



CALL NO. 200

CONTRACT ID. 191216

ROCKCASTLE - LAUREL COUNTIES

FED/STATE PROJECT NUMBER 121GR19D016 - NHPP IM

DESCRIPTION I-75 (LAUREL & ROCKCASTLE COUNTIES)

WORK TYPE ASPHALT REHAB INTERSTATE/PARKWAY

PRIMARY COMPLETION DATE 10/1/2019

LETTING DATE: May 24, 2019

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME May 24, 2019. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

DBE CERTIFICATION REQUIRED - 9%

REQUIRED BID PROPOSAL GUARANTY: Not less than 5% of the total bid.

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PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 11

CONTRACT ID - 191216
121GR19D016 - NHPP IM
COUNTY - LAUREL
PCN - DE06300751916
NHPP IM 0752 (101)

I-75 (LAUREL COUNTY) (MP 50.200) ADDRESS PAVEMENT CONDITION OF I-75 (LAUREL COUNTY) IN BOTH DIRECTIONS (MP 50.705), A DISTANCE OF 0.51 MILES.ASPHALT REHAB INTERSTATE/PARKWAY SYP NO. 11-20013.00.
GEOGRAPHIC COORDINATES LATITUDE 37:14:12.00 LONGITUDE 84:13:59.00

COUNTY - ROCKCASTLE
PCN - DE10200751917
NHPP IM 0753 (102)

I-75 (ROCKCASTLE COUNTY) (MP 50.800) ADDRESS PAVEMENT CONDITION OF I-75 (ROCKCASTLE COUNTY) IN BOTH DIRECTIONS (MP 55.300), A DISTANCE OF 04.50 MILES.ASPHALT REHAB INTERSTATE/PARKWAY SYP NO. 08-20003.00.
GEOGRAPHIC COORDINATES LATITUDE 37:16:40.00 LONGITUDE 84:15:19.00

COMPLETION DATE(S):
COMPLETED BY 10/01/2019 APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

All addenda to this proposal must be applied when calculating bid and certified in the bid packet submitted to the Kentucky Department of Highways. Failure to use the correct and most recent addenda may result in the bid being rejected.

BID SUBMITTAL

Bidder must use the Department's electronic bidding software. The Bidder must download the bid file located on the Bid Express website (www.bidx.com) to prepare a bid packet for submission to the Department. The bidder must submit electronically using Bid Express.

JOINT VENTURE BIDDING

Joint venture bidding is permissible. All companies in the joint venture must be prequalified in one of the work types in the Qualifications for Bidders for the project. The bidders must get a vendor ID for the joint venture from the Division of Construction Procurement and register the joint venture as a bidder on the project. Also, the joint venture must obtain a digital ID from Bid Express to submit a bid. A joint bid bond of 5% may be submitted for both companies or each company may submit a separate bond of 5%.

UNDERGROUND FACILITY DAMAGE PROTECTION

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. When prescribed in said directives, the contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom shall be contacted through their individual Protection Notification Center. Non-compliance with these directives can result in the enforcement of penalties.

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

Pursuant to KRS 176.085(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by [KRS 14A.9-010](#) to obtain a certificate of authority to transact business in the Commonwealth ("certificate") from the Secretary of State under [KRS 14A.9-030](#) unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. If the foreign entity is not required to obtain a certificate as provided in [KRS 14A.9-010](#), the foreign entity should identify the applicable exception. Foreign entity is defined within [KRS 14A.1-070](#).

For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.

Businesses can register with the Secretary of State at <https://secure.kentucky.gov/sos/ftbr/welcome.aspx>.

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

Questions about projects during the advertisement should be submitted in writing to the Division of Construction Procurement. This may be done by fax (502) 564-7299 or email to kytc.projectquestions@ky.gov. The Department will attempt to answer all submitted questions. The Department reserves the right not to answer if the question is not pertinent or does not aid in clarifying the project intent.

The deadline for posting answers will be 3:00 pm Eastern Daylight Time, the day preceding the Letting. Questions may be submitted until this deadline with the understanding that the later a question is submitted, the less likely an answer will be able to be provided.

The questions and answers will be posted for each Letting under the heading "Questions & Answers" on the Construction Procurement website (www.transportation.ky.gov/contract). The answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

HARDWOOD REMOVAL RESTRICTIONS

The US Department of Agriculture has imposed a quarantine in Kentucky and several surrounding states, to prevent the spread of an invasive insect, the emerald ash borer. Hardwood cut in conjunction with the project may not be removed from the state. Chipping or burning on site is the preferred method of disposal.

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

Identification of excess material sites and borrow sites shall be the responsibility of the Contractor. The Contractor shall be responsible for compliance with all applicable state and federal laws and may wish to consult with the US Fish and Wildlife Service to seek protection under Section 10 of the Endangered Species Act for these activities.

ACCESS TO RECORDS

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially

disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004.

April 30, 2018

FEDERAL CONTRACT NOTES

The Kentucky Department of Highways, in accordance with the Regulations of the United States Department of Transportation 23 CFR 635.112 (h), hereby notifies all bidders that failure by a bidder to comply with all applicable sections of the current Kentucky Standard Specifications, including, but not limited to the following, may result in a bid not being considered responsive and thus not eligible to be considered for award:

102.02 Current Capacity Rating 102.10 Delivery of Proposals
102.8 Irregular Proposals 102.14 Disqualification of Bidders
102.9 Proposal Guaranty

CIVIL RIGHTS ACT OF 1964

The Kentucky Department of Highways, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Federal Department of Transportation (49 C.F.R., Part 21), issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin.

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071.

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SECOND TIER SUBCONTRACTS

Second Tier subcontracts on federally assisted projects shall be permitted. However, in the case of DBE's, second tier subcontracts will only be permitted where the other subcontractor is also a DBE. All second tier subcontracts shall have the consent of both the Contractor and the Engineer.

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

It is the policy of the Kentucky Transportation Cabinet (“the Cabinet”) that Disadvantaged Business Enterprises (“DBE”) shall have the opportunity to participate in the performance of highway construction projects financed in whole or in part by Federal Funds in order to create a level playing field for all businesses who wish to contract with the Cabinet. To that end, the Cabinet will comply with the regulations found in 49 CFR Part 26, and the definitions and requirements contained therein shall be adopted as if set out verbatim herein.

The Cabinet, contractors, subcontractors, and sub-recipients shall not discriminate on the basis of race, color, national origin, or sex in the performance of work performed pursuant to Cabinet contracts. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted highway construction projects. The contractor will include this provision in all its subcontracts and supply agreements pertaining to contracts with the Cabinet.

Failure by the contractor to carry out these requirements is a material breach of its contract with the Cabinet, which may result in the termination of the contract or such other remedy as the Cabinet deems necessary.

DBE GOAL

The Disadvantaged Business Enterprise (DBE) goal established for this contract, as listed on the front page of the proposal, is the percentage of the total value of the contract.

The contractor shall exercise all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises participate in a least the percent of the contract as set forth above as goals for this contract.

OBLIGATION OF CONTRACTORS

Each contractor prequalified to perform work on Cabinet projects shall designate and make known to the Cabinet a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs.

If a formal goal has not been designated for the contract, all contractors are encouraged to consider DBEs for subcontract work as well as for the supply of material and services needed to perform this work.

Contractors are encouraged to use the services of banks owned and controlled by minorities and women.

CERTIFICATION OF CONTRACT GOAL

Contractors shall include the following certification in bids for projects for which a DBE goal has been established. BIDS SUBMITTED WHICH DO NOT INCLUDE CERTIFICATION OF DBE PARTICIPATION WILL NOT BE ACCEPTED. These bids will not be considered for award by the Cabinet and they will be returned to the bidder.

“The bidder certifies that it has secured participation by Disadvantaged Business Enterprises (“DBE”) in the amount of _____ percent of the total value of this contract and that the DBE participation is in compliance with the requirements of 49 CFR 26 and the policies of the Kentucky Transportation Cabinet pertaining to the DBE Program.”

The certification statement is located in the electronic bid file. All contractors must certify their DBE participation on that page. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted.

DBE PARTICIPATION PLAN

Lowest responsive bidders must submit the *DBE Plan/ Subcontractor Request*, form TC 14-35 DBE, within **5** days of the letting. This is necessary before the Awards Committee will review and make a recommendation. **The project will not be considered for award prior to submission and approval of the apparent low bidder’s DBE Plan/Subcontractor Request.**

The DBE Participation Plan shall include the following:

- 1 Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
- 2 Description of the work each is to perform including the work item , unit, quantity, unit price and total amount of the work to be performed by the individual DBE. The Project Code Number (PCN), Category Number, and the Project Line Number can be found in the “material listing” on the Construction Procurement website under the specific letting;
- 3 The dollar value of each proposed DBE subcontract and the percentage of total project contract value this represents. DBE participation may be counted as follows; a) If DBE suppliers and manufactures assume actual and contractual responsibility, the dollar value of materials to be furnished will be counted toward the goal as follows:
 - The entire expenditure paid to a DBE manufacturer;
 - 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to the public, maintain an inventory and own and operate distribution equipment; and
 - The amount of fees or commissions charged by the DBE firms for a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.

- b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;
 - c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;
- 4 Written and signed documentation of the bidder's commitment to use a DBE contractor whose participation is being utilized to meet the DBE goal; and
- 5 Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment.

UPON AWARD AND BEFORE A WORK ORDER WILL BE ISSUED

Contractors must submit the signed subcontract between the contractor and the DBE contractor, the DBE's certificate of insurance, and an affidavit for bidders, offerors, and contractors from the DBE to the Division of Construction Procurement. The affidavit can be found on the Construction Procurement website. If the DBE is a supplier of materials for the project, a signed purchase order and an affidavit for bidders, offerors, and contractors must be submitted to the Division of Construction Procurement.

Changes to DBE Participation Plans must be approved by the Cabinet. The Cabinet may consider extenuating circumstances including, but not limited to, changes in the nature or scope of the project, the inability or unwillingness of a DBE to perform the work in accordance with the bid, and/or other circumstances beyond the control of the prime contractor.

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

If the DBE participation submitted in the bid by the apparent lowest responsive bidder does not meet or exceed the DBE contract goal, the apparent lowest responsive bidder must submit a Good Faith Effort Package to satisfy the Cabinet that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set and nine (9) copies of this information must be received in the office of the Division of Contract Procurement no later than 12:00 noon of the tenth calendar day after receipt of notification that they are the apparent low bidder.

Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a sample representative letter along with a distribution list of the firms solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the Cabinet considers in judging good faith efforts. This documentation may include written subcontractors' quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

The Good Faith Effort Package shall include, but may not be limited to information showing evidence of the following:

- 1 Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
- 2 Whether the bidder provided solicitations through all reasonable and available means;
- 3 Whether the bidder provided written notice to all DBEs listed in the DBE directory at the time of the letting who are prequalified in the areas of work that the bidder will be subcontracting;
- 4 Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the DBE Liaison in the Office of Minority Affairs to give notification of the bidder's inability to get DBE quotes;
- 5 Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise perform these work items with its own forces;
- 6 Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
- 7 Whether the bidder negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached;
- 8 Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm's quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;
- 9 Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;
- 10 Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal; and
- 11 Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

Where the apparent lowest responsive bidder fails to submit sufficient participation by DBE firms to meet the contract goal and upon a determination by the Good Faith Committee based upon the information submitted that the apparent lowest responsive bidder failed to make sufficient reasonable efforts to meet the contract goal, the bidder will be offered the opportunity to meet in person for administrative reconsideration. The bidder will be notified of the Committee's decision within 24 hours of its decision. The bidder will have 24 hours to request reconsideration of the Committee's decision. The reconsideration meeting will be held within two days of the receipt of a request by the bidder for reconsideration.

The request for reconsideration will be heard by the Office of the Secretary. The bidder will have the opportunity to present written documentation or argument concerning the issue of whether it met the goal or made an adequate good faith effort. The bidder will receive a written decision on the reconsideration explaining the basis for the finding that the bidder did or did not meet the goal or made adequate Good Faith efforts to do so.

The result of the reconsideration process is not administratively appealable to the Cabinet or to the United States Department of Transportation.

The Cabinet reserves the right to award the contract to the next lowest responsive bidder or to rebid the contract in the event that the contract is not awarded to the low bidder as the result of a failure to meet the good faith requirement.

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

Failure by the prime contractor to fulfill the DBE requirements of a project under contract or to demonstrate good faith efforts to meet the goal constitutes a breach of contract. When this occurs, the Cabinet will hold the prime contractor accountable, as would be the case with all other contract provisions. Therefore, the contractor's failure to carry out the DBE contract requirements shall constitute a breach of contract and as such the Cabinet reserves the right to exercise all administrative remedies at its disposal including, but not limited to the following:

- Disallow credit toward the DBE goal;
- Withholding progress payments;
- Withholding payment to the prime in an amount equal to the unmet portion of the contract goal; and/or
- Termination of the contract.

PROMPT PAYMENT

The prime contractor will be required to pay the DBE within seven (7) working days after he or she has received payment from the Kentucky Transportation Cabinet for work performed or materials furnished.

CONTRACTOR REPORTING

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to complete and submit a signed and notarized affidavit (TC 18-7) and copies of checks for any monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal. **These documents must be submitted within 10 days of being paid by the Cabinet.**

Payment information that needs to be reported includes date the payment is sent to the DBE, check number, Contract ID, amount of payment and the check date. Before Final Payment is made on this contract, the Prime Contractor will certify that all payments were made to the DBE subcontractor and/or DBE suppliers.

The Prime Contractor should supply the payment information at the time the DBE is compensated for their work. Form to use is located at:

<http://transportation.ky.gov/Construction/Pages/Subcontracts.aspx>

The prime contractor should notify the KYTC Office of Civil Rights and Small Business Development seven (7) days prior to DBE contractors commencing work on the project. The contact is Melvin Byne and the telephone number is (502) 564-3601.

Photocopied payments and completed, signed and notarized affidavit must be submitted by the Prime Contractor to: Office of Civil Rights and Small Business Development
6th Floor West 200 Mero Street
Frankfort, KY 40622

DEFAULT OR DECERTIFICATION OF THE DBE

If the DBE subcontractor or supplier is decertified or defaults in the performance of its work, and the overall goal cannot be credited for the uncompleted work, the prime contractor may utilize a substitute DBE or elect to fulfill the DBE goal with another DBE on a different work item. If after exerting good faith effort in accordance with the Cabinet's Good Faith Effort policies and procedures, the prime contractor is unable to replace the DBE, then the unmet portion of the goal may be waived at the discretion of the Cabinet.

1/27/2017

**LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – CARGO
PREFERENCE ACT (CPA).**

(REV 12-17-15) (1-16)

SECTION 7 is expanded by the following new Article:

102.10 Cargo Preference Act – Use of United States-flag vessels.

Pursuant to Title 46CFR Part 381, the Contractor agrees

- To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
- To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph 1 of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
- To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

EXPEDITE PROJECT WORK ORDER

The Contractor may request that the Department expedite the work order for this project to allow for maximization of time to complete the work. In order for the Department to accomplish this task, the Contractor may be required to “hand carry” all required project documentation to facilitate the process. Immediately UPON NOTIFICATION OF AWARD OF THE CONTRACT, deliver required project documentation to:

Division of Construction Procurement
200 Mero St.
Frankfort, KY 40602

ASPHALT MIXTURE

Unless otherwise noted, the Department estimates the rate of application for all asphalt mixtures to be 110 lbs/sy per inch of depth.

DGA BASE

Unless otherwise noted, the Department estimates the rate of application for DGA Base to be 115 lbs/sy per inch of depth.

DGA BASE FOR SHOULDERS

Unless otherwise noted, the Department estimates the rate of application for DGA Base for Shoulders to be 115 lbs/sy per inch of depth. The Department will not measure necessary grading and/or shaping of existing shoulders prior to placing of DGA Base, but shall be incidental to the Contract unit price per ton for DGA Base.

Accept payment at the Contract unit price per ton as full compensation for all labor, materials, equipment, and incidentals for grading and/or shaping of existing shoulders and furnishing, placing, and compacting the DGA Base.

INCIDENTAL SURFACING

The Department has included in the quantities of asphalt mixtures established in the proposal estimated quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, curve widening, ramp gores and tapers, and road and street approaches, as applicable. Pave these areas to the limits as shown on Standard Drawing RPM-110-06 or as directed by the Engineer. In the event signal detectors are present in the intersecting streets or roads, pave the crossroads to the right of way limit or back of the signal detector, whichever is the farthest back of the mainline. Surface or resurface these areas as directed by the Engineer. The Department will not measure placing and compacting for separate payment but shall be incidental to the Contract unit price for the asphalt mixtures.

FUEL AND ASPHALT PAY ADJUSTMENT

The Department has included the Contract items Asphalt Adjustment and Fuel Adjustment for possible future payments at an established Contract unit price of \$1.00. The Department will calculate actual adjustment quantities after work is completed. If existing Contract amount is insufficient to pay all items on the contract with the adjustments, the Department will establish additional monies with a change order.

OPTION A

Be advised that the Department will accept compaction of asphalt mixtures furnished for driving lanes and ramps, at 1 inch (25mm) or greater, on this project according to OPTION A in accordance with Section 402 and Section 403 of the current Standard Specifications. The Department will require joint cores as described in Section 402.03.02 for surface mixtures only. The Department will accept compaction of all other asphalt mixtures according to OPTION B.

Commonwealth of Kentucky

DEPARTMENT OF HIGHWAYS

I-75

ASPHALT PAVEMENT AND ROADWAY REHABILITATION

LAUREL COUNTY - MP 50.200 TO MP 50.705
ITEM NO. 11-20013.00

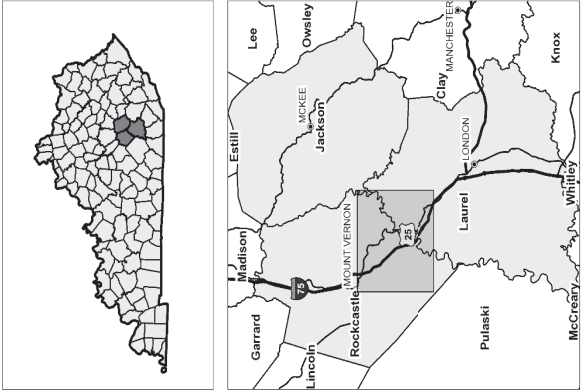
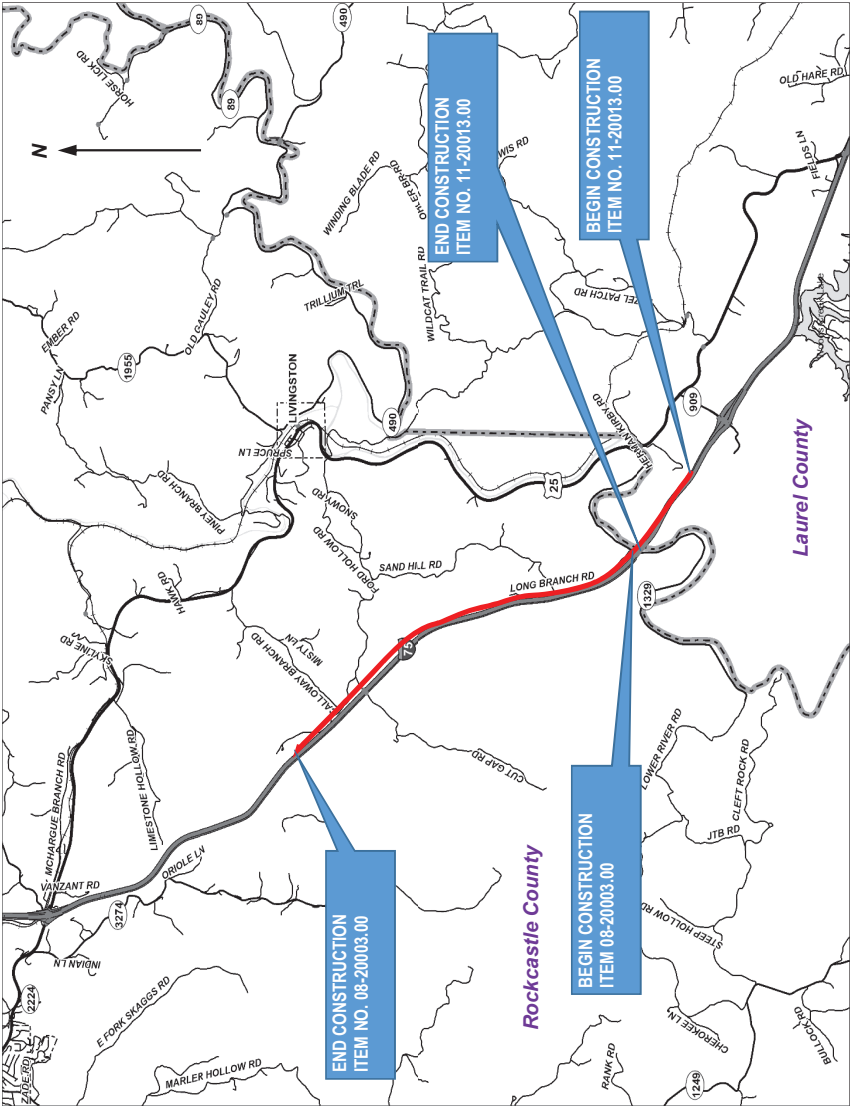
ROCKCASTLE COUNTY - MP 50.800 TO MP 55.300
ITEM NO. 08-20003.00

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Prepared By:
WSP USA INC.
1792 ALYSHEBA WAY
LEXINGTON, KY 40509
859-272-5400

April 5, 2019



THIS PROJECT IS A FULLY
CONTROLLED ACCESS HIGHWAY

COUNTY(S) ROCKCASTLE AND LAUREL

ITEM NO(S) 08-20003.00 AND 11-20013.00

PROJECT NO(S). NHPPIM 00753 (102) FD52 102 0075 052-056 NHPPIM 00752 (101) FD52 063 0075 050-051

LETTING DATE: May 24, 2019

RECOMMENDED BY: KYTC Project Manager

DATE:

PLAN APPROVED BY: State Highway Engineer

DATE:

FHWA APPROVED BY:

DATE:

STANDARD DRAWINGS
I-75 - LAUREL AND ROCKCASTLE
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APPLICABLE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD DRAWINGS - CURRENT EDITIONS:

RBC-002	GUARDRAIL CONNECTOR TO BRIDGE END TYPE A COMPONENTS
RBM-020	DELINEATORS FOR CONCRETE BARRIERS
RDD-040	CHANNEL LINING CLASS II AND III
RDI-035	COATINGS, LININGS AND PAVINGS FOR NON-STRUCTURAL PLATE PIPE
RDI-040	EROSION CONTROL BLANKET SLOPE INSTALLATION
RDI-041	EROSION CONTROL BLANKET CHANNEL INSTALLATION
RDP-001	PERFORATED PIPE TYPES AND COVER HEIGHTS
RDP-005	PERF. PIPE FOR SUBGRADE DRAINAGE ON TWO-LANE AND MULTILANE ROADS
RDP-006	PERFORATED PIPE UNDERDRAINS (LONGITUDINAL AND TRANSVERSE)
RDP-010	PERFORATED PIPE HEADWALLS
TPM-100	PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS
TPM-170	FLEXIBLE DELINEATOR POST ARRANGEMENTS FOR HORIZONTAL CURVES
TTC-115	LANE CLOSURE MULTI-LANE HIGHWAY CASE I
TTC-120	LANE CLOSURE MULTI-LANE HIGHWAY CASE II
TTC-135	SHOULDER CLOSURE
TTC-160	TEMPORARY PAVEMENT MARKERS FOR LANE CLOSURE
TTD-120	DOUBLE FINES ZONE SIGNS
TTS-115	MOBILE OPERATION FOR PAINT STRIPING CASE IV
BHS-008	RAIL SYSTEM TYPE 3

APPLICABLE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD DRAWING SEPIAS (ATTACHED):

005	SHOULDER AND EDGELINE RUMBLE STRIP DETAILS
008	RUMBLE STRIP DETAILS MULTI-LANE ROADWAYS AND RAMPS
013	GUARDRAIL CONNECTOR TO BRIDGE END TYPE A AND A-1 COMPONENTS
015	GUARDRAIL CONNECTOR TO BRIDGE END TYPE A
016	GUARDRAIL CONNECTOR TO BRIDGE END TYPE A-1
024	TYPICAL GUARDRAIL INSTALLATIONS
025	INSTALLATION OF GAURDRAIL END TREATMENT TYPE 1
027	STEEL BEAM GUARDRAIL "W" BEAM
028	STEEL GUARDRAIL POSTS
029	GUARDRAIL END TREATMENT TYPE 1
030	GUARDRAIL END TREATMENT TYPE 4A
032	DELINEATORS FOR GUARDRAIL
033	GUARDRAIL SYSTEM TRANSITION
038	GUARDRAIL END TREATMENT TYPE 2A

REFERENCES
I-75 - LAUREL AND ROCKCASTLE
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- 1. KENTUCKY TRANSPORTATION CABINET, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

- 2. FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) - CURRENT EDITION WITH REVISIONS.

- 3. APPLICABLE KENTUCKY DEPARTMENT OF HIGHWAYS SUPPLEMENT SPECIFICATIONS (ATTACHED):
 - SPCL. NOTE PORTABLE CHANGEABLE MESSAGE SIGNS
 - SPCL. NOTE ASPHALT MILLING AND TEXTURING
 - SPCL. NOTE TYPICAL SECTION DIMENSIONS
 - SPCL. NOTE BEFORE YOU DIG
 - SPCL. NOTE GUARDRAIL DELIVERY VERIFICATION SHEET
 - SPCL. NOTE FIXED COMPLETION DATE AND LIQUIDATED DAMAGES
 - SPCL. NOTE INLAID PAVEMENT MARKERS
 - SPCL. NOTE PAVER MOUNTED TEMPERATURE PROFILES
 - SPCL. NOTE INTELLIGENT COMPACTION OF ASPHALT MIXTURES
 - SPCL. NOTE BARCODE LABEL ON PERMANENT SIGNS
 - SPCL. NOTE GEOGRID REINFORCEMENT FOR ASPHALT PAVEMENTS
 - SPCL. NOTE LONGITUDINAL PAVEMENT JOINT ADHESIVE
 - SPCL. NOTE SMA SURFACE
 - SPCL. NOTE GROOVED ALL WEATHER PAVEMENT MARKINGS
 - SPCL. NOTE OVERBAND CRACK SEALING

GENERAL SUMMARY						
I-75 - ROCKCASTLE AND LAUREL COUNTIES - ITEM NOS. 08-20003.00 AND 11-20013.00						
BID CODE	ITEM	UNIT	NOTE	QUANTITIES		
				ROCKCASTLE ITEM NO. 08-20003.00 MP 50.800 TO MP 55.300	LAUREL ITEM NO. 11-20013.00 MP 50.200 TO MP 50.705	TOTAL PROJECT MP 50.200 TO MP 55.300
00001	DGA	TON		759	19	778
00071	CRUSHED AGGREGATE SIZE NO 57	TON	8	44	11	55
00078	CRUSHED AGGREGATE SIZE NO 2	TON	8	14	2	16
00100	ASPHALT SEAL AGGREGATE	TON		18	1	19
00103	ASPHALT SEAL COAT	TON		2	1	3
00190	LEVELING AND WEDGING PG64-22	TON		33	8	41
00219	CL4 ASPH BASE 1.00 D PG76-22	TON	8	100	25	125
00339	CL3 ASPH SURF 0.38D PG64-22	TON		7,645	1,173	8,817
00397	CL4 SMA SURF 0.38D PG76-22	TON		12,677	1,759	70
00356	ASPHALT MATERIAL FOR TACK	TON		62	9	14,436
00464	CULVERT PIPE - 24 IN	LF	6,11	8	0	8
01000	PERFORATED PIPE - 4 IN	LF	8	1,330	205	1,535
01010	NON-PERFORATE PIPE - 4 IN	LF	8	112	16	128
01020	PERF PIPE HEADWALL TY 1 - 4 IN	EACH	8	4	0	4
01024	PERF PIPE HEADWALL TY 2 - 4 IN	EACH	8	2	0	2
01028	PERF PIPE HEADWALL TY 3 - 4 IN	EACH	8	8	2	10
01032	PERF PIPE HEADWALL TY 4 - 4 IN	EACH	8	2	0	2
01208	PIPE CULVERT HEADWALL - 24 IN	EACH		2	0	2
01740	CORED HOLE DRAINAGE BOX CON-4 IN	EACH	8	2	0	2
01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	EACH	9	131	12	143
01985	DELINEATOR FOR BARRIER - YELLOW	EACH	9	242	41	283
02014	BARRICADE - TYPE III	EACH		2	2	4
02351	GUARDRAIL - STEEL W BEAM - S FACE	LF		2,037	0	2,037
02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	EACH		0	1	1
02367	GR END TREATMENT 1	EACH		3	0	3
02369	GR END TREATMENT 2A	EACH		2	0	2
02381	REMOVE GUARDRAIL	LF		2,337	50	2,387
02387	GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	EACH		0	1	1
02391	GR END TREATMENT 4A	EACH		1	0	1
02483	CHANNEL LINING CLASS II	TON	2	450	90	540
02484	CHANNEL LINING CLASS III	TON	6	25	0	25
02562	TEMPORARY SIGNS	SF	3	1,500	1,000	2,500
02568	MOBILIZATION	LS		1	0	1
02569	DEMOBILIZATION	LS		1	1	1
02575	SHOULDER AND DITCHING	LF	9	34,148	5,332	39,480
02599	FABRIC-GEOTEXTILE TYPE IV	SY	8	686	98	784
02625	REMOVE HEADWALL	EACH	4	2	0	2
02650	MAINTAIN AND CONTROL TRAFFIC	LS		1	1	2
02671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH		2	2	4
02676	MOBILIZATION FOR MILL & TEXT	LS		1	1	2
02677	ASPHALT MILLING & TEXTURING	TON		20,321	2,932	23,253
02696	SHOULDER RUMBLE STRIPS - SAWED	LF		68,296	10,663	78,959

GENERAL SUMMARY						
I-75 - ROCKCASTLE AND LAUREL COUNTIES - ITEM NOS. 08-20003.00 AND 11-20013.00						
BID CODE	ITEM	UNIT	NOTE	QUANTITIES		
				ROCKCASTLE ITEM NO. 08-20003.00 MP 50.800 TO MP 55.300	LAUREL ITEM NO. 11-20013.00 MP 50.200 TO MP 50.705	TOTAL PROJECT MP 50.200 TO MP 55.300
02726	STAKING	LS		1	1	2
02775	ARROW PANEL	EACH		4	4	8
03240	BASE FAILURE REPAIR	SY		28	56	84
05950	EROSION CONTROL BLANKET	SY	7	12,000	2,000	14,000
06401	FLEXIBLE DELINEATOR POST - M/W	EACH	9	141	28	169
06407	SBM ALUM SHEET SIGNS .125 IN	SF	5	487	81	568
06511	PAVE STRIPING - TEMP PAINT - 6 IN	LF	3	154,000	24,000	178,000
06542	PAVE STRIPING - THERMO - 6 IN W	LF	14	33,231	7,998	41,229
06543	PAVE STRIPING - THERMO - 6 IN Y	LF	14	24,262	5,332	29,594
06549	PAVE STRIPING - TEMP REM TAPE - B	LF	3,10	2,720	1,360	4,080
06550	PAVE STRIPING - TEMP REM TAPE - W	LF	3,10	8,160	4,080	12,240
06551	PAVE STRIPING - TEMP REM TAPE - Y	LF	3,10	2,720	1,360	4,080
06556	PAVE STRIPING-DUR TY 1-6 IN W	LF	3,10	0	4,080	4,080
06557	PAVE STRIPING-DUR TY 1-6 IN Y	LF	3,10	0	1,360	1,360
10020NS	FUEL ADJUSTMENT	DOLL		31,838	7,783	39,621
10030NS	ASPHALT ADJUSTMENT	DOLL		79,967	19,548	99,515
20071EC	JOINT ADHESIVE	LF		136,591	21,325	157,916
20550ND	SAWCUT PAVEMENT	LF		704	176	880
20757ED	PAVEMENT REPAIR	SY		112	28	140
20912ND	BARRIER WALL POST	EACH		23	3	26
23071EN	OVERBAND CRACK SEALING	LB	12	11,000	0	11,000
23607EC	PAVE MARK THERMO - LANE REDUCTION ARROW	EACH		3	0	3
24489EC	INLAID PAVEMENT MARKER	EACH		1,195	134	1,329
24781EC	INTELLIGENT COMPACTION FOR ASPHALT	TON		20,321	2,932	23,253
24891EC	PAVE MOUNTED INFRARED TEMP EQUIPMENT	SF		2,216,866	319,877	2,536,742
25008EC	PAVE STRIPING - THERMO - 6 IN Y - WET REFLECT	LF	13	24,262	0	24,262
25009EC	PAVE STRIPING - THERMO - 6 IN W - WET REFLECT	LF	13	39,997	0	39,997
25019EC	GROOVE FOR STRIPING - 7 IN	LF	13	64,259	0	64,259

NOTES:

- Quantities from all other summary sheets have been carried over and included in this General Summary Sheet.
- Based on 200' of ditch in Laural County and 1000' of ditch in Rockcastle County for shouldering and ditching.
- For Maintenance of Traffic.
- Any clearing and grubbing necessary for this operation shall be incidental to this pay item.
- Existing signs beings replaced shall reuse the existing post.
- For Remove and Reset Pipe Culvert Headwall as directed by Engineer.
- Based on 2000' of ditch in Laural County and 19000' of ditch in Rockcastle County for shouldering and ditching.
- For construction of pavement subsurface drainage outlets.
- Only for areas where milling and overlaying is being done.
- For traffic tapers at ends of project.
- Removal of existing pipe is incidental to this pay item.
- For longitudinal crack sealing between MP 50.767 and MP 52.056.
- For northbound lanes in Rockcastle County, MP 50.705 to MP 55.300

SCHEDULE AND SUMMARY OF GUARDRAIL												
I-75 - ROCKCASTLE AND LAUREL COUNTIES - ITEM NOS. 08-20003.00 AND 11-20013.00												
LOCATION				ITEM								
COUNTY	DIRECTION	STATIONS	MILEPOINTS	LIN. FT.		GR END TREATMENT 1	GR END TREATMENT 2A	GR END TREATMENT 4A	GUARDRAIL CONNECTOR TO BRIDGE END TY A	GUARDRAIL CONNECTOR TO BRIDGE END TY A-1		
				REMOVE GUARDRAIL	02351							
				02381	02351	02367	02369	02391	02387	02387		
				25					1			
				25						1		
X	NB	335+62.64 TO 337+12.16	52.193 TO 52.221	150	100	1						
X	SB	371+63.93 TO 379+63.93	52.875 TO 53.026	800	750		1					
X	NB	379+59.25 TO 379+58.81	53.025 TO 53.025	300	250			1				
X	SB	396+87.76 TO 404+96.54	53.353 TO 53.506	812	712	1	1					
X	SB	474+21.52 TO 476+96.52	54.817 TO 54.869	275	225	1						
LAUREL COUNTY TOTALS:				50	0	0	0	0	1	1		
ROCKCASTLE COUNTY TOTALS:				2337	2037	3	2	1	0	0		
PROJECT TOTALS:				2387	2037	3	2	1	1	1		

- NOTES:
- 1. Quantities are carried over and included in General Summary.
 - 2. Remove Guardrail includes removal of any End Treatments.

SCHEDULE AND SUMMARY OF REPAIRS AND DRAINAGE OUTLETS								
I-75 - ROCKCASTLE AND LAUREL COUNTIES - ITEM NOS. 08-20003.00 AND 11-20013.00								
LOCATION			BASE FAILURE REPAIR (each)		PAVEMENT REPAIR (each)		DRAINAGE OUTLET (each)	
DIRECTION	STATION	MILEPOINT	ROCKCASTLE ITEM NO. 08-20003.00 MP 50.800 TO MP 55.300	LAUREL ITEM NO. 11-20013.00 MP 50.200 TO MP 50.705	ROCKCASTLE ITEM NO. 08-20003.00 MP 50.800 TO MP 55.300	LAUREL ITEM NO. 11-20013.00 MP 50.200 TO MP 50.705	ROCKCASTLE ITEM NO. 08-20003.00 MP 50.800 TO MP 55.300	LAUREL ITEM NO. 11-20013.00 MP 50.200 TO MP 50.705
NB & SB	239+40	50.370						2
NB	247+00	50.514				1		
SB	251+00	50.590				1		
NB	254+25	50.651		1				
SB	255+00	50.666		1				
NB	255+25	50.670		1				
SB	257+00	50.703		1				
NB	333+50	52.152	1					
NB & SB	336+70	52.213					2	
NB	343+00	52.332			1			
NB	352+00	52.503			1			
NB & SB	365+00	52.749					2	
SB	383+00	53.090			1			
NB & SB	386+00	53.147					2	
NB	388+00	53.184			1			
SB	392+00	53.260			1			
NB	408+00	53.563			1			
NB & SB	415+50	53.705					2	
NB	416+00	53.715			1			
SB	423+50	53.857	1					
NB & SB	437+75	54.127					2	
SB	450+00	54.359			1			
NB & SB	465+00	54.643					2	
NB & SB	496+50	55.239					2	
COUNTY TOTALS:			2	4	8	2	14	2
PROJECT TOTALS:			6		10		16	

- NOTES:
- 1. Locations and quantites of repairs are approximate. Actual locations and quantity will be determined by the Engineer.
 - 2. Repair quantities are carried over and included in General Summary.
 - 3. Quantities for Drainage Outlet on the Paving Summary and General Summary.

PAVING AREAS						
I-75 - ROCKCASTLE AND LAUREL COUNTIES - ITEM NOS. 08-20003.00 AND 11-20013.00						
BID CODE	ITEM	NOTE	DEPTH (inches)	SQUARE YARDS		
				ROCKCASTLE ITEM NO. 08-20003.00 MP 50.800 TO MP 55.300	LAUREL ITEM NO. 11-20013.00 MP 50.200 TO MP 50.705	TOTAL PROJECT MP 50.200 TO MP 55.300
00001	DGA WEDGE	1,3	9.35	1,412	34	1,446
00071	CRUSHED AGGREGATE SIZE NO 57	2	12.00	64	16	80
00100	ASPHALT SEAL AGGREGATE	3	----	911	22	933
00103	ASPHALT SEAL COAT	3	----	911	22	933
00190	LEVELING AND WEDGING PG64-22		1.25	480	120	600
00219	CL4 ASPH BASE 1.00 D PG76-22	2	3.50	304	76	380
00219	CL4 ASPH BASE 1.00 D PG76-22	2	4.25	176	44	220
00339	CL3 ASPH SURF 0.38D PG64-22		1.50	92,661	14,217	106,877
00356	ASPHALT MATERIAL FOR TACK		----	154,138	21,445	175,583
00397	CL4 SMA SURF 0.38D PG76-22		1.50	153,658	21,325	174,983
24891EC	PAVE MOUNTED INFRARED TEMP EQUIPMENT		----	246,318	35,542	281,860
24781EC	INTELLIGENT COMPACTION FOR ASPHALT		-----	153,658	21,325	174,983

- NOTES:
- 1. Depth shown is equivalent and is based on the average depth over the cross section of the pavement material.
 - 2. For construction of pavement subsurface drainage outlets.
 - 3. For any needed reconstruction of DGA wedge in areas where guardrail is removed and replaced.

PAVING SUMMARY						
I-75 - ROCKCASTLE AND LAUREL COUNTIES - ITEM NOS. 08-20003.00 AND 11-20013.00						
ITEM CODE	ITEM	NOTES	UNIT	ROCKCASTLE ITEM NO. 08-20003.00 MP 50.800 TO MP 55.300	LAUREL ITEM NO. 11-20013.00 MP 50.200 TO MP 50.705	TOTAL PROJECT MP 50.200 TO MP 55.300
00001	DGA	1,6	TON	759	19	778
00071	CRUSHED AGGREGATE SIZE NO 57	1,5	TON	44	11	55
00100	ASPHALT SEAL AGGREGATE	3,6	TON	18	1	19
00103	ASPHALT SEAL COAT	4,6	TON	2	1	3
00190	LEVELING AND WEDGING PG64-22	2,8	TON	33	8	41
00219	CL4 ASPH BASE 1.00 D PG76-22	2,5	TON	100	25	125
00339	CL3 ASPH SURF 0.38D PG64-22	2	TON	7,645	1,173	8,817
00356	ASPHALT MATERIAL FOR TACK		TON	62	9	70
00397	CL4 SMA SURF 0.38D PG76-22	2	TON	12,677	1,759	14,436
02677	ASPHALT MILLING & TEXTURING	2	TON	20,321	2,932	23,253
20071EC	JOIN ADHESIVE		LF	136,591	21,325	157,916
24891EC	PAVE MOUNTED INFRARED TEMP EQUIPMENT		SF	2,216,866	319,877	2,536,742
24781EC	INTELLIGENT COMPACTION FOR ASPHALT	2	TON	20,321	2,932	23,253

NOTES:

1. Estimated at 115 lbs. per sq. yd. per inch of depth.
2. Estimated at 110 lbs. per sq. yd. per inch of depth.
3. Estimated at 20 lbs. per sq. yd. (two applications).
4. Estimated at 2.4 lbs. per sq. yd. (two applications).
5. For construction of pavement subsurface drainage outlets.
6. For any needed reconstruction of DGA wedge in areas where guardrail is removed and replaced.
7. Quantities are carried over and included in General Summary.
8. For areas that experience scabbing after pavement is milled. Also for any settlement of pavement and base failure repairs.

GENERAL NOTES
I-75 – LAUREL AND ROCKCASTLE
PAGE 1 OF 5

I. GENERAL

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2012, Supplemental Specifications, any applicable Special Provisions, and applicable Standard and Sepia Drawings, except as hereafter specified. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for the following work:

- (1) Maintain and Control Traffic;
- (2) Remove and reset or replace guardrail and guardrail end treatments at the locations listed and/or as directed by the Engineer;
- (3) Inlaid Pavement Markers;
- (4) Upgrade of sheet signs;
- (5) Asphalt Pavement Milling and Texturing;
- (6) Asphalt Surface at locations listed and/or as directed by the Engineer; and
- (7) All other work specified as part of this contract.

II. MATERIALS

Except as specified in these notes or on the drawings, all materials will be according to the Standard Specifications and applicable Special Provisions and Special Notes. The Department will sample and test all materials according to Department's Sampling Manual and the Contractor will have the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing, unless otherwise specified in these notes.

A. Maintain and Control Traffic

See Traffic Control Plan.

B. Dense Graded Aggregate

Crushed Stone Base may not be furnished in lieu of DGA.

C. Pavement Markings - 6-inch

Use Extruded Thermoplastic Marking 6-inch

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic

See Traffic Control Plan and Standard Specifications.

B. Site Preparation

Be responsible for all site preparation. Do not disturb existing signs unless noted on the plans. This item will include, but is not limited to, incidental excavation and backfilling; removal of all obstructions or any other items; disposal of materials; sweeping and removal of debris; shoulder preparation and restoration, temporary and permanent erosion and pollution control; and all incidentals. Site preparation will be only as approved or directed by the Engineer. Other than the bid items listed, no direct payment will be made for site preparation, but will be incidental to the other items of work.

B. Disposal of Waste

Dispose of all cuttings, debris, and other waste off the right-of-way at approved sites obtained by the Contractor at no additional cost to the Department. The contractor will be responsible for obtaining any necessary permits for this work. Temporary openings in the right of way fence for direct access to waste sites off the right of way or for access to other public roads will not be allowed. No separate payment will be made for the disposal of waste and debris from the project or obtaining the necessary permits but will be incidental to the other items of the work.

GENERAL NOTES
I-75 – LAUREL AND ROCKCASTLE
PAGE 2 OF 5

C. Final Dressing, Clean Up, and Seeding and Protection

After all work is completed, completely remove all debris from the job site. Perform Class A Final Dressing on all disturbed areas. Sow disturbed earthen areas with Seed Mixture No. 1. These items are incidental to other items in the contract.

D. Guardrail

Remove and replace guardrail and guardrail end treatments listed in this proposal and/or as directed by the Engineer. Guardrail, end treatments and terminal sections are listed by mile points and quantities are approximate only. Actual locations will be determined by the Engineer at the time of construction. Grade and reshape shoulders to proper template for new guardrail and end treatment. Utilize DGA for embankment when required for new end treatments. Remove any existing guardrail with a lane closure in place. Do not leave the area unprotected. After the guardrail is removed, a shoulder closure shall remain in place until the guardrail is replaced in that area. To minimize safety hazards, guardrail removal is to be performed at the latest practical time prior to initiating the paving operation in an area and re-installation is to begin within 5 calendar days from the time that the final base course is completed and shall be pursued until completion. If guardrail installation is not started within 5 calendar days after paving operations ends, liquated damages will be charged as outlined in Section 108 of the 2012 Standard Specifications.

The Contractor shall deliver existing salvaged guardrail system materials to the Central Sign Shop and Recycle Center in Frankfort, KY (502-564-8187) between the hours of 8:00 AM and 3:00 PM, Monday through Friday, and shall be neatly stacked in accordance with section 719.03.07 of the standard specifications. There is a guardrail delivery verification sheet which must be completed. The Contractor, Engineer, and Central Sign/Guardrail Center representative must all sign off on this sheet before payment may be made.

E. Pavement Striping and Pavement Markers

Permanent striping will be in accordance with Section 714, except that:

- (1) Striping will be 6-inch width;
- (2) Permanent striping will be in place before a lane is opened to traffic; and
- (3) Permanent striping will be 6-inch Extruded Thermoplastic Marking.

F. On-Site Inspection

Each Contractor submitting a bid for this work will make a thorough inspection of the site prior to submitting a bid and will thoroughly familiarize himself with existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will not be honored by the Department.

G. Caution

Information shown on the drawings and in this proposal and the types and quantities of work listed are not to be taken as an accurate or complete evaluation of the material and conditions to be encountered during construction. The bidder must draw his own conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the conditions encountered are not in accordance with the information above.

H. Utility Clearance

It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, if it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities.

**GENERAL NOTES
I-75 – LAUREL AND ROCKCASTLE
PAGE 3 OF 5**

IV. METHOD OF MEASUREMENT

A. Maintain and Control Traffic

See Traffic Control Plan.

B. Site Preparation

Other than the bid items listed, site preparation will not be measured for payment, but will be incidental to the other items of work.

C. Dense Graded Aggregate

DGA used for guardrail and guardrail end treatments will be measured for payment.

D. Pavement and Base Failure Repairs

Pavement and base failure repairs will be measured per square yard.

E. Inlaid Pavement Markers and Permanent Striping

Permanent striping is measured per linear foot. Inlaid Pavement Markers are measured as each.

V. BASIS OF PAYMENT

No direct payment will be made other than for the bid items listed. All other items required to complete the construction will be incidental to the bid items listed. Existing signs (not to be disturbed) that are damaged by the Contractor will be replaced by the Contractor at his expense.

A. Maintain and Control Traffic

See Traffic Control Plan.

B. Site Preparation

Other than the bid items listed, no direct payment will be allowed for site preparation, but will be incidental to the other items of work.

C. Dense Grade Aggregate

See Section 302 of the Standard Specifications.

D. Inlaid Pavement Markers and Permanent Striping

See Special Notes and Traffic Control Plan.

E. Pavement and Base Failure Repairs

Pavement and base failure repairs will be paid for by square yard. The bid items "Pavement Repair" and "Base Failure Repair" include all materials and work need to complete each repair as directed by the Engineer.

F. Ditching and Shouldering

In accordance with Section 209 of the Standard Specifications, the bid item "Ditching and Shouldering" includes ditching on both sides of the roadway and the median for the entire length of the project where there is milling and pavement. Cleaning of all drainage structures, including drop box inlets, perforated pipe headwalls, and pipe structures 36 inches in diameter or less is also included in this bid item. It shall also include removal of any vegetation growing along the base of the median barrier wall.

G. Lane Closures

Contrary to Section 112, lane closures will not be measured for payment but will be incidental to the bid item "Maintain and Control Traffic". Arrow boards, portable message boards, and signs shall be paid for one time regardless of how many times they are moved.

**GENERAL NOTES
I-75 – LAUREL AND ROCKCASTLE
PAGE 4 OF 5**

VI. MISCELLANEOUS

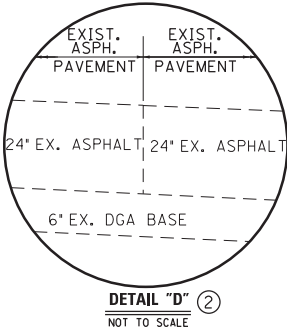
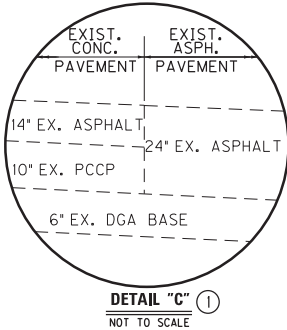
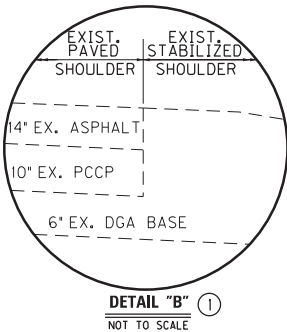
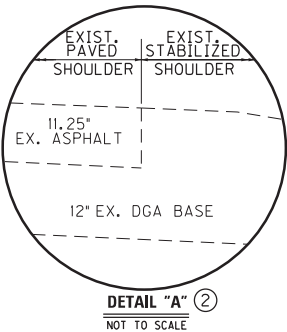
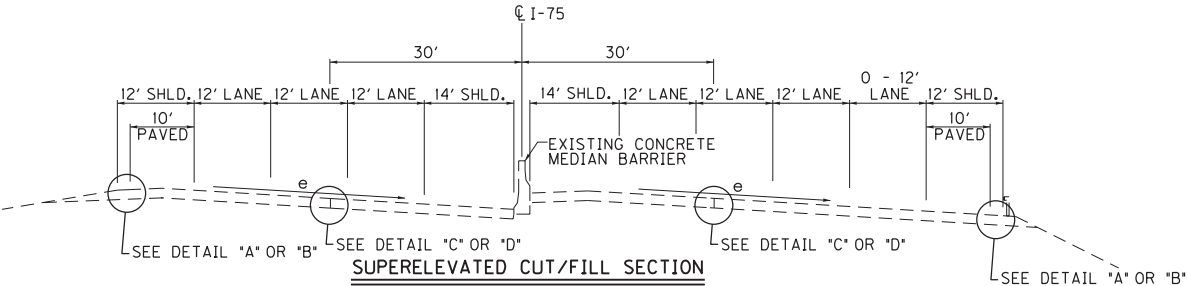
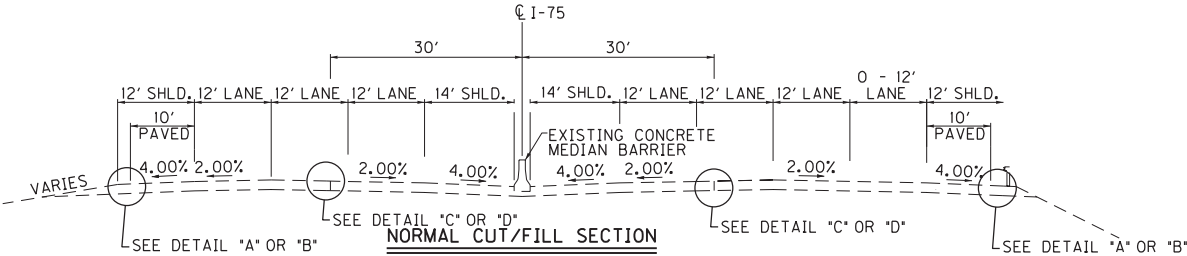
- A. The dimensions shown on the typical sections for pavement and shoulder widths and thickness are nominal or typical dimensions. The actual dimensions to be constructed may be varied to fit existing conditions as directed or approved by the Engineer. It is not intended that existing pavement or shoulders be widened unless specified in the Proposal.
- B. The contractor is advised that locations of low wires crossing the roadway may exist. The following mile point location(s) are approximate: MP 53.52 and MP 54.38

CAUTION: Other locations may exist. These and all other utilities should be avoided on this project. If any utility is impacted, it will be the Contractor's responsibility to contact the affected utility and cover any costs associated with the impact.
- C. Guardrail, End Treatments, and Terminal Sections to be replaced are listed by mileposts. Exact placement to be approved by the Engineer on construction.
- D. Any signs (not to be replaced) and any light poles that are damaged during Construction are to be replaced at the contractor's expense.
- E. The existing edge drain system is to be preserved. Care should be taken when the asphalt is removed and replaced, any edge drains damaged during these activities will be replaced at the Contractor's expense.
- F. Pavement rideability requirements in accordance with Section 410 Category A of the standard specifications shall apply on this project.
- G. The Department will accept the compaction of asphalt mixtures furnished for the driving lanes at one inch or greater on this project by Option A according to subsections 402 and 403 of the Standard Specifications. The Department will accept the compaction of all other mixtures by Option B.
- H. The Contractor shall be responsible for the repair of any asphalt or concrete in the travelled lanes that becomes detrimental or hazardous to the travelling public during construction. Areas needing repair will be at the discretion of the Engineer.
- I. No tree cutting is allowed nor should it be necessary.
- J. The Contractor shall deliver 5,000 tons of milled asphalt material to the District 11 Laurel County Section Engineer's Office at 1995 Russel Dyche Memorial Highway, London, KY between the hours of 9:00 AM and 4:00 PM, Monday through Friday. The material shall be dumped in areas of the storage area as directed by the Engineer.
- K. Delineators shall meet the requirements of Section 830 and 838 of the Standard Specifications. Delineators shall be placed in accordance with Section 3F of the M.U.T.C.D., current edition and Kentucky Standard Drawings, current edition. In areas where there is milling and asphalt, the delineators for the existing guardrail that is left in place shall be replaced.
- L. Quantities have been included in the General Summary for base failures and pavement repairs. Quantities are based on ten (10) pavement repairs and six (6) base failure repairs. The Engineer will determine the actual locations that will be repaired based upon the condition of the pavement at the time the repairs are accomplished. The Engineer shall determine the extent of the repairs.
- M. Locations of pavement subsurface drainage outlets are shown on the plans. These locations may be adjusted by the Engineer. Engineer may elect to add or reduce the number of outlets.

GENERAL NOTES
I-75 – LAUREL AND ROCKCASTLE
PAGE 5 OF 5

- N. Apply “Joint Adhesive” in accordance with “Special Note for Joint Adhesive”. Additionally, apply the adhesive immediately prior to paving the adjoining lane. Re-apply the “Joint Adhesive” when paving is not completed within 48 hours prior to paving. No additional payment will be considered for the re-application of the joint adhesive.
- O. Allowing traffic to travel on milled surface is not allowed unless approved by the Engineer.
- P. PVC pipe shall be used for all 4-inch non-perforated pipe.
- Q. A vacuum truck shall be required during all milling operations
- R. Milling shall be done to the edge of the barrier wall, as shown in the typical sections.
- S. Paving operations shall be done during daylight hours, between 6:00 AM and 9:00 PM or as directed by the Engineer.
- T. The contractor shall verify the existing cross slopes prior to paving operations and submit it to the engineer. After paving operations, the contractor shall survey the cross slopes again at the same locations to verify that the cross slopes are still draining properly and are acceptable. The contractor shall take cross slopes across the entire pavement width – lanes and shoulders. The cross slopes shall be verified every 500 foot in tangent sections, every 100 foot in curves while in full super, and every 50 foot in curve transitions (runoff and runout).
- U. Contrary to Special Note for Geogrid Reinforcement for Asphalt Pavements, Geogrid Reinforcement for Asphalt will be incidental to Pavement Repair.
- V. Permanent striping shall include all striping between MP 50.200 and MP 55.300.
- W. Permanent striping in the Northbound lanes from MP 50.705 to MP 55.300 shall be grooved all weather pavement marking. See “Special Note for Grooved All Weather Pavement Marking”.
- X. Longitudinal Crack sealing shall be done from MP 50.767 to MP 52.056. The contractor shall use the method as described in the “Special Note for Overband Crack Sealing”. Contrary to the special note, the crack sealing will be longitudinal.

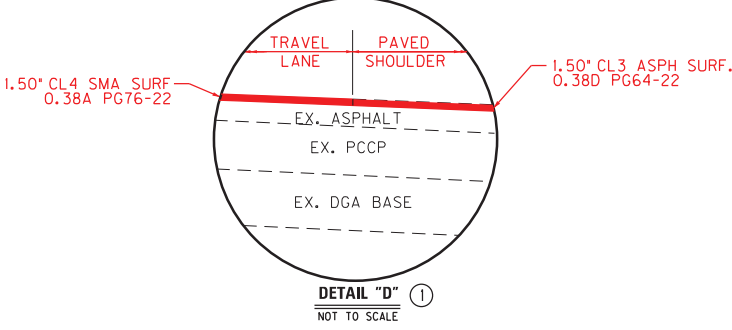
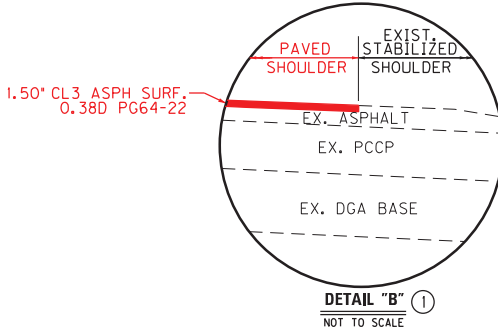
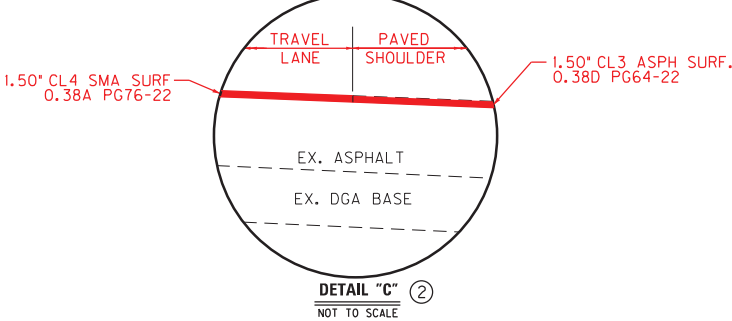
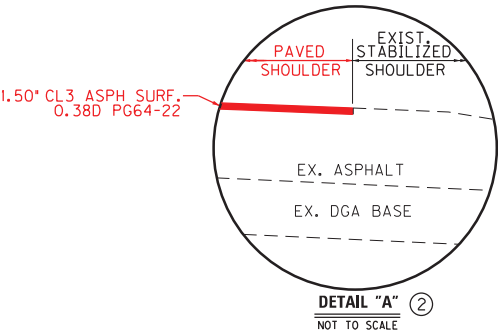
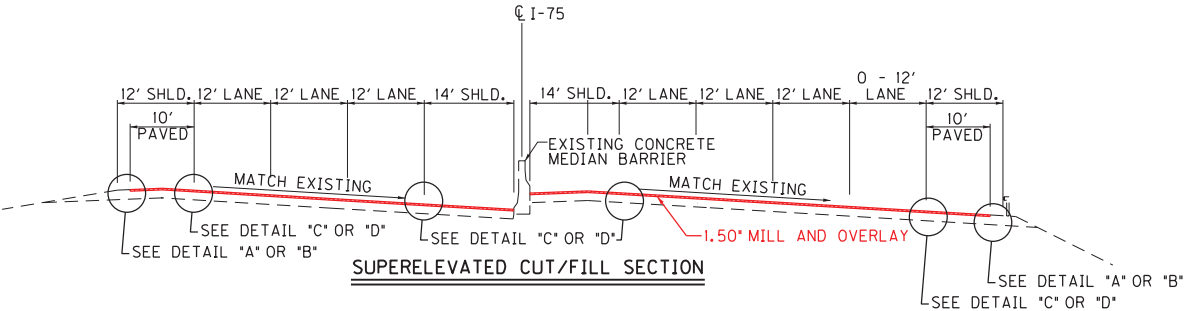
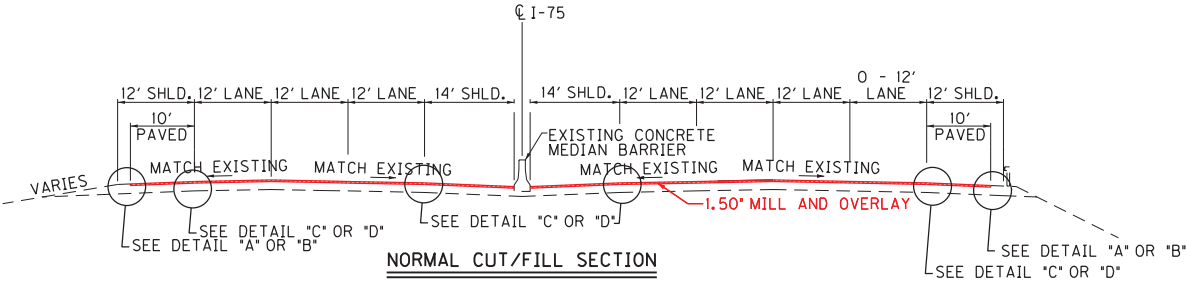
EXISTING
TYPICAL SECTIONS



① FROM MP 50.200 TO MP 50.705 IN LAUREL COUNTY, DETAIL "B" AND DETAIL "C" IS APPLICABLE.

② FROM MP 52.056 TO MP 55.300 IN ROCKCASTLE COUNTY, DETAIL "A" AND DETAIL "D" IS APPLICABLE.

PROPOSED
TYPICAL SECTIONS



① FROM MP 50.200 TO MP 50.705 IN LAUREL COUNTY, DETAIL "B" AND DETAIL "D" IS APPLICABLE.
② FROM MP 52.056 TO MP 55.300 IN ROCKCASTLE COUNTY, DETAIL "A" AND DETAIL "C" IS APPLICABLE.

COUNTY OF	ITEM NO.
LAUREL	II-20013.00

- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL

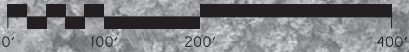
SUBSURFACE DRAINAGE OUTLET



NB I-75
SB I-75



BEGIN CONSTRUCTION
MP 50.200
STA. 230 + 42.11



SCALE: 1"=200'

I-75
MP 50.200 TO MP 50.417
PLAN SHEET 1 OF 14

COUNTY OF	ITEM NO.
LAUREL ROCKCASTLE	11-20013.00 8-20003.00

- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL

75
MILE
50
.8

ROCKCASTLE COUNTY
LAUREL COUNTY

END MILLING AND OVERLAY
MP 50.705
STA. 257 + 07.75

INSTALL I GUARDRAIL CONNECTOR
TO BRIDGE END TYPE A

ROCKCASTLE
COUNTY
(DO NOT DISTURB)

ROCKCASTLE
RIVER
(DO NOT DISTURB)

INSTALL I GUARDRAIL CONNECTOR
TO BRIDGE END TYPE A-1

TUSKEGEE
ARMEN
MEMORIAL TRAIL
(DO NOT DISTURB)

SLOWER
KEEP
TRAFFIC
RIGHT
R4-3
48"x60"

75
MILE
50
.6

BRIDGE
ICES BEFORE
ROAD
W8-13
48"x48"



SCALE: 1"=200'

I-75
MP 50.417 TO MP 50.814
PLAN SHEET 2 OF 14

COUNTY OF	ITEM NO.
ROCKCASTLE	8-20003.00



COUNTY OF	ITEM NO.
ROCKCASTLE	8-20003.00



COUNTY OF	ITEM NO.
ROCKCASTLE	8-20003.00



COUNTY OF	ITEM NO.
ROCKCASTLE	8-20003.00

- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL

75
MILE
52
.4

75
MILE
52
.2

75
MILE
52
.0

SUBSURFACE DRAINAGE OUTLET

BEGIN MILLING AND OVERLAY
MP 52.056
STA. 328 + 42.84

W8-5
48"X48"



SCALE: 1"=200'

I-75
MP 51.998 TO MP 52.405
PLAN SHEET 6 OF 14

COUNTY OF	ITEM NO.
ROCKCASTLE	8-20003.00

- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL

SUBSURFACE DRAINAGE OUTLET

NB I-75
SB I-75

75
MILE
52
.8

365+00

360+00

75
MILE
52
.6

INSTALL NEW ①
HEADWALL

355+00

EXISTING HEADWALL
SEPARATED FROM
24" CULVERT

TRUCKS
USE
RIGHT
LANE
R4-5
48"x60"

350+00

TRUCK
LANE
500
FEET
D17-2
54"x60"

① EXISTING HEADWALL HAS SEPARATED FROM PIPE. INSTALL NEW HEADWALL AND PLACE CLASS III CHANNEL LINING AS APPROVED BY THE ENGINEER. CLEARING AND GRUBBING IS INCIDENTAL TO REMOVAL OF EXISTING HEADWALL. NO TREES SHALL BE CUT UNLESS APPROVED BY THE ENGINEER.



SCALE: 1"=200'

I-75
MP 52.405 TO MP 52.803
PLAN SHEET 7 OF 14

COUNTY OF	ITEM NO.
ROCKCASTLE	8-20003.00

- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL

75
MILE
53
.2

SUBSURFACE DRAINAGE OUTLET

NB I-75
SB I-75

75
MILE
53
.0

385+00

380+00

375+00

370+00



SCALE: 1"=200'

I-75
MP 52.803 TO MP 52.203
PLAN SHEET 8 OF 14

COUNTY OF	ITEM NO.
ROCKCASTLE	8-20003.00

- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL

75
MILE
53
.6

75
MILE
53
.4

NB I-75
SB I-75

405+00

400+00

395+00



I-75
MP 53.203 TO MP 53.604
PLAN SHEET 9 OF 14

SCALE: 1"=200'

COUNTY OF	ITEM NO.
ROCKCASTLE	8-20003.00

- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL



- LANE REDUCTION ARROW

450+00

445+00

440+00

435+00

EXISTING HEADWALL
SEPARATED FROM
24" CULVERT

NB I-75
+
SB I-75

XX-XX
48"X48"

① EXISTING HEADWALL HAS SEPARATED FROM PIPE. INSTALL NEW HEADWALL AND PLACE CLASS III CHANNEL LINING AS APPROVED BY THE ENGINEER. CLEARING AND GRUBBING IS INCIDENTAL TO REMOVAL OF EXISTING HEADWALL. NO TREES SHALL BE CUT UNLESS APPROVED BY THE ENGINEER.

SCALE: 1"=200'

I-75
MP 53.974 TO MP 54.372
PLAN SHEET 11 OF 14

COUNTY OF	ITEM NO.
ROCKCASTLE	8-20003.00

- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL



COUNTY OF	ITEM NO.
ROCKCASTLE	8-20003.00

- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL



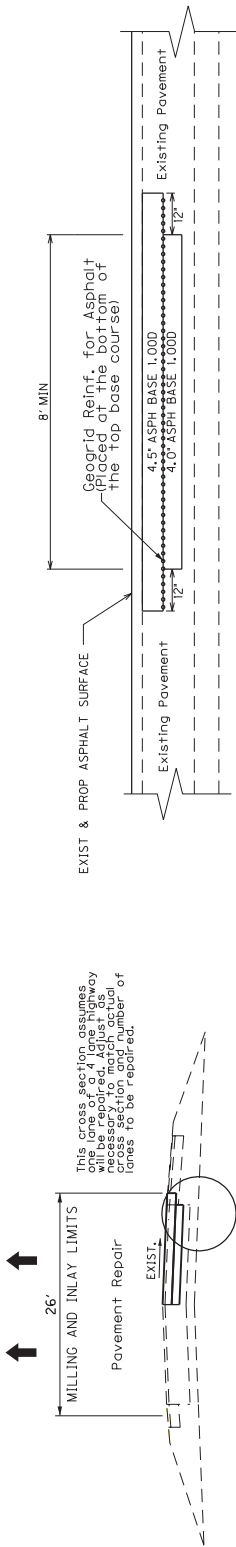
COUNTY OF	ITEM NO.
ROCKCASTLE	8-20003.00

- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL

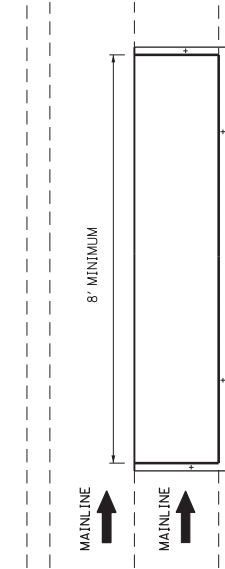


COUNTY OF	ITEM NO.
LAUREL ROCKCASTLE	11-20013.00 8-20003.00

PAVEMENT REPAIR DETAIL



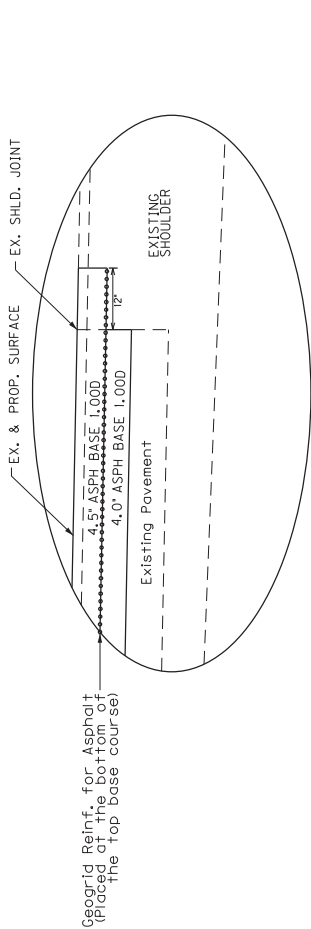
CROSS SECTION
DETAIL A



PLAN VIEW

*12' Edge key - top base course

PROFILE



DETAIL A

NOTES

1. Caution: Existing concrete pavement may exist below the asphalt pavement. This shall be sawcut for removal.
2. Pavement repairs shall be performed at locations selected by and as directed by the Engineer. The Engineer will assess, select, and mark areas for treatment. The full lane width will be removed and replaced. The Engineer may elect to perform repairs on one lane or multiple lanes. The Engineer may elect to only remove and replace the top lift or base or may decide a Base Failure Repair is more appropriate (see Base Failure Repair Detail). An edge key 12' into existing pavement is required for the top course of base.
3. Complete pavement repair operations in one continuous operation or protect with barrier wall. Do not leave an unprotected hole with no workers present. If barrier wall must be used for pavement repairs, it will be considered incidental to other items of work and not be considered for payment.
4. After completing base failure repair operations, open to traffic for a minimum of 14 days before resurfacing. Monitor pavement for settlement during this 14+ days and repair by leveling and wedging, as approved by the Engineer, until placement of final surface course.
5. (NOTE NOT USED)
6. Perform typical mill and inlay operations with resurfacing items subject to payment as part of the resurfacing operation.
7. Asphalt base courses shall be CL4 ASPH BASE PG76-22.

* QUANTITIES TO BID
20757ED PAVEMENT REPAIR SQ. YD.

* The bid item 20757ED PAVEMENT REPAIR shall include all materials and work to complete the repair as directed by the Engineer. This includes saw cuts of pavement, removal of pavement, geogrid reinforcement for asphalt, and asphalt cores.

NOT TO SCALE

COUNTY OF
LAUREL
ROCKCASTLE

27'

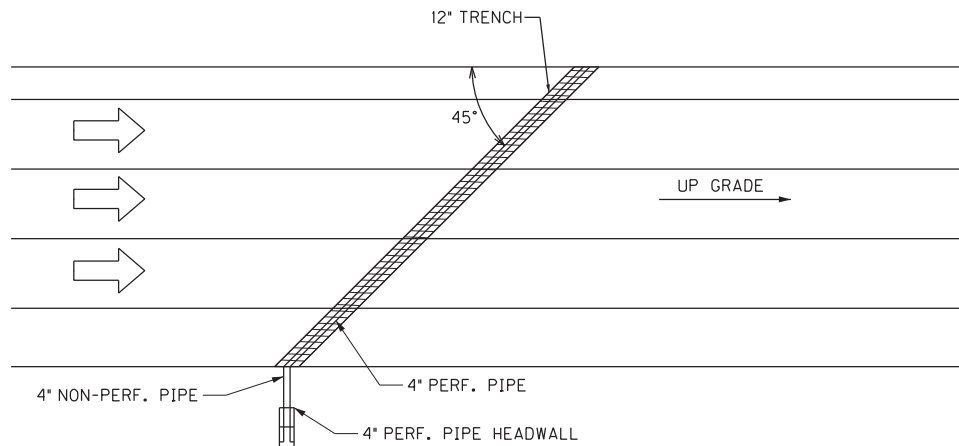
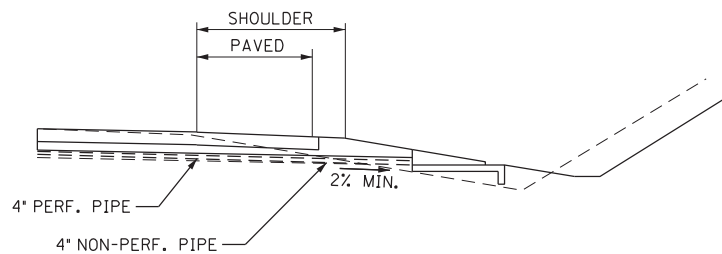
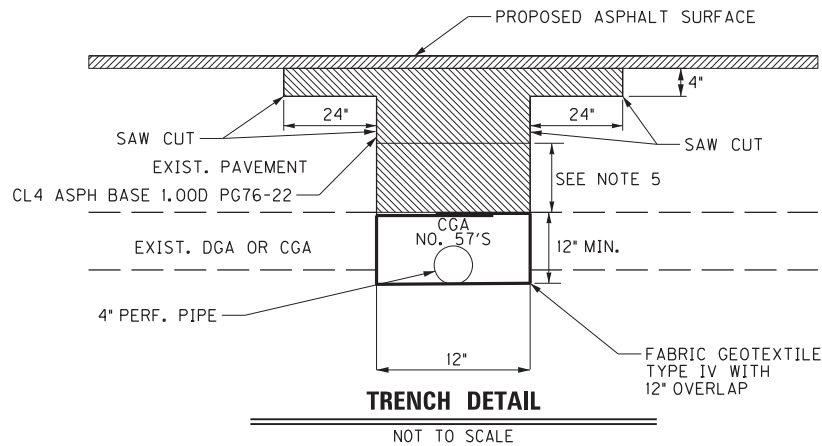


1. Caution: Existing concrete pavement may exist below the asphalt pavement. This shall be saw cut for removal.
2. Full depth base failure repairs shall be performed at locations selected by and as directed by the Engineer. The Engineer will assess, select, and mark areas for treatment. The full lane width will be removed and replaced. The Engineer may elect to perform repairs on one or more lanes. The existing base and subgrade shall be removed and the top course of base. If only one lane is being repaired, carry top base course 12' into adjacent lane when WOT allows.
3. When replacing the outside lane, perforated pipe should be placed under the shoulder by extending the repair area 12 inches into the existing shoulder.
4. Select an appropriate outlet source which may include a perf pipe headwall or cored hole in an existing drop box inlet. Non-perf outlet pipe may require installation at significant length or adjusted alignment to provide positive drainage. Grade subgrade to the outlet side of the excavation at 2%, install a longitudinal perforated pipe on the low side of subgrade connecting to the low grade outlet.
5. Complete base failure operations in one continuous operation or protect with barrier wall. Do not leave an unprotected hole with no workers present. If barrier wall must be used for base failure repairs, it will be considered incidental to other items of work and not be considered for payment.
6. After completing base failure repair operations, open to traffic for a minimum of 14 days before resurfacing. Monitor pavement for settlement during this 14+ days and repair by leveling and wedging, as approved by the Engineer, until placement of final surface course.
7. (NOTE NOT USED)
8. (NOTE NOT USED)
9. Perform typical mill and inlay operations with resurfacing items subject to payment as part of the resurfacing operation.
10. Asphalt base courses to be 4" thick as directed by Engineer and shall be CL4 ASPH BASE 1,000 PG76-22.
11. Crushed stone base shall be extended up to limits of asphalt drainage blanket that is present in area 30' from median.

* QUANTITIES TO BID
03240 BASE FAILURE REPAIR

BASE FAILURE REPAIR DETAIL

PAVEMENT SUBSURFACE
DRAINAGE OUTLET



1. PERFORATED PIPES SHALL BE TRENCHED TO AN EXISTING MEDIAN BARRIER DROP BOX INLET OR A NEW PEFORATED PIPE HEADWALL SHALL BE INSTALLED.
2. ANY EXCAVATION ASSOCIATED WITH INSTALLATION OF PERFORATED AND NON-PERFORATED PIPE SHALL BE INCIDENTAL TO THE COST OF PERFORATED AND NON-PERFORATED PIPE.
3. ONE TON OF CRUSHED AGGREGATE SIZE NO. 2 TO BE PLACED AT OUTLET OF PERFORATED PIPE HEADWALL.
4. NON-PERFORATED PIPE SHALL BE 4" PVC PIPE.
5. AS DIRECTED BY ENGINEER THE CGA #57s SHALL BE EXTENDED UP TO LIMITS OF ASPHALT DRAINAGE BLANKET THAT IS PRESENT IN AREA 30' FROM MEDIAN.
6. ASPHALT BASE COURSES TO BE 4" THICK AS DIRECTED BY ENGINEER AND SHALL BE CL4 ASPH BASE 1.00D PG76-22.
7. APPROXIMATE LOCATIONS OF SUBSURFACE DRAINAGE OUTLETS ARE SHOWN ON THE PLANS. THESE LOCATIONS MAY BE ADJUSTED BY THE ENGINEER.
8. AFTER COMPLETING PAVEMENT SUBSURFACE DRAINAGE OUTLETS, OPEN TO TRAFFIC FOR A MINIMUM OF 14 DAYS BEFORE RESURFACING. MONITOR PAVEMENT FOR SETTLEMENT DURING THIS 14+ DAYS AND REPAIR BY LEVELING AND WEDGING, AS APPROVED BY THE ENGINEER, UNTIL PLACEMENT OF FINAL SURFACE COURSE.

NOT TO SCALE

PAVEMENT SUBSURFACE DRAINAGE
OUTLET DETAIL

COUNTY OF

ITEM NO.

SHEET NO.

FILE NAME: J:\187420 - SW PAVEMENT REHAB 2018-2020\187420A - I-75 - LAUREL\CAD\SEPA\SEPA 005.DGN

DATE PLOTTED: January 10, 2019

USER: USJH673619

E-SHEET NAME:

MicroStation v8.11.7.443

INTERSECTIONS WITH OR WITHOUT
RIGHT TURN LANES ①

→ 5' |←

→ 5' |←

MARKED CROSSWALK ②

→ 5' |←

→ 5' |←

APPROACH SLAB

→ 5' |←

→ 5' |←

HIGHWAY-RAIL GRADE CROSSINGS ③

→ 5' |←

→ 5' |←

DRIVEWAYS/MINOR
COMMERCIAL ENTRANCES ⑤

→ 5' |←

→ 5' |←

BRIDGE DECK/APPROACH SLAB ④

→ 5' |←

→ 5' |←

MAILBOX TURNOUTS ⑥

→ 5' |←

→ 5' |←

~ NOTES ~

① RUMBLE STRIPS SHALL BE OMITTED THROUGH MAJOR INTERSECTIONS WITH, OR WITHOUT, RIGHT-TURN LANES. OMIT RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF THE AREA WHERE EDGELINE PAVEMENT MARKINGS HAVE BEEN OMITTED (NORMALLY WHERE SIDE STREET RADIUS INTERSECTS MAINLINE).

② RUMBLE STRIPS SHALL NOT BE INSTALLED THROUGH MARKED CROSSWALKS. OMIT RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF MARKED CROSSWALKS.

③ RUMBLE STRIPS SHALL NOT BE INSTALLED ACROSS HIGHWAY-RAIL GRADE CROSSINGS.

④ RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS OR APPROACH SLABS.

⑤ RUMBLE STRIPS SHALL BE INSTALLED THROUGH DRIVEWAYS & MINOR COMMERCIAL ENTRANCES.

⑥ RUMBLE STRIPS SHALL BE INSTALLED THROUGH MAILBOX TURNOUTS.

7. RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.

BID ITEMS AND UNIT TO BID
EDGELINE RUMBLE STRIPS
SHOULDER RUMBLE STRIPS

LF
LF

DRAWING NOT TO SCALE

USE WITH SEPIA 006, 007,
AND 008

KENTUCKY
DEPARTMENT OF HIGHWAYS

SHOULDER & EDGELINE
RUMBLE STRIP DETAILS

SUBMITTED *R. [Signature]* 11-23-16
DATE

COUNTY OF

ITEM NO.

SHEET NO.

TRAFFIC LANES

Z

X

PAVEMENT CROSS-SECTION

(WHEN ELRS ARE SPECIFIED)

EDGELINE

SHOULDER

12"

RUMBLE STRIP

X

TRAFFIC

PAVEMENT SURFACE

6" MIN. / 7.5" MAX.

3/8" MIN. / 1/2" MAX.

SECTION A-A

SHOULDER

12"

RUMBLE STRIP

X

TRAFFIC

EDGELINE

OFFSET - SEE CHART AND ③

TRAFFIC

or

TRAFFIC

SRS DETAILS

SHOULDER WIDTH (Z) ②	RUMBLE TYPE ①	RUMBLE LENGTH (X) ③	OFFSET ③
>=1'	ELRS	8"	N/A
2'	ELRS or SRS	8"	ELRS-N/A SRS-6"
3'	ELRS or SRS	8"	ELRS-N/A SRS-6"
4'	ELRS or SRS	8"	ELRS-N/A SRS-6"
5'	SRS ⑥	8"	6"
6'	SRS ⑥	8"	6"
7'	SRS ⑥	12"	12"
>=8'	SRS ⑥	16"	12"

~ NOTES ~

① FOR MULTI-LANE ROADWAYS, THE RUMBLE TYPE TO BE INSTALLED IS BASED ON SHOULDER WIDTH (Z). FOR SHOULDER WIDTHS OF 2', 3', AND 4' THE RUMBLE TYPE MAY BE SPECIFIED AS EITHER EDGELINE RUMBLE STRIPS (ELRS) OR SHOULDER RUMBLE STRIPS (SRS). IN THESE SITUATIONS, THE RUMBLE TYPE TO BE INSTALLED WILL BE SPECIFIED IN THE PLANS, PROPOSAL, AND/OR BID ITEMS, OR AS DIRECTED BY THE ENGINEER.

② WHEN ELRS ARE SPECIFIED, SHOULDER WIDTH (Z) IS FROM LANE SIDE EDGE OF RUMBLE STRIP TO OUTSIDE EDGE OF TRAVERSABLE PAVEMENT. WHEN SRS ARE SPECIFIED, SHOULDER WIDTH (Z) IS FROM CENTER OF EDGELINE STRIPE TO OUTSIDE EDGE OF TRAVERSABLE PAVEMENT.

③ RUMBLE LENGTH (X) AND/OR OFFSET DISTANCE MAY BE MODIFIED AS THE ENGINEER DIRECTS, IF THE SHOULDER WIDTH (Z) IS EQUAL TO OR LESS THAN THE COMBINED WIDTH OF THE PROPOSED RUMBLE LENGTH (X) AND OFFSET DISTANCE.

4. DISTANCES SHOWN ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE.

⑤ WHEN ELRS ARE SPECIFIED, THE EDGELINE MARKING SHALL BE PLACED IN THE CENTER OF THE RUMBLE STRIP.

⑥ SHOULDER RUMBLE STRIPS (SRS) ALONG OUTSIDE (RIGHT) SHOULDERS THAT ARE 5' OR WIDER SHOULD INCLUDE BICYCLE GAPS AS DETAILED. BICYCLE GAPS ARE NOT REQUIRED ON INSIDE (LEFT) SHOULDERS. BICYCLE GAPS SHALL NOT BE USED ON INTERSTATES AND PARKWAYS.

7. RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS, OR WHEN THE SHOULDER WIDTH IS LESS THAN 1 FT.

TRAFFIC

10'

50'

10'

INSIDE (LEFT) SHOULDER

OUTSIDE (RIGHT) SHOULDER

BICYCLE GAPS ⑥

USE WITH SEPIA 005

KENTUCKY

DEPARTMENT OF HIGHWAYS

RUMBLE STRIP DETAILS

MULTI-LANE ROADWAYS

AND RAMPS

008

DATE

11-23-16

SUBMITTED

R. Offroy

FILE NAME: J:\617420 - SW PAVEMENT REHAU 2018-2020\617420A - I-75 - LAUREL\CAADD\SEPA\SEPIA 008.DGN

USER: USJH673619 DATE PLOTTED: January 10, 2019

E-SHEET NAME: MicroStation v8.11.7.443

LF

LF

BID ITEMS AND UNIT TO BID

SHOULDER RUMBLE STRIPS

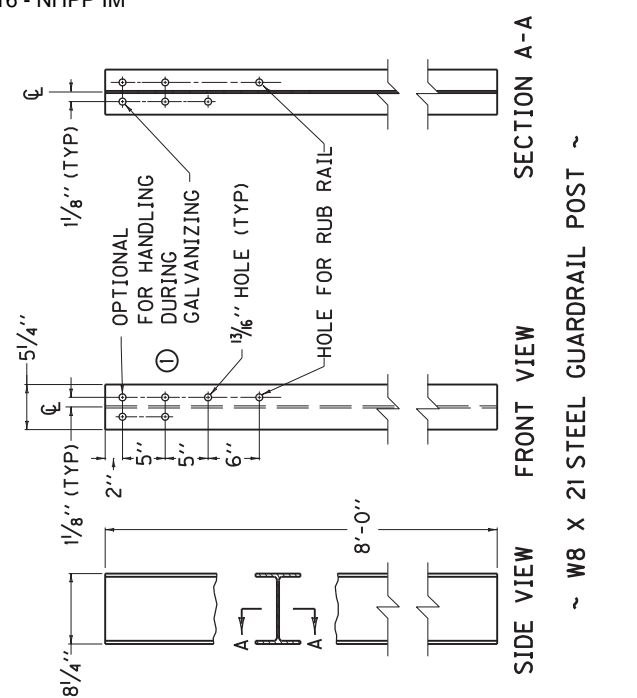
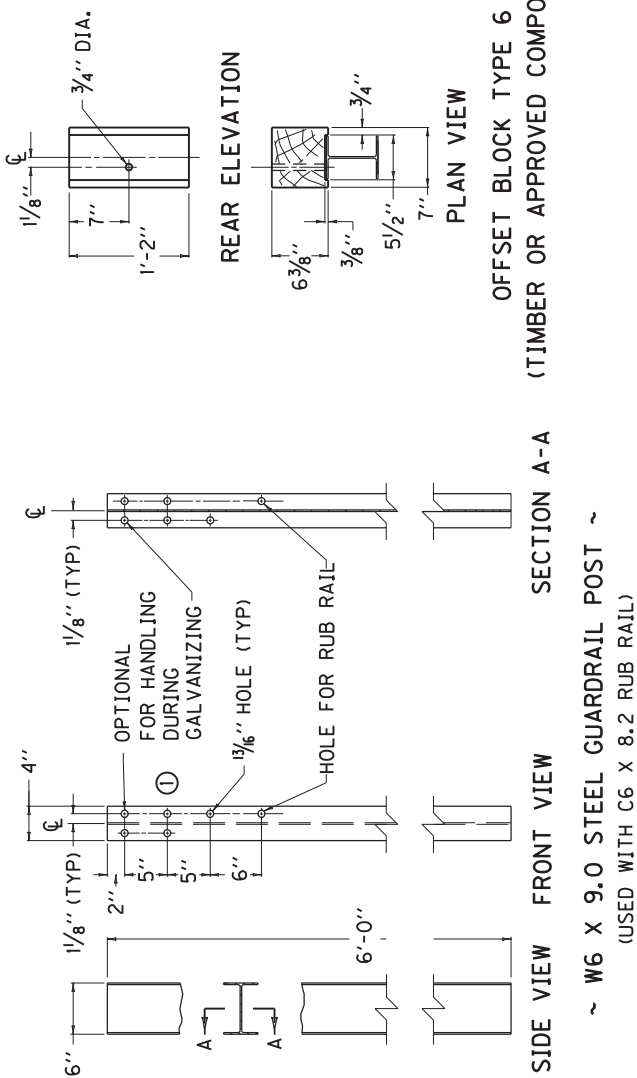
EDGELINE RUMBLE STRIPS

I-75 - LAUREL AND ROCKCASTLE

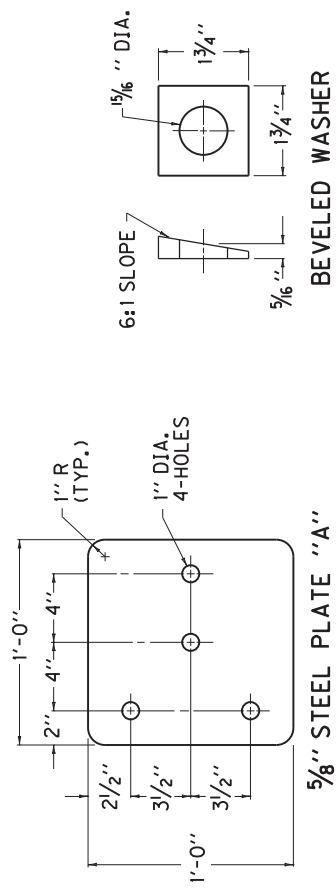
KYTC STANDARD DRAWING SEPIA SHEETS

SHEET 2 OF 14

COUNTY OF	ITEM NO.	SHEET NO.



~ NOTES ~
① THESE HOLES ARE REQUIRED FOR ATTACHING RAIL.



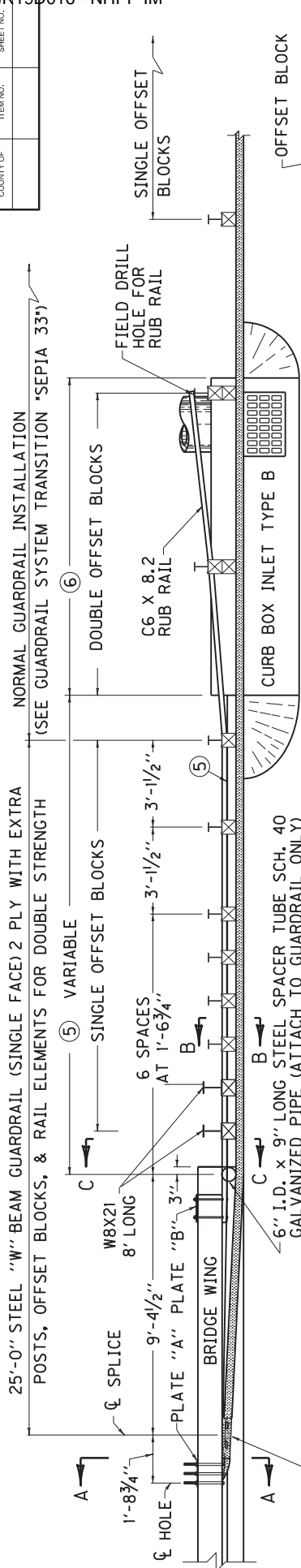
USE WITH CUR. STD. DWGS.
RBC-002, RBC-005, RBC-006

KENTUCKY
DEPARTMENT OF HIGHWAYS
GUARDRAIL CONNECTOR
TO BRIDGE END
TYPE A AND A-1
COMPONENTS

SUBMITTED: *[Signature]*
DATE: 12-20-18
ACTING DIRECTOR OF DESIGN

013

COUNTY OF	ITEM NO.	SHEET NO.
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PLAN VIEW

NOTES

1. GENERAL
- a. SEE CUR. STD. DWGS. IN THE RBB, RBR, AND RPM-SERIES FOR OTHER RELATED GUARDRAIL DETAILS AND BRIDGE PLANS FOR BRIDGE WING DETAIL.
 - b. SEE CUR. STD. DWG. ROB-SERIES FOR CURB BOX INLET TYPE B.
 - c. GUARDRAIL CONNECTOR TO BRIDGE END TYPE A IS FOR USE ON BOTH BRIDGE ENDS OF AN UNDIVIDED HIGHWAY AND ON THE APPROACH BRIDGE ENDS OF A DIVIDED HIGHWAY.
2. MATERIAL REQUIREMENTS
- ALL HARDWARE SHALL BE GALVANIZED. (AASHTO M-232)
 - $\frac{5}{8}$ " STEEL PLATE "A" AND "B" (AASHTO M-270)
 - $\frac{7}{8}$ " HEX HEAD BOLTS OR STEEL THREADED RODS (LENGTH AS SHOWN)
 - $\frac{7}{8}$ " HEAVY HEX NUTS ($\frac{7}{8}$ " THICK) (AASHTO M-291)
 - $\frac{7}{8}$ " FLAT WASHERS ($\frac{3}{16}$ " THICK) (AASHTO M-293)
 - $\frac{7}{8}$ " BEVELED WASHERS ($\frac{5}{16}$ " MEAN THICKNESS) (AASHTO M-293)
- BOTH THE BOLT AND THREADED ROD SHALL HAVE A MINIMUM OF 50,000 LBS. TENSILE STRENGTH AT THE NARROWEST POINT.

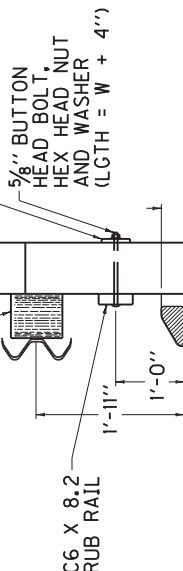
3. CONSTRUCTION METHODS

- g. ELIMINATE EXTRA OFFSET BLOCKS WHEN CURB BOX INLET TYPE B IS NOT REQUIRED.
- h. HOLES TO BE FORMED THROUGH BRIDGE WING WITH 1" I.D. PLASTIC PIPE FOR 7/8" BOLTS
3/4" I.D. PLASTIC PIPE FOR 5/8" BOLTS; PIPE SHALL REMAIN IN PLACE.
- METHOD OF MEASUREMENT AND BASIS OF PAYMENT
- g. GUARDRAIL CONNECTOR TO BRIDGE END TYPE A SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, AND INCLUDES: TERMINAL SECTION NO. 2; ALL ITEMS WHICH ARE IN ADDITION TO THE NORMAL INSTALLATION OF STEEL BEAM GUARDRAIL (EXTRA POSTS, OFFSET BLOCKS, RAIL ELEMENTS, SPACER TUBE, HARDWARE, RUB RAIL, ETC.), AND OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION AS DETAILED. STEEL "W" BEAM GUARDRAIL (SINGLE FACE) AND ISLAND HEADER CURB ARE SEPARATE BID ITEMS WHICH ARE ALWAYS REQUIRED. CURB BOX INLET TYPE B IS A SEPARATE BID ITEM THAT WILL BE USED WHEN REQUIRED FOR BRIDGE END DRAINAGE.

BID ITEMS AND UNIT TO BID

5. THE PLASTIC PIPE AND COST OF FORMING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR BRIDGE SUPERSTRUCTURE CONCRETE.

SECTION A-A



SECTION C-C

ISLAND HEADER CURB. TRANSITION FROM ISLAND CURB SHAPE TO
SHAPE ON BRIDGE WING WITHIN 7'-3". LENGTH OF CURB VARIABLE
(12'-3" WHEN L=5'-0") (17'-3" WHEN L=10'-0") (21'-3" WHEN L=15'-0")
(7'-3" WHEN L=20'-0"). ON APPROACH END CONSTRUCT 25'-0" OF
ISLAND HEADER CURB EVEN WHEN CURB BOX INLET TYPE B IS NOT
REQUIRED.

- ⑥ 6'-4" WHEN L=5'-0" ☆
11'-4" WHEN L=10'-0"
16'-4" WHEN L=15'-0"

⑦ 5/8" X 3 1/2" BUTTON HEAD BOLT,
HEX HEAD NUT.

8. CURB BOX NOT REQUIRED UNLESS NEEDED FOR DRAINAGE.

★ 10'-0" LENGTH IS REQUIRED UNLESS OTHERWISE NOTED.

L EQUALS THROAT LENGTH OF BOX.

SECTION B-B

KENTUCKY

GUARDRAIL CONNECTOR
TO BRIDGE END
TYPE A

SUBMITTED William S. Galbreath 4-04-18
DIRECTOR DIVISION OF DESIGN DATE

015 -

COUNTY OF

ITEM NO.

SHEET NO.

25'-0" STEEL- "W" BEAM GUARDRAIL - SINGLE FACE 2 PLY

NORMAL GUARDRAIL INSTALLATION
(SEE GUARDRAIL SYSTEM TRANSITION "SEPIA 33")

⑤

VARIABLE

⑥

SINGLE OFFSET BLOCKS

⑦

DOUBLE OFFSET BLOCKS

⑧

CURB BOX INLET TYPE B

⑨

TERMINAL SECT. NO. 2

⑩

BRIDGE WING

⑪

PLATE "A"

⑫

PLATE "B"

⑬

PLATE "C"

⑭

PLATE "D"

⑮

PLATE "E"

⑯

PLATE "F"

⑰

PLATE "G"

⑱

PLATE "H"

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PLATE "I"

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PLATE "J"

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PLATE "R"

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PLATE "S"

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PLATE "T"

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PLATE "U"

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PLATE "V"

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PLATE "W"

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PLATE "X"

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PLATE "Y"

㊱

PLATE "Z"

PLAN VIEW

TERMINAL SECT. NO. 2. FOR RECTANGULAR PLATE WASHER REQUIREMENTS AT SPLICE SEE CUR. STD. DWG. RBR-O10

SECTION A-A

SECTION B-B

SECTION C-C

1. GENERAL

2. MATERIAL REQUIREMENTS

3. CONSTRUCTION METHODS

4. METHOD OF MEASUREMENT AND BASIS OF PAYMENT

5. ISLAND HEADER CURB. TRANSITION FROM ISLAND CURB SHAPE TO SHAPE ON BRIDGE WING WITHIN 7'-3". LENGTH OF CURB VARIABLE (22'-3" WHEN L=5'-0") (17'-3" WHEN L=10'-0") (12'-3" WHEN L=15'-0") (7'-3" WHEN L=20'-0"). ON THE APPROACH END CONSTRUCT 25'-0" OF ISLAND HEADER CURB EVEN WHEN CURB BOX INLET TYPE B IS NOT REQUIRED.

6. 6'-4" WHEN L=5'-0" ☆
11'-4" WHEN L=10'-0" ☆
16'-4" WHEN L=15'-0" ☆
21'-4" WHEN L=20'-0" ☆

7. CURB BOX NOT REQUIRED UNLESS NEEDED FOR DRAINAGE.
☆ 10'-0" LENGTH IS REQUIRED UNLESS OTHERWISE NOTED.
L EQUALS THROAT LENGTH OF BOX.

USE WITH CUR. STD. DWGS.
BHS-008, RBC-002, RBC-003,
RBR-O10

DEPARTMENT OF HIGHWAYS
KENTUCKY

GUARDRAIL CONNECTOR
TO BRIDGE END
TYPE A-1

SUBMITTED: 4-04-18
DATE
DIRECTOR DIVISION OF DESIGN

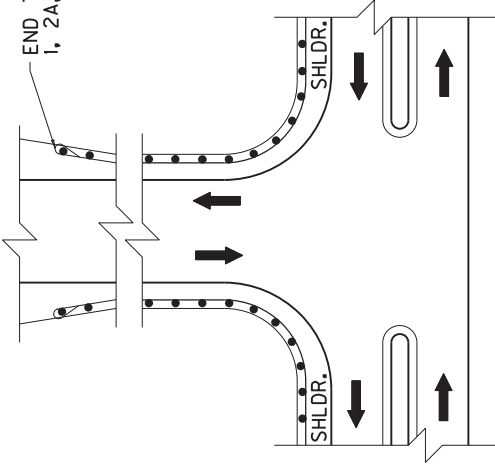
016

COUNTY OF	ITEM NO.	SHEET NO.

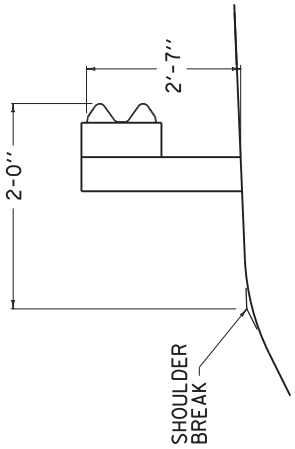
~ NOTES ~

1. FOR END TREATMENT TYPE 4A USE CUR. STD. DWG. RBR-035 FOR OFFSETS.
2. THE MINIMUM LENGTH OF GUARDRAIL, INCLUDING THE END TREATMENT, PRECEDING A FIXED OBJECT IS 200 FEET: (LENGTH MAY BE REDUCED SHOULD FIELD CONDITIONS WARRANT).

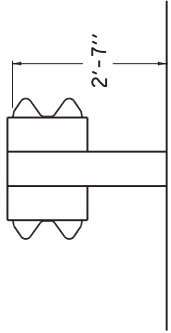
END TREATMENT (TYPES 1, 2A, 3, 4A, OR 7 AS REQUIRED)



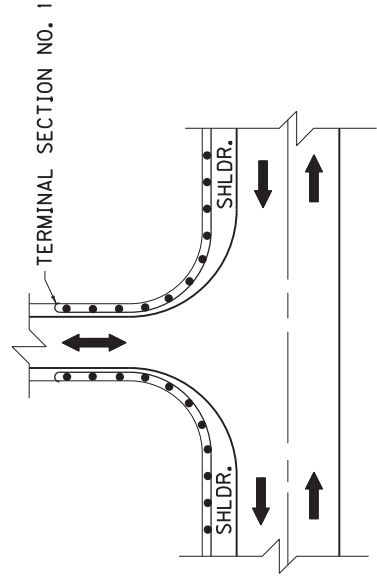
APPROACH ROADS



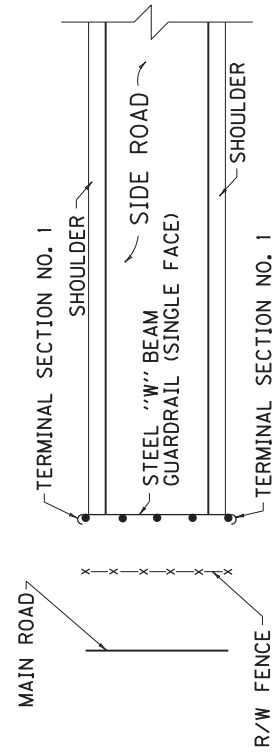
NORMAL GUARDRAIL INSTALLATION



TYPICAL DOUBLE FACE GUARDRAIL INSTALLATION



ENTRANCES

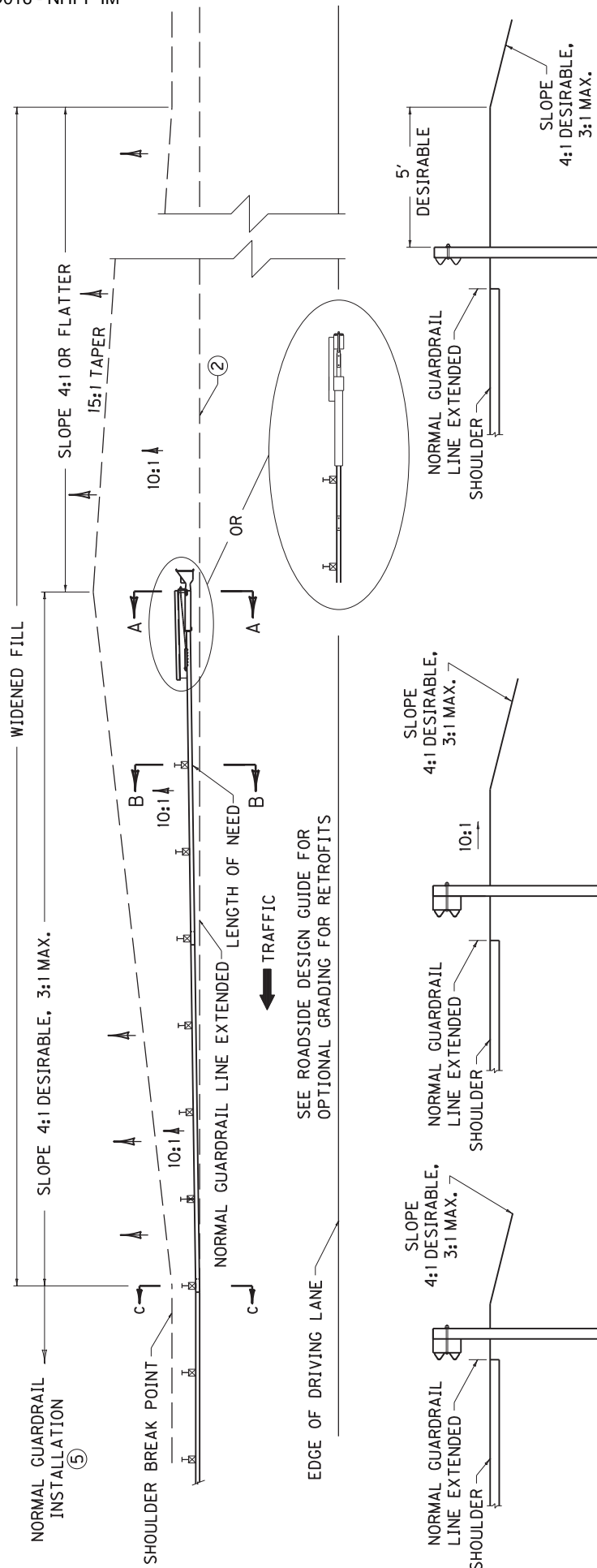


GUARDRAIL USED AS A BARRICADE

USE WITH CUR. STD. DWG. RBI-002, RBR-035
KENTUCKY DEPARTMENT OF HIGHWAYS
TYPICAL GUARDRAIL INSTALLATIONS
SUBMITTED <i>William J. Stedley</i> 11-17-17 DIRECTOR DIVISION OF DESIGN DATE

024

COUNTY OF	ITEM NO.	SHEET NO.
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SECTION A-A

NOTES

BID ITEMS AND UNIT TO BID:
GUARDRAIL END TREATMENT TYPE 1
ROADWAY OR BORROW EXCAVATION,
OR EMBANKMENT IN PLACE
EACH
CUYD

1. THE MINIMUM LENGTH OF GUARDRAIL, INCLUDING THE END TREATMENT, PRECEDING A FIXED OBJECT IS 200 FEET (LENGTH MAY BE REDUCED SHOULD FIELD CONDITIONS WARRANT).
- ② GUARDRAIL EXTRUDER EDGE CLOSEST TO TRAFFIC SHALL BE ON NORMAL GUARDRAIL LINE EXTENDED.
- ③ END TREATMENT TYPE 1 MAY BE ATTACHED TO CURVED GUARDRAIL IS A 550' RADIUS OR MORE. END TREATMENT TYPE 1 SHALL TAPER WITHIN THE PAY LIMITS.
4. INTENDED USE: FILLS WITH ADEQUATE VEHICLE RECOVERY ;
- ⑤ FOR MAINTENANCE AND REPAIR PROJECTS, USE "GUARDRAIL TO TRANSITION BACK TO 27" OR 29" GUARDRAIL HEIGHT, IF TO BE REPLACED.

GUARDRAIL END TREATMENT TYPE 1
INSTALLED ON A CURVE ③

TRAFFIC →

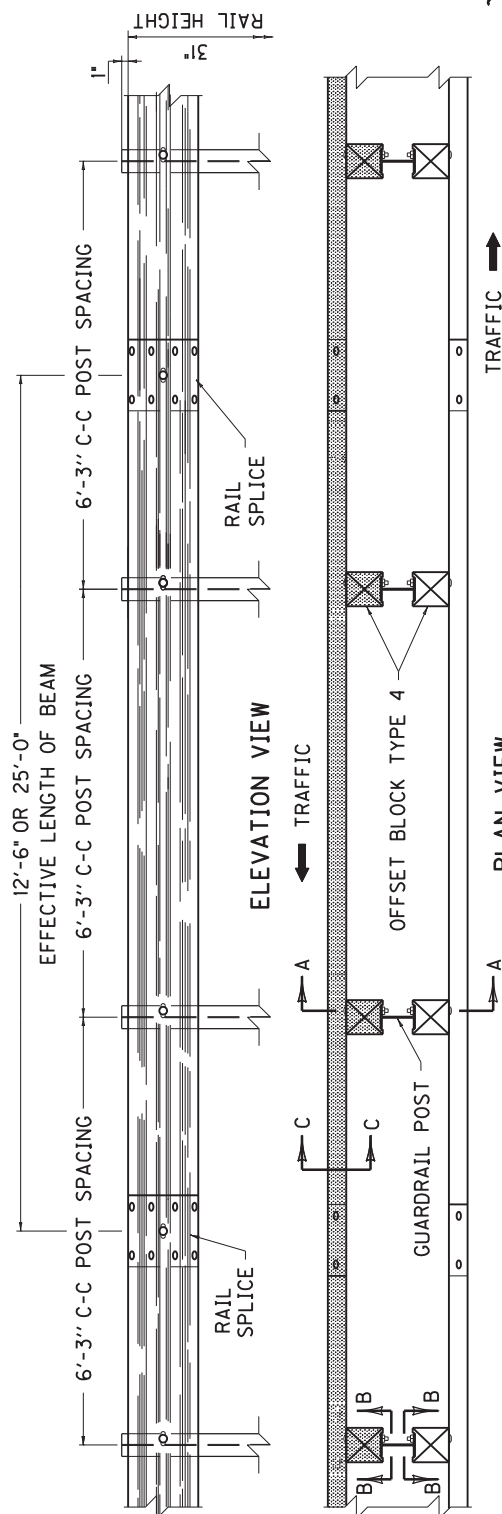
USE WITH CUR. STD. DWG.
RBR-020

KENTUCKY
DEPARTMENT OF HIGHWAYS
INSTALLATION OF
GUARDRAIL
END TREATMENT
TYPE I

SUBMITTED William S. Lawrence 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

0254

COUNTY OF	ITEM NO.	SHEET NO.
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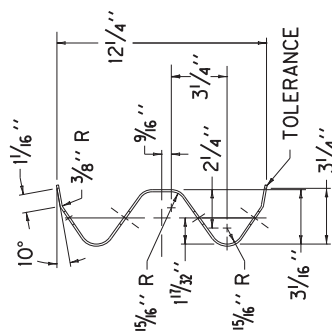


NOTES

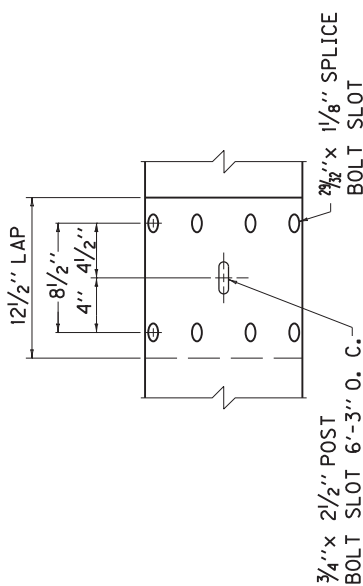
BID ITEM AND UNIT TO BID
GUARDRAIL-STEEL W BEAM-S FACE
OR
LF

GUARDRAIL-STEEL W BEAM-D FACE

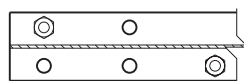
1. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE AND ACCEPTED MANUFACTURING PRACTICES.
2. THE RAIL ELEMENT SHALL COMPLY WITH AASHTO M-180 -CLASS A, TYPE II.
3. ALL LAPS SHALL BE PLACED IN THE DIRECTION OF TRAFFIC FLOW.
4. TOLERANCE + 1/4", -1/4"
5. 8-5/8" x 1/4" LONG BUTTON HEAD BOLTS AND HEX HEAD RECESS NUTS REQUIRED FOR EACH RAIL SPLICE.
6. LENGTH EQUALS POST AND BLOCK WIDTH PLUS 2" FOR BOLT OR 2 1/4" FOR THREADED ROD.
7. GALVANIZED STEEL 100 COMMON COATED NAIL (DRIVE NAIL AT THE TOP OR BOTTOM CENTER OF BLOCK AND POST AFTER BOLT IS INSTALLED).
8. 5/8" x 6 STEEL THREADED ROD AND TWO (2) HEX HEAD NUTS OR 5/8" x 6 BUTTON OR HEX HEAD BOLT AND HEX HEAD NUT.
9. 5/8" x 8" BUTTON HEAD BOLT, HEX HEAD RECESS NUT AND ONE 5/8" ROUND WASHER (TYP.), BOLT SHALL HAVE A MINIMUM THREAD LENGTH OF 2".
██████████ REQUIRED FOR DOUBLE RAIL
10. BOTH 12'-6" AND 25' LENGTHS OF "W" BEAM GUARDRAIL SECTIONS WILL BE PERMITTED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



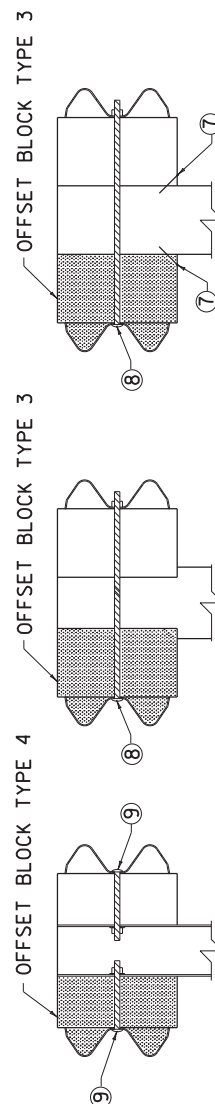
SECTION C-C
(RAIL CORRUGATED
SHEET STEEL BEAM)



RAIL SPLICE ⑤



SECTION B-B



SECTION A-A

DOUBLE FACE RAIL WITH
STEEL POST (W6x9)
(TIMBER OR APPROVED
COMPOSITE OFFSET BLOCK)

SECTION A-A

DOUBLE FACE RAIL WITH
ROUND TIMBER POST

SECTION A-A

DOUBLE FACE RAIL WITH
TIMBER POST

**KENTUCKY
DEPARTMENT OF HIGHWAYS**

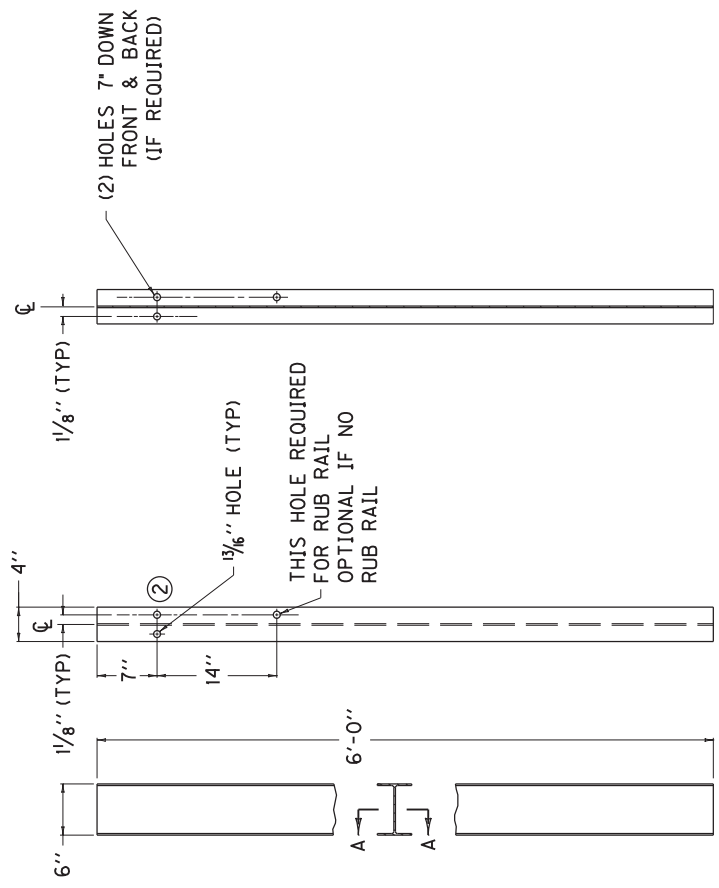
STEEL BEAM
GUARDRAIL
("W" BEAM)

SUBMITTED William J. Leland 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

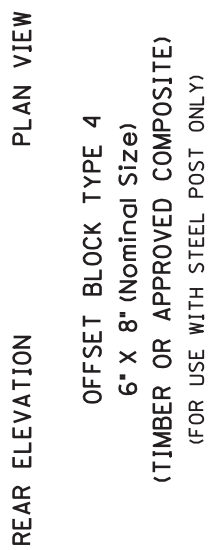
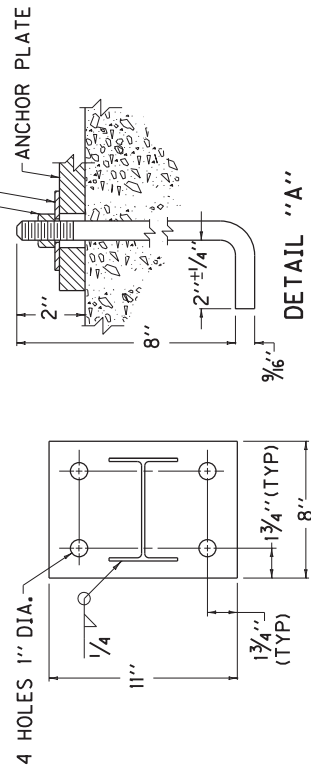
027 F

COUNTY OF	ITEM NO.	SHEET NO.

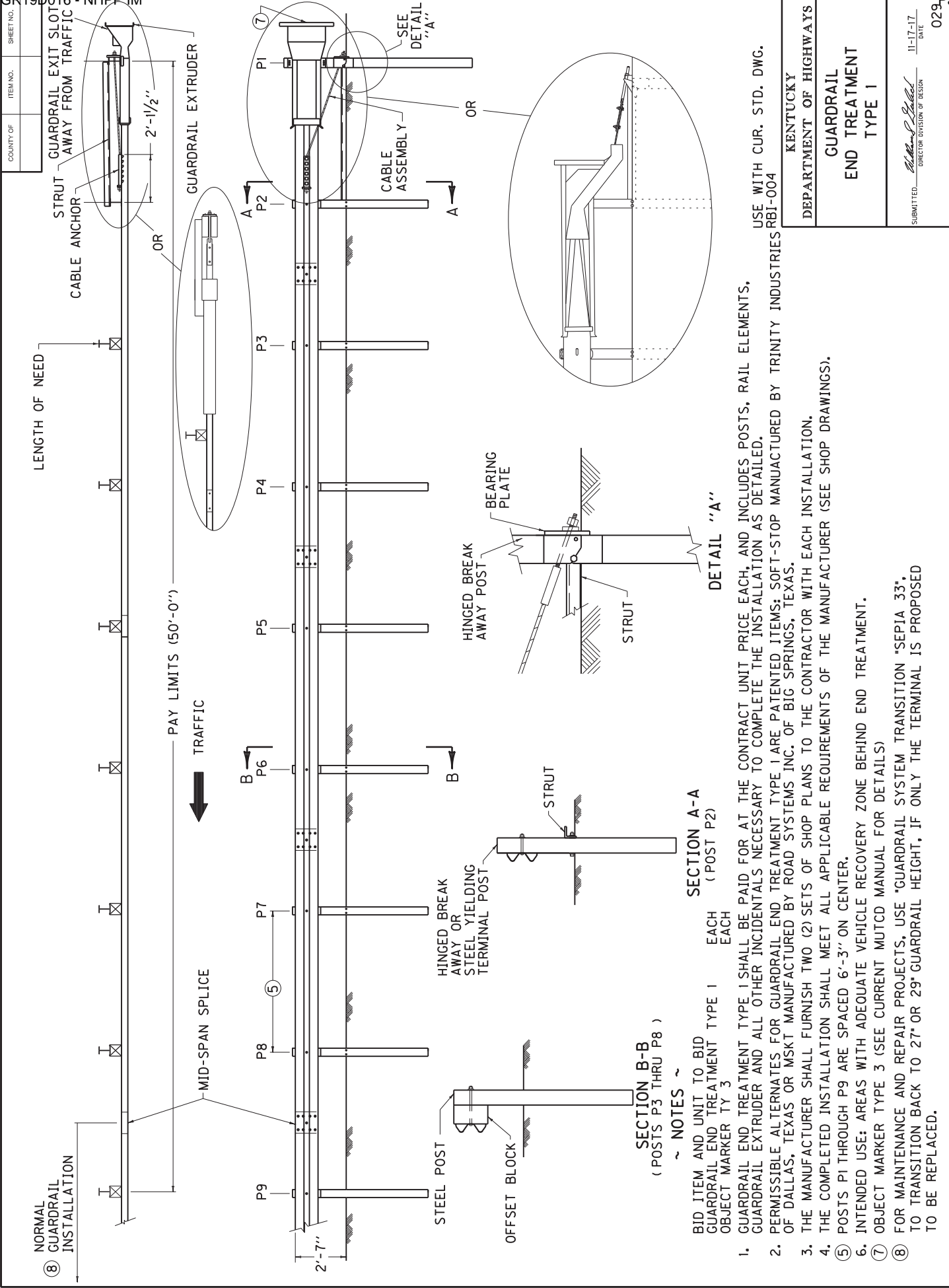
- ~ NOTES ~
- ① W6 X 8.5 IS AN ACCEPTABLE ALTERNATE.
 - ② THESE HOLES ARE REQUIRED FOR ATTACHING RAIL.
 - ③ TIMBER OR COMPOSITE BLOCKOUTS MAY BE USED WITH STEEL POST.



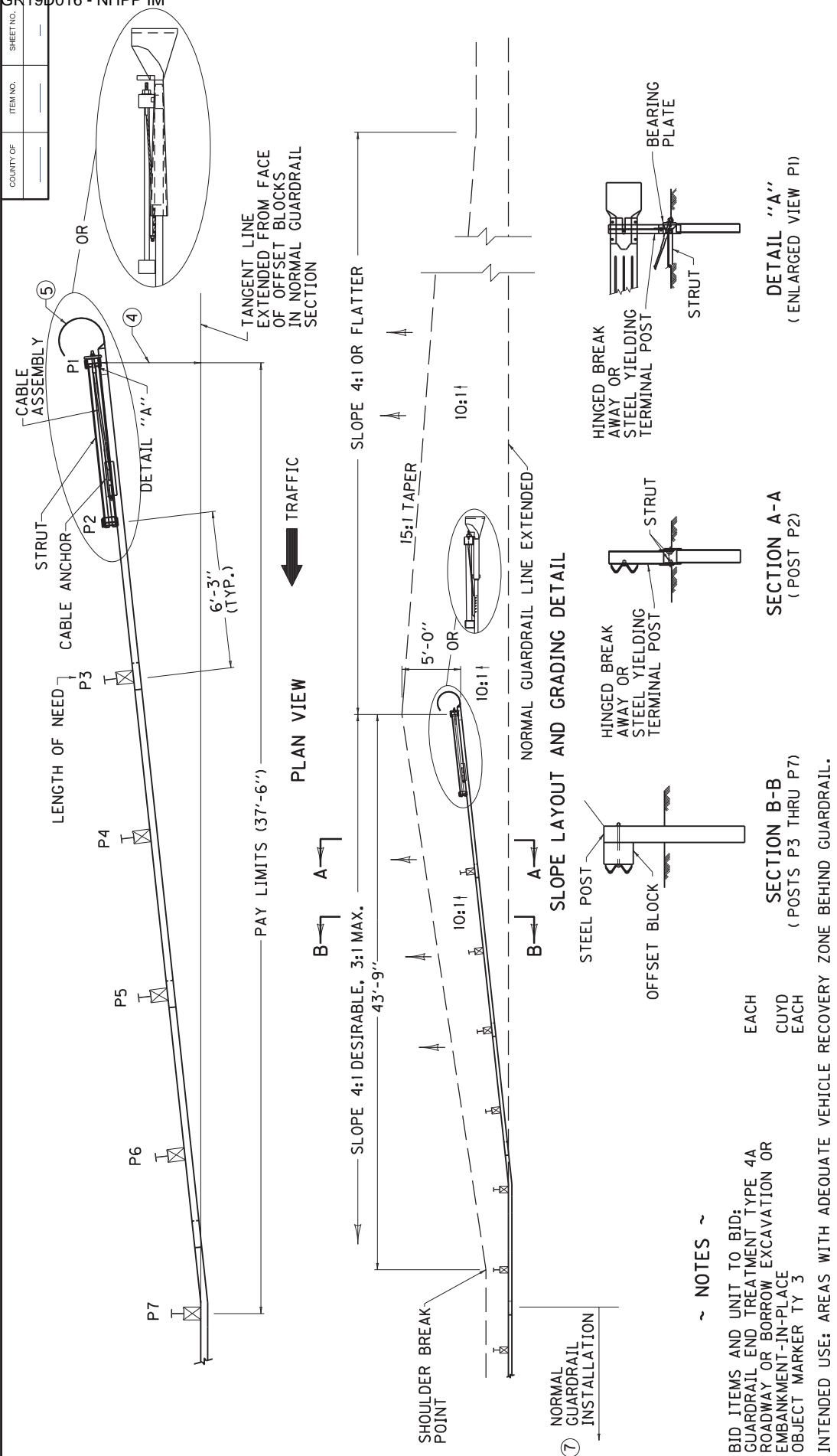
~ W6 X 9.0 STEEL POST ① ~



KENTUCKY DEPARTMENT OF HIGHWAYS
STEEL GUARDRAIL POSTS
SUBMITTED: <i>William J. Riddell</i> DIRECTOR DIVISION OF DESIGN
DATE: 3-06-18
028



COUNTY OF	ITEM NO.	SHEET NO.



~ NOTES ~

- BID ITEMS AND UNIT TO BID:
GUARDRAIL END TREATMENT TYPE 4A
ROADWAY OR BORROW EXCAVATION OR
EMBANKMENT-IN-PLACE
OBJECT MARKER TY 3
EACH
CUYD
EACH
- INTENDED USE: AREAS WITH ADEQUATE VEHICLE RECOVERY ZONE BEHIND GUARDRAIL.
 - PERMISSIBLE ALTERNATES FOR GUARDRAIL END TREATMENT TYPE 4A ARE PATENTED ITEMS: SPT-31 MANUFACTURED BY TRINITY INDUSTRIES OF DALLAS, TEXAS OR FLEAT-SP-MGS MANUFACTURED BY ROAD SYSTEMS INC. OF BIG SPRINGS, TEXAS.
 - THE MANUFACTURER SHALL FURNISH TWO (2) SETS OF SHOP PLANS TO THE CONTRACTOR WITH EACH INSTALLATION.
 - SYSTEM OFFSET OF 4'-0" SHALL BE MEASURED FROM FACE OF OFFSET BLOCK AT NORMAL GUARDRAIL SECTION TO FACE OF POST AT P1.
 - OBJECT MARKER TYPE 3 (SEE CURRENT MUTCD MANUAL FOR DETAILS).
 - THE COMPLETED INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE MANUFACTURER. (SEE SHOP DRAWINGS)
 - FOR MAINTENANCE AND REPAIR PROJECTS, USE "GUARDRAIL SYSTEM TRANSITION "SEPIA 33" TO TRANSITION BACK TO 27" OR 29" GUARDRAIL HEIGHT", IF ONLY THE TERMINAL IS PROPOSED TO BE REPLACED.
 - NCHRP-350-COMPLIANT CRASH CUSHIONS WILL BE ACCEPTED IN INSTANCES WHERE MASH-COMPLIANT DEVICES ARE NOT YET AVAILABLE.

KENTUCKY DEPARTMENT OF HIGHWAYS
GUARDRAIL END TREATMENT TYPE 4A
SUBMITTED 1-02-19 DATE ACTING DIRECTOR DIVISION OF HIGHWAY DESIGN 030

COUNTY OF

ITEM NO.

SHEET NO.

~ NOTES ~

BID ITEMS AND UNIT TO BID

DELINEATOR FOR GUARDRAIL B/W

DELINEATOR FOR GUARDRAIL M/W

DELINEATOR FOR GUARDRAIL M/Y

EACH

EACH

EACH

1. DELINEATORS SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE EACH AND SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR ONE COMPLETE INSTALLATION.

2. DELINEATOR SHAPE AND DIMENSIONS ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY.

3. TYPES OF DELINEATORS PERMITTED SHALL BE FROM THE LIST OF APPROVED MATERIALS.

4. GUARDRAIL DELINEATORS SHALL BE REQUIRED ON ALL GUARDRAIL.

5. DELINEATORS SHALL NOT BE INSTALLED WITHIN THE PAY LIMITS OF THE END TREATMENT.

6. DELINEATORS SHALL BE MANUFACTURED FROM 12 GA. GALVANIZED STEEL.

7. DIMENSIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MANUFACTURER'S TOLERANCES.

8. WHEN CONCRETE BARRIERS EXTEND ACROSS BRIDGE STRUCTURES IN LIEU OF STEEL BEAM GUARDRAIL, DELINEATORS SHALL BE INSTALLED AT SAME VERTICAL ALIGNMENT AS ON THE GUARDRAIL, AND DELINEATORS SHALL COMPLY WITH CURRENT STANDARD DRAWING RBM-020.

9. DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

PLAN VIEW

5"

2 1/2"

2"

1 1/2"

3/4"

1 1/6"

TYPE IX SHEETING,
YELLOW OR WHITE

3"

2 1/2"

FRONT VIEW

90° ±

SIDE VIEW

GUARDRAIL

DELINEATOR

FRONT VIEW

GUARDRAIL

DELINEATOR

TRAFFIC

SIDE VIEW

GUARDRAIL

DELINEATOR

ISOMETRIC VIEW

DELINEATOR

USE WITH CUR. STD. DWGS.
RBM-020. RBR-060

KENTUCKY
DEPARTMENT OF HIGHWAYS

DELINATORS
FOR GUARDRAIL

SUBMITTED: *William J. Hall*
DIRECTOR DIVISION OF DESIGN
DATE: 11-17-17
032

PLACEMENT OF DELINEATORS
FOR GUARDRAIL

BI-DIRECTIONAL WHITE DELINEATOR
FOR GUARDRAIL FACING TRAFFIC

BI-DIRECTIONAL WHITE DELINEATOR
FOR GUARDRAIL FACING TRAFFIC

MONO-DIRECTIONAL WHITE DELINEATOR
FOR GUARDRAIL FACING TRAFFIC

MONO-DIRECTIONAL YELLOW DELINEATOR
FOR GUARDRAIL FACING TRAFFIC

APPROXIMATE DELINEATOR SPACING

TANGENT	100'
CURVE	50'

SPACING SHOULD BE ADJUSTED IN CURVES
SO THAT SEVERAL DELINEATORS ARE ALWAYS
SIMULTANEOUSLY VISIBLE TO THE ROAD USER.

I-75 - LAUREL AND ROCKCASTLE

KYTC STANDARD DRAWING SEP14 SHEETS

SHEET 12 OF 14

COUNTY OF	ITEM NO.	SHEET NO.
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NOTES

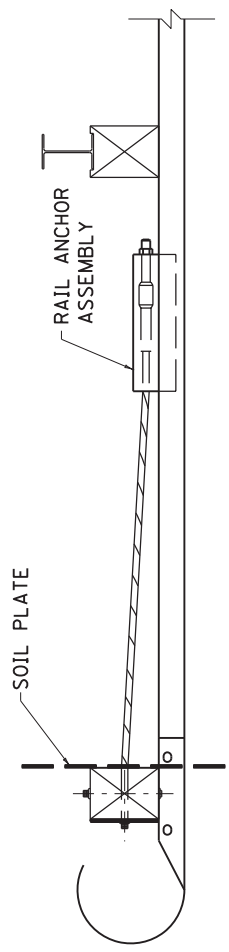
- 1) WHERE POST OFFSET IS CONSTRAINED, AND WHEN THE EXISTING SHOULDER IS WIDER THAN 4 FEET, THE EXISTING SHOULDER MAY BE REDUCED UP TO 2 INCHES TO ACCOMMODATE THE 8 INCH BLOCKS OF THE MGS GUARDRAIL. WHERE SITE CONSTRAINTS PROHIBIT THE POST FROM BEING PLACED AT LEAST 6 INCHES IN FRONT OF THE SLOPE BREAK POINT, USE 7 FOOT POSTS.
- 2) MGS TRANSITION FROM EXISTING GUARDRAIL SHALL BE COMPLETED OUTSIDE THE 50 FEET MGS END TERMINAL LIMIT.

I-75 - LAUREL AND ROCKCASTLE
KYTC STANDARD DRAWING SEPIA SHEETS
SHEET 13 OF 14

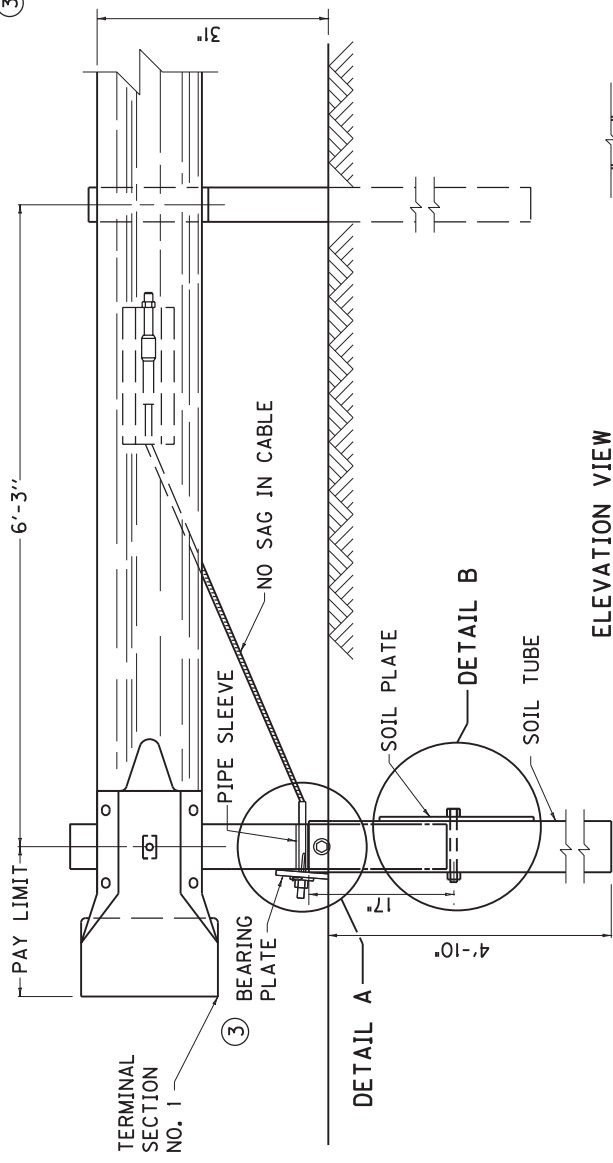
COUNTY OF	ITEM NO.	SHEET NO.

~ NOTES ~

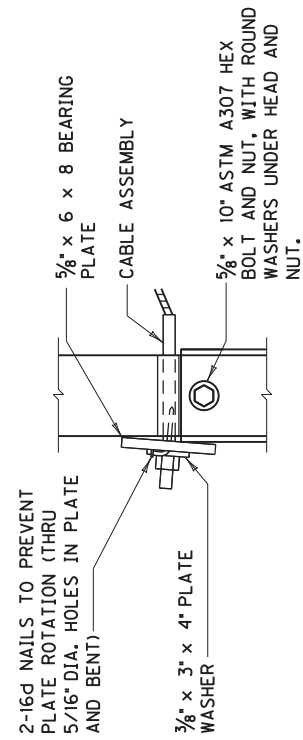
- BID ITEM AND UNIT TO BID
- EACH
- GUARDRAIL END TREATMENT TYPE 2A
1. GUARDRAIL END TREATMENT TYPE 2A SHALL BE TO THE PAY LIMITS AS DETAILED. THE CONTRACT UNIT BID IS EACH AND SHALL INCLUDE A TERMINAL SECTION NO. 1, RAIL ANCHOR ASSEMBLY, CABLE ANCHOR ASSEMBLY, SOIL TUBE, SOIL PLATE AND ALL OTHER INCIDENTALS NECESSARY FOR A COMPLETE INSTALLATION AS DETAILED.
2. IN THE EVENT SOLID ROCK IS ENCOUNTERED, THE SOIL TUBE MAY BE SHORTENED, PROVIDED IT EXTENDS INTO THE SOLID GROUND A MINIMUM OF 3 FEET.
- ③ INSTALL BEARING PLATE SO THAT THE "V" OPENING IS AT THE TOP.



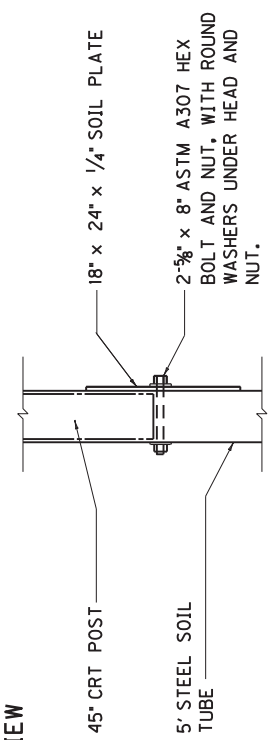
PLAN VIEW



ELEVATION VIEW



DETAIL A



DETAIL B

USE WITH CUR. STD. DWGS.
RBI-001 , RBI-002, RBI-003
RBR-010

KENTUCKY
DEPARTMENT OF HIGHWAYS

GUARDRAIL
END TREATMENT
TYPE 2A

SUBMITTED: *William J. Ball*
DATE: 3-06-18
DIRECTOR, DIVISION OF DESIGN

038

NOTES ■ ■

- (1) PAYMENT FOR GROUND MOUNTED SIGN SUPPORTS TYPE A AND TYPE B SHALL BE BASED ON THE WEIGHT OF THE SIGN. THE NECESSARY GALVANIZING, HARDWARE, ETC. MUST BE CONSIDERED INCIDENTAL QUANTITIES FOR TYPE C SUPPORTS. SHALL INCLUDE ALL NECESSARY HARDWARE TO FORM COMPLETE BREAK-AWAY BEAMS, SEE PANEL SIGN DETAIL SHEET.
- (2) QUANTITY SHALL INCLUDE ALL COPY AND HARDWARE NECESSARY FOR THE REMOVAL OF THE SIGN. NO DEDUCTION IN AREA IS TO BE MADE FOR ROUNDING OF CORNERS.
- (3) WITH PERMISSION OF THE ENGINEER, SHEETING SIGNS ON THE RAMPS AND SIDE ROADS MAY BE MOVED TO BE COMPATIBLE WITH THE EXISTING SIGNS.
- (4) QUANTITY IS ESTIMATED. THE EXACT LENGTH SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- (5) WHERE REQUIRED, BRACING FOR SHEETING SIGNS SHALL BE INCIDENTAL TO STEEL POST. SEE SHEETING SIGN DETAIL SHEET.
- (6) QUANTITY SHALL INCLUDE ALL MATERIAL NECESSARY TO FORM A COMPLETE BREAK-AWAY ASSEMBLY. TYPE I POSTS AND CONCRETE SHALL BE PAID SEPARATELY. SEE SHEETING SIGN DETAIL SHEET.
- (7) QUANTITY SHALL INCLUDE SIGN AND POST.
- (8) ALL MATERIALS REMOVED AND NOT REUSED, SUCH AS SIGNS, SIGN LIGHTS, SIGN SUPPORTS, ETC., SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
- (9) THE REMOVAL OF ALL TYPE I OR II POSTS AND ALL SHEETING SIGNS SHALL BE INCIDENTAL TO THE PROJECT WITH NO ADDITIONAL PAYMENT BEING ALLOWED. ALL MATERIAL SHALL BE STORED IN ACCORDANCE WITH NOTE (8) ABOVE.
- (10) WHERE THE REMOVAL OF OVERHEAD STRUCTURE CONCRETE BASE IS CALLED FOR, THE BASE IS TO BE REMOVED TO A MINIMUM OF ONE FOOT (1') BELOW THE GROUND LINE. BACKFILLED TO EXISTING GROUND LINE, AND THE DISTURBED AREAS RESEDED.
- (11) WHERE THE REMOVAL OF BEAM SIGN SUPPORTS IS CALLED FOR, THE BEAM AND ANY CONCRETE PROJECTING ABOVE THE GROUND LINE ARE TO BE CUT OFF A MINIMUM OF ONE FOOT (1') BELOW EXISTING GROUND LINE OR THE ENTIRE BEAM AND CONCRETE BASE ARE TO BE REMOVED COMPLETELY AND BACKFILLED TO EXISTING GROUND LINE.
- (12) QUANTITY SHALL INCLUDE W-BARS AND ALL HARDWARE NECESSARY FOR ATTACHING SIGNS TO SUPPORTS.
- (13) QUANTITY IS ESTIMATED. THE EXACT NUMBER SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL POSITIONING DETAIL SHEET FOR REFINER FOR REVIEW.

SIGNING QUANTITY SHEET[illegible]

SIGNING SPECIFICATION NOTES

THE FOLLOWING PUBLICATIONS ARE APPLICABLE TO THE WORK DESCRIBED HEREIN:

- KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION)
- STANDARD HIGHWAY SIGNS AND MARKINGS (CURRENT EDITION) -- FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION) -- FEDERAL HIGHWAY ADMINISTRATION

SCOPE OF WORK

TO FURNISH, FABRICATE AND ERECT IN PLACE ALL MATERIALS NECESSARY TO FORM COMPLETED SIGNS AS INDICATED AT LOCATIONS DESCRIBED ELSEWHERE IN THESE PLANS. NEW SIGNS ARE TO BE INSTALLED AT EXISTING LOCATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

SIGN SUBSTRATES

SIGN SUBSTRATES SHALL CONFORM TO SECTION 833 OF KENTUCKY'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION) AND THESE PLANS. PANEL SIGNS SHALL BE LABELED AS P-*, SHEETING SIGNS SHALL BE LABELED AS S-*,

SIGN MATERIALS

SIGN SHEETING

SIGN SHEETING SHALL CONFORM TO SECTION 830 OF KENTUCKY'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION) AND THESE PLANS. ONLY SHEETING ON THE DEPARTMENT'S LIST OF APPROVED MATERIALS SHALL BE USED.

ALL RETROREFLECTIVE MATERIALS SHALL BE FABRICATED AND ASSEMBLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND/OR RECOMMENDATIONS.

THE FOLLOWING SIGNS AND SIGN COMPONENTS SHALL BE FABRICATED USING TYPE IX SHEETING:

- STOP (R1-1) SIGNS
- ADVISORY SPEED (W13-TP) SIGNS
- YIELD (R1-2) SIGNS
- DO NOT ENTER (R5-1) SIGNS
- WRONG WAY (R5-1A) SIGNS
- THE FOLLOWING SIGNS SHALL BE FABRICATED USING TYPE IX FLUORESCENT SHEETING:
- HORIZONTAL ALIGNMENT SIGNS AND PLAQUES, INCLUDING THE SIGNS SHOWN IN FIGURE 2C-1 OF THE MUTCD
- ALL ADVISORY SPEED (W13-TP) PLAQUES
- THE FOLLOWING SIGNS SHALL BE FABRICATED USING TYPE IX FLUORESCENT YELLOW-GREEN SHEETING:
- SCHOOL AND SCHOOL BUS WARNING SIGNS, INCLUDING THE FLUORESCENT YELLOW-GREEN SIGNS SHOWN IN FIGURES 7B-1 AND 7B-6 OF THE MUTCD AND OTHER SCHOOL-RELATED WARNING SIGNS THAT ARE NOT INCLUDED IN THE MUTCD
- BICYCLE WARNING (W11-1) SIGNS AND ANY SUPPLEMENTAL PLAQUES, SUCH AS "SHARE THE ROAD" (W16-TP) PLAQUES AND DIAGONAL DOWNWARD POINTING ARROW (W16-TP) PLAQUES
- PEDESTRIAN WARNING (W11-2) SIGNS AND DIAGONAL DOWNWARD POINTING ARROW (W16-7P) PLAQUES THAT SUPPLEMENT PEDESTRIAN WARNING SIGNS
- IN-STREET PEDESTRIAN CROSSING (R1-6) SIGNS AND OVERHEAD PEDESTRIAN CROSSING (R1-9) SIGNS
- SUPPLEMENTAL PLAQUES TO ANY OF THE PREVIOUSLY LISTED FLUORESCENT YELLOW-GREEN SIGNS LISTED ABOVE
- ALL OTHER PERMANENT SIGNS (INCLUDING THE BACKGROUNDS OF PANEL SIGNS) SHALL BE FABRICATED USING TYPE III OR TYPE IV SHEETING.

LETTERS, SYMBOLS, AND BORDERS

PANEL OVERLAY SECTIONS SHALL BE AFFIXED WITH A "POP" RIVET WITH A MINIMUM DIAMETER OF 3/16 INCH, AND THE LENGTH SHALL BE AS NECESSARY TO PROPERLY APPLY COPY IN A WORKMANLIKE MANNER.

HARDWARE

ALL HARDWARE FOR THE ASSEMBLY OF PANEL SIGNS AND THE ATTACHMENT OF THESE SIGNS TO THEIR SUPPORTS SHALL BE AS RECOMMENDED BY THE PANEL MANUFACTURER. PLACEMENT OF POST CLIP SHALL BE AS SHOWN ON THE SIGNING MISCELLANEOUS DETAIL SHEET.

ALL HARDWARE FOR THE ERECTION OF SHEETING SIGNS SHALL BE CADMIUM PLATED STEEL IN ACCORDANCE WITH ASTM B-776 AND ASTM A-307.

FONT(S)

STANDARD ALPHABETS SHALL BE USED FOR ALL LEGENDS ON PANEL GUIDE SIGNS.

GROUND-MOUNTED SIGN SUPPORTS

GENERAL

ALL SIGNS SHALL BE POSITIONED AS SHOWN ON THE POSITIONING DETAIL SHEET. ALL BEAMS AND POSTS SHALL BE OF SUFFICIENT LENGTHS TO EXTEND FROM THE TOP OF THE SIGN TO THE REQUIRED BASE EMBEDMENT. EXISTING I-BEAMS ON WHICH SHEETING SIGNS ARE ATTACHED SHALL BE REMOVED AND REPLACED WITH TYPE I OR TYPE II POSTS, UNLESS THEY ARE LOCATED BEHIND GUARDRAIL.

BEAMS

ALL BEAMS SHALL BE EITHER TYPE "A" (STANDARD BEAM INSTALLATION) OR TYPE "C" (BREAKAWAY SIGN POST SUPPORT SYSTEM INSTALLATION). TYPE "A" BEAMS ARE SHOWN ON THE PANEL SIGN DETAIL SHEET, AND THE TYPE "C" BEAMS ARE SHOWN ON THE BREAKAWAY SIGN SUPPORT SYSTEM FOR "C" BEAM SHEET. ONLY BREAKAWAY (TYPE "C") BEAM SUPPORT SYSTEMS ON THE DEPARTMENT'S LIST OF APPROVED MATERIALS SHALL BE USED. THE TYPE AND SIZE OF BEAM TO BE USED SHALL BE INDICATED FOR EACH PANEL SIGN ON THE SIGN DETAIL SHEETS. BEAM LENGTHS INCLUDED IN THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS AT EACH SIGN LOCATION AND CROSS SECTIONS SHALL BE DEVELOPED TO VERIFY BEAM LENGTHS, WITH ANY DISCREPANCIES BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.

STEEL POSTS

TYPE I STEEL POSTS SHALL BE EITHER STANDARD INSTALLATION IN SOIL WITH SOIL STABILIZER, OR TYPE "D" (BREAKAWAY SIGN POST SUPPORT SYSTEM INSTALLATION). ONLY BREAKAWAY TYPE "D" POST SYSTEMS ON THE DEPARTMENT'S LIST OF APPROVED MATERIALS SHALL BE USED. BRACING, IF REQUIRED, SHALL BE INCIDENTAL TO TYPE I POST.

TYPE II POST SHALL BE STANDARD INSTALLATION IN SOIL WITH A SOIL STABILIZER. INSTALLATION PROCEDURES AND BRACING REQUIREMENTS ARE DETAILED ON THE SHEETING SIGN DETAIL SHEET.

ALL STEEL POSTS SHALL MEET THE REQUIREMENTS OF SECTION 832 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

MILEPOST MARKERS AND ENHANCED REFERENCE MARKERS

MILEPOST MARKERS AND ENHANCED REFERENCE LOCATION SIGNS SHALL CONFORM TO THE GENERAL REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CURRENT EDITION). ADDITIONAL REQUIREMENTS ARE GIVEN ON THE SIGNING POSITIONING DETAIL SHEET AND ENHANCED REFERENCE LOCATION SIGNS DETAIL SHEET.

FOR THE LOUISVILLE AREA, FINAL LOCATION OF ENHANCED REFERENCE LOCATION SIGNS SHALL BE VERIFIED BY TRIMARC. NOTIFY A REPRESENTATIVE OF TRIMARC AT LEAST TWO WEEKS IN ADVANCE OF BEGINNING WORK ON THIS ITEM.

901 WEST MAIN STREET
LOUISVILLE, KY 40202
502-587-6624
270-307-7456

MEDIAN CROSSOVER SIGNS

THE CONTRACTOR SHALL INSTALL 48" X 48", "NO U TURN" SIGNS (R3-4) AT EACH MEDIAN CROSSOVER. THIS IS TO BE DONE WHETHER ALL NEEDED INSTALLATIONS ARE MENTIONED IN THE FOLLOWING SHEETS OR NOT. AT CROSSOVERS ON MEDIANS SIXTY FEET (60') WIDE OR LESS, THE SIGNS SHALL BE MOUNTED PERPENDICULAR TO THE ROADWAY ON THE SAME POSTS IN THE CENTER OF THE MEDIAN, ONE FACING TRAFFIC IN EACH DIRECTION. AT CROSSOVERS ON MEDIANS OVER SIXTY FEET (60') WIDE, THE SIGNS SHALL BE MOUNTED PERPENDICULAR TO THE ROADWAY ON SEPARATE POSTS AT THE MEDIAN SHOULDER ON THE FAR SIDE OF THE CROSSOVER, ONE FACING TRAFFIC IN EACH DIRECTION. FOR ADDITIONAL GUIDANCE, SEE SEP1A DRAWING FOR FLEXIBLE DELINEATOR POST ARRANGEMENT FOR INTERCHANGE RAMP AND CROSSOVERS.

CONCRETE BASES

ALL CONCRETE BASES SHALL BE OF CLASS "A" CONCRETE FOR SIGNS AND SHALL BE AS SHOWN ELSEWHERE IN THESE PLANS. EXCAVATION NECESSARY TO CONSTRUCT BASES AND FOOTINGS IS INCIDENTAL TO THE COST OF CLASS "A" CONCRETE FOR SIGNS.

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SIGNING SPECIFICATION NOTES

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ROCKCASTLE	8-20003.00	

CONCRETE BASES (CONTINUED)

WHERE THE REMOVAL OF OVERHEAD STRUCTURE CONCRETE BASE IS CALLED FOR, THE BASE IS TO BE REMOVED TO A MINIMUM OF ONE FOOT (1') BELOW THE GROUND LINE. BACKFILLED TO EXISTING GROUND LINE, AND THE DISTURBED AREAS RESEDED.

WHERE THE REMOVAL OF BEAM SIGN SUPPORTS IS CALLED FOR, THE BEAM AND ANY CONCRETE PROJECTING ABOVE THE GROUND LINE ARE TO BE CUT OFF A MINIMUM OF ONE FOOT (1') BELOW EXISTING GROUND LINE OR THE ENTIRE BEAM AND CONCRETE BASE ARE TO BE REMOVED COMPLETELY AND BACKFILLED TO EXISTING GROUND LINE.

SAMPLES, TESTING, ETC.

BEFORE BEGINNING INSTALLATION, THE CONTRACTOR SHALL FURNISH TO THE PROJECT ENGINEER DRAWINGS, DESCRIPTIONS, MANUFACTURER'S CUTS ETC. FOR WRITTEN APPROVAL OF ALL MATERIALS TO BE USED. MILL TEST REPORTS FOR BEAMS, STEEL PANELS, AND EACH DIFFERENT GAUGE OF ALUMINUM OR STEEL SHEETING USED MUST BE SUBMITTED TO THE DIVISION OF CONSTRUCTION AND APPROVED PRIOR TO ERECTION.

MISCELLANEOUS

THE COST FOR REMOVING EXISTING PANEL SIGNS SHALL BE INCIDENTAL TO THE COST OF THE PROJECT.

ON SHEETING SIGNS WHERE THERE ARE MORE THAN ONE SIGN ASSEMBLY MOUNTED BESIDE EACH OTHER, THE POSTS SHALL BE SPACED TO PROVIDE APPROXIMATELY SIX INCHES (6") OF SPACING BETWEEN SIGNS.

CLEARING AND GRUBBING, AND TREE TRIMMING, WHEN REQUIRED FOR CONSTRUCTION OR VISIBILITY OF SIGNS, SHALL BE INCIDENTAL TO THE CONTRACT.

SIGN COVERING IS NOT RECOMMENDED. HOWEVER, IF IT IS ABSOLUTELY NECESSARY TO COVER THE SIGN FACE TEMPORARILY FOLLOWING ERECTION, USE CAUTION SINCE SOME COVERINGS MAY CAUSE PERMANENT DAMAGE TO THE SIGN FACE FOLLOWING EXPOSURE TO MOISTURE, SUNLIGHT, ETC. POROUS CLOTH OR GEOTEXTILE FABRIC COVERS WHICH ARE FOLDED OVER THE SIGN EDGES AND SECURED AT THE BACK OF THE SIGN HAVE BEEN USED SUCCESSFULLY FOR LIMITED PERIODS. DO NOT USE TAPE, PAPER, PLASTIC, OR SHEET METAL COVERS. ANY SIGNS THAT ARE DAMAGED AS A RESULT OF COVERING SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DEPARTMENT.

TYPE I AND II STEEL POSTS IN SOIL SHALL BE DRIVEN 32" TO 34" BELOW THE GROUND LINE AS SHOWN. HOWEVER, IF SOLID ROCK IS ENCOUNTERED, THE CONTRACTOR SHALL DRILL HOLES OF THE REQUIRED DEPTH INTO THE ROCK AND BACKFILL WITH CONCRETE. THE COST SHALL BE INCIDENTAL TO STEEL POST, AND SOIL STABILIZERS WILL NOT BE REQUIRED.

ANY AREA DISTURBED SHALL BE SIDE GRADED TO THE EXISTING SLOPES AND RESEDED AS DIRECTED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE DEPARTMENT.

REMOVE AND DO NOT REPLACE THE WHITE ON BLUE GENERAL SERVICES SIGNS AT THE EXIT RAMP TERMINALS, "EMERGENCY STOPPING ONLY" SIGNS, AND THE ROUTE MARKER THAT IS LOCATED INSIDE THE INTERCHANGE PAST THE EXIT GORE AREA.

INSTALLATION OF ADVISORY EXIT AND RAMP SPEED SIGNS (W13-2 AND W13-3) SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

ALL EXISTING SHEETING SIGNS WITHIN THE LIMITS OF THIS PROJECT ARE TO BE REMOVED AND REPLACED WITH NEW SIGNS AND POSTS. SIGNS AND POSTS SHALL CONFORM TO CURRENT STANDARDS/SPECIFICATIONS. THE COST FOR REMOVING EXISTING SHEETING SIGNS AND POSTS, RELOCATING EXISTING SIGNS AND POSTS TO CONFORM TO THE SIGNING PLANS AND SPECIFICATIONS, AND ALL HARDWARE REQUIRED, SHALL BE INCIDENTAL TO THE PROJECT. IN ADDITION TO REPLACING ALL EXISTING SIGNS, ALL SIGNS SHOWN ON THE SIGNING PLANS MUST BE INSTALLED. FOR SIGN SIZES AND SPECIFICATIONS, SEE THE CURRENT PROJECT SIGNING PLAN DETAIL SHEETS.

THE COST FOR SIGN BRACKETS AND ANY OTHER HARDWARE REQUIRED TO ATTACH NEW SIGNS ON EXISTING TRUSSES AND CANTILEVERS SHALL BE INCLUDED IN THE UNIT PRICE OF SIGN BASE MATERIAL FOR PANEL SIGNS.

DUPLICATE SIGNS SHALL NOT BE DISPLAYED DURING THE CONSTRUCTION OF THIS PROJECT.

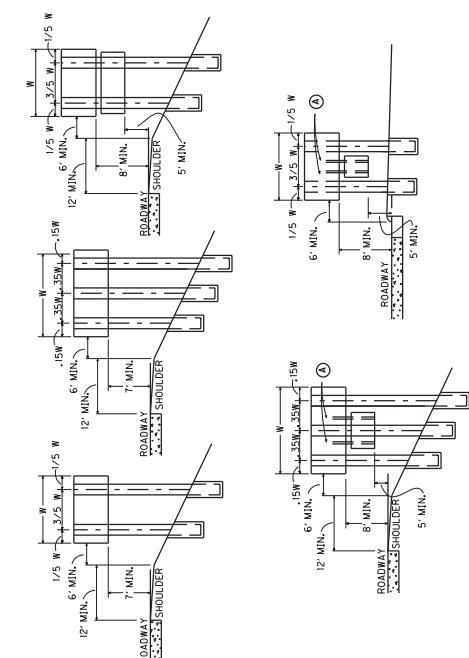
SHEETING SIGNS (D1-1, D1-2, D1-3) EQUAL TO OR LESS THAN 72" X 42" REQUIRE TWO TYPE I OR TYPE II POSTS.

THE HORIZONTAL CLEARANCE "X" ON ALL THE SHEETING SIGNS SHOULD BE A MINIMUM OF 6' FROM THE EDGE OF THE SHOULDER TO THE EDGE OF THE SIGN OR A MINIMUM OF 12' FROM THE EDGE OF THE SIGN TO THE EDGE OF THE TRAVELLED WAY AS SHOWN IN THE SIGNING POSITIONING DETAIL SHEET.

IF ANY SIGN IS LOCATED NEAR A LUMINAIRE OR ANOTHER POLE, IT SHALL BE INSTALLED IN ADVANCE OF THE POLE SO THAT THE MOTORISTS VIEW OF THE SIGN WILL NOT BE OBSTRUCTED. SIGNS THAT DO NOT COMPLY WITH THE MUTCD SHALL BE REMOVED BY THE CONTRACTOR AS APPROVED AND DIRECTED BY THE ENGINEER.

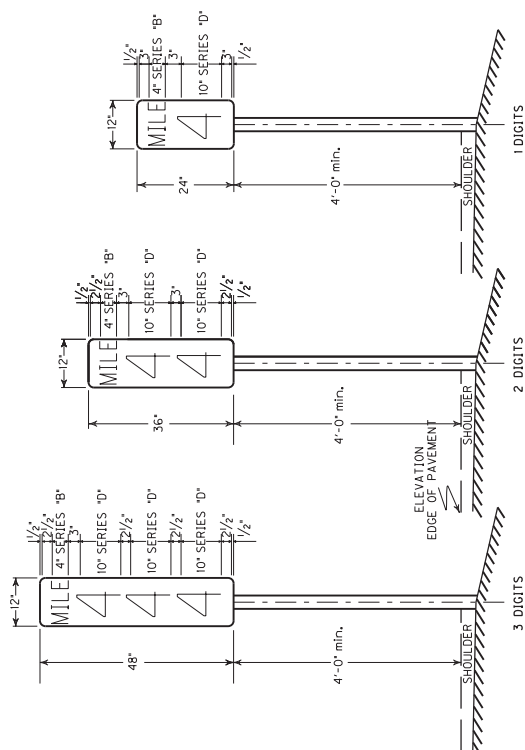
COUNTY OF	ITEM NO.	SHEET NO.
LAUREL ROCKAASSTLE	11-20013.00 8-20003.00	T004

PANEL SIGNS



ATTACHMENT OF SECONDARY SIGN TO MAJOR SIGN IS TO BE MADE WITH TWO (2) 3" x 3" x $\frac{3}{16}$ " ANGLES OF SUFFICIENT LENGTH TO EXTEND FROM THE LOWER EDGE OF THE SECONDARY SIGN TO AT LEAST THREE FEET UP THE BACK OF THE MAJOR SIGN. A MINIMUM OF ONE POST CLIP PER FOOT SHALL BE USED IN ATTACHING EXTRUSIONS TO EACH ANGLE.

MILEPOST MARKERS



TYPICAL SIGN PANEL DIMENSIONS AND MILEPOST LOCATIONS

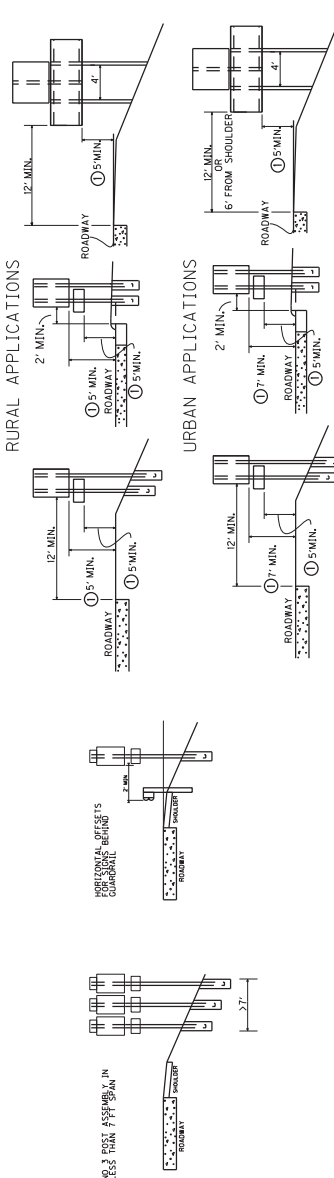
[illegible]

NOTE: STATION NUMBERS ARE GIVEN FOR NOTED DIRECTION OF TRAVEL ONLY.
CORRESPONDING MILEPOST MARKERS FOR OTHER DIRECTION SHOULD BE PLACED
DIRECTLY OPPOSITE THOSE FOR WHICH STATION NUMBERS ARE GIVEN.

[illegible]

SHEETING SIGNS

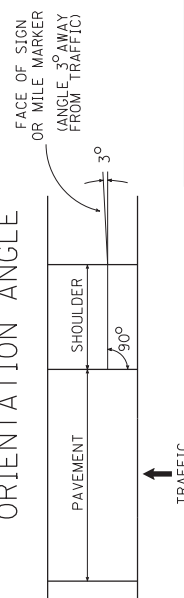
RURAL APPLICATIONS



NOTE: SHOULD A SIGN BE LOCATED AT A POINT WHERE GUARDRAIL IS CALLED FOR OR EXISTING, ALL SIGN SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL AND LATERAL OFFSET SHALL BE MEASURED FROM THE GUARDRAIL.

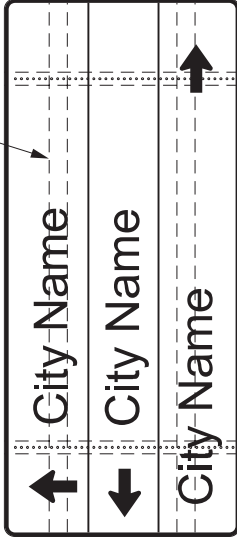
1) NOT TO EXCEED 8' IN URBAN AREAS AND 6' IN RURAL AREAS UNLESS SPECIFIED BY THE ENGINEER

ORIENTATION ANGLE



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SEE SHEETING SIGN DETAIL
SHEET 2 OF 2 FOR BRACING
REQUIREMENTS



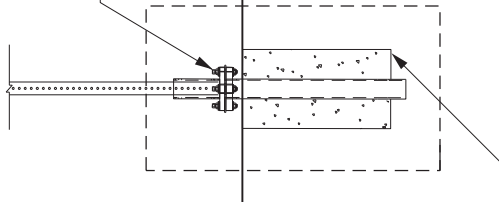
NOTE: SEE SIGN DETAIL
SHEETS FOR QUANTITY,
LENGTH, SIZE AND GAUGE
OF TYPE I POSTS

PLAN VIEW
NOT TO SCALE

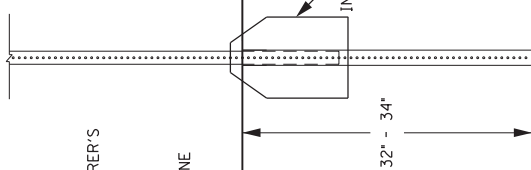
PLAN VIEW
NOT TO SCALE



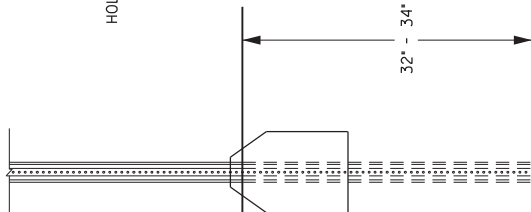
PLAN VIEW
NOT TO SCALE



TYPE I
SQUARE TUBING POST
WITH TYPE "D" SUPPORT



TYPE I
SQUARE TUBING POST
WITH SOIL STABILIZER



TYPE II
CHANNEL POST
WITH SOIL STABILIZER

FOR SIGN INSTALLATIONS,
NOT EMBEDDED IN CONCRETE,
INSTALL SOIL STABILIZING PLATE
ON BACKSIDE OF POST FROM
TRAFFIC FLOW

SEE MANUFACTURER'S
SPECIFICATIONS

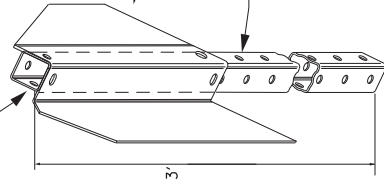
GROUND LINE

32" - 34"

32" - 34"

32" - 34"

HOLES ARE 1" ON CENTER

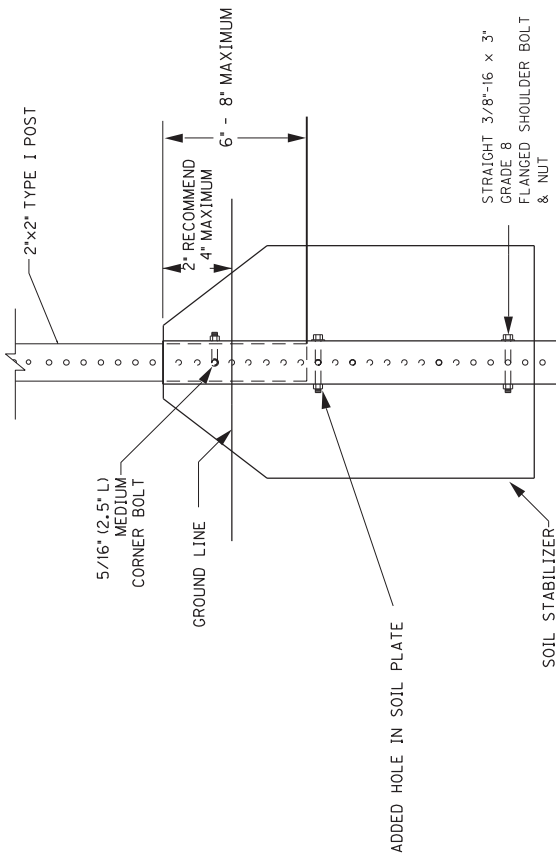


SOIL STABILIZER DETAIL
FOR TYPE I POST

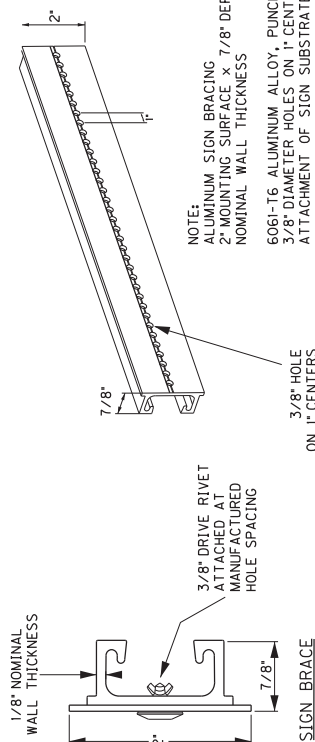
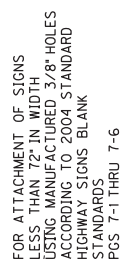
SOIL STABILIZER

TYPE I - SQUARE TUBING OR
TYPE II - CHANNEL POST

SOIL STABILIZER DETAIL



PLAN VIEW
NOT TO SCALE



NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE x 7/8" DEPTH x 1/8"
NOMINAL WALL THICKNESS
6061-T6 ALUMINUM ALLOY, PUNCHED WITH
3/8" DIAMETER HOLES ON 1" CENTERS FOR
ATTACHMENT OF SIGN SUBSTRATE
USING 3/8" DRIVE RIVETS

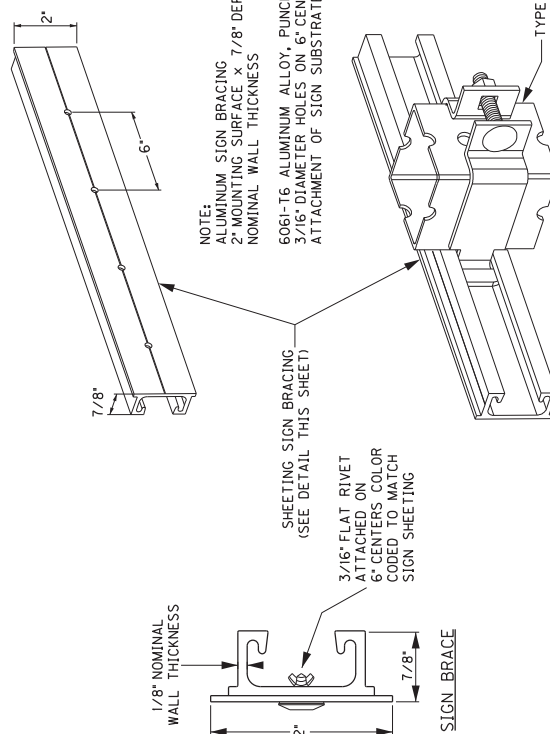
SIGN BRACE
3/8" HOLE
ON 1" CENTERS

POST

SQUARE POST CLAMP & BRACE

FOR ATTACHMENT OF SIGNS
GREATER THAN, OR EQUAL TO,
72" IN WIDTH.

RIVETS SHALL BE COLOR CODED
TO MATCH SHEETING IN ORDER
TO MINIMIZE GLARE FROM RIVETS

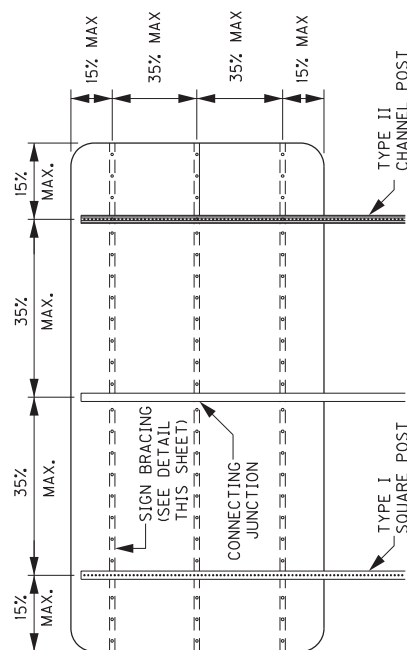


NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE x 7/8" DEPTH x 1/8"
NOMINAL WALL THICKNESS

6061-T6 ALUMINUM ALLOY, PUNCHED WITH 3/16" DIAMETER HOLES ON 6" CENTERS FOR ATTACHMENT OF SIGN SUBSTRATE USING RIVETS

3/16" FLAT RIVET
ATTACHED ON
5" CENTERS COLOR
CODED TO MATCH
SIGN SHEETING

TYPE I SQUARE TUBING SIGN SUPPORT

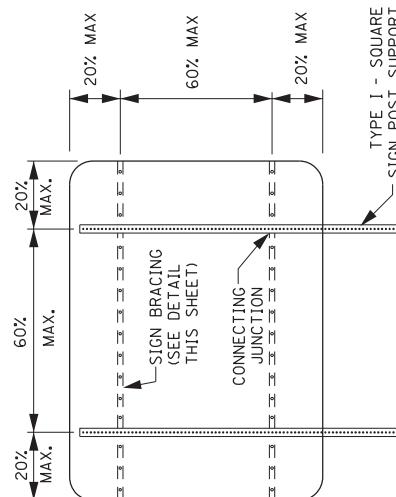


3 POST - BRACING DIAGRAM

NOTE:

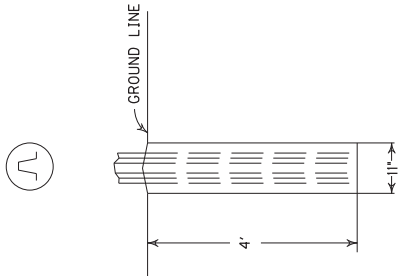
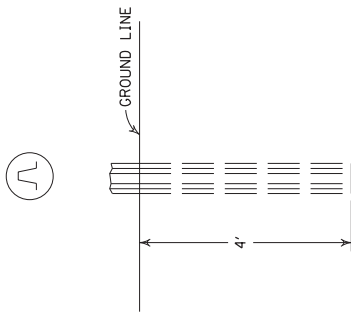
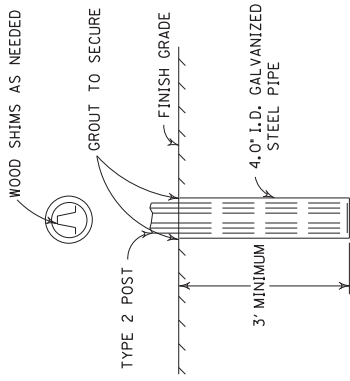
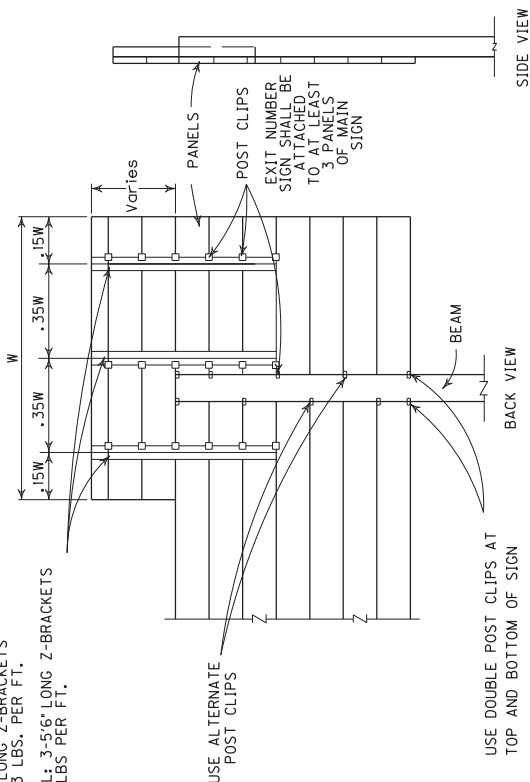
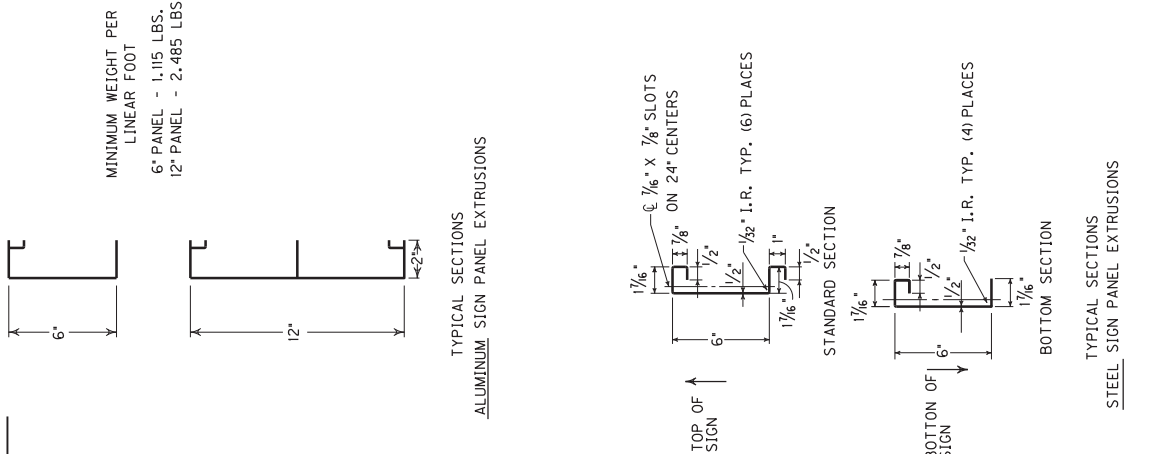
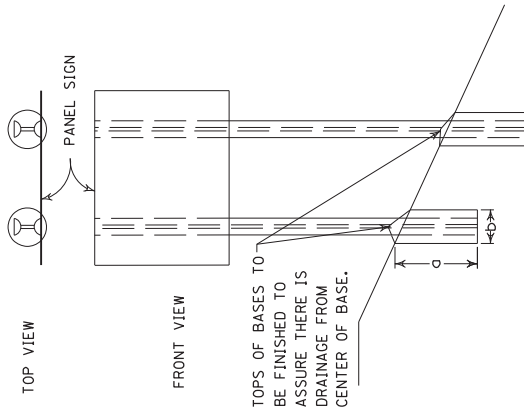
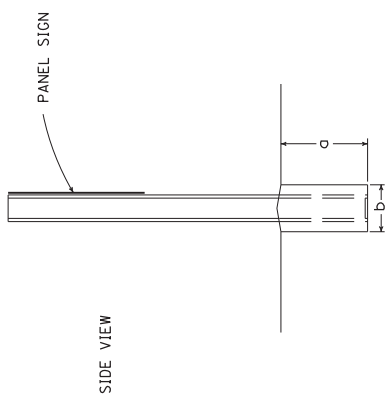
- NOTE:
1. MAXIMUM AREA
PER CONNECTING
JUNCTION = 16 SQ. FT.

2. BRACING SHOULD NOT BE SPLICED WITHIN 6" OF A BRACE TO POST JUNCTION.



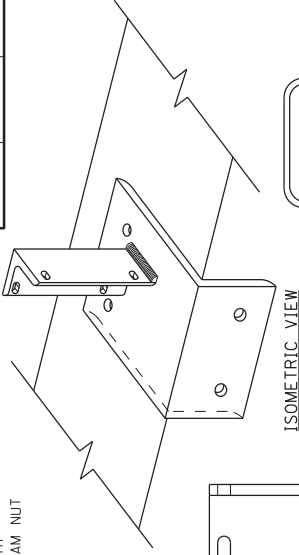
2 POST - BRACING DIAGRAM

NOTE:
USE OF SIGN BRACING NOT SHOWN ON THIS SHEET MAY BE PERMITTED
BY PROJECT ENGINEER AND/OR DISTRICT TRAFFIC ENGINEER.

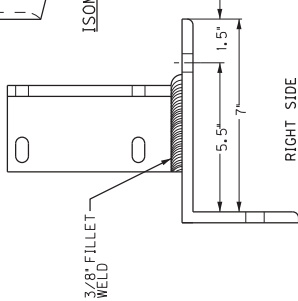
CHANNEL POST DETAILS			PANEL DETAILS		TYPICAL BEAM WITH TYPE "A" CONCRETE BASE DETAIL
TYPE "B" CONCRETE BASE	TYPE "C" DRIVEN BASE	TYPE "D" PIPE BASE			
					
DETAIL FOR EXIT NUMBER SIGN ATTACHMENT AND TYPICAL POST CLIP ARRANGEMENT					
<p>ALUMINUM: 3-5'6" LONG Z-BRACKETS 3" X 2 7/8" @ 2.33 LBS. PER FT. OR GALVANIZED STEEL: 3-5'6" LONG Z-BRACKETS 3" X 2 7/8" @ 6.7 LBS PER FT.</p>  <p>USE ALTERNATE POST CLIPS</p> <p>USE DOUBLE POST CLIPS AT TOP AND BOTTOM OF SIGN</p> <p>NOTE: THE COST FOR ATTACHING AN EXIT NUMBER SIGN SHALL BE INCLUDED IN THE BID ITEM FOR SIGN BASE MATERIAL FOR PANEL SIGNS AND SHALL INCLUDE ALL Z-BRACKETS AND HARDWARE. THE EXIT NUMBER SIGN SHALL BE INSTALLED OVER THE LEFT OR RIGHT SIDE OF THE SIGN AS SHOWN ON THE PLANS.</p>			<p>MINIMUM WEIGHT PER LINEAR FOOT 6" PANEL - 1.115 LBS. 12" PANEL - 2.485 LBS.</p>  <p>TYPICAL SECTIONS ALUMINUM SIGN PANEL EXTRUSIONS</p> <p>TYPICAL SECTIONS STEEL SIGN PANEL EXTRUSIONS</p>		 <p>TOP VIEW</p> <p>FRONT VIEW</p> <p>TOPS OF BASES TO BE FINISHED TO ASSURE THERE IS DRAINAGE FROM CENTER OF BASE.</p> <p>NOTE: SHOULD THE CONTRACTOR OVERDRILL THE HOLE, EXTRA CONCRETE WILL BE AT THE CONTRACTOR'S EXPENSE. PAYMENT WILL BE DETERMINED BY THE "O" DIMENSION.</p>  <p>SIDE VIEW</p> <p>PANEL SIGN</p>

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USE 5/16" LARGE CORNER BOLT
FOR 3" ANCHOR WITH
WASHERS & HEX-JAM NUT



ISOMETRIC VIEW

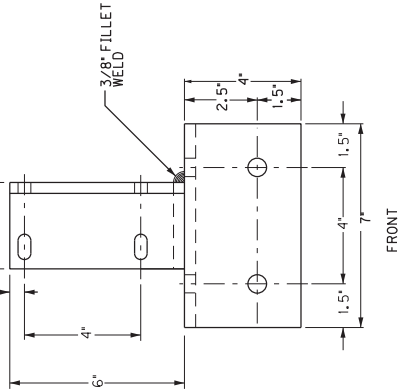


RIGHT SIDE

3/8" FILLET
WELD



3/8" FILLET
WELD



FRONT

NOTES:
ALL ROUND HOLES 5/8" Ø AND ALL OBLONG
HOLES ARE 7/16" X 7/8".

ALL HARDWARE SHALL BE GALVANIZED STEEL
OR STAINLESS STEEL AS SPECIFIED.

ALL WORK AND MATERIALS SHALL BE IN
ACCORDANCE WITH STANDARD SPECIFICATIONS.

ATTACH TO BARRIER WALL USING 1/2" X 13 TPI
GRADE 8 BOLTS WITH CONCRETE ANCHOR.

IF GALVANIZE COATING IS DAMAGED, TREAT
WITH COLD GALVANIZING COMPOUND SPRAY.

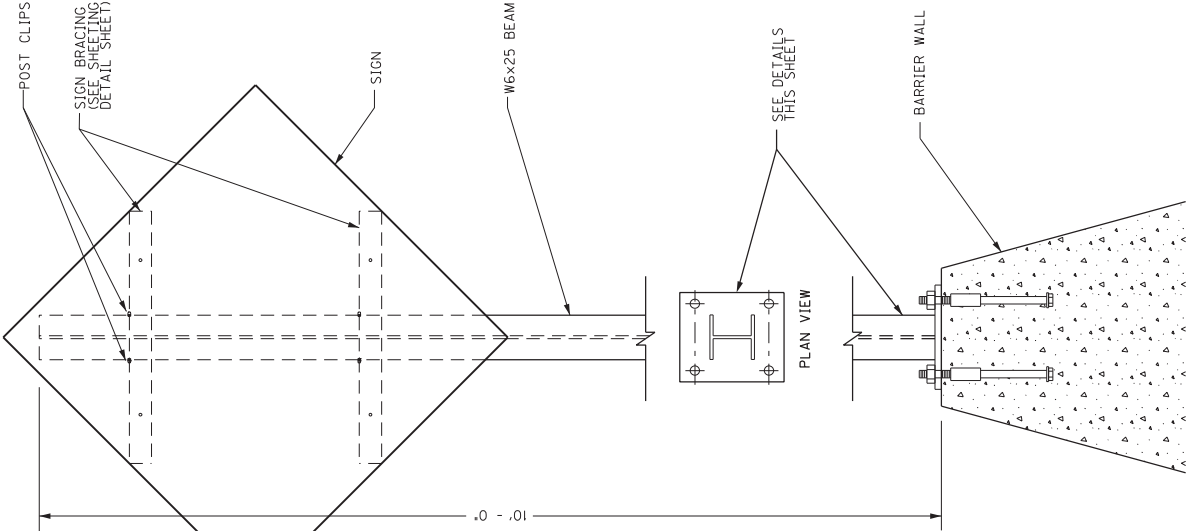
**BARRIER MOUNTING BRACKET
WITH ENHANCED REFERENCE**

LOCATION SIGN

(BLUE BACKGROUND)

MATERIALS:
ASTM A36 STRUCTURAL ANGLE,
3/8" THICK WITH 3/8" FILLET WELD.

BARRIER WALL MOUNTING DETAILS



PLAN VIEW

POST CLIPS
SIGN BRACING
(SEE SHEETING
DETAIL SHEET)

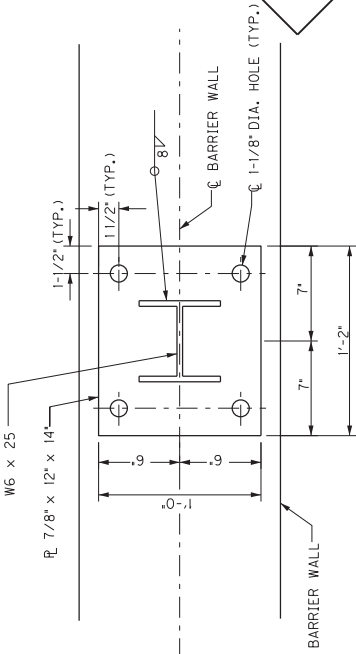
SIGN

W6x25 BEAM

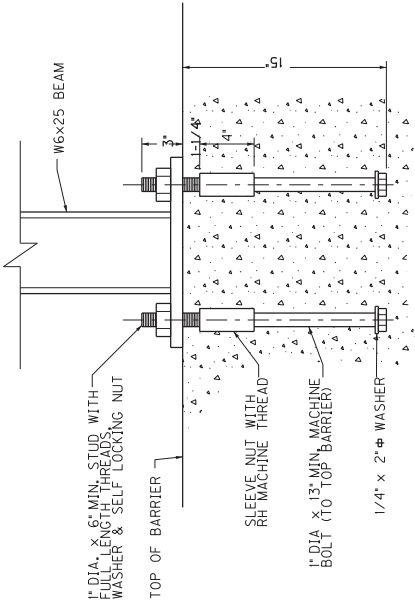
SEE DETAILS
THIS SHEET

BARRIER WALL

BARRIER WALL POST



PLAN VIEW DETAIL



ANCHOR DETAIL

GENERAL NOTES:
POST CLIPS, BRACKETS AND SIGN TO BE CAPABLE OF SUSTAINING 20 LBS.
PER SQUARE FOOT OF SIGN AREA.

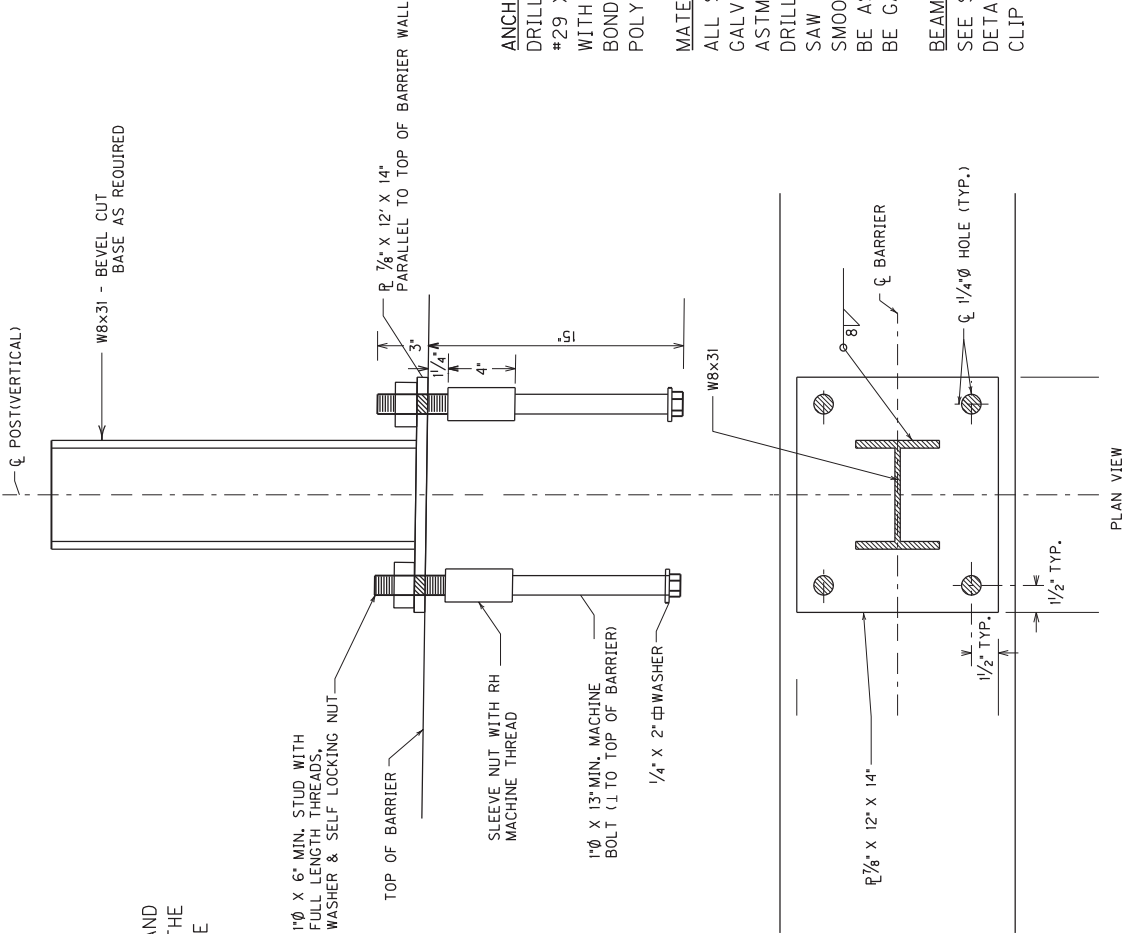
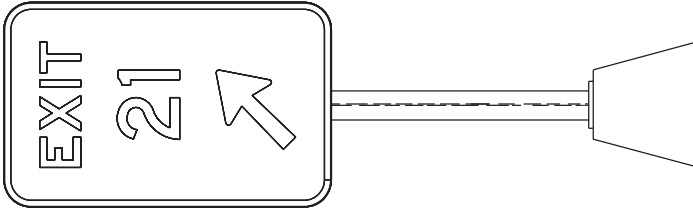
THE COST FOR MAKING THE WALL POST AND ANY HARDWARE REQUIRED TO
COMPLETE THE INSTALLATION SHALL BE INCLUDED IN THE COST OF
BARRIER WALL POST.

ANCHOR ALTERNATIVES:
DRILL 1-3/8" Ø X 14" HOLE FOR #8 X 16" REINFORCING BAR WITH 1" X 4"
MACHINE THREADS. BOND ANCHORS IN HOLE WITH POLYESTER RESIN.

MATERIAL SPECIFICATIONS:
ALL STEEL TO BE FROM ASTM A572. ALL HOLES SHALL BE DRILLED.
PLATE CUTS SHALL BE SAW CUT AND ALL EDGES GROUND SMOOTH.
BOLT MATERIALS SHALL BE ASTM A307 OR EQUIVALENT AND
BE GALVANIZED. GALVANIZE AFTER FABRICATION PER ASTM A123.

COUNTY OF	ITEM NO.	SHEET NO.
LAUREL ROCKCASTLE	11-20013.00 8-20003.00	1009

THE COST FOR MAKING THE WALL POST AND ANY HARDWARE REQUIRED TO COMPLETE THE INSTALLATION SHALL BE INCLUDED IN THE COST OF BARRIER WALL POST.









ANCHOR ALTERNATIVES
DRILL 1 3/8"Ø X 14" HOLE FOR #29 X 16" REINFORCING BAR WITH 1" X 4" MACHINE THREADS. BOND ANCHORS IN HOLE WITH POLYESTER RESIN.

MATERIAL SPECIFICATIONS
ALL STEEL TO BE FROM ASTM A572. GALVANIZE AFTER FABRICATION PER ASTM A123. ALL HOLES SHALL BE DRILLED. PLATE CUTS SHALL BE SAW CUT AND ALL EDGES GROUND SMOOTH. BOLT MATERIALS SHALL BE ASTM A307 OR EQUIVALENT AND BE GALVANIZED.





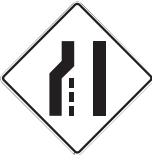
BEAM ATTACHMENT
SEE SIGNING MISCELLANEOUS DETAIL SHEET FOR THE POST CLIP ARRANGEMENT.

DETAIL FOR BARRIER WALL POST


COUNTY OF	ITEM NO.
ROCKCASTLE	8-20003.00

SIGN/SIGN ASSEMBLY NUMBER	SIZES IN INCHES		MESSAGES	SPECIFICATION	SIGN LOCATION				
	HORIZ.	VERT.			SIDE OF ROAD	FACING TRAFFIC TRAVELING	ON ROAD	AT STATION (APPROXIMATE)	AT MILE (APPROXIMATE)
S-01	48"	48"		W4-2	RIGHT	NORTH	I-75	447+08	54.31
				BARCODES (I)					
S-02	48"	48"		W8-5	RIGHT	NORTH	I-75	326+05	52.02
				BARCODES (I)	MEDIAN	NORTH	I-75	326+05	52.02
					MEDIAN	SOUTH	I-75	436+07	54.10
					LEFT	SOUTH	I-75	436+07	54.10
S-03	54"	60"		D17-2	RIGHT	NORTH	I-75	347+00	52.41
				BARCODES (I)					
S-04	48"	60"		R4-5	RIGHT	NORTH	I-75	352+00	52.51
				BARCODES (I)					
S-05	48"	48"		XXXX	RIGHT	NORTH	I-75	436+07	54.10
				BARCODES (I)	MEDIAN	NORTH	I-75	436+07	54.10
S-06	48"	48"		W9-1	RIGHT	NORTH	I-75	441+37	54.20
				BARCODES (I)					
							SHEETING SIGN DETAIL SHEET SHEET 1 OF 3		

COUNTY OF	ITEM NO.
ROCKCASTLE	8-20003.00

SIGN/SIGN ASSEMBLY NUMBER	SIZES IN INCHES		MESSAGES	SPECIFICATION	SIGN LOCATION				
	HORIZ.	VERT.			SIDE OF ROAD	FACING TRAFFIC TRAVELING	ON ROAD	AT STATION (APPROXIMATE)	AT MILE (APPROXIMATE)
S-07	48"	48"		W8-22	MEDIAN	SOUTH	1-75	440+05	54.17
	30"	12"		W16-3aP					
				BARCODES (2)					
S-08	48"	48"		W7-1	MEDIAN	SOUTH	1-75	447+08	54.31
				BARCODES (1)	LEFT	SOUTH	1-75	447+08	54.31
S-10	48"	48"		EXISTING SIGN	MEDIAN	NORTH	1-75	473+00	54.80
				DO NOT DISTURB					
S-11				EXISTING SIGN	MEDIAN	NORTH	1-75	462+00	54.59
				DO NOT DISTURB					
S-12				EXISTING SIGN	MEDIAN	NORTH	1-75	447+50	54.88
				DO NOT DISTURB	RIGHT	NORTH	1-75	447+50	54.88
S-									

COUNTY OF	ITEM NO.
LAUREL	II-20013.00

SIGN/SIGN ASSEMBLY NUMBER	SIZES IN INCHES		MESSAGES	SPECIFICATION	SIGN LOCATION				
	HORIZ.	VERT.			SIDE OF ROAD	FACING TRAFFIC TRAVELING	ON ROAD	AT STATION (APPROXIMATE)	AT MILE (APPROXIMATE)
S-01	48"	48"		W8-13	RIGHT	NORTH	I-75	249+20	50.56
				BARCODES (I)					
S-02	48"	60"		R4-3	LEFT	SOUTH	I-75	252+00	50.61
				BARCODES (I)					
S-									
S-									
S-									
S-									

**TRAFFIC CONTROL PLAN
I-75 – LAUREL AND ROCKCASTLE
PAGE 1 OF 5**

TRAFFIC CONTROL GENERAL

Except as provided herein, maintain and control traffic in accordance with the 2012 Standard Specifications and the Standard Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic". All lane closures used on the project will be in compliance with the appropriate Standard Drawings. Do NOT use cones for lane closures or shoulder closures.

Contrary to Section 106.01, traffic control devices used on this project may be new or used in like-new condition at the beginning of the work and maintained in like-new condition until completion of the work. Traffic Control Devices will conform to current MUTCD.

Reduce the speed limit in work areas to 55 miles per hour and establish double fines for work zone speeding violations. The extent of these areas within the project limits will be restricted to the proximity of actual work areas as determined by the Engineer. Notify the Engineer a minimum of 12 hours prior to using the double fine signs. At the beginning of the work zone, the "WARNING FINE DOUBLED IN WORK ZONE" signs will be dual mounted. At the end of the work zone, the "END DOUBLE FINE" signs will be dual mounted as well. Remove or cover the signs when the highway work zone does not have workers present for more than a two-hour period of time. Payment for the signs will be at the unit bid price for signs erected. Any relocation or covering of signs will be incidental to Maintain and Control Traffic.

Night work may be required on this project. Work schedule shall be coordinated with on-going construction. Obtain approval from the Engineer for the method of lighting prior to its use.

PROJECT PHASING AND CONSTRUCTION PROCEDURES

The contractor shall maintain a minimum of two, eleven foot lanes in each direction.

Traffic may be reduced to one lane each direction for the construction of pavement subsurface drainage outlets. Traffic shall only be reduced to one lane each direction Sunday night through Friday morning at night, between 7:00 PM and 7:00 AM or as directed by the engineer.

Use a lane closure all times when work is performed in the lane or adjacent shoulder. Shoulders are NOT to be used as temporary travel lanes unless otherwise directed or approved by the Engineer. If shoulders are utilized, perform any maintenance of the shoulder as deemed necessary by the Engineer to maintain traffic. All removal of existing striping shall be by water blasting, unless otherwise directed by the Engineer, and this work shall be considered incidental to "Maintain and Control Traffic." Remove edge lines as necessary and approved by the Engineer throughout the project. Paint temporary edge lines through the lane closure.

All pavement edge transitions must be smooth and level before opening lanes up to traffic. A lane closure must be in place during all times that pavement edge drop-offs are present (see Pavement Edge Drop-off note).

The Engineer will determine exact locations of pavement repair, if any, at the time of construction. Once milling of pavement at a repair location has begun, work continuously within the parameters outlined above to complete the work and eliminate the "hole". Place Type III Barricades immediately in front of pavement repair areas. Once pavement removal at a site has begun, full depth replacement must be completed within the time a lane closure is allowed.

Note that lane shifts are required throughout the project. Stripe according to the Standard Drawings and MUTCD.

The contractor must notify the Engineer at least fourteen (14) days prior to beginning construction in either direction.

**TRAFFIC CONTROL PLAN
I-75 – LAUREL AND ROCKCASTLE
PAGE 2 OF 5**

PHASE 1

Shift traffic to the two outside lanes and shoulders as needed, as directed by the Engineer. Maintain two 11' lanes in each direction. Close the inside lane and shoulder to traffic. Mill existing inside lanes and shoulders. Once the pavement has been removed, the Contractor must work continuously until the pavement has been replaced back to existing grade.

PHASE 2

Shift traffic to the inside lane and shoulder. Maintain two 11' lanes in each direction. Mill existing outside lane(s) and shoulder. Once the pavement has been removed, the Contractor must work continuously until the pavement has been replaced back to existing grade.

PHASE 3

Place permanent striping and markers using temporary lane closures as directed by the Engineer. Construct guardrail, guardrail end treatments, and bridge end connectors. Final striping and guardrail may be placed during closures for milling and paving, as directed by the Engineer.

LANE CLOSURES

Limit the lengths of lane closures to only that needed for actual operations in accordance with the phasing specified herein, or as directed by the Engineer. Limit lane closures to allow a minimum of two lanes open per direction at any given time except for Pavement subsurface drainage construction. Traffic may be reduced to one lane each direction for Pavement Subsurface Drainage construction. Traffic shall only be reduced to one lane each direction Sunday night through Friday morning at night, between 7:00 PM and 7:00 AM or as directed by the Engineer.

Other than the holidays listed in the 2012 Standard Specifications, the Engineer may specify additional days and hours when lane closures are not allowed. See "Special Note for Fixed Completion Date And Liquidated Damages" for disincentive fees.

Do not leave lane closures in place during non-working hours or prohibited periods.

Contrary to Section 112, lane closures will NOT be measured for payment, but are considered incidental to Maintain and Control Traffic.

SIGNS

Additional traffic control signs in addition to normal lane closure signing detailed on the Standard Drawings may be required by the Engineer. Additional signs needed for lane closures may include, but are not limited to, dual mounted TRUCKS USE LEFT/RIGHT LANE, LEFT/RIGHT LANE CLOSED 1 MILE, LEFT/RIGHT LANE CLOSED 2 MILES, LEFT/RIGHT LANE CLOSED 3 MILES, SLOWED/STOPPED TRAFFIC AHEAD. Signage for reduced speed limits and double fine work zones will be furnished, relocated, and maintained by the Contractor.

Contrary to Section 112, individual signs will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for damaged signs or signs directed to be replaced by the Engineer due to poor legibility or reflectivity will not be measured for payment.

**TRAFFIC CONTROL PLAN
I-75 – LAUREL AND ROCKCASTLE
PAGE 3 OF 5**

A quantity of signs has been included for lane shifts, "Roadwork Ahead" signs on entrance ramps, and extra Double Fine signs and Speed Limit signs between interchanges to be paid only once no matter how many times they are moved or relocated.

Traffic control signs in addition to normal lane closure signing detailed in the Standard Drawings may be required by the Engineer.

FLASHING ARROWS

Flashing arrows will be paid for once, no matter how many times they are moved or relocated. The Department WILL NOT take possession of the flashing arrows upon completion of the work.

PORTABLE CHANGEABLE MESSAGE SIGNS

Provide portable changeable message signs in advance of and within the project at locations to be determined by the Engineer. If work is in progress concurrently in both directions provide additional portable changeable message signs. Place portable changeable message signs one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens relocate or provide additional portable changeable message signs so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. The locations designated may vary as the work progresses. The messages required to be provided will be designated by the Engineer. The portable changeable message signs will be in operation always. In the event of damage or mechanical/electrical failure, the Contractor will repair or replace the Portable Changeable Message Sign immediately. Portable Changeable Message Signs will be paid for once, no matter how many times they are moved or relocated. The Department WILL NOT take possession of the signs upon completion of the work.

BARRELS

Barrels are to be used for channelization or delineation and will be incidental to "MAINTAIN AND CONTROL TRAFFIC" according to Section 112.04.01. Replacements for damaged barrels directed by the Engineer to be replaced due to poor condition or reflectivity will not be measured for payment.

TRUCK MOUNTED ATTENUATORS

Furnish and install MUTCD approved Truck Mounted Attenuators (TMAs) in advance of work areas when workers are present less than 12 feet from traffic. If there is less than 500 feet between work sites, only a single TMA will be required at a location directed by the Engineer. Locate the TMAs at the individual work sites and move them as the work zone moves within the project limits. All details of the TMA installations shall be approved by the Engineer. TMAs will not be measured for payment but are incidental to Maintain and Control Traffic. The Department WILL NOT take possession of the TMAs upon completion of the work.

PAVEMENT MARKINGS

If lane closures are in place during nighttime hours, remove or cover the lenses of raised pavement markers that do not conform to the traffic control scheme in use, or as directed by the Engineer. Replace or uncover lenses before a closed lane is reopened to traffic. No direct payment will be made for removing and replacing or covering and uncovering the lenses but will be incidental to "Maintain and Control Traffic".

Place temporary and permanent striping in accordance with Section 112 and Section 714, except that:

**TRAFFIC CONTROL PLAN
I-75 – LAUREL AND ROCKCASTLE
PAGE 4 OF 5**

1. Temporary and permanent striping will be 6" in width;
2. If the Contractor's operations or phasing requires temporary markings which must be subsequently removed from the ultimate pavement, an approved removable lane tape will be used; however removable tape will be measured and paid as Pavement Striping-Temporary Paint 6";
3. Edge lines will be required for temporary striping;
4. Existing, temporary, or permanent striping will be in place before a lane is opened to traffic;
5. Place permanent striping on pavement within the project limits; and
6. Permanent striping will be Extruded Thermoplastic Marking.
7. Northbound lanes from MP 50.705 to MP 55.300 shall be grooved all weather pavement marking. See "Special Note for Grooved All Weather Pavement Marking".

Should the Contractor change the existing striping pattern, the Contractor is to restripe the roadway back to its original configuration within the time allotted for a lane closure.

Removal of existing and temporary striping shall be incidental to "Maintain and Control Traffic".

BARRICADES

Barricades used for channelization or delineation will be incidental to Maintain and Control Traffic according to Section 112.04.01. Barricades used to protect pavement removal/repair areas will be bid as each according to Section 112.04.04. Individual barricades will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for damaged barricades or barricades directed to be replaced by the Engineer due to poor legibility or reflectivity will not be measured for payment.

PAVEMENT EDGE DROP-OFFS

Pavement edge drop-offs will be protected by a lane or shoulder closure. Lane closures will be protected with barrels, vertical panels, or barricades as shown on the Standard Drawings.

A pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation shall not have an elevation difference greater than 1 ½". Place warning signs (MUTCD W8-11 or W8-9A) in advance of and at 1500' intervals throughout the drop-off area. Dual posting on both sides of the traveled way shall be required. Pavement edges that traffic is not expected to cross, except accidentally, shall be treated as follows:

- Less than 2" – Protect with a lane closure.
- 2" to 4" – Protect with a lane closure. Place barrels, vertical panels, or barricades every 50 feet. Traffic cones may not be used in place of barrels, panels, and barricades at any time. Construct a wedge with compacted cuttings from milling, trenching, or asphalt mixtures with a 3:1 or flatter slope, when work is not active in the drop-off area. Place Type III Barricades at the beginning of the lane closures, and place additional Type III Barricades spaced at 2,500 feet during the time the lane closure is in place.
- Guardrail Installation – Guardrail will be removed at the last practical moment and replaced as soon as the placement of asphalt in an area requiring guardrail is complete.

**TRAFFIC CONTROL PLAN
I-75 – LAUREL AND ROCKCASTLE
PAGE 5 OF 5**

All areas from which guardrail is removed shall be protected by a shoulder closure or other method approved by the Engineer until the new guardrail is installed.

TRAFFIC COORDINATOR

Designate an employee to be Traffic Coordinator. The designated Traffic Coordinator must be certified by an agency qualified for training in this area. The Traffic Coordinator will inspect the project maintenance of traffic once every two hours during the Contractor's operations and at any time a lane closure is in place. The Traffic Coordinator will report all incidents throughout the work zone to the Engineer on the project. The Contractor will furnish the name and telephone number where the Traffic Coordinator can be contacted always.

During any period when a lane closure is in place, the Traffic Coordinator will arrange for personnel to be present on the project always to inspect the traffic control, maintain the signing and devices, and relocate portable changeable message boards as queue lengths change. The personnel will have access on the project to a radio or telephone to be used in case of emergencies or accidents.

This project is designated as a Significant Project in accordance with Section 112.03.03 of the Kentucky Standard Specifications.

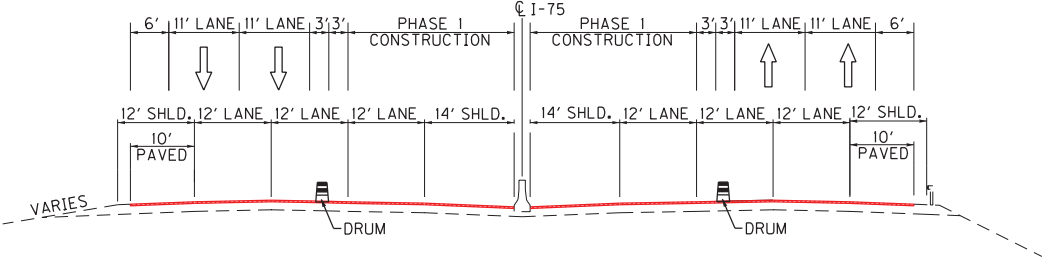
COORDINATION OF WORK

The Contractor is advised that other projects may be in progress within or in the near vicinity of this project. The traffic control of those projects may affect this project and the traffic control of this project may affect those projects. The Contractor will coordinate the work on this project with the work of the other Contractors. In case of conflict, the Engineer will determine the relative priority to give to work phasing on the various projects.

CONTRACTOR'S AND CONTRACTOR'S EMPLOYEES' VEHICLES

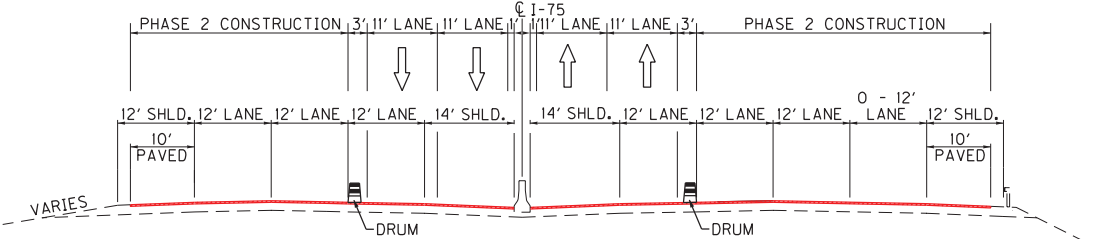
Do not use or allow employees to use median crossovers at any time except when inside lanes are closed for construction. In all other phases of construction, change vehicular direction of travel only at interchanges.

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS



PHASE 1 CONSTRUCTION

TEMPORARY STRIPING SHALL BE PLACED AND EXISTING STRIPING REMOVED BEFORE PHASE 1 CONSTRUCTION BEGINS
NOTE: WHEN TRUCK CLIMBING LANE IS PRESENT, TRAFFIC SHALL BE SHIFTED INTO THE TWO OUTSIDE LANES IN THE NORTHBOUND DIRECTION



PHASE 2 CONSTRUCTION

TEMPORARY STRIPING SHALL BE PLACED AND PHASE 1 STRIPING REMOVED BEFORE PHASE 2 CONSTRUCTION BEGINS

SPECIAL NOTE FOR ASPHALT MILLING AND TEXTURING

Begin paving operations immediately after the commencement of the asphalt milling operation. Continue paving operations continuously until completed. Do not allow public traffic to drive on the milled surface. If paving operations are not begun within this time period, liquidated damages will be assessed at the rate prescribed by Section 108.09 of the current Standard Specifications until such time as paving operations are begun.

Removal of the existing pavement markers prior to the milling operation is considered incidental to the bid item "Asphalt Pavement Milling and Texturing".

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

The dimensions shown on the typical sections for pavement and shoulder widths are nominal or typical dimensions. The actual dimensions to be constructed or diamond ground may be varied to fit existing conditions as directed or approved by the Engineer. It is not intended that existing pavement or shoulders be widened unless specified elsewhere in the Proposal.

I-75 - LAUREL AND ROCKCASTLE
SPECIAL NOTES

SPECIAL NOTE FOR BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

Special Note for Fixed Completion Date And Liquidated Damages

This project will have a fixed completion date of **October 01, 2019** for completion of all work associated with this project.

Liquidated damages per the Standard Specifications will be charged for each calendar day for any work completed after October 01, 2019

In addition to the Liquidated Damages specified in Section 108.09, Liquidated Damages in the following amount will be charged when a lane closure remains in place during the prohibited period outlined in the Traffic Control Plan:

\$1,000 per hour or fraction thereof

Contrary to Section 108.09 of the Standard Specifications, Liquidated Damages per the Standard Specifications will be charge during the months of December through March for all work that is not completed.

I. DESCRIPTION

Except as provided herein, perform all work in accordance with the Department's Standard and Supplemental Specifications and applicable Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications. This work shall consist of:

- (1) Maintain and Control Traffic; and (2) Furnish and install Inlaid Pavement Markers (IPMs) in recessed grooves; and (3) Any other work as specified by these notes and the Contract.

II. MATERIALS

The Department will sample all materials in accordance with the Department's Sampling Manual. Make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

- A. **Maintain and Control Traffic.** See Traffic Control Plan.
- B. **Markers.** Provide reflective lenses with depth control breakaway positioning tabs. Before furnishing the markers, provide to the Engineer the manufacturer’s current recommendations for adhesives and installation procedures. Use one brand and design throughout the project. Use markers meeting the specifications in the table below

SPECIFICATIONS FOR HOUSING AND REFLECTOR	
Material:	Polycarbonate Plastic
Weight:	Housing 2.00 oz.
	Reflector 2.00oz.
Housing Size:	5.00" x 3.00" x 0.70" high
Specific Intensity of Reflectivity at 0.2° Observation Angle	
White:	3.0 at 0°entrance angle
	1.2 at 20°entrance angle
Yellow:	60% of white values
Red:	25% of white values

- C. **Adhesives.** Use adhesives that conform to the manufacturer’s recommendations.

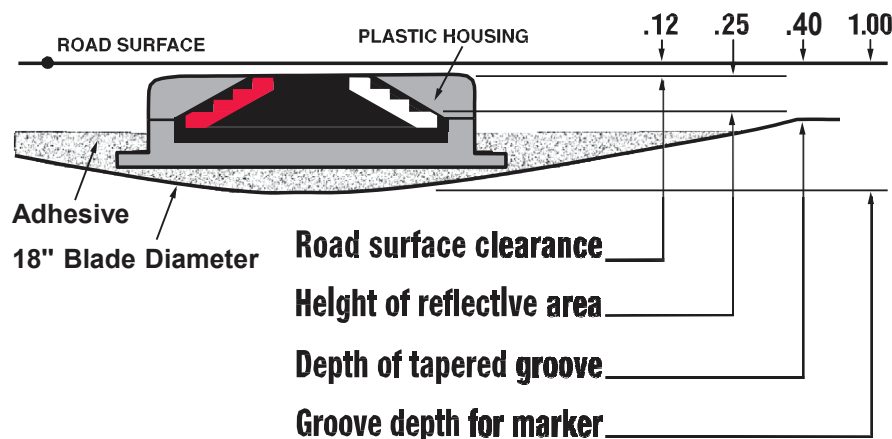
III. CONSTRUCTION

A. Experimental Evaluation. The University of Kentucky Transportation Center will be evaluating this installation of IPMs. Notify the Engineer a minimum of 14 calendar days prior to beginning work. The Engineer will coordinate the University's activities with the Contractor's work.

B. Maintain and Control Traffic. See Traffic Control Plan.

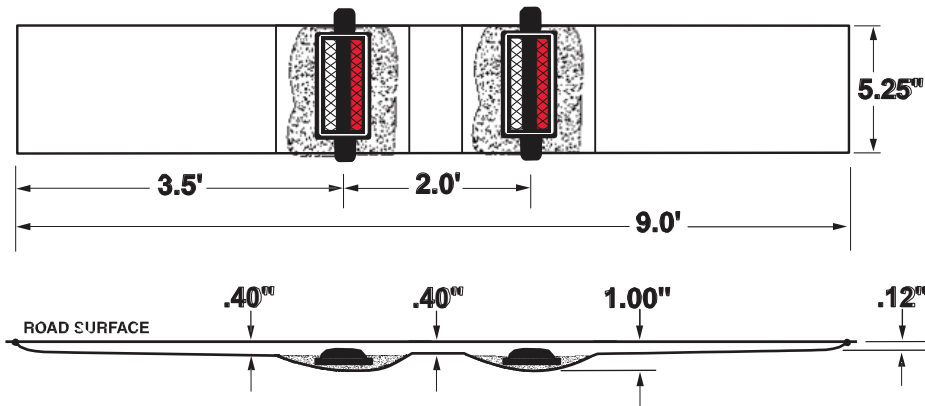
C. Installation. Install IPMs in recessed grooves cut into the final course of asphalt pavement according to the manufacturer's recommendations. Do not cut the grooves until the pavement has cured sufficiently to prevent tearing or raveling. Cut installation grooves using diamond blades on saws that accurately control groove dimensions. Remove all dirt, grease, oil, loose or unsound layers, and any other material from the marker area which would reduce the bond of the adhesive. Maintain pavement surfaces in a clean condition until placing markers.

Prepare the pavement surfaces and install the markers in the recessed groove according to the drawing below. Use an approved snowplowable epoxy adhesive. Ensure that the adhesive bed area is equal to the bottom area of the marker and apply adhesive in sufficient quantity to force excess out around the entire perimeter of the marker. Use materials, equipment, and construction procedures that ensure proper adhesion of the markers to the pavement surface according to the manufacturer's recommendations. Remove all excess adhesive from in front of the reflective faces. If any adhesive or foreign matter cannot be removed from the reflective faces, or if any marker fails to properly adhere to the pavement surface, remove and replace the marker at no additional cost to the Department.



D. Location and Spacing. Install the markers in the pattern for high reflectivity with two (2) IPMs per groove. Locate and space markers as shown in the current standard drawings or sepias (note: use Inlaid Pavement Markers wherever Type V Pavement Markers are called for). Do not install markers on bridge decks. Do not install a marker on top of a pavement joint or crack. Offset the recessed groove a minimum of 2 inches from any longitudinal pavement joint or crack and at least one inch from the painted stripe, ensuring that the finished line of markers is straight

with minimal lateral deviation. Give preference to maintaining the 2-inch offset between recessed groove and joint as opposed to keeping the line of markers straight.



Place inlaid markers as much in line with existing pavement striping as possible. Place markers installed along an edge line or channelizing line so that the near edge of the plastic housing is no more than one inch from the near edge of the line. Place markers installed along a lane line between and in line with the dashes. Do not place markers over the lines except where the lines deviate visibly from their correct alignment, and then only after obtaining the Engineer's prior approval of the location.

If conflicts between recessed groove placement in relation to pavement joint and striping cannot be resolved, obtain the Engineer's approval to eliminate the marker or revise the alignment.

- E. **Disposal of Waste.** Dispose of all removed asphalt pavement, debris, and other waste at sites off the right of way obtained by the Contractor at no additional cost to the Department. See Special Note for waste and Borrow.
- F. **Restoration.** Be responsible for all damage to public and/or private property resulting from the work. Restore all damaged features in like kind materials and design at no additional cost to the Department.
- G. **On-Site Inspection.** Make a thorough inspection of the site prior to submitting a bid and be thoroughly familiar with existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid as evidence of this inspection having been made and will not honor any claims for money or grant Contract time extensions resulting from site conditions.
- H. **Caution.** Do not take information shown on the drawings and in this proposal and the types and quantities of work listed as an accurate or complete evaluation of the material and conditions to be encountered during construction, but consider the types and quantities of work listed as approximate only. The bidder must draw his own conclusion as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional

compensation or extension of Contract time if the conditions encountered are not in accordance with the information shown.

IV. MEASUREMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

- B.** “INLAID PAYMENT MARKER” shall be measured as each. One (1) installation of “INLAID PAVEMENT MARKER” will consist of grooving the pavement, removing asphalt cuttings and debris, preheating pavement to remove moisture, adhesives, and installation of two (2) markers with all lenses in accordance with this note.

Note: Each pay item of Inlaid Pavement Marker will require two markers.

V. PAYMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

- B. Inlaid Pavement Markers.** The Department will make payment for the completed and accepted quantity of completely installed “INLAID PAVEMENT MARKERS” at the Contract unit price, each. Accept payment as full compensation for all labor, equipment, materials, and incidentals to accomplish this work to the satisfaction of the Engineer. A system of one (1) groove and two (2) markers shall be paid as one “INLAID PAVEMENT MARKER”. The bid item “INLAID PAVEMENT MARKER” shall be used regardless of the color and type of lenses required.

I-75 - LAUREL AND ROCKCASTLE
SPECIAL NOTES
SPECIAL NOTE FOR SMA SURFACE

Contrary to section 412.02.04 of the Standard Specifications the Department will require no rap and/or shingles in the SMA asphalt mixture.

SPECIAL NOTE FOR GROOVED ALL WEATHER PAVEMENT MARKINGS

1. DESCRIPTION. Furnish and install a wet retroreflective pavement marking system in accordance with this special note. Project will include use of thermoplastic striping. Striping (both edge and skip lines) shall include specified elements to provide wet retroreflectivity. Lines shall be installed in a shallow groove to protect retroreflective elements.

2. THERMOPLASTIC STRIPING. Thermoplastic pavement markings shall comply with Sections 714 and 837 of the Department of Highways' Standard Specifications for Road and Bridge Construction, unless otherwise noted. Contrary to Section 714 of the Standard Specifications, thermoplastic striping shall be a minimum thickness of 100 mils. Striping shall include specified elements to provide wet retroreflectivity.

Gaps in the edge lines, as outlined in the Subsection 714.03.01 of the Standard Specifications for Road and Bridge Construction, will not be necessary since striping will be recessed below the surface.

3. WET REFLECTIVE ELEMENTS. Wet reflective beads shall be one of the following products:

- 3M Connected Roads All Weather Elements
- Potters Visimax Highway Glass Bead System

The color of the wet reflective beads shall match the color of the line being applied. Traditional and wet reflective beads shall be applied in a double-drop application of traditional glass beads and wet reflective optical elements. Contractor shall follow manufacturer's recommendations as to incorporating wet reflective elements into the striping operation. Apply traditional beads and wet reflective elements in sufficient quantities to obtain the dry retroreflectivity requirements and desired wet retroreflectivity levels. A 50/50 ratio of traditional beads to wet reflective elements is recommended, but bead distribution may be modified with the approval of the engineer, if the contractor feels that a different distribution is necessary to meet dry/wet retroreflectivity levels.

The manufacturer of the wet reflective bead shall have a factory representative on site before the contractor begins striping operations. The factory representative shall assure the engineer that the wet reflective system has been calibrated for proper application before the contractor begins. The factory representative shall remain available to periodically assure the engineer the system is being applied according to the manufacturer's recommendations. A random sample of wet reflective elements shall be provided to the Division of Materials before use on the project.

4. PLACEMENT IN GROOVE. In an attempt to protect the retroreflective elements, striping shall be installed in shallow grooves. Contractor shall follow bead manufacturer's recommendations regarding grooving applications.

Grooves shall be a minimum of 2" from any longitudinal pavement joint. The groove shall not be

installed on concrete surfaces or in other areas identified by the Engineer. The groove shall not be installed continuously for intermittent pavement markings, but only where markings are to be applied.

Grooves shall be 1 inch \pm ¼ inch wider than the pavement marking material. Groove depth shall be 150 mils \pm 5 mils, unless otherwise approved by the Engineer. Depth shall be consistent across the full width of the groove. Depth plates shall be provided by the Contractor to the Engineer to assure that desired groove depth is achieved.

Grooves that are ground deeper or wider than the specified allowable limits shall be repaired per the direction of the Engineer at no additional cost. Grooves that are ground too shallow, too narrow, or with unacceptable rises between blade cuts shall be reground to the correct size, depth, and surface finish at no additional cost. Slots ground out of alignment shall be patched using an approved method and materials.

Prior to cutting out the grooves for all recessed lines, the Contractor shall use a chalk line or other suitable method to layout the proposed pavement markings on the surface course so that the Engineer can inspect the locations.

Grooves shall be clean, dry and free of laitance, oil, dirt, grease, paint or other foreign contaminants. If water is used to clean the groove or the grooving process takes place during rainfall, a minimum of 24 hours of dry time is required prior to the placement of pavement markings.

After the depth, width, length, and surface condition has been approved by the Engineer, grooves shall be cleaned of any fine particles using high-pressure compressed air before application of the striping. The Contractor shall prevent traffic from traversing the grooves and re-clean grooves, as necessary, prior to application of pavement markings at no additional cost to the Department.

5. PAVEMENT MARKING PERFORMANCE. Pavement marking retroreflectivity performance under dry conditions will be evaluated in accordance with the Standard Specifications for Road and Bridge Construction.

The use of wet reflective elements on this project is part of a pilot effort to evaluate potential pavement marking enhancements. As a result, minimum wet retroreflectivity values have been established and will be measured. However, the wet retroreflectivity performance will not be considered as part of the acceptance and payment for pavement striping on this project.

Desired minimum wet recovery retroreflectivity requirements at the end of the proving period (Standard Specifications for Road and Bridge Construction, Section 714.03.06) are as follows:

Retroreflectivity ($\text{mcd}(\text{ft}^{-2})(\text{fc}^{-1})$) {metric equivalent $\text{mcd}(\text{m}^{-2})(\text{lux}^{-1})$ }

I-75 - LAUREL AND ROCKCASTLE
SPECIAL NOTES

	White	Yellow
Wet recovery (ASTM 2177)	250	175
Wet Continuous (ASTM E2832)	150	100

In support of wet retroreflectivity testing, samples of representative markings (both white and yellow) shall be provided on one foot sections of rigid panel (20 gauge aluminum or thicker). Samples shall be taken at the beginning and end of the striping operation (total of two samples per color). Samples shall be protected from damage and submitted to the Division of Materials for testing and record of the project output for the materials used. Lines on the project are subject to future testing to monitor pavement marking performance in the field.

6. MEASUREMENT. Wet retroreflective elements will be incidental to the pay items for pavement striping.

The Department will measure work required for the installation of the recessed groove. The Department will not measure surface preparation and pre-marking of the groove for payment and will consider them incidental to the groove pay item. Corrective work will not be measured for payment.

7. PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
25019EC	Groove for Pave Striping – 7 IN	LF
25008EC	Pave Striping-Thermo-6 IN W-Wet Reflect	LF
25009EC	Pave Striping-Thermo-6 IN Y- Wet Reflect	LF

March 27, 2019

SPECIAL NOTE FOR OVERBAND CRACK SEALING

This special note will apply at each transverse (thermal) crack in the mainline pavement. Other cracks, such as longitudinal cracks, map cracking, etc., will not be crack sealed with this project. Crack sealing is to be done a minimum of two weeks prior to paving the asphalt surface.

1. **Description.** This specification covers overband crack sealing of thermal cracks.
2. **Materials.** Crack Sealant shall be Crafcro Polyfiber Type III or equivalent product. Sealant for asphalt pavements shall be single component, pre-mixed and pre-reacted wrapped in plastic, boxed in UV resistant wrapped pallets with net weights and batch numbers on each pallet and box from the manufacturer. The sealant application life when heated to application temperature is approximately 12 to 15 hours. Product shall be able to be reheated to application temperature after initial heat up without specification degradation. Hot applied polymer modified crack sealant: The hot pour liquid crack sealant shall contain 5.0% +/- 1/2% polyester fibers by weight of asphalt components (recycled fibers are not permitted). Hot applied polymer modified crack sealant shall meet ASTM D5167 as follows:

<u>Fiber</u>	<u>Properties</u>
Type	Polyester
Denier	3 to 5
Specific Gravity	1.38f
Min. Melt Temp.	475 F
Tensile Strength	78,000 to 88,000 PSI
Elongation at Break	35 to 38%

<u>Modified Sealant Material</u>	<u>Properties</u>
Cone Penetration, 77 F (ASTM D5329)	30 mm Max.
Safe Heating Temp.	400° F
Flexibility, 1", 90 bend, 10 sec.	Pass @ 0° F
Ductility, 77 F	10 cm min.
Softening Point	200° F
Asphalt Compatibility (ASTM D5329)	Pass

3. **Construction**
- a. Routing of joints will not be required. No sealant material shall be placed until the joints and cracks have been cleaned of all loose dirt and material using a minimum of 125 psi/ 100 cfm air compressor.
- b. After cleaning, all joints and cracks shall be heat lanced to clean and remove moisture. The heat lance shall be a LAB Model B or approved equal capable of producing air temperatures up to 2500° F. Cracks shall be inspected and approved by the Department prior to placing the sealant material. Final crack

cleaning and heat lancing shall not proceed in advance of sealing by more than 1/8 mile.

- c. The sealant container shall be a thermostatically controlled heated oil jacketed tank with the ability to agitate the sealant. Sealant shall be leveled or struck down with the use of a 3-inch disk attachment at the end of the wand applicator. The overband width of the hot applied modified crack sealant shall not exceed 3 inches in width or 1/8 inch in height above the surrounding pavement unless directed by the engineer.
 - d. Glenzoil 20 Plus, Crafcro Detack, or equal shall be sprayed on the placed sealant prior to opening to traffic at an application rate of approximately 1 gallon of Glenzoil 20 Plus/Crafcro Detack per 50 gallons of sealant.
 - e. All debris from the work must be removed prior to opening to traffic.
4. **Measurement.** The Department will measure the quantity of OVERBAND CRACK SEALING in pounds. All work, equipment, and materials associated with placing the crack sealing, in accordance with this note, will not be measured and will be considered incidental to OVERBAND CRACK SEALING.
5. **Payment.** The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
23071EN	OVERBAND CRACK SEALING	POUNDS

SPECIAL NOTE FOR INTELLIGENT COMPACTION OF ASPHALT MIXTURES

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction current edition.

1.0 DESCRIPTION. Provide and use Intelligent Compaction (IC) Rollers for compaction of all asphalt mixtures.

2.0 MATERIALS AND EQUIPMENT. In addition to the equipment specified in Subsection 403.02, a minimum of one (1) IC roller is to be used on the project at all times, two (2) IC rollers will be required when the paving train consists of three (3) or more rollers. The Contractor is to only use the IC roller(s) for compaction as the breakdown and/or intermediate roller(s). All IC rollers will meet the following minimum characteristics:

1. Are self propelled double-drum vibratory rollers equipped with accelerometers mounted in or about the drum to measure the interactions between the rollers and compacted materials in order to evaluate the applied compactive effort. The IC rollers must have the approval of the Engineer prior to use. Examples of rollers equipped with IC technology can be found at www.IntelligentCompaction.com.
2. Are equipped with non-contact temperature sensors for measuring pavement surface temperatures.
3. The output from the roller is designated as the IC-MV which represents the stiffness of the materials based on the vibration of the roller drums and the resulting response from the underlying materials.
4. Are equipped with integrated on-board documentation systems that are capable of displaying real-time color-coded maps of IC measurement values including the stiffness response values, location of the roller, number of roller passes, machine settings, together with the material temperature, speed and the frequency and amplitude of roller drums. Ensure the display unit is capable of transferring the data by means of a cloud based system.
5. Are equipped with a mounted Global Positioning System GPS radio and receiver either a Real Time Kinematic (RTK-GPS) or Global Navigational Satellite System (GNSS) units that monitor the location and track the number of passes of the rollers. Accuracy of the positioning system is to be a minimum of 12 inches. Data is to be transferred to the Cabinet via a cloud based system within 30 minutes of collection.

3.0 WORK PLAN. Submit to the Engineer an IC Work Plan at the Preconstruction Conference and at least 2 weeks prior to beginning construction. Describe in the work plan the following:

1. Compaction equipment to be used including:
 - Vendor(s)
 - Roller model(s),
 - Roller dimensions and weights,
 - Description of IC measurement system,
 - GPS capabilities,
 - Documentation system,
 - Temperature measurement system, and
 - Software.
2. Roller data collection methods including sampling rates and intervals and data file types.
3. Transfer of data to the Engineer including method, timing, and personnel responsible. At the preconstruction meeting, provide the Cabinet with rights to allow for web access to the data file location. Access to the data is not to be hindered in any way. The Contractor will provide the Cabinet with any vendor specific software, user id, passwords, etc. needed to access the data through this service, cost of this access is incidental to the thermal profile bid item. The Cabinet is to have access to all data as it is being collected. If a third party is used for collecting and distributing the data the Cabinet is to have the same access rights and time as the Contractor.
4. Training plan and schedule for roller operators, project foreman, project surveyors, and Cabinet personnel; including both classroom and field training. Training should be conducted at least 1 week before beginning IC construction. The training is to be performed by a qualified representative(s) from the IC Roller manufacture(s) to be used on the project. This training shall include how to access and use the data from the cloud data source.

4.0 CONSTRUCTION. Do not begin work until the Engineer has approved the IC submittals and the IC equipment.

Follow requirements established in Section 400 for production and placement, materials, equipment, acceptance plans and adjustments except as noted or modified in this Specification. Provide the Engineer at least one day's notice prior to beginning construction or prior to resuming production if operations have been temporarily suspended. Ensure paving equipment complies with all requirements specified in Section 400. The IC roller temperatures will be evaluated by the Department with the data from a Paver Mounted Infrared Temperature Gauge.

A. Pre-Construction Test Section(s) Requirements.

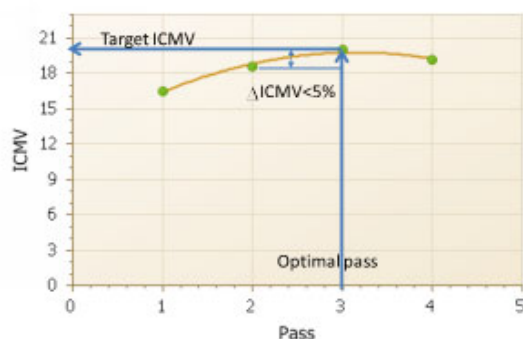
Three to five days prior to the start of production, ensure the proper setup of the GPS, IC roller(s) and the rover(s) by conducting joint GPS correlation and verification testing between the Contractor, GPS representative and IC roller manufacturer using the same datum.

1. Ensure GPS correlation and verification testing includes the following minimum processes:
 - a. Establish the GPS system to be used either one with a base station or one with mobile receivers only. Ensure all components in the system are set to the correct coordinate system; then,
 - b. Verify that the roller and rover are working properly and that there is a connection with the base station; then,
 - c. Record the coordinates of the two edges where the front drum of the roller is in contact with the ground from the on-board, color-coded display; then,
 - d. Mark the locations of the roller drum edges and move the roller, and place the mobile receiver at each mark and record the readings; then,
2. Compare coordinates between the roller and rover receivers. If the coordinates are within 12.0 in. of each other, the comparison is acceptable. If the coordinates are not within 12.0 in., diagnose and perform necessary corrections and repeat the above steps until verification is acceptable.
3. Do not begin work until acceptable GPS correlation and verification has been obtained.
4. The Contractor and the Department should conduct random GPS verification testing during production to ensure data locations are accurate. The recommended rate is once per day with a requirement of at least once per week.
5. All acceptance testing shall be as outlined in Standard Specifications section 400.

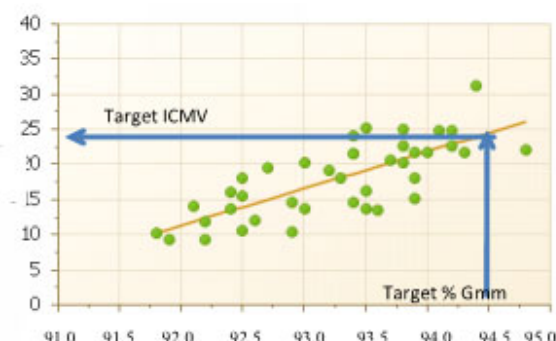
B. Construction Test Section(s) Requirements.

Construct test section(s) at location(s) agreed on by the Contractor and the Engineer within the project limits. The test section is required to determine a compaction curve of the asphalt mixtures in relationship to number of roller passes and to the stiffness of mixture while meeting the Department in-place compaction requirements. All rollers and the respective number of passes for each is to be determined via control strip each time a material change, equipment change or when the Engineer deems necessary.

Conduct test section(s) on every lift and every asphalt mixture. Ensure test section quantities of 500 to 1,000 tons of mainline mixtures. Operate IC rollers in the low to medium amplitude range and at the same settings (speed, frequency) throughout the section while minimizing overlapping of the roller, **the settings are to be used throughout the project with no changes**. After each roller pass, the qualified technician from the contractor observed by the Department will use a nondestructive nuclear gauge that has been calibrated to the mixture to estimate the density of the asphalt at 10 locations uniformly spaced throughout the test section within the width of a single roller pass. The density readings and the number of roller passes needed to achieve the specified compaction will be recorded. The estimated target density will be the peak of the average of the nondestructive readings within the desired compaction temperature range for the mixture. The IC roller data in conjunction with the Veda software will create an IC compaction curve for the mixture. The target IC-MV is the point when the increase in the IC-MV of the material between passes is less than 5 percent on the compaction curve. The IC compaction curve is defined as the relationship between the IC-MV and the roller passes. A compaction curve example is as follows:



Subsequent to the determination of the target IC-MV, compact an adjoining > 250 < 500 tons section using same roller settings and the number of estimated roller passes and allow the Department to verify the compaction with the same calibrated nondestructive nuclear gauge following the final roller pass. **The Department will obtain cores at 10 locations (No cores for calibration are to be taken in the surface layer, use non-destructive density results only!!)** uniformly spaced throughout the test section within the width of the single roller. Obtain GPS measurement of the core locations with a GPS rover. Use the Veda software to perform least square linear regression between the core data and IC-MV in order to correlate the production IC-MV values to the Department specified in-place air voids. A sample linear regression curve example is as follows.



C. Construction Requirements.

Use the IC roller on all lifts and types of asphalt within the limits of the project.

Ensure the optimal number of roller passes determined from the test sections has been applied to a minimum coverage of 80% of the individual IC Construction area. Ensure a minimum of 75% of the individual IC Construction area meets the target IC-MV values determined from the test sections.

Do not continue paving operations if IC Construction areas not meeting the IC criteria are produced until they have been investigated by the Department. Obtain the Engineer's approval to resume paving operations. Non-IC rollers are allowed to be used as the third roller on the project; one of the breakdown or the finish rollers is to be equipped with IC technology.

IC Construction areas are defined as subsections of the project being worked continuously by the Contractor. The magnitude of the IC Construction areas may vary with production but must be at least 750 tons per mixture for evaluation. Partial IC Construction areas of < 750 tons will be included in the previous area evaluation. IC Construction areas may extend over multiple days depending on the operations.

The IC Construction Operations Criteria does not affect the Department's acceptance processes for the materials or construction operations

5.0 MEASUREMENT. The Department will measure the total tons of asphalt mixtures compacted using the IC roller(s). Compaction is to be performed by a minimum of one (1) IC roller for a two (2) roller operation and a minimum of two (2) IC rollers when three (3) or more rollers are used for compaction. Material compacted by rollers not equipped with properly functioning IC equipment will not be accepted for payment of the bid item asphalt mixtures IC rolled. Use of

non-IC rollers can be accepted on small areas due to equipment malfunctions at the written approval of the Engineer. Paving operations should be suspended for equipment malfunctions that will extend over three days of operation.

Data is to be transferred to the cabinet in usable form no later than 30 minutes after collection. Data is to be transferred via a cloud based system.

6.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

- 1. Payment is full compensation for all work associated with providing IC equipped rollers, laptop computer, transmission of electronic data files, two copies of IC roller manufacturer software, and training.
- 2. Delays due to GPS satellite reception of signals to operate the IC equipment or IC roller breakdowns will not be considered justification for contract modifications or contract extensions.
- 3. Delays in data transfer will result in a reduction payment. Delays over 1 hour after collection are 75% pay, over 90 minutes are 50% pay, over 2 hours are 25% pay.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24781EC	Intelligent Compaction for Asphalt	Ton

March 14, 2019

SPECIAL NOTE FOR PAVER MOUNTED TEMPERATURE PROFILES

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction current edition.

1.0 DESCRIPTION. Provide a paver mounted infrared temperature equipment to continually monitor the temperature of the asphalt mat immediately behind all paver(s) during the placement operations for all mainline pavements (including ramps for Interstates and Parkways) within the project limits. Provide thermal profiles that include material temperature and measurement locations.

2.0 MATERIALS AND EQUIPMENT. In addition to the equipment specified in Subsection 403.02 Utilize a thermal equipment supplier that can provide a qualified representative for on-site technical assistance during the initial setup, pre-construction verification, and data management and processing as needed during the Project to maintain equipment within specifications and requirements.

Provide operator settings, user manuals, required viewing/export software for analysis. Ensure the temperature equipment will meet the following:

- A. A device with one or more infrared sensors that is capable of measuring in at least 1 foot intervals across the paving width, with a minimum width of 12 feet, or extending to the recording limits of the equipment, whichever is greater. A **Maximum of two (2)** brackets are allowed in the influence area under the sensors. A temperature profile must be made on at least 1 foot intervals longitudinally down the road:
- B. Infrared sensor(s):
 - 1. Measuring from 32°F to 400°F with an accuracy of $\pm 2.0\%$ of the sensor reading.
- C. Ability to measure the following:
 - 1. The placement distance using a Global Positioning System (GPS) or a Distance Measuring Instrument (DMI) and a Global Positioning System (GPS).
 - 2. Stationing
- D. GPS: Accuracy ± 4 feet in the X and Y Direction
- E. Latest version of software to collect, display, retain and analyze the mat temperature readings during placement. The software must have the ability to create and analyze:
 - 1. Full collected width of the thermal profiles,
 - 2. Paver speed and
 - 3. Paver stops and duration for the entire Project.
- F. Ability to export data automatically to a remote data server ("the cloud").

At the preconstruction meeting, provide the Cabinet with rights to allow for web access to the data file location. Access to the data is not to be hindered in any way. The Contractor will provide the Cabinet with any vendor specific software, user id, passwords, etc. needed to access the data through this service, cost of this access is incidental to the thermal profile bid item. The Cabinet is to have access to all data as it is being collected. If a third party is used for collecting and distributing the data the Cabinet is to have the same access rights and time as the Contractor.

This web-based software must also provide the Department with the ability to download the raw files and software and to convert them into the correct format.
- G. The thermal profile data files must provide the following data in a neat easy to read table format.
 - 1. Project information including Road Name and Number, PCN, Beginning and Ending MPs.
 - 2. IR Bar Manufacturer and Model number
 - 3. Number of Temperature Sensors (N)
 - 4. Spacing between sensors and height of sensors above the asphalt mat
 - 5. Total number of individual records taken each day (DATA BLOCK)
 - a. Date and Time reading taken
 - b. Latitude and Longitude
 - c. Distance paver has moved from last test location
 - d. Direction and speed of the paver
 - e. Surface temperature of each of the sensors

3.0 CONSTRUCTION. Provide the Engineer with all required documentation at the pre-construction conference.

- A. Install and operate equipment in accordance with the manufacturer's specifications.
- B. Verify that the temperature sensors are within $\pm 2.0\%$ using an independent temperature device on a material of known temperature. Collect and compare the GPS coordinates from the equipment with an independent measuring device.
 - 1. Ensure the independent survey grade GPS measurement device is calibrated to the correct coordinate system (using a control point), prior to using these coordinates to validate the equipment GPS.
 - 2. The comparison is considered acceptable if the coordinates are within 4 feet of each other in the X and Y direction.
- C. Collect thermal profiles on all mainline pavements during the paving operation and transfer the data to the "cloud" network or if automatic data transmission is not available, transfer the data to the Engineer at the end of daily paving.
- D. Contact the Department immediately when System Failure occurs. Daily Percent Coverage will be considered zero when the repairs are not completed within two (2) working days of System Failure. The start of this two (2) working day period begins the next working day after System Failure.
- E. Evaluate thermal profile segments, every 150 feet, and summarize the segregation of temperature results. Results are to be labeled as Minimal 0° - 25° F, Moderate 25.1° - 50° F and Severe $>50^{\circ}$. Severe readings over 3 consecutive segments or over 4 or more segments in a day warrant investigation on the cause of the differential temperature distribution.

4.0 MEASUREMENT. The Department will measure the total area of the pavement lanes mapped by the infrared scanners. Full payment will be provided for all lanes with greater than 85% coverage. Partial payment will be made for all areas covered from 50% coverage to 85% coverage at the following rate Coverage area percentage X Total bid amount. And area with less than 50% coverage will not be measured for payment.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

- 1. Payment is full compensation for all work associated with providing all required equipment, training, and documentation.
- 2. Delays due to GPS satellite reception of signals or equipment breakdowns will not be considered justification for contract modifications or contract extensions.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24891EC	Pave Mount Infrared Temp Equipment	Square Foot

March 14, 2019



KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF RIGHT OF WAY & UTILITIES

TC 62-226
Rev. 01/2016
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RIGHT OF WAY CERTIFICATION

<input checked="" type="checkbox"/> Original	<input type="checkbox"/> Re-Certification	RIGHT OF WAY CERTIFICATION	
ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
08-20003.00	Rockcastle	FD52 102 0075 052-056	NHPPIM 00753 (102)
PROJECT DESCRIPTION			
Address Pavement Condition on I-75 both directions from MP 52.05 to MP 55.925			
<input checked="" type="checkbox"/> No Additional Right of Way Required			
Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project.			
<input type="checkbox"/> Condition # 1 (Additional Right of Way Required and Cleared)			
All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.			
<input type="checkbox"/> Condition # 2 (Additional Right of Way Required with Exception)			
The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract			
<input type="checkbox"/> Condition # 3 (Additional Right of Way Required with Exception)			
The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.			
Total Number of Parcels on Project	0	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired			
Signed Deed	0		
Condemnation	0		
Signed ROE	0		
Notes/ Comments (Use Additional Sheet if necessary)			
LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	2019.04.0 Charles Hale
Signature		Signature	<i>Charles Hale</i> 08:31:27
Date		Date	-04'00' 4/4/2019
Right of Way Director		FHWA	
Printed Name	Digitally signed by DM Loy	Printed Name	<i>Donella Robinson</i>
Signature	DM Loy	Signature	<i>Donella Robinson</i>
Date	Date: 2019.04.04 08:44:53 -04'00'	Date	4.5.19



KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF RIGHT OF WAY & UTILITIES

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RIGHT OF WAY CERTIFICATION

<input checked="" type="checkbox"/> Original	<input type="checkbox"/> Re-Certification	RIGHT OF WAY CERTIFICATION	
ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
11-20013.00	Laurel	FD52 063 0075 050-051	NHPPIM 0752 (101)
PROJECT DESCRIPTION			
Asphalt Pavement Rehab milling and inlay in Laurel County on I-75 from MP 50.200-50.705.			
<input checked="" type="checkbox"/> No Additional Right of Way Required			
Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project.			
<input type="checkbox"/> Condition # 1 (Additional Right of Way Required and Cleared)			
All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.			
<input type="checkbox"/> Condition # 2 (Additional Right of Way Required with Exception)			
The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract			
<input type="checkbox"/> Condition # 3 (Additional Right of Way Required with Exception)			
The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.			
Total Number of Parcels on Project	N/A	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired			
Signed Deed			
Condemnation			
Signed ROE			
Notes/ Comments (Use Additional Sheet if necessary)			
LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Greg Combs
Signature		Signature	
Date		Date	2019.04.02 13:53:09 -04'00'
Right of Way Director		FHWA	
Printed Name	DM Loy	Printed Name	Camilla A. Robinson
Signature		Signature	
Date	2019.04.02 14:01:19 -04'00'	Date	4.5.19

UTILITIES AND RAIL CERTIFICATION NOTE

ROCKCASTLE COUNTY, NHPPIM 0753 (102)
FD52102 0075 052-056
PAVEMENT REHABILITATION PROJECT ON I-75 FROM
MP 50.800 – 55.300
8-20003.00

GENERAL PROJECT NOTE ON UTILITY PROTECTION

Utility coordination efforts determined that no significant utility relocation work is required to complete the project. Any work pertaining to these utility facilities is defined in the bid package and is to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal.

NOTE: DO NOT DISTURB THE FOLLOWING UTILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS

ALL EXISTING UTILITIES are believed to be clear of construction. The road contractor is responsible for contacting all utilities and having lines Crossing the project area to avoid conflicts.

The Contractor is fully responsible for protection of all utilities listed above

THE FOLLOWING COMPANIES ARE RELOCATING/ADJUSTING THEIR UTILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

N/A

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE COMPANY OR THE COMPANY’S SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

N/A

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT

N/A

THE FOLLOWING RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☒ No Rail Involved ☒ Minimal Rail Involved (See Below) ☒ Rail Involved (See Below)

UTILITIES AND RAIL CERTIFICATION NOTE

**ROCKCASTLE COUNTY, NHPPIM 0753 (102)
FD52102 0075 052-056
PAVEMENT REHABILITATION PROJECT ON I-75 FROM
MP 50.800 – 55.300
8-20003.00**

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs.

The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.

UTILITIES AND RAIL CERTIFICATION NOTE

LAUREL COUNTY, NHPPIM 0752 (101)
FD52 063 0075 050-051
I-75 PAVEMENT REHAB
11-20013.00

Utility coordination efforts conducted by the project sponsor have determined that no significant utility relocation work is required to complete the project. Any work pertaining to these utility facilities is defined in the bid package and is to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal.

THE FOLLOWING RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☒ No Rail Involved ☐ Minimal Rail Involved (See Below) ☐ Rail Involved (See Below)

UNDERGROUND FACILITY DAMAGE PROTECTION – BEFORE YOU DIG

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. The contractor is instructed to contact KY 811 for the location of existing underground utilities. Contact shall be made a minimum of two (2) and no more than ten (10) business days prior to excavation.

The contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY 811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom are to be contacted through their individual Protection Notification Center. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. Non-compliance with these directives can result in the enforcement of penalties.

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The

Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs.

UTILITIES AND RAIL CERTIFICATION NOTE

LAUREL COUNTY, NHPPIM 0752 (101)
FD52 063 0075 050-051
I-75 PAVEMENT REHAB
11-20013.00

The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor’s responsibility to verify all utilities and their respective locations before excavating.

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.

AREA UTILITIES CONTACT LIST AS PROVIDED BY KY 811

<u>Utility Company/Agency</u>	<u>Contact Name</u>	<u>Contact Information</u>
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MATERIAL SUMMARY

CONTRACT ID: 191216

121GR19D016 - NHPP IM

DE06300751916

I-75 (LAUREL COUNTY) ADDRESS PAVEMENT CONDITION OF I-75 (LAUREL COUNTY) IN BOTH DIRECTIONS
ASPHALT REHAB INTERSTATE/PARKWAY, A DISTANCE OF .51 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	00001	DGA BASE	19.00	TON
0010	00071	CRUSHED AGGREGATE SIZE NO 57	11.00	TON
0015	00100	ASPHALT SEAL AGGREGATE	1.00	TON
0020	00103	ASPHALT SEAL COAT	1.00	TON
0025	00190	LEVELING & WEDGING PG64-22	8.00	TON
0030	00219	CL4 ASPH BASE 1.00D PG76-22	25.00	TON
0035	00339	CL3 ASPH SURF 0.38D PG64-22	1,173.00	TON
0040	00356	ASPHALT MATERIAL FOR TACK	9.00	TON
0045	00397	CL4 SMA SURF 0.38A PG76-22	1,759.00	TON
0050	02677	ASPHALT PAVE MILLING & TEXTURING	2,932.00	TON
0055	20071EC	JOINT ADHESIVE	21,325.00	LF
0060	24781EC	INTELLIGENT COMPACTION FOR ASPHALT	2,932.00	TON
0065	24891EC	PAVE MOUNT INFRARED TEMP EQUIPMENT	319,877.00	SF
0070	00078	CRUSHED AGGREGATE SIZE NO 2	2.00	TON
0075	01000	PERFORATED PIPE-4 IN	205.00	LF
0080	01010	NON-PERFORATED PIPE-4 IN	16.00	LF
0085	01028	PERF PIPE HEADWALL TY 3-4 IN	2.00	EACH
0090	01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	12.00	EACH
0095	01985	DELINEATOR FOR BARRIER - YELLOW	41.00	EACH
0100	02014	BARRICADE-TYPE III	2.00	EACH
0105	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	1.00	EACH
0110	02381	REMOVE GUARDRAIL	50.00	LF
0115	02387	GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	1.00	EACH
0120	02483	CHANNEL LINING CLASS II	90.00	TON
0125	02562	TEMPORARY SIGNS	1,000.00	SQFT
0130	02575	DITCHING AND SHOULDERING	5,332.00	LF
0135	02599	FABRIC-GEOTEXTILE TYPE IV	98.00	SQYD
0140	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS
0145	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH
0150	02676	MOBILIZATION FOR MILL & TEXT	1.00	LS
0155	02696	SHOULDER RUMBLE STRIPS	10,663.00	LF
0160	02726	STAKING	1.00	LS
0165	02775	ARROW PANEL	4.00	EACH
0170	03240	BASE FAILURE REPAIR	56.00	SQYD
0175	05950	EROSION CONTROL BLANKET	2,000.00	SQYD
0180	06401	FLEXIBLE DELINEATOR POST-M/W	28.00	EACH
0185	06407	SBM ALUM SHEET SIGNS .125 IN	81.00	SQFT
0190	06511	PAVE STRIPING-TEMP PAINT-6 IN	24,000.00	LF
0195	06542	PAVE STRIPING-THERMO-6 IN W	7,998.00	LF
0200	06543	PAVE STRIPING-THERMO-6 IN Y	5,332.00	LF
0205	06549	PAVE STRIPING-TEMP REM TAPE-B	1,360.00	LF
0210	06550	PAVE STRIPING-TEMP REM TAPE-W	4,080.00	LF

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0215	06551	PAVE STRIPING-TEMP REM TAPE-Y	1,360.00	LF
0220	06556	PAVE STRIPING-DUR TY 1-6 IN W	4,080.00	LF
0225	06557	PAVE STRIPING-DUR TY 1-6 IN Y	1,360.00	LF
0230	10020NS	FUEL ADJUSTMENT	7,783.00	DOLL
0235	10030NS	ASPHALT ADJUSTMENT	19,548.00	DOLL
0240	20550ND	SAWCUT PAVEMENT	176.00	LF
0245	20757ED	PAVEMENT REPAIR	28.00	SQYD
0250	20912ND	BARRIER WALL POST	3.00	EACH
0255	24489EC	INLAID PAVEMENT MARKER	134.00	EACH
0260	02569	DEMOBILIZATION	1.00	LS

CONTRACT ID: 191216

121GR19D016 - NHPP IM

DE10200751917

I-75 (ROCKCASTLE COUNTY) ADDRESS PAVEMENT CONDITION OF I-75 (ROCKCASTLE COUNTY) IN BOTH DIRECTIONS ASPHALT REHAB INTERSTATE/PARKWAY, A DISTANCE OF 4.5 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0265	00001	DGA BASE	759.00	TON
0270	00071	CRUSHED AGGREGATE SIZE NO 57	44.00	TON
0275	00100	ASPHALT SEAL AGGREGATE	18.00	TON
0280	00103	ASPHALT SEAL COAT	2.00	TON
0285	00190	LEVELING & WEDGING PG64-22	33.00	TON
0290	00219	CL4 ASPH BASE 1.00D PG76-22	100.00	TON
0295	00339	CL3 ASPH SURF 0.38D PG64-22	7,645.00	TON
0300	00356	ASPHALT MATERIAL FOR TACK	62.00	TON
0305	00397	CL4 SMA SURF 0.38A PG76-22	12,677.00	TON
0310	02677	ASPHALT PAVE MILLING & TEXTURING	20,321.00	TON
0315	20071EC	JOINT ADHESIVE	136,591.00	LF
0320	24781EC	INTELLIGENT COMPACTION FOR ASPHALT	20,321.00	TON
0325	24891EC	PAVE MOUNT INFRARED TEMP EQUIPMENT	2,216,866.00	SF
0330	00078	CRUSHED AGGREGATE SIZE NO 2	14.00	TON
0335	00464	CULVERT PIPE-24 IN	8.00	LF
0340	01000	PERFORATED PIPE-4 IN	1,330.00	LF
0345	01010	NON-PERFORATED PIPE-4 IN	112.00	LF
0350	01020	PERF PIPE HEADWALL TY 1-4 IN	4.00	EACH
0355	01024	PERF PIPE HEADWALL TY 2-4 IN	2.00	EACH
0360	01028	PERF PIPE HEADWALL TY 3-4 IN	8.00	EACH
0365	01032	PERF PIPE HEADWALL TY 4-4 IN	2.00	EACH
0370	01208	PIPE CULVERT HEADWALL-24 IN	2.00	EACH
0375	01740	CORED HOLE DRAINAGE BOX CON-4 IN	2.00	EACH
0380	01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	131.00	EACH
0385	01985	DELINEATOR FOR BARRIER - YELLOW	242.00	EACH
0390	02014	BARRICADE-TYPE III	2.00	EACH
0395	02351	GUARDRAIL-STEEL W BEAM-S FACE	2,037.00	LF
0400	02367	GUARDRAIL END TREATMENT TYPE 1	3.00	EACH
0405	02369	GUARDRAIL END TREATMENT TYPE 2A	2.00	EACH

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0410	02381	REMOVE GUARDRAIL	2,337.00	LF
0415	02391	GUARDRAIL END TREATMENT TYPE 4A	1.00	EACH
0420	02483	CHANNEL LINING CLASS II	450.00	TON
0425	02484	CHANNEL LINING CLASS III	25.00	TON
0430	02562	TEMPORARY SIGNS	1,500.00	SQFT
0435	02575	DITCHING AND SHOULDERING	34,148.00	LF
0440	02599	FABRIC-GEOTEXTILE TYPE IV	686.00	SQYD
0445	02625	REMOVE HEADWALL	2.00	EACH
0450	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS
0455	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH
0460	02676	MOBILIZATION FOR MILL & TEXT	1.00	LS
0465	02696	SHOULDER RUMBLE STRIPS	68,296.00	LF
0470	02726	STAKING	1.00	LS
0475	02775	ARROW PANEL	4.00	EACH
0480	03240	BASE FAILURE REPAIR	28.00	SQYD
0485	05950	EROSION CONTROL BLANKET	12,000.00	SQYD
0490	06401	FLEXIBLE DELINEATOR POST-M/W	141.00	EACH
0495	06407	SBM ALUM SHEET SIGNS .125 IN	487.00	SQFT
0500	06511	PAVE STRIPING-TEMP PAINT-6 IN	154,000.00	LF
0505	06542	PAVE STRIPING-THERMO-6 IN W	33,231.00	LF
0510	06543	PAVE STRIPING-THERMO-6 IN Y	24,262.00	LF
0515	06549	PAVE STRIPING-TEMP REM TAPE-B	2,720.00	LF
0520	06550	PAVE STRIPING-TEMP REM TAPE-W	8,160.00	LF
0525	06551	PAVE STRIPING-TEMP REM TAPE-Y	2,720.00	LF
0530	10020NS	FUEL ADJUSTMENT	31,838.00	DOLL
0535	10030NS	ASPHALT ADJUSTMENT	79,967.00	DOLL
0540	20550ND	SAWCUT PAVEMENT	704.00	LF
0545	20757ED	PAVEMENT REPAIR	112.00	SQYD
0550	20912ND	BARRIER WALL POST	23.00	EACH
0555	23071EN	OVERBAND CRACK SEALING	11,000.00	LB
0560	23607EC	PAVE MARK THERMO-LANE REDUCTION ARROW	3.00	EACH
0565	24489EC	INLAID PAVEMENT MARKER	1,195.00	EACH
0570	25008EC	PAVE STRIPING-THERMO-6 IN W-WET REFLECT	24,262.00	LF
0575	25009EC	PAVE STRIPING-THERMO-6 IN Y-WET REFLECT	39,997.00	LF
0580	25019EC	GROOVE FOR PAVE STRIPING - 7 IN	64,259.00	LF
0585	02568	MOBILIZATION	1.00	LS
0590	02569	DEMOBILIZATION	1.00	LS

GUARDRAIL DELIVERY VERIFICATION SHEET

Contract Id: _____

Contractor: _____

Section Engineer: _____

District & County: _____

<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QTY LEAVING PROJECT</u>	<u>QTY RECEIVED@BB YARD</u>
GUARDRAIL (Includes End treatments & crash cushions)	LF	_____	_____
STEEL POSTS	EACH	_____	_____
STEEL BLOCKS	EACH	_____	_____
WOOD OFFSET BLOCKS	EACH	_____	_____
BACK UP PLATES	EACH	_____	_____
CRASH CUSHION	EACH	_____	_____
NUTS, BOLTS, WASHERS	BAG/BCKT	_____	_____
DAMAGED RAIL TO MAINT. FACILITY	LF	_____	_____
DAMAGED POSTS TO MAINT. FACILITY	EACH	_____	_____

***Required Signatures before Leaving Project Site**

Printed Section Engineer's Representative _____ & Date _____

Signature Section Engineer's Representative _____ & Date _____

Printed Contractor's Representative _____ & Date _____

Signature Contractor's Representative _____ & Date _____

***Required Signatures after Arrival at Bailey Bridge Yard (All material on truck must be counted & the quantity received column completed before signatures)**

Printed Bailey Bridge Yard Representative _____ & Date _____

Signature Bailey Bridge Yard Representative _____ & Date _____

Printed Contractor's Representative _____ & Date _____

Signature Contractor's Representative _____ & Date _____

****Payment for the bid item remove guardrail will be based upon the quantities shown in the Bailey Bridge Yard received column. Payment will not be made for guardrail removal until the guardrail verification sheets are electronically submitted to the Section Engineer by the Bailey Bridge Yard Representative.**

Completed Form Submitted to Section Engineer Date: _____ By: _____

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2012* and *Standard Drawings, Edition of 2016*.

SUPPLEMENTAL SPECIFICATIONS

The contractor shall use the Supplemental Specifications that are effective at the time of letting.
The Supplemental Specifications can be found at the following link:

<http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx>

SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

This Special Note will apply when indicated on the plans or in the proposal.

1.0 DESCRIPTION. Furnish, install, operate, and maintain variable message signs at the locations shown on the plans or designated by the Engineer. Remove and retain possession of variable message signs when they are no longer needed on the project.

2.0 MATERIALS.

2.1 General. Use LED Variable Message Signs Class I, II, or III, as appropriate, from the Department's List of Approved Materials.

Unclassified signs may be submitted for approval by the Engineer. The Engineer may require a daytime and nighttime demonstration. The Engineer will make a final decision within 30 days after all required information is received.

2.2 Sign and Controls. All signs must:

- 1) Provide 3-line messages with each line being 8 characters long and at least 18 inches tall. Each character comprises 35 pixels.
- 2) Provide at least 40 preprogrammed messages available for use at any time. Provide for quick and easy change of the displayed message; editing of the message; and additions of new messages.
- 3) Provide a controller consisting of:
 - a) Keyboard or keypad.
 - b) Readout that mimics the actual sign display. (When LCD or LCD type readout is used, include backlighting and heating or otherwise arrange for viewing in cold temperatures.)
 - c) Non-volatile memory or suitable memory with battery backup for storing pre-programmed messages.
 - d) Logic circuitry to control the sequence of messages and flash rate.
- 4) Provide a serial interface that is capable of supporting complete remote control ability through land line and cellular telephone operation. Include communication software capable of immediately updating the message, providing complete sign status, and allowing message library queries and updates.
- 5) Allow a single person easily to raise the sign to a satisfactory height above the pavement during use, and lower the sign during travel.
- 6) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
- 7) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
- 8) Provide the driver board as part of a module. All modules are interchangeable, and have plug and socket arrangements for disconnection and reconnection. Printed circuit boards associated with driver boards have a conformable coating to protect against moisture.
- 9) Provide a sign case sealed against rain, snow, dust, insects, etc. The lens is UV stabilized clear plastic (polycarbonate, acrylic, or other approved material) angled to prevent glare.
- 10) Provide a flat black UV protected coating on the sign hardware, character PCB, and appropriate lens areas.
- 11) Provide a photocell control to provide automatic dimming.

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- 12) Allow an on-off flashing sequence at an adjustable rate.
- 13) Provide a sight to aim the message.
- 14) Provide a LED display color of approximately 590 nm amber.
- 15) Provide a controller that is password protected.
- 16) Provide a security device that prevents unauthorized individuals from accessing the controller.
- 17) Provide the following 3-line messages preprogrammed and available for use when the sign unit begins operation:

/KEEP/RIGHT/⇒⇒⇒/	/MIN/SPEED/**MPH/
/KEEP/LEFT/⇐⇐⇐/	/ICY/BRIDGE/AHEAD/ /ONE
/LOOSE/GRAVEL/AHEAD/	LANE/BRIDGE/AHEAD/
/RD WORK/NEXT/**MILES/	/ROUGH/ROAD/AHEAD/
/TWO WAY/TRAFFIC/AHEAD/	/MERGING/TRAFFIC/AHEAD/
/PAINT/CREW/AHEAD/	/NEXT/**/MILES/
/REDUCE/SPEED/**MPH/	/HEAVY/TRAFFIC/AHEAD/
/BRIDGE/WORK/**0 FT/	/SPEED/LIMIT/**MPH/
/MAX/SPEED/**MPH/	/BUMP/AHEAD/
/SURVEY/PARTY/AHEAD/	/TWO/WAY/TRAFFIC/

*Insert numerals as directed by the Engineer.

Add other messages during the project when required by the Engineer.

2.3 Power.

- 1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. Provide direct wiring for operation of the sign or arrow board from an external power source to provide energy backup for 21 days without sunlight and an on-board system charger with the ability to recharge completely discharged batteries in 24 hours.

3.0 CONSTRUCTION. Furnish and operate the variable message signs as designated on the plans or by the Engineer. Ensure the bottom of the message panel is a minimum of 7 feet above the roadway in urban areas and 5 feet above in rural areas when operating. Use Class I, II, or III signs on roads with a speed limit less than 55 mph. Use Class I or II signs on roads with speed limits 55 mph or greater.

Maintain the sign in proper working order, including repair of any damage done by others, until completion of the project. When the sign becomes inoperative, immediately repair or replace the sign. Repetitive problems with the same unit will be cause for rejection and replacement.

Use only project related messages and messages directed by the Engineer, unnecessary messages lessen the impact of the sign. Ensure the message is displayed in either one or 2 phases with each phase having no more than 3 lines of text. When no message is needed, but it is necessary to know if the sign is operable, flash only a pixel.

When the sign is not needed, move it outside the clear zone or where the Engineer directs. Variable Message Signs are the property of the Contractor and shall be removed from the project when no longer needed. The Department will not assume ownership of these signs.

4.0 MEASUREMENT. The final quantity of Variable Message Sign will be

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the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

5.0 PAYMENT. The Department will pay for the Variable Message Signs at the unit price each. The Department will not pay for signs replaced due to damage or rejection. Payment is full compensation for furnishing all materials, labor, equipment, and service necessary to, operate, move, repair, and maintain or replace the variable message signs. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

GEOGRID REINFORCEMENT FOR ASPHALT PAVEMENTS

This Special Note will apply where indicated on the plans or in the proposal. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. This specification covers geogrid used for the reinforcement of asphalt pavements.

2.0 MATERIALS AND EQUIPMENT.

2.1 Geogrid. Furnish fiberglass-reinforced or polyester geogrid coated with an elastomeric polymer. Ensure the geogrid forms a stable network such that the ribs, filaments, or yarns retain their dimensional stability, including selvages. When the Contract specifies, furnish geogrid with a non-woven fabric backing composed of long chain synthetic polymers that are 95 percent by weight polyolefins or polyesters.

A) Physical Requirements. Furnish the specified geogrid type conforming to the Physical Requirements Table and ASTM D 4759. Ensure that each geogrid shipment is accompanied by a manufacturer's certification listing minimum average roll specification values of each lot number for those properties listed in the table.

When the Contract specifies, furnish geogrid with a non-woven fabric backing that conforms to AASHTO M288 for paving fabric, except the minimum melting point is 360 °F.

PROPERTY	TEST METHOD	SPECIFICATION
Tensile Strength, lb/in (min.)	GRI-GG1	560
Elongation at Break, % (max.)	GRI-GG1	5
Melting Point, °F (min.)	ASTM D 276	360
Aperture Size, inch	I. D. Calipered	1.0 by 1.0

B) Packaging, Shipment, and Storage. Ensure that each roll is labeled with the manufacturer's name, product type, style number, lot number, roll number, manufactured date, roll dimensions, chemical composition, and applicable physical properties. Protect the geogrid from direct sunlight, ultraviolet rays, flames, aggressive chemicals, mud, dirt, dust, and debris during all periods of shipment and storage. Keep geogrids dry until installation, and do not store directly on the ground.

2.2 Asphalt Distributor. Conform to 406.02.05.

2.3 Rolling Equipment. Use pneumatic-tired rollers that weigh at least 12 tons and have 7 to 9 tires capable of inflation pressures up to 125 psi. Maintain an inflation pressure in all tires within ± 5 psi of the manufacturer's recommended pressure. Arrange the tires so that the gap between the tires of the front axle is covered by the tires of the rear axle. Mount wheels to provide equal contact pressure under each wheel. Use a tire tread that is satisfactory to the Engineer. Maintain tire size and inflation pressure such that the contact pressure is at least 80 psi.

3.0 CONSTRUCTION.

3.1 Geogrid Representative. Ensure that a representative of the geogrid manufacturer is on the project when work begins, and remains on call as the project progresses, to advise the Engineer.

3.2 Weather Restrictions. Do not place the geogrid when weather conditions, in the opinion of the Engineer, are not suitable. Ensure the air and pavement temperatures sufficient to allow the tack coat to hold the geogrid, and fabric backing when specified, in place. Specifically, ensure the temperature is at least 60 °F and rising.

3.3 Surface Preparation. Perform any needed base repairs and repair all potholes, cracks greater the 1/4 inch, and any badly damaged or rough pavement which may require milling or placement of leveling course. Ensure the surface is dry, clean, dust-free, and between 40 and 140 °F. Using a calibrated distributor truck, apply an asphalt tack coat uniformly at a residual rate of 0.3 gallons per square yard for fabric backed material and at a residual rate of 0.08 gallons per square yard for material without backing. Unless the geogrid is precoated with an adhesive, apply the tack coat to a minimum of 3 inches wider than the area to be covered by the geogrid.

3.4 Geogrid Placement. Place the geogrid while the tack coat is still tacky/broken. Keep the material flat and wrinkle free throughout the installation. Roll the geogrid until the adhesive is activated or the geogrid is seated in the tack coat. Clean the roller with an asphalt release agent. Brooming may be required. On sharp curves, cut the edges and fold the geogrid over in the direction of the placement of the asphalt overlay. Overlap

side joints by one to 2 inches. Overlap all end-of-roll joints by 3 to 6 inches. Ensure that the overlaps are shingled in the direction of paving.

3.5 Asphalt Placement. Place the asphalt overlay at a minimum 2-inch compacted thickness. Pave over the geogrid on the same day of its placement. Except for paving equipment and vehicles, allow no traffic on the grid until the following course of asphalt mixture is placed.

3.6 Geogrid Repair. Repair any visible distress that occurs due to movement of the geogrid immediately after rolling. For small areas, remove the asphalt mixture from the affected area; replace the geogrid in its original position, and replace, level, and compact the asphalt mixture. Cut the geogrid if necessary for it to lie flat.

3.7 Sampling and Testing. The Department will sample the geogrid at the project site according to ASTM D 4354 and KM 64-113 at a frequency the Engineer determines. The Department will test the geogrid for all properties possible given the testing equipment availability. When the Department determines that an individual sample fails to meet any specification requirement, the Department will reject that roll and sample 2 additional rolls from the same lot. When the Department determines that either of these 2 additional samples fails to comply with any part of the specification, the Department will reject the entire quantity of rolls represented by that sample.

4.0 MEASUREMENT. The Department will measure the quantity of geogrid in square yards. The Department will not measure geogrid when the contract indicates that the geogrid are incidental to the work being performed or when no separate bid item for geogrid is listed in the proposal. The Department will not measure providing the geogrid manufacturer’s representative for payment and will consider it incidental to the geogrid.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
00110	Geogrid Reinforcement for Asphalt	Square Yard

June 15, 2012

SPECIAL NOTE FOR BARCODE LABEL ON PERMANENT SIGNS

1.0 DESCRIPTION. Install barcode label on sheeting signs. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

2.0 MATERIALS. The Department will provide the Contractor with a 2 inch x 1 inch foil barcode label for each permanent sheeting sign. A unique number will be assigned to each barcode label.

The Contractor shall contact the Operations and Pavement Management Branch in the Division of Maintenance at (502) 564-4556 to obtain the barcode labels.

3.0 CONSTRUCTION. Apply foil barcode label in the lower right quadrant of the sign back. Signs where the bottom edge is not parallel to the ground, the lowest corner of the sign shall serve as the location to place the barcode label. The barcode label shall be placed no less than one-inch and no more than three inches from any edge of the sign. The barcode must be placed so that the sign post does not cover the barcode label.

Barcodes shall be applied in an indoor setting with a minimum air temperature of 50°F or higher. Prior to application of the barcode label, the back of the sign must be clean and free of dust, oil, etc. If the sign is not clean, an alcohol swab shall be used to clean the area. The area must be allowed to dry prior to placement of the barcode label.

Data for each sign shall include the barcode number, MUTCD reference number, sheeting manufacturer, sheeting type, manufacture date, color of primary reflective surface, installation date, latitude and longitude using the North American Datum of 1983 (NAD83) or the State Plane Coordinates using an x and y ordinate of the installed location.

Data should be provided electronically on the TC 71-229 Sign Details Information and TC 71-230 Sign Assembly Information forms. The Contractor may choose to present the data in a different format provided that the information submitted to the Department is equivalent to the information required on the Department TC forms. The forms must be submitted in electronic format regardless of which type of form is used. The Department will not accept PDF or handwritten forms. These completed forms must be submitted to the Department prior to final inspection of the signs. The Department will not issue formal acceptance for the project until the TC 71-229 and TC-230 electronic forms are completed for all signs and sign assemblies on the project.

4.0 MEASUREMENT. The Department will measure all work required for the installation of the barcode label and all work associated with completion and submission of the sign inventory data (TC 71-229 and TC 71-230).

The installation of the permanent sign will be measured in accordance to Section 715.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

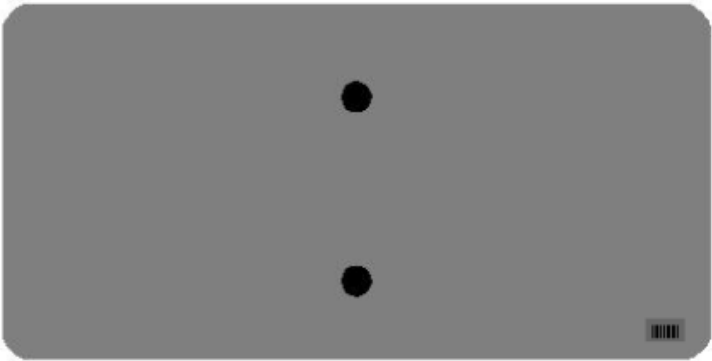
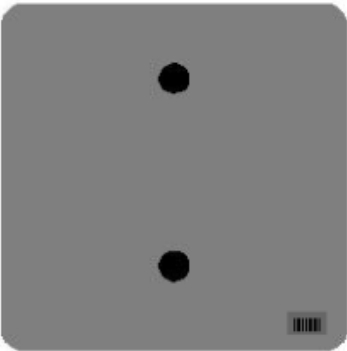
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24631EC	Barcode Sign Inventory	Each

The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment as full compensation for all work required under this special note.

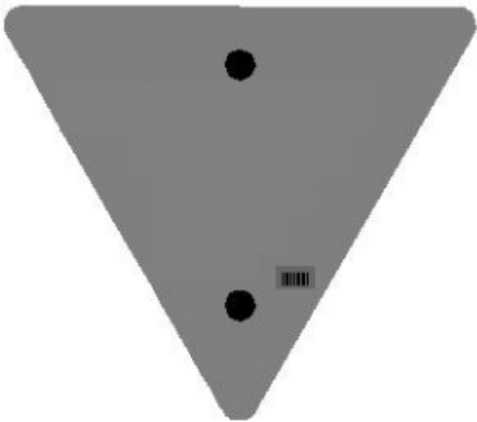
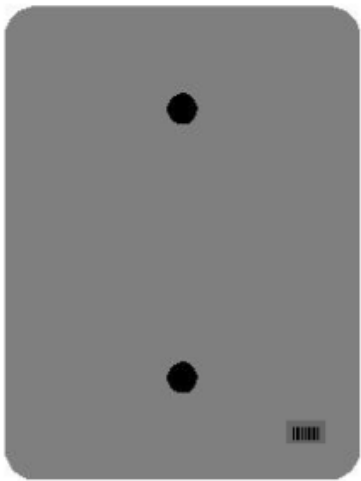
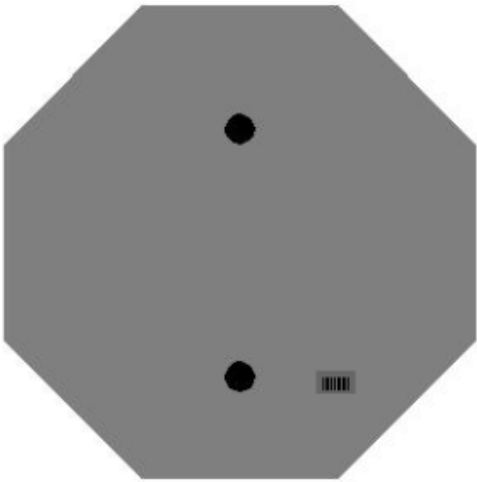
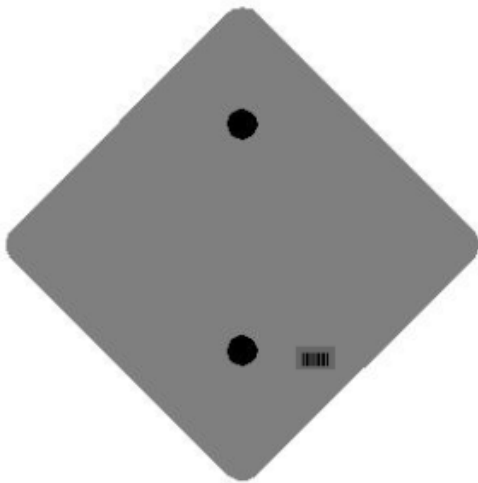
One Sign Post



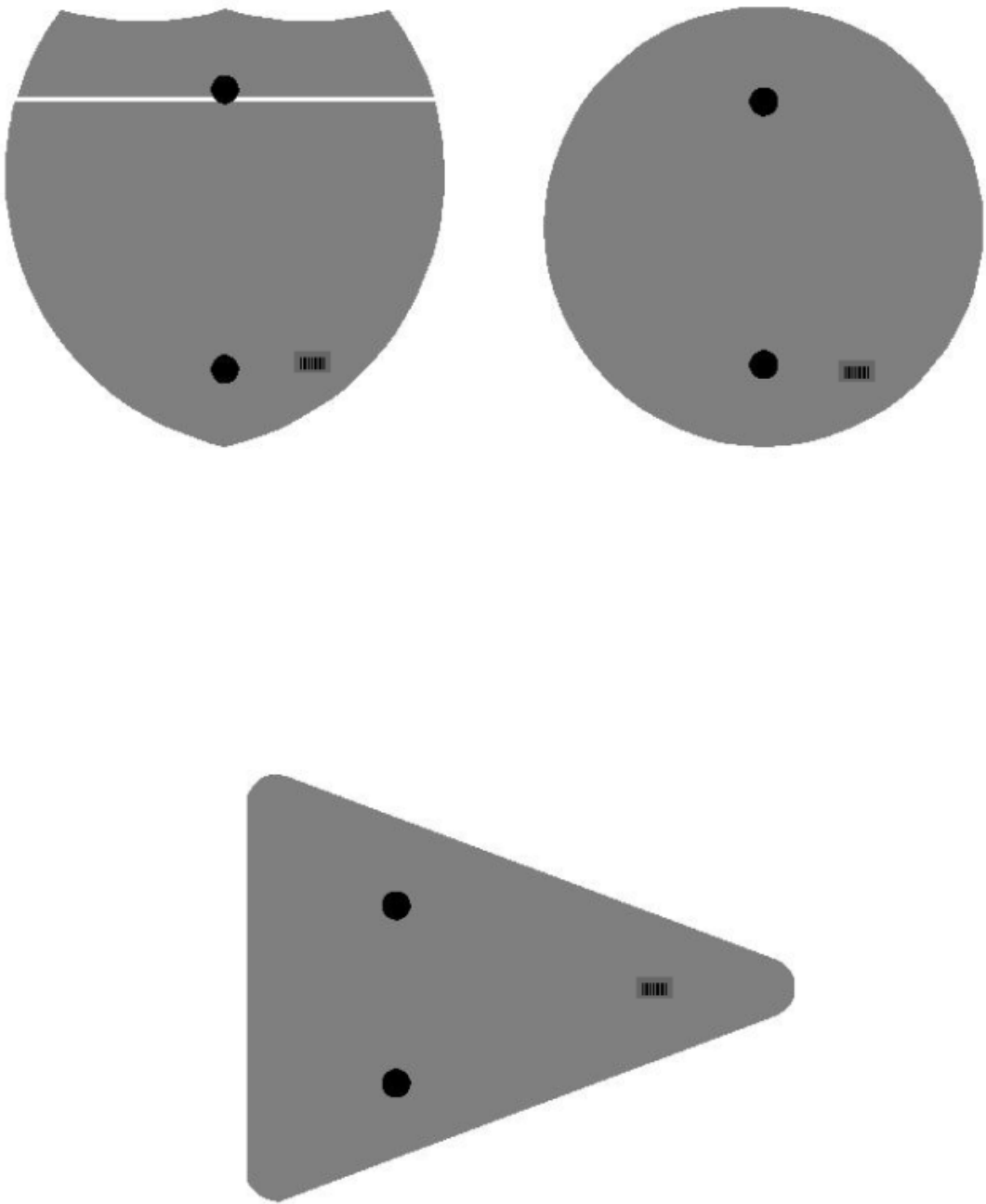
↑
2" Wide Post



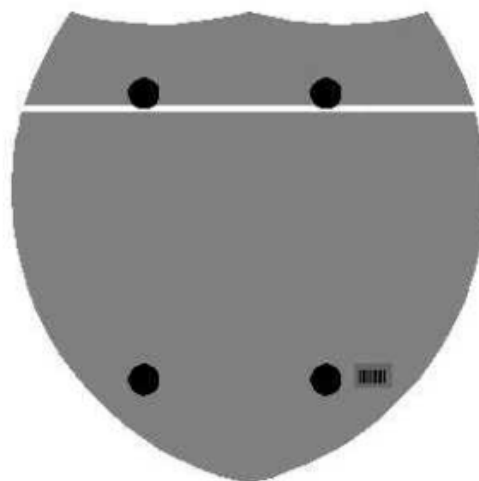
One Sign Post



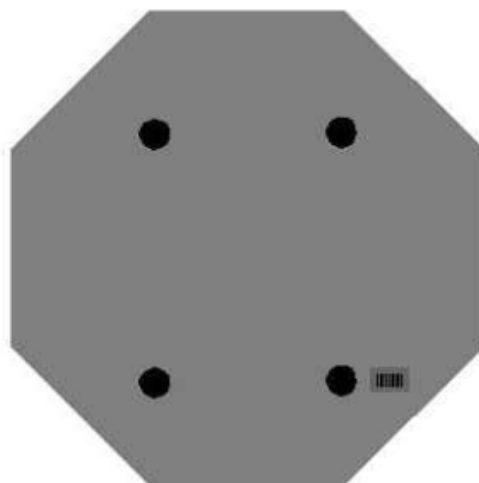
One Sign Post



Double Sign Post

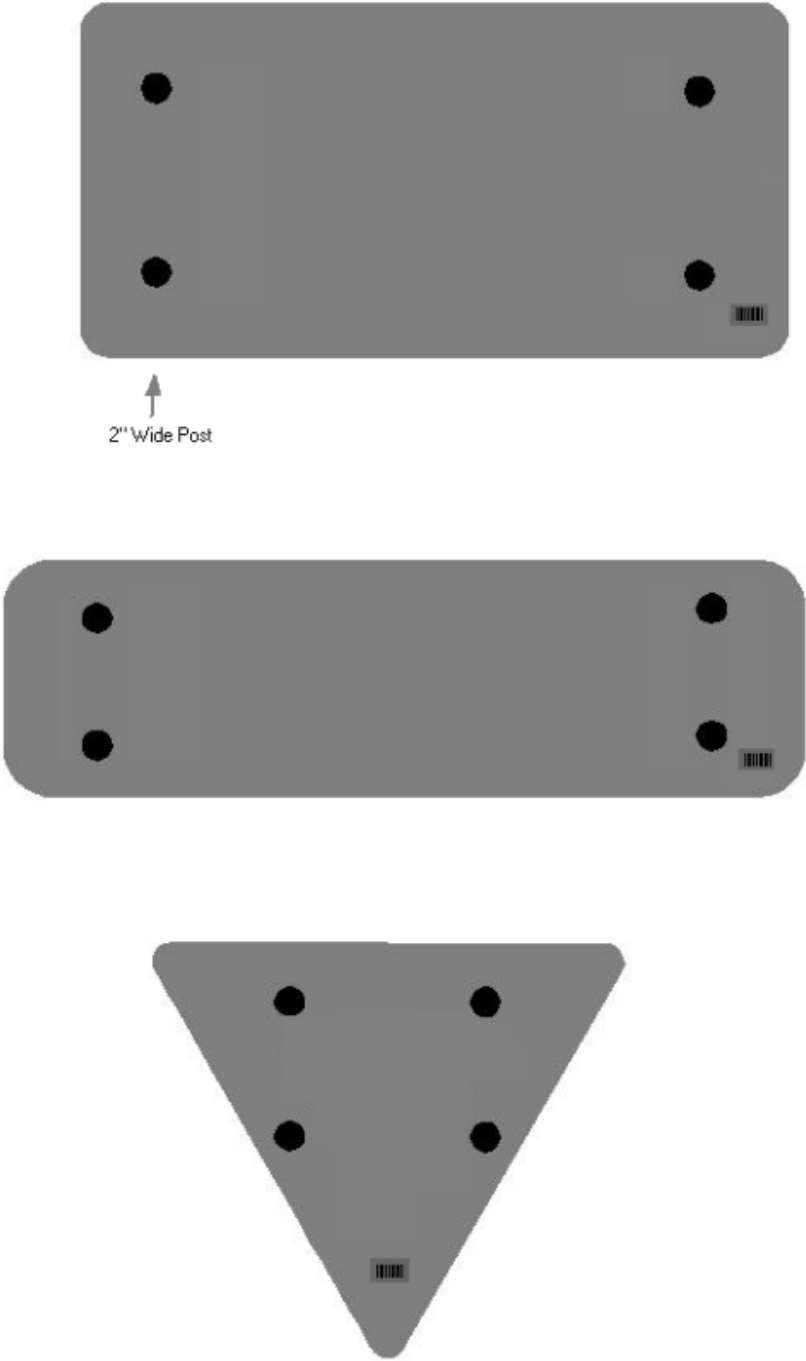


Interstate
Shield



48" Stop

2 Post Signs



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SPECIAL NOTE FOR LONGITUDINAL PAVEMENT JOINT ADHESIVE

1. **DESCRIPTION.** This specification covers the requirements and practices for applying an asphalt adhesive material to the longitudinal joint of the surface course of an asphalt pavement. Apply the adhesive to the face of longitudinal joint between driving lanes for the first lane paved. Then, place and compact the adjacent lane against the treated face to produce a strong, durable, waterproof longitudinal joint.
2. **MATERIALS, EQUIPMENT, AND PERSONNEL.**

2.1 Joint Adhesive. Provide material conforming to Subsection 2.1.1.

2.1.1 Provide an adhesive conforming to the following requirements:

Property	Specification	Test Procedure
Viscosity, 400 ° F (Pa·s)	4.0 – 10.0	ASTM D 4402
Cone Penetration, 77 ° F	60 – 100	ASTM D 5329
Flow, 140 ° F (mm)	5.0 max.	ASTM D 5329
Resilience, 77 ° F (%)	30 min.	ASTM D 5329
Ductility, 77 ° F (cm)	30.0 min.	ASTM D 113
Ductility, 39 ° F (cm)	30.0 min.	ASTM D 113
Tensile Adhesion, 77 ° F (%)	500 min.	ASTM D 5329, Type II
Softening Point, ° F	171 min.	AASHTO T 53
Asphalt Compatibility	Pass	ASTM D 5329

Ensure the temperature of the pavement joint adhesive is between 380 and 410 °F when the material is extruded in a 0.125-inch-thick band over the entire face of the longitudinal joint.

2.2. Equipment.

2.2.1 Melter Kettle. Provide an oil-jacketed, double-boiler, melter kettle equipped with any needed agitation and recirculating systems.

2.2.2 Applicator System. Provide a pressure-feed-wand applicator system with an applicator shoe attached.

2.3 Personnel. Ensure a technical representative from the manufacturer of the pavement joint adhesive is present during the initial construction activities and available upon the request of the Engineer.

3. **CONSTRUCTION.**

3.1 Surface Preparation. Prior to the application of the pavement joint adhesive, ensure the face of the longitudinal joint is thoroughly dry and free from dust or any other debris that would inhibit adhesion. Clean the joint face by the use of compressed air.

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Ensure this preparation process occurs shortly before application to prevent the return of debris on the joint face.

3.2 Pavement Joint Adhesive Application. Ensure the ambient temperature is a minimum of 40 ° F during the application of the pavement joint adhesive. Prior to applying the adhesive, demonstrate competence in applying the adhesive according to this note to the satisfaction of the Engineer. Heat the adhesive in the melter kettle to the specified temperature range. Pump the adhesive from the melter kettle through the wand onto the vertical face of the cold joint. Apply the adhesive in a continuous band over the entire face of the longitudinal joint. Do not use excessive material in either thickness or location. Ensure the edge of the extruded adhesive material is flush with the surface of the pavement. Then, place and compact the adjacent lane against the joint face. Remove any excessive material extruded from the joint after compaction (a small line of material may remain).

3.3 Pavement Joint Adhesive Certification. Furnish the joint adhesive's certification to the Engineer stating the material conforms to all requirements herein prior to use.

3.4 Sampling and Testing. The Department will require a random sample of pavement joint adhesive from each manufacturer's lot of material. Extrude two 5 lb. samples of the heated material and forward the sample to the Division of Materials for testing. Reynolds oven bags, turkey size, placed inside small cardboard boxes or cement cylinder molds have been found suitable. Ensure the product temperature is 400°F or below at the time of sampling.

4. MEASUREMENT. The Department will measure the quantity of Pavement Joint Adhesive in linear feet. The Department will not measure for payment any extra materials, labor, methods, equipment, or construction techniques used to satisfy the requirements of this note. The Department will not measure for payment any trial applications of Pavement Joint Adhesive, the cleaning of the joint face, or furnishing and placing the adhesive. The Department will consider all such items incidental to the Pavement Joint Adhesive.
5. PAYMENT. The Department will pay for the Pavement Joint Adhesive at the Contract unit bid price and apply an adjustment for each manufacturer's lot of material based on the degree of compliance as defined in the following schedule. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

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Pavement Joint Adhesive Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Joint Adhesive Referenced in Subsection 2.1.1						
Viscosity, 400 ° F (Pa•s)			3.0-3.4	2.5-2.9	2.0-2.4	≤1.9
ASTM D 3236	4.0-10.0	3.5-10.5	10.6-11.0	11.1-11.5	11.6-12.0	≥ 12.1
Cone Penetration, 77 ° F			54-56	51-53	48-50	≤ 47
ASTM D 5329	60-100	57-103	104-106	107-109	110-112	≥ 113
Flow, 140 ° F (mm) ASTM D 5329	≤ 5.0	≤ 5.5	5.6-6.0	6.1-6.5	6.6-7.0	≥ 7.1
Resilience, 77 ° F (%) ASTM D 5329	≥ 30	≥ 28	26-27	24-25	22-23	≤ 21
Tensile Adhesion, 77 ° F (%) ASTM D 5329	≥ 500	≥ 490	480-489	470-479	460-469	≤ 459
Softening Point, ° F AASHTO T 53	≥ 171	≥ 169	166-168	163-165	160-162	≤ 159
Ductility, 77 ° F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9
Ductility, 39 ° F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9

Code
20071EC

Pay Item
Joint Adhesive

Pay Unit
Linear Foot

May 7, 2014

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, 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 undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

**KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS**

**EMPLOYMENT REQUIREMENTS
RELATING TO
NONDISCRIMINATION OF EMPLOYEES
(APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)**

**AN ACT OF THE KENTUCKY GENERAL ASSEMBLY
TO PREVENT DISCRIMINATION IN EMPLOYMENT**

**KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972**

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (forty and above); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age forty (40) and over. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, except that such a notice or advertisement may indicate a preference, limitation, or specification based on religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, when religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age forty (40) and over, in admission to, or employment in any program established to provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

Revised: January 25, 2017

Standard Title VI/Non-Discrimination Assurances

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, **Federal Highway Administration**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the **Federal Highway Administration** to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the **Federal Highway Administration**, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the **Federal Highway Administration** may determine to be appropriate, including, but not limited to:
 - a. withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the **Federal Highway Administration** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Standard Title VI/Non-Discrimination Statutes and Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*).

EXECUTIVE BRANCH CODE OF ETHICS

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (7) provides:

No present or former public servant shall, within six (6) months following termination of his office or employment, accept employment, compensation, or other economic benefit from any person or business that contracts or does business with, or is regulated by, the state in matters in which he was directly involved during the last thirty-six (36) months of his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, or for which he received, prior to his state employment, a professional degree or license, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his tenure in state government. This subsection shall not prohibit the performance of ministerial functions, including but not limited to filing tax returns, filing applications for permits or licenses, or filing incorporation papers, nor shall it prohibit the former officer or public servant from receiving public funds disbursed through entitlement programs.

KRS 11A.040 (9) states:

A former public servant shall not represent a person or business before a state agency in a matter in which the former public servant was directly involved during the last thirty-six (36) months of his tenure, for a period of one (1) year after the latter of:

- a) The date of leaving office or termination of employment; or
- b) The date the term of office expires to which the public servant was elected.

This law is intended to promote public confidence in the integrity of state government and to declare as public policy the idea that state employees should view their work as a public trust and not as a way to obtain private benefits.

If you have worked for the executive branch of state government within the past six months, you may be subject to the law's prohibitions. The law's applicability may be different if you hold elected office or are contemplating representation of another before a state agency.

Also, if you are affiliated with a firm which does business with the state and which employs former state executive-branch employees, you should be aware that the law may apply to them.

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, 3 Fountain Place, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: January 27, 2017

General Decision Number: KY190107 01/04/2019 KY107

Superseded General Decision Number: KY20180187

State: Kentucky

Construction Type: Highway

Counties: Adair, Barren, Bell, Breathitt, Casey, Clay, Clinton, Cumberland, Estill, Floyd, Garrard, Green, Harlan, Hart, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lincoln, Magoffin, Martin, McCreary, Menifee, Metcalfe, Monroe, Morgan, Owsley, Perry, Pike, Powell, Pulaski, Rockcastle, Russell, Taylor, Wayne, Whitley and Wolfe Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019

SUKY2015-047 10/20/2015

	Rates	Fringes
BOILERMAKER.....	\$ 24.65	12.94
BRICKLAYER		
Bricklayer.....	\$ 22.90	8.50

Stone Mason.....	\$ 21.50	8.50
CARPENTER		
Carpenter.....	\$ 24.90	14.50
Piledriver.....	\$ 24.55	14.50

CEMENT MASON.....	\$ 21.25	8.50
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ELECTRICIAN		
Electrician.....	\$ 29.36	10.55
Equipment Operator.....	\$ 26.90	10.31
Groundsman.....	\$ 17.79	8.51
Lineman.....	\$ 30.09	10.94

When workmen are required to work from bosum chairs, trusses, stacks, tanks, scaffolds, catwalks, radio and T.V. towers, structural steel (open, unprotected, unfloored raw steel), and bridges or similar hazardous locations where workmen are subject to fall, except where using JLG's and bucket trucks up to 75 feet: Add 25% to workman's base rate for 50 to 75 feet, and add 50% to workman's base rate for over 75 feet.

IRONWORKER.....	\$ 27.56	20.57
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LABORER

Group 1.....	\$ 21.80	12.36
Group 2.....	\$ 22.05	12.36
Group 3.....	\$ 22.10	12.36
Group 4.....	\$ 22.70	12.36

GROUP 1: Aging and Curing of Concrete (Any Mode or Method), Asbestos Abatement Worker, Asphalt Plant Laborers, Asphalt Laborers, Batch Truck Dumpers, Carpenter Tenders, Cement Mason Tenders, Cleaning of Machines, Concrete Laborers, Demolition Laborers, Dredging Laborers, Drill Tender, Environmental Laborer - Nuclear, Radiation, Toxic and Hazardous Waste - Level D, Flagmen, Grade Checkers, All Hand Digging and Hand Back Filling, Highway Marker Placers, Landscaping Laborers, Mesh Handlers and Placers, Puddler, Railroad Laborers, Rip-rap and Grouters, Right of Way Laborers, Sign, Guard Rail and Fence Installers (All Types), Signalmen, Sound Barrier Installer, Storm and Sanitary Sewer Laborers, Swampers, Truck Spotters and Dumpers, Wrecking of Concrete Forms, General Cleanup

GROUP 2: Batter Board Men (Sanitary and Storm Sewer), Brickmason Tenders, Mortar Mixer Operator, Scaffold Builders, Burner and Welder, Bushammers, Chain Saw Operator, Concrete Saw Operators, Deckhand Scow Man, Dry Cement Handlers, Environmental Laborers - Nuclear, Radiation, Toxic and Hazardous Waste - Level C, Forklift Operators for Masonry, Form Setters, Green Concrete Cutting, Hand Operated Grouter and Grinder Machine Operator, Jack Hammers, Lead Paint Abatement, Pavement Breakers, Paving Joint Machine, Pipe Layers - Laser Operators (Non-metallic), Plastic Pipe Fusion, Power Driven Georgia Buggy and Wheel Barrow, Power Post Hole Diggers, Precast Manhole Setters, Walk-behind Tampers, Walk-behind Trenchers, Sand Blasters, Concrete Chippers, Surface Grinders, Vibrator Operators, Wagon Drillers

GROUP 3: Air Track Driller (All Types), Asphalt Luteman and Rakers, Gunnite Nozzleman, Gunnite Operators and Mixers, Grout

Pump Operator, Powderman and Blaster, Side Rail Setters, Rail Paved Ditches, Screw Operators, Tunnel Laborers (Free Air), Water Blasters

GROUP 4: Caisson Workers (Free Air), Cement Finishers, Environmental Laborer - Nuclear, Radiation, Toxic and Hazardous Waste - Level A and B, miners and Drillers (Free Air), Tunnel Blasters, and Tunnel Mockers (Free Air), Directional and Horizontal Boring, Air Track Drillers (All Types), Powder Man and Blasters, Troxler and Concrete Tester if Laborer is Utilized

PAINTER

All Excluding Bridges.....	\$ 19.92	9.57
Bridges.....	\$ 23.92	10.07

PLUMBER.....	\$ 22.52	7.80
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POWER EQUIPMENT OPERATOR:

Group 1.....	\$ 29.95	14.40
Group 2.....	\$ 29.95	14.40
Group 3.....	\$ 27.26	14.40
Group 4.....	\$ 26.96	14.40

GROUP 1: Auto Patrol, Batch Plant, Bituminous Paver, Cable-Way, Clamshell, Concrete Mixer (21 cu ft or over), Concrete Pump, Crane, Crusher Plant, Derrick, Derrick Boat, Ditching and Trenching Machine, Dragline, Dredge Engineer, Elevator (regardless of ownership when used for hoisting any building material), Elevating Grader and all types of Loaders, Hoe-type Machine, Hoisting Engine, Locomotive, LeTourneau or Carry-all Scoop, Bulldozer, Mechanic, Orangepeel Bucket, Piledriver, Power Blade, Roller (Bituminous), Roller (Earth), Roller (Rock), Scarifier, Shovel, Tractor Shovel, Truck Crane, Well Point, Winch Truck, Push Dozer, Grout Pump, High Lift, Fork Lift (regardless of lift height), all types of Boom Cats, Multiple Operator, Core Drill, Tow or Push Boat, A-Frame Winch Truck, Concrete Paver, Grade-All, Hoist, Hyster, Material Pump, Pumpcrete, Ross Carrier, Sheepfoot, Sideboom, Throttle-Valve Man, Rotary Drill, Power Generator, Mucking Machine, Rock Spreader attached to Equipment, Scoopmobile, KeCal Loader, Tower Cranes, (French, German and other types), Hydrocrane, Tugger, Backfiller Gurries, Self-propelled Compactor, Self-Contained Hydraulic Percussion Drill

GROUP 2: All Air Compressors (200 cu ft/min or greater), Bituminous Mixer, Concrete Mixer (21 cu. ft. or over), Welding Machine, Form Grader, Tractor (50 hp and over), Bull Float, Finish Machine, Outboard Motor Boat, Brakeman, Mechanic Tender, Whirly Oiler, Tract-air, Road Widening Trencher, Articulating Trucks

GROUP 3: Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4: Bituminous Distributor, Cement Gun, Conveyor, Mud Jack, Paving Joint Machine, Pump, Tamping Machine, Tractor (under 50 hp), Vibrator, Oiler, Air Compressor (under 200 cu ft per minute), Concrete Saw, Burlap and Curing Machine, Hydro Seeder, Power Form Handling Equipment, Deckhand Oiler, Hydraulic Post Driver

SHEET METAL WORKER.....	\$ 20.40	7.80
TRUCK DRIVER		
Driver (3 Tons and Over), Driver (Truck Mounted Rotary Drill).....	\$ 23.74	14.50
Driver (3 Tons and Under), Tire Changer and Truck Mechanic Tender.....	\$ 23.53	14.50
Driver (Semi-Trailer or Pole Trailer), Driver (Dump Truck, Tandem Axle), Driver of Distributor.....	\$ 23.40	14.50
Driver on Mixer Trucks (All Types).....	\$ 23.45	14.50
Driver on Pavement Breakers.	\$ 23.55	14.50
Driver, Euclid and Other Heavy Earth Moving Equipment and Low Boy.....	\$ 24.31	14.50
Driver, Winch Truck and A- Frame when used in Transporting Materials.....	\$ 23.30	14.50
Greaser on Greasing Facilities.....	\$ 24.40	14.50
Truck Mechanic.....	\$ 23.50	14.50
Truck Tender and Warehouseman.....	\$ 23.20	14.50

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage

determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid to an employee at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Director
Division of Construction Procurement
Frankfort, Kentucky 40622
502-564-3500

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(Executive Order 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
4.5%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. The notification shall be mailed to:

**Evelyn Teague, Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8609**

4. As used in this Notice, and in the contract resulting from this solicitation, the "**covered area**" is Laurel County.

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(Executive Order 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
7.0%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

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**Evelyn Teague, Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8609**

4. As used in this Notice, and in the contract resulting from this solicitation, the "**covered area**" is Rockcastle County.

PART IV

INSURANCE

INSURANCE

The Contractor shall procure and maintain the following insurance in addition to the insurance required by law:

- 1) Commercial General Liability-Occurrence form – not less than \$2,000,000 General aggregate, \$2,000,000 Products & Completed Aggregate, \$1,000,000 Personal & Advertising, \$1,000,000 each occurrence.
- 2) Automobile Liability- \$1,000,000 per accident
- 3) Employers Liability:
 - a) \$100,000 Each Accident Bodily Injury
 - b) \$500,000 Policy limit Bodily Injury by Disease
 - c) \$100,000 Each Employee Bodily Injury by Disease
- 4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
 - a) "policy contains no deductible clauses."
 - b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."
- 5) KENTUCKY WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

The cost of insurance is incidental to all contract items. All subcontractors must meet the same minimum insurance requirements.

PART V

BID ITEMS

Report Date 5/1/19

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	778.00	TON		\$	
0020	00071		CRUSHED AGGREGATE SIZE NO 57	55.00	TON		\$	
0030	00100		ASPHALT SEAL AGGREGATE	19.00	TON		\$	
0040	00103		ASPHALT SEAL COAT	3.00	TON		\$	
0050	00190		LEVELING & WEDGING PG64-22	41.00	TON		\$	
0060	00219		CL4 ASPH BASE 1.00D PG76-22	125.00	TON		\$	
0070	00339		CL3 ASPH SURF 0.38D PG64-22	8,818.00	TON		\$	
0080	00356		ASPHALT MATERIAL FOR TACK	71.00	TON		\$	
0090	00397		CL4 SMA SURF 0.38A PG76-22	14,436.00	TON		\$	
0100	02677		ASPHALT PAVE MILLING & TEXTURING	23,253.00	TON		\$	
0110	20071EC		JOINT ADHESIVE	157,916.00	LF		\$	
0120	24781EC		INTELLIGENT COMPACTION FOR ASPHALT	23,253.00	TON		\$	
0130	24891EC		PAVE MOUNT INFRARED TEMP EQUIPMENT	2,536,743.00	SF		\$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0140	00078		CRUSHED AGGREGATE SIZE NO 2	16.00	TON		\$	
0150	00464		CULVERT PIPE-24 IN	8.00	LF		\$	
0160	01000		PERFORATED PIPE-4 IN	1,535.00	LF		\$	
0170	01010		NON-PERFORATED PIPE-4 IN	128.00	LF		\$	
0180	01020		PERF PIPE HEADWALL TY 1-4 IN	4.00	EACH		\$	
0190	01024		PERF PIPE HEADWALL TY 2-4 IN	2.00	EACH		\$	
0200	01028		PERF PIPE HEADWALL TY 3-4 IN	10.00	EACH		\$	
0210	01032		PERF PIPE HEADWALL TY 4-4 IN	2.00	EACH		\$	
0220	01208		PIPE CULVERT HEADWALL-24 IN	2.00	EACH		\$	
0230	01740		CORED HOLE DRAINAGE BOX CON-4 IN	2.00	EACH		\$	
0240	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	143.00	EACH		\$	
0250	01985		DELINEATOR FOR BARRIER - YELLOW	283.00	EACH		\$	
0260	02014		BARRICADE-TYPE III	4.00	EACH		\$	
0270	02351		GUARDRAIL-STEEL W BEAM-S FACE	2,037.00	LF		\$	
0280	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	1.00	EACH		\$	
0290	02367		GUARDRAIL END TREATMENT TYPE 1	3.00	EACH		\$	
0300	02369		GUARDRAIL END TREATMENT TYPE 2A	2.00	EACH		\$	
0310	02381		REMOVE GUARDRAIL	2,387.00	LF		\$	
0320	02387		GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	1.00	EACH		\$	
0330	02391		GUARDRAIL END TREATMENT TYPE 4A	1.00	EACH		\$	
0340	02483		CHANNEL LINING CLASS II	540.00	TON		\$	
0350	02484		CHANNEL LINING CLASS III	25.00	TON		\$	
0360	02562		TEMPORARY SIGNS	2,500.00	SQFT		\$	
0370	02575		DITCHING AND SHOULDERING	39,480.00	LF		\$	
0380	02599		FABRIC-GEOTEXTILE TYPE IV	784.00	SQYD		\$	
0390	02625		REMOVE HEADWALL	2.00	EACH		\$	
0400	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	

PROPOSAL BID ITEMS

191216

Page 2 of 2

Report Date 5/1/19

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0410	02671		PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH		\$	
0420	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		\$	
0430	02696		SHOULDER RUMBLE STRIPS	78,959.00	LF		\$	
0440	02726		STAKING	1.00	LS		\$	
0450	02775		ARROW PANEL	8.00	EACH		\$	
0460	03240		BASE FAILURE REPAIR	84.00	SQYD		\$	
0470	05950		EROSION CONTROL BLANKET	14,000.00	SQYD		\$	
0480	06401		FLEXIBLE DELINEATOR POST-M/W	169.00	EACH		\$	
0490	06407		SBM ALUM SHEET SIGNS .125 IN	568.00	SQFT		\$	
0500	06511		PAVE STRIPING-TEMP PAINT-6 IN	178,000.00	LF		\$	
0510	06542		PAVE STRIPING-THERMO-6 IN W	41,229.00	LF		\$	
0520	06543		PAVE STRIPING-THERMO-6 IN Y	29,594.00	LF		\$	
0530	06549		PAVE STRIPING-TEMP REM TAPE-B	4,080.00	LF		\$	
0540	06550		PAVE STRIPING-TEMP REM TAPE-W	12,240.00	LF		\$	
0550	06551		PAVE STRIPING-TEMP REM TAPE-Y	4,080.00	LF		\$	
0560	06556		PAVE STRIPING-DUR TY 1-6 IN W	4,080.00	LF		\$	
0570	06557		PAVE STRIPING-DUR TY 1-6 IN Y	1,360.00	LF		\$	
0580	10020NS		FUEL ADJUSTMENT	39,621.00	DOLL	\$1.00	\$	\$39,621.00
0590	10030NS		ASPHALT ADJUSTMENT	99,515.00	DOLL	\$1.00	\$	\$99,515.00
0600	20550ND		SAWCUT PAVEMENT	880.00	LF		\$	
0610	20757ED		PAVEMENT REPAIR	140.00	SQYD		\$	
0620	20912ND		BARRIER WALL POST	26.00	EACH		\$	
0630	23071EN		OVERBAND CRACK SEALING	11,000.00	LB		\$	
0640	23607EC		PAVE MARK THERMO-LANE REDUCTION ARROW	3.00	EACH		\$	
0650	24489EC		INLAID PAVEMENT MARKER	1,329.00	EACH		\$	
0660	25008EC		PAVE STRIPING-THERMO-6 IN W-WET REFLECT	24,262.00	LF		\$	
0670	25009EC		PAVE STRIPING-THERMO-6 IN Y-WET REFLECT	39,997.00	LF		\$	
0680	25019EC		GROOVE FOR PAVE STRIPING - 7 IN	64,259.00	LF		\$	

Section: 0003 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0690	02568		MOBILIZATION	1.00	LS		\$	
0700	02569		DEMOBILIZATION	1.00	LS		\$	