. CAPITOL AVE. JEFFERSON CITY, MO 65102 Phone 1-888-275-6636
	If a seal is present on this sheet, JSP's have been electronically sealed and dated.
	JOB NUMBER: J8P3170 JOB NUMBER: J8S3168  GREENE COUNTY, MO DATE PREPARED: 7/21/2021
	ADDENDUM DATE:
Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: All	

JOB  
SPECIAL PROVISIONS

A. General - Federal JSP-09-02G

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

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

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

General Provisions & Supplemental Specifications

Supplemental Plans to July 2021 Missouri Standard Plans  
For Highway Construction

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

B. Contract Liquidated Damages JSP-13-01B

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

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

Notice to Proceed: January 31, 2022

Completion Date: November 1, 2022

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

Job Number	Calendar Days	Daily Road User Cost
J8P3170	108	\$7,600
J8S3168	54	\$2,300
J8P3087D	206	\$7,600

**3.0 Liquidated Damages for Contract Administrative Costs.** Should the contractor fail to complete the work on or before the completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **\$2,000** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the above specified completion date or calendar days.

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

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

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

### **2.5.1 Traffic Safety.**

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

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

## **3.0 Work Hour Restrictions.**

**3.1** Except for emergency work, as determined by the engineer, and long term lane closures required by project phasing, all lanes shall be scheduled to be open to traffic during the five

major holiday periods shown below, from 12:00 noon on the last working day preceding the holiday until 6:00 a.m. on the first working day subsequent to the holiday unless otherwise approved by the engineer.

Memorial Day  
Labor Day  
Thanksgiving  
Christmas  
New Year's Day

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

12:00 noon July 2, 2021 – 6:00 a.m. July 6, 2021  
12:00 noon July 1, 2022 – 6:00 a.m. July 5, 2022  
12:00 noon June 30, 2023 – 6:00 a.m. July 5, 2023

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

Route 160 Eastbound:  
7:00 p.m. - 5:00 a.m. seven days a week

Route 160 Westbound:  
7:00 p.m. - 5:00 a.m. seven days a week

**3.4** Any work requiring a reduction in the number of through lanes of traffic shall be completed during nighttime hours. Nighttime hours shall be considered to be 7:00 p.m. to 5:00 a.m. for this project.

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

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

#### **4.0 Detours and Lane Closures.**

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

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

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

#### **D. Emergency Provisions and Incident Management JSP-90-11A**

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

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

MO Highway Patrol 417-895-7600
MoDOT Incident Mgmt: 417-864-1160
Springfield Fire: 417-874-2300
Springfield Police: 417-864-1810

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

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

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

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

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

Jason Evenden, Project Contact  
Southwest District  
3025 East Kearney Street  
Springfield, MO 65803

Telephone Number: 417-408-4650

Email: [jason.evenden@modot.mo.gov](mailto:jason.evenden@modot.mo.gov)

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

F. Supplemental Revisions JSP-18-01R

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.

## COVID-19 Safety

**1.0 Description.** The coronavirus disease 2019 or COVID-19 has reached a pandemic stage across the United States, including the State of Missouri. To reduce the impact of COVID-19 outbreak conditions on businesses, workers, customers and the public, the contractor shall be aware of all COVID-19 guidance from the Center for Disease Control (CDC) and other government health mandates. The contractor shall conduct all operations in conformance with

these safety directives. The guidance may change during the project construction and the contractor shall change and adapt their operation and safety protocols accordingly.

**2.0 Safety Plan.** The contractor shall include these procedures in the project safety plan as called for in the contract documents and revise the safety plan as needed.

**3.0 Essential Work.** In accordance with any state or local Stay at Home Order, care for the infrastructure has been deemed essential and MoDOT is moving forward with construction projects, this project is considered essential and the contractor and their employees, subcontractors and suppliers are considered essential business and performing essential functions.

**4.0 Basis of Payment.** Compliance with regulations and laws pertaining to COVID-19 is covered under Sec 107 of the Missouri Standard Specifications for Highway Construction. No direct payment will be made for compliance with this provision.

#### Anti-Discrimination Against Israel Certification

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

#### G. Flagging Procedure for Two-Lane Roadways (3-2-1 Cone Procedure) NJSP-17-03A

**1.0 Description.** Flagging operations shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) Chapter 6, Section 107 and 616 in Missouri Standard Specifications for Highway Construction, Missouri Standard Plans for Highway Construction, temporary traffic control plans, and as described herein.

**2.0 Procedures for Flagging Short, Intermediate, or Long-Term Stationary Operations.** This procedure includes the use of three traffic cones or other channelizing devices.

**2.1 Step 1.** The flagger shall place three cones across the lane of traffic to be stopped, from centerline to shoulder. When no vehicles are present, the flagger should remain on the shoulder with the stop paddle visible.

**2.2 Step 2.** When traffic has stopped, the flagger shall move towards the centerline of the roadway, keeping the stop paddle visible, and keeping a visual contact with the stopped drivers. Once the flagger has confirmed that opposing traffic is clear, the flagger shall prepare to release the stopped traffic.

**2.3 Step 3a.** If the vehicles are to travel in the current lane, the flagger shall remove the center cone from the center of the lane.

**2.4 Step 3b.** If the vehicles are to travel in the opposite lane, the three cones shall remain across the closed lane.

**2.5 Step 4.** If opening the lane (Step 3a above) the flagger shall walk back to the shoulder with the cone, turn the stop paddle to slow, and then release traffic using a hand signal to direct vehicles between the two remaining cones. If releasing traffic to the other lane (Step 3b above) the flagger shall remain near the centerline of the roadway, turn the stop paddle to slow, and use a hand signal to direct the traffic around the cones into the open lane.

**2.6** Once all traffic has cleared, the flagger shall return the slow paddle to stop. The flagger shall replace the cone to the center of the lane or leave the cones across the lane. The flagger then returns to the shoulder and repeats the steps.

**2.7** If the roadway width is less than 12 feet, the number of cones may be reduced to two or one, or other channelizing devices may be used.

**3.0 Basis of Payment.** No direct payment will be made for any cost associated with this provision.

**Pictorial Representation of Steps for Flagging Procedure for Two-Lane Roadways (3-2-1 Cone Procedure)**



STEP 1



STEP 2



STEP 3



STEP 4

H. Optional Temporary Pavement Marking Paint NJSP-18-07B

**1.0 Description.** This provision provides the contractor with the option to either complete all Permanent Pavement Marking Paint (PPMP) prior to the time limits specified herein or to apply Temporary Pavement Marking Paint (TPMP) in accordance with Sec 620.10.2 (4 in. width) in all locations shown on the plans as PPMP and delay application of the PPMP until the spring of 2022, as allowed herein. PPMP is defined as Standard Waterborne Paint and High Build Waterborne Paint and does not include Sec 620.20.3 Durable Pavement Markings.

**1.1** No application of PPMP shall occur between October 1, 2021 and March 1, 2022, both dates inclusive, except as stated herein. When the contractor has begun application of PPMP prior to October 1, 2021, and weather limitations stated in Sec 620.20.2.4 can be met, the contractor may complete the PPMP within the first seven (7) calendar days of October. If all (100%) of the PPMP is not completed on or before October 7, 2021, all previously applied PPMP, including any painted markings applied prior to October 1, shall be considered TPMP,

and the contractor shall complete the remaining marking with TPMP, and then re-apply PPMP in all planned locations after March 1, 2022. All PPMP shall be completed prior to June 1, 2022. No additional payment will be made for PPMP that is later determined to be TPMP due to the contractor's failure to complete the PPMP within the time specified.

**1.2 Use of TPMP Prior to October 1.** The contractor has the option to apply TPMP in lieu of PPMP prior to October 1, 2021, even when there is sufficient time to complete the PPMP prior to October 1, 2021. For example, the contractor may choose to use TPMP as a base coat for the PPMP on open-graded surfaces in order to achieve higher retroreflectivity readings on the surface coat as compared to a single application.

**1.2.1** The contractor has the option of using TPMP in lieu of Temporary Raised Pavement Markers if applied each day that existing markings are obliterated.

**2.0 Construction Requirements.** TPMP shall be accurately placed in the final planned location and shall be completely covered by the final application of PPMP. Any failure to comply with this requirement shall be corrected by removal of the misplaced pavement markings at the contractor's expense and without marring of the pavement surface.

**2.1** Prior to application of the PPMP on TPMP, TPMP shall be fully cured in accordance with the manufacturer's recommendation, or for a period of 12 hours, whichever is greater.

**3.0 Weather Limitations.** All weather limitations specified in Sec 620 for PPMP and TPMP shall apply. Cold Weather Pavement Marking Paint, in accordance with Sec 620.10.6, shall be used for TPMP when specified weather limitations do not allow the use of waterborne paint. No additional payment will be made for the use of Cold Weather Pavement Marking Paint as TPMP. Cold Weather Pavement Marking Paint is not an allowable substitute for PPMP and shall subsequently be covered with PPMP.

**4.0 Time Exception.** If application of PPMP is to be delayed to the spring of 2022, the contractor shall submit a request to the engineer for a time exception and shall provide a revised work schedule that shows the planned completion of the PPMP.

**4.1** Upon receipt of the time exception request in Section 4.0, the engineer will list "Application of Permanent Pavement Marking Paint" as an exception on the Semi-Final Inspection form, thus granting an exception to the count of contract time thru June 1, 2022, solely for the purpose of delaying application of PPMP. This time exception shall not apply to any time needed to complete any other work items. Liquidated Damages, as specified elsewhere in this contract, shall remain in effect for all other work items not completed by the contract time limits, as specified elsewhere in this contract, and for PPMP not completed by June 1, 2022.

**5.0 Method of Measurement.** No final measurement will be made for TPMP.

**6.0 Basis of Payment.** Full payment for TPMP will be made at the contract lump sum price even when PPMP is completed prior to the time limitation and TPMP is not used or only partially used.

**6.2** If a \$0 bid is entered for TPMP, no payment will be made should TPMP become necessary.

Item Number	Description	Unit
6209901	TEMPORARY PAVEMENT MARKING PAINT	LS

I. Quality Management NJSP-15-22

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

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

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

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

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

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

**2.1** The QMP shall address all QC inspection and testing requirements of the work as described herein. A draft QMP shall be submitted to the Resident Engineer for review at least two weeks prior to the pre-construction conference. An approved QMP is required at least two weeks prior to the start of work, unless otherwise allowed by the engineer. Physical work on the project shall not begin prior to approval of the QMP by the engineer.

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

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

- a) Organizational structure of the contractor's project management, production staff, and QC staff, specific to this project.
- b) Name, qualifications and job duties of the Quality Manager.
- c) A list of all certified QC testers who will perform QC duties on the project, including sub-contract work, and the tests in which they are certified.
- d) A list of all QC inspectors who will perform QC inspection duties on the project, including sub-contract work, and the areas of inspection that they will be assigned.
- e) A procedure for verifying documentation is accurate and complete as outlined in Section 3.
- f) A procedure describing QC Inspections as outlined in Section 4.
- g) A procedure describing QC Testing, as outlined in Section 5, including a job specific Inspection and Test Plan (ITP).
- h) A procedure describing Material Receiving as outlined in Section 6.
- i) A list of Hold Points that are not included in the checklist forms, as outlined in Section 8.
- j) A procedure for documenting and resolving Non-Conforming work as outlined in Section 9.
- k) A procedure for tracking and documenting revisions to the QMP.
- l) A list of any approved changes to the Standard Specifications or ITP, including a reference to the corresponding change order.
- m) Format for the Weekly Schedule and Work Plans as outlined in Section 10, including a list of activities that will require pre-activity meetings.

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

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

**3.2** Documents (standard forms, reports, and checklists) referenced throughout this provision are considered the minimum documentation required. They shall be obtained from MoDOT at the following web address: [www.modot.org/quality](http://www.modot.org/quality). The documents provided by MoDOT are

required to be used in the original format, unless otherwise approved by the engineer. Any alteration to these forms shall be approved by the engineer.

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

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

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

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

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

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

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

**4.4** The contractor shall measure, and document on the DIR, the quantity for all items of work that require measurement. Any calculations necessary to support the measurement shall be included with the documentation. The engineer will verify the measurements prior to final payment.

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



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

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

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

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

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

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

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

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

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

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

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

**8.0 Hold Points.** Hold Points are events that require approval by the engineer prior to continuation of work. Hold Points occur at definable stages of work when the succeeding work depends on a QA review of the preceding work before work can continue.

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

**8.2** Prior to all Hold Point inspections, QC shall provide the engineer with the Daily Inspection Reports, Inspection Checklists, Test Reports, and Material Receiving Reports for the work performed leading up to the Hold Point. If the engineer identifies any corrective actions needed during a Hold Point inspection, the corrections shall be completed prior to continuing work. The engineer may require a new Hold Point to be scheduled if the corrections require a follow-up inspection.

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

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

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

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

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

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

**10.1** A Weekly Schedule shall be provided to the engineer each week that outlines the planned project activities for the following two-week period. This schedule shall include all planned work, identification of all new activities, traffic control events, and requested Hold Point inspections for the period. Planned quantity of materials, along with delivery dates should also be included in the schedule.

**10.2** A Work Plan shall be submitted to the engineer at least one week prior to the pre-activity meeting. The Work Plan shall include the following: a safety plan, list of materials to be used,

work sequence, defined responsibilities for QC testing and inspection personnel, and stages of work that will require Hold Point inspections.

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

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

J. Utilities JSP-93-26F J8P3170 J8S3168

**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 List for J8P3170**

<b><u>Utility Name</u></b>	<b><u>Known Required Adjustment</u></b>	<b><u>Type</u></b>
ATT Distribution Roger Payne 600 St. Louis, Room 630 Springfield, MO 65806 Phone: 417-836-2507 Email: <a href="mailto:rp4629@att.com">rp4629@att.com</a>	None	Communications
City Utilities of Springfield - Electric T&D Jason Smith 301 E. Central St. Springfield, MO 65801 Phone: 417-831-8731 Email: <a href="mailto:jason.smith@cityutilities.net">jason.smith@cityutilities.net</a>	None	Power
City Utilities of Springfield - Gas & Water Brandon Braun 301 E. Central St. Springfield, MO 65801 Phone: 417-831-8922 Email: <a href="mailto:brandon.braun@cityutilities.net">brandon.braun@cityutilities.net</a>	None	Gas & Water
City Utilities of Springfield - SpringNet Bethany Forrester	None	Communications

301 E Central St.  
Springfield, MO 65801  
Phone: 417-831-8529  
Email: [bforrester@springnet.net](mailto:bforrester@springnet.net)

City of Springfield – Traffic  
Tom Dancey  
1107 W. Chestnut Expressway  
Springfield, MO 65802  
Phone: 417-864-1167  
Email: [tdancey@springfieldmo.gov](mailto:tdancey@springfieldmo.gov)

None

Signals/ITS

City of Springfield – Clean Water Services  
Matt Taylor  
840 Boonville Ave.  
Springfield, MO 65802  
Phone: 417-864-1934  
Email: [mtaylor@springfieldmo.gov](mailto:mtaylor@springfieldmo.gov)

None

Sewer

Mediacom  
Kyle Keller  
1533 S. Enterprise Ave.  
Springfield, MO 65804  
Phone: 417-496-8577  
Email: [kkeller@mediacomcc.com](mailto:kkeller@mediacomcc.com)

None

Communications

Sho-Me Technologies  
Brad McGoon  
301 West Jackson St.  
Marshfield, MO 65706  
Phone: 417-859-3475  
Email: [dmcgoon@showmepower.com](mailto:dmcgoon@showmepower.com)

None

Communications

MoDOT – Signals, Lighting, ITS  
Joe Dotson  
2455 N. Mayfair Ave.  
Springfield, MO 65803  
Phone: 417-733-0664  
Email: [joseph.dotson@modot.mo.gov](mailto:joseph.dotson@modot.mo.gov)

None

Signals, Lighting, ITS

Bluebird Network  
James Scott  
10024 Office Center Avenue, Suite 201  
St. Louis, MO 63128  
Phone: 314-270-8738  
Email: [james.scott@bluebirdnetwork.com](mailto:james.scott@bluebirdnetwork.com)

None

Communications

**Utility List for J8S3168**

<b><u>Utility Name</u></b>	<b><u>Known Required Adjustment</u></b>	<b><u>Type</u></b>
AT&T – Distribution See Contact Information Above	None	Communications
City Utilities of Springfield - Electric T&D See Contact Information Above	None	Power
City Utilities of Springfield - Gas & Water See Contact Information Above	None	Gas & Water
City Utilities of Springfield - SpringNet See Contact Information Above	None	Communications
City of Springfield – Traffic See Contact Information Above	None	Signals/ITS
City of Springfield – Clean Water Services See Contact Information Above	None	Sewer
Mediacom See Contact Information Above	None	Communications
Sho-Me Technologies See Contact Information Above	None	Communications
MoDOT – Signals, Lighting, ITS See Contact Information Above	None	Signals, Lighting, ITS
Bluebird Network See Contact Information Above	None	Communications
ATT Transmission Lenny Vohs 1425 Oak Street Kansas City, MO 64106 Phone: 816-275-4014 Email: <a href="mailto:lv2121@att.com">lv2121@att.com</a>	None	Communications
Cable America Curtis Scott 655 N. Hillside Avenue Republic, MO 65738 Phone: 417-732-7242 Email: <a href="mailto:cwscott@cablemo.com">cwscott@cablemo.com</a>	None	Communications
Ozark Electric Cooperative Kenneth Raming	None	Power

2007 James River Ct.

Nixa, MO 65714

Phone: 417-725-5160

Email: [kraming@ozarkelectric.com](mailto:kraming@ozarkelectric.com)

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

K. Bridge End Transitions

**1.0** At all bridge exceptions, the engineer will determine in the field the ending point of the transition. This point will not necessarily be at the bridge end, but will be located at a point which provides a smooth transition and approach to the bridge. The limits of all bridge end transitions shall be approved by the engineer before any milling proceeds on these transitions. Where bridges are to be resurfaced, the surfacing shall be from curb to curb.

L. Contractor Furnished Surveying and Staking - SW

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

**1.0 Description.** The contractor shall be responsible for all layout required on the project. This responsibility shall include, but not be limited to the following: Construction signing, transition milling, pavement marking, loop detectors, etc.

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

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

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

**2.0 Basis of Payment.** No direct payment will be made to cover the costs associated with these additional requirements. All costs will be considered completely covered by the unit bid price submitted for Contractor Furnished Surveying and Staking.

M. 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 is not 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 from general construction shall be repaired within twenty-four (24) hours of the time of damage at the contractor's expense. Repair of the damaged pavement, shoulders, side roads, or entrances shall be as determined by the engineer.

**3.0 Method of Measurement.** No measurement of damaged pavement or shoulder areas or damaged 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 expenses.

N. Pavement Marking Log - SW

**1.0 Description.** This work shall consist of the Contractor documenting the location of all existing pavement markings prior to coldmilling or resurfacing and installing new pavement markings to match the scheme that was in place prior to the project.

**2.0 Construction Requirements.** Prior to the start of resurfacing work, the Contractor shall document the color, type, and location of the existing pavement markings, including any change in pavement marking (e.g., solid yellow to intermittent yellow on the centerline) and no passing zones. The Contractor shall submit the method of documentation to the Engineer for approval prior to recording the existing pavement marking information.

**2.1** The existing pavement marking documentation provided by the Contractor shall include the location of existing pavement markings by either station or log mile. The Engineer shall reserve the right to make adjustments to the final pavement marking locations. The Engineer will provide the Contractor with any adjusted locations. Under no circumstances shall the Contractor make adjustments to the location of permanent pavement markings without the Engineer's approval.

**2.2** All permanent pavement markings shall be installed in accordance with Sec 620.

**3.0. Temporary Pavement Marking.** The Contractor shall provide temporary pavement marking in accordance with Sec 620 and Standard Plan 620.10. No compensation will be made to the Contractor for temporary pavement marking.

**4.0 Method of Measurement.** Measurement will be made in accordance with Sec 620.

**5.0 Basis of Payment.** No direct compensation will be made to the Contractor for compliance with this provision. All costs associated with the equipment, labor, materials, and time necessary to fulfill the requirements of this provision shall be considered completely covered by the pavement marking (Sec 620) line items in the contract.

O. Permanent Pavement Marking - SW

**1.0 Description.** This work shall consist of furnishing and placing permanent centerline, edge line, and lane line markings as specified, at locations shown on the plans or as approved by the engineer. This work shall be in accordance with Section 620 and specifically as follows.

This work shall consist of furnishing and placing permanent centerline, edge line, lane line markings, and preformed thermoplastic pavement marking, as specified, at locations shown on the plans or as approved by the engineer. The preformed thermoplastic pavement marking includes, but not limited to, 24" White (Stop Bars) and 24" Yellow (Hash Mark), 6" White for Crosswalks, Turn Arrows, Railroad Crossings, Yield Markings, and the word "ONLY". This work shall be in accordance with Section 620 and specifically as follows.

**2.0 Construction Requirements.** On roadways open to traffic, permanent centerline, edge line, and lane line markings shall be in place no later than five days after the final paving operations. This requirement applies per individual route if multiple routes are included in a contract or if a 15 mile section of an individual route is open to traffic within a contract. This requirement also applies to divided highways, once a directional segment of 15 mile, or the entire directional segment if less than 15 miles, is paved and open to traffic within a contract. To fulfill this requirement, the contractor may have to mobilize more than once for the installation of permanent centerline, edge line, and lane line markings. The contractor will also need to coordinate the permanent pavement marking with the installation of rumble strips. The contractor shall place the preformed thermoplastic pavement marking after the permanent centerline, edge line, and lane line marking is installed by the contractor or by others. The contractor will have 5 five days after the permanent centerline, edge line, and lane line markings are placed to start the preformed thermoplastic pavement marking installation and shall be placed in accordance with manufacturer's recommendations or as approved by the engineer.

**3.0 Basis of Payment.** The accepted quantity of permanent pavement marking paint and preformed thermoplastic pavement marking will be paid for at the contract unit price for each of the pay items include in the contract. Payment will be considered full compensation for all labor, equipment, material or time necessary to complete the described work including any other incidental items.

P. Contractor Furnished, Contractor Installed Radar Detection System

**1.0 General.** Radar stop bar detection shall be installed for all approaches at the intersections of **US 160 and Sunshine Street, US 160 and Mount Vernon Street, US 160 and Chestnut Expressway, and US 160 and Nichols Street.**

**2.0 Equipment.** Radar equipment must meet or exceed all the following requirements.

- (a) Equipment must be FCC certified.



- (b) Equipment must meet all NEMA TS2-2003 specifications for traffic control equipment.
- (c) Each radar unit must be composed of multiple sensors to establish two-dimensional coverage.
- (d) Radar Detection must be compatible with SDLC inputs.

**3.0 Construction Requirements.** The contractor shall be responsible for providing and installing all necessary items to make the new radar detection system operational. Input BIU 11 shall be used for radar detector inputs according to the chart below.

Radar Detection Inputs		
Input BIU 11		
Input	Phase	Detection Type
IO1	1	Stop Bar
IO2	2	Stop Bar
IO3	3	Stop Bar
IO4	4	Stop Bar
IO5	5	Stop Bar
IO6	6	Stop Bar
IO7	7	Stop Bar
IO8	8	Stop Bar

**4.0 Method of Measurement.** Method of measurement will be made per lump sum radar detection system installed by the contractor and acceptable by the engineer.

**4.0 Basis of Payment.** Payment for installation of the detection system will be completely covered by the contract unit price for Pay Item No. 902-99.01, Contractor Furnished, Contractor Installed Radar Detection System, per lump sum.

Q. Low-Tracking or Non-Tracking Tack Coat NJSP-15-15H

**1.0 Description.** This work shall consist of preparing and treating an existing bituminous or concrete surface with a low-tracking or non-tracking tack coat material prior to an asphalt overlay in accordance with Section 407, except as revised by this specification.

**2.0 Low-Tracking or Non-Tracking Requirements.** Products accepted for use as low-tracking or non-tracking tack shall not stick to the tires, tracks or other parts of paving equipment or vehicles such that the surface to be overlaid becomes visible or void of tack prior to the placement of the asphaltic concrete pavement mixture. The tack material shall exhibit a low-tracking or non-tracking characteristic within 30 minutes of being applied to the roadway. Products accepted for use shall exhibit a laboratory "no-pick-up" time of 60 minutes or less per TM-87. The product shall bond the two pavements. Products accepted for use shall exhibit a laboratory bond strength greater than or equivalent to a standard SS-1h tack material. The test method used may be any AASHTO TM method or other approved research test methods.

**2.1 Optional Application.** In lieu of applying a Low-Tracking or Non-Tracking Tack, a Polymer Modified Emulsion Tack may be placed immediately ahead of the asphalt pavement as defined below in section 4.0 Optional Polymer Modified Emulsion Tack.

**3.0 Equipment and Construction Requirements.** All equipment and construction requirements shall be in accordance with Section 407; except as revised as follows:

**3.1 Storage and Handling.** All guidelines and instructions about storage and handling of the non-tracking tack product shall be followed in accordance with the product manufacturer. A copy of this information shall be provided to the engineer. The information shall include the application and maximum allowable temperatures for the product and the particle charge.

**3.2 Distributor.** The distributor shall have the full circulating and heating capabilities in the tank. If the particle charge of the low-tracking or non-tracking tack is different from the particle charge of the emulsion that was previously used then the tank shall be thoroughly cleaned prior to use, since some products are not compatible.

**3.3 Curing.** The low-tracking or non-tracking tack shall be allowed to cure prior to any construction traffic driving on the surface. A minimum of 15 minutes of cure time shall be allowed prior to driving on the tacked surface, unless less cure time is successfully demonstrated and approved by the engineer.

**3.4 Supplier Information.** The low-tracking or non-tracking tack materials are a different type of product compared to the conventional tack used in Missouri. *There may be multiple products that can meet the low-tracking or non-tracking tack requirements. All products that achieve equivalent field performance will be allowed.*

**3.5 Material Requirements.** All material shall be in accordance with Section 1015 of the Standard Specifications and specifically as follows:

<b>Emulsion Properties for Low-Tracking or Non-Tracking Tack Coat</b>			
Tests	Method	Min	Max
Viscosity, Saybolt Furol @ 25°C (77°F), s	AASHTO T 59	10	100
Storage Stability Test, 24 hr, percent	AASHTO T 59	--	1.0
Sieve Test, percent	AASHTO T 59	--	0.30
Residue by Distillation, percent	AASHTO T 59	50	
Oil Distillate by Distillation, percent	AASHTO T 59	--	1
Test on Residue from Distillation			
Penetration 25°C, 100 g, 5 s	AASHTO T 49	--	90
Solubility in Trichloroethylene, %	AASHTO T 44	97.5	--

**OR**

The following requirements are not intended to govern emulsified products.

<b>PG Graded Products for Low-Tracking or Non-Tracking Tack Coat</b>			
Tests	Method	Min	Max
Rotational Viscosity (Pa-sec) @ 302° F	AASHTO T 316 302°F	100	300
Penetration 25°C, 100 g, 5 s	AASHTO T 49	--	90
In addition to the table above, when using PG Graded Binders as tack, a certification shall be supplied to the engineer which includes test results demonstrating that the PG binder component meets the minimum requirements of a PG 58 or greater on the high end and a -22 or lower on the low end in accordance with AASHTO M320. The PG binder component shall account for at least 97% of the total product composition by volume. If using 100% PG binders, then the products shall be in accordance with Section 1015.10.			

***All products that meet a laboratory “no-pick-up” time of 60 min or less and a field “no-pick-up” time of 30 min or less shall be accepted per TM-87.***

#### **4.0 Optional Polymer Modified Emulsion Tack.**

**4.1 Description.** In lieu of using a low-tracking or non-tracking tack coat material, a Polymer Modified Emulsion Tack may be placed prior to a bituminous overlay of hot asphaltic concrete pavement. The Polymer Modified Emulsion Tack shall be spray applied immediately prior to the application of the hot asphaltic concrete pavement so as to produce a homogeneous surface in accordance with Secs 401, 402, or 403. This option will not be required solely if low tracking tack products fail to perform in the field.

**4.2 Materials.** The Polymer Modified Emulsion Tack shall be in accordance with Sec 1015.20.5.1.1 or Sec 1015.20.6.2.

**4.3 Construction Requirements.** The asphaltic concrete pavement shall be placed in accordance with Secs 401, 402, or 403, except as modified herein.

**4.4 Equipment.** No wheel, track or other part of the paving machine or any hauling equipment shall come in contact with the Polymer Modified Emulsion Tack before the asphaltic concrete pavement mixture is applied.

#### **4.5 Application of Polymer Modified Emulsion Tack.**

**4.5.1** The Polymer Modified Emulsion tack shall be sprayed at a temperature of 120 - 180° F. The sprayer shall accurately and continuously monitor the application rate and provide a uniform coverage across the entire width to be overlaid. The application rate of the asphalt emulsion tack shall be applied at the same rate as the low-tracking or non-tracking tack coat material in accordance with Sec 407. The Engineer may make adjustments to the application rate based upon the existing pavement surface conditions and the recommendations of the Polymer Modified Emulsion Tack supplier.

**4.5.2** Water may be added to SS-1hp and CSS-1hp by the emulsion manufacturer and shipped to the jobsite. No dilution shall be allowed in the field. When water is added to SS-1HP or CSS-1HP, the resulting mixture shall contain no more than 20 percent of added water. The contractor shall notify the engineer of the use of a diluted emulsion. The exact quantity of

added water shall be indicated on the manufacturer's bill of lading, manifest or truck ticket. The application rate of the resulting mixture shall be adjusted such that the original emulsion will be spread at the specified rate. No water shall be added to the CPEM-1 or PEM-1.

**5.0 Method of Measurement.** Measurement of asphalt emulsion to the nearest gallon shall be made as specified in Sec 1015. The measurement of asphalt emulsion shall be based upon undiluted material.

**6.0 Basis of Payment.** The accepted quantity of low-tracking or non-tracking tack coat or polymer modified emulsion tack will be paid for at the contract unit price 407-10.07, Tack Coat – Low-tracking or Non-tracking.

R. Temporary Short-Term Rumble Strips JSP-13-05E

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

**2.0 Material.**

**2.1** The short-term rumble strips shall be 10 to 12 feet in length, minimum of 8 inches wide,  $\frac{3}{4}$  to  $1\frac{1}{4}$  inch thick, fabricated from a polymer material, and orange in color.

**2.2** The short term-rumble strips shall not curl or deform across the width of the strip, maintaining its rigidity.

**3.0 Construction.**

**3.1** Each set shall consist of three individual strips spanning a single lane, spaced in accordance with the plans or as directed by the engineer. The short-term rumble strips shall be installed and removed in accordance with manufacturer's recommendation.

**3.2** The contractor shall monitor, maintain alignment, and repair if needed the short-term rumble strips during construction. Short-term rumble strips shall not be placed on roadways when there are no workers present.

**3.3** Strips shall not extend onto the shoulder without the approval of the Engineer.

**4.0 Method of Measurement.** Measurement of short-term rumble strips will be based per each set.

**5.0 Basis of Payment.** The accepted quantity of Temporary Short-Term Rumble Strips sets will be paid for at the contract unit price for 616-20.04, Temporary Short-Term Rumble Strips, per each set. The short-term rumble strips unit bid price shall include the cost of all labor, equipment and materials to install, maintain, remove and relocate the rumble strips during the construction of the project.