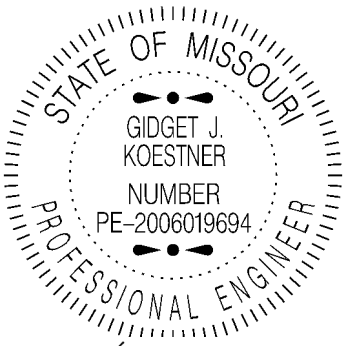
Job No. JST0142
Various Routes
Various Counties

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

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Job No. JST0142
Various Routes
Various Counties



11/12/2026 10:40:26 AM
GIDGET J. KOESTNER - CIVIL
MO-PE-2006019694

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
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: JST0142
VARIOUS COUNTIES:

DATE PREPARED: 11/10/2026

ADDENDUM:

Only the following items of the Job Special Provisions are authenticated by this seal: ALL

Job No. JST0142
Various Routes
Various Counties

JOB
SPECIAL PROVISIONS

A. General – State JSP-09-03M

1.0 Description. The Federal Government is not participating in the cost of construction of this project.

1.1 This contract requires payment of the prevailing hourly rate of wages for each craft or type of worker required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations. The current State Wage Rates can be found on the Missouri Department of Transportation web page at www.modot.org under "Doing Business with MoDOT", "Contractor Resources" for the applicable bid opening. This supplemental bidding document has 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.

State Wage Rates

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

General Provisions & Supplemental Specifications

Supplemental Plans to July 2026 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-13-01E

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

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

Notice to Proceed:	March 1, 2027
Contract Completion Date:	June 1, 2028

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

Project	Calendar Days	Daily Road User Cost
JST0142	N/A	$3,200

3.0 Liquidated Damages for Contract Administrative Costs. Should the contractor fail to complete the work on or before the contract completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **$750** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the specified contract completion date or calendar days.

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

C. Project Contact for Bidder / Contractor Questions

1.0 Any project specific questions shall be directed to the following contact:

Gidget Koestner, Policy & Innovations Engineer
Telephone Number: (573) 751-6905
Email: Gidget.Koestner@modot.mo.gov

2.0 Upon award and execution of the contract, the successful bidder/contractor shall forward all questions and coordinate the work with the contract administrator. The contract will be administered and inspected by the engineer/contract administrator listed below:

Tim Hellebusch, Resident Engineer
Telephone Number: (314) 370-3306
Email: Tim.hellebusch@modot.mo.gov

3.0 All questions concerning the bid document preparation can be directed to the Central Office – Design as listed below:

Telephone Number: (573) 751-2876
Email: BCS@modot.mo.gov

D. Scope of Work

1.0 The scope of this project includes removing existing 4-inch ET Plus Crashworthy End Terminals (CETs) and replacing them with an approved Miscellaneous Commission-Furnished Type A Crashworthy End Terminal (NGT) compliant with MASH Standards. The work also includes adjusting guardrail height transitions as needed to meet MASH requirements and completing additional guardrail repairs.

2.0 The work will be performed along Commission maintained roadways in:

JST0142 ESTIMATED QUANTITIES SUMMARY					
LOCATION	**REMOVALS OF IMPROVEMENTS**		**CWET INSTALLATION, GRADING & MOBILIZATION**	**MGS HEIGHT AND BLOCK TRANSITION**	**MGS GUARDRAIL**
	GUARDRAIL	**CWET**			
	LF	**EA**	**EA**	**EA**	**LF**
FRANKLIN COUNTY	925	37	37	37	
JEFFERSON COUNY	2300	92	92	92	
ST. LOUIS COUNTY	3400	136	136	136	
ST. CHARLES COUNTY	1800	72	72	72	
ST. LOUIS CITY	650	26	26	26	
VARIOUS	TBD BY THE ENGINEER				500
EST. TOTALS	**9075**	**363**	**363**	**363**	**500**

NOTE: Final quantities to be determined by job order for each location.

3.0 The contract includes pay items to repair various guardrail systems and crashworthy end terminals by removal and replacement of major components and assemblies that have been damaged.

4.0 The contract includes pay items for removal of existing guardrail systems and end terminals and installation of new guardrail, crashworthy end terminals, and related appurtenances complete in place. The engineer may order a new guardrail system, crashworthy end terminal, or related appurtenance to be installed when the existing system and/or terminal is damaged to such a significant extent that it is in the best interest of the Commission and the traveling public to install new current standard material, complete in place, rather than repair the existing system. New guardrail systems and/or terminals may be used to replace an entire existing system and/or

terminal, which is partially or wholly damaged, or selected portions of such damaged system and/or terminal. Installation of new guardrail systems and/or terminals may require conformance to location specific plans provided by the engineer. The work may involve adjusting the location of new guardrail systems and/or crashworthy terminals to properly shield the roadside obstacle for which the existing damaged system and/or terminal was originally installed. The determination of when an existing guardrail system and/or crashworthy end terminal is significantly damaged such that it requires installation of a new system and/or terminal, rather than repair, or when an existing system and/or terminal requires adjusting the location will be made by the engineer.

5.0 The engineer reserves the right to have others perform some or all of the work at individual locations based on the needs of the Commission.

6.0 Work may be required during daytime, nighttime, and/or weekend hours. Some work may be on a first priority basis with response required within the time specified in the Job Order.

E. Contractor Responsibilities for Third Party Administration Requirements

1.0 Misc. Commission Furnished Crashworthy End Terminals. Type A Crashworthy End Terminals (MASH) will be Commission Furnished by a Third Party to replace existing 4" ET Plus CETs. The brand / manufacturer of the furnished Type A Crashworthy End Terminals (MASH) is at the discretion of the Third Party.

1.1 The Misc. Commission Furnished Type A Crashworthy End Terminal (MASH) will be delivered to the contractor's staging area or equipment yard upon request of the contractor. The contractor will be required to request delivery of the commission furnished Type A Crashworthy End Terminal (MASH) from a Third Party supplier in full shipment loads. A contact and form of request will be provided to the awarded contractor.

1.2 There may be multiple active Commission Furnished crashworthy end terminal replacement projects across the state during this contract period. Contractor cooperation in requesting, stockpiling, and installing Commission Furnished materials is required. The contractor shall refrain from stockpiling Commission Furnished materials in excess and must limit Commission Furnished materials to only what is essential for timely work order completion. Excessive stockpiling of Commission Furnished materials by the contractor is subject to reappropriation by the Commission to other locations as needed.

1.3 The contractor is responsible for the care of the Misc. Commission Furnished Type A Crashworthy End Terminal (MASH) once delivered to the staging area or equipment yard until approved for maintenance by the engineer. Damaged CETs will be replaced at the contractor's expense.

2.0 Contractor Responsibility. The contractor will be responsible for: removing the existing 4" ET Plus CET, ensuring grading limits meet standard specifications and plan requirements, and ensuring newly installed guardrail, Misc. Commission Furnished Type A Crashworthy End Terminal (MASH) or Misc. Type A Crashworthy End Terminal (NGT) (MASH) heights meet the minimum MASH 2016 requirements of 31".

2.1 If adjoining guardrail does not meet the minimum MASH 2016 height of 31", removal of existing guardrail may be required and height transitions addressed per JSP D. Scope of Work.

2.2 Other than providing Misc. Commission Furnished Type A Crashworthy End Terminal (MASH), no other materials will be supplied for this contract. No material allowances will be supplied for this contract.

F. Job Order Contract

1.0 This Job Order is a defined delivery with indefinite quantity contract. The contractor shall perform the work required to remove existing 4-inch ET Plus CETs and replace with Commission Furnished Type A Crashworthy End Terminal (NGT) (MASH) at multiple work locations as shown in JSP GG. Locations and Estimated Quantities. The contractor shall perform all tasks itemized in the Job Order to ensure Misc. Commission Furnished Type A Crashworthy End Terminal (MASH) are installed per manufacturer recommendations, Misc. Type A Crashworthy End Terminals (NGT) (MASH) are installed per JSP AA. Type A Crashworthy End Terminal – Next Generation Terminal (NGT) (MASH), and all installations meet Missouri Standard Plans and Specifications for Highway Construction unless otherwise noted in the Contract.

2.0 The engineer may identify the required work at an individual work location in collaboration with the contractor at a Joint Scope Meeting, unless the engineer approves other arrangements. The contractor will provide the engineer with a draft Detailed Scope of Work which the engineer shall review. If not already designated in JSP GG. Locations and Estimated Quantities, the engineer will determine which locations will require additional guardrail lengths, use of Misc. Type A Crashworthy End Terminal (NGT) (MASH), and manner of height transition. The engineer will also assess the planned work time for special work zone considerations. Once the detailed Scope of Work is agreed upon, the contractor will submit a Draft Job Order for work to be completed within the coming pay period to the engineer. At any given time, the contractor may be performing more than one Job Order.

3.0 The contract includes a list of fixed cost pay items with fixed unit prices. Payment for the work will be determined by multiplying the fixed unit prices by the Adjustment Factor. The contractor shall bid the Adjustment Factor to be applied to the fixed unit prices. The total cost of an individual Job Order will be determined by multiplying the fixed unit price of each fixed cost pay item by the Adjustment Factor.

4.0 Definitions.

4.1 Detailed Scope of Work. A written document that sets forth the work that the contractor is obligated to perform in connection with a particular Job Order.

4.2 Job Order. A written order directing the work required at an individual work location in accordance with the Detailed Scope of Work within the Job Order Completion Time.

4.3 Job Order Completion Time. The time within which the contractor anticipates completing the Detailed Scope of Work for a particular Job Order.

4.4 Fix Cost Pay Item. Work for which a description and fixed cost is set forth in the fixed cost pay item list.

4.5 Non-Fixed Cost Pay Item. Work for which a description and fixed cost is not set forth in the pay item list. Payment for non-fixed cost pay items will be determined in accordance with Section 109.4.2, 109.4.3, or 109.4. Non-fixed cost pay items will be paid using and Adjustment Factor of 1.000.

G. Job Order Procedure

1.0 Draft Job Order. The engineer will prepare a Draft Job Order (DJO) and submit to the contractor by email. The DJO will be provided as an Excel spreadsheet and will include the basic information listed in Section 1.2. The contractor shall review the DJO and respond by email within 24 hours, as specified herein. If the contractor agrees to all terms, and accepts the Job Order as final, the contractor shall respond with concurrence and proceed with the work under those terms. If the contractor has any proposed changes, the contractor shall present those in the response. The engineer will consider any proposed changes and respond with a Final Job Order, as described in Section 2.0. If additional time is required for the engineer to review the contractor's proposed changes, or if time is needed to hold a Joint Scope Meeting prior to the work, the Notice to Proceed date will be postponed accordingly and revised by the engineer.

1.1 Joint Scope Meeting. For complex Job Orders, or when price agreement negotiations are necessary, or for any other reason deemed necessary by the engineer, a joint scope meeting may be required either in person at the job site, or through Microsoft Teams, to plan the work and complete all Job Order terms. Establishment of pricing for any non-fixed cost pay items shall be in accordance with Sec 109.4.2 or 109.4.3. If no agreement to pricing can be made, then the work will proceed with payment for non-fixed cost items under Sec 109.4.4. The contractor's attendance at the joint scope meeting is required and at no additional cost.

1.2 Draft Job Order Information. The Draft Job Order will provide the following information:

(a) Job Order number
(b) MoDOT Property Damage (PD) No. (when applicable)
(c) County, route, and location
(d) Date of issuance
(e) Proposed Notice to Proceed date (as defined elsewhere in these provisions)
(f) Required completion date
(g) Designation if work is restricted to the nighttime period only
(h) Traffic control plan type
(i) Additional traffic control devices (if needed)
(j) Speed limit reduction and normal speed limit (if needed)
(k) General description of repair
(l) Estimated repair quantities

2.0 Final Job Order. Following any revisions to the DJO, as authorized by the engineer, the terms in the Job Order are considered binding. The final Job Order is a written notice from the engineer to the contractor directing the work to be performed at each work location. A Job Order is considered a contract document as defined in Sec 101.2. A separate Job Order will be issued for each work location, as defined elsewhere in these provisions.

2.1 The contractor does not have the right to refuse to perform any Job Order or any work identified in a Job Order. If the contractor refuses or fails to perform any Job Order or any work identified in a Job Order, the contractor may be considered in default in accordance with Sec 108.

2.2 The Commission reserves the right to cancel or reject a Job Order for any reason. The Commission also reserves the right to not issue a Job Order if that is determined to be in the best interests of the Commission. The contractor shall not recover costs arising out of or related to the development of the Job Order including but not limited to the costs to attend the Joint Scope Meeting, review the Detailed Scope of Work, subcontractor costs, and the cost to review the Job Order Proposal with the Commission.

2.3 Multiple Job Orders. The engineer may issue multiple Job Orders with the same or overlapping completion periods.

3.0 Completed Job Orders. Following completion of the Job Order work, the contractor shall promptly enter the following information into the Excel Job Order form and return the Job Order to the engineer by email:

(a) Actual date that repairs were completed
(b) Actual repair materials used to complete the work and any traffic control changes, as authorized by the engineer
(c) Printed name of the contractor's authorized representative who is certifying that the work is complete and in compliance with the Job Order, Contract, and plans (when applicable)

3.1 The engineer will review the completed Job Order, make any necessary adjustments to update final quantities, including traffic control, and determine the final payment amount. If any additional time to complete the work is warranted due to the engineer changing priority of Job Order completion, or for any other reason, the engineer will note such time extension in the comments section. Upon acceptance of the work, as described in JSP N. FINAL INSPECTION AND ACCEPTANCE OF THE WORK, the engineer will serve notice of Acceptance for Maintenance by converting the final completed Job Order to PDF format, digitally signing, and sending a digital copy to the contractor by email. Payment will be made following acceptance. Should any liquidated damages be assessed for failure to complete the work on time, a separate contract adjustment will be made.

H. Fixed Unit Price List - Guardrail Repair

1.0 Description. A fixed unit price list containing unit prices associated with Guardrail Repair is listed below. Fixed unit prices are for complete and in-place construction and include all labor, equipment and material required to complete the construction task. All labor, material, equipment and work required by a specification shall be considered part of the fixed unit price, unless otherwise stated elsewhere in this contract. Pay limits will be defined in the approved Job Order.

2.0 Fixed Unit Price List for Guardrail Repair Job Orders.

MISC. TRAFFIC CONTROL ITEMS

Item Number	Description	Unit	Fixed Unit Price
6169902	MISC. WORK BEYOND SHOULDER	EA	$250.00
6169902	MISC. SHOULDER WORK - UNDIVIDED ROADWAYS	EA	$250.00
6169902	MISC. RIGHT SHOULDER WORK - HIGH SPEED ROADWAY	EA	$350.00
6169902	MISC. LEFT SHOULDER WORK - HIGH SPEED ROADWAY	EA	$500.00
6169902	MISC. 1-LANE 2-WAY OPERATION W/ FLAGGERS	EA	$800.00
6169902	MISC. SINGLE LANE CLOSURE	EA	$900.00
6169902	MISC. PARTIAL RAMP CLOSURE	EA	$400.00
6169902	MISC. COMPLETE RAMP CLOSURE	EA	$600.00
6169902	MISC. ENTRANCE RAMP AREA, MAINLINE WORK	EA	$400.00
6169902	MISC. ENTRANCE RAMP AREA, ACCEL LANE WORK	EA	$400.00
6169902	MISC. EXIT RAMP AREA, MAINLINE/DECEL LANE WORK	EA	$400.00
6169902	MISC. ADDITIONAL TRUCK MOUNTED ATTENUATOR (TMA)	EA	$350.00
6169902	MISC. ADDITIONAL FLASHING ARROW PANEL	EA	$100.00
6169902	MISC. ADDITIONAL DIRECTIONAL INDICATOR BARRICADE	EA	$15.00
6169902	MISC. ADDITIONAL CHANNELIZER (TRIMLINE/)	EA	$11.00
6169902	MISC. ADDITIONAL CMS (CONTRACTOR FURNISHED/RETAINED)	EA	$1,100.00
6169902	MISC. SEQUENTIAL FLASHING WARNING LIGHT	EA	$50.00
6169904	MISC. ADDITIONAL CONSTRUCTION SIGNS	SF	$4.00
6169902	MIS. TEMPORARY TRAFFIC CONTROL SINGLE LANE SHIFT – DIVIDED ROADWAY	EA	$500.00
6169902	MISC. TEMPORARY TRAFFIC CONTROL SINGLE LANE SHIFT – UNDIVIDED ROADWAY	EA	$500.00

NEW GUARDRAIL INSTALLATION ITEMS			
Item Number	**Description**	**Unit**	**Fixed Unit Price**
2029902	MISC. 4” ET PLUS CRASHWORTHY END TERMINAL REMOVAL	EA	$250.00
2029903	MISC. REMOVE GUARDRAIL	LF	$10.00
2149910	GRADING FOR CRASHWORTHY END TERMINAL	LS	$3,500.00
2159910	MISC. SHAPING SLOPES CLASS III (MODIFIED MATERIAL REQUIREMENT)	100 FT	$1,200.00
6061060	MGS GUARDRAIL	LF	$28.00
6061061	MGS GUARDRAIL, 8 FT., 6 FT.-3 IN. SPACING	LF	$32.00
6061063	MGS GUARDRAIL, 6 FT. POSTS, 3 FT.-1.5 IN. SPACING	LF	$41.00
6061065	MGS GUARDRAIL, 6 FT. POSTS, 1 FT.-6.75 IN. SPACING	LF	$64.00
6061067	MGS DOUBLE FACED GUARDRAIL	LF	$46.00
6061068	MGS BRIDGE APPROACH TRANSITION SECTION (MAJOR ROUTE)	EA	$3,502.00

6061069	MGS BRIDGE APPROACH TRANSITION SECTION (MINOR ROUTE)	EA	$3,375.00
6061070	MGS VERTICAL CONCRETE BARRIER TRANSITION	EA	$3,375.00
6061074	MGS HEIGHT AND BLOCK TRANSITION SECTION	EA	$647.00
6061075	MGS LONG SPAN GUARDRAIL SECTION	EA	$1,390.00
6061081	MGS BRIDGE ANCHOR SECTION (THRIE-BEAM BRIDGE)	EA	$2,728.00
6069902	MISC. COMMISSION FURNISHED TYPE A CRASHWORTHY END TERMINAL (MASH)	EA	$4,200.00
6069902	MISC. TYPE A CRASHWORTHY END TERMINAL (NGT) (MASH)	EA	$4,200.00
6069902	MISC. 12.5' W-BEAM	LF	$240.00

GUARDRAIL REPAIR ITEMS			
Item Number	**Description**	**Unit**	**Fixed Unit Price**
6069902	MISC. REALIGN & USE EXIST POST TYPE A, E OR MGS GR	EA	$25.00
6069902	MISC. R&R WOOD/PLASTIC BLOCK 8x6x15 MGS	EA	$21.00
6069902	MISC. R&R WOOD/PLASTIC BLOCK 12x6x14 MGS	EA	$25.00

I. Adjustment Factor

1.0 Description. The Adjustment Factor includes business and construction related costs as defined in this specification. It is the responsibility of the contractor to verify the unit prices provided in this contract and to modify their Adjustment Factor accordingly.

1.1 Business Costs. Business related costs consist of profit, overhead costs, subcontractor profit and overhead, taxes, finance costs, and other costs including but not limited to:

(a) insurance, bonds and indemnification
(b) project meetings, training, management and supervision
(c) project office staff and equipment
(d) employee or subcontractor wage rates that exceed prevailing wages
(e) fringe benefits, payroll taxes, worker's compensation, insurance costs and any other payment mandated by law in connection with labor that exceeds the labor rate allowances
(f) business risks such as the risk of low than expected volumes of work, smaller than anticipated Job Orders, poor subcontractor performance, and inflation or material cost fluctuations

1.2 Construction Costs. Construction related costs include but are not limited to:

(a) personnel safety equipment

(b) security requirements
(c) excess material waste
(d) daily and final clean-up
(e) costs resulting from inadequate supply of materials, fuel, electricity, or skilled labor
(f) costs resulting from productivity loss
(g) working in extreme and adverse weather conditions
(h) any other discreet items of work required to complete a particular Job Order

1.3 General Costs. The above lists are not exhaustive and are intended to provide general examples of cost items to be included in the contractor's Adjustment Factor as defined in the contract.

2.0 Adjustment Factor. The Adjustment Factor may include daytime, nighttime, and/or weekend hours as identified by the engineer.

2.1 Daytime hours are defined as ½ hour after sunrise to ½ hour before sunset. If the contractor works outside of the defined daytime hours, the contractor shall provide lighting equipment at no additional cost to the Commission.

3.0 Nighttime Work. If the engineer determines traffic volumes are such that work cannot be performed during the daytime, without significant traffic impacts, the Job Order will specify nighttime repair operations.

4.0 Weekend Work. If the engineer determines traffic volumes are such that work cannot be performed Monday through Friday without significant traffic impacts, the Job Order will specify weekend repair operations.

J. Bidding the Adjustment Factor

1.0 The bidder shall complete the bid form by writing in the Adjustment Factor. The Adjustment Factor shall be specified to three decimal places. Note that this is a contract pay item for contractor payment, not work items.

EXAMPLE: The Adjustment Factor shall be entered as the following example illustrates.

1 . 1 9 8

OR

0 . 9 8 7

Note: The Adjustment Factors used are for example purposes only and are not an indication of factors being bid by the contractor.

K. Contract Award

1.0 The Commission will evaluate the bids with the intent of awarding the contract to the lowest responsible bidder. The budget for this project will have a minimum budget of $0 dollars and an anticipated maximum of $2,500,00.00 dollars. If the contract is extended in accordance with the JSP H. TERM OF CONTRACT, the anticipated budget will be no more than two times the maximum amount.

2.0 The lowest bid will be determined by multiplying the Adjustment Factor by the anticipated budget for the adjustment factor. For purposes of bidding this contract, the estimated percentage of work performed during Daytime hours is 15 percent, Nighttime hours is 85 percent, and Weekend hours is 0 percent. The dollar quantities provided in the bid form are anticipated budgets and are not intended to represent the actual value of work that will be assigned.

L. Bonds

1. 0 The amount of the Bid Bond shall be 5 percent of the anticipated budget for this project.

2.0 The amount of the Performance Bond shall be 100 percent of the anticipated budget for this project.

M. Completing the Work

1.0 The contractor shall perform any task in the fixed unit price list for the fixed unit price multiplied by the quantity, multiplied by the Adjustment Factor. The contractor shall perform the Detailed Scope of Work for the Job Order Price as calculated in accordance with the procedure for developing Job Orders set forth herein.

2.0 When installed quantities differ from the estimated quantities in the issued Job Order, the as built quantities in the final Job Order will address the quantity variation(s) for final payment. When quantities are not specified in the Detailed Scope of Work, the Job Order Price will be deemed to be lump sum for such work.

3.0 The contractor shall employ and supply a sufficient force of workers, materials and equipment and shall progress the work with such diligence so as to ensure completion of the Detailed Scope of Work within the Job Order completion time or within such extended time for completion as may be granted by the engineer.

N. Final Inspection and Acceptance of the Work

105.10.7 Final Inspection. Upon completion of the required work for each Job Order, the contractor shall promptly notify the engineer as specified per Section 3.0 of JSP G. JOB ORDER

PROCEDURE. Final inspections by the engineer may be random and may not be performed for all Job Orders. At the discretion of the engineer, in lieu of a Final Inspection, the engineer may declare Acceptance for Maintenance based on the certification of work by the contractor's authorized representative. If the engineer determines all work required by the contract has been satisfactorily completed, or the engineer accepts the contractor's certification, the engineer will make the acceptance for maintenance and notify the contractor in writing as specified per Section 3.1 of JSP G. JOB ORDER PROCEDURE. Final Acceptance of all work in the Contract will occur as specified in Sec 105.15 and within 30 days of receipt of final documentation from the contractor.

105.10.7.1 Work determined to be unsatisfactory by the engineer, even if discovered following Acceptance for Maintenance, shall be corrected to acceptable standards at the contractor's sole cost. All items that are unsatisfactory shall be corrected within the time specified for each Job Order, or as otherwise allowed by the engineer. Any time extension given will be considered a non-compensable delay. Upon completion of the corrections, the contractor shall notify the engineer for a re-inspection.

105.10.7.2 Following a Job Order final inspection and Acceptance for Maintenance, the contractor, subcontractors, and suppliers are relieved of any new or additional liability to third parties for personal injury, death, or property damages which may be alleged to result from the performance of the work required by that Job Order, unless additional work on the right of way is required by the engineer.

105.10.7.3 Nothing in this section shall be deemed to excuse the contractor of liability or responsibility for any personal injury, death, or property damages which may arise from acts or the failure to act prior to the final inspection of the work required by the Job Order.

O. Work Zone Traffic Management Plan

1.0 Description. The contractor may be responsible for the work zone traffic management as mutually agreed upon by the contractor and engineer for each individual Job Order. 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 The contractor shall notify the engineer at least 48 hours prior to performing any work at each work site with the exception of first priority repairs. The notification shall include all information needed to identify traffic impacts such as work location, anticipated work hours, traffic control plan type, required lane or shoulder closures, anticipated duration of the work, etc. The engineer will make appropriate notification to the public, MoDOT customer service, and MoDOT work crews of the contractor's operations. The contractor shall notify the engineer at the actual time of closing any lane or shoulder and shall again notify the engineer when the lane or shoulder is reopened to traffic. The contractor shall notify the engineer as soon as practical any postponement due to weather, material, or other circumstances and shall renotify the engineer when the work has been rescheduled.

2.2 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 work and the contractor is prepared to diligently pursue the work until the closed lane is reopened to traffic.

3.0 Maintenance of Traffic.

3.1 Traffic flow shall be maintained through the work zone using the existing pavement in accordance with the traffic control plans. No detours or lane shifts onto shoulders will be allowed unless otherwise approved by the engineer.

3.2 Provisions shall be made to allow the movement of emergency vehicles through the limits of the work at all times.

3.3 During non-working hours the contractor shall have all lanes of traffic open for all routes, ramps, and side roads. All channelizers and other traffic control devices shall be removed from the roadway during non-working hours unless otherwise approved by the engineer.

4.0 Traffic Congestion and Delay. The contractor shall, upon approval of the engineer, take proactive measures to reduce traffic congestion in the work zone. The contractor shall be responsible for maintaining the existing traffic flow through the job site during the work. If disruption of the traffic flow occurs and traffic is backed up in queues of 15-minute delays or longer, then the contractor shall review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent queues from occurring again.

5.0 Traffic Safety.

5.1 Where traffic queues routinely extend to within 1000 feet (300 m) of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet (150 m) 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.

5.2 When a traffic queue extends to within 1000 feet (300 m) of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet (150 m) 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 (300 m) and no more than 0.5 miles (0.8 km) in advance of the end of the traffic queue on divided highways and no less than 500 feet (150 m) and no more than 0.5 mileS (0.8 km) in advance of the end of the traffic queue on undivided highways.

6.0 Work Hour Restrictions.

6.1 All work shall be scheduled to avoid major sporting events, conventions, concerts, and similar special events as specified by the engineer. During the term of this contract, there are five major holiday periods: New Year's Day, Memorial Day, Labor Day, Thanksgiving, and Christmas. All lanes shall be scheduled to be open to traffic during these holiday periods, 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 designated by the engineer.

6.1.1 Independence Day. The lane restrictions specified in Section 6.1 shall also apply to Independence Day, except that the restricted periods shall be as follows:

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

6.2 During non-working hours the contractor shall have all lanes of traffic open for all routes, ramps, and side roads. Working hours for holidays shall be determined by the engineer.

6.3 Due to the wide variance in traffic volumes throughout the contract area, it is not possible to give specific work hours for the term of the contract. Each Job Order will specify work hours or work hour restrictions based on the repair location, this may include peak hour restrictions. The following table provides general guidance as to the most restrictive schedule for when work on or adjacent to the roadway may be allowed.

Traffic Control Plan Type	Work Hours (Monday thru Friday)
Single Lane Closure	7:30 p.m. to 4:30 a.m.
Ramp Closure	Hours and days as approved by the engineer
One Lane Two Way Operation with Flagger	Hours and days as approved by the engineer

Specific work hours for an individual work location shall be according to the mutually agreed upon schedule in the Job Order.

7.0 Work Within Another Work Zone. The engineer may determine it is in the best interest of the Commission and the traveling public to have the work designated in the Job Order performed within another contractor's work zone or within a MoDOT work zone. If the work is designated to be performed within another work zone, the contractor shall coordinate and perform the work in accordance with Sec 105.6.

8.0 Ramp Closure. Ramp closures shall be minimized and shall be approved by the engineer a minimum of five days prior to the closure. Only one ramp closure will be permitted in a particular interchange or complex at one time. Work on acceleration / deceleration lanes will not require ramp closure unless approved by the engineer. Detour traffic handling details will be as specified by the engineer. Major ramp closures may require detour signing with other ramp closures only requiring use of changeable message signs (CMS) for detours. If the engineer determines detour signing is required, all necessary detour trailblazing placards will be furnished, installed, and covered by others. The contractor shall furnish all CMS required by the engineer. The contractor shall be responsible for uncovering and covering the trailblazing placards as work progresses.

9.0 Changeable Message Signs. The contractor shall provide changeable message signs notifying motorists of future traffic disruption and possible traffic slowdown one week before traffic is shifted to a detour. The changeable message sign installation shall be placed at a location as approved or directed by the engineer.

10.0 Basis of Payment. All items necessary to complete the traffic control will be paid for at the fixed unit price multiplied by the Adjustment Factor, as mutually agreed upon in the Job Order.

P. Traffic Control Plan Types

1.0 Description. The engineer will designate in the Job Order the type of traffic control plan (TCP) necessary to perform the work. If the engineer determines more than one type of TCP is needed to perform the work, the additional plan or plans will be specified in the Job Order. The various types of TCP's and the traffic control devices required for each TCP are shown on the plans. The contractor shall furnish adequate channelizing devices as shown on the plans. **The contractor's attention is directed to the fact that trim line channelizers are required for all TCP's regardless of daytime or nighttime operations. Cones will not be allowed for use on this contract.**

2.0 Plan Types.

2.1 Single Lane Closure. A single lane closure shall be performed by furnishing, installing, and removing the following set of traffic control devices:

2 each	Road Work Ahead
2 each	Right (Left) Lane Closed Ahead
2 each	Reduced Speed Limit Ahead (Symbol)
2 each	Lane Ends
2 each	Speed Limit XX MPH
2 each	Work Zone (Plaque)
14 each	Directional Indicator Barricade
30 each	Channelizer (Trim Line)
2 each	Flashing Arrow Panel (One Truck Mount for TMA)
1 each	Truck Mounted Attenuator
1 each	Changeable Message Sign (Contractor Furnished / Retained)

2.2 Ramp Closure. The contractor shall obtain approval from the engineer a minimum of five days prior to any ramp closure. A ramp closure shall be performed by furnishing, installing, and removing the following set of traffic control devices:

2 each	Road Work Ahead
2 each	Ramp Closed Ahead
2 each	Reduced Speed Limit Ahead (Symbol)
2 each	Lane Ends
1 each	Exit Closed
2 each	Speed Limit XX MPH
2 each	Work Zone (Plaque)
1 each	Road Closed

2 each	Speed Limit XX (Normal Speed)
14 each	Directional Indicator Barricade
40 each	Channelizer (Trim Line)
2 each	Flashing Arrow Panel (One Truck Mount for TMA)
1 each	Truck Mounted Attenuator
2 each	Changeable Message Sign (Contractor Furnished / Retained)
3 each	Type III Movable Barricade

2.3 Partial Ramp Closure. A partial ramp closure shall be performed by furnishing, installing, and removing the following set of traffic control devices:

1 each	Ramp Work Ahead
1 each	Ramp Narrows
1 each	Speed Limit XX MPH
2 each	Work Zone (Plaque)
14 each	Directional Indicator Barricade
40 each	Channelizer (Trim Line)
1 each	Flashing Arrow Panel (One Truck Mount for TMA)
1 each	Truck Mounted Attenuator
1 each	Changeable Message Sign (Contractor Furnished / Retained)

2.4 Entrance Ramp Area Mainline Work. Entrance Ramp Area Mainline Work shall be performed by furnishing, installing, and removing the following set of traffic control devices:

3 each	Road Work Ahead
2 each	Right (Left) Lane Closed Ahead
2 each	Lane Ends
1 each	Ramp Narrows
14 each	Directional Indicator Barricade
50 each	Channelizer (Trim Line)
2 each	Flashing Arrow Panel (One Truck Mount for TMA)
1 each	Truck Mounted Attenuator
1 each	Changeable Message Sign (Contractor Furnished / Retained)

2.5 Entrance Ramp Area Acceleration Lane Work. Entrance Ramp Area Acceleration Work shall be performed by furnishing, installing, and removing the following set of traffic control devices:

3 each	Road Work Ahead
2 each	Right (Left) Lane Closed Ahead
2 each	Lane Ends
1 each	Ramp Narrows
1 each	Yield
1 each	Yield Ahead (Symbol)
1 each	Merge Traffic (Symbol)
14 each	Directional Indicator Barricade
50 each	Channelizer (Trim Line)
2 each	Flashing Arrow Panel (One Truck Mount for TMA)
1 each	Truck Mounted Attenuator

1 each	Changeable Message Sign (Contractor Furnished / Retained)

2.6 Exit Ramp Area Deceleration/Mainline Lane Work. Exit Ramp Area Deceleration/Mainline Work shall be performed by furnishing, installing, and removing the following set of traffic control devices:

2 each	Road Work Ahead
2 each	Right (Left) Lane Closed Ahead
2 each	Lane Ends
1 each	Ramp Narrows
1 each	Exit
14 each	Directional Indicator Barricade
50 each	Channelizer (Trim Line)
2 each	Flashing Arrow Panel (One Truck Mount for TMA)
1 each	Truck Mounted Attenuator
1 each	Changeable Message Sign (Contractor Furnished / Retained)

2.7 One-Lane Two-Way Operation with Flaggers. A minimum of two flaggers will be required to direct traffic. Additional flaggers may be required when working at intersecting streets or ramps as directed by the engineer. No direct payment will be made for flaggers. "One-Lane Two-Way Operation with Flaggers", shall include furnishing, installing, and removing the following set of traffic control devices as shown on the plans:

2 each	Road Work Ahead
2 each	One Lane Road Ahead
2 each	Be Prepared To Stop
2 each	Flagger (Symbol)

3.0 Additional Traffic Control Devices. The engineer may determine that signs and channelizers, in addition to those devices shown in the plans are necessary to safely accommodate traffic. These additional devices may be needed for merging ramp traffic, detours, or other special cases to supplement the specified lane closure devices. The contract provides a fixed cost for any additional traffic control items.

4.0 Flaggers. Flaggers may be required when working at intersecting streets or ramps as directed by the engineer. No direct payment will be made for flaggers.

5.0 Temporary Traffic Control Single Lane Shift. When a Single Lane Closure is used for work on a divided highway, and repairs are necessary in both the right and left lanes within the same log mile range and direction, payment for the Temporary Traffic Control Single Lane Shift shall be paid for at the fixed unit price.

6.0 Method of Measurement and Basis of Payment.

6.1 Measurement will be made per each set-up made within the term of the Job Order. A set-up is defined as each installation and removal of traffic control devices at a specific work site. The accepted quantity of each set-up will be paid for at the fixed unit price for:

Item 616-99.02	Misc. Single Lane Closure	Each
Item 616-99.02	Misc. Temporary Traffic Control Single Lane Shift	Each
Item 616-99.02	Misc. Ramp Closure	Each
Item 616-99.02	Misc. Partial Ramp Closure	Each
Item 616-99.02	Misc. Entrance Ramp Area, Mainline Work	Each
Item 616-99.02	Misc. Entrance Ramp Area, Accel Lane Work	Each
Item 616-99.02	Misc. Exit Ramp Area, Mainline/Decel Lane Work	Each
Item 616-99.02	Misc. One-Lane Two-Way Operation with Flaggers	Each

multiplied by the Adjustment Factor, as mutually agreed upon in the Job Order.

6.2 Measurement of additional traffic control devices will be made per each set-up made within the term of the Job Order. Payment for the devices shall include furnishing, installing, and removing the additional devices at a specific work site. No payment will be made for additional devices used by the contractor without prior approval of the engineer. The accepted quantity of additional traffic control devices will be paid for in accordance with the fixed unit price list, multiplied by the Adjustment Factor, as mutually agreed upon in the Job Order.

Q. Work Plan and Schedule for Accomplishing Work

Delete Sec 108.4 through 108.4.4 and substitute the following:

108.4 Work Plan and Schedule. Prior to or at the preconstruction conference, the contractor shall provide a proposed work plan and typical schedule for accomplishing both normal and first priority work. The work plan shall include a written list of equipment and personnel that the contractor intends to use in executing the work.

108.4.1 The work plan will be reviewed by the engineer to determine in general if adequate personnel and equipment appear to be available to complete the work within the required number of calendar days. If the engineer determines the work plan is inadequate, the engineer and contractor shall meet for a joint review of the plan to correct and adjust the plan and schedule as necessary. A revised work plan and schedule shall be provided by the contractor prior to commencing the work.

108.4.2 If multiple Job Orders are issued with overlapping completion periods, the priority of the work will be jointly determined by the engineer and the contractor, with final approval of the work plan by the engineer. The work schedule and work priorities will be determined by the needs of the Commission and not the contractor's convenience of work location.

108.4.3 No direct payment will be made for furnishing the work plan or revisions.

108.4.4 The contractor shall determine the most feasible work plan and schedule consistent with the requirements of the contract. The engineer's approval of contractor's work plan is not intended to be acknowledgment or representation that it is reasonable or will accomplish the work within a particular time or at a particular cost.

R. 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. MoDOT customer service 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 Highway Patrol	(314) 340-4000
MoDOT District SL Customer Service (24 hr.)	(314) 275-1500
MoDOT Incident Response (24 hr.)	(816) 241-2223
Franklin County Sheriff's Department	(636) 583-2567
Jefferson County Sheriff's Department	(636) 797-5000
St. Charles County Sheriff's Department	(636)-949-7372
St. Louis County Sheriff's Department	(314) 615-4724
St. Louis City Sheriff's Department	(314) 622-4800

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.

S. Utilities

1.0 It is the inherent risk of the work under this contract that the contractor may encounter utilities above and/or below the ground or in the vicinity of any given Job Order which may interfere with their operations. The contractor expressly acknowledges and assumes this risk even though the nature and extent are unknown to both the contractor and the Commission at the time of bidding and award of the contract. The effect in cost or time of the presence of utilities above, below or in the vicinity of the contractor's work under this contract shall not be compensable.

T. Delay Provisions

1.0 If the contractor is delayed in the commencement, prosecution or completion of the work by any act of the Commission, or by any cause beyond the contractor's control, then the contractor will be entitled to an extension of time. If the contractor is delayed or prevented from working on

a particular date as a result of a delay, error or omission of the Commission, and the contractor incurs unavoidable labor costs as a direct result thereof because the contractor did not have enough time to cancel or divert its labor force, then the contractor will be reimbursed for such costs. For each worker so paid, the contractor will be reimbursed the amount paid the worker. Also, the contractor will be reimbursed for construction tasks required as a direct result of such delay, error or omission, such as closing off areas of work. No other costs shall be paid as a result of a delay or late cancellation.

U. Mobilization

Delete Sec 618.2 and substitute the following:

618.2 No direct payment will be made for mobilization. All costs for mobilization shall be considered included in the cost of the individual contract pay items included in the contract.

V. Sample Job Order

1.0 The following is an example Job Order intended to be an illustration that may be used as a guide for formulating the bid of the Adjustment Factor. For each example Job Order, the appropriate items that would be used and the quantities are computed based upon the sample work that would be completed in the Job Order. The contractor shall be reminded this is a Job Order sample and the quantity totals in actual Job Orders, if issued, may be more or less than that depicted below or be totally different from the samples illustrated.

1.1 Job Order Sample 1: Damaged Guardrail repair location does not have significant daytime peak hour ADT and will only require shoulder closure.

Item Description	Fixed Unit Price	Quantity	Price
Misc. Right Shoulder Work – High Speed Roadway	$350.00	1	$350.00
Misc. 4” ET Plus Crashworthy End Terminal Removal	$250.00	1	$250.00
Misc. Commission Furnished Type A Crashworthy End Terminal (MASH)	$1700.00	1	$1700.00
		Subtotal:	**$2300.00**
Adjustment Factor	1.150		
		TOTAL:	**$2645.00**

W. Supplemental Revisions JSP-18-01NN

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

The Missouri Highways and Transportation Commission shall not enter into a contract (or extend or renew a contract) using federal funds to procure or obtain equipment, services, or systems that

uses covered telecommunications equipment or services as substantial or as critical technology as part of any system where the video surveillance and telecommunications equipment was produced by Huawei Technologies Company, ZTE Corporation, Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

- Stormwater Compliance Requirements

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

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

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

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

2.1 Duties of the WPCM:

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

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

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

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

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

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

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

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

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

5.0 Stormwater Deficiency Corrections. All stormwater deficiencies identified in the Inspection Report shall be corrected by the contractor within 7 days of the inspection date or any extended period granted by the engineer when weather or field conditions prohibit the corrective work. If the contractor does not initiate corrective measures within 5 calendar days of the inspection date or any extended period granted by the engineer, all work shall cease on the project except for work to correct these deficiencies, unless otherwise allowed by the engineer. All impact costs

related to this halting of work, including, but not limited to stand-by time for equipment, shall be borne by the contractor. Work shall not resume until the engineer approves the corrective work.

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

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

- *Delete Sec 106.9, including all subsections and substitute the following:*

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

106.9.1 Buy America Requirements for Iron or Steel Products.
The contractor's attention is directed to Title 23 CFR 635.410 *Buy America Requirements*. Where articles, materials or supplies that consist wholly or predominantly of iron or steel or a combination of both are to be permanently incorporated into the contract work, steel and iron material shall be manufactured, from the initial melting stage through the application of coatings, in the USA except for "minimal use" as described herein. Predominantly of iron or steel or a combination of both means that the cost of the iron and steel content exceeds 50 percent of the total cost of all its components. Under a general waiver from FHWA the use of pig iron and processed, pelletized, and reduced iron ore manufactured outside of the USA will be permitted in the domestic manufacturing process for steel or iron material.

106.9.1.1 Any sources other than the USA as defined will be considered foreign. The required domestic manufacturing process shall include formation of ingots and any subsequent process. Coatings shall include any surface finish that protects or adds value to the product.

106.9.1.2 "Minimal use" of foreign steel, iron or coating processes will be permitted, provided the cost of such products does not exceed 1/10 of one percent (0.1 percent) of the total contract cost or $2,500.00, whichever is greater. If foreign steel, iron, or coating processes are used, invoices to document the cost of the foreign portion, as delivered to the project, shall be provided and the engineer's written approval obtained prior to placing the material in any work.

106.9.1.3 Buy America requirements include a step certification for all fabrication processes of all steel or iron materials that are accepted per Sec 1000. The AASHTO Product Evaluation and Audit Solutions compliance program verifies that all steel and iron products fabrication processes conform to 23 CFR 635.410 Buy America Requirements and is an acceptable standard per 23 CFR 635.410(d). AASHTO Product Evaluation and Audit Solutions compliant suppliers will not be required to submit step certification documentation with the shipment for some selected steel

and iron materials. The AASHTO Product Evaluation and Audit Solutions compliant supplier shall maintain the step certification documentation on file and shall provide this documentation to the engineer upon request.

106.9.1.3.1 Items designated as Category 1 will consist of steel girders, piling, and reinforcing steel installed on site. Category 1 items require supporting documentation prior to incorporation into the project showing all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements. This includes the Mill Test Report from the original producing steel mill and certifications documenting the manufacturing process for all subsequent fabrication, including coatings. The certification shall include language that certifies all steel and iron materials permanently incorporated in this project was procured and processed domestically and all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410.

106.9.1.3.2 Items designated as Category 2 will include all other steel or iron products not in Category 1 and permanently incorporated in the project. Category 2 items shall consist of, but not be limited to items such as fencing, guardrail, signing, lighting and signal supports. The prime contractor is required to submit a material of origin form certification prior to incorporation into the project from the fabricator for each item that the product is domestic. The Certificate of Materials Origin form (link to certificate form) from the fabricator must show all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements and be signed by a fabricator representative. The engineer reserves the right to request additional information and documentation to verify that all Buy America requirements have been satisfied. These documents shall be submitted upon request by the engineer and retained for a period of 3 years after the last reimbursement of the material.

106.9.1.3.3 Any minor miscellaneous steel or iron items that are not included in the materials specifications shall be certified by the prime contractor as being procured domestically. Examples of these items would be bolts for sign posts, anchorage inserts, etc. The certification shall read "I certify that all steel and iron materials permanently incorporated in this project during all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements procured and processed domestically in accordance with CFR Title 23 Section 635.410 Buy America Requirements. Any foreign steel used was submitted and accepted under minor usage". The certification shall be signed by an authorized representative of the prime contractor.

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

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

Construction materials mean articles, materials, or supplies that consist of only one of the items listed. Minor additions of articles, materials, supplies, or binding agents to a construction material

do not change the categorization of the construction material. Upon request by the engineer, the contractor shall submit a domestic certification for all construction materials listed that are incorporated into the project.

(a) Non-ferrous metals
(b) Plastic and Polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables)
(c) Glass (including optic glass)
(d) Fiber optic cable (including drop cable)
(e) Optical fiber
(f) Lumber
(g) Engineered wood
(h) Drywall

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

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

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

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

"The total value of the non-compliant products is no more than the lesser of $1,000,000 or 5% of total applicable costs for the project." The contractor shall submit to the engineer any non-domestic materials and their total material cost to the engineer. The contractor and the engineer will both track these totals to assure that the minimal usage allowance is not exceeded.

- Third-Party Test Waiver for Concrete Aggregate

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

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

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

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

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

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

3.1 The testing facility shall be AASHTO accredited.

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

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

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

3.3 Results, no more than five years old, from the third-party test facility shall compare within ±2.0 percent of an independent test from another AASHTO accredited test facility or with MoDOT test records, in order to be approved for use (e.g. test facility results in a durability factor of 79,

MoDOT's recent durability test factor is 81; this compared within +2 percent). The independent testing facility shall be in accordance with this provision. The comparison test can be from a different sample of the same ledge combination.

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

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

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

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

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

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

- *Add Sec 102.7.9 to include the following:*

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

- Revisions to General Conditions of the Contract for Missouri Standard Specifications for Highway Construction

Insert the following definitions into Sec 101.2:

Agent of Contractor. Subcontractors, its employees, assigns, and agents.

Agent of MoDOT. Any private contractors, subcontractors, engineers, or the employees thereof performing work in accordance with the plans and specifications approved by MoDOT.

Commencement of Work. Also defined as the start of construction operations/activities, this is the date the contractor, its employees, agents, and/or assigns first begins performing work pursuant to the terms of the contract, including the furnishing of labor, material, equipment, and other incidentals necessary or convenient to the successful completion of the project and the carrying out of duties and obligations imposed by the contract. For purposes of clarity, this date shall be deemed to occur on the date certified payroll activities on the project commence.

Exceptions. Work items identified by the engineer, as documented on the semi-final inspection, that are allowed to be completed after the contract completion date but prior to the item-specific completion date established by the engineer. Failure to complete any excepted work item by the item-specific completion date will result in assessment of contract liquidated damages. Designation of exceptions not mandated by the contract is at the sole discretion of the engineer.

Typical exceptions include:

(a) Seasonal items (e.g., sodding, overseeding, establishment of grass for soil stabilization, or tree/shrub plantings)
(b) Tasks that have contractually required or allowed delays (e.g., removal of sediment control devices, waiting periods for signal/lighting systems, pause for retroreflectivity evaluation of pavement markings)
(c) Other tasks in which the engineer determines it is in the best interest of the Commission to allow completion of such task to extend beyond the contract completion date, but within a designated period of time.

Delete Sec 105.10.7, including all subsections and substitute the following:

105.10.7 Final Inspection. Upon apparent completion of the entire project, the engineer will make a Final Inspection of the work to determine acceptance for maintenance in accordance with Sec 105.15.

Delete Sec 105.15, including all subsections and substitute the following:

105.15 Acceptance.

105.15.1 Partial Acceptance. At the discretion of the engineer, portions of the work within a project may be accepted for maintenance prior to the Final Inspection of all work for that

project. When a portion of the work or a specific item is partially accepted, the contractor is relieved from maintenance on the identified portion of the work, but this is not the Final Inspection, as defined in Sec 105.15.2, and will not excuse the contractor from liability or responsibility to the Commission for work performed.

105.15.1.1 Acceptance of a Specific Item or Section of Work. Upon completion of any of the items or sections of work listed herein, the contractor may request the engineer's inspection of the work and partial acceptance. If the engineer finds the work to be complete and acceptable, including submittal by the contractor of all required documentation, partial acceptance will be made for that item or section. The following items, complete in place, as determined by the engineer, are eligible for consideration of partial acceptance:

(a) Any section 0.5 mile or more in length.
(b) Any section 0.5 mile or more in length in one direction of a divided highway.
(c) A complete bridge.
(d) An intersection traffic signal system. Partial acceptance may be made for signal equipment prior to the 30-day testing period though any required performance tests and/or guarantees shall remain applicable.
(e) Devices intended to be used for traffic safety and control. Acceptance of traffic safety devices is limited to guardrail, impact attenuation barriers, traffic signal items, signs, delineators, lighting, concrete barrier walls, concrete bridge parapet, bridge railing, guard cable, crash cushions and fence, which are permanently installed in their final position in accordance with the contract documents.

105.15.1.2 Semi-Final Inspection, Corrections and Exceptions. The contractor shall submit a written request for a semi-final inspection at least seven days prior to the anticipated completion of work, excluding exceptions. If the engineer postpones the inspection beyond the date the contractor completes all work, the period of postponement will be considered an excusable but non-compensable delay.

105.15.1.2.1 Immediately following the semi-final inspection, the engineer will provide the contractor with a list of any remaining items of work, corrections, and exceptions. The count of contract time will continue until all work and corrections are complete. If the engineer determines all work is complete, with no exceptions, the semi-final inspection will be considered the Final Inspection in accordance with Sec 105.15.2.

105.15.1.2.2 Work Complete Date. Upon verification by the engineer that all work, exclusive of exceptions, is complete, the engineer will declare partial acceptance and cease the count of contract time. The count of contract time will resume should the contractor fail to complete one or more exceptions by the required date.

105.15.2 Final Inspection and Acceptance for Maintenance. The contractor shall promptly notify the engineer when all work on a project, including exceptions, is complete. Upon Final Inspection by the engineer and verification that all work on a project is complete, a notice of acceptance for maintenance will be submitted to the contractor. Acceptance for maintenance excludes any items covered by item-specific performance bonds. Final Inspection shall occur not later than ten (10) business days after contractor's notification to the engineer that all corrections and exceptions have been completed. If the Final Inspection has not occurred within the ten (10) business-day time frame, all corrections and exceptions

shall be deemed completed and MoDOT will be deemed to have accepted maintenance. If written acceptance for maintenance is not received within twenty (20) business days after the date of the Final Inspection, nor any objections sent to the Agent of MoDOT during this twenty (20) business-day period, the project and the work shall automatically be deemed accepted for maintenance.

105.15.2.1 Following the Final Inspection, the Agent of MoDOT will be relieved of any new or additional liability to third parties for personal injury, death or property damages which may be alleged to result from the design or construction of the work, unless additional work is performed by the Agent of MoDOT on the right of way after Final Inspection.

105.15.2.2 Nothing in these specifications shall be deemed to excuse the contractor of liability or responsibility for any personal injury, death or property damages which may have occurred during the time period from the Commencement of Work through the Final Inspection.

105.15.2.3 Acceptance of a project shall not be construed to relieve the contractor of full responsibility for making good any non-latent defect in work or material found on any section of work prior to final acceptance of the entire project, to alter in any manner the method of payment prescribed in the contract or to constitute a waiver of any claim the Commission might have against the contractor on the entire project.

105.15.2.4 Contracts with Multiple Projects. For contracts that include two or more projects, the contractor may request a separate final inspection and acceptance for maintenance as the work is completed on each project.

105.15.3 Final Acceptance and Payment. Following Final Inspection and acceptance for maintenance, the engineer will prepare the final tabulation of quantities in accordance with Sec 109.8. A final change order, if necessary, and the final tabulation of quantities will be submitted to the contractor for review. Upon receipt of the final tabulation of quantities, the contractor shall promptly submit to the engineer any remaining project documentation including, but not limited to, those listed in Sec 105.15.3.2.

105.15.3.1 A Final Acceptance report will be submitted to the contractor, and final payment will be made, no later than thirty days following concurrence on tabulation of quantities, receipt by the engineer of all project documentation, and verification by the engineer that all material incorporated into the work has been properly inspected. If the final tabulation of quantities determines the contractor was overpaid, the contractor, or in case of default, the surety, shall return the amount of overpayment to the Commission within thirty days of receiving notice of the overpayment from the engineer.

105.15.3.2 When required by the contract, project documentation shall consist of the following:

(a) Contractor's Affidavit Regarding Settlement of Claims (Form C-242)
(b) Final Change Order
(c) DBE Participation List and Final Verification
(d) Affidavit – Compliance with the Prevailing Wage Law

105.15.3.3 Final acceptance will not excuse the contractor's liability or responsibility to the Commission for any latent defects in the work or material incorporated into the work, or for claims relating to any work or material incorporated into the work, except as barred by Sections 537.600 and 537.610, RSMo.

Delete Sec 107.11, including all subsections, and substitute the following:

107.11 Responsibility for Claims for Damage or Injury. The contractor shall be responsible, to the extent imposed by applicable law, for injury, property damage, damage to the Work, or other loss caused by the negligent, wrongful, intentional, reckless, or contractually noncompliant acts or omissions of the contractor or an Agent of Contractor from Commencement of construction activities through Final Inspection and acceptance for maintenance.

107.11.1 The contractor shall not be responsible for damage relating to personal injury or death, arising from the design, condition, or maintenance of the project area prior to commencement of work and after Final Inspection and acceptance of the work, in accordance with Sec 101.2 and 105.15.2, unless any of the following conditions exist:

(a) The work is so defective that it creates an imminent danger to third parties;
(b) A defect in the work was concealed and not discoverable by a reasonable inspection by the Commission;
(c) The agent of MoDOT knew of the dangerous condition and did not disclose it to the Commission; or
(d) The plans or specifications followed were so imperfect or improper that the agent of MoDOT should have known the work to be done thereunder would result in an unsafe condition.

107.11.2 Neither the Commission nor the contractor, by execution of a contract, shall intend to or create a new or enlarge an existing cause of action in any third party. This provision shall not be interpreted to create any new liability that does not exist under the law, or to waive or extinguish any defense that either party to this contract or their respective agents and employees may have to an action or suit by a third party.

Delete Sec 107.12, including all subsections, and substitute the following:

107.12 Contractor's Responsibility for Work Damages to any portion of the work occurring after the date of Commencement of Work and before the work is deemed approved and accepted, caused by the action of the elements or from any other reason, shall be repaired or replaced at the contractor's expense. The contractor, at the contractor's option, may insure against any such damages. The Commission may, in its discretion, make such a payment, determined in accordance with Sec 109.4, for damage to the work due to unforeseeable causes beyond the control of, and without fault or negligence on the part of the contractor, unless the contractor has been reimbursed for such damages by the contractor's insurer. Prior to reimbursement, the contractor shall furnish documentary evidence of all efforts to recover such repair costs.

107.12.1 The contractor shall immediately give written notice to the engineer of any pedestrian, worker and/or vehicular accident that occurs in or near the work zone. The

contractor may be directed by the engineer to repair permanent Commission facilities that have been damaged by events that are beyond the control of the contractor. Reimbursement will be provided by the Commission, determined in accordance with Sec 109.4, for the actual direct cost of labor, equipment and material, exclusive of overhead, indirect or consequential costs of profit. The Commission may elect to make such repairs in lieu of the contractor.

Delete Sections 107.13, 107.13.1, 107.13.2, 107.13.3, 107.13.3.4, 107.13.5, 107.13.6, 107.13.9, 107.13.10.4, 107.13.10.8, and substitute the following:

107.13 General Insurance Requirements. From the commencement of construction activities through the Final Inspection and acceptance for maintenance of the project by the engineer, the contractor shall procure and maintain at the contractor's expense, insurance for all damages and losses imposed by law and assumed under the contract, of the kinds and in the amounts specified in Secs 107.13.1 through 107.13.8.

107.13.1 Sovereign Immunity Limits for Missouri Public Entities. The contractor shall procure and maintain at least minimum insurance coverages to meet the sovereign immunity limits for Missouri public entities as calculated by the Missouri Department of Insurance and published annually in the Missouri Register pursuant to Section 537.610, RSMo for Sec 107.13.2 through 107.13.5, unless specified otherwise for each type of insurance coverage. Each policy shall provide additional insured status for the Missouri Highways and Transportation Commission, its members, the Missouri Department of Transportation, and its employees up to Missouri's sovereign immunity limits. Provided, however, additional insured coverage applies only to liability caused in whole or in part by the acts or omissions of the named insured or those acting on its behalf and does not provide defense or indemnity for liability that Section 537.600, RSMo. places solely on MoDOT or another public entity. Each policy shall be endorsed to not waive sovereign immunity limits. The naming of the Commission, its members, MoDOT, and its employees as additional insureds under any insurance policy shall not be construed as a waiver of any sovereign, official, or other governmental immunity. The Commission, its members, MoDOT, and its employees reserve the right to assert any sovereign, official, or any other governmental immunities. Nothing in the Section shall be construed to enlarge the liability of the contractor beyond that imposed by applicable law, create a contractual duty to defend or indemnify prohibited by Section 537.600, RSMo, or require insurance coverage for liability that Section 537.600, RSMo places solely upon MoDOT. Insurance coverage and priority shall otherwise be determined in accordance with the applicable policies and endorsements.

107.13.2 Commercial General Liability Insurance. The contractor shall procure, and maintain during the term of the project, commercial general liability insurance with coverage at least as broad as Insurance Services Office (ISO) policy form CG 00 01. The general aggregate limit shall, by endorsement or otherwise, provide a designated aggregate limit solely for this project using ISO form CG 25 03 05 09 or an equivalent form. General liability policies shall be endorsed to add the Commission, its members, MoDOT, its employees, agents, and assigns as additional insureds (the "Additional Insureds") using Insurance Services Office forms CG 20 10 or the equivalent under such policy. For construction contracts, an endorsement providing completed operations coverage to the Additional Insureds, ISO form CG 20 37 or the equivalent, is also required. This form, CG 20 37, shall be endorsed on each subsequent commercial general liability policy issued to the contractor for three (3) years after final acceptance of the project. Should work on the project be

discontinued, the commercial general liability insurance coverage shall remain in effect for three (3) years after the date of discontinuation, when applicable. Coverage shall not be reduced by insured versus insured exclusions or by explosion, collapse and underground (XCU) exclusions.

107.13.3 Commercial Automobile Liability Insurance. The contractor shall procure and maintain automobile liability coverage at least as broad as ISO policy form CA 00 01 covering owned, hired, and non-owned autos. The policy shall be endorsed to Commission, its members, MoDOT, and its employees, agents, and assigns as additional insureds (the "Additional Insureds").

107.13.4 Contractor's Pollution Liability (CPL) Insurance. The contractor shall procure and maintain contractor's pollution liability insurance for liability arising out of sudden, accidental, and gradual pollution and remediation. The policy shall have minimum limits of $1,000,000. The Commission, its members, MoDOT, and its employees, agents, and assigns shall be endorsed as additional insureds under such policy. The policy shall provide coverage for hauling of waste from the project site to the final disposal location including non-owned disposal sites. Completed operations coverage for pollution liability shall extend a minimum of three (3) years after final acceptance of the project. Contractor shall require any subcontractor that performs environmental remediation, hazardous material removal or related work including the transportation, disposal, or environmental engineering work, to provide contractor's pollution liability insurance with limits and scope of coverage appropriate to the exposure. The Commission, its members, MoDOT, and its employees, agents, and assigns shall be endorsed as additional insured under such policy. The policy shall not contain a cross suits exclusion or other provisions that would eliminate additional insured claims against the contractor or subcontractor.

107.13.5 Aircraft Liability Insurance. If aircraft, including unmanned aircraft, will be used on the project, contractor shall provide, or cause to be provided, aircraft liability insurance protecting against claims for damages resulting from such use in all cases where any aircraft that is owned, leased or chartered by any Contractor-Related Entity used on the Project. The policy shall have minimum limits of $1,000,000 and the Commission, its members, MoDOT, and its employees, agents, and assigns shall be additional insureds on the policy by endorsement or policy provision. The use of any aircraft in performance of the Work, the aircraft crew, flight path and altitude, including landing of any aircraft on the Site or on any property owned by the Commission, MoDOT or other parties at interest, shall be subject to review and written acceptance by the Commission prior to any such usage. If any aircraft are leased or chartered with crew and/or pilot, evidence of non-owned aircraft liability insurance will be acceptable to meet these requirements but must be provided prior to use of the aircraft. For use of unmanned aircraft vehicles, the contractor may provide insurance either through an aircraft liability insurance policy, or by endorsement to the contractor's commercial general liability insurance policy and excess liability policies. Use of unmanned aircraft must comply with all state and federal rules and regulations, including FAA requirements.

107.13.6 Excess or Umbrella Liability Insurance. The contractor may satisfy the required limits for Secs 107.13.2 through 107.13.5 by use of excess or umbrella liability insurance policies in any combination that meets the contract limits requirements. Such policies shall

include as additional insureds, the Commission, its members, MoDOT, and its employees, agents, and assigns.

107.13.9 Evidence of Insurance. Required evidence of insurance providing confirmation of compliance with these requirements shall consist of a certificate of insurance and any endorsements adding the Commission, MoDOT and its employees as additional insureds where specified. "Blanket" or "automatic" additional insured endorsements providing additional insured coverage "where required by contract," may be used, provided that such forms provide coverage at least as broad as provided by the specified endorsement forms required. The contractor and any subcontract work shall not commence under the contract until the contractor obtains the applicable insurance coverage required and receives approval for such insurance from the engineer. No later than five (5) business days prior to the Commencement of Work, all evidence of insurance for the prime contractor, including certificates of insurance and required endorsements, and notices shall be submitted electronically by the insurance agent to ContractorSupport@MoDOT.mo.gov. The aforementioned evidence of insurance shall also be submitted in the same manner no fewer than five (5) business days prior to the effective date of any change or renewal of insurance during the term of the project. All evidence of insurance for the prime contractor, including certificates of insurance and required endorsements, and notices shall be submitted electronically by the insurance agent to ContractorSupport@MoDOT.mo.gov. The contractor shall promptly furnish the engineer with a complete copy of its policy upon request. Failure to furnish evidence of proper insurance, or complete insurance policies when requested, may result in the suspension of work as provided in Sec 108, and may result in other claims or actions for breach of contract or otherwise, as may be recognized at law or in equity.

107.13.10.4 Primary and Non-contributory. For any claims related to this contract or insurance requirements herein identified, the contractor's insurance coverage shall be primary insurance with respect to the Commission, its members, MoDOT, and its employees, as the additional insureds. Any other insurance or self-insurance maintained by any of these parties shall be excess of the contractor's insurance and shall not contribute with the contractor's insurance, unless liability caused in whole or in part by the acts or omissions of the named insured or those acting on its behalf and does not provide defense or indemnity for liability that Section 537.600, RSMo places solely upon MoDOT or another public entity. Priority and allocation shall be governed by the applicable policies and endorsements. MoDOT may not unilaterally alter priority among the contractor's, any subcontractor's, or any additional insured's policies.

107.13.10.8 Timely Notice of Claims. Contractor shall give the engineer prompt and timely notice of claims made or suits instituted that arise out of or result from contractor's or agent of contractor's performance under this Agreement, and that involve or may involve coverage under any of the required liability policies. The Commission and MoDOT will provide timely notice to the contractor of any claims or lawsuits that it receives.

Delete Sec 107.14 and substitute the following:

107.14 Cooperation in Defense. The Agent of MoDOT and MoDOT shall reasonably cooperate in the defense of the other against potential third party claims. This cooperation

includes providing reasonable access to relevant records, documents, and personnel. Nothing in this section creates a contractual duty to defend prohibited by RSMo 537.600(5).

Delete Sec 107.18 and substitute the following:

107.18 Basis of Payment. No direct payment will be made for compliance with Sec 107.

- Payment for Excess Piling

Delete Sec 702.6.3 and insert the following:

702.6.3 Pile Cut-Offs. No direct payment will be made for routine pile cut-offs, except as otherwise provided herein.

702.6.3.1 Excess Piling. If the total measured length of installed piling on a given structure, per item, is 85 percent or less of the plan quantity, the difference between plan quantity and installed quantity shall be deemed as excess piling. Reimbursement will be made for excess piling, as determined by the engineer. No reimbursement will be made for piling purchased in excess of plan quantity. The contractor shall provide the engineer with all paid invoices, which may be used to determine an equitable reimbursement. Shipping costs on the invoice will be included in the reimbursement payment, but no handling, overhead or profit will be included. All excess piling shall be removed from the project and retained by the contractor.

- *Delete Sec 102.18.1 and renumber existing Sec 102.18.2 through 102.18.5.4 including all subsections:*

102.18.1 Certification Regarding Disbarment, Eligibility, Indictments, Convictions or Civil Judgments. The president or authorized official of the bidder, under penalty of perjury under the laws of the USA, shall certify that, except as noted in the exceptions, the company or any person associated therewith in the capacity of owner, partner, director, officer, principal investor, project director, manager, auditor or any position involving the administration of federal funds:

(a) Is not currently under suspension, debarment, voluntary exclusion or determination of ineligibility by any federal agency.

(b) Has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past three years.

(c) Does not have a proposed debarment or suspension pending.

(d) Has not been indicted, convicted or had a civil judgment rendered against any of the listed parties by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

102.18.1.1 If there are any exceptions, the bidder shall submit the exceptions on company letterhead, signed by the bidder and inserted inside the bid submitted.

102.18.1.2 Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility.

102.18.1.3 For any exception noted, the bidder shall indicate to whom it applies, the initiating agency, and dates of action.

102.18.1.4 Providing false information may result in criminal prosecution or administrative sanctions.

102.18.2 Certification Regarding Anti-Collusion. In accordance with 23 USC 112, the bidder shall certify, under penalty of perjury, that the bidder has not, either directly or indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this contract.

102.18.3 Certification Regarding Lobbying Activities. In accordance with 31 USC 1352, the bidder shall certify that:

(a) No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any federal agency, a member of Congress, an officer or employee of Congress or an employee of a member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement and the extension, continuation, renewal, amendment or modification of any federal contract, grant, loan or cooperative agreement.

(b) If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any federal agency, a member of Congress, an officer or employee of Congress or an employee of a member of Congress in connection with this federal contract, grant, loan or cooperative agreement, the bidder shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with the instructions.

102.18.3.1 This certification shall be a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification shall be a prerequisite for making or entering into this transaction imposed by 31 USC 1352. Any person who fails to file the required certification will be subject to a civil penalty of no less than $10,000 and no more than $100,000 for each such failure.

102.18.3.2 The bidder also agrees by submitting a bid that the bidder shall require that the language of this certification be included in all subcontracts that exceed $100,000, and that all such subrecipients shall certify and disclose any lobbying activities accordingly.

102.18.4 Certification Regarding Missouri Domestic Products Procurement Act. This certification will only apply to state-funded projects as noted on the cover of the Request for Bid. The bidder's attention is directed to Sections 34.350 through 34.359 RSMo 2000, which requires all manufactured goods or commodities used or supplied in the performance of the contract or any subcontract to be manufactured, assembled or produced in the USA. Sections 34.350 through 34.359 RSMo will not apply if the total bid is less than $1,000.00.

102.18.4.1 Section 34.355 RSMo requires the vendor or bidder to certify compliance with Section 34.353 RSMo and, if applicable, Section 34.359 RSMo at the time of bidding and prior to payment. Failure to comply with Section 34.353 RSMo during performance of the contract and to provide certification of compliance prior to payment will result in nonpayment for those goods or commodities.

102.18.4.2 The bidder shall certify that all the specified goods or products for which this bid was solicited are manufactured, assembled or produced in the USA. If there are any exceptions, the bidder shall submit a list of the exceptions on company letterhead, signed by the bidder and attached to the inside of the bid submitted. The list shall include the pay item number and the location where the item is manufactured. The bidder shall identify any of the exceptions in the list that are specified goods or products that are treated as manufactured, assembled or produced in the USA under an existing treaty, law, agreement or regulation of the USA regarding export/import restrictions and international trade.

102.18.4.3 The bidder shall notify the contact listed in the Request for Bid of any specified goods or products that cannot be manufactured, assembled or produced in the USA in sufficient quantities or in time to meet the contract specifications.

102.18.4.4 The bidder shall certify that the bid complies with all provisions of Section 34.350 *et seq* RSMo.

Delete Sec 106.10 and substitute the following:

106.10 Missouri Domestic Products Requirement. For state funded projects, as noted on the cover of the contract, material shall be in accordance with Sec 102.18.4.

- *Delete the Training Provision of the General Provisions and substitute the following*:

Training Provision

1.0 Description. This provision implements 23 CFR Part 230.111 and 23 CFR Part 230, Subpart A, Appendix B.

2.0 Purpose. The contractor shall provide on-the-job training aimed at developing full journeymen in the type of trade or job classification involved. Training and upgrading of minorities and women toward journeymen status is a primary objective of this Training Special Provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

2.1 In the event that a contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also ensure that this training special provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

2.2 The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment. Prior to commencing construction, the contractor shall submit to MoDOT for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work, who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

3.0 Program Administration. All training goals, including the number of training hours, on federally funded projects are to be established by the Business Development and Compliance (BDC) Division with Federal Highway Administration (FHWA) oversight. The following guidelines will be utilized in selecting projects and determining the goal to be set:

a. Availability of minorities and women for training.
b. The potential for effective training.
c. Duration of the contract (number of working days).
d. Dollar value of the contract.
e. Total normal work force that the average bidder could be expected to use.
f. Geographical location.
g. Type of work.
h. The need for additional journeymen in the area.
i. The need to correct underutilization of minorities and females in specific trades.
j. A satisfactory ratio of trainees to journeymen expected to be on the contractor’s workforce during normal operations (considered to fall between 1:10 and 1:4).
k. Recognition of the suggested minimum goal for the State.

3.1 Trainee goals will be set in 1,000 increments or 1 slot (person) per 1,000 hours per project. For example, if the trainee goal on the project is 2,000 hours a maximum of 2 trainees will be approved for the project. In the event a trainee leaves the project for valid reasons the trainee shall be replaced as soon as possible. **No apprentice/trainee can be assigned less than 500 hours on a contract.** MoDOT will not assign training on contracts that will not support the 500 hours. **Providing less than 500 hours is not considered to be beneficial training nor helping to achieve journey-level status. Therefore, a trainee/apprentice, regardless of craft, must have been trained on the contract for at least 500 hours to be eligible for reimbursement.** Upon reaching the 500 hours, the contractor will be compensated as noted herein. FHWA and MoDOT will only approve training programs meeting the requirements of the Training Special Provisions (TSP). A program will be approved if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training

programs approved but not necessarily sponsored by the Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training will also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts.

3.2 No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case.

3.3 The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by MoDOT and the Federal Highway Administration. MoDOT and the Federal Highway Administration shall approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from MoDOT prior to commencing work on the classification covered by the program.

4.0 Approval Process. Any trainee submitted to fulfill the OJT requirement must be in a registered training program. Acceptable training programs include:

a. BAT Programs – Apprenticeship programs approved by the U.S. Department of Labor, Bureau of Apprenticeship and Training.
b. Any other program, such as the Missouri Manpower Programs, which have been approved by FHWA and MoDOT.

4.1 Submittal of the TRAINEE NOTIFICATION – After the training plan has been approved, the Trainee Notification Form should be submitted within 30 days of the trainee commencing work on the project. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower-level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification will be permitted only with the approval of the BDC Division. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training. Reimbursement to the contractor for off-site training as indicated above may only be made when the contractor does one or more of the following and the trainees are concurrently employed on federal-aid projects:

Contributes to the cost of the training.
Provides the instruction to the trainee.
Pays the trainee's wages during the off-site training period.

5.0 Good Faith Efforts (GFE). In the event that the OJT goal is not met at the end of the project, the BDC Division will request a written narrative GFE and supporting documents and data to explain the goal shortfall. After submittal, the BDC Division will make a determination to approve or deny the GFE.

5.1 In the event the BDC Division denies the GFE submitted by the contractor, the contractor shall have the right to an Administrative Reconsideration Hearing. The request for an administrative reconsideration hearing must be made within seven (7) days of the receipt of the denial letter. The Administrative Reconsideration Committee may be constituted, as MoDOT deems appropriate and fair, provided that no committee member on the Reconsideration Committee shall have taken part in the original MoDOT determination that the contractor failed to meet the OJT contract goal and/or failed to make adequate GFE to do so.

5.2 If the Administrative Reconsideration Committee does not find the contractor met the OJT contract goal, and/or does not find that the contractor made adequate and sufficient GFE to do so, then The Administrative Reconsideration Committee will recommend that liquidated damages as outlined in the non-compliance sanctions section below be carried out. If the Administrative Reconsideration Committee does find that the contractor has met a GFE, then no liquidated damages will be assessed.

6.0 Economically Disadvantaged Verification. When a contractor submits a trainee who is economically disadvantaged the following information should be submitted with the trainee notification to verify this status:

> The previous year's tax return verifying the individual's income is less than the federal poverty guidelines, or Verification of enrollment in any government issued entitlement programs.

7.0 Beneficial Training. MoDOT will ensure its contractors provide on-the-job training aimed at developing or contributing to full journey level status in the type of trade(s) involved. Training shall be consistent with the trainee/apprentice program. Training tasks will be consistent with the approved trade classification for the specific contract. The contractor shall furnish the trainee a copy of the program the contractor will follow in providing the training. The contractor shall provide each trainee and resident engineer documentation showing the type and length of training that will be completed including classroom and on-the-job hours. This includes providing information on the monthly trainee report and trainee notification as to the total working and classroom hours the trainee/apprentice has completed to date.

8.0 Training Reimbursement Process. Except as otherwise noted herein, the contractor will be reimbursed $10.00 per hour of training given an employee on this contract in accordance with an approved training program.

8.1 Reimbursement will be made at the end of the project, once all trainee hours have been submitted, as well as the trainee summary. The contractor will be reimbursed for hours each trainee has attained on the project, with the minimum hours for reimbursement eligibility being 500. Contractors will be reimbursed in instances where the OJT goal is met as well as if a GFE is made to meet the goal. Reimbursement will not be made if the OJT goal was not met, and the contractor did not make a GFE to meet the goal.

8.2 Training will not be reimbursed if the contractor fails to provide beneficial training. This includes only partially meeting the training goal on the project.

8.3 A request may be submitted to the BDC Division to increase the Training Hours assigned to a contract. Approval of such requests by the BDC Division will be granted on a case-by-case basis.

8.4 The contractor is eligible to be reimbursed the total OJT hours assigned to the project once those hours have been fulfilled. For any hours achieved beyond the goal, the contractor must request this additional reimbursement from the BDC Division, and, with concurrence from the resident engineer, the contractor is then eligible to receive reimbursement of hours achieved beyond the goal, either 25 percent of hours over the goal or 500, whichever is less. Outlined below are the maximum overrun reimbursements:

OJT Goal	Hours Achieved	Payable Hours
1,000	1,250	1,250
2,000	1,500	1,500
3,000+	1,501+	1,500

9.0 Monitoring. MoDOT will monitor contractors to ensure trainees and apprentices are receiving beneficial training in the type of trades submitted. Training shall be consistent with the training program or those OJT Programs the FHWA and MoDOT have approved.

9.1 It is normally expected that the trainee/apprentice will begin training on the project as soon as possible, utilizing the skills involved and remaining on the project as long as training opportunities exist in the work classifications or until the completion of the training program.

9.2 Project Office staff will periodically interview trainees to determine:

Whether apprentice/trainee is receiving training in designated craft
Workplace environment
If trainee/apprentice is experiencing problems on the job site
If the apprentice/trainee is being treated fairly

9.3 MoDOT monitors contracts with training through onsite visits, monthly training reports and construction reports. These reports are generated by the contractor and are to be disseminated to the Project Office. If there are problems, the BDC Division will contact the contractor to address the deficiencies.

9.4 Trainees will be paid at the rate set by the training program. The appropriate minimum journeyman's rate paid cannot be less than the amounts set out in the 23 CFR Subpart A, Appendix B. For example, at least 60 percent of the appropriate minimum journey person’s rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period and 90 percent for the last quarter of the training period. The appropriate rates approved by the Department of Labor or Transportation in connection with the existing programs shall apply to all apprentice or trainees being trained for the same classification who are covered by the Training Special Provision.

10.0 Reports. The contractor shall provide for the maintenance of records and furnish monthly reports documenting the contractor's performance under this provision. All trainee notifications must be submitted within 30 days of the trainee's start date. If a trainee has been previously approved by MoDOT, the contractor must still notify MoDOT of the name of the individual(s) and proposed craft the trainees will be trained in, as well as indicate which project the trainees will be working on. The trainee notifications or listing of the proposed trainees must be submitted via fax, mail or electronically to the BDC Division. If the contractor fails to submit the trainee notification or list of proposed trainees prior to the onset of the project, the contractor will be subject to the sanctions as outlined in this OJT TSP.

10.1 Monthly Trainee reports must be submitted following the last pay period of the month, no later than the 15th of the following month. Failure to submit the reports, hours completed during that month could result in hours not being credited. In the cases of voluntary trainee termination or when the trainee completes the hours specified in the program, the contractor must complete the trainee completion form within 30 days. The contractor's failure to submit the proper reports in a timely manner may result in the loss of reimbursement for the training hours for that month.

11.0 Non-Compliance Sanctions. Progress payments shall be withheld for failing to comply with all OJT Program requirements unless MoDOT accepts GFE.

11.1 If the training hours have not been obtained and a GFE has not been displayed upon project completion, the contractor will be assessed liquidated damages in the amount of $20.00 per hour for those hours not realized. For instance, if the project goal was 1,000 hours and only 450 hours were met, then liquidated damages would be assessed at 550 x $20.00 = $11,000.00.

11.2 If BDC Division approves a GFE, then liquidated damages will not be assessed. An approved GFE along with the minimum 500 training hours will result in reimbursement for the applicable hours.

11.3 If the contractor does not achieve the full OJT goal, they will not receive partial credit for hours completed under 500 per trainee. For instance, if the goal on the project was 1,000 hours and only 450 were convened, then no reimbursement will be given for any hours fulfilled. If the goal on the project is 2,000 hours and only 1,500 hours are completed and no GFE is demonstrated, the contractor will receive credit for the 1,500 hours and also be assessed liquidated damages in the amount of the 500 hours that were not met.

11.4 In the event the Contract exceeds the trainee goal on the project, the contractor must submit a request to BDC to obtain an extension of hours. The maximum number of hours beyond those enumerated in the contract cannot exceed 25 percent per 1,000 hours, with a maximum of 500 hours eligible for reimbursement beyond the goal. This extension is subject to the **advance** approval of the BDC Division, and concurrence from the resident engineer.

11.5 Failure to satisfactorily comply with the OJT requirements will also be reflected in the contractor's performance evaluation.

X. Guardrail and End Terminal Repair and Replacement

1.0 Description. This work shall consist of all labor, equipment, and materials to remove existing 4" ET Plus crashworthy end terminals (CETs) and replace with an approved Misc. Commission Furnished Type A Crashworthy End Terminal (MASH) or Misc. Type A Crashworthy End Terminal (NGT) (MASH), address necessary height adjustment as directed, and provide additional guardrail if required, as identified in JSP GG. Locations and Estimated Quantities or as directed by the engineer. All work shall comply with Secs 202 and 606 except as herein modified.

2.0 Materials. All guardrail materials shall conform to Division 1000, Materials Details, and specifically Sec 1040. All materials shall be new unless otherwise approved by the engineer or otherwise allowed by these specifications.

2.1 Materials and components for Misc. Type A Commission Furnished Crashworthy End Terminals (MASH) and Misc. Type A Crashworthy End Terminals (NGT) (MASH) shall conform to the manufacturer's latest approved design. All replacement components shall be from the original equipment manufacturer unless approved by the engineer. The contractor shall provide manufacturer certification that the replacement components furnished, when properly installed by the contractor, will reestablish or exceed the original capabilities of the end terminal.

2.2 All materials intended for use in this contract shall be stored in a dedicated location on the contractor's property and shall be inspected and approved by the engineer prior to use.

3.0 Construction Requirements.

3.1 Installation of New Guardrail System and/or Crashworthy End Terminal. If the job order designates a contract pay item for new guard rail, bridge approach transition section, height and block transition section, end anchor, crashworthy end terminal, or other appurtenance the contractor shall furnish and place the designated item complete in place. The new system and/or terminal shall be installed at the location designated by the engineer.

3.2 Realigning Posts. Posts which are out of alignment but otherwise undamaged will be designated for realignment. The contractor shall realign and plumb the designated posts. After realignment, any voids around the post shall be securely backfilled with a cohesive soil, or a sand meeting the gradation requirements of Sec 1005.3.5, and thoroughly tamped.

3.3 Reflective Sheeting on End Terminals. On new crashworthy end terminals located 12 feet or less from the edge of the traveled way, the contractor shall furnish and install black/yellow reflective sheeting or other marking as directed by the engineer. The reflective sheeting size, shape, method of attachment and placement shall be approved by the engineer prior to installation. Reflective sheeting installed on new end terminals is included in the cost of the end terminal.

3.4 Guardrail Block. Current Commission standards require the use of 8" x 6" x 14" or 21" wood or plastic guardrail blocks for new guardrail installations. Former standards allowed use of 6" x 6" x 14" or 21" blocks. For those locations requiring replacement of only the block and not the post, minor adjustments to the alignment of the existing guardrail posts or guardrail

panels may be required to accommodate the 8" block.

3.5 Additional Work. If additional major components or pay items beyond those specified in the job order are needed to properly perform the work, the contractor shall contact the engineer for authorization to proceed with the additional work. Any work performed without authorization of the engineer will be at the contractor's expense.

4.0 Method of Measurement.

4.1 Measurement of existing guardrail, end anchor, bridge anchor, and turndown terminal removal will be made to the nearest foot from center of first post to center of last post.

4.2 Measurement of existing 4” ET Plus crashworthy end terminal removal will be made per each.

4.3 Measurement of realigned posts will be made per each.

4.4 Measurement of replacement reflective sheeting on end terminals will be made per each. No measurement or payment will be made for reflective sheeting installed on new end terminals.

5.0 Basis of Payment.

5.1 The accepted quantity of removed guardrail, end anchor, bridge anchor, or turndown terminal will be paid for at the contract unit price for:

Item 202-99.03 Remove Guardrail Linear Foot

5.1.1 Payment will be considered full compensation for all labor and equipment necessary to completely remove the guardrail system.

5.2 The accepted quantity of removed 4” ET Plus crashworthy end terminals will be paid for at the contract unit price for:

Item 202-99.02 Remove 4” ET Plus Crashworthy End Terminal Each

5.2.1 Payment will be considered full compensation for all labor and equipment necessary to completely remove the terminal system.

5.4 The accepted quantity of realigned posts will be paid for at the contract unit price for:

Item 606-99.02 Realign and Use Existing Post, Each
Type A, E, or MGS Guardrail

5.4.1 Payment will be considered full compensation for all labor, equipment, and material, including any required backfill, necessary to realign and plumb an existing post.

Y. Definition of Special "99 Number" Pay Items

1.0 The contract contains a large number of special "99-number" pay items. The Commission's automated bidding system is limited by the number of characters allowed for each special item description. The following table defines the abbreviated item descriptions. This table also further defines the work required for each of the pay items.

ITEM NO.	ITEM DESCRIPTION
Traffic Control Items	
616-99.02	MISC. ADDITIONAL TRUCK MOUNTED ATTENUATOR Provide additional truck mounted attenuator for use in addition to other
616-99.04	MISC. ADDITIONAL CONSTRUCTION SIGNS Provide additional construction signs for use in addition to other devices specified in the traffic control plan.
616-99.02	MISC. ADDITIONAL FLASHING ARROW PANEL Provide additional flashing arrow panel for use in addition to other devices specified in the traffic control plan.
616-99.02	MISC. ADDITIONAL CHANNELIZER (TRIMLINE) Provide additional channelizers for use in addition to other devices specified in the traffic control plan.
616-99.02	MISC. ADDITIONAL CHANGEABLE MESSAGE SIGN (CMS CONTRACTOR FURNISHED/RETAINED) Provide additional changeable message sign for use in addition to other devices specified in the traffic control plan.
616-99.02	MISC. ADDITIONAL DIRECTIONAL INDICATOR BARRICADE Provide additional directional indicator barricades (DIBS) for use in addition to other devices specified in the traffic control plan.
616-99.02	MISC. WORK BEYOND SHOULDER Provide traffic control for work off roadway shoulder, but within clear zone. Not to be used when vehicles are parked on shoulder.
616-99.02	MISC. SHOULDER WORK – UNDIVIDED ROADWAYS Provide traffic control for work on shoulder or vehicles parked on shoulder.
616-99.02	MISC. LEFT SHOULDER WORK – HIGH SPEED ROADWAY Provide traffic control for work on left shoulder or vehicles parked on left shoulder of a high speed roadway as designated by the engineer.
616-99.02	MISC. RIGHT SHOULDER WORK – HIGH SPEED ROADWAY Provide traffic control for work on right shoulder or vehicles parked on right

shoulder of a high speed roadway as designated by the engineer.

616-99.02 MISC. 1-LANE 2-WAY OPERATION W/FLAGGERS
Provide traffic control for one lane, two way operations on non-divided two lane pavement, using two flaggers.

616-99.02 MISC. SINGLE LANE CLOSURE
Provide traffic control closing one lane, left or right, on a divided highway.

616-99.02 MISC. PARTIAL RAMP CLOSURE
Provide traffic control for partial ramp closure.

616-99.02 MISC. COMPLETE RAMP CLOSURE
Provide traffic control for complete ramp closure.

616-99.02 MISC. ENTRANCE RAMP AREA, MAINLINE WORK
Provide traffic control within an entrance ramp area closing one lane on a divided highway; work is along mainline.

616-99.02 MISC. ENTRANCE RAMP AREA, ACCEL LANE WORK
Provide traffic control within an entrance ramp area closing one lane on a divided highway. Work is along acceleration lane.

616-99.02 MISC. EXIT RAMP AREA, MAINLINE/DECEL LANE WORK
Provide traffic control within an exit ramp area closing one lane on a divided highway. Work is along mainline or deceleration lane.

616-99.02 MISC. SEQUENTIAL FLASHING WARNING LIGHT
Provide traffic control with sequential flashing warning light.

<u>New Guardrail Installation Items</u>

202-99.02 MISC. TYPE A OR B TERMINAL REMOVAL
Remove existing complete Type A or B crashworthy end terminal.

202-99.03 MISC. REMOVED GUARDRAIL
Remove existing complete guardrail. Item also includes existing turndown end treatments.

214-99.10 MISC. GRADING FOR CRASHWORTHY END TERMINAL
Furnish and place rocky fill material for end terminal installation.

606-01.10 MISC. BULLNOSE GUARDRAIL SYSTEM
Furnish and install Bullnose Guardrail System.

606-10.10 MISC. GUARDRAIL TYPE A
Furnish and install Type A Guardrail.

606-10.11A MISC. GUARDRAIL TYPE A, 7 FT. POST, 3 FT. – 1.5 IN. SPACING

Furnish and install Type A Guardrail with 7’ post, 3’-1 1/2” spacing.

606-99.02 MISC. INSTALL POST IN SOLID ROCK OR CONC, 6’ OR 7’ (TYPE A, E OR MGS)
Install 6’ or 7’ guardrail post in solid rock or through concrete for Type A, E or MGS guardrail. Pay item is in addition to normal pay item for new guardrail or for normal pay item to remove and replace a 6’ or 7’ type A or E guardrail post.

606-99.02 MISC. FLARED TYPE A CRASHWORTHY END TERMINAL
Furnish and install flared Type A crashworthy end terminal.

606-10.50 GUARDRAIL TYPE E, 6 FT. POSTS, 3 FT. – 1.5 IN. SPACING
Furnish and install Type E Guardrail with 6’ post having 3’-1.5” spacing.

606-10.51 GUARDRAIL TYPE E, 7 FT. POSTS
Furnish and install Type E Guardrail with 7’ post.

606-10.54 GUARDRAIL TYPE E, 6 FT. POSTS, 6 FT. – 3 IN. SPACING
Furnish and install Type E Guardrail with 6’ post having 6’-3” spacing.

606-10.60 GUARDRAIL, MGS
Furnish and install Midwest Guardrail System guardrail.

606-10.61 GUARDRAIL, MGS, 8 FT., 6 FT. – 3 IN. SPACING
Furnish and install Midwest Guardrail System guardrail with 8’ post with 6’-3” spacing.

606-10.63 MGS GUARDRAIL, 6 FT. POSTS, 3 FT. – 1.5 IN. SPACING
Furnish and install Midwest Guardrail System guardrail with 6’ post having 3’-1 ½” spacing.

606-10.65 MGS GUARDRAIL, 6 FT. POSTS, 1 FT. – 6.75 IN. SPACING
Furnish and install Midwest Guardrail System guardrail with 6’ post having 1’-6.75” spacing.

606-10.67 MGS DOUBLE FACED GUARDRAIL
Furnish and install Midwest Guardrail System double-faced guardrail.

606-10.68 MGS BRIDGE APPROACH TRANSITION SECTION (MAJOR ROUTE)
Furnish and install Midwest Guardrail System bridge approach transition section on a Major Route.

606-10.69 MGS BRIDGE APPROACH TRANSITION SECTION (MINOR ROUTE)
Furnish and install Midwest Guardrail System bridge approach transition section on a Minor Route.

606-10.70 MGS VERTICAL CONCRETE BARRIER TRANSITION
Furnish and install Midwest Guardrail System vertical concrete barrier

transition.

606-10.74 MGS HEIGHT AND BLOCK TRANSITION SECTION
Furnish and install Midwest Guardrail System height and block transition section.

606-10.75 MGS LONG SPAN GUARDRAIL SECTION
Furnish and install Midwest Guardrail System long span guardrail section.

606-10.80 MGS END ANCHOR
Furnish and install Midwest Guardrail System end anchor.

606-10.81 MGS BRIDGE ANCHOR SECTION (THRIE-BEAM BRIDGE)
Furnish and install Midwest Guardrail System Thrie Beam bridge anchor section.

606-22.00A BRIDGE ANCHOR SECTION, 6.5 FT. POSTS (SAFETY BARRIER CURB) (ROADWAY AND REHABILITATION WORK ONLY)
Furnish and install bridge anchor section with 6’ 6” posts for only roadway and rehabilitation work.

606-22.00A BRIDGE ANCHOR SECTION, 7.5 FT. POSTS (SAFETY BARRIER CURB) (ROADWAY AND REHABILITATION WORK ONLY)
Furnish and install bridge anchor section with 7’ 6” posts for only roadway and rehabilitation work.

606-99.02 MGS TRANSITION SECTION, 6 FT. POSTS
Furnish and install Midwest Guardrail System transition section with 6’ posts.

606-23.00A TRANSITION SECTION, 6.5 FT. POSTS
Furnish and install guardrail transition section with 6’ 6” posts.

606-23.01A TRANSITION SECTION, 7.5 FT. POSTS
Furnish and install guardrail transition section with 7’ 6” posts.

606-23.03 ASYMMETRICAL TRANSITION SECTION, 6.5 FT. POSTS
Furnish and install asymmetrical guardrail transition section with 6’ 6” posts.

606-23.04 ASYMMETRICAL TRANSITION SECTION, 7.5 FT. POSTS
Furnish and install asymmetrical guardrail transition section with 7’ 6” posts.

606-24.00 BRIDGE ANCHOR SECTION (THRIE BEAM)
Furnish and install Thrie Beam bridge anchor section.

606-30.00 TERMINAL SECTION – GUARDRAIL
Furnish and install terminal section for guardrail.

606-30.14 TYPE A CRASHWORTHY END TERMINAL (MASH)
Furnish and install MASH Type A crashworthy end terminal.

606-30.16 TYPE B CRASHWORTHY END TERMINAL
Furnish and install Type B crashworthy end terminal.

606-66.10 END ANCHOR
Furnish and install end anchor.

606-66.20 GUARDRAIL ANCHOR, EMBEDDED
Furnish and install embedded guardrail anchor.

606-66.30 GUARDRAIL ANCHOR, ROCK FACE
Furnish and install Guardrail Anchor, Rock Face.

Guardrail Repair Items

606-99.02 MISC. R&R 12.5’ W-BEAM PANEL (TYPE A GR)
Remove and replace 12’-6” Type A guardrail beam.

606-99.02 MISC. R&R 12.5’ W-BEAM PANEL (MGS)
Remove and replace 12’-6” Midwest Guardrail System guardrail beam.

606-99.02 MISC. R&R 12.5' THRIE BEAM RAIL TY E GR
Remove and replace 12’-6” thrie beam rail for Type E guardrail.

606-99.02 MISC. R&R END ANCHOR RAIL
Remove and replace end anchor rail section.

606-99.02 MISC. R&R MGS END ANCHOR
Remove and replace Midwest Guardrail System end anchor.

606-99.02 MISC. R&R 72” FOUNDATION TUBE W/O SOIL PLATE (MGS)
Remove and replace Midwest Guardrail System end anchor system foundation tube with or without soil plate.

606-99.02 MISC. R&R 46” WOOD POST IN FOUNDATION TUBE (MGS)
Remove and replace Midwest Guardrail System end anchor system wood post in foundation tube.

606-99.02 MISC. R&R CABLE ASSY W/PIPE, PLATE & ANCHOR (MGS)
Remove and replace Midwest Guardrail System end anchor cable assembly with pipe, plate and anchor.

606-99.02 MISC. R&R MGS END ANCHOR CABLE ASSEMBLY
Remove and replace Midwest Guardrail System end anchor cable assembly.

606-99.02 MISC. R&R PARTS FOR END SECTION
Remove and replace parts for end section.

606-99.02 MISC. R&R 25' W-BEAM PANEL (TYPE A GR)
Remove and replace 25' W-beam guardrail panel for Type A guardrail. Existing panels may be 12.5' long.

606-99.02 MISC. R&R 25' W-BEAM PANEL (MGS)
Remove and replace 25' W-beam guardrail panel for Midwest Guardrail System guardrail. Existing panels may be 12.5' long.

606-99.02 MISC. R&R 6.25' THRIE BEAM PANEL (MGS)
Remove and replace 6.25' Thrie beam guardrail panel for Midwest Guardrail System guardrail.

606-99.02 MISC. R&R 18.75' THRIE BEAM PANEL (MGS)
Remove and replace 18.75' Thrie beam guardrail panel for Midwest Guardrail System guardrail.

606-99.02 MISC. R&R 25' THRIE BEAM PANEL (TYPE E GR)
Remove and replace 25' Thrie beam guardrail panel for Type E guardrail. Existing panels may be 12'-6" long.

606-99.02 MISC. R&R 25' THRIE BEAM PANEL (MGS)
Remove and replace 25' Thrie beam guardrail panel for Midwest Guardrail System guardrail. Existing panels may be 12'-6" long.

606-99.02 MISC. R&R 6.25' TYPE A TO TYPE E TRANSITION BEAM
Remove and replace 6.25' transition section beam for Type A to Type E transition.

606-99.02 MISC. R&R 12.5' END ANCHOR PANEL
Remove and replace 12.5' end anchor W-beam panel. Existing beam may be shorter.

606-99.02 MISC. R&R 12.5' MGS END ANCHOR PANEL
Remove and replace Midwest Guardrail System 12.5' end anchor panel.

606-99.02 MISC. R&R 12.5' BEAM, CONC/CONVEX RADIUS, TY A
Remove and replace 12'-6" Type A guardrail beam with a concave or convex radius beam.

606-99.02 MISC. R&R 12.5' BEAM, CONC/CONVEX RADIUS, MGS
Remove and replace 12'-6" Midwest Guardrail System guardrail beam with a concave or convex radius beam.

606-99.02 MISC. R&R 12.5' BEAM 10 GA. (TYPE E GR)
Remove and replace 12'-6", 10 gage, Type E guardrail beam.

606-99.02 MISC. R&R STEEL POST, 6' MGS
Remove and replace 6’ steel guardrail post for MGS guardrail.

606-99.02 MISC. R&R STEEL POST, 6' TYPE A OR MGS GR
Remove and replace 6’ steel guardrail post for Type A or MGS guardrail.

606-99.02 MISC. R&R STEEL POST 6', TY E GR
Remove and replace 6’ steel guardrail post for Type E guardrail.

606-99.02 MISC. R&R STEEL POST 7' (TY A GR)
Remove and replace 7’ steel post for Type A guardrail.

606-99.02 MISC. R&R STEEL POST 7' (TY E GR)
Remove and replace 7’ steel post for Type E guardrail.

606-99.02 MISC. R&R WOOD POST 6' (TY A GR)
Remove and replace 6’ wood post for Type A guardrail.

606-99.02 MISC. R&R WOOD POST 7' (TY A GR)
Remove and replace 7’ wood post for Type A guardrail.

606-99.02 MISC. R&R STEEL POST 8' MGS
Remove and replace 8’ steel guardrail post for MGS guardrail.

606-99.02 MISC. REALIGN & USE EXIST POST TY A OR E OR MGS GR
Realign and reuse existing guardrail post for Type A or E or MGS guardrail.

606-99.02 MISC. R&R WOOD/PLASTIC BLOCK 8X6X14 TY A GR
Remove and replace wood or plastic post block, 8" x 6" x 14" for Type A guardrail.

606-99.02 MISC. R&R WOOD/PLASTIC BLOCK 8X6X14 MGS
Remove and replace wood or plastic post block, 8" x 6" x 14" for Midwest Guardrail System guardrail.

606-99.02 MISC. R&R WOOD/PLASTIC BLOCK 12X6X14 MGS
Remove and replace wood or plastic post block, 12" x 6" x 14" for Midwest Guardrail System guardrail.

606-99.02 MISC. R&R WOOD BLOCK 8X6X17 TRANSITION SECTION
Remove and replace wood or plastic post block, 8" x 6" x 17" for Type A to Type E transition section.

606-99.02 MISC. R&R WOOD BLOCK 12X6X19 TRANSITION SECTION
Remove and replace wood or plastic post block, 12" x 6" x 19".

606-99.02 MISC. R&R MGS HEIGHT AND BLOCK TRANSITION SECTION
Remove and replace Midwest Guardrail System height and block transition section.

606-99.02 MISC. RE-TENSION GUARDRAIL SYSTEM
Re-tension anchor hardware for all end anchors and end terminals as needed for mid-rail repairs.

606-99.02 MISC. R&R STEEL SPACER BLOCK (TYPE A GR)
Remove and replace steel spacer block for Type A guardrail.

606-99.02 MISC. R&R STEEL BLOCKOUT FOR RADIUS RAIL
Remove and replace steel blockout for radius rail.

606-99.02 MISC. R&R WOOD/PLASTIC BLOCK 8X6X21 TY E GR
Remove and replace wood or plastic post block, 8" x 6" x 21" for Type E guardrail.

606-99.02 MISC. R&R STEEL TUBE BLOCK 7X4 BR ANCH
Remove and replace structural steel tubing block, 7" x 4" x 3/16" for bridge anchor section.

606-99.02 MISC. R&R END SEC (SHOE) TY A GR
Remove and replace guardrail end section (also called a shoe) for Type A guardrail.

606-99.02 MISC. R&R TERMINAL CONNECTOR TY A OR MGS GR
Remove and replace terminal connector for Type A or MGS guardrail.

606-99.02 MISC. R&R TERMINAL CONNECTOR, TYPE E OR MGS GR
Remove and replace thrie beam terminal connector for Type E or MGS guardrail.

606-99.02 MISC. R&R GR DELINEATOR 1 SIDE OR 2 SIDE
Remove and replace existing reflective guardrail delineator (includes both 1 and 2 sided). Color will be as specified in Sec 606.10.

End Terminal Repair Items

606-99.02 MISC. NEW OR R&R REFLECTIVE SHEETING ON END TERMINAL
Install black/yellow reflective sheeting on new crashworthy end terminal Head or remove and replace on existing head.

606-99.02 MISC. R&R NEW IMPACT HEAD (MSKT)
Remove and replace impact head with a new impact head for MSKT crashworthy end terminal.

606-99.02 MISC. REM EXT GR & REUSE EXIST IMPACT HEAD (MSKT)
Remove extruded guardrail beam from an existing impact head and reuse the undamaged, serviceable impact head on the repaired MSKT crashworthy end terminal. A new or used replacement head in an undamaged, serviceable condition may be furnished to allow removal of

the extruded guardrail beam from the original head at the contractor's shop facilities.

606-99.02 MISC. R&R 12.5 FT END SECTION 1ST W-BEAM RAIL (MSKT)
Remove and replace 1st 12.5' w-beam rail. Rail must be original manufacturer replacement part.

606-99.02 MISC. R&R 9.375 FT 2ND SECTION W-BEAM RAIL (MSKT)
Remove and replace 2nd 9.375' w-beam rail. Rail must be original manufacturer replacement part.

606-99.02 MISC. R&R CABLE ASSY W/PIPE, PLATE & ANCH (MSKT)
Remove and replace cable assembly including pipe sleeve, bearing plate, and anchor bracket for MSKT crashworthy end terminal.

606-99.02 MISC. R&R GROUND STRUT (MSKT)
Remove and replace a MSKT ground strut.

606-99.02 MISC. R&R POST #1 HBA TOP (MSKT)
Remove and replace #1 HBA top post on MSKT crashworthy end terminal.

606-99.02 MISC. R&R POST #1 HBA BOTTOM (MSKT))
Remove and replace #1 HBA bottom post on MSKT crashworthy end terminal.

606-99.02 MISC. R&R POST #2 HBA TOP (MSKT)
Remove and replace #2 HBA top post on MSKT crashworthy end terminal.

606-99.02 MISC. R&R POST #2 HBA BOTTOM (MSKT)
Remove and replace #2 HBA bottom post on MSKT crashworthy end terminal.

606-99.02 MISC. R&R 12/25/3'1.5:3@6'3:3'1.5/S (SOFTSTOP)
Remove and replace 12/25/3'1.5:3@6'3:3'1.5/S on SoftStop crashworthy end terminal.

606-99.02 MISC. R&R 6'0 SYT POST/8.5/31" GR HT (SOFTSTOP)
Remove and replace 6'0 SYT post/8.5/31" GR HT on SoftStop crashworthy end terminal.

606-99.02 MISC. R&R ANCHOR GUARDRAIL 12'-6" (SOFTSTOP)
Remove and replace anchor guardrail 12'-6" on SoftStop crashworthy end terminal.

606-99.02 MISC. R&R ANGLE STRUT (SOFTSTOP)
Remove and replace angle strut on SoftStop crashworthy end terminal.

606-99.02 MISC. R&R STYP#1 8.5# 4'9-1/2 (SOFTSTOP)
Remove and replace STYP#1 8.5# 4'9-1/2 on SoftStop crashworthy end

terminal.

606-99.02 MISC. R&R ANCHOR POST W6X15#X6' (SOFTSTOP)
Remove and replace anchor post W6X15#X6' on SoftStop crashworthy end terminal.

606-99.02 MISC. R&R IMPACT HEAD (SOFTSTOP)
Remove and replace impact head on SoftStop crashworthy end terminal.

606-99.02 MISC. REM EXT GR & REUSE EXIST IMPACT HEAD (SOFTSTOP)
Remove extruded guardrail beam from an existing impact head and reuse the undamaged, serviceable impact head on the repaired SoftStop crashworthy end terminal. A new or used replacement head in an undamaged, serviceable condition may be furnished to allow removal of the extruded guardrail beam from the original head at the contractor's shop facilities.

606-99.02 MISC. R&R CAN TL3 SS646 (SOFTSTOP)
Remove and replace # CAN TL3 SS646 on SoftStop crashworthy end terminal.

606-99.02 MISC. R&R SLED WELDMENT (TRACC)
Remove and replace sled weldment on TRACC crashworthy end terminal.

606-99.02 MISC. R&R SHREDDER (TRACC)
Remove and replace shredder on TRACC crashworthy end terminal.

606-99.02 MISC. R&R STAGE 2 RIP PLATE 75 IN (TRACC)
Remove and replace stage 2 RIP plate 75" on TRACC crashworthy end terminal.

606-99.02 MISC. R&R STAGE 3 RIP PLATE 93 IN (TRACC)
Remove and replace stage 3 RIP plate 93" on TRACC crashworthy end terminal.

606-99.02 MISC. R&R STAGE 3 RIP PLATE (25965G) 87 IN (TRACC)
Remove and replace stage 3 RIP plate (25965G) 87" on TRACC crashworthy end terminal.

606-99.02 MISC. R&R STAGE 3 RIP PLATE (25966G) 87 IN (TRACC)
Remove and replace stage 3 RIP plate (25966G) 87" on TRACC crashworthy end terminal.

606-99.02 MISC. R&R 2 BAY FENDER PANEL (TRACC)
Remove and replace 2 bay fender panel on TRACC crashworthy end terminal.

606-99.02 MISC. R&R NOSEPIECE YELLOW (TRACC)
Remove and replace nosepiece yellow on TRACC crashworthy end

terminal.

Bullnose System Repair Items

606-99.02 MISC. R&R PARTS FOR BULLNOSE SYSTEM
Remove and Replace various parts for Bullnose System

606-99.02 MISC. R&R 72 IN FOUNDATION TUBE BULLNOSE SYSTEM
Remove and Replace 72 in Foundation Tube for Bullnose System

606-99.02 MISC. R&R 96 1/16 IN FOUNDATION TUBE BULLNOSE SYSTEM
Remove and Replace 96 1/16 in Foundation Tube for Bullnose System

606-99.02 MISC. R&R POST #1-2 BULLNOSE SYSTEM
Remove and Replace post #1-2 for Bullnose System

606-99.02 MISC. R&R POST #3-8 BULLNOSE SYSTEM
Remove and Replace post #3-8 for Bullnose System

606-99.02 MISC. R&R POST #9-12 BULLNOSE SYSTEM
Remove and Replace post #9-12 for Bullnose System

606-99.02 MISC. R&R 8X16X14 3/16 TAPERED WOOD BLOCK BULLNOSE SYSTEM
Remove and Replace 8x16x14 3/16 Tapered Wood Block for Bullnose System

606-99.02 MISC. R&R RAIL SECTION #1 BULLNOSE SYSTEM
Remove and Replace Rail Section #1 for Bullnose System

606-99.02 MISC. R&R RAIL SECTION #2 BULLNOSE SYSTEM
Remove and Replace Rail Section #2 for Bullnose System

606-99.02 MISC. R&R RAIL SECTION #3 BULLNOSE SYSTEM
Remove and Replace Rail Section #3 for Bullnose System

Z. Type A Crashworthy End Terminal - Next Generation Terminal (NGT) (MASH)

1.0 Description. In locations where it is determined by the engineer that there is insufficient space for a height transition to be made outside of the crashworthy end terminal, due to various reasons, a Type A Crashworthy End Terminal - Next Generation Terminal (NGT) (MASH) will be placed.

2.0 Installation. The Misc. Type A Crashworthy End Terminal (NGT) (MASH) shall be installed in such a manner to achieve the height transition along the length of the end terminal. The head of the crashworthy end terminal shall be at the MASH compliant height and transition along the length of the system to connect to the existing guardrail in place

AA. Guardrail Compliance Requirements

1.0 Effective July 1, 2016 all new end terminals and end terminal repairs on routes shall be MASH Crashworthy End Terminals.

All new guardrail installations shall use Midwest Guardrail System (MGS) in lieu of Type A Guardrail. For guardrail repairs, Type A or MGS guardrail may be used as determined by the engineer.

BB. Grading for Crashworthy End Terminal

1.0 Description. This work shall consist of all grading necessary to meet or exceed the Alternate Grading limits for MASH crashworthy End Terminals as shown on Standard Drawing 606.81, including furnishing and placing the fill material and mobilization of equipment. The graded area for the end terminal shall be sloped no greater than 10:1 away from the edge of pavement or shoulder. Grading shall include constructing a 2:1 or flatter slope from the grading limits shown on the standard drawing to the existing slope.

1.1 Grading for Crashworthy End Terminal (GCET) will not be used for locations where the engineer estimates more than 15 cubic yards of material per end terminal will be required or where constructing a 2:1 or flatter slope from the grading area to the existing slope is deemed to be infeasible. When either of the aforementioned conditions applies, the work is considered beyond the scope of this contract unless both parties agree to a negotiated settlement to proceed with performing the work. The engineer may also decline to utilize GCET for any other reasons.

1.2 Completion of the GCET work may be done concurrently with the repair of the end terminal or may be postponed by the contractor for a maximum of 30 calendar days from the notice to proceed date specified on the Job Order. Failure to complete the grading work within the limit specified herein will result in liquidated damages as specified elsewhere in this contract.

2.0 Materials. The fill material used by the contractor shall be rocky in nature, such as crushed stone, base rock, or other granular type material approved by the engineer. Limestone screenings, sand and other fine materials that are highly erodible shall not be used for fill material. Large rock, not to exceed a maximum nominal size of 8”, may be used, but shall be gap-graded to minimize voids. When the size of the rock used exceeds 3” in diameter, all voids in the rock fill shall be filled with granular material of 1” size or less.

2.1 Material shall not be obtained from Commission right of way. Material obtained from a contractor-furnished borrow shall be in accordance with 203.3.

3.0 Construction. The rocky fill material shall be placed in accordance with this provision and as stated herein. Existing vegetative material shall be removed prior to adding fill material. Compactive effort and construction methods shall be performed to the extent that the final 10:1 platform has sufficient stability to support a standard unloaded dump truck without sliding of the material or rutting of the platform in excess of 1” in depth. Proof rolling by the contractor with an unloaded dump truck may be required upon request by the engineer at no additional cost to the Commission. Benching of the existing slope may be required to ensure the material has a stable

foundation to comply with this provision. The final surface of the graded area shall be uniform and true to grade.

4.0 Method of measurement. No final measurement will be made for the volume of material used for GCET. A preliminary estimate of the amount of fill will be made by the engineer for the purpose of determining if GCET shall be specified. The Job Order issued by the engineer will indicate the need for GCET when, in the opinion of the engineer, the existing terrain at the end terminal does not meet or exceed the alternate grading limits for MASH crashworthy end terminals as shown on Standard Drawing 606.81 and the engineer estimates the grading work needed to meet the standard will not exceed 15 CY of material.

5.0 Basis of Payment. A lump sum payment will be made for each end terminal that requires GCET, as determined by the engineer. Payment for this work shall be completely covered by the fixed unit price for MISC. GRADING FOR CRASHWORTHY END TERMINAL multiplied by the Adjustment Factor.

5.1 Payment for traffic control will not be duplicated when the contractor performs the GCET work separate from the repair of the end terminal.

CC. Shaping Slopes Class III (Modified Material Requirements)

Delete Sec 215.1.3 and 215.1.3.1 and substitute the following:

215.1.3 Shaping Slopes, Class III, shall consist of providing rock fill material and shaping slopes to construct additional shoulder width for the installation of guardrail and Type A crashworthy end terminals in accordance with Missouri Standard Plans for Highway Construction. The rock fill material used shall meet the requirements specified in Sec 215.1.3.1. The shoulder surface shall be finished smooth such that it is traversable and without significant voids or depressions.

215.1.3.1 Material Requirements. Rock fill material used for Shaping Slopes, Class III, shall consist of a durable crushed stone, shot rock or broken concrete, with a predominant size of 3 inches and a maximum size of 6 inches. Acceptance by the engineer will be made by visual inspection.

215.4 Basis of Payment. The accepted quantity will be paid at the contract unit bid price for 215-99.10 Misc. Shaping Slopes Class III – Modified Material Requirement, per 100F.

DD. Guardrail Posts in Concrete JSP-22-02B

1.0 Description. This work shall consist of the careful removal of any posts, including but not limited to: bridge anchor section and transition section posts, that are embedded in existing concrete (drain basin or other concrete surface), the coring of new holes to install posts that fall within the limits of the concrete surface, the repair of the holes left from removal of existing posts, and the backfilling of material in the new locations in accordance with the plans and these provisions.

2.0 Construction Requirements. The contractor shall carefully saw cut around the existing guardrail posts embedded in concrete or otherwise remove the posts with minimal damage to the surrounding concrete.

2.1 Posts for the new bridge anchor section and asymmetrical transition section shall be installed in the concrete drain basin per Standard Plan 606.50. The relief slot behind the post shall be filled with coarse Type 1 Aggregate to within two (2) inches of the surface. The top two (2) inches shall be filled with compacted hot mix asphalt or a dense cold asphalt repair mix. The purpose of the capped material is to prevent water intrusion.

2.2 All voids in the concrete left from the removal of the existing posts shall be filled with concrete or compacted hot mix asphalt to a depth that matches the existing thickness of the concrete surface. Concrete bag mix (5,000 psi or greater) or a commercial mix will be allowable for this purpose.

3.0 Method of Measurement. Measurement of Guardrail Posts in Concrete will be per each new post installation that falls within the limits of the concrete surface.

4.0 Basis of Payment. All labor, equipment, and materials necessary for compliance with this provision will be paid for at the contract unit bid price for Item 606-99.02, Misc. Guardrail Posts in Concrete, per each.

EE. Environmentally Sensitive Locations

1.0 There are various environmentally sensitive locations within this contract. The contractor shall ensure there are no impacts to streams and no disturbance within the toe of slope as noted for the locations listed. Disturbance shall be kept to the minimum amount feasible for the completion of work. If there is exposed soil from contractor operations that may contribute to run-off, the placement of erosion control items will be required.

2.0 Any grading as noted in JSP CC. Grading for Crashworthy End Terminal and JSP DD. Shaping Slopes Class III (Modified Material Requirements) in environmentally sensitive locations shall require the use of aggregate.

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

FF. Locations and Estimated Quantities

1.0 Locations and estimated quantities are subject to change due to field conditions.

LOCATIONS AND ESTIMATED QUANTITIES							
LOCATION	ROUTE	LOG MILE	REMOVALS OF IMPROVEMENTS		CWET INSTALLATION, GRADING & MOBILIZATION	MGS GUARDRAIL	MGS HEIGHT AND BLOCK TRANSITION
			GUARDRAIL LF	CWET EA	EA	LF	EA
FRANKLIN	MO 30 E	0.498	25	1	1		1
FRANKLIN	MO 30 W	51.875	25	1	1		1
FRANKLIN	MO 30 W	52.218	25	1	1		1
FRANKLIN	MO 47 N	47.276	25	1	1		1
FRANKLIN	MO 47 S	71.838	25	1	1		1
FRANKLIN	SOR 44 W	0.835	25	1	1		1
FRANKLIN	RP IS44 E TO MO100 E	0.08	25	1	1		1
FRANKLIN	RP IS44 W TO MO100 W	0.1	25	1	1		1

FRANKLIN	MO 100 E	49.712	25	1	1		1
FRANKLIN	MO 100 E	49.807	25	1	1		1
FRANKLIN	MO 100 E	50.153	25	1	1		1
FRANKLIN	MO 100 E	51.591	25	1	1		1
FRANKLIN	MO 100 E	71.603	25	1	1		1
FRANKLIN	MO 100 W	63.352	25	1	1		1
FRANKLIN	MO 100 W	63.419	25	1	1		1
FRANKLIN	MO 100 W	71.703	25	1	1		1
FRANKLIN	CRD OLD HIGHWAY 100 E	3.412	25	1	1		1
FRANKLIN	CRD OLD HIGHWAY 100 E	3.494	25	1	1		1
FRANKLIN	MO 185 N	50.264	25	1	1		1
FRANKLIN	MO 185 N	50.559	25	1	1		1
FRANKLIN	MO 185 S	14.978	25	1	1		1
FRANKLIN	MO 185 S	30.674	25	1	1		1
FRANKLIN	MO 185 S	33.139	25	1	1		1
FRANKLIN	MO 185 S	33.357	25	1	1		1
FRANKLIN	US 50 E	217.637	25	1	1		1
FRANKLIN	US 50 E	217.714	25	1	1		1
FRANKLIN	US 50 E	218.206	25	1	1		1
FRANKLIN	US 50 E	218.968	25	1	1		1
FRANKLIN	US 50 W	42.843	25	1	1		1
FRANKLIN	US 50 W	43.882	25	1	1		1
FRANKLIN	US 50 W	44.279	25	1	1		1
FRANKLIN	US 50 W	44.356	25	1	1		1
FRANKLIN	SOR 50 E	0.048	25	1	1		1
FRANKLIN	RT D N	5.443	25	1	1		1
FRANKLIN	RT D S	0.151	25	1	1		1
FRANKLIN	RT F S	0.903	25	1	1		1
FRANKLIN	RT F S	0.91	25	1	1		1

LOCATIONS AND ESTIMATED QUANTITIES							
LOCATION	ROUTE	LOG MILE	REMOVALS OF IMPROVEMENTS		CWET INSTALLATION, GRADING & MOBILIZATION	MGS GUARDRAIL	MGS HEIGHT AND BLOCK TRANSITION
			GUARDRAIL LF	CWET EA	EA	LF	EA
JEFFERSON	MO 21 N	168.99	25	1	1		1
JEFFERSON	MO 21 N	171.366	25	1	1		1
JEFFERSON	MO 21 S	21.631	25	1	1		1
JEFFERSON	MO 21 S	22.629	25	1	1		1
JEFFERSON	MO 21 S	24.838	25	1	1		1
JEFFERSON	MO 21 S	28.568	25	1	1		1
JEFFERSON	WOR 21 S	1.476	25	1	1		1
JEFFERSON	RP MO 21 N TO OLD HWY 21 S	0.269	25	1	1		1
JEFFERSON	RP MO 21 N TO HAYDEN RD E	0.289	25	1	1		1
JEFFERSON	RP MO 21 N TO RT A E	0.198	25	1	1		1
JEFFERSON	RP MO 21 N TO RT A E	0.213	25	1	1		1
JEFFERSON	RP MO 21 S TO RT A W	0.238	25	1	1		1
JEFFERSON	RP MO 21 S TO RT A W	0.244	25	1	1		1
JEFFERSON	RP RT A TO MO 21 N N	0.328	25	1	1		1
JEFFERSON	CRD OLD HWY N1 N	4.31	25	1	1		1
JEFFERSON	CRD OLD HWY N1 S	12.5	25	1	1		1
JEFFERSON	MO 30 E	21.962	25	1	1		1
JEFFERSON	MO 30 W	24.678	25	1	1		1
JEFFERSON	MO 30 W	24.983	25	1	1		1
JEFFERSON	MO 30 W	25.539	25	1	1		1
JEFFERSON	MO 30 W	25.549	25	1	1		1
JEFFERSON	NOR 30 W	0.101	25	1	1		1
JEFFERSON	EOR 141 N	0.426	25	1	1		1

JEFFERSON	EOR 141 N	0.484	25	1	1		1
JEFFERSON	EOR 141 S	0.355	25	1	1		1
JEFFERSON	EOR 141 S	0.412	25	1	1		1
JEFFERSON	US 61 N	183.493	25	1	1		1
JEFFERSON	US 61 N	187.043	25	1	1		1
JEFFERSON	US 61 N	187.086	25	1	1		1
JEFFERSON	US 61 N	189.757	25	1	1		1
JEFFERSON	US 61 N	192.15	25	1	1		1
JEFFERSON	US 61 N	193.127	25	1	1		1
JEFFERSON	US 61 S	201.905	25	1	1		1
JEFFERSON	US 61 S	201.994	25	1	1		1
JEFFERSON	US 61 S	204.274	25	1	1		1
JEFFERSON	US 61 S	204.307	25	1	1		1
JEFFERSON	US 61 S	204.391	25	1	1		1
JEFFERSON	US 61 S	207.014	25	1	1		1
JEFFERSON	US 67 N	122.606	25	1	1		1
JEFFERSON	US 67 N	124.243	25	1	1		1
JEFFERSON	US 67 N	126.403	25	1	1		1
JEFFERSON	US 67 N	126.937	25	1	1		1
JEFFERSON	US 67 N	128.635	25	1	1		1
JEFFERSON	US 67 N	128.765	25	1	1		1
JEFFERSON	US 67 N	129.213	25	1	1		1
JEFFERSON	US 67 N	129.756	25	1	1		1
JEFFERSON	US 67 N	135.138	25	1	1		1
JEFFERSON	US 67 S	67.491	25	1	1		1
JEFFERSON	US 67 S	67.868	25	1	1		1
JEFFERSON	US 67 S	69.409	25	1	1		1
JEFFERSON	US 67 S	70.693	25	1	1		1
JEFFERSON	US 67 S	72.143	25	1	1		1
JEFFERSON	US 67 S	74.191	25	1	1		1
JEFFERSON	IS 55 N	175.81	25	1	1		1
JEFFERSON	IS 55 N	176.244	25	1	1		1
JEFFERSON	RP IS 55 N TO RT T N	0.218	25	1	1		1
JEFFERSON	WOR 55	0.782	25	1	1		1
JEFFERSON	WOR 55 N	1.255	25	1	1		1
JEFFERSON	WOR 55 N	1.422	25	1	1		1
JEFFERSON	RT E N	14.561	25	1	1		1
JEFFERSON	RT E N	14.656	25	1	1		1
JEFFERSON	RT E N	15.598	25	1	1		1
JEFFERSON	RT E N	15.701	25	1	1		1
JEFFERSON	RT E S	0.501	25	1	1		1
JEFFERSON	RT E S	0.508	25	1	1		1
JEFFERSON	RT E S	0.678	25	1	1		1
JEFFERSON	RT E S	1.538	25	1	1		1
JEFFERSON	RT E S	1.624	25	1	1		1
JEFFERSON	RT K E	0.276	25	1	1		1
JEFFERSON	RT K W	0.272	25	1	1		1
JEFFERSON	RT V N	2.488	25	1	1		1
JEFFERSON	RT V N	2.603	25	1	1		1
JEFFERSON	RT V S	5.512	25	1	1		1
JEFFERSON	RT W N	0.575	25	1	1		1
JEFFERSON	RT W N	0.772	25	1	1		1
JEFFERSON	RT W S	5.791	25	1	1		1
JEFFERSON	RT Y N	5.994	25	1	1		1
JEFFERSON	RT Y N	6.108	25	1	1		1
JEFFERSON	RT Y S	9.392	25	1	1		1
JEFFERSON	RT Y S	10.147	25	1	1		1
JEFFERSON	RT Y S	10.247	25	1	1		1
JEFFERSON	RT MM W	1.059	25	1	1		1
JEFFERSON	RT PP W	1.789	25	1	1		1

JEFFERSON	RT TT N	0.273	25	1	1		1
JEFFERSON	RT TT S	7.562	25	1	1		1
JEFFERSON	RT TT S	7.681	25	1	1		1
JEFFERSON	CRD GRAVOIS RD E	0.063	25	1	1		1
JEFFERSON	CRD HAYDEN RD E	0.651	25	1	1		1
JEFFERSON	CRD HAYDEN RD W	0.123	25	1	1		1
JEFFERSON	RP HAYDEN RD TO MO 21 S S	0.105	25	1	1		1
JEFFERSON	CST BYRNES MILL RD N	24.834	25	1	1		1

LOCATIONS AND ESTIMATED QUANTITIES							
LOCATION	ROUTE	LOG MILE	REMOVALS OF IMPROVEMENTS		CWET INSTALLATION, GRADING & MOBILIZATION	MGS GUARDRAIL	MGS HEIGHT AND BLOCK TRANSITION
			GUARDRAIL LF	CWET EA	EA	LF	EA
ST. CHARLES	MO 79 N	1.455	25	1	1		1
ST. CHARLES	MO 94 E	103.528	25	1	1		1
ST. CHARLES	MO 94 E	104.868	25	1	1		1
ST. CHARLES	MO 94 W	25.801	25	1	1		1
ST. CHARLES	MO 94 W	29.798	25	1	1		1
ST. CHARLES	RP MO 94 E TO SOR 94 E	0.118	25	1	1		1
ST. CHARLES	RP MO 94 E TO SOR 94 E	0.157	25	1	1		1
ST. CHARLES	RP MO 94 E TO SOR 94 E	0.182	25	1	1		1
ST. CHARLES	RP MO 94 E TO SOR 94 E	0.249	25	1	1		1
ST. CHARLES	NOR 94 W	4.773	25	1	1		1
ST. CHARLES	NOR 94 W	3.697	25	1	1		1
ST. CHARLES	NOR 94 W	2.02	25	1	1		1
ST. CHARLES	SOR 94 E	0.724	25	1	1		1
ST. CHARLES	SOR 94 E	0.984	25	1	1		1
ST. CHARLES	SOR 94 E	1.151	25	1	1		1
ST. CHARLES	SOR 94 E	1.298	25	1	1		1
ST. CHARLES	SOR 94 E	1.996	25	1	1		1
ST. CHARLES	SOR 94 E	2.11	25	1	1		1
ST. CHARLES	SOR 94 E	2.181	25	1	1		1
ST. CHARLES	SOR 94 E	2.28	25	1	1		1
ST. CHARLES	SOR 94 E	2.589	25	1	1		1
ST. CHARLES	SOR 94 E	2.911	25	1	1		1
ST. CHARLES	SOR 94 E	3.043	25	1	1		1
ST. CHARLES	SOR 94 E	3.051	25	1	1		1
ST. CHARLES	SOR 94 E	3.492	25	1	1		1
ST. CHARLES	SOR 94 E	3.498	25	1	1		1
ST. CHARLES	RP NOR 94 TO MO 94 W W	0.127	25	1	1		1
ST. CHARLES	RP SOR 94 TO MO 94 E E	0.14	25	1	1		1
ST. CHARLES	US 61 N	253.028	25	1	1		1
ST. CHARLES	US 61 S	148.044	25	1	1		1
ST. CHARLES	NOR 64 E	0.098	25	1	1		1
ST. CHARLES	RP IS 70 E TO MO 94 E E	0.164	25	1	1		1
ST. CHARLES	NOR 70 E	2.089	25	1	1		1
ST. CHARLES	NOR 70 W	0.545	25	1	1		1
ST. CHARLES	SOR 70 E	3.325	25	1	1		1
ST. CHARLES	SOR 70 E	4.293	25	1	1		1
ST. CHARLES	SOR 70 E	5.695	25	1	1		1

ST. CHARLES	SOR 70 E	5.946	25	1	1		1
ST. CHARLES	SOR W	0.502	25	1	1		1
ST. CHARLES	SOR W	0.633	25	1	1		1
ST. CHARLES	MO 370 E	5.546	25	1	1		1
ST. CHARLES	MO 370 W	8.455	25	1	1		1
ST. CHARLES	RT K N	5.669	25	1	1		1
ST. CHARLES	RT K N	5.706	25	1	1		1
ST. CHARLES	RT N E	18.504	25	1	1		1
ST. CHARLES	RT N E	18.596	25	1	1		1
ST. CHARLES	RT N E	15.962	25	1	1		1
ST. CHARLES	RT N W	1.93	25	1	1		1
ST. CHARLES	RT N W	2.021	25	1	1		1
ST. CHARLES	RT N W	4.568	25	1	1		1
ST. CHARLES	RT N W	4.623	25	1	1		1
ST. CHARLES	RT N W	8.884	25	1	1		1
ST. CHARLES	RP RT N TO MO 94 E E	0.26	25	1	1		1
ST. CHARLES	RT P E	3.52	25	1	1		1
ST. CHARLES	RT P E	3.544	25	1	1		1
ST. CHARLES	RT P E	6.676	25	1	1		1
ST. CHARLES	RT P W	3.596	25	1	1		1
ST. CHARLES	RT P W	6.696	25	1	1		1
ST. CHARLES	RT P W	6.721	25	1	1		1
ST. CHARLES	RT Z S	0.506	25	1	1		1
ST. CHARLES	CST HARVESTER RD N	0.383	25	1	1		1
ST. CHARLES	CST MEL WETTER PKWY N	0.787	25	1	1		1
ST. CHARLES	CST MEL WETTER PKWY S	0.152	25	1	1		1
ST. CHARLES	CST MID RIVERS MALL DR N	4.571	25	1	1		1
ST. CHARLES	CST MID RIVERS MALL DR S	5.1	25	1	1		1
ST. CHARLES	RP PROSPECT RD TO IS 64 W W	0.028	25	1	1		1
ST. CHARLES	CST SALT RIVER RD W	0.809	25	1	1		1
ST. CHARLES	CST WENTZVILLE PKWY E	2.644	25	1	1		1
ST. CHARLES	CST WENTZVILLE PKWY W	0.187	25	1	1		1
ST. CHARLES	CST WENTZVILLE PKWY W	2.613	25	1	1		1
ST. CHARLES	RP LAKESIDE PARK DR TO MO 370 E E	0.131	25	1	1		1
ST. CHARLES	RP MO 370W TO LAKESIDE PARK DR N	0.096	25	1	1		1
ST. CHARLES	RP MUGGE RD TO MO 364 E E	0.169	25	1	1		1

LOCATIONS AND ESTIMATED QUANTITIES							
LOCATION	ROUTE	LOG MILE	REMOVALS OF IMPROVEMENTS		CWET INSTALLATION, GRADING & MOBILIZATION	MGS GUARDRAIL	MGS HEIGHT AND BLOCK TRANSITION
			GUARDRAIL LF	CWET EA	EA	LF	EA
ST. LOUIS	CST CHURCH RD W	0.325	25	1	1		1
ST. LOUIS	MO 109 N	3.602	25	1	1		1
ST. LOUIS	MO 109 N	12.298	25	1	1		1
ST. LOUIS	MO 109 N	12.332	25	1	1		1
ST. LOUIS	MO 109 S	0.791	25	1	1		1
ST. LOUIS	MO 109 S	0.827	25	1	1		1
ST. LOUIS	MO 109 S	8.377	25	1	1		1
ST. LOUIS	MO 141 N	20.4	25	1	1		1
ST. LOUIS	MO 141 N	20.741	25	1	1		1
ST. LOUIS	MO 141 N	21.548	25	1	1		1
ST. LOUIS	MO 141 N	23514	25	1	1		1
ST. LOUIS	MO 141 S	8.087	25	1	1		1
ST. LOUIS	MO 141 S	9.2	25	1	1		1
ST. LOUIS	MO 141 S	10.594	25	1	1		1

ST. LOUIS	RP MO 141 N TO MO 340 W W	0.136	25	1	1		1
ST. LOUIS	RP MO 141 N TO MO 340 W W	0.14	25	1	1		1
ST. LOUIS	RP MO 141 S TO MO 340 W W	0.119	25	1	1		1
ST. LOUIS	RP MO 141 S TO MO 340 W W	0.127	25	1	1		1
ST. LOUIS	RP MO 141 N TO IS 64 E E	0.193	25	1	1		1
ST. LOUIS	RP MO 141 N TO IS 64 W W	0.241	25	1	1		1
ST. LOUIS	RP MO 141 N TO RT AB W W	0.071	25	1	1		1
ST. LOUIS	RP MO 231 N TO IS 255 N N	0.202	25	1	1		1
ST. LOUIS	MO 340 E	4.559	25	1	1		1
ST. LOUIS	RP MO 364 E TO IS 270 E E	0.083	25	1	1		1
ST. LOUIS	MO 367 S	0.32	25	1	1		1
ST. LOUIS	MO 367 S	0.675	25	1	1		1
ST. LOUIS	MO 367 S	1.339	25	1	1		1
ST. LOUIS	EOE 367 N	1.098	25	1	1		1
ST. LOUIS	EOE 367 N	1.489	25	1	1		1
ST. LOUIS	EOR 367 S	0.258	25	1	1		1
ST. LOUIS	EOR 367 S	0.947	25	1	1		1
ST. LOUIS	EOR 367 S	1.648	25	1	1		1
ST. LOUIS	EOR 367 S	1.956	25	1	1		1
ST. LOUIS	EOR 367 S	2.15	25	1	1		1
ST. LOUIS	RP EOR 367 TO MO 367 N	0.069	25	1	1		1
ST. LOUIS	RP MO 367 N TO NOR 270 E	0.135	25	1	1		1
ST. LOUIS	MO 370 W	3.94	25	1	1		1
ST. LOUIS	US 61 S	158.352	25	1	1		1
ST. LOUIS	US 61 S	164.581	25	1	1		1
ST. LOUIS	US 61 S	164.494	25	1	1		1
ST. LOUIS	US 61 S	170.064	25	1	1		1
ST. LOUIS	US 67 N	166.5	25	1	1		1
ST. LOUIS	US 67 N	191.782	25	1	1		1
ST. LOUIS	RP US 67 S TO IS 64 E E	0.111	25	1	1		1
ST. LOUIS	RP US 67 S TO IS 64 E E	0.24	25	1	1		1
ST. LOUIS	IS 64 E	22.483	25	1	1		1
ST. LOUIS	IS 64 E	27.627	25	1	1		1
ST. LOUIS	IS 64 E	30.084	25	1	1		1
ST. LOUIS	IS 64 E	30.973	25	1	1		1
ST. LOUIS	IS 64 W	12.126	25	1	1		1
ST. LOUIS	NOR 64 E	0.013	25	1	1		1
ST. LOUIS	NOR 64 E	0.12	25	1	1		1
ST. LOUIS	NOR 64 E	0.864	25	1	1		1
ST. LOUIS	NOR 64 E	3.338	25	1	1		1
ST. LOUIS	NOR 64 W	0.145	25	1	1		1
ST. LOUIS	NOR 64 W	0.426	25	1	1		1
ST. LOUIS	NOR 64 W	0.488	25	1	1		1
ST. LOUIS	NOR 64 W	0.588	25	1	1		1
ST. LOUIS	SOR 64 E	0.416	25	1	1		1
ST. LOUIS	SOR 64 E	0.758	25	1	1		1
ST. LOUIS	SOR 64 E	1.453	25	1	1		1
ST. LOUIS	SOR 64 E	1.453	25	1	1		1
ST. LOUIS	SOR 64 W	0.209	25	1	1		1
ST. LOUIS	RP IS 64 E TO MO 141 S S	0.024	25	1	1		1
ST. LOUIS	RP IS 64 E TO IS 170 W W	0.09	25	1	1		1
ST. LOUIS	RP IS 64 E TO IS 170 W W	0.304	25	1	1		1
ST. LOUIS	RP IS 64 W TO BOONES CROSSING RD N	0.111	25	1	1		1
ST. LOUIS	RP IS 64 W TO MC KNIGHT RD N	0.254	25	1	1		1
ST. LOUIS	RP IS 64 W TO US 67 N N	0.279	25	1	1		1
ST. LOUIS	RP IS 64 W TO MO 141 N N	0.346	25	1	1		1
ST. LOUIS	RP IS 64 W TO MO 141 N N	0.349	25	1	1		1
ST. LOUIS	IS 170 E	7.675	25	1	1		1
ST. LOUIS	IS 170 E	11.02	25	1	1		1

ST. LOUIS	IS 170 W	0.739	25	1	1		1
ST. LOUIS	IS 170 W	2.591	25	1	1		1
ST. LOUIS	IS 170 W	3.632	25	1	1		1
ST. LOUIS	RP IS 170 E TO MO 340 W W	0.152	25	1	1		1
ST. LOUIS	RP IS 170 W TO MO 340 E E	0.136	25	1	1		1
ST. LOUIS	EOR 255 N	0.068	25	1	1		1
ST. LOUIS	EOR 255 N	0.13	25	1	1		1
ST. LOUIS	WOR 255 N	0.576	25	1	1		1
ST. LOUIS	WOR 255 N	0.606	25	1	1		1
ST. LOUIS	WOR 255 N	1.294	25	1	1		1
ST. LOUIS	WOR 255 N	1.557	25	1	1		1
ST. LOUIS	WOR 255 S	0.61	25	1	1		1
ST. LOUIS	WOR 255 S	1.28	25	1	1		1
ST. LOUIS	NOR 270 E	1.195	25	1	1		1
ST. LOUIS	RP IS 270 E TO RT D E E	0.213	25	1	1		1
ST. LOUIS	RP IS 270 W TO MO 364 W W	0.223	25	1	1		1
ST. LOUIS	RP IS 270 W TO IS 55 N N	1.275	25	1	1		1
ST. LOUIS	CRD BARRETT PARKWAY DR E	0.042	25	1	1		1
ST. LOUIS	CRD BIG BEND RD W	3.259	25	1	1		1
ST. LOUIS	RP BIG BEND BLVD TO IS 64 E E	0.065	25	1	1		1
ST. LOUIS	CRD JJ KELLY MEMORIAL DR N	0.34	25	1	1		1
ST. LOUIS	CRD JJ KELLY MEMORIAL DR S	0.096	25	1	1		1
ST. LOUIS	CRD KRATKY RD S	0.09	25	1	1		1
ST. LOUIS	CRD KRATKY RD S	0.115	25	1	1		1
ST. LOUIS	CRD KRATKY RD S	0.168	25	1	1		1
ST. LOUIS	CRD KRATKY RD S	0.27	25	1	1		1
ST. LOUIS	CRD KRATKY RD S	0.332	25	1	1		1
ST. LOUIS	CRD KOCH RD N	0.237	25	1	1		1
ST. LOUIS	CRD LEWIS RD N	0.01	25	1	1		1
ST. LOUIS	CRD MATTIS RD E	1.836	25	1	1		1
ST. LOUIS	CRD NEW JAMESTOWN RD N	0.172	25	1	1		1
ST. LOUIS	CRD NEW JAMESTOWN RD N	0.19	25	1	1		1
ST. LOUIS	CRD OLD MANCHESTER RD E	1.185	25	1	1		1
ST. LOUIS	CRD OLD MANCHESTER RD E	1.253	25	1	1		1
ST. LOUIS	CRD OLD MANCHESTER RD W	0.64	25	1	1		1
ST. LOUIS	CRD OLD MANCHESTER RD W	0.664	25	1	1		1
ST. LOUIS	CRD SAPPINGTON RD S	3.862	25	1	1		1
ST. LOUIS	CST BELLEVUE AVE N	1.002	25	1	1		1
ST. LOUIS	CST BROWN RD W	0.303	25	1	1		1
ST. LOUIS	CST BROWN RD W	0.37	25	1	1		1
ST. LOUIS	CST CHESTERFIELD PKWY EAST S	0.423	25	1	1		1
ST. LOUIS	CST DOUGHERTY FERRY RD W	2.01	25	1	1		1

LOCATIONS AND ESTIMATED QUANTITIES

LOCATION	ROUTE	LOG MILE	REMOVALS OF IMPROVEMENTS		CWET INSTALLATION, GRADING & MOBILIZATION	MGS GUARDRAIL	MGS HEIGHT AND BLOCK TRANSITION
			GUARDRAIL LF	CWET EA	EA	LF	EA
ST. LOUIS CITY	IS 44 E	287.522	25	1	1		1
ST. LOUIS CITY	SOR 44 E	0	25	1	1		1
ST. LOUIS CITY	IS 64 E	0.068	25	1	1		1
ST. LOUIS CITY	IS 64 E	36.015	25	1	1		1
ST. LOUIS CITY	IS 64 W	4.618	25	1	1		1
ST. LOUIS CITY	IS 64 W	6.746	25	1	1		1

ST. LOUIS CITY	SOR 64 E	0.216	25	1	1		1
ST. LOUIS CITY	SOR 64 W	0.021	25	1	1		1
ST. LOUIS CITY	RP IS 64 E TO MCCAUSLAND AVE S S	0.116	25	1	1		1
ST. LOUIS CITY	RP IS 64 E TO HAMPTON CONCOURSE N	0.193	25	1	1		1
ST. LOUIS CITY	RP IS 64 E TO HAMPTON CONCOURSE N	0.194	25	1	1		1
ST. LOUIS CITY	RV 70 E	5.775	25	1	1		1
ST. LOUIS CITY	CST CLAYTON AVE E	0.179	25	1	1		1
ST. LOUIS CITY	CST CLAYTON AVE W	0.99	25	1	1		1
ST. LOUIS CITY	CST GERMANIA AVE E	1.61	25	1	1		1
ST. LOUIS CITY	CST LAFAYETTE AVE E	1.952	25	1	1		1
ST. LOUIS CITY	CST LAFAYETTE AVE W	0.497	25	1	1		1
ST. LOUIS CITY	CST 11TH ST S	0.643	25	1	1		1
ST. LOUIS CITY	RP HAMPTON CONCOURSE S TO IS 64 E	0.183	25	1	1		1
ST. LOUIS CITY	RP KINGSHIGHWAY BLVD N TO IS 64 E	0.107	25	1	1		1
ST. LOUIS CITY	RP KINGSHIGHWAY BLVD N TO IS 64 W	0.173	25	1	1		1
ST. LOUIS CITY	RP MCCAUSLAN AVE TO IS 64 W W	0.022	25	1	1		1
ST. LOUIS CITY	RP PAPIN ST W TO IS 64 E E	0.033	25	1	1		1
ST. LOUIS CITY	RP SKINNKER BLVD TO IS 64 E E	0.129	25	1	1		1
ST. LOUIS CITY	RP TUCKER BLVD TO IS 70 E E	0.189	25	1	1		1
ST. LOUIS CITY	RP TUCKER BLVD TO IS 70 E E	0.198	25	1	1		1

LOCATIONS AND ESTIMATED QUANTITIES							
LOCATION	**ROUTE**	**LOG MILE**	**REMOVALS OF IMPROVEMENTS**		**CWET INSTALLATION, GRADING & MOBILIZATION**	**MGS GUARDRAIL**	**MGS HEIGHT AND BLOCK TRANSITION**
			GUARDRAIL	**CWET**			
			LF	**EA**	**EA**	**LF**	**EA**
VARIOUS	TO BE DETERMINED BY THE ENGINEER					5000	