

**STATE OF MISSOURI  
HIGHWAYS and TRANSPORTATION COMMISSION**

JEFFERSON CITY, MISSOURI

**CONSTRUCTING OR IMPROVING**  
**Contract I.D.** 181019-F05

THIS JOB SHALL BE CONSTRUCTED UNDER  
FEDERAL PROJECT NUMBER(S): I-70-5(344)

J6I3384 - VARIOUS ROUTES - VARIOUS COUNTIES

BIDDER CHECKLIST  
FINAL CHECKLIST BEFORE SUBMITTING BID

1. Submit completed Contractor Questionnaire and/or Contractor Prequalification Questionnaire with attachments not later than seven (7) days prior to the date and hour of the bid opening. See Secs 101-103 of the Missouri Standard Specifications for Highway Construction, and Rule 7 CSR 10-15.010, "Prequalifications to Bid of Certain Contractors". Questionnaire and Contact information are provided on MoDOT's website.
2. All bids shall be submitted electronically using "Bid Express Secure Internet Bidding" at [www.bidx.com](http://www.bidx.com). Any paper bid submitted will be considered irregular per section 102.8 of the Missouri Standard Specifications for Highway Construction.
3. Please read all items in the bidding document carefully. The EBSX files from MoDOT's website may be used for the itemized bid.
4. If submitted in the name of a firm or corporation, the legal name of the firm or corporation should appear in the space designated, and be signed for by one or more persons legally qualified to execute papers in the name of said firm or corporation.
5. The bidder shall submit a Bid Guaranty meeting the requirements of Sec 102 of the Missouri Standard Specifications for Highway Construction. If submitting a project specific or annual bid bond, bidders must use the MoDOT provided bid bond forms. The project specific bond form is included in the request for bid. The project specific and annual bid bond forms are also available on MoDOT's website. Annual bid bonds shall be executed by June 15th of each year.
6. Submit the Subcontractor Disclosure Form in accordance with the bidding documents. For bids of more than \$2,000,000, each bidder shall submit with each bid a disclosure of the subcontracts that have a subcontract value that is equal or greater than twenty percent of the total project bid or subcontracts that are greater than or equal to \$2,000,000. If that information is not available at the time of bid the bidder shall submit the "Subcontractor Disclosure Form" pages with MoDOT on or before 4:00 p.m. of the third business day after the bid opening date.
7. Submit the DBE Identification Submittal in accordance with the bidding documents for Federal Projects Only.
8. Alternate Pavements; to exercise this option, separate pay items, descriptions and quantities are included in the itemized proposal for each of the two alternates. The bidder shall bid only one of the two alternates and leave the contract unit price column blank for any pay item listed for the other alternate.
9. When submitting a bid, your bid will still come through with "red" folders. You should make sure that it is not the Schedule of Items folder or the Signature and Identity of Bidder folder. Click on the yellow checkmark (Check

Bid)at the top and it will list any errors in the bid. To view itemized folders, click the Tree View. This will show the status of the individual folders.

\*\*\*\*\*

Below is a list of common mistakes made by bidders leading to non-responsive bids. Please refer to the Standard Specifications for the appropriate procedures for completing and submitting a bid.

- a) Submitting a paper bid for a project
- b) Using a different bid bond form than the one provided
- c) Improper use of the Maximum Monetary Value Award Provision
  - only used if bidding more than one project and should be in only one bid proposal
- d) Not obtaining a digital ID in advance of the letting
  - (obtaining a digital ID may take 5 business days)

\*\*\*\*\*

All questions concerning the bid document preparation shall be directed to the Central Office - Design Division at (573) 751-2876. Project specific questions shall be directed to the project contact listed in the Job Special Provisions.

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\*These forms are also available on MoDOT's Website, [www.modot.org](http://www.modot.org) under Information on the Bid Opening Info page of the Contractor Resources site.

**NOTICE TO CONTRACTORS**

Electronic bids submitted through the Bid Express website for the proposed work will be received by the Missouri Highways and Transportation Commission until 11:00 o'clock a.m. (prevailing local time) on 10/19/2018.

Bid bonds will be received at the office of the Secretary to the Commission in the Missouri Department of Transportation Central Office Building, 105 West Capitol Avenue, Jefferson City, Missouri; delivered by US Mail should be mailed to: Missouri Highways and Transportation Commission, Attention: State Design Engineer/Bid Bond, P.O. Box 270, Jefferson City, MO 65102 or delivered by parcel delivery services, (such as UPS, Fed Ex, DHL, etc.) should be shipped to Missouri Highways and Transportation Commission, Attention: State Design Engineer/Bid Bond, 105 West Capitol Avenue, Jefferson City, MO 65102.

(1) PROPOSED WORK: The proposed work, hereinafter called the work, includes:

\*\*\*\*(1): Job J6I3384 Route I-70, I-170, I-55 VARIOUS County. Signing improvements various locations on I-70, I-170, and I-55 in St. Charles County, St. Louis County, St. Louis City, and Jefferson County, the total length of improvement being 20.09 miles.

If more than one Job Number is listed for this call, then combination bids will be required on the Jobs listed above.

(2) COMPLIANCE WITH CONTRACT PROVISIONS: The bidder, having examined and being familiar with the local conditions affecting the work, and with the contract, contract documents, including the Missouri Highways and Transportation Commission's "Missouri Standard Specifications for Highway Construction, 2018," and "Missouri Standard Plans for Highway Construction, 2018", their revisions, and the request for bid, including appendices, the special provisions and plans, hereby proposes to furnish all labor, materials, equipment, services, etc., required for the performance and completion of the work. All references are to the Missouri Standard Specifications for Highway Construction, as revised, unless otherwise noted. All questions concerning the bid document preparation shall be directed to the Central Office - Design Division at (573) 751-2876.

(3) PERIOD OF PERFORMANCE: If the bid is accepted, the bidder shall continuously and diligently prosecute the work in such order and manner as will ensure the completion of the work within the time specified in the Job Special Provisions in accordance with Sec 108.

(4) LIQUIDATED DAMAGES: The bidder agrees that, should the bidder fail to complete the work in the time specified or such additional time as may be allowed by the engineer under the contract, the amount of liquidated damages as specified in the Job Special Provisions to be recovered in accordance with Sec 108.

(5) ITEMIZED BID: The bidder should complete the following section in accordance with Sec 102.7. The bidder proposes to furnish all labor, materials, equipment, services, etc. required for the performance and

completion of the work, as follows:

Line Number	Item Number	Quantity	Unit	Unit Price	Extension Price
Section 0001					
Roadway Items - J6I3384					
0010	2022010	1	LS		
REMOVAL OF IMPROVEMENTS					
0020	6123000A	1.000	EA		
TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)					
0030	6161040	2.000	EA		
FLASHING ARROW PANEL					
0040	6169901	1	LS		
MISC. TEMPORARY TRAFFIC CONTROL					
0050	6181000	1	LS		
MOBILIZATION					
0060	6209902	6.000	EA		
MISC. TIER TWO INLAID PAVEMENT MARKER SYSTEM.					
Section 0001 Total					
Section 0002					
Signal Items - J6I3384					
0070	9029902	1.000	EA		
MISC. TIER THREE SYSTEM					
Section 0002 Total					
Section 0003					
Signing Items - J6I3384					
0080	9031010	76.800	CUYD		
CONCRETE FOOTINGS, EMBEDDED					
0090	9031220	57250.000	LB		
PIPE POSTS					
0100	9035004A	8122.000	SQFT		
SH-FLAT SHEET					
Section 0003 Total					
Item Total					
					\$0.00

**DBE CERTIFICATION**

(6) Trainees: (Applies to Federal Projects only) The number of trainee hours provided under this contract will be 0 slots at 1000 hours per slot or 0 hours.

(7) Bidder's Certificaton for DBE Program and Contract Goal

(Applies to Federal Projects only.)

(A) DBE Contract Goal: By submitting this bid, the bidder certifies that the bidder is familiar with the DBE Program Requirements in the General Provisions. The contract goal for the amount of work to be awarded is 12.00 % of the total federal project price. The bidder shall also complete the DBE Identification Submittal form in accordance with the General Provisions. This form is available on MoDOT's Website, [www.modot.org](http://www.modot.org) on the Bid Opening Info page of the Contractor Resources site.

(B) DBE Participation: The bidder certifies that it will utilize DBE's as follows:

% OF TOTAL FEDERAL CONTRACT

NOTE: Bidder must fill in the above blank. If no percentage is specified, the bidder certifies that it agrees to and will comply with the contract goal. If a percentage below the contract goal is specified, then the bidder must submit complete documentation of good faith efforts to meet the DBE contract goal, immediately below.

The DBE Identification Submittal form will be submitted via

(C) Certification of Good Faith Efforts to Obtain DBE Participation: By submitting its signed bid, the bidder certifies under penalty of perjury and other provisions of law, that the bidder took each of the following steps to try to obtain sufficient DBE participation to achieve the Commission's proposed DBE Contract Goal:



**CONTRACT PROVISIONS**

(8a) ACCEPTANCE OF PROVISION FOR PRICE ADJUSTMENT FOR FUEL: Bidders have the option to accept the provision for Price Adjustment for Fuel in accordance with Sec. 109.14. The bidder must select "Yes" for those items of work in which they choose to accept the provision. No price adjustments will be made, due to fuel price changes, for bidders who do not accept this provision. This provision does not apply to Seal Coat.

EXCAVATION PRODUCTION

ASPHALT PAVING PRODUCTION AND HAULING

CONCRETE PAVING PRODUCTION AND HAULING

AGGREGATE BASE HAULING

(8b) ACCEPTANCE FOR PROVISION FOR ASPHALT CEMENT PRICE INDEX, SEAL COAT PRICE INDEX, ASPHALT UNDERSEAL PRICE INDEX, OR POLYMER MODIFIED EMULSION MEMBRANE PRICE INDEX: Bidders have the option to accept the provision for Asphalt Cement Price Index, Seal Coat Price Index, Asphalt Underseal Price Index, and/or Polymer Modified Emulsion Membrane Price Index (when used in conjunction with an Ultrathin Bonded Asphalt Wearing Surface treatment) in accordance with the General Provisions. The bidder must mark each box below if they choose to accept the provision. No price adjustments will be made, due to asphalt price changes, for bidders who do not accept this provision.

ASPHALT CEMENT

SEAL COAT

ASPHALT UNDERSEAL

POLYMER MODIFIED EMULSION MEMBRANE (UBAWS)

(9) MAXIMUM MONETARY VALUE OF AWARDS ACCEPTED THIS BID OPENING: Bidders have the option to specify the maximum monetary value of awards that they will accept for the total of all bids they have submitted in the bid opening, Sec 102.7.2. If the bidder is submitting only one bid, or if the bidder does not want to specify a maximum monetary value for submitted bids, this section should not be completed. If a submitted bid upon correction exceeds the indicated maximum monetary amount, the bid may be declared non-responsive. If a bidder's submitted bids show different values for the maximum monetary value, the lowest value will govern.

MAXIMUM MONETARY VALUE OF AWARDS ACCEPTED THIS BID OPENING

\$

(Note: this amount should be entered in only one of the bids for this bid opening)

(10) COMBINATION BIDS: (Applies only if combination bids are specified. See cover and/or notice to contractor(s).) Combination bids will be in accordance with Sec 102.12. By selecting "All or None" the bidder desires to combine all projects in accordance with Sec 102.12.2.1.

(11a) CERTIFICATIONS FOR FEDERAL JOBS: (Applies to Federal Projects only.) By signing and submitting this bid, the bidder makes the certifications appearing in Sec. 102.18.1 (regarding affirmative action and equal opportunity), Sec. 102.18.2 (regarding disbarment, eligibility, indictments, convictions, or civil judgments), Sec. 102.18.3 (regarding anti-collusion), and Sec. 102.18.4 (regarding lobbying activities). Any necessary documentation is to accompany the bid submission, as required by these sections. As provided in Sec. 108.13, the Commission may terminate the contract for acts of misconduct, which includes but is not limited to fraud, dishonesty and material misrepresentation or omission of fact within the bid submission.

(11b) CERTIFICATIONS FOR STATE JOBS: (Applies to State Projects only.) By signing and submitting this bid, the bidder makes the certifications appearing in Sec. 102.18.2 (regarding diseligibility, indictments, convictions, or civil judgments), Sec. 102.18.3 (regarding anti-collusion), and Sec. 102.18.5 (regarding Missouri Domestic Products Procurement Act).

Any necessary documentation is to accompany the bid submission, as required by these sections. As provided in Sec. 108.13, the Commission may terminate the contract for acts of misconduct, which includes but is not limited to fraud, dishonesty, and material misrepresentation or omission of fact within the bid submission.

Does the bidder make certification for the above items listed in 11(a) or 11(b)? **Yes** ☐ **No** ☐

By selecting "No" the bidder REFUSES to make one or more certifications for the above items 11a or 11b. The bidder shall provide a statement of explanation for the refusal in the space below or by fax to the Design Division @ Fax no. 573-522-2281.

(12) ANTIDISCRIMINATION: The Commission hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, businesses owned and controlled by socially and economically disadvantaged individuals will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, religion, creed, sex, age, ancestry, or national

origin in consideration for an award.

(13) PREFERENCE TO MISSOURI FIRMS IN AWARDING OF CONTRACTS: (Applies to State Projects only.) The bidder's attention is directed to Section 34.355 RSMo Supp 2000, et seq, which requires that preference be given in awarding contracts to firms, corporations, or individuals doing business as Missouri firms, corporations, or individuals, or which maintain Missouri offices or places of business, when the quality of performance promised is equal, or better, and the price quoted is the same, or less.

The law also requires that a contractor or bidder domiciled outside the State of Missouri shall be required, in order to be the successful bidder, to submit a bid which is the same percent less than the lowest bid submitted by a responsible contractor or bidder domiciled in Missouri as would be required for the Missouri domiciled contractor or bidder to succeed over the bidding contractor or bidder domiciled outside Missouri in a like contract or bid being let in his domiciliary state. A contractor or bidder domiciled outside Missouri shall also be required to submit an audited financial statement as would be required of a Missouri domiciled contractor or bidder on a like contract or bid being let in the domiciliary state of that contractor or bidder.

For firms, corporations or individuals domiciled outside the State of Missouri, it is requested they submit the following information:

List the state of domicile

List address of all Missouri offices or places of business

I acknowledge that I have read, understand and completed the above Contract Provisions.

**SUBCONTRACTOR DISCLOSURE**

(14) SUBCONTRACTOR DISCLOSURE The bidder shall submit with this bid any subcontracts that meet the requirements of Sec 102. List below the name of each subcontractor that will be furnishing labor, labor and materials, the category of work that the subcontractor will be performing (e.g. asphalt, concrete, earthwork, bridges...), and the dollar value of the subcontract. Select "NONE" if there are no subcontractors that need to be disclosed.

If the information is not available at the time of bid, the bidder shall submit the "Subcontractor Disclosure Form", located on MoDOT's website, on or before 4:00 p.m. of the third business day after the bid opening date, directly to the Design Division, Missouri Department of Transportation, 105 W. Capitol Avenue, P.O. Box 270, Jefferson City, Missouri 65102-0270. Telefax transmittal to MoDOT will be permitted at fax no. 573-522-2281 or emailed to [subcontractor.disclosure@modot.mo.gov](mailto:subcontractor.disclosure@modot.mo.gov). The complete signed original documents do not need to be mailed to MoDOT, but the bidder shall have it available if requested by the Design Division or the engineer.

SUBCONTRACTOR NAME:

DOLLAR VALUE: \$

CATEGORY OF WORK:

SUBCONTRACTOR NAME:

DOLLAR VALUE: \$

CATEGORY OF WORK:

SUBCONTRACTOR NAME:

DOLLAR VALUE: \$

CATEGORY OF WORK:

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DOLLAR VALUE: \$

CATEGORY OF WORK:

SUBCONTRACTOR NAME:

DOLLAR VALUE: \$

CATEGORY OF WORK:

SUBCONTRACTOR NAME:

DOLLAR VALUE: \$

CATEGORY OF WORK:

Submitted:

**SIGNATURE AND IDENTITY OF BIDDER**

## (15) SIGNATURE AND IDENTITY OF BIDDER

BY SUBMITTING THIS BID ELECTRONICALLY, I HEREBY ACKNOWLEDGE THAT ALL REQUIREMENTS INCLUDED IN THE HARD COPY REQUEST FOR BID, AND AMENDMENTS ARE A PART OF THIS BID AND CONTRACT.

\*\*\* AN ELECTRONIC PROPOSAL SUBMITTED AND SIGNED WITH A DIGITAL ID, UNDER THE PROVISION OF THE MISSOURI DEPARTMENT OF TRANSPORTATION, WILL BE CONSIDERED VALID AND BINDING. \*\*\*

THE BIDDER CERTIFIES THAT THE BIDDER AND ITS OFFICIALS, AGENTS, AND EMPLOYEES HAVE NEITHER DIRECTLY NOR INDIRECTLY ENTERED INTO ANY AGREEMENT, PARTICIPATED IN ANY COLLUSION, OR OTHERWISE TAKEN ANY ACTION IN RESTRAINT OF FREE COMPETITIVE BIDDING IN CONNECTION WITH THIS BID, AND THAT THE BIDDER INTENDS TO PERFORM THE WORK WITH ITS OWN BONAFIDE EMPLOYEES AND SUBCONTRACTORS, AND DID NOT BID FOR THE BENEFIT OF ANOTHER CONTRACTOR.

THE BIDDER CERTIFIES THAT THE BIDDER'S COMPANY KNOWINGLY EMPLOYS ONLY INDIVIDUALS WHO ARE AUTHORIZED TO WORK IN THE UNITED STATES IN ACCORDANCE WITH APPLICABLE FEDERAL AND STATE LAWS AND ALL PROVISIONS OF MISSOURI EXECUTIVE ORDER NO. 07-13 FOR CONTRACTS WITH THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION, ACTING THROUGH THE MISSOURI DEPARTMENT OF TRANSPORTATION.

THE BIDDER ACKNOWLEDGES THAT THIS IS AN UNSWORN DECLARATION, EXECUTED UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES AND/OR FALSE DECLARATION UNDER THE LAWS OF MISSOURI, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS. THE FAILURE TO PROVIDE THIS CERTIFICATION IN THIS BID MAY MAKE THIS BID NON-RESPONSIVE, AND CAUSE IT TO BE REJECTED.

☐ Yes ☐ No

Select "No" ONLY if the bidder REFUSES to make this certification. The bidder may provide an explanation for the refusal with this submittal in the space below or by fax to the Design Division @ fax no. 573-522-2281.

USE OF ANOTHER PERSON'S DIGITAL ID IN THIS BIDDING PROCESS VIOLATES THE LAWS OF MISSOURI.

I acknowledge that I have read, understood and completed the above Electronic Bid Submission Certification.

**BID BOND**

(16) BID GUARANTY: The bidder shall submit a Bid Guaranty meeting the requirements of Section 102 of the Missouri Standard Specifications for Highway Construction. MoDOT's bid bond forms are available on MoDOT's website.

Annual bid bonds shall be submitted to MoDOT by June 15th of each year. If utilizing a paper annual or project specific bid bond as a Bid Guaranty

for this project the bidder shall mark the box below.

\*\*Pay by: ☐ Paper Annual or Project Specific Bid Bond.

If submitting a cashier's/certified check, the Bid Bond folder will not turn green.

**ELECTRONIC BID BOND**

The bidder shall complete the following bond verification process if utilizing an electronic project bid bond or electronic annual bid bond as a Bid Guaranty for this project.

\*\*Bond ID:

\*\*Surety Registry Agency:

\*\*Bond Pct:

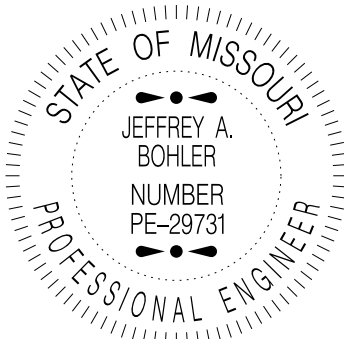
Surety State:

FIELDS WITH THE \*\* INDICATOR ARE REQUIRED FIELDS IF SUBMITTING YOUR BID VIA BID EXPRESS

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

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

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 <p>THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.</p>	<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: J6I3384 VARIOUS COUNTIES, MO DATE PREPARED: 09-11-2018
	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-09-02D

**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 "Bidding". 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 "Business"; "Standards and Specifications". The effective version shall be determined by the letting date of the project.

General Provisions & Supplemental Specifications

Supplemental Plans to July 2018 Missouri Standard Plans  
For Highway Construction

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

B. Contract Liquidated Damages

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

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

Notice to Proceed: December 3, 2018  
Completion Date: September 1, 2019

**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
<b>J6I3384</b>	<b>N/A</b>	<b>\$1,800</b>

**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 **\$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

**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.

**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** 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** When a traffic queue extends 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 due to non-recurring congestion, 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** There are six major holidays throughout the calendar year: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas. To minimize any impacts work may have on traffic during these holidays, all lanes shall be scheduled to be open to traffic from 12:00 noon on the last working day preceding the holiday until 9:00 a.m. on the first working day subsequent to the holiday. There may be other events of regional significance, such as specific sporting events (i.e. St. Louis Cardinals and St. Louis Blues home games), events at Forest Park, Tower Grove Park, or Grand Center, parades, marathons, concerts, and other major St. Louis events. The Engineer will advise the contractor of any such events and how they are to be handled. Restricted periods for special events shall be determined by the Engineer.

**3.2** The contractor shall not perform any construction operation on the roadbed during restricted periods, holiday periods or other special events, whether specified in the contract documents or not, as exact dates and times of all special events is unknown at the time this document is published.

**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 contractors 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.

City Area Working Hours (No lane closures on Interstate)

I-70 EB - 9am – 9pm  
I-70 WB – 5am – 3pm  
I-55 NB - 9am – 9pm  
I-55 SB - 5am – 3pm

St. Louis County Working Hours (No lane closures on Interstate)

I-70 9am – 3pm  
I-170 9am – 3pm  
I-55 NB - 9am – 9pm  
I-55 SB - 5am – 3pm

St. Charles Working Hours (No lane closures on Interstate)

I-70 EB - 9am – 9pm  
I-70 WB – 5am – 3pm

#### **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**

**1.0** The contractor shall have communication equipment on the construction site or immediate access to other communication systems to request assistance from the police or other emergency agencies for incident management. In case of traffic accidents or the need for police to direct or restore traffic flow through the job site, the contractor shall notify police 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 police services, the following agencies may also be notified for accident or emergency situation within the project limits.

Missouri State Highway Patrol  
Troop C Headquarters  
891 Technology Dr.  
Weldon Spring, MO 63304  
(636) 300-2800

St. Louis Metropolitan Police Department  
South Patrol Division  
3157 Sublette  
St. Louis, MO 63139  
(314) 444-0100

Saint Louis University Hospital  
3635 Vista Ave.  
St. Louis, MO 63110  
(314) 577-8000

Barnes-Jewish Hospital  
1 Barnes-Jewish Hospital Plaza  
St. Louis, MO 63110  
(314) 747-3000

St. Louis Fire Department Headquarters  
1421 N. Jefferson Ave.  
St. Louis, MO 63106  
(314) 533-3406

St. Louis City Tow Lot/Towing Services  
7410 Hall St.  
St. Louis, MO 63147  
(314) 383-7546

MoDOT Transportation Management Center (TMC)  
14301 South Outer 40 Rd.  
Chesterfield, MO 63017  
(314) 275-1500

Missouri Highway Patrol (800)-222-6400 Missouri Highway Patrol: (636) 300-2800
Transportation Management Center (TMC) Hours of Operation: 24/7/365 Dispatch (314) 275-1500 Nextel Direct Connect 140*2*14100

St. Louis County		
Police 636-529-8210	Fire Mid-County 314-863-4018	Northeast Ambulance and Fire 314-382-7238

St. Charles County Police Department: (636) 949-3000		
St. Charles County Ambulance District (636) 344-7600	O'Fallon Fire Department (636) 272-3493	O'Fallon Police Department (636) 240-3200

**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 police agency.

**2.2** The contractor shall notify 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 enforcement and emergency agencies, a report shall be furnished to the engineer on the status of incident management.

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

**E. Project Contact for Contractor/Bidder Questions**

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

Jeff Bohler, Project Contact  
St. Louis District  
1590 Woodlake Drive  
Chesterfield, MO 63017

Telephone Number 314-453-5052  
e-mail [Jeffrey.Bohler@modot.mo.gov](mailto:Jeffrey.Bohler@modot.mo.gov)

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

F. Utilities

**1.1** 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** The contractor shall be aware there are numerous utilities present along the routes in this contract. Utility locates were not performed during the design phase of the project; therefore, the extent of conflicts with utilities are unknown.

There may be underground utilities that run parallel or cross the routes that are in close proximity to the sign work locations. The contractor shall take necessary precautions and measures to verify locations and depths of utilities by any necessary means to determine exact impacts to their work.

If utility facilities are found and discovered, the engineer will determine whether relocation of the utility is necessary to accommodate construction or if the work can be installed in accordance with Missouri Standard Plans for Highway Construction for the item of work specified.

Basis of Payment. There is no direct pay for complying with this provision.

G. Contractor Quality Control NJSP-15-42

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

**2.0 Quality Control Plan.**

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

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

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

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

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

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

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

#### **4.0 Work Planning and Scheduling.**

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

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

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



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

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

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

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

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

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

#### H. Stormwater Compliance Requirements NJSP-15-38

**1.0** The land disturbance necessary to complete this project is not anticipated to exceed one (1) acre. Should the contractor disturb more than one (1) acre to complete the work, or for any other reason, all terms of this Job Special Provision will apply.

**1.1 Description.** The Contractor shall comply with the terms of the United States of America v. Missouri Highways and Transportation Commission Consent Decree (Consent Decree) that are identified as the responsibility of the Contractor or subcontractor, and with the terms of this provision. Viewing of the Consent Decree is available on the MoDOT Land Disturbance webpage under Contractor Resources, or by going to the web address [www.modot.org/LD](http://www.modot.org/LD).

**1.2 Applicability.** The Consent Decree and this provision apply to any project that includes land disturbance of areas totaling greater than one (1) acre on the project site. The project site consists of all areas designated on the plans, including temporary and permanent easements. The Consent Decree and this provision do not apply to Contractor staging, plant, or borrow areas that are not located on MoDOT right of way (Off-site). The Contractor is responsible for obtaining its own separate land disturbance permit for Off-site areas. This provision is in addition to any other stormwater, environmental, and land disturbance requirements specified elsewhere in the contract.

**2.0 Stormwater Training for Contractor Employees.** The Contractor's on-site project manager, designated Water Pollution Control Manager (WPCM), as defined in Section 3.0, and WPCM delegate, shall complete MoDOT Stormwater Training prior to serving in those roles. If someone other than the Contractor's project manager is given the authority to manage the grading or erosion control operations, the project manager(s) for those operations shall also complete MoDOT Stormwater Training. MoDOT Stormwater Training is also required for any other person who the Contractor gives authority to take measures to prevent or minimize the consequences of non-compliance with the Stormwater requirements, as defined in Section 3.1(a) of this provision.

**2.1** The Commission will provide MoDOT Stormwater Training to the Contractor employees specified in Section 2.0 at a location and time determined by MoDOT. There will be no fee for attending the training; however, the Contractor shall be responsible for all other cost related to the training, such as travel expenses, if necessary, and wages for its employees. The time to complete the training is anticipated to be no more than 6 hours. As long as the Consent Decree is in effect, MoDOT will provide periodic trainings at various locations around the state, as needed, to ensure contractors and bidders have the opportunity to maintain the number of WPCMs they need to comply with this provision.

**2.2** Those who require MoDOT Stormwater Training per Section 2.0 shall complete the training prior to beginning any land disturbance work. Thereafter, training shall occur at least once every two (2) years. The training is not project-specific. Any Contractor employee who receives the training will be qualified to perform the WPCM duties on any MoDOT project for a period of two (2) years.

**2.3** MoDOT will document the names and dates that contractor employees attend MoDOT Stormwater Training and will retain those records for the period of time specified in the Consent Decree. Duplicate record keeping by the contractor is not required.

**3.0 Water Pollution Control Manager (WPCM).** Prior to the Pre-Activity meeting for Grading/Land Disturbance, the Contractor shall designate a Water Pollution Control Manager (WPCM) to fulfill the duties and responsibilities listed in Section 3.1 until final stabilization occurs. The Contractor's on-site project manager may also serve as the WPCM or that role may be assigned to another manager employed by the contractor or a subcontractor. The Contractor shall also maintain a WPCM delegate to temporarily fulfill the WPCM duties in the absence of the primary WPCM (e.g. illness, vacation, other leave).

**3.1 Duties of the WPCM:**

- (a) Be familiar with Stormwater Requirements including the National Pollutant Discharge Elimination System (NPDES), the current MoDOT State Operating Permit for construction stormwater discharges/ land disturbance activities, the Project-specific Stormwater Pollution Prevention Plan (Project SWPPP), the Corps of Engineers Section 404 Permit, when applicable, the Consent Decree, and this provision. The Project SWPPP includes: a title page with project-specific information, the general SWPPP posted on the MoDOT land disturbance website, the Project Erosion & Sediment Control Plan, all applicable special provisions, and all applicable specifications and standard drawings;
- (b) Complete the stormwater training set forth in Section 2.0;

- (c) Attend the Pre-Activity for Grading/ Land Disturbance Meeting or, if hired after the meeting has occurred, be familiar with the conference decisions;
- (d) Review and sign the Project-specific SWPPP and all updates thereto within time periods set out in the Consent Decree;
- (e) Visit and review the project site for compliance with Stormwater Requirements at least once per week from the start of any grading operations until final stabilization is achieved and permit is closed;
- (f) Be authorized by the Contractor to supervise all work performed by the Contractor and subcontractors that involves compliance with Stormwater Requirements, including the authority to order work be stopped on a Project, implement MoDOT-directed changes in work related to Stormwater Requirements, and order the taking of, measures to cease, correct, prevent, or minimize the consequences of non-compliance with Stormwater Requirements;
- (g) Review and certify electronically each MoDOT inspection report for the Project within three (3) days of receiving each report to ensure it conforms with report requirements in the National Pollution Discharge Elimination System Stormwater (NPDES SW) Permit, Project SWPPP and the Consent Decree and ensure that all Stormwater Deficiencies noted on the report are corrected within the time required;
- (h) Recommend in writing within three (3) days of discovering any changes in site conditions and Best Management Practices (BMPs) that require an update to the Project-specific SWPPP; and
- (i) Be the point of contact relating to Stormwater Requirements and the Consent Decree between the Contractor, Subcontractors and MoDOT.

**4.0 Pre-Activity Meeting for Grading/Land Disturbance and Required Hold Point.** At each Project, a Pre-Activity Meeting for Grading/Land Disturbance shall be held prior to the start of any land disturbance and shall include a physical visit and review of the project site. 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.

**4.1** Contractor employees who shall attend the Pre-Activity Meeting for Grading/Land Disturbance include the WPCM for the Project and the person(s) designated the authority to manage the grading and erosion control operations.

**4.2** 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.

**5.0 Compliance with the NPDES SW Permit and Project SWPPP.** On all projects, the Contractor shall comply with all applicable Stormwater Requirements which are defined as, but are not limited to:

- (a) Consulting with the engineer on recommended design revisions to the Project SWPPP to accommodate the Contractor's staging plan, implementation, managing, and maintaining BMPs or other control measures to prevent or minimize sediment and other pollutants in stormwater runoff in accordance with contract specifications or any relevant manufacturer specifications and good engineering practices, including but not limited to the manuals (*Note: two manuals cited in the MoDOT permit are "Developing your stormwater pollution prevention plan: A guide for construction activities" and "Protecting Water Quality: A Field Guide to erosion, sediment and stormwater best management practices for development sites in Missouri"*) and any other applicable standards for sedimentation basins, stabilization, rock dams, brush checks, construction entrances, and other BMPs;
- (b) Installing all BMPs at the locations and relative times specified in the Project SWPPP; and
- (c) Complying with the Missouri Water Quality Standards and with effluent limitations in Section E.1 of the NPDES SW Permit. Measurement of effluent is not required except as specified in E.2.

**5.1 Stormwater Deficiency Corrections.** Per terms of the Consent Decree, Stormwater Deficiencies identified on the MoDOT Land Disturbance Inspection Report shall be corrected within 7 days of the inspection date to avoid stipulated penalties, except that more time might be 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.

**6.0 Inspection Protocol.** The Contractor and all subcontractors shall review and adhere to MoDOT's written Stormwater Inspection Protocol, found on the MoDOT Land Disturbance webpage ([www.modot.org/LD](http://www.modot.org/LD)). The Inspection Protocol is applicable to all Projects under the consent decree. The MoDOT Resident Engineer will serve the role of Stormwater Resident Engineer, or a delegate will be named in their absence.

**6.1 Inspection Reports.** MoDOT will provide one or more Environmental Construction Inspectors (ECI) to perform the weekly and post run-off inspections and other duties described in paragraph 17 of the Consent Decree. The ECI will enter the inspection reports into a web-based Stormwater Compliance database. The WPCM will have access to this database to view all report information, including any noted deficiencies, and to certify the report as required in Section 3.1 (g.). Automated email reminders of pending reports that need to be certified and for deficiencies that need to be corrected will be sent to the WPCM. The Contractor may designate other employees or subcontractor employees to have viewing access to this database and to receive the email reminders. Completion of MoDOT Stormwater Training is necessary in order to receive the email reminders. The WPCM and other users shall be equipped with an electronic device (desktop computer, laptop, tablet, smartphone, etc.) with a browser and

internet access to connect to the database. The contractor shall be responsible for providing the electronic devices.

**7.0 Stipulated Penalties.** If the Contractor fails to comply fully and timely with the requirements of the Consent Decree, stipulated penalties will be assessed to the Commission. For matters under the Contractor's responsibility and control the following stipulated penalties will be assessed to the Contractor and MoDOT will withhold payment pursuant to the following:

<b>Violation</b>	<b>Stipulated Penalty Amount</b>
Failure to Designate or Maintain WPCM at each Project in Accordance with Section 3.0.	\$750 for the initial violation (each person not designated) and then \$750 for each fourteen (14) day period that person is not designated.
Failure to complete MoDOT Stormwater Training by an Individual Required to be Trained in Accordance with Section 2.0, such as the WPCM or Project Manager.	\$750 per person for each missed training. This \$750.00 per person violation shall continue to accrue for each fourteen (14) day period that the person fails to timely receive the applicable training
Failure of WPCM to Review and Certify an Inspection Report in Accordance with Inspection Protocol as set forth in Section 6.	\$250 per inspection report not reviewed or signed.
Failure to Comply with Any NPDES SW Permit or SWPPP Requirement.	\$1000 per violation for the first ten (10) days of the violation; \$2500 per violation for days 11-20; \$3500 per violation for days 21 and beyond.
Failure to Correct a Stormwater Deficiency Identified in a MoDOT Inspection Report, or Otherwise Discovered by the WPCM, within the Time Required by the NPDES SW Permit or SWPPP.	\$1000 per deficiency for the first ten (10) days after correction was required; \$2500 per deficiency for days 11-20 after correction was required; \$3500 per deficiency for days 21 and beyond after correction was required.

**8.0 Information Collection and Retention.** The EPA, its representatives and its agents shall have the right of entry into any facility covered by this Consent Decree, at all reasonable times, upon presentation of credential, to:

- (a) monitor the progress of activities required under the Consent Decree;
- (b) verify any data or information submitted to the United States in accordance with the terms of the Consent Decree;
- (c) obtain samples and, upon request, splits of any samples taken by MoDOT or its representatives, contractors, or consultants;
- (d) obtain documentary evidence, including photographs and similar data; and
- (e) assess MoDOT's compliance with the Consent Decree.

**8.1** Until three (3) years after the termination of the Consent Decree, Contractors and the agents of the Contractors shall preserve all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its Contractors' or agents' possession or control, or that come into the Contractor's or agent's possession or control, and that relate to MoDOT's performance of its obligations under the Consent Decree or to the Contractor's performance of its obligations under the Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures.

**9.0 Basis of Payment.** Should the contractor disturb more than one (1) acre due to its method of operations, or for any other reason, no direct payment will be made for compliance with this provision, including the cost to provide a WPCM. Should the engineer direct the contractor to exceed one (1) acre of land disturbance, payment will be made only for the actual cost of the weekly duties of the WPCM. Separate payment will be made for erosion and sediment control devices, and for permanent and temporary seeding and mulching, when payment for those items are provided elsewhere in the contract.

I. Tier Two Inlaid Pavement Arrows System

**1.0 Description.** This specification is for a system of internally Illuminated Recessed Pavement marker which together make an arrow to deter wrong way drivers. System shall include 8 internally Illuminated recessed pavement markers per arrow. System shall include two arrows per ramp.

**2.0 Operation Specifications.** Pavement markers to meet the following:

- Charge Time 3 Hours/8 Hours cloudy
- Operating Time 16 Hours
- Compressive Strength 239,000 N / 53,775 lbf
- Water Proof Rating IP68
- Operating Temperature -40°F to 158°F
- Dimensions (inches) Ø 5.83" x 1.97"
- Weight (pounds) 2.23#

**3.0 Lighting Specifications.**

Lighting Specification – Luminance (LUX)			
Function	Color	3 LED	6 LED
Steady	Yellow	24	34
	White	138	54.8
	Red	48	17.3
	Green	17.8	62
	Blue	90.6	47.7

**4.0 Component Specifications.**

Single Mono-Crystalline Solar Cell	Solar Module Size	82 x 82
	Solar Maximum Output Power	0.677W
	Solar Operating Current	2156mA
	Solar Voltage	3.15V
LED	LED Size	3528 CHIP LED + Ø10 LENS
	LED Current	20mA per each
	LED Operating Current	1.1 mA (3PCS), 6.6mW (6PCS)
	LED Voltage	3V
	LED Wattage	3.3 mW(3PCS), 6.6mW(6PCS)
	LED Quantities	3PCS / 6PCS
Pseudocapacitor	Pseudocapacitor	2.3V 120F
	Number of Semicapacitors	2pCS

**5.0 Payment.** Payment for all labor, equipment, materials and incidental work for placing Tier Two Inlaid Pavement Marker System, will be paid for at the contract unit price for:

Item No.	Type	Description
620-99.02	Each	Tier Two Inlaid Pavement Marker System

J. Temporary Traffic Control

**1.0 Description.** All work necessary to maintain safe and efficient traffic flow through the work areas shall be provided by the contractor. This will include furnishing, relocating, and removing temporary traffic control devices, truck mounted attenuators and equipment, and the removal and relocation or covering and uncovering of existing signs and other traffic control devices in accordance with the contract documents or as directed by the engineer.

**2.0 Work requirements.** Work shall be in accordance with Sec 616, Sec 612, and the contract plans.

**3.0 Method of Measurement.** The quantities shown on the plans shall be considered an estimate and may be subject to change based on field conditions. This work will not be measured for payment, but will be considered a lump sum unit. Any Value Engineering proposals to the temporary traffic control will not be paid for through value engineering but will be covered under Temporary Traffic Control, lump sum.

**4.0 Basis of Payment.**

**4.1** Partial payments will be made as follows:

- (a) The first partial payment will be made when five percent of the original contract amount is earned. This payment will be the lesser of 50 percent of the contract price for the item of temporary traffic control or 5 percent of the original contract price.
- (b) The second partial payment will be made when 50 percent of the original contract amount is earned. This payment will be the lesser of 25 percent of the original contract price for the item of temporary traffic control or 2.5 percent of the original contract price.
- (c) The third partial payment will be made when 75 percent of the original contract amount is earned. This payment will be the lesser of 20 percent of the original contract price for the item of temporary traffic control or 2 percent of the original contract price.
- (d) When the engineer has accepted the contract for maintenance in accordance with Sec 105, the remaining contract price for the item of temporary traffic control will be paid.
- (e) The above partial payment schedule may be adjusted by the engineer if proof of invoices submitted by the contractor demonstrate additional temporary traffic control costs were incurred earlier than the above proposed schedule. The total payment for temporary traffic control will not exceed the bid amount for Temporary Traffic Control, lump sum, unless covered by a cost change order as referenced in the following Section 4.3.

**4.1.1** For the purposes of this provision, the term “original contract price” will be construed as the total dollar value of the construction items (excluding temporary traffic control) of the original contract.

**4.2** Temporary traffic control will be paid for at the contract lump sum price for:

Item Number	Type	Description
616-99.01	Lump Sum	Temporary Traffic Control

No direct payment will be made for the following:

- (a) Incidental items necessary to complete the work, unless specifically provided as a pay item in the contract.
- (b) Installing, operating, maintaining, cleaning, repairing, removing or replacing traffic control devices.
- (c) Covering and uncovering existing signs and other traffic control devices.
- (d) Relocating temporary traffic control devices, including permanent traffic control devices temporarily relocated, unless specifically included as a pay item in the contract.
- (e) Providing channelizers.
- (f) Worker apparel.
- (g) Flaggers, pilot vehicles, and appurtenances at flagging stations.



- (h) Furnishing, installing, operating, maintaining, and removing construction-related vehicle and equipment lighting.
- (i) Construction and removal of temporary equipment crossovers, including restoring pre-existing crossovers.
- (j) Removing existing pavement markings, installing temporary pavement markings, and removing and relocating temporary pavement markings as necessary for staging operations.
- (k) Installing "Drive Smart" and "Point of Presence" signs.

**4.3** Any additional work deemed necessary by the engineer that requires temporary traffic control and is not covered by the contract plans will be included in the cost change order for the additional work. However, if the added work is required in a stage where temporary traffic control is already in place, no additional traffic control pay will be allowed in this case.

**K. Disposition Of Existing Modot Signing Equipment**

**1.0 Description.** The existing sheet and/or extruded aluminum sign panels to be removed by the contractor shall be delivered to the Missouri Department of Transportation's District Sign Shop located on Barrett Station Road in west St. Louis County. The contractor shall assist with the storage of these signs as directed by the engineer.

**1.1** Any hardware (brackets, u-bolts, aluminum I-beams, etc) associated with removals involving overhead sign supports shall also be salvaged and delivered to the Sign Shop.

**1.2** The contractor shall notify the sign shop at least 24 hours in advance of delivering any signing materials to this maintenance lot. Contact information is below:

James (Dusty) Henson, Signing / Striping Supervisor  
Office: (314) 205-7313, Cell: (618) 340-5666

**1.3** All sign supports, footings and other signing equipment to be removed shall become the property of the contractor and disposed of off the right of way.

**1.4** The contractor shall exercise reasonable care in the handling of the signs. Should any sign be damaged due to the contractor's negligence during removal, transportation and/or reinstallation, it shall be replaced in kind at the contractor's expense. The engineer shall have the final determination on whether the said signs should be replaced or repaired.

**2.0 Basis of Payment.** All costs incurred for complying with this provision shall be considered completely covered by the contract unit price for:

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

No direct payment will be made for attaching existing signs onto existing or new posts as indicated in the plans.

L. Tier Three System

**1.0 Description.** This specification is for a Wrong Way Detection System (WWDS).

**2.0 Specifications.** System shall meet the following Specifications:

**Key Components:**

The WWDS consists of two key components: detection hardware, and a cloud-based system management and notification service.

**Detection Hardware:**

- The WWDS detection hardware shall consist of an array of redundant sensors, utilizing at least two different detection technologies, for improved accuracy and extremely low probability of false alerts
- Detection hardware shall be powered by 120VAC or solar power
- Detection hardware shall be mounted to a rigid pole, or other approved structure

**Cloud-Based Service:**

- The cloud-based service shall provide a secure user interface and shall be capable of delivering on-screen notifications with images, e-mail notifications with images, and SMS text messages, when the detection hardware has been triggered
- The cloud-based service shall not require any locally installed software applications other than an up-to-date web browser
- Historical alert data and system statistics shall be accessible through easy-to-use user-configurable reports, and shall be capable of displaying detection hardware system status, including but not limited to DC power supply voltage and cabinet temperature.

**LED Sign**

- All signs shall conform to 2009 Federal Highway Administration's MUTCD section 2A.07 on retro reflectivity and illumination. Each sign shall have eight daylight-visible LEDs that are embedded individually into 1" diameter holes around the perimeter of the sign, and shall be ultrasonically welded to the sign assembly to provide maximum strength and rigidity. Each sign blank material shall be a minimum of 0.080" thick aluminum.
- Each sign face shall consist of Diamond Grade™ DG3 reflective fluorescent yellow-green or fluorescent yellow or white sheeting, as required, for an MUTCD compliant sign, applied to the sign blank with a 3MTM 1160 Premium Protective Overlay film to provide an additional layer of graffiti protection.
- Shall be the specified sign legend.
- Shall consist of specified quantity of high power, 1 watt LEDs.
- Shall consist of specified color LEDs (amber, red, or white).
- Shall have each LED sealed within a 7/8" diameter, heat-dissipating plastic enclosure to provide resistance to weather and vibration.

- Shall have the LEDs wired in strings to activate simultaneously per MUTCD standards.
- Shall have the LEDs wired in parallel electrically so that remaining LEDs continue to flash in the event of the failure of any individual LED.
- Wiring between LEDs shall be encapsulated inside 1" x 3/8" aluminum extrusions secured to the back of each sign assembly, to provide weather resistance and protection.
- Each sign shall have adequate holes for mounting to a pole or post. Optional vandal-resistant fasteners to mount the LED sign assembly to a pole or post shall be available.
- UV-resistant label(s) shall be applied to the back of each sign assembly and shall include specific information such as the manufacturer, manufacturer phone number, model number, serial number, date of manufacture and any applicable regulatory compliance information.

### **Required Functionality:**

When properly installed, tested and certified within guidelines the WWDS shall:

- Automatically capture images of wrong-way vehicles that proceed past the detection hardware
- Generate alerts in the cloud-based web user interface as well as e-mail and SMS alerts for all configured users.
- Trigger LED-enhanced signage.

When local warning devices are incorporated with the detector, they shall be configurable and may be activated by the incoming detector's primary output, either by time-of-day, by sensing ambient light levels, or at all times. When multiple local warning devices are present in a WWDS, they shall be activated simultaneously via a 900MHz FHSS wireless transceiver, and shall flash in a configurable synchronized pattern. If desired, hardwired connections to the warning devices may be used in place of the wireless transceiver.

### **System Testing and Certification:**

To ensure proper installation, configuration, and functionality, all WWDS shall be tested and certified under the direct on-site supervision of the manufacturer. Manufacturer shall provide a written test plan to the installing agency at least 30 days prior to scheduled testing. Installing agency, or their appointed contactor, shall be responsible for full ramp closure during a portion of the nighttime testing, including all applicable management of traffic and advance motorist notification as required by the agency. Expenses for on-site testing and configuration shall be a separate pay item, and shall be quoted by the manufacturer directly.

The test plan shall include provisions to verify the following:

- Activation of local warning devices (if equipped)
- Activation of local radio-activated warning devices (if equipped)
- Generation of wrong way alerts in from wrong way small, medium, and large size vehicles, in all lane positions, in a range of slow and high speeds
- Delivery of e-mail alerts to a specified user, or users
- Radar detector aim and threshold adjustment (if equipped)
- Inductive Loop detector configuration and tuning (if equipped)
- Confirmation camera aim and focus

- Proper installation and connection of all terminals and components
- Clear digital pictures of all system components

**General Requirements:**

Wrong Way Detection System manufacturer must have a minimum of ten years of relevant intelligent traffic product manufacturing experience, including successful deployment of a minimum of 100 fully functional WWDS.

**General Detection Hardware Requirements: Microwave Detectors (24 GHz Systems Only):**

- Shall be completely sealed and protected from water intrusion
- Shall have a universal mounting bracket to mount on wall, post or mast arm
- Shall have a temperature range of -40 °C to 85 °C
- Shall have selectable frequencies at 24 GHz with a beam angle of  $\pm 15$
- Shall utilize Ethernet communication for programming
- Shall be programmable to create up to eight (8) independent detection zones up to a maximum of 600 feet
- Shall detect Motorcycles
- Shall include a built-in self-test, including self-power usage
- Shall automatically recover from power failure
- Shall be protected from reverse polarity power connections and power surges
- Shall be capable of detecting targets as slow as 5MPH and as fast as 150MPH
- Shall comply with part 15 of FCC rules
- Shall operate from 12VDC to 24VDC
- Shall be programmable from windows-based software

**Confirmation Camera:**

- Shall include cross-line detection software analytics
  - Detection area and direction shall be programmable
- Shall be capable of storing images saved in a buffer to capture events that occurred in the recent past
- Shall have programmable event-based logic that integrates with Wrong Way Logic Controller
- Shall have adjustable image settings, including:
  - Compression, color, brightness, sharpness, contrast, white balance, exposure control, exposure zones, backlight compensation, fine tuning of behavior at low light, and rotation
- Shall have a shutter time of 1/6s to 1/24500s
- Shall utilize a 1/4" progressive scan RGB CMOS
- Shall have a minimum of one input and one output
- Shall comply with part 15 of the FCC rules
- Shall operate from -4° to +122°F (-20° to +50°C)
- Shall have a sensor that is IP66 NEMA 4X-rated
- Shall operate from 8VDC to 28VDC
- Shall be programmable from windows-based software

**Programmable Wrong Way Logic Controller:**

- Shall analyze discrete inputs from multiple sensors and confirmation cameras
- Shall provide programmable outputs per event criteria, including sign activation and wrong way alert generation
- Shall have the ability to drive two mechanical relays for integration with existing infrastructure
- Shall provide a minimum of four additional GPIO for future functionality
- Shall include screw-type terminals for all wire connections
- Shall include multiple programmable status LEDs for on-site testing and troubleshooting
- Shall include a micro-USB interface for future updates
- Shall operate on 9VDC to 18VDC

**4G LTE Cellular Gateway:**

- Shall provide communication to cloud-based web service
- Shall be offered in Verizon and AT&T variants
- Shall include an integrated five-port 10/100 Ethernet switch
- Shall include an integrated RS232 serial port
- Shall include LED indicators for Power, WAN, Signal, RS232, Ethernet Link, and Activity
- Shall comply with part 15 of FCC rules
- Shall operate from -40° to +167°F (-40° to +75°C)
- Shall have a sensor that is IP66 NEMA 4X-rated
- Shall operate on 8VDC to 30VDC
- Shall be capable of Over the Air (OTA) firmware updates and remote management
- Shall be capable of IPSEC VPN
- Shall be programmable from windows-based software

**900 MHz FHSS Wireless Transceiver:**

- Shall seamlessly integrate with programmable sign controller to ensure synchronized activation of other radio-equipped devices in the system
- Shall include an integrated LCD and two user-interface buttons for setup and troubleshooting, including readouts of flash duration and battery conditions and LED testing functionality
- Shall include two LED indicators for status and troubleshooting
- Shall be capable of operating as a Gateway, Node, or Repeater
- Shall be capable of providing site-survey data for verification of signal strength between network devices
- Shall include network-wide modification of sign controller settings and output durations, using programmability from any networked transceiver without the use of additional equipment or software
- Shall operate on the license-free ISM band
- Shall comply with part 15 of FCC rules
- Shall operate on 3.3VDC to 15VDC

**Programmable Sign Controller:**

- Shall include integrated constant-current LED drivers with two-channel output
- Shall include two General Purpose Inputs and Outputs (GPIO)

- Shall be completely programmable, including flash pattern and duration, and LED intensity
- Shall seamlessly integrate with the 900 MHz FHSS wireless transceiver to form a network of connected devices
- Shall include an integrated Real Time Clock (RTC) with on-board battery backup
- Shall include data-logging capabilities with selectable interval from one minute to one day
- Shall include integrated time-clock functionality, including up to 16 events per day, and up to 7 selectable day types
- Shall include an RS232 serial interface for local programming
- Shall be programmable from windows-based software
- Shall be housed in a NEMA 4X enclosure

**120VAC to 12VDC Power Supply:**

- Shall be 120W minimum
- Shall be DIN rail mounted
- Shall be UL508 Listed
- Shall operate from -40° to +160°F (-40° to +71°C)

**Solar Power Supply:**

- The solar panel shall be up to 13.5"x15" in size and provide up to 130 watts peak total output.
- The solar panel shall be mounted to an aluminum bracket at an angle of 45°- 60° to provide maximum output.
- All fasteners used shall be anti-vandal.
- All solar panel connectors shall conform to Ingress Protection, IP-67 rating, dust proof, and protected from temporary immersion in water up to 1 meter deep for 30 minutes. Connectors shall be Deutsch DTM series.
- The solar controller shall have PWM series battery charging (not shunt)
- The solar controller shall have a 3-position battery select: gel, sealed or flooded
- The solar controller shall have Current compensated low voltage disconnect (LVD)
- The solar controller shall have LED's to indicate battery status and faults
- The solar controller shall protect against short circuit, overload, reverse polarity, reverse current, high voltage, high temperature and surges from lightning and voltage spikes

**Primary Enclosure:**

- Shall be constructed of 0.125" Aluminum
- Shall be vented to promote airflow for internal components
- Shall include screening on all vents and drains to prevent insects and other foreign matter from entering
- Shall include a replaceable #2 traffic lock and keys
- Shall include at least three tamper-resistant stainless steel hinges
- Shall include a removable control panel to which all control circuit components mount
- Shall utilize six 5/16"-18 stainless steel mounting studs that mate to a range of bracket options

Job No.: J6I3384  
Routes I-55, I-70, I-170  
Various Counties

**3.0 Payment.** Payment for all labor, equipment, materials and incidental work for placing Tier Three Wrong Way Detection Systems, will be paid for at the contract unit price for:

Item No.	Type	Description
902-99.02	Each	Tier Three System