CALL NO. 100

CONTRACT ID. 191210

LAUREL COUNTY

FED/STATE PROJECT NUMBER NHPP IM 0752 (100)

DESCRIPTION I-75 (LAUREL COUNTY)

WORK TYPE ASPHALT SURFACE WITH GRADE & DRAIN

PRIMARY COMPLETION DATE 6/30/2021

LETTING DATE: March 22,2019

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME March 22,2019. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

PLANS AVAILABLE FOR THIS PROJECT.

DBE CERTIFICATION REQUIRED - 12%

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

TABLE OF CONTENTS

PART V BID ITEMS

PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 11

CONTRACT ID - 191210

NHPP IM 0752 (100)

COUNTY - LAUREL

PCN - DE06300751910
NHPP IM 0752 (100)

I-75 (LAUREL COUNTY) (MP 28.900) IMPROVE I-75 FROM US 25E TO THE LITTLE LAUREL RIVER (MP 33.200), A DISTANCE OF 04.87 MILES.ASPHALT SURFACE WITH GRADE & DRAIN SYP NO. 11-00009.10.

GEOGRAPHIC COORDINATES LATITUDE 37:00:05.00 LONGITUDE 84:06:21.00

COMPLETION DATE(S):

COMPLETED BY 06/30/2021 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.

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 certainly 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 our 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 Bynes 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.

TRAINEES

In Compliance with the "TRAINING SPECIAL PROVISION" included in Part III of the Proposal, the Contractor will be required to employ a trainee(s) for this contract.

PROJECT TRAFFIC COORDINATOR (PTC)

Be advised this project is a significant project pursuant to section 112.03.12.

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.

ASPHALT PAVEMENT RIDE QUALITY CATEGORY A

The Department will apply Pavement Rideability Requirements on this project in accordance with Section 410, Category A.

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.

SPECIAL NOTE FOR PIPE CLEANING

PART 1 -- GENERAL

1.01 SCOPE OF WORK

A. Furnish all labor, materials, equipment and incidentals required to clean all pipes, as specified herein.

B. Cleaning shall include the proper high pressure water jetting, rodding, snaking, bucketing, brushing and flushing of pipes prior to inspection by closed circuit television, pipeline rehabilitation, and testing operations.

C. Cleaning shall dislodge, transport and remove all sludge, mud, sand, gravel, rocks, bricks, grease, roots, sticks, and all other debris from the interior of the sewer pipe and structures as required for pipeline rehabilitation.

PART 2 -- PRODUCTS

2.01 MATERIALS

A. Hydraulically propelled Sewer Cleaning Equipment

1. Hydraulically propelled sewer cleaning equipment shall be the movable dam type constructed such that a portion of the dam may be collapsed during cleaning to prevent flooding of the sewer.

2. The movable dam shall be the same diameter as the pipe being cleaned and shall provide a flexible scraper around the outer periphery to ensure total removal of grease.

3. Contractor shall take precautions against flooding prior to using sewer cleaning balls or other such equipment that cannot be collapsed instantly.

B. High Velocity Hydro-Cleaning Equipment shall have the following:

1. A minimum of 500-ft of high pressure hose.

2. Two or more high velocity nozzles capable of producing a scouring action from 15 to 45 degrees in all size lines to be cleaned.

3. A high velocity gun for washing and scouring manhole walls and floor.

4. Capability of producing flows from a fine spray to a long distance solid stream.

5. A water tank, auxiliary engines and pumps and a hydraulically driven hose reel.

6. Equipment operating controls located above ground.

C. Mechanical cleaning equipment for sewer mains shall be either power buckets or power rodders.

1. Bucket machines
   a. Be furnished with buckets in pairs
   b. Use V-belts for power transmission or have an overload device. No direct drive machines will be permitted.
   c. Be equipped with a take up drum and a minimum of 500-ft of cable.
   d. Have sufficient dragging power to perform the work efficiently.

2. Power rodding machine
   a. Either sectional or continuous.
   b. Hold a minimum of 750-ft of rod.
   c. The machine shall have a positive rod drive to produce 2000 pounds of rod pull.

PART 3 -- EXECUTION

3.01 PERFORMANCE

A. Selection of cleaning equipment shall be based on the conditions of the structures and lines at the time the work commences based on the pre-construction CCTV inspection to be conducted by the Contractor under this Contract.

B. Use properly selected equipment to remove all dirt, grease, rock and other deleterious materials, and obstructions.

C. Protect existing lines from damage caused by improper use of cleaning equipment.

D. Take precautions to avoid damage or flooding to public or private property being served by the line being cleaned.

F. Removal of Materials

1. Remove all solids and semi-solids at the downstream opening of the section being cleaned.

2. Passing material from one section of a line to another will not be permitted; unless access to any one section of line cannot be achieved.

G. Remove from the site and properly dispose of all solids or semi-solids recovered during the cleaning operation.

H. No cleaning shall take place in a particular segment until all upstream pipe segments have been cleaned. If cleaning is done in a downstream pipe segment in order to facilitate overall cleaning operations, the segment shall be re-cleaned at no additional cost, after all pipes upstream of that segment have been cleaned.

3.02 FIELD QUALITY CONTROL

A. Acceptance of this portion of the work shall be dependent upon the results of the television inspection. Lines not acceptably clean as to permit television inspection and rehabilitation shall be re-cleaned and re-inspected at no additional cost to the Owner

B. Following cleaning, the Contractor shall inspect each section in accordance with the Special Note for Pipe Liner Acceptance Testing.

C. Upon the Engineer’s final structure to structure inspection of the system, if any foreign matter is still present in the system, clean the sections and portions of the lines as required.

PART 4 – PAYMENT

Payment for cleaning of the pipes as detailed in the Pipe Drainage Summary will be made per linear foot as the price bid for CLEAN. The CLEAN bid item will be paid for the cleaning of all pipe sizes. Payment for CLEAN will be considered full compensation for all work, equipment, and incidentals necessary to clean the pipe in accordance with this note.

SPECIAL NOTE FOR PIPE LINER ACCEPTANCE TESTING

PART 1 -- GENERAL

1.01 SCOPE OF WORK

A. Furnish all necessary labor, materials, equipment, services and incidentals required to visually inspect by means of closed-circuit television (CCTV) designated pipe sections including, but not limited to, recording and playback equipment, materials and supplies.

B. The inspection shall be performed on one section (i.e. curb box inlet to curb box inlet) at a time. The section being inspected shall be suitably isolated from the remainder of the system.

C. Video recordings shall be made of the television inspections and copies of both the recordings and printed inspection logs shall be supplied to the Engineer.

D. Contractor may have to perform point repairs, remove obstructions or remove protruding service connections to complete pre-rehabilitation TV inspection.

PART 2 -- PRODUCTS

2.01 EQUIPMENT

A. The television camera used for inspection shall be one specifically designed and constructed for such inspection. Lighting for the camera shall be suitable to allow a clear picture for the entire periphery of the pipe. The camera shall be operative in 100 percent humidity conditions. The camera, television monitor and other components of the video system shall be capable of producing a minimum 500-line resolution color video picture. Picture quality and definition shall be to the satisfaction of the Engineer and if unsatisfactory, inspection shall be performed again with the appropriate changes made as designated by the Engineer at no additional cost to the Engineer. The television inspection equipment shall have an accurate footage counter that shall display on the monitor, the exact distance of the camera from the centerline of the starting manhole.

PART 3 -- EXECUTION

3.01 PROCEDURE

A. The camera shall be moved through the pipe in either direction at a uniform rate, stopping when necessary to ensure proper documentation of the pipe's condition but in no case will the television camera be pulled at a speed greater than 30 fpm. Manual winches, power winches, TV cable and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the pipe conditions shall be used to move the camera through the line. If, during the inspection operation, the television camera will not pass through the entire section, the equipment shall be removed and repositioned in a manner so that the inspection can be performed from the opposite opening. All set-up costs for the inspection shall be included in the unit prices bid. If the camera fails to pass through the entire section, the Contractor shall perform point repairs as required or approved by the Engineer. Point repairs will be paid as each at the bid price for "PIPE REPAIR". The Contractor shall re-clean or further remove blockage after the point repairs at no additional cost to the Engineer.

B. Whenever non-remote powered and controlled winches are used to pull the television camera

through the line, telephones, radios, or other suitable means of communication shall be set up between the two openings of the line being inspected to ensure that good communications exist between members of the crew.

The camera height shall be adjusted such that the camera lens is always centered in the pipe being televised. Flow shall be controlled such that depth of flow shall not exceed 20% of pipe's diameter.

Lighting system shall be adequate for quality pictures.

3.02 RECORDING OF FIELD OBSERVATIONS

A. Television Inspection logs

1. Printed location records shall be kept which shall clearly show the location. In addition, other data of significance including joints, unusual conditions, roots, collapsed sections, or presence of scale and corrosion that the camera failed to pass through and reasons for the failure and other discernible features shall be recorded and annotated using the PACP system and a copy of such records shall be supplied to the Engineer.

B. Digital Recordings

1. The purpose of digital recording shall be to supply a visual and audio record of areas of interests of the pipe segments that may be replayed by the Engineer. Digital recording playback shall be at the same speed that it was recorded and shall be made in color. The Contractor shall be required to have all digital media and necessary playback equipment readily accessible for review by the Engineer during the project.

2. The Contractor shall perform CCTV inspection of each newly installed or rehabilitated pipe segment after testing and before re-introducing any flow into the pipe. Each test shall be witnessed by the Engineer.

3. The Contractor shall record each CCTV inspection on a DVD and submit such recordings to the Engineer as a prerequisite for Partial Utilization/Substantial Completion.

4. CCTV inspections shall be performed by a PACP certified and trained person.

5. Inspections shall include narration that notes the location and type of defects, if any.

6. At the completion of the project, the Contractor shall furnish all of the original digital recordings to the Engineer. Each disc shall be labeled as to its contents. Labels shall include the disc number, date televised, sewer segment reach designation, street location, and structure numbers on the disc. The Contractor shall keep a copy of the discs for 30 days after the final payment for the project, at which time the discs may be erased at the Contractor's option.

PART 4 – PAYMENT

Payment for both the video inspection prior to and after the Pipe Liners have been installed will be made as one lump sum payment as PIPE LINER ACCEPTANCE TESTING. Payment for PIPE LINER ACCEPTANCE TESTING will be considered full compensation for all work, equipment, and incidentals necessary to perform the video inspection in accordance with this note.

Payment for pipe point repairs will be made as each at the bid price for PIPE REPAIR. Payment for PIPE REPAIR will be considered full compensation for all work, equipment, and incidentals necessary to make point repairs as required and approved by the Engineer.

June 1, 2017

SPECIAL NOTE FOR PVC FOLD-AND-FORM PIPE LINER

I. GENERAL

A. SUMMARY

1. Section Includes: Definition of the approved methods and materials to rehabilitate gravity pipelines by the insertion of a continuously extruded, folded, PVC Fold-and-Form Pipe Liner into a conduit (host pipe), and the "blow-molding" (thermoforming) of the pipe liner to conform to the shape of the existing pipe. The pipe liner shall:

   a) Extend continuously from one access point to the next access point with no joints.

   b) Provide a tightly conforming fit against the inner wall of the host pipe.

   c) Definitions:

      (1) PVC Fold-and-Form Pipe Liner: A continuously extruded (joint-less), polyvinyl chloride (PVC) Pipe Liner that is shaped into a reduced form to facilitate insertion into existing pipelines or conduits. The Pipe Liner shall return to its extruded, round memory upon application of heat and pressure and form tightly against the host pipe by "blow molding" (thermoforming) techniques.

      (2) Host Pipe: An existing gravity pipeline or conduit to be internally rehabilitated by installation of the PVC Fold-and-Form Pipe Liner.

B. REFERENCES

1. Codes and standards referred to in this Special Note are:

   a) ASTM D 256: Standard Test Methods for Determining the Pendulum Impact Resistance of Notched Specimens of Plastics.

   b) ASTM D 638: Standard Test Method for Tensile Properties of Plastics

   c) ASTM D 790: Standard Test Method for Flexural Properties of Unreinforced and Reinforced Plastics

   d) ASTM D 1784: Standard Specification for Rigid Polyvinyl Chloride (PVC) Compounds and Chlorinated Polyvinyl Chloride (CPVC) Compounds

   e) ASTM D 2122: Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings

   f) ASTM D 2152: Standard Test Method for Extrusion Quality using Acetone Immersion

   g) ASTM D 2444: Standard Test Method for Impact Strength

   h) ASTM F 1057: Standard Test Method for Extrusion Quality using Heat Reversion

   i) ASTM F 1504: Standard Specification for Folded/Formed Poly (Vinyl Chloride) Pipe for Existing Sewer and Conduit rehabilitation

C. PIPE DESIGN AND DIMENSION

1. Submittals: The Contractor shall furnish engineering data covering materials and installation procedures.

2. Unless otherwise specified, the Contractor shall determine the minimum and maximum length of liner to effectively span the distance from the inlet to the outlet of the respective pipelines.

3. The pipe liner shall have a nominal outside diameter and minimum wall thickness based upon project parameters and the condition of the host pipe.

D. SAFETY

1. The CONTRACTOR shall conform to all safety requirements of pertinent regulatory agencies, and shall secure the site for the working conditions in compliance with the same. The CONTRACTOR shall erect signs and devices as are necessary for the safety of the work site.

2. The CONTRACTOR shall also provide all of the WORK in accordance with applicable OSHA standards. Emphasis shall be placed upon the requirements for entering confined spaces and working with steam.

II. PRODUCTS

A. MATERIAL SPECIFICATIONS:

1. The PVC Fold-and-Form Pipe Liner will be manufactured from virgin PVC Fold-and-Form Pipe Liner compound, containing no fillers, and meet or exceed the following minimum physical properties:

a) COMBUSTIBILITY: Self-Extinguishing

b) FLEXURAL MODULUS: ASTM D 790 280,000 PSI @73F

c) FLEXURAL STRENGTH: ASTM D 790 5,000 PSI @73F

d) IZOD IMPACT: ASTM D 256 1.5 FT-LB/IN

e) CHEMICAL RESISTANCE: suitable under general sanitary sewer conditions

2. CHARACTERISTICS: The PVC Fold-and-Form Pipe Liner shall be designed to meet the following installation performance requirements:

a) The Pipe Liner shall be capable of expanding a full pipe size larger than the nominal diameter (ex: 8” to 10”) without splitting, or rupturing with the understanding that the pipe liner dimension ratio will increase when so expanded.

b) After being expanded by “blow-molding”, the installed Pipe Liner will match the configuration of the host pipe.

c) The Pipe Liner shall be capable of negotiating pipe line bends in the host pipe without splitting, rupturing, or wrinkling of the pipe liner material.

d) The pipe liner shall be dimensionally stable after cool-down.

e) Processing of the pipe liner shall cause no degradation of the pipe liner physical properties.

3. MARKINGS: The pipe liner shall be marked at maximum five (5) foot intervals indicating ASTM D 1784 cell classification, manufacturer, and size (diameter and SDR). Each production lot will be uniquely coded.

4. DIMENSIONS:

a) The Pipe Liner outside diameter will be manufactured substantially smaller than the inside diameter of the host pipe. The pipe liner shall be manufactured with sufficient excess wall thickness to allow the pipe liner to meet or exceed the DR requirements after being expanded by "blow-molding" within the host pipe.

b) Unless otherwise specified, the Standard Dimension Ration (SDR) of 4" to 15" diameter Pipe Liner will be SDR 35. 18" to 36" Pipe Liner will be specified by wall thickness. The Pipe Liner will be continuously extruded (no joints) at the factory to the minimum length required to effectively span the distance between access points, in accordance with actual distances which shall be field verified by the Contractor prior to manufacturing.

B. MATERIAL TESTING: Each production lot of Pipe Liner will be inspected and tested at the time of manufacture for defects is accordance with ASTM D 2444, and ASTM D 2152. All pipe liners shall conform to the specified dimensions. Material design properties shall be confirmed in accordance with ASTM D 790.

III. EXECUTION

A. HOST PIPE PREPARATION

1. The existing pipeline shall be cleaned of any obstructions and televised using CCTV immediately prior to installation of the pipe liner. The host pipe condition shall be acceptable to the ENGINEER as appropriate for lining prior to the insertion of the pipe Liner.

2. Prior to beginning the insertion of the pipe liner, the CONTRACTOR shall confirm that the host pipe is adequately cleaned.

B. INSTALLATION PROCEDURES:

1. The pipe liner manufacturer's installation instructions and procedures shall be followed during installation.

2. Point Repairs

a) Point repairs and obstruction removals shall be completed, as necessary, in order to enable lining.

3. Liner Insertion

a) The entrance to the host pipe shall be covered so as to provide a smooth surface to prevent damage to the Pipe Liner.

b) The Pipe Liner shall be positioned to enable it to naturally curve into the access point and the host pipe.

c) The insertion end of the Pipe Liner shall be sealed to inhibit fluids and solids form entering the lumen of the Pipe Liner.

d) Insert the Pipe Liner into the entry access point. Slowly feed the Pipe Liner from the supply reel, while simultaneously pulling the Pipe Liner at the exit access point, to minimize tension on the Pipe Liner. Maintain two-way communication between personnel at entry and exit access points to coordinate the rate of Pipe Liner supply and pulling operations.

e) Use a power winch and a steel cable connected to the pulling head as recommended by the manufacturer to advance the Pipe Liner.

4. Pipe Liner Processing and "Blow-Molding":

a) Process and "blow-mold" the PVC Fold and-Form Pipe Liner in accordance with the manufacturer's instructions for heating and expanding the Pipe Liner. Upon completion of processing and "blow-molding", the Pipe Liner shall fit tightly against the inside wall of the host pipe and be locked into the joints of the host pipe, if possible.

b) Temperature and pressure gauges shall be used at the insertion and termination access points to monitor internal conditions during Pipe Liner processing and "blow-molding".

c) Introduce pressurized steam to heat and relax the Pipe Liner in strict accordance with the recommendations of the Pipe Liner manufacturer.

d) Continue the application of steam while introducing compressed air to increase internal pressure on the Pipe Liner as recommended by the manufacturer. DO NOT ALLOW PRESSURE TO EXCEED 12 PSI, AS DAMAGE MAY OCCUR TO HOST PIPE.

e) Discontinue the use of steam while continuing the use of compressed air to maintain the internal pressure. Allow the Pipe Liner to cool below 100 F before releasing pressure.

5. Liner Termination:

a) During the pulling in place and "blow-molding" process, the PVC liner shall form a bell shape at each end effectively locking the liner in place.

IV. PAYMENT

A. Payment for PVC Fold and Form Pipe Liners will be made per linear foot as

1. PVC FOLD AND FORM PIPE LINER – 12 IN - ITEM 24860EC
2. PVC FOLD AND FORM PIPE LINER – 15 IN - ITEM 24861EC
3. PVC FOLD AND FORM PIPE LINER – 18 IN - ITEM 24862EC
4. PVC FOLD AND FORM PIPE LINER – 24 IN - ITEM 24863EC
5. PVC FOLD AND FORM PIPE LINER – 30 IN - ITEM 24864EC
6. PVC FOLD AND FORM PIPE LINER – 36 IN - ITEM 24865EC

B. Payment will be considered full compensation for all work, equipment, and incidentals necessary to install the pipe liners in accordance with this note.

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STATION 547

SITE LOCATION IS APPROXIMATE AND WILL BE DETERMINED IN THE FIELD AND APPROVED BY DIVISION OF PLANNING PERSONNEL PRIOR TO ANY CONSTRUCTION.

ALL LOOPS SHALL BE 6'X6' SQUARE AND SHALL BE INSTALLED 16' FROM LEADING EDGE TO LEADING EDGE AS SHOWN. PIEZOELECTRIC SENSORS (PIEZOS) SHALL BE INSTALLED 5' FROM THE EDGE OF LOOPS WITH THE EDGE OF EACH PIEZO FLUSH WITH THE EDGE OF THE CORRESPONDING DRIVING LANE. LOOPS AND PIEZOS SHALL BE INSTALLED SPLICE-FREE TO THE CABINET AND A MINIMUM OF 2' OF WIRE FOR EACH SENSOR SHALL BE COILED INSIDE EACH JUNCTION BOX AND CABINET. ALL LOOPS AND PIEZOS SHALL BE LABELED IN ALL JUNCTION BOXES AND CABINET. DIVISION OF PLANNING PERSONNEL WILL CONNECT THE LOOPS AND PIEZOS INSIDE THE CABINET.

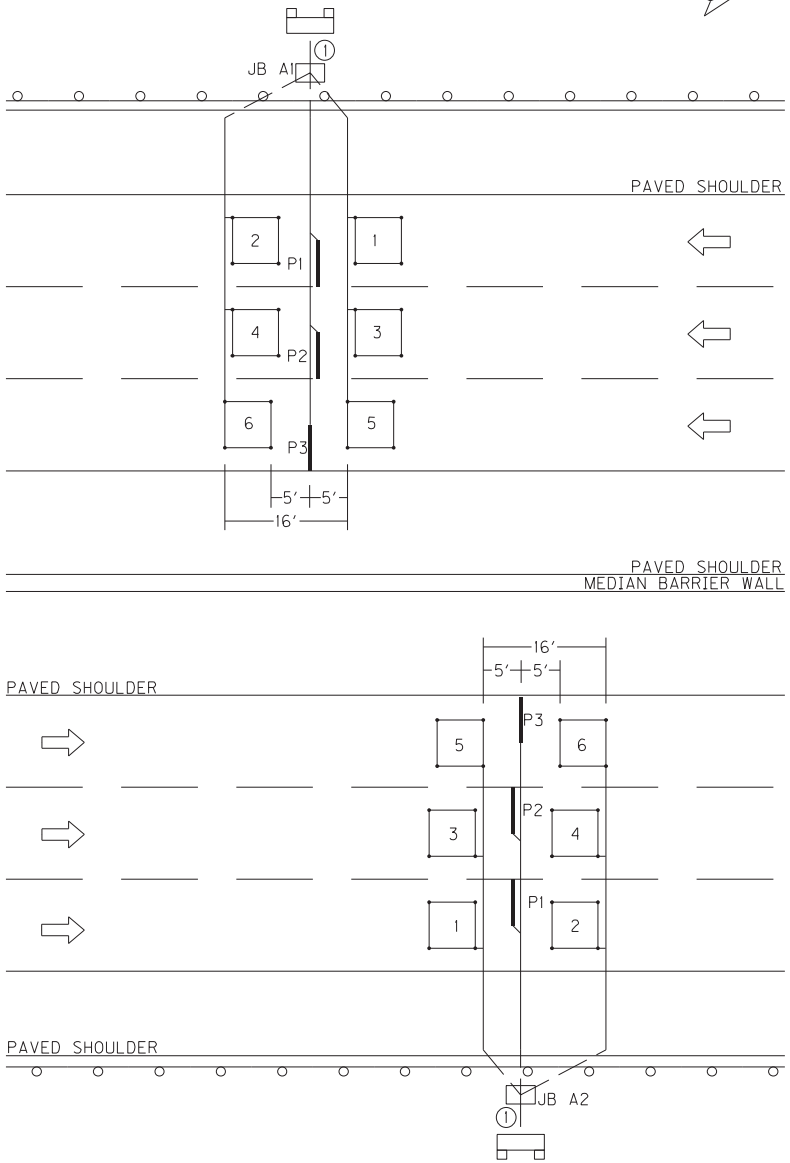
INSTALL ONE (1) 1¼" CONDUIT FROM EACH SAW SLOT TO NEAREST JUNCTION BOX.

INSTALL TWO (2) TYPE A JUNCTION BOXES (JB A1 AND A2).

INSTALL TWO (2) 20"X20"X8" CABINETS MOUNTED TO TWO (2) WOOD POSTS (EACH).

CODED NOTE:

(1) INSTALL ONE (1) 2" CONDUIT.



SCALE 1"=30'

PERMANENT TRAFFIC DATA ACQUISITION STATIONS
ESTIMATE OF QUANTITIES

Bid Item Code	Description	Unit	Quantity
2562	TEMPORARY SIGNS	SQ FT	
2650	MAINTAIN AND CONTROL TRAFFIC	LP SUM	
2775	ARROW PANEL	EACH	
4791	CONDUIT ¾ INCH	LIN FT	
4793	CONDUIT 1 ¼ INCH	LIN FT	60
4795	CONDUIT 2 INCH	LIN FT	30
4811	ELECTRICAL JUNCTION BOX TYPE B	EACH	
4820	TRENCHING AND BACKFILLING	LIN FT	80
4821	OPEN CUT ROADWAY	LIN FT	
4829	PIEZOELECTRIC SENSOR	EACH	6
4830	LOOP WIRE	LIN FT	2900
4850	CABLE NO. 14/1 PAIR	LIN FT	
4871	POLE – 35’ WOODEN	EACH	
4895	LOOP SAW SLOT AND FILL	LIN FT	600
4899	ELECTRICAL SERVICE	EACH	
20213EC	INSTALL PAD MOUNT ENCLOSURE	EACH	
20359NN	GALVANIZED STEEL CABINET	EACH	2
20360ES818	WOOD POST	EACH	4
20391NS835	ELECTRICAL JUNCTION BOX TYPE A	EACH	2
20392NS835	ELECTRICAL JUNCTION BOX TYPE C	EACH	
20468EC	ELECTRICAL JUNCTION BOX 10x8x4	EACH	
21543EN	BORE AND JACK CONDUIT	LIN FT	
23206EC	INSTALL CONTROLLER CABINET	EACH	

MATERIAL, INSTALLATION, AND BID ITEM NOTES FOR PERMANENT TRAFFIC DATA ACQUISITION STATIONS

1. DESCRIPTION

Except as specified in these notes, all work shall consist of furnishing and installing all materials necessary for permanent data acquisition station equipment installation(s) and shall be performed in accordance with the current editions of:

- The Contract
- Division of Planning Standard Detail Sheets
- Kentucky Transportation Cabinet, Department of Highways, *Standard Specifications for Road and Bridge Construction*
- Kentucky Transportation Cabinet, Department of Highways, Standard Drawings
- National Fire Protection Association *(NFPA) 70: National Electrical Code*
- Institute of Electrical and Electronic Engineers (IEEE), *National Electrical Safety Code*
- Federal Highway Administration, *Manual on Uniform Traffic Control Devices*
- American Association of State Highway and Transportation Officials (AASHTO), *Roadside Design Guide*.
- Standards of the utility company serving the installation, if applicable

The permanent traffic data acquisition station layout(s) indicate the extent and general arrangement of the proposed installation and are for general guidance. Any omission or commission shown or implied shall not be cause for deviation from the intent of the plans and specifications. Information shown on the plans 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 conclusion as to the conditions encountered. The Department of Highways (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 shown. If any modifications of the plans or specifications are considered necessary by the Contractor, details of such modifications and the reasons, therefore, shall be submitted in writing to the Engineer for written approval prior to beginning such modified work.

The Contractor shall contact all utility companies and the district utility agent prior to beginning construction to insure proper clearance and shielding from existing and proposed utilities. The Contractor shall use all possible care in excavating on this project so as not to disturb any existing utilities whether shown on the plans or not shown on the plans. Any utilities disturbed or damaged by the Contractor during construction shall be replaced or repaired to original condition by the Contractor at no cost to the department. If necessary, to avoid existing utilities, the Contractor shall hand dig areas where poles or conduit cross utilities.

The Contractor shall be responsible for all damage to public and/or private property resulting from his work.

The Contractor shall inspect the project site prior to submitting a bid and shall be thoroughly familiarized with existing conditions. Submission of a bid will be considered an affirmation of this inspection having been completed. The Department will not honor any claims resulting from site conditions.

2. MATERIALS

All proposed materials shall be approved prior to being utilized. The Contractor shall submit for material approval an electronic file of descriptive literature, drawings and any requested design data for the proposed materials. After approval, no substitutions of any approved materials may be made without the written approval of the Engineer.

Materials requiring sampling shall be made available a sufficient time in advance of their use to allow for necessary testing.

2.1. Anchoring

2.1.1. Anchor and Anchor Rod

Anchor, except rock anchor, shall be expanding type, with a minimum area of 135 square inches.

Anchor rod shall be galvanized steel, double-eye, have a minimum diameter of 5/8 inches, and a minimum length of 84 inches. Minimum holding capacity shall be 15,400 lbs.

Rock anchor shall be galvanized steel, triple-eye, expanding type, with a minimum diameter of ¾ inch, a minimum 53 inches long, and a minimum tensile strength of 23,000 lb.

2.1.2. Guy Wire and Guy Guard

Guy wire shall be Class A, Zinc-coated, 3/8 inch diameter, high strength grade steel (minimum 10,800 lb.) and galvanized per ASTM A475. Guy guard shall be 8’ long, fully-rounded, yellow, and able to be securely attached to the guy wire.

2.1.3. Strandvise for Guy Wire

Strandvise for guy wire shall be 3/8 inch and rated to hold a minimum of 90% of the rated breaking strength (RBS) of the strand used.

2.2. Asphalt

Asphalt shall be a minimum CL2 Asph Surf 0.38C PG64-22 and conform to the *Standard Specifications for Road and Bridge Construction.*

2.3. Backer Rod

Backer rod shall be ½ inch diameter, closed cell polyethylene foam and shall meet or exceed the following physical properties:

- Density (average): 2.0 lbs/cu.ft. (minimum): ASTM D 1622 test method
- Tensile Strength: 50 PSI (minimum): ASTM D 1623 test method
- Compression Recovery: 90% (minimum): ASTM D 5249 test method
- Water Absorption: 0.03 gm/cc (maximum): ASTM C 1016 test method

2.4. Cabinets

2.4.1. Galvanized Steel Cabinet

Galvanized Steel Cabinet shall be constructed of 16 or 14 gauge galvanized steel and shall meet or exceed the industry standards set forth by UL 50 and NEMA 3R. The finish shall be an ANSI 61 gray polyester powder finish inside and out over the galvanized steel. Cabinet shall have minimum inside dimensions of 20 inches high by 20 inches wide by 8 inches deep.

The cabinet shall be equipped with the following:

- Drip shield top
- Seam-free sides, front, and back, to provide protection in outdoor installations against rain, sleet, and snow
- Hinged cover with 16 gauge galvanized steel continuous stainless steel pin.
- Cover fastened with captive plated steel screws, knob or latch
- Hasp and staple for padlocking
- No gaskets or knockouts
- Back panel for terminal block installation
- Post mounting hardware
- Terminal Blocks

2.4.2. Anchor Bolt for Pad Mounted Cabinet

Anchor bolt for pad mounted cabinet shall be galvanized steel with minimum dimensions of 3/8 inch by 6 inches.

2.5. Concrete

Concrete shall be Class A and conform to the *Standard Specifications for Road and Bridge Construction.*

2.6. Conduit and Conduit Fittings

Conduit and conduit fittings shall be rigid steel unless otherwise specified.

Conduit shall be zinc galvanized inside and out and conform to the NEC, UL Standard 6, and ANSI C-80.1.

Rigid Steel Conduit Fittings shall be galvanized inside and out and conform to the NEC, UL Standard 514B, and ANSI C-80.4. Intermediate Metal Conduit (IMC) will not be approved as an acceptable alternative to rigid steel conduit.

2.7. Conduit sealant

Conduit sealant shall be weather-, mold-, and mildew-resistant and chemically resistant to gasoline, oil, dilute acids and bases. Conduit sealant shall be closed cell type and shall meet or exceed the following properties:

- Cure Time — 20 minutes max.
- Density — 64.4 kg/m3; 6 lbs/ft3
- Compressive Strength (ASTM 1691) — 13.8 MPa; 330 or 300 psi

- Tensile Strength (ASTM 1623) 15.9 MPa; 270 or 250 psi
- Flexural Strength (ASTM D790) 14.5 MPa; 460 or 450 psi
- Service Temperature -20 to 200 F

2.8. Electrical Service Meter Base

Electrical service meter base shall meet or exceed all requirements of the National Electrical Code and the local utility providing the electrical service.

2.9. Electrical Service Disconnect

Electrical service disconnect shall meet or exceed all requirements of the National Electrical Code and the local utility providing the electrical service.

2.10. Flashing Arrow

Flashing Arrow shall conform to the *Standard Specifications for Road and Bridge Construction.*

2.11. Ground Fault Circuit Interrupter (GFCI) Receptacle

Ground Fault Circuit Interrupter Receptacle shall be 2-pole, 3-wire, 20 Amp, 125 Volt, 60 Hz, NEMA 5-20R configuration and meet or exceed the following standards and certifications:

- NEMA WD-1 and WD-6
- UL 498 and 943
- NOM 057
- ANSI C-73

This item shall include a UL listed, 4 inch x4 inch x $2^1/_8$ inch box with ¾ inch side and end knockouts and a 1½ inches deep, single-receptacle cover to house the GFCI receptacle. Box and cover shall be hot rolled, galvanized steel with a minimum thickness of 0.62 inches.

2.12. Grounding

2.12.1. Ground Rod

Ground Rod shall be composite shaft consisting of a pure copper exterior (5 mil minimum) that has been inseparably molten welded to a steel core. Ground Rod shall have a minimum diameter of 5/8 inch, a minimum length of 8 feet and shall be manufactured for the sole purpose of providing electrical grounding.

2.12.2. Ground Rod Clamp

Ground rod shall be equipped with a one piece cast copper or bronze body with a non-ferrous hexagonal head set screw and designed to accommodate a 10 AWG solid through 2 AWG stranded grounding conductor.

2.13. Grout

2.13.1. Grout for Inductive Loop Installation

Grout for inductive loop installation shall be non-shrink, shall meet the requirements of the *Standard Specifications for Road and Bridge Construction*,

and shall be included on the KYTC Division of Materials, *List of Approved Materials*.

2.13.2. Grout for Piezoelectric Sensor Installation

Grout for piezoelectric sensor installation shall be per the piezoelectric sensor manufacturer's recommendation. Grout shall be suitable for installation in both asphalt and Portland cement pavements. Grout shall have a short curing time (tack free in ten minutes; open to traffic in forty minutes; and fully cured within sixty minutes) to prevent unnecessary lane closure time and should be of sufficient consistency to prevent running when applied on road surfaces with a drainage cross slope. Particulate matter within the grout shall not separate or settle and the grout shall not shrink during the curing process.

2.14. Hardware

Except where specified otherwise, all hardware such as nuts, bolts, washers, threaded ends of fastening devices, etc. with a diameter less than 5/8 inch shall be passivated stainless steel, alloy type 316 or type 304. Stainless steel hardware shall meet ASTM F593 and F594 for corrosion resistance. All other nuts and bolts shall meet ASTM A307 and shall be galvanized.

2.14.1. Conduit Strap

Conduit strap shall be double-hole, stainless steel, and sized to support specified conduit. Conduit strap shall attach to wood pole or post with two 2 ¼ inch wood screws.

2.14.2. Mounting Strap for Pole Mount Cabinet

Mounting strap for pole mount cabinet shall be ¾ inch x 0.03 inch stainless steel; equipped with clips or buckles to securely hold strap.

2.14.3. Metal Framing Channel and Fittings

Metal framing channel shall be 1 5/8 inches wide galvanized steel that conforms to ASTM A1011 and ASTM A653. One side of the channel shall have a continuous slot with in-turned edges to accommodate toothed fittings.

Fittings shall be punch pressed from steel plates and conform to ASTM A575 and the physical requirements of ASTM A1011.

2.15. Junction Box

2.15.1. Junction Box Type A, B, or C

Junction Box Type A, B, or C shall meet or exceed ANSI/SCTE 77-2007, Tier 15. Box shall have an open bottom. A removable, non-slip cover marked "PLANNING" shall be equipped with a lifting slot and attached with a minimum of two 3/8 inch stainless steel hex bolts and washers. Type A Box shall have nominal inside dimensions of 13 inches wide by 24 inches long by 18 inches deep. Type B Box shall have nominal inside dimensions of 11 inches wide by 18 inches long by 12

inches deep. Type C Box shall have nominal inside dimensions of 24 inches wide by 36 inches long by 30 inches deep.

2.15.2. Aggregate for Junction Box Type A, B, or C

Aggregate for junction box type A, B, or C shall be gradation size no. 57 and conform to the *Standard Specifications for Road and Bridge Construction*.

2.15.3. Junction Box 10x8x4

Junction Box Type 10x8x4 shall be constructed of a UV-stabilized, nonmetallic material or non-rusting metal and be weatherproof in accordance with NEMA 4X. Box shall be equipped with an overhanging door with a continuous durable weatherproof gasket between the body and door. Door shall be hinged with screws, hinge(s) and pin(s) and shall be equipped with a padlockable latch on the side opposite the hinge(s). Junction Box 10x8x4 shall have minimum inside dimensions of 10 inches high by 8 inches wide by 4 inches deep.

2.16. Maintain and Control Traffic

Materials for the bid item Maintain and Control Traffic shall conform to the *Standard Specifications for Road and Bridge Construction,* and the KYTC Department of Highways *Standard Drawings*.

2.17. Piezoelectric Sensor

Piezoelectric sensor (piezo) shall provide a consistent level voltage output signal when a vehicle axle passes over it, shall have a shielded transmission cable attached, and shall meet the following requirements:

- Dimensions: such that sensor will fit in a ¾ inch wide by 1 inch deep saw cut. Total length shall be 6 feet unless specified otherwise.
- Output uniformity: ± 7% (maximum)
- Typical output level range: 250mV (minimum) from a wheel load of 400 lbs.
- Working temperature range: -40° to 160° F.
- Sensor life: 30 million Equivalent Single Axle Loadings (minimum)

Shielded transmission cable shall be coaxial and shall meet the following requirements:

- RG 58C/U with a high density polyethylene outer jacket rated for direct burial
- Length shall be a minimum of 100 feet. Installations may exceed 100 feet so the piezo shall be supplied with a lead-in of appropriate length so that the cable can be installed splice-free from the piezo to the cabinet.
- Soldered, water resistant connection to the sensor.

One installation bracket for every 6 inches of sensor length shall also be supplied. Piezo shall be a RoadTrax BL Class I or approved equal.

2.18. Saw Slot Sealant

Saw Slot Sealant shall be non-shrink, non-stringing, moisture cure, polyurethane

encapsulant suitable for use in both asphalt and concrete pavements. It shall provide a void-free encapsulation for detector loop cables and adequate compressive yield strength and flexibility to withstand heavy vehicular traffic and normal pavement movement.

The cured encapsulant shall meet or exceed the following:

- Hardness (Indentation): 35-65 Shore A, ASTM D2240
- Tensile Strength: 150 psi minimum, ASTM D412
- Elongation: 125% minimum 2 inch/minute pull, ASTM D412
- Tack-free Drying Time: 24 hours maximum, ASTM C679
- Complete Drying Time: 30 hours maximum, KM 64-447
- Chemical Interactions (seven day cure at room temperature, 24-hour immersion, KM 64-446):
  - Motor Oil: No effect
  - Deicing Chemicals: No effect
  - Gasoline: Slight swell
  - Hydraulic Brake Fluid: No effect
  - Calcium Chloride (5%): No effect

2.19. Seeding and Protection

Material for Seeding and Protection shall be Seed Mixture Type I and conform to the *Standard Specifications for Road and Bridge Construction*.

2.20. Signs

Materials for signs shall conform to the *Standard Specifications for Road and Bridge Construction.*

2.21. Splicing Materials

2.21.1. Electrical Tape

Electrical tape shall be a premium grade, UL-listed, all-weather, vinyl-insulating tape with a minimum thickness of 7 mil. Tape shall be flame retardant and resistant to abrasion, moisture, alkalis, acids, corrosion, and weather (including ultraviolet exposure).

2.21.2. Splice Kit

Splice kit shall be inline resin-type and rated for a minimum of 600V. Resin shall be electrical insulating-type and shall provide complete moisture and insulation resistance.

2.22. Steel Reinforcing Bar

Steel reinforcing bar shall be #5 and shall conform to the *Standard Specifications for Road and Bridge Construction.*

2.23. Terminal Block

Terminal block shall be rated for a minimum of 300 V and have a minimum of six

terminal pairs with 9/16-inch nominal spacing (center to center) for connecting loop and piezoelectric sensor wires to cable assemblies. Terminal block shall have screw type terminal strips to accommodate wire with spade-tongue ends.

2.24. Warning Tape

Warning tape shall be acid and alkali resistant formulated for direct burial. Tape shall be a minimum of 3 inches wide by 4.0 mils (nominal) thick, and shall be permanently imprinted with a minimum 1 inch black legend on a red background warning of an electric line. Tape shall meet or exceed the following industry specifications:

- American Gas Association (AGA) 72-D-56
- American Petroleum Institute (API) RP 1109
- American Public Works Association (APWA) Uniform Color Code
- Department of Transportation (DOT) Office of Pipeline Safety USAS B31.8
- Federal Gas Safety Regulations S 192-321 (e)
- General Services Administration (GSA) Public Buildings Service Guide: PBS 4-1501, Amendment 2
- National Transportation Safety Board (NTSB) PSS 73-1
- Occupational Safety and Health Administration (OSHA) 1926.956 (c) (1)

2.25. Wire and Cable

All cable and wire shall be plainly marked in accordance with the National Electrical Code (NEC).

2.25.1. Loop Wire

Loop wire shall be 14 AWG, stranded, copper, single conductor, and shall conform to the International Municipal Signal Association (IMSA) Specification No. 51-7.

2.25.2. Cable No. 14/1 Pair

Cable No. 14/1 pair loop lead-in cable shall be 14 AWG, stranded, copper paired, electrically shielded conductors, and shall conform to IMSA 19-2.

2.25.3. Grounding conductor

Grounding conductor and bonding jumper shall be solid or stranded, 4 AWG bare copper.

2.25.4. Service Entrance Conductor

Service entrance conductor shall be stranded, copper, Type USE-2, sized as required to comply with the NEC.

2.25.5. Terminal for electrical wire or cable

Terminal for electrical wires or cables shall be insulated, solderless, spade tongue terminals of correct wire and stud size. Terminal for electrical wires or cables shall be incidental to the wire or cable (including piezoelectric sensor transmission cable) to be connected to terminal strips.

2.26. Wood Post

Wood post shall be Southern Pine pretreated to conform to the American Wood Preservers' Association (AWPA) C-14 or UC4B and shall have minimum dimensions of 4 inches by 4 inches by 8 feet long (for Galvanized Steel Cabinet) or 4 feet long (for Junction Box 10x8x4), sawed on all four sides with both ends square.

2.27. Wooden Pole

Wooden pole shall be a Class IV wood pole of the length specified and shall conform to the *Standard Specifications for Road and Bridge Construction* except the pole shall be treated in accordance with AWPA P9 Type A.

3. CONSTRUCTION METHODS

The plans indicate the extent and general arrangement of the installation and are for guidance. When the Contractor deems any modifications to the plans or specifications necessary, details of such changes and the reasons shall be submitted in writing to the engineer for written approval prior to beginning the modified work.

After the project has been let and awarded, the Division of Construction shall notify the Division of Planning of the scheduled date for a Pre-Construction meeting so that prior arrangements can be made to attend. This will allow the Division of Planning an opportunity to address any concerns and answer any questions that the Contractor may have before beginning the work.

The Division of Planning Equipment Management Team (502-564-7183) shall be notified a minimum of seven days before any work pertaining to these specifications begins to allow their personnel the option to be present during installation.

Unless otherwise specified, installed materials shall be new.

Construction involving the installation of loops or piezoelectric sensors shall not be performed when the temperature of the pavement is less than 38ºF.

A final inspection will be performed by a member of the Central Office Division of Planning equipment staff after the installation is complete to verify that the installation is in compliance with the plans and specifications.

Any required corrective work shall be performed per the *Standard Specifications for Road and Bridge Construction.*

3.1. Anchoring

Furnish: Anchor, anchor rod, guy wire, strand vise, guy guard.

Anchor shall be installed in relatively dry and solid soil. Rock anchor shall be installed in solid rock. Excavate the hole at a 45° to 60° angle in line with the guy (hole size shall be slightly larger than the expanded anchor – see manufacturer's recommendation). Attach rod to anchor, install assembly into hole, and expand anchor. Backfill and tamp entire disturbed area. The effectiveness of the anchor is dependent upon the thoroughness of backfill tamping. Attach guy to strand vise on pole and anchor rod and tighten to required tension. Install guy guard on guy.

3.2. Bore and Jack Pipe – 2"

Furnish: Steel Encasement Pipe, 2"

Bore and jack pipe – 2" shall conform to the Section 706 of the *Standard Specifications for Road and Bridge Construction*.

3.3. Cleanup and Restoration

Furnish: Seed Mix Type 1 (as required); fertilizer (as required); agricultural limestone (as required); mulch or hydromulch (as required); tackifier (as required).

The Contractor shall be responsible for repairing any damage to public and/or private property resulting from his work. Upon completion of the work, restore all disturbed highway features in like kind design and materials. This shall include filling any ruts and leveling ground appropriately. Contractor shall dispose of all waste and debris off the project. Sow all disturbed earthen areas with Seed Mix Type 1 per Section 212 of the *Standard Specifications for Road and Bridge Construction*. All materials and labor necessary for cleanup and restoration shall be considered incidental to other bid items.

3.4. Conduit

Furnish: Conduit; conduit fittings; bushings (grounding where required); LB condulets (as required); weatherheads (as required); conduit straps; hardware; conduit sealant.

Conduit that may be subject to regular pressure from traffic shall be laid to a minimum depth of 24 inches below grade. Conduit that will not be subject to regular pressure from traffic shall be laid to a minimum depth of 18 inches below grade.

Conduit ends shall be reamed to remove burrs and sharp edges. Cuts shall be square and true so that the ends will butt together for the full circumference of the conduit. Tighten couplings until the ends of the conduit are brought together. Do not leave exposed threads. Damaged portions of the galvanized surfaces and untreated threads resulting from field cuts shall be painted with an Engineer-approved, rust inhibitive paint. Conduit bends shall have a radius of no less than 12 times the nominal diameter of the conduit, unless otherwise shown on the plans.

Contractor shall install a bushing (grounding bushing where required) on both ends of all conduits. Cap spare conduits on both ends with caps or conduit sealant.

Conduit openings in junction boxes and cabinets shall be waterproofed with a flexible, removable conduit sealant, working it around the wires, and extending it a minimum 1 inch into the end of the conduit.

After the conduit has been installed and prior to backfilling, the conduit installation shall be inspected and approved by the Engineer.

3.5. Electrical Service

Furnish: Meter base, service disconnect, wire, GFCI AC duplex receptacle with box and cover; conduit, conduit fittings, bushings (grounding where required); LB condulets (as required); weatherhead; conduit straps; hardware; conduit sealant; ground rod with clamp; grounding conductor.

Prior to any construction, the Contractor shall initiate a work order with the local power

company for the installation of electrical service to the site. A representative from the Division of Planning and the local power company shall be consulted prior to choosing an exact location for the pole. The Contractor shall clear the right-of-way for the electrical service drop.

Contractor shall obtain electrical inspections, memberships, meter base, service disconnect and any other requirements by the utility serving the installation and pay all fees as required.

Install meter-base and disconnect panel with a 30-ampere, fused, circuit breaker inside. Install a manufactured weatherproof hub connectors to connect the conduit to the top of the meter base and service disconnect.

Install a rigid ¾ inch conduit with three 8 AWG service conductors from the cabinet, through the service disconnect to the meter base and a 1¼" conduit with three 8 AWG service conductors from the meter base to a weatherhead two feet from the top of the electrical service pole. Install conduit straps 30 inches on center and provide a drip loop where the wire enters the weatherhead. Splice electric drop with service entrance conductors at the top of the pole.

The limit of conduit incidental to "Install Electrical Service" for a pad mounted cabinet is 24 inches beyond face of service pole.

Install a 120-volt, 20-amp GFCI AC duplex receptacle with box and cover in the automatic data recorder (ADR) cabinet.

Install a ground rod with clamp. Install a grounding conductor wire from the meter base, through the disconnect panel, to the ground rod clamp. Install grounding conductor in 1-¾" conduit from service disconnect to ground rod.

After completing the installation and before the electrical service is connected, obtain a certificate of compliance from the Kentucky Department of Housing, Buildings and Construction, Electrical Inspection Division.

3.6. Flashing Arrow

Furnish: Arrow Panel

Construction of Flashing Arrow shall conform to the *Standard Specifications for Road and Bridge Construction.*

3.7. Galvanized Steel Cabinet

Furnish: Cabinet; wood posts; concrete; conduit fittings; metal framing channel; pipe clamp; terminal block(s); spade tongue wire terminals; wire labels; hardware.

Where right-of-way allows, locate the cabinet such that it is outside the clear zone in accordance with the *Roadside Design Guide*. Install Cabinet such that the door of the

cabinet faces the roadway.

Excavate as required and install wood posts to a depth of 36 inches and place concrete around posts as shown on the standard detail sheets. Install metal framing channel with pipe clamp between posts.

Install Cabinet on wood posts 38 inches above the finished grade as shown on the standard detail sheets. Install a unistrut between posts when two posts are specified.

Install the required number of terminal blocks on the cabinet back plate. Install a spade tongue terminal on each loop and piezo sensor wire entering the cabinet and connect wires to terminal block(s). Wiring shall be neat and orderly. Label all wires and cables inside cabinet.

Install conduit from ground to cabinet and attach to pipe clamp. Install locknuts to attach conduit to cabinet and install a conduit bushing as shown on the standard detail sheets.

3.8. Grounding

Furnish: Ground rod with clamp; grounding conductor.

At sites with electrical or solar service, all conduits, poles, and cabinets shall be bonded to ground rods and the electrical system ground to form a complete grounded system.

Install such that top of ground rod is a minimum of 3 inches below finished grade.

Grounding systems shall have a maximum 25 ohms resistance to ground. If the resistance to ground is greater than 25 ohms, two or more ground rods connected in parallel shall be installed. Adjacent ground rods shall be separated by a minimum of 6 feet.

3.9. Install Pad Mount Enclosure

Furnish: Concrete; anchor bolts with washers and nuts; conduit; conduit fittings; conduit grounding bushings; ground rod with clamp; grounding conductor; conduit sealant; wooden stakes (where required); wire labels; hardware.

The Contractor shall be responsible for securing the enclosure from the Central Office Division of Planning Warehouse in Frankfort and transporting it to the installation site.

Where right-of-way allows, locate the enclosure such that it is outside the clear zone in accordance with the *Roadside Design Guide*.

Excavate as required, and place concrete to construct the enclosure foundation as specified on the standard detail sheets. Install enclosure on the concrete base such that the door(s) of the enclosure opens away from traffic (hinges away from traffic). Install anchor bolts, washers, and nuts to secure the enclosure to the foundation.

Install ground rod with clamp and install one ¾ inch rigid conduit from enclosure base to

ground rod. Install a grounding conductor from ground rod to enclosure base and bond to each conduit bushing in the base.

Install one ¾ inch rigid steel conduit for electrical service from the base of the enclosure to 24 inches beyond the concrete base. Make all field wiring connections to the electrical service, as applicable.

If electrical service is not provided as a bid item in the contract, plug conduit on both ends with a cap, conduit sealant, or electrical tape. Mark the location of the buried conduit end with a wooden stake labeled "3/4 in. conduit."

Install specified rigid steel conduit(s) into the base of the enclosure for sensor wire entry. Install one spare 2 inch conduit from the enclosure base to 2 feet beyond the concrete base. Plug spare conduit on both ends with a cap, conduit sealant or electrical tape.

The limit of all conduits incidental to "Install Pad Mount Enclosure" is 24 inches beyond the edge of the concrete base.

Wiring in enclosure shall be neat and orderly. Label all wires and cables inside enclosure. KYTC personnel will furnish and install terminal blocks and connect sensors to terminal blocks.

3.10. Install Controller Cabinet

Furnish: Mounting brackets; mounting straps; conduit; LB condulets; conduit fittings; conduit grounding bushings; ground rod with clamp; grounding conductor; cable staples; conduit sealant; wooden stakes (where required); wire labels; hardware.

The Contractor shall be responsible for securing the cabinet from the Central Office Division of Planning Warehouse in Frankfort and transporting it to the installation site. Any existing holes in the cabinet not to be reused shall be covered or plugged to meet NEC requirements.

Install mounting brackets and secure cabinet to pole with mounting straps.

Install a ground rod with clamp. Install grounding conductor in 1-¾" conduit form cabinet to ground rod.

Install one ¾ inch rigid steel conduit with two lb condulets from cabinet to electrical service disconnect box. Make all field wiring connections to the electrical service, as applicable.

If electrical service is not provided as a bid item in the contract, plug conduit on both ends with cap, plumbers putty, conduit sealant, or electrical tape. Mark the location of the buried conduit end with a wooden stake labeled "3/4 in. conduit".

Install specified rigid steel conduit(s) and type LB condulet(s) into the bottom of the

cabinet for sensor wire entry. The limit of conduits incidental to "Install Controller Cabinet" is 24 inches beyond the face of the pole.

Wiring in cabinet shall be neat and orderly. Label all wires and cables inside cabinet. KYTC personnel will furnish and install terminal blocks and connect sensors to terminal blocks.

3.11. Junction Box Type 10x8x4

Furnish: Junction box; wood post; conduit fittings; wire labels; hardware.

Where right-of-way allows, locate the junction box such that it is outside the clear zone in accordance with the Roadside Design Guide.

Excavate as required and install wood post(s) to a depth of 18 inches. Install junction box on wood post such that the bottom of the box is 18 inches above the finished grade as shown on the standard detail sheets. Box shall be installed with four (4) 2½ inch wood screws and washers.

Install locknuts to attach conduit to junction box and install a conduit bushing as shown on the standard detail sheets.

Wiring inside box shall be neat and orderly. Label all wires and cables inside box.

3.12. Junction Box Type A, B, or C

Furnish: Junction box, No. 57 aggregate; grounding conductor

Excavate as required and place approximately 12 inches of No. 57 aggregate beneath the proposed junction box to allow for drainage. Install specified junction box type A, B, or C near the edge of pavement, flush with finished grade per the detail sheets. Where required, orient the box so that the dimensions comply with the National Electrical Code. Stub conduits with grounding bushings into junction box at its base to accommodate wires and connect grounding conductor to all grounding bushings. Backfill to existing grade, and restore disturbed area to the satisfaction of the Engineer.

Wiring inside box shall be neat and orderly. Label all wires and cables inside box.

3.13. Loops - Proposed

Furnish: Wire; saw slot sealant; backer rod; grout; conduit sealant.

The plans and notes specify the approximate location for loop installations. Prior to sawing slots or drilling cores, the Contractor shall meet with a representative of the Division of Planning to verify the precise layout locations on site. Avoid expansion joints and pavement sections where potholes, cracks, or other roadway flaws exist.

Upon completion of this meeting, the Contractor shall measure out and mark the proposed loop locations with spray paint or chalk such that the saw slots will be parallel

and perpendicular to the direction of traffic. Marked lines shall be straight and exact to the locations determined and sized as shown on the plans. Unless indicated otherwise, loops shall be 6 feet by 6 feet square and loops in the same lane shall be spaced 16 feet from leading edge to leading edge.

On resurfacing, rehabilitation, and new construction projects that include new asphalt pavement, the Contractor shall install loops prior to laying the final surface course. On projects with milling and texturing, the Contractor may install the loops prior to or after the milling operation; however, if installed prior to milling, the Contractor shall be responsible for ensuring that the loops are installed at a depth such that the milling operation will not disturb the newly installed loops. The Contractor shall correct damage caused by the milling operations to newly installed loops prior to placement of the final surface course at no additional cost to the Cabinet.

For projects that include the installation of new asphalt and piezoelectric sensors, the Contractor shall mark or otherwise reference all loops installed prior to the final surface course such that the loops can be accurately located when the piezoelectric sensors are installed after placement of the final surface course.

For projects that do not have asphalt surfacing, the Contractor shall install the loops in the surface of the pavement.

The Prime Contractor shall coordinate the installation of loops with the electrical sub-Contractor and the Engineer to ensure correct operation of the completed installation.

The following is a typical step by step procedure for the installation of a loop.

- Carefully mark the slot to be cut, perpendicular to the flow of traffic and centered in the lane.
- Make each saw-cut 3/8-inch wide and at a depth such that the top of the backer rod is a minimum of 2 inches below the surface of rigid (PCC/Concrete) pavement or 4 inches below the surface of asphalt pavement.
- Drill a 1½ inch core hole at each corner and use a chisel to smooth corners to prevent sharp bends in the wire.
- Clean ALL foreign and loose matter out of the slots and drilled cores and within 1 foot on all sides of the slots using a high pressure washer.
- Completely dry the slots and drilled cores and within 1 foot on all sides of the slots using oil-free forced air, torpedo heaters, electric heaters, or natural evaporation, depending on weather conditions. Be very careful not to burn the asphalt if heat is used.
- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45º angle to the conduit adjacent to the roadway.
- Closely inspect all cuts, cores, and slots for jagged edges or protrusions prior to the placement of the wire. All jagged edges and protrusions shall be ground or re-cut and cleaned again.

- Place the loop wire splice-free from the termination point (cabinet or junction box) to the loop, continue around the loop for four turns, and return to the termination point.
- Push the wire into the saw slot with a blunt object such as a wooden stick. Make sure that the loop wire is pushed fully to the bottom of the saw slot.
- Install conduit sealant to a minimum of 1" deep into the cored 1½ inch hole.
- Apply loop sealant from the bottom up and fully encapsulate the loop wires in the saw slot. The wire should not be able to move when the sealant has set.
- Cover the encapsulated loop wire with a continuous layer of backer rod along the entire loop and home run saw slots such that no voids are present between the loop sealant and backer rod.
- Finish filling the saw cut with non-shrinkable grout per manufacturer's instructions. Alleviate all air pockets and refill low spaces. There shall be no concave portion to the grout in the saw slot. Any excess grout shall be cleaned from the roadway to alleviate tracking.
- Clean up the site and dispose of all waste off the project.
- Ensure that the grout has completely cured prior to subjecting the loop to traffic. Curing time varies with temperature and humidity.

Exceptions to installing loop wire splice-free to the junction box or cabinet may be considered on a case-by-case basis and must be pre-approved by the Engineer. If splices are allowed, they shall be located in a junction box and shall conform to the construction note for Splicing.

If loop lead-in cable (Cable No. 14/1 Pair) is specified, cable shall be installed splice free to the cabinet ensuring that extra cable is left in each junction box or cabinet. All wires and cables shall be labeled in each junction box and cabinet.

Loop inductance readings shall be between 100 and 300 microhenries. The difference of the loop inductance between two loops in the same lane shall be ±20 microhenries. Inductance loop conductors shall test free of shorts and grounds. Upon completion of the project, all loops must pass an insulation resistance test of a minimum of 100 million ohms to ground when tested with a 500 Volt direct current potential in a reasonably dry atmosphere between conductors and ground.

3.14. Loops – Existing

When noted on a data collection station layout sheet that there are existing inductive loops within the limits of the project, notify the Engineer in writing, a minimum of 14 calendar days prior to beginning milling operations. After milling and prior to placing asphalt inlay, conduct an operating test on the existing inductance loops at the control cabinet in the presence of the Engineer to determine if the inductance loop conductors have an insulating resistance of a minimum of 100 megohms when tested with a 500 volt direct current potential in a reasonably dry atmosphere between conductors and ground. The Department may also conduct its own tests with its own equipment.

If the tests indicate the loop resistances are above the specified limit and the Engineer determines the system is operable, proceed with the asphalt inlay. If the test indicates the loop resistance is not within the specified limits or if the Engineer determines the system is otherwise not operable, prior to placing the asphalt inlay install and test new loop detectors according to the station layout, notes, and Detail Drawings.

The Engineer will contact and maintain liaison with the District Planning Engineer and the Division of Planning in order to coordinate any necessary work.

3.15. Maintain and Control Traffic

Furnish (all as required): Drums, traffic cones, barricades used for channelization purposes, delineators, and object markers.

Maintain and Control Traffic shall conform to the plans, the Standard Specifications for Road and Bridge Construction, and the KYTC Department of Highways Standard Drawings.

3.16. Open Cut Roadway

Furnish: Concrete, reinforcing bars.

Excavate trench by sawing and chipping away roadway to dimensions as indicated on the detail sheets. After placing conduit, install concrete and steel reinforcing bars per the *Standard Specifications for Road and Bridge Construction*. Restore any disturbed sidewalk to its original condition.

3.17. Piezoelectric Sensor

Furnish: Piezoelectric sensor and cable; sensor support brackets; saw slot sealant; backer rod; grout; conduit sealant.

The plans and notes specify the approximate location for piezoelectric sensor (piezo) installations. Prior to sawing slots or drilling cores, the Contractor shall meet with a representative of the Division of Planning to verify the final layout on site. Avoid expansion joints and pavement sections where potholes, cracks, or other roadway flaws exist. Roadway ruts at the proposed piezo location shall not be in excess of ½ inch under a 4-foot straight edge.

Install the piezo perpendicular to traffic in the final surface course of the pavement. Locate the sensor in the lane as shown on the site layout drawing. Eleven-foot length sensors shall be centered in the lane.

The following is a typical step by step procedure for the installation of a piezo. Refer specifically to the manufacturer's instructions provided with the sensor prior to installation.

- Carefully mark the slot to be cut, perpendicular to the flow of traffic and properly positioned in the lane.

- It is strongly recommended that a ¾ inch wide diamond blade be used for cutting the slot, or that blades be ganged together to provide a single ¾ inch wide cut. The slot shall be wet cut to minimize damage to the pavement.
- Cut a slot ¾ inch wide (±1/16 inch) by 1 inch minimum deep. The slot should be a minimum of 2 inches longer than the sensor (including the lead attachment). Drop the saw blade an extra ½ inch down on both ends of the sensor. The lead out of the passive cable should be centered on the slot.
- Cut the slot for the passive cable ¼ inch wide and at a depth so that the top of the backer rod is a minimum of 2 inches below the road surface.
- Clean ALL foreign and loose matter out of the slot and within 1 foot on all sides of the slot using a high pressure washer.
- Completely dry the slot and within 1 foot on all sides of the slot using oil-free forced air, torpedo heaters, electric heaters, or natural evaporation, depending on weather conditions. Be very careful not to burn the asphalt if heat is used.
- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45º angle to the conduit adjacent to the roadway.
- Place strips of 2-4 inch wide tape strips on the pavement along the lengths of both sides of the sensor slot, 1/8 inch away from the slot.
- Wear clean, protective latex (or equivalent) gloves at all times when handling sensors. Visually inspect sensor to ensure it is straight. Check lead attachment and passive cable for cuts, gaps, cracks and/or bare wire. Verify that the correct sensor type and length is being installed by checking the data sheet. Verify there is sufficient cable to reach the cabinet. Piezo lead-in cable shall not be spliced.
- Test the sensor for capacitance, dissipation factor and resistance, according to the directions enclosed with the sensor. Capacitance and dissipation should be within ±20% of the piezo data sheet. Resistance (using the 20M setting) should be infinite. Record the sensor serial number and the test results and label "pre-installation." This information should be stored in the counter cabinet and/or returned to Department Planning personnel.
- Lay the sensor next to the slot and ensure that it is straight and flat.
- Clean the sensor with steel wool or an emery pad and wipe with alcohol and a clean, lint-free cloth.
- Place the installation bracket clips every 6 inches along the length of the sensor.
- Bend the tip of the sensor downward at a 30° angle. Bend the lead attachment end down at a 15° angle and then 15° back up until level (forming a lazy Z).
- Place the sensor in the slot, with the brass element 3/8 inch below the road surface along the entire length. The tip of the sensor should be a minimum of 2 inches from the end of the slot and should not touch the bottom of the slot. The top of the plastic installation bracket clips should be 1/8 inch below the surface of the road. The lead attachment should not touch the bottom or sides of the slot. Ensure the sensor ends are pushed down per the manufacturer's instructions.
- Visually inspect the length of the sensor to ensure it is at uniform depth along its length and it is level (not twisted, canted or bent).

- On the passive cable end, block the end of the slot approximately 3-5 inches beyond the end of the lead attachment area creating an adequate "dam" so that the sensor grout does not flow out.
- Use one bucket of sensor grout per piezo installation. Overfill the slot with sensor grout and allow to cure for a minimum of 10 minutes before continuing with the installation. Ensure that sensor grout fills around and beneath the sensor completely and that there is not a trough on top.
- Remove the tape along the sides of the saw slot when the adhesive starts to cure.
- Carefully remove the dam from the end of the sensor.
- Route the lead-in cable through the saw slot
- Install conduit sealant to a minimum of 1" deep into the cored 1½ inch hole.
- Cover the lead-in cable with encapsulant, backer rod, and grout.
- If necessary, after the grout has hardened, grind with an angle grinder until the profile is a 1/16 inch mound. There shall be no concave portion to the mound.
- Clean up the site and dispose of all waste off the project.
- Ensure that the sensor grout has completely cured prior to subjecting the sensor to traffic. Curing time will vary with temperature and humidity.

Upon installation, test the sensor for capacitance, dissipation factor and resistance, according to the directions enclosed with the sensor. Capacitance and dissipation should be within ±20% of the piezo data sheet. Resistance (using the 20M setting) should be infinite. Perform a functional test of the piezo with an oscilloscope to ensure that the sensor is generating a proper response to the passage of vehicles.

Record the sensor serial number and the test results and label "post-installation." This information should be stored in the counter cabinet and/or returned to Department Planning personnel.

3.18. Pole – Wooden

Furnish: Pole; anchoring equipment (as required); hardware (as required).

Excavate and install wood pole to a minimum depth of one-sixth the total pole height. Place backfill material in hole and compact until flush with existing grade. Install guy wire, guy guard, anchor, anchor rod, and strand vise, if necessary. Anchor shall be a minimum of one-third the pole height from the face of the pole. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer.

3.19. Removal of Existing Equipment

The Contractor shall remove existing materials (including but not limited to: poles, anchors, cabinets, junction boxes, conduit and wire) not to be reused. Contractor shall dispose of all removed materials off the project. All materials and labor necessary for the removal of existing equipment shall be considered incidental to other bid items.

3.20. Signs

Furnish: Signs; sign standards; hardware.

Construction of **s**igns shall conform to the *Standard Specifications for Road and Bridge Construction.*

3.21. Splicing

Furnish: Splice kit; solder.

These notes describe the splicing process (if permitted) and are not intended to grant permission to splice. Permission to splice shall be determined by the Division of Planning and the locations shall be shown on the layout sheet. If splicing is needed but not shown on the layout sheet, the Contractor shall receive prior written approval from the Division of Planning.

All splices shall conform to the provisions of the NEC.

Splices for loop and loop lead-in wire shall be twisted and soldered. Abrade the outer jacket of both wires to promote good adhesion and prevent capillary leak paths. Seal the splice with an electrical sealing resin. Spliced loop conductors shall test free of shorts and unauthorized grounds and shall have an insulating resistance of at least 100 megohms when tested with a 500 volt direct current potential in a reasonably dry atmosphere between conductors and ground.

For piezos, the same type coax cable, supplied by the manufacturer, shall be used to splice to the sensor's lead-in cable. Cables shall be soldered. Abrade the outer jacket of both cables to promote good adhesion and prevent capillary leak paths. Seal the splice with an electrical sealing resin. Spliced piezo cables shall be tested and have a minimum resistance of 20 megohms, a maximum dissipation factor of 0.03, a capacitance within the manufacturer's recommended range based upon the length of additional cable. A functional test of the piezo shall be performed to ensure that the sensor is generating a proper response to the passage of vehicles.

3.22. Trenching and Backfilling

Furnish: Warning tape; seed mix type I; cereal rye or German foxtail-millet; mulch; concrete (as required); asphalt (as required).

Excavate trench and provide required cover as shown on the standard detail sheets. After placing conduit, backfill material shall be placed and compacted in lifts of 9 inches or less. Install warning tape as shown on the detail sheet. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer. This item shall include concrete, asphalt or approved replacement material for sidewalks, curbs, roadways, etc. (if required).

3.23. Wiring

Furnish: Wire; wire labels; spade tongue wire terminals (as required).

Installation of all wiring shall conform to the NEC. Permanent identification numbers shall be affixed to all wires in all junction boxes and cabinets (see Layout(s) for loop and piezo numbers).

Additional lengths of each loop and piezo sensor wire shall be neatly coiled in all cabinets and junction boxes as follows:

Enclosure Type	Additional length of each wire
Galvanized Steel Cabinet	2' – 3'
Pad Mount Cabinet (332)	6' - 8'
Pole Mount Cabinet (336)	3' - 4'
Junction Box Type 10x8x4	2' – 3'
Junction Box Type A, B, or C	2' – 3'

3.24. Wood Post

Furnish: Wood post; concrete (as required); seed mix type I; cereal rye or German foxtail-millet; mulch.

Excavate hole to specified depth and place concrete, if required. Install post, backfill to existing grade, and tamp backfill. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer.

4. BID ITEM NOTES AND METHOD OF MEASUREMENT FOR PAYMENT

Only the bid items listed will be measured for payment. All other items required to complete the vehicle detection installation shall be incidental to other items of work. Payment at the contract unit price shall be full compensation for all materials, labor, equipment and incidentals to furnish and install these items.

4.1. Bore and Jack Pipe – 2”

Bore and jack pipe – 2” shall be furnished, installed, and measured for payment per the *Standard Specifications for Road and Bridge Construction*.

4.2. Conduit

Conduit shall include furnishing and installing specified conduit in accordance with the specifications. This item shall include conduit fittings, bodies, boxes, weatherheads, expansion joints, couplings, caps, conduit sealant, electrical tape, clamps, bonding straps and any other necessary hardware. Conduit will be measured in linear feet.

4.3. Electrical Service

Electrical Service shall include furnishing and installing all necessary materials and payment of all fees toward the complete installation of an electrical service which has passed all required inspections. Incidental to this item shall be furnishing and installing:

- Meter-base per utility company’s specifications
- Service disconnect panel per utility company’s specifications
- Meter base and service disconnect entrance hubs, waterproof
- Service entrance conductors
- Rigid steel conduit
- Rigid steel conduit fittings
- Conduit straps
- Weatherhead
- Duplex GFCI receptacle, 120-volt, 20-amp
- Ground rod with clamp
- Grounding conductor

Also incidental to this item shall be any necessary clearing of right of way for the electrical service drop.

Electrical service will be measured in individual units each.

4.4. Flashing Arrow

Flashing Arrow shall be furnished, installed, and measured for payment per the *Standard Specifications for Road and Bridge Construction.*

4.5. Galvanized Steel Cabinet

Galvanized Steel Cabinet shall include furnishing and installing galvanized steel cabinet on post as specified. Incidental to this item shall be furnishing and installing grounding hardware, and any necessary post/pole mounting hardware. Also incidental to this item shall be furnishing and installing the required number of terminal blocks and connection of all

sensors to the terminal blocks. Galvanized Steel Cabinet will be measured in individual units each.

4.6. Install Pad Mount Enclosure

Install Pad Mount Enclosure shall include installing a Department-furnished enclosure as specified on the detail sheets.

This item shall include obtaining the enclosure from KYTC and transporting it to the installation site and furnishing and installing the following:

- Concrete foundation (including any excavation necessary)
- Anchor bolts, lock washers, and nuts
- Conduit
- Conduit fittings (including grounding bushings)
- Weatherhead
- Terminal Strip(s)
- Ground rod with clamp
- Grounding conductor

Install Pad Mount Enclosure will be measured in individual units each.

4.7. Install Controller Cabinet

Install Controller Cabinet shall include installing a Department-furnished cabinet as specified on the detail sheets.

This item shall include obtaining the cabinet from KYTC and transporting it to the installation site and furnishing and installing the following:

- Conduit
- Conduit Fittings
- Terminal Strip(s)
- Ground rod with clamp
- Grounding conductor

Install Controller Cabinet will be measured in individual units each.

4.8. Junction Box Type 10" x 8" x 4"

Junction Box Type 10”x8”x4” shall include furnishing and installing specified junction box in accordance with the specifications. This item shall include connectors, splice sleeves, conduit fittings, mounting materials and any other items required to complete the installation. Incidental to this item shall be furnishing and installing specified post (wood, channel, metal, etc.) as required for the installation. Junction Box Type 10”x8”x4” will be measured in individual units each.

4.9. Junction Box Type A, B, or C

Junction Box Type A, B, or C shall include furnishing and installing specified junction box in accordance with the specifications. This item shall include excavation, furnishing and installing #57 aggregate, backfilling around the box, and restoration of disturbed areas to the satisfaction of the Engineer. Incidental to this item shall be furnishing and installing a

grounding conductor bonding all conduit grounding bushings in the box. Junction Box Type A, B, or C will be measured in individual units each.

4.10. Loop Saw Slot and Fill

Loop Saw Slot and Fill shall include sawing and cleaning saw slots and furnishing and installing conduit sealant, loop sealant, backer rod, grout, or other specified material. Loop Saw Slot and Fill will be measured in linear feet of sawed slot.

4.11. Maintain and Control Traffic

Maintain and Control Traffic shall be measured for payment per the *Standard Specifications for Road and Bridge Construction.*

4.12. Open Cut Roadway

Open Cut Roadway shall include excavating trench (sawing and chipping roadway) to dimensions as indicated on the detail sheets and furnishing and placing concrete, steel reinforcing bars, and asphalt. This item also includes restoring any disturbed sidewalk to its original condition. Open Cut Roadway will be measured in linear feet.

4.13. Piezoelectric Sensor

Piezoelectric sensor (piezo) shall include sawing and cleaning saw slots and furnishing and installing piezo in accordance with the specifications. This item shall include furnishing and installing lead-in wire, conduit sealant, encapsulation material, backer rod, grout, testing, and accessories. Piezo will be measured in individual units each.

4.14. Pole – 35' Wooden

Pole – 35' Wooden shall include excavation, furnishing and installing specified wood pole, backfilling and restoring disturbed areas to the satisfaction of the Engineer. Incidental to this item shall be furnishing and installing guy wire, anchor and anchor rod, strand vise, and guy guard, if specified.

Pole – 35' Wooden will be measured in individual units each.

4.15. Signs

Signs shall be furnished, installed, and measured for payment per the *Standard Specifications for Road and Bridge Construction.*

4.16. Trenching and Backfilling

Trenching and Backfilling shall include excavation, warning tape, backfilling, temporary erosion control, seeding, protection and restoration of disturbed areas to original condition. This item shall include concrete, asphalt or approved replacement material for sidewalks, curbs, roadways, etc. (if required). Trenching and backfilling will be measured in linear feet.

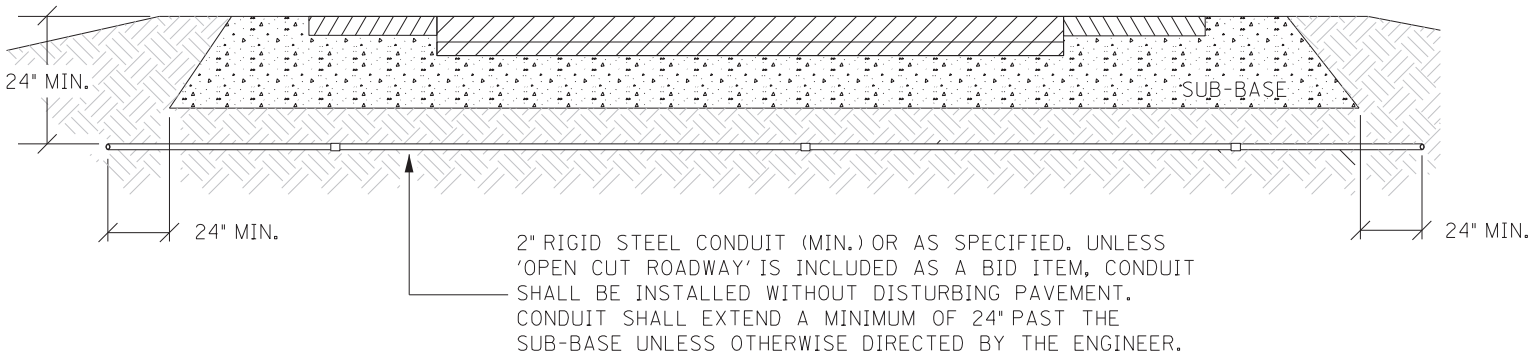
4.17. Wire or Cable

Wire or cable shall include furnishing and installing specified wire or cable within saw slot, conduit, junction box, cabinet, or overhead as indicated on the detail sheets. Incidental to this item shall be the labeling of all wires and cables in each junction box, cabinet and splice

box, and furnishing and installing other hardware required for installing cable. Wire or Cable will be measured in linear feet.

4.18. Wood Post

Wood Post shall include furnishing and installing wood post as specified. This item shall include excavation, furnishing and placing concrete (if required), backfilling around the post, and restoration of disturbed areas to the satisfaction of the engineer. Wood Post will be measured in individual units each.

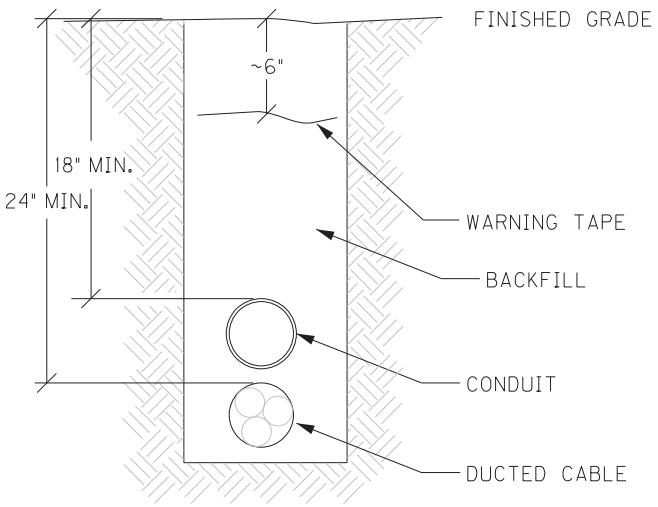


CONDUIT UNDER PAVEMENT

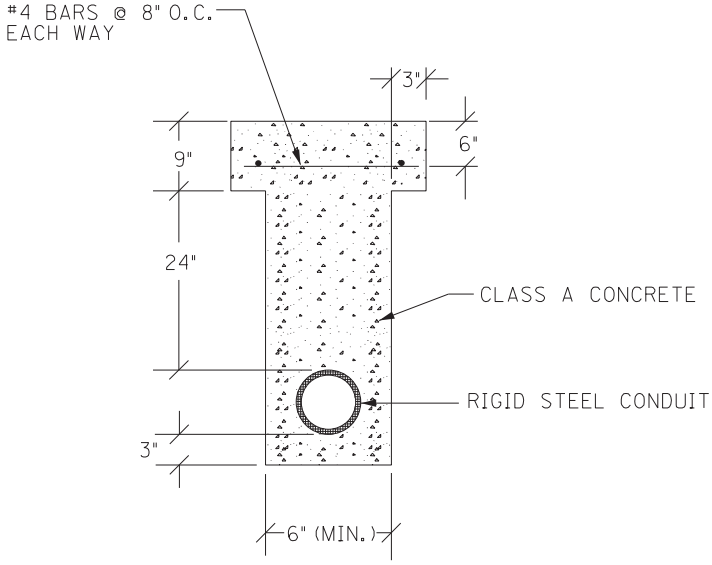
TOTAL TRENCH WIDTH SHALL BE 3" (NOM.) WIDER THAN THE SUM OF THE OUTSIDE DIAMETER(S) OF THE CONDUIT(S) INSTALLED. CONDUIT(S) SHALL BE CENTERED IN TRENCH.

CONTRACTOR SHALL PLACE BACKFILL IN LIFTS (9" MAX.) COMPACT BACKFILL, AND RESTORE DISTURBED AREA TO THE SATISFACTION OF THE ENGINEER

CONTRACTOR SHALL INSTALL UNDERGROUND UTILITY WARNING TAPE ABOVE CONDUIT AS SHOWN.



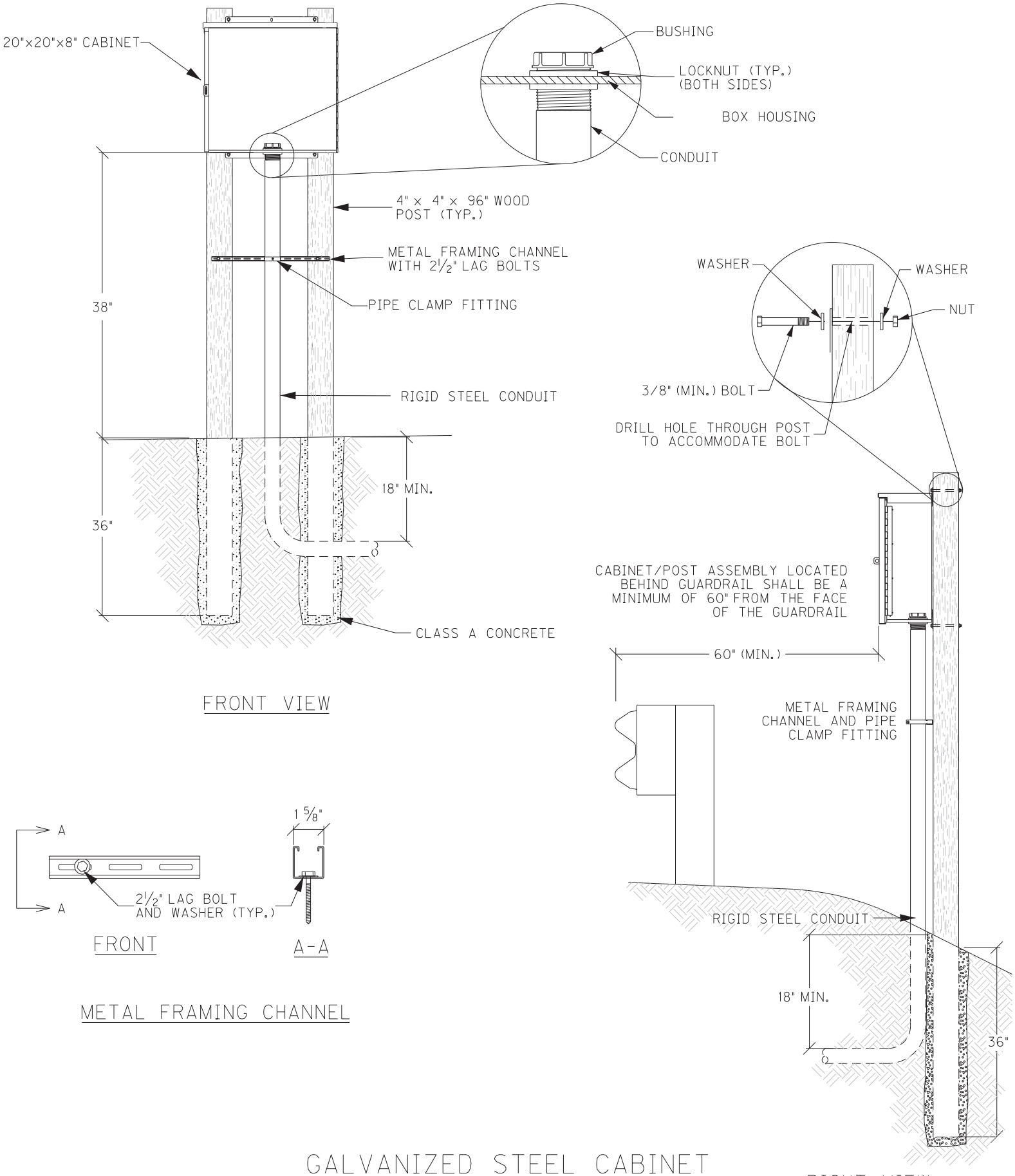
CONDUIT TRENCH



OPEN CUT PAVEMENT DETAIL

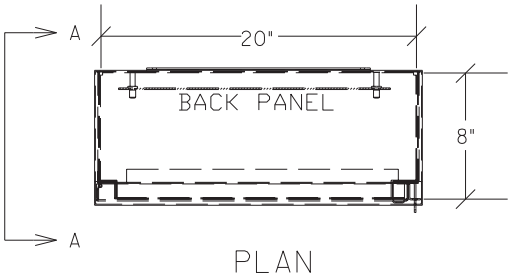
CONDUIT INSTALLATION

NOT TO SCALE

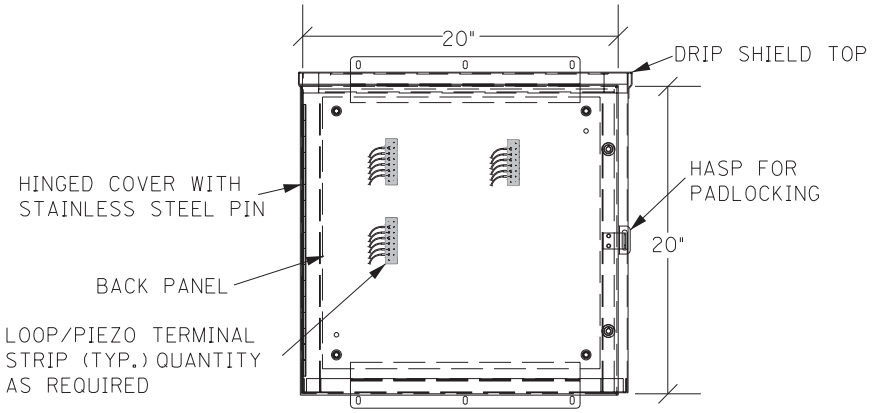


GALVANIZED STEEL CABINET
DOUBLE POST ASSEMBLY

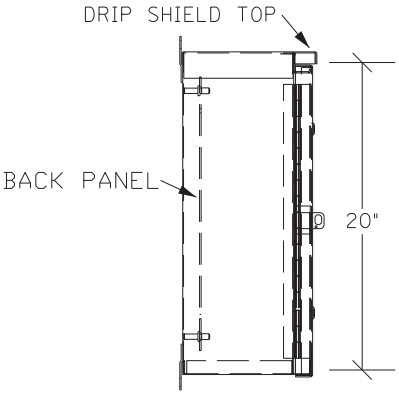
NOT TO SCALE



PLAN

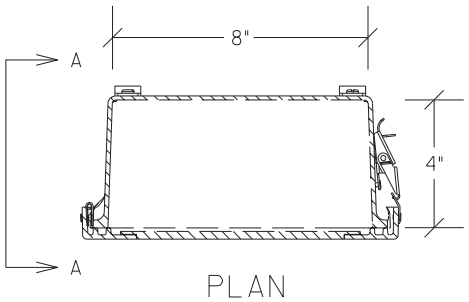


ELEVATION

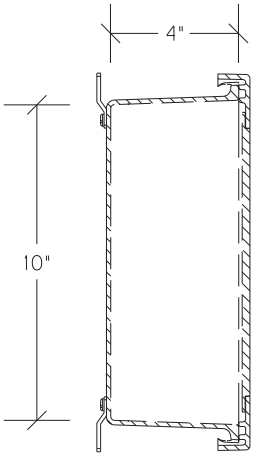


SECTION A-A

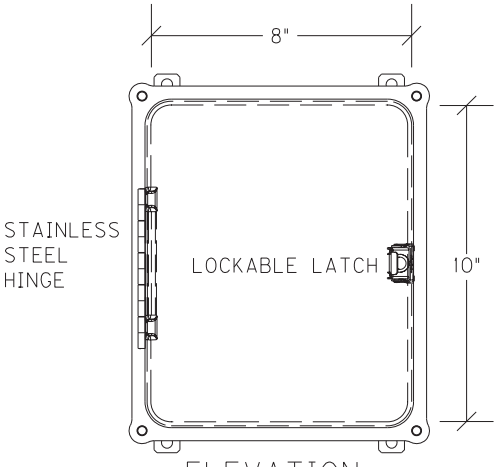
GALVANIZED STEEL CABINET



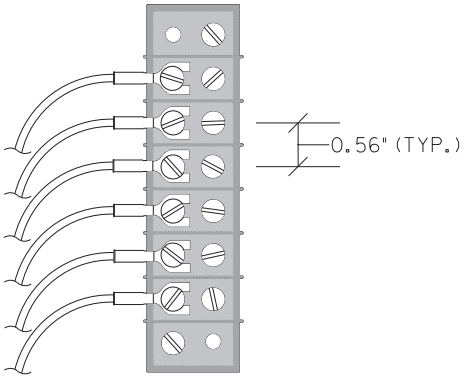
PLAN



SECTION A-A



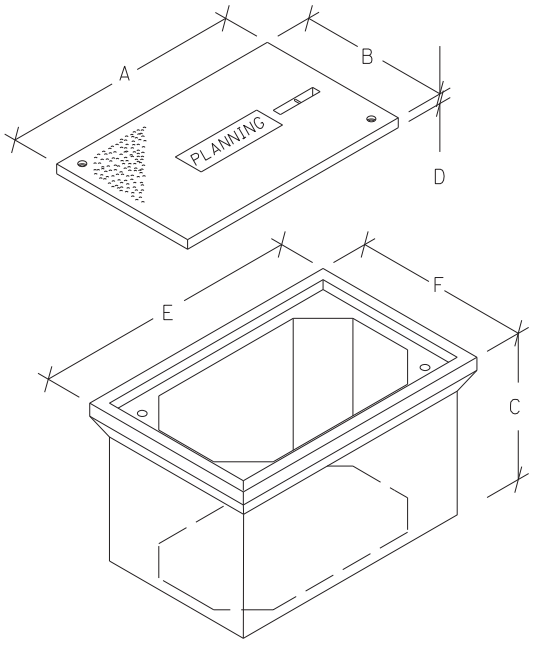
ELEVATION



TERMINAL STRIP (TYP.)

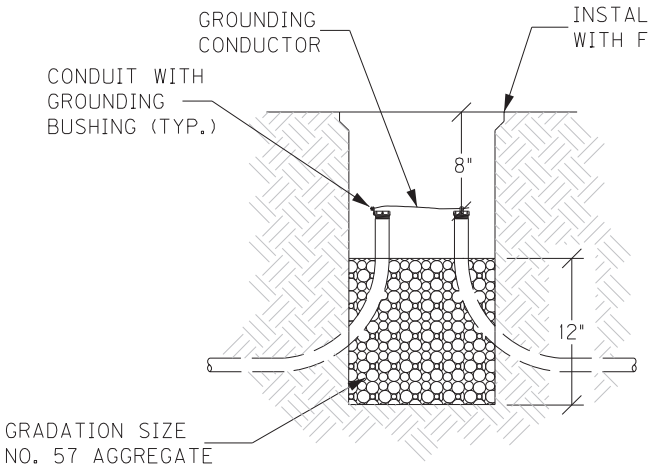
JUNCTION BOX 10"x8"X4"

NOT TO SCALE



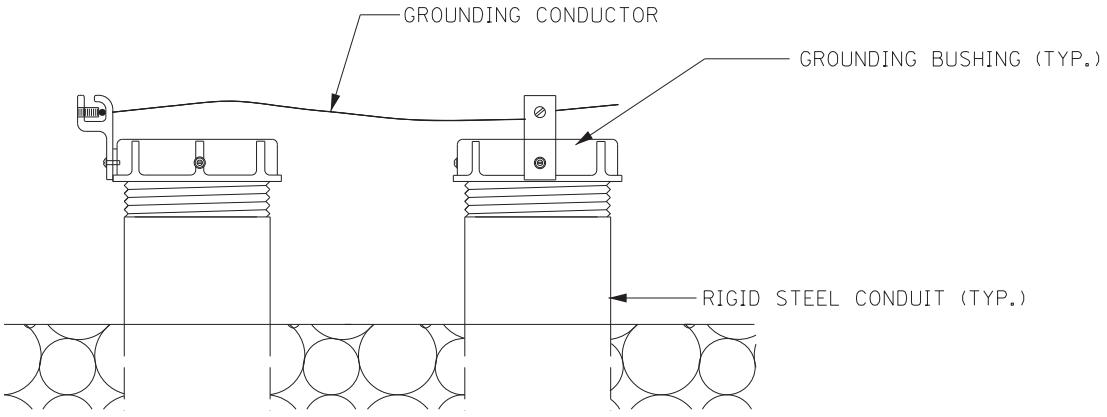
JUNCTION BOX DIMENSIONS (NOMINAL)						
	A	B	C	D*	E	F
TYPE A	23"	14"	18"	2"	25"	16"
TYPE B	18"	11"	12"	1¾"	20"	13"
TYPE C	36"	24"	30"	3"	38"	26"

* MINIMUM
STACKABLE BOXES ARE PERMITTED



WHERE REQUIRED, JUNCTION BOX SHALL BE ORIENTED SUCH THAT THE DIMENSIONS COMPLY WITH THE NATIONAL ELECTRICAL CODE.

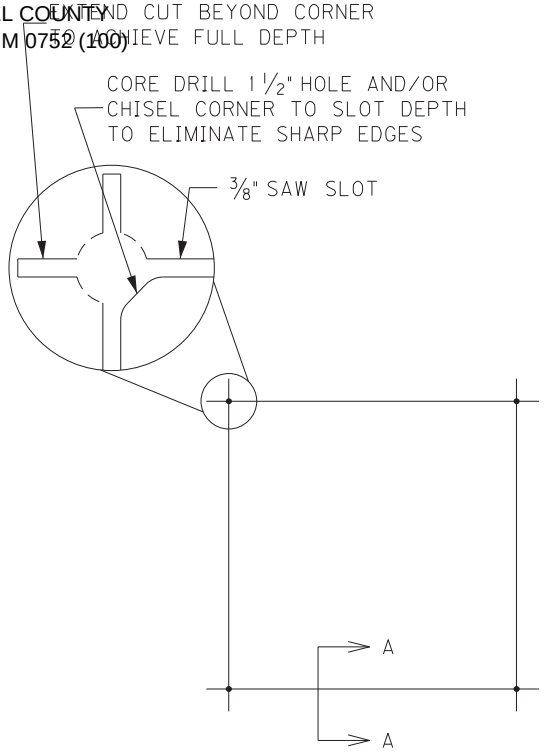
ELEVATION



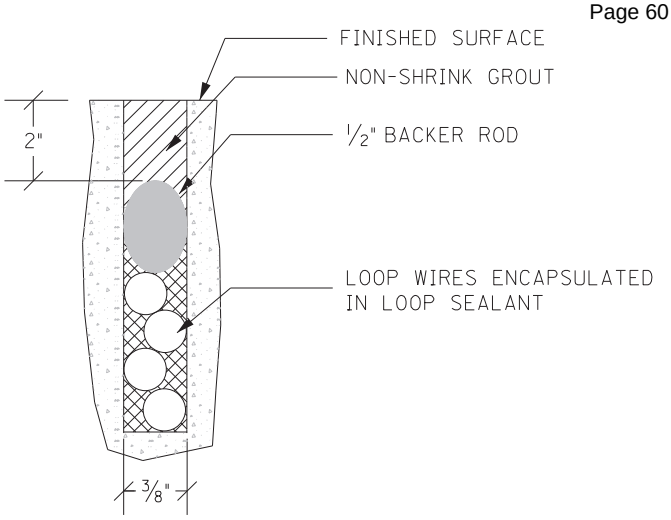
GROUNDING DETAIL

JUNCTION BOX - TYPE A, TYPE B, TYPE C

NOT TO SCALE



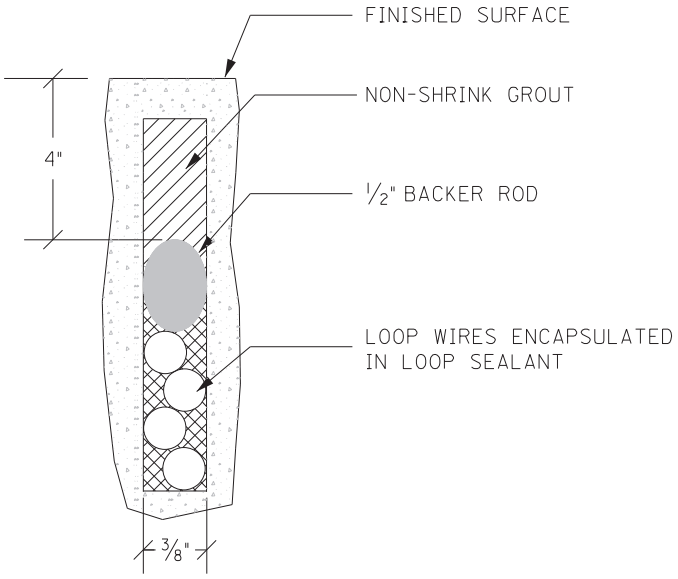
SAW CUT PLAN



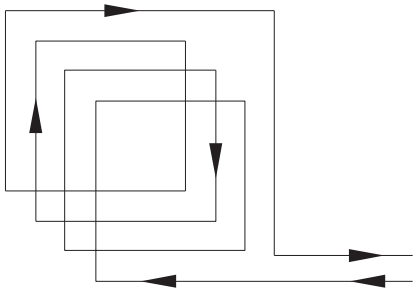
SECTION A-A (CONCRETE)

UNLESS SPECIFIED OTHERWISE, ALL LOOPS SHALL BE 6' x 6' SQUARE, CENTERED IN EACH LANE, WITH FOUR TURNS OF 14 AWG LOOP WIRE.

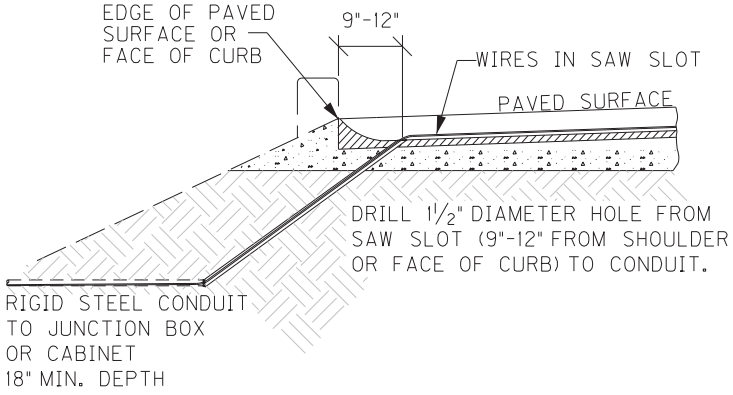
ADJACENT SAW SLOTS SHALL BE A MINIMUM OF 12" APART.



SECTION A-A (ASPHALT)



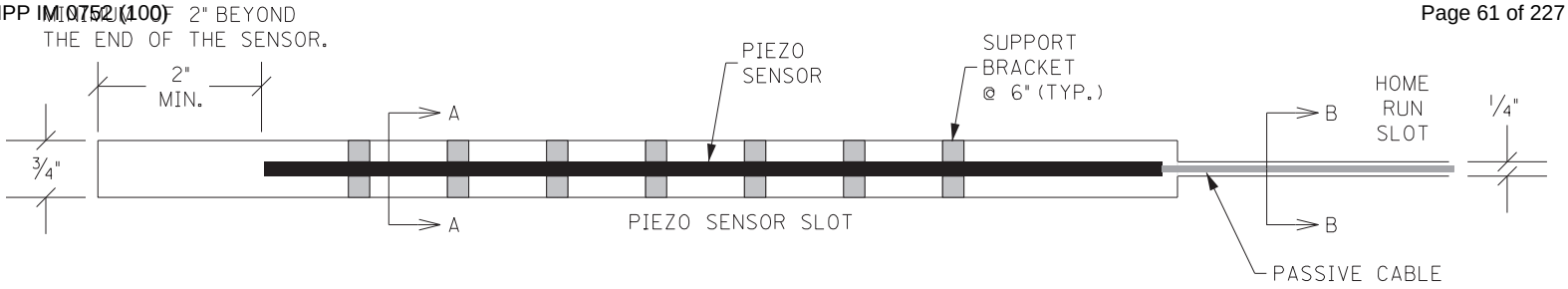
WIRING PLAN



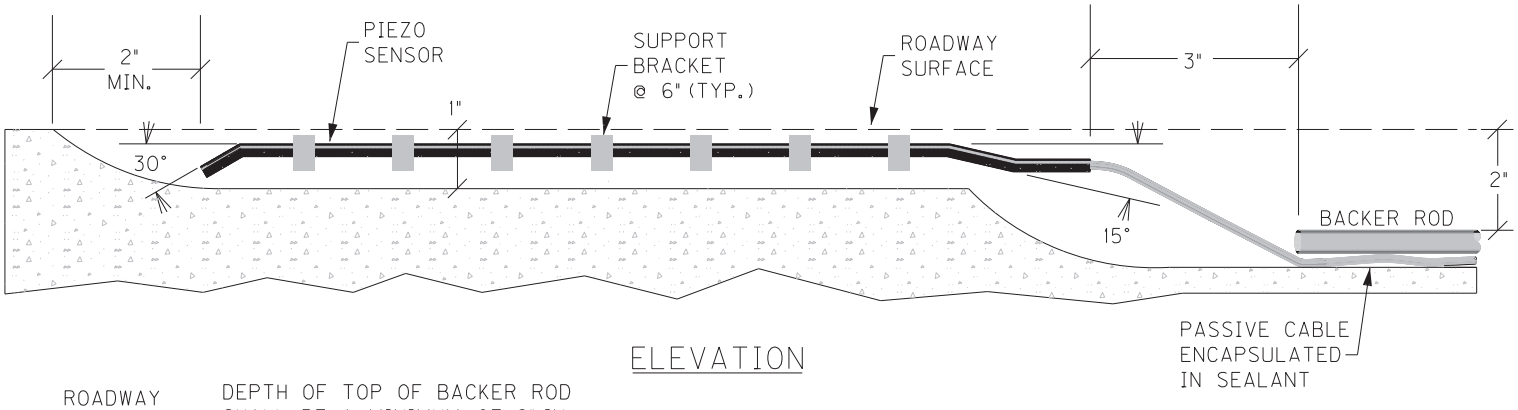
SAW SLOT EDGE OF PAVEMENT TRANSITION

INDUCTIVE LOOP DETECTOR

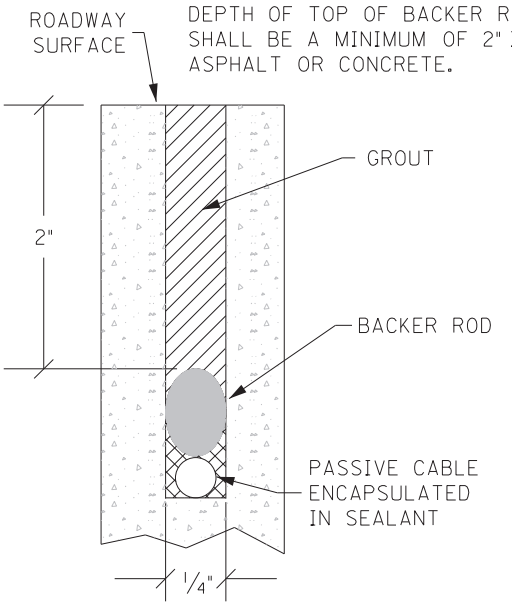
NOT TO SCALE



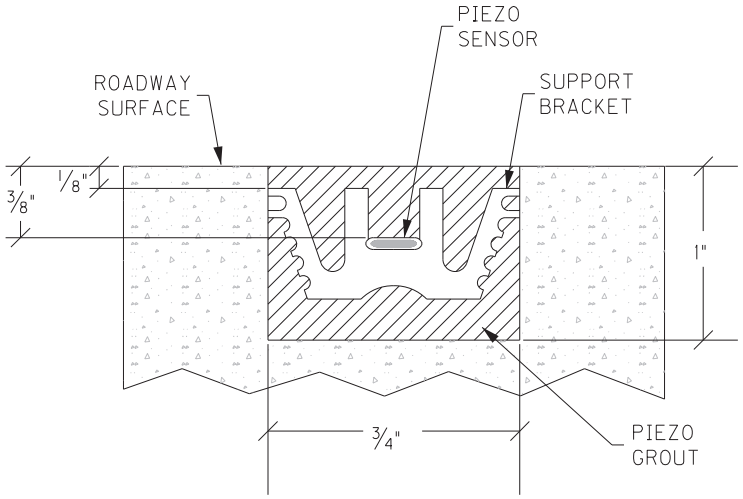
PLAN



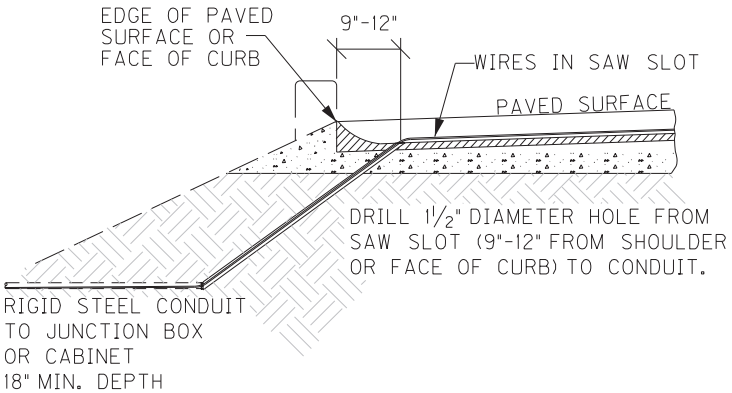
ELEVATION



SECTION B-B



SECTION A-A



SAW SLOT EDGE OF PAVEMENT TRANSITION

PIEZOELECTRIC SENSOR INSTALLATION

NOT TO SCALE

SPECIAL NOTE FOR INLAID PAVEMENT MARKERS

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 recommendation

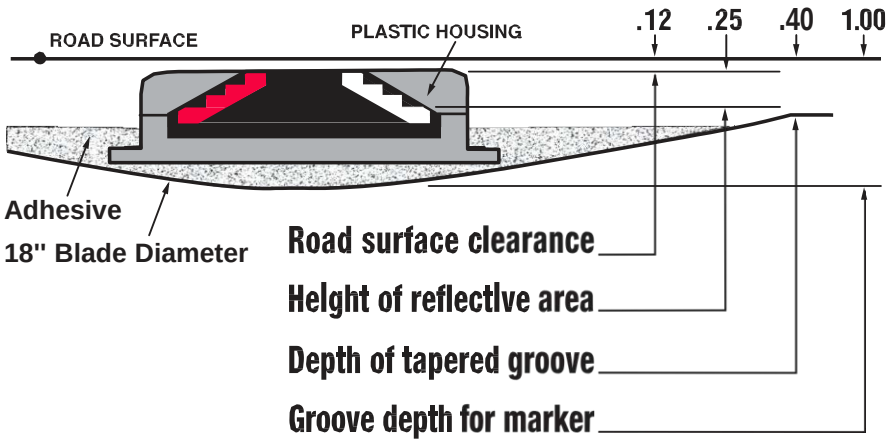
III. CONSTRUCTION

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.

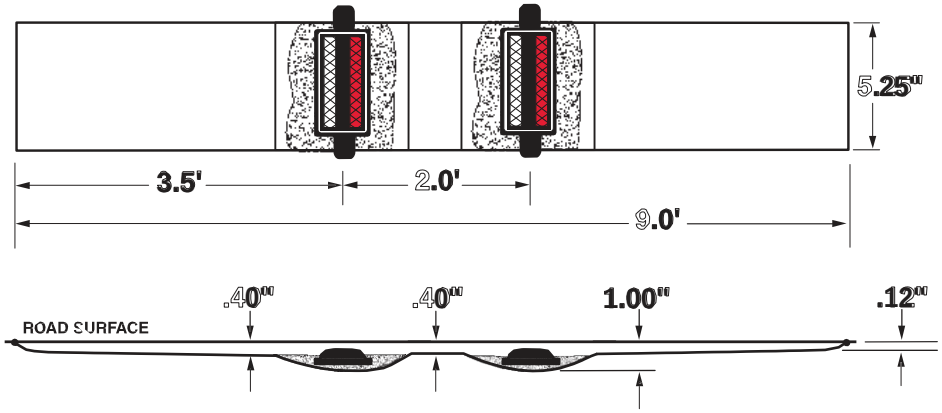
C. Installation. Install IPMs in recessed grooves cut into the final course of asphalt pavement according to the manufacturer's recommendations. Do not cut the grooves until the pavement has cured sufficiently to prevent tearing or raveling. Cut installation grooves using diamond blades on saws that 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.

Special Note for Pavement Drainage Blanket

The Department will not permit the use of RAP or RAS in the asphalt treated drainage blanket. Contrary to section 402.05.01 of the Standard Specification the Department will assign a 0.75 pay factor when the gradation is outside of the master range as listed in section 303.03.01 of the Standard Specification. Cease all shipments to the Department when an individual sublot pay value falls below 0.90, as listed in section 303.03.01, and/or outside the master range. Do not send the drainage blanket to the Department until corrections have been made and document until it exceeds the 0.90 pay factor.

SPECIAL NOTE
FOR
FIXED COMPLETION DATE

Fixed Completion Date

This project will have a fixed completion date of June 30, 2021 for completion of all work associated with this project.

Liquidated damages per the Standard Specifications will be charged for each calendar day that all work is not completed after June 30, 2021.

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

11-9.1

Feb 8, 2019

SPECIAL NOTE

For Construction Activities

Laurel and Whitley County
I-75 Widening
Item No. 11-9 and 11-14.8

STANDARD GRAY BAT EROSION CONTROL IS TO BE FOLLOWED.

If there are any questions regarding this note, please contact Danny Peake, Director, Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601; Phone: (502) 564-7250.

SPECIAL NOTE FOR PIPELINE INSPECTION

1.0 DESCRIPTION. The Department will perform visual inspections on all pipe on the project. A video inspection will be required on projects having more than 250 linear feet of storm sewer and/or culvert pipe and on routes with an ADT of greater than 1,000 vehicles. Conduct video inspections on all pipe located under the roadway and 50 percent of the remaining pipe not under the roadway. Storm sewer runs and outfall pipes not under the roadway take precedence over rural entrance pipes. Contractors performing this item of work must be prequalified with the Department in the work type J51 (Video Pipe Inspection and Cleaning). Deflection testing shall be completed using a mandrel in accordance with the procedure outlined below or by physical measurement for pipes greater than 36inches in diameter. Mandrel testing for deflection must be completed prior to the video inspection testing. Unless otherwise noted, Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

2.0 VIDEO INSPECTION. Ensure pipe is clear of water, debris or obstructions. Complete the video inspection and any necessary measurement prior to placing the final surface over any pipe. When paving will not be delayed, take measurements 30 days or more after the completion of earthwork to within 1 foot of the finished subgrade. Notify the Engineer a minimum of 24 hours in advance of inspection and notify the Engineer immediately if distresses or locations of improper installation are logged.

2.1 INSPECTION FOR DEFECTS AND DISTRESSES

A) Begin at the outlet end and proceed through to the inlet at a speed less than or equal to 30 ft/minute. Remove blockages that will prohibit a continuous operation.

B) Document locations of all observed defects and distresses including but not limited to: cracking, spalling, slabbing, exposed reinforcing steel, sags, joint offsets, joint separations, deflections, improper joints/connections, blockages, leaks, rips, tears, buckling, deviation from line and grade, damaged coatings/paved inverts, and other anomalies not consistent with a properly installed pipe.

C) During the video inspection provide a continuous 360 degree pan of every pipe joint.

D) Identify and measure all cracks greater than 0.1" and joint separations greater than 0.5".

E) Video Inspections are conducted from junction to junction which defines a pipe run. A junction is defined as a headwall, drop box inlet, curb box inlet, manhole, buried junction, or other structure that disturbs the continuity of the pipe. Multiple pipe inspections may be conducted from a single set up location, but each pipe run must be on a separate video file and all locations are to be referenced from nearest junction relative to that pipe run.

F) Record and submit all data on the TC 64-765 and TC 64-766 forms.

3.0 MANDREL TESTING. Mandrel testing will be used for deflection testing. For use on Corrugated Metal Pipe, High Density Polyethylene Pipe, and Polyvinyl Chloride Pipe,

use a mandrel device with an odd number of legs (9 minimum) having a length not less than the outside diameter of the mandrel. The diameter of the mandrel at any point shall not be less than the diameter specified in Section 3.6. Mandrels can be a fixed size or a variable size.

3.1 Use a proving ring or other method recommended by the mandrel manufacturer to verify mandrel diameter prior to inspection. Provide verification documentation for each size mandrel to the Engineer.

3.2 All deflection measurements are to be based off of the AASHTO Nominal Diameters. Refer to the chart in section 3.6.

3.3 Begin by using a mandrel set to the 5.0% deflection limit. Place the mandrel in the inlet end of the pipe and pull through to the outlet end. If resistance is met prior to completing the entire run, record the maximum distance achieved from the inlet side, then remove the mandrel and continue the inspection from the outlet end of the pipe toward the inlet end. Record the maximum distance achieved from the outlet side.

3.4 If no resistance is met at 5.0% then the inspection is complete. If resistance occurred at 5.0% then repeat 3.1 and 3.2 with the mandrel set to the 10.0% deflection limit. If the deflection of entire pipe run cannot be verified with the mandrel then immediately notify the Engineer.

3.5 Care must be taken when using a mandrel in all pipe material types and lining/coating scenarios. Pipe damaged during the mandrel inspection will be video inspected to determine the extent of the damage. If the damaged pipe was video inspected prior to mandrel inspection then a new video inspection is warranted and supersedes the first video inspection. Immediately notify the Engineer of any damages incurred during the mandrel inspection and submit a revised video inspection report.

3.6 AASHTO Nominal Diameters and Maximum Deflection Limits.

Base Pipe Diameter	AASHTO Nominal Diameter	Max. Deflection Limit	
		5.0%	10.0%
(inches)	(inches)	(inches)	
15	14.76	14.02	13.28
18	17.72	16.83	15.95
24	23.62	22.44	21.26
30	29.53	28.05	26.58
36	35.43	33.66	31.89
42	41.34	39.27	37.21
48	47.24	44.88	42.52
54	53.15	50.49	47.84
60	59.06	56.11	53.15

4.0 PHYSICAL MEASUREMENT OF PIPE DEFLECTION. Alternate method for deflection testing when there is available access or the pipe is greater than 36 inches in diameter, as per 4.1. Use a contact or non-contact distance instrument. A leveling device is recommended for establishing or verifying vertical and horizontal control.

4.1 Physical measurements may be taken after installation and compared to the AASHTO Nominal Diameter of the pipe as per Section 3.6. When this method is used, determine the smallest interior diameter of the pipe as measured through the center point of the pipe (D2). All measurements are to be taken from the inside crest of the corrugation. Take the D2 measurements at the most deflected portion of the pipe run in question and at intervals no greater than ten (10) feet through the run. Calculate the deflection as follows:

% Deflection = [(AASHTO Nominal Diameter - D2) / AASHTO Nominal Diameter] x 100%

Note: The Engineer may require that preset monitoring points be established in the culvert prior to backfilling. For these points the pre-installation measured diameter (D1) is measured and recorded. Deflection may then be calculated from the following formula:

$$\% \text{ Deflection} = [(D1 - D2) / D1] (100\%)$$

4.2 Record and submit all data.

5.0 DEDUCTION SCHEDULE. All pipe deductions shall be handled in accordance with the tables shown below.

FLEXIBLE PIPE DEFLECTION	
Amount of Deflection (%)	Payment
0.0 to 5.0	100% of the Unit Bid Price
5.1 to 9.9	50% of the Unit Bid Price [(1)]
10 or greater	Remove and Replace [(2)]

[(1)] Provide Structural Analysis for HDPE and metal pipe. Based on the structural analysis, pipe may be allowed to remain in place at the reduced unit price. [(2)] The Department may allow the pipe to remain in place with no pay to the Contractor in instances where it is in the best interest to the public and where the structural analysis demonstrates that the pipe should function adequately.

RIGID PIPE REMEDIATION TABLE PIPE	
Crack Width (inches)	Payment
• 0.1	100% of the Unit Bid Price
Greater than 0.1	Remediate or Replace [(1)]

[(1)] Provide the Department in writing a method for repairing the observed cracking. Do not begin work until the method has been approved.

6.0 PAYMENT. The Department will measure the quantity in linear feet of pipe to inspect. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24814EC	Pipeline Inspection	Linear Foot
10065NS	Pipe Deflection Deduction	Dollars

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 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.

3.0 WORK PLAN. Submit to the Engineer an IC Work Plan at the Preconstruction Conference and at least 2 weeks prior to the 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:

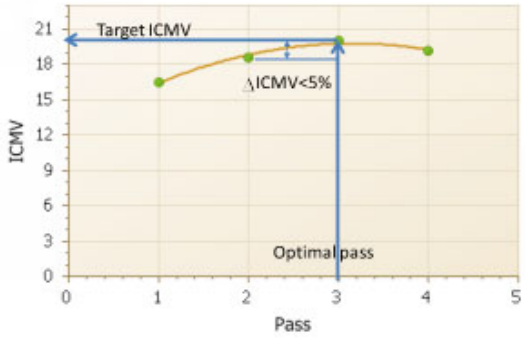
    a. Establish the GPS system to be used either one with a base station or one with mobile receivers only. Ensure all components in the system are set to the correct coordinate system; then,
    b. Verify that the roller and rover are working properly and that there is a connection with the base station; 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.
Time for data transfer

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.

Code	Pay Item	Pay Unit
24781EC	Intelligent Compaction for Asphalt	Ton

January 28, 2019

SPECIAL NOTE FOR INTELLIGENT COMPACTION OF AGGREGATE BASES AND SOILS

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

1.0 DESCRIPTION. Provide and use Intelligent Compaction (IC) Rollers for compaction of Aggregate bases, stabilized subgrades, soil, and soil rock mixtures.

2.0 MATERIALS AND EQUIPMENT. The Contractor shall supply sufficient numbers of rollers and other associated equipment necessary to complete the compaction requirements for the specific materials. The Contractor will determine the number of IC rollers to use depending on the scope of the project. The IC roller(s) may be utilized during production with other standard compaction equipment and shall be used for the evaluation of the compaction operations. Provide at least one (1) roller to be used on the project with the following minimum characteristics:

1. Are self propelled vibratory rollers equipped with machine drive power and/or 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. www.IntelligentCompaction.com contains a list of acceptable rollers equipped with IC technology.
2. IC rollers can be either smooth drums or pad footed drums based on the type needed for the aggregate base or soil types to compact.
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, or the machine drive power value.
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 speed, the frequency and amplitude of roller drums. Ensure the display unit is capable of transferring the data by means of a cloud based near real time system with a USB port backup data transfer.
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 must be within 12 inches.

3.0 WORK PLAN. Submit to the Engineer an IC Work Plan at the Preconstruction Conference and/or at least 2 weeks prior to beginning the corresponding construction activates. 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,
    - 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. **Data transfer shall be provided by a real time cloud data collecting and distribution system (ex. Visionlink). 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 IC bid item(s).**
4. Training plan and schedule for roller operators, project foreman, project surveyors, and Cabinet personnel; including both classroom and field training from the equipment manufacturer. 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.

4.0 CONSTRUCTION. 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. Use the project datum system (Northing, Easting and Elevation) when applicable.

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; then,

2. Compare coordinates between the roller and rover receivers. If the coordinates are within12.0 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. 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.
4. A test strip is to be used for all materials (DGA, CSB, subgrade and soil) as outlined and sized in section 302.03.04 to determine optimum rolling pattern, for all materials, and the target density for aggregate bases. A new test strip will be required anytime the material changes, equipment changes, or proper compaction has not been obtained for two (2) consecutive test locations.
5. All acceptance testing shall be as outlined in Standard Specifications sections 200 and 300.
6. Any areas a minimum of 50 square feet in area not achieving the 80% of the stiffness value determined by the latest control strip shall be tested by other means approved by the Engineer. If the material doesn't pass the testing is shall be repaired based on current standards to the satisfaction of the Engineer.

5.0 MEASUREMENT. The Department will measure the total tons of aggregate base (DGA and/or CSB), total square yards of stabilized subgrade, and total cubic yards of soil compacted using the IC roller(s). The use of non-IC rollers is allowed on this project, but an IC roller must be used as well.

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

1. All areas with a minimum of 80% pass coverage and 75% required stiffness readings.
2. Payment is full compensation for all work associated with providing IC equipped rollers, transmission of electronic data files, two copies of IC roller manufacturer software, and training.
3. 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.

Code	Pay Item	Pay Unit
24779EC	Intelligent Compaction for Soil	Cubic Yard
24780EC	Intelligent Compaction for Aggregate	Ton
24990EC	Intelligent Comp Subgrade Stabilization	Square Yard

January 28, 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 ± 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 ± 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 Driving Lanes 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°. 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.

Code	Pay Item	Pay Unit
24891EC	Pave Mount Infrared Temp Equipment	Square Foot

January 28, 2019

March 7, 2019

SPECIAL NOTE FOR ASPHALT CK BASE

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction. Follow the 2012 Standard Specifications for Road and Bridge Construction except for the exception in this special note.

1.0 Description. This work shall consist of furnishing all the materials, testing equipment, performing testing, and the construction of an asphalt base as described herein.

The paving mixture is intended to be a uniformly, coarse-graded material containing a high percentage large-size aggregate resulting in a low deformation, shear-resistant pavement suitable for very heavily loaded vehicles and/or paving over Portland cement concrete.

The compacted lift thickness(es) shall be specified elsewhere in the contract or on the plans. Typically, a finished compacted lift thickness will range from a minimum lift thickness of four and one half inches to a maximum lift thickness of six inches.

2.0 Materials.

2.1 Aggregate. Coarse aggregate shall conform to section 805 except that all slag shall be 100 percent passing the ¾ inch sieve. Gravel will not be permitted.

Fine aggregate shall conform to section 804. Natural and/or conglomerate sand will be limited to a maximum of 10 percent of the total aggregate weight.

2.2 Asphalt Binder. Provide an asphalt binder conforming to section 806. The asphalt binder shall be a PG 64-22, unless otherwise specified in the proposal or on the plans.

2.3 Reclaimed Materials. The use of reclaimed material in the mixture will not be permitted.

2.4 Anti-Stripping Additive. Anti-stripping additive may be required as determined by ASTM D4867. Any changes in the source of materials on the approved mix design may require further testing by the Contractor for this property. Measurement and payment for anti-stripping will be considered incidental to the Asphalt CK Base.

2.5 Warm Mix. Contrary to section 402 warm mix will not be permitted.

3.0 Mix Design Criteria.

3.1 Preparation of Mixture. Conform to the following aggregate composition limits (master range) along with the tolerance of the JMF during production.

March 7, 2019

Aggregate Composition Limits		
Sieve Size	Percent Passing By Weight	JMF Tolerance (%)
2 inch	100	
1 1/2 inch	80 - 100	± 8
1 inch	65 -85	± 8
3/4 inch	50 - 70	± 6
1/2 inch	40 - 60	± 6
3/8 inch	30 - 50	± 5
No. 4	15 - 30	± 5
No. 8	8 - 18	± 5
No. 16	5 - 15	± 5
No. 30	4 - 12	± 5
No. 50	3 - 10	±4
No. 100	2 - 8	± 2
No. 200	0 - 5	± 1.5

3.2 Preliminary Mix Design. Perform the volumetric mix design according to AASHTO R 35 and conforming to M323. However, the gradation of the design must fall within the master range listed in the Aggregate Composition Limits table above. Complete the volumetric mix design at the appropriate number of gyrations in section 403. The ESAL also will be listed on the plans or proposal and/or established on the pay item. The department will require a dust-to-binder ratio of 0.8 to 1.6, the VMA shall be 11.0 minimum, and a TSR value of 80% minimum. The target for air voids during the design shall be in the range of 4.0 to 4.5.

This mixture will be considered a specialty mixture no matter the ESAL class and shall be for the mix design requirements as outlined in KM 421 section 3.9.1.2.

3.3 Selection of Optimum AC. The department will approve the AC at an air-void content in the range of 4.0 to 4.5. The Engineer may assign an AC corresponding to other air-void levels as deemed appropriate. Ensure that the optimum AC is a minimum of 3.5 percent by weight of the total mixture.

4.0 Control and Acceptance. Conform to section 402 with the following exception listed below.

4.1 Acceptance. Acceptance testing shall conform to section 402 except for the following. Acceptance will be by the means of gradation and asphalt content instead of volumetric properties. The acceptance range (JMF tolerance) for gradation listed above in the Aggregate Composition Limits table will be used for acceptance and at no time shall exceed the master range. Gradation, AC content, and

volumetric testing will be required once every 1000 tons of production of the Class CK Base. During the production air voids shall be between 1.5 to 7, VMA minimum of 10.5, asphalt content shall be within the range of plus/minus 0.5 from the approved mix design, and gradation within the range JMF tolerances, not to exceed the master range. At any time when the production of the mixture falls outside these ranges then production shall cease and follow section 402 to allow the re-start of production. Record all results on the AMAW along with any changes made to the mixture during production.

4.1.a Gradation. The field sample must be obtained as in accordance with ASTM D75.5 to determine the gradation of the bituminous mixture. Automatic belt sampling devices is required and must have prior approval by the department before use to ensure all material is being removed and collected from the belt during production. Once the field sample has been obtained follow ASTM T248 Method A to obtain the test sample. Contrary to KM 64-620, KM 64-606, AASTHO T11, and AASTHO T27 the test sample size for the -200 um wash and gradation test shall have a minimum of 7000 grams and the field sample shall be 70 to 90 lbs.

4.1.b Asphalt Content Contrary to section 402, asphalt determination will only be accepted by AASTHO T308.

4.2 Density. Conform to section 402 and compact asphalt mixture by Option A for mainline, turning lanes, and ramps. Asphalt mixture placed on the shoulder shall be accept by Option B.

5.0 Construction.

5.1 Seasonal and Weather Limitations. Conform to section 403.

5.2 Placement. When constructing driving lanes, ramps, turning lands, and shoulders use a MTV to place the mixture to ensure uniformity of the placement of the mixture.

6.0 Payment.

6.1 Lot Pay Adjustment.

The Department will follow section 402.05 except for as follows.

Lot Pay Adjustment for Compaction Option B = ($50.00) (Quantity) {[0.25(AC Pay Value) + 0.15(Percent Passing 1-inch sieve Pay Value) +0.15(Percent Passing 1/2 –sieve Pay Value) +0.15(Percent Passing 3/8-inch Pay Value) +0.15(Percent Passing No.4-sieve Pay Value) +0.15(Percent Passing No. 200-sieve Pay Value)]}

Weighted Values Option B						
	1.0 Sieve	1/2 Sieve	3/8 Sieve	No. 4 Sieve	No. 200 Sieve	AC
Weight (%)	15	15	15	15	15	25

March 7, 2019

Lot Pay Adjustment for Compaction Option A = ($50.00) (Quantity) {[0.10(Percent Passing 1-inch sieve Pay Value) +0.10(Percent Passing 1/2 –sieve Pay Value) +0.10(Percent Passing 3/8-inch Pay Value) +0.10(Percent Passing No.4-sieve Pay Value) +0.10(Percent Passing No. 200-sieve Pay Value) +0.10(AC Pay Value) +0.40(Lane Density Pay Value)]-1.00}

Weighted Values Option A							
	1.0 Sieve	1/2 Sieve	3/8 Sieve	No. 4 Sieve	No. 200 Sieve	AC	Lane Density
Weight (%)	10	10	10	10	10	10	40

A C	
Pay Value	Deviation From JMF (%)
1.00	±0.3
0.95	±0.4
0.9	±0.5
(1)	≥±0.60

Gradation		
Sieve	Pay Value	Deviation From JMF(%)
1 inch	105	0 - 4
	100	4.1 - 8
	95	8.1 - 10
	90	10.1 - 12
	(1)	≥12.1
1/2 inch	105	0 - 3
	100	3.1 - 6
	95	6.1 - 8
	90	8.1 - 10
	(1)	≥10.1
3/8 inch	105	0 - 2
	100	2.1 - 5
	95	5.1 - 7
	90	7.1 - 8
	(1)	≥8.1
No. 4	105	0 - 2
	100	2.1 - 5
	95	5.1 - 7
	90	7.1 - 8
	(1)	≥8.1
No. 200	105	0 - 0.5
	100	0.6 - 1.5
	95	1.6 - 2.0
	90	2.1 - 2.5
	(1)	≥2.6

Lane Density		
Pay Value	ESAL Class 2	ESAL Class 3 or 4
1.05	93.0 - 96.0	93.0 - 96.0
1.00	91.0 - 92.9	91.0 - 92.9
	96.1 - 96.5	96.1 - 96.5
0.95	90.0 - 90.9	90.0 - 90.9
0.90	89.0 - 89.9	89.5 - 89.9
	96.6 - 97.0	96.6 - 97.0
0.85	97.1 - 98.5	-----
0.75	88.5 - 88.9	-----
(1)	<88.5 or >98.5	<89.5 or >97.0

(1) Conform to 402.05 except as follows

March 7, 2019

The Department will define this level of quality as test results for Gradation and AC corresponding to the following pay values:

- 0.90 or greater for each individual sieve;
- 0.90 or greater for AC.

For Lane Density the Department will require removal and replacement only when the results for all 4 cores in a sublot (or all available cores in a partial sublot) are as follows:

- Less than 88.5 percent, or greater than 98.5 percent, of solid density for ESAL Class 2; or
- Less than 89.5 percent, or greater than 97.0 percent, of solid density for ESAL Class 3 or 4.

The Department will make payment for the installed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24903EC	CL2 ASPH BASE CK PG64-22	TON
24904EC	CL3 ASPH BASE CK PG64-22	TON
24905EC	CL4 ASPH BASE CK PG64-22	TON

Kentucky Transportation Cabinet
Division of Highway Design

TRAFFIC MANAGEMENT PLAN

County: LAUREL Item No.: 11-9.10

Federal Project No.: NHPP IM 0752 (100)

Project Description:

Widen I-75 to 6 lanes from Milepoint 28.9 to Milepoint 34.2.

Roadway Classification: ☐ Urban ☒ Rural

☐ Local ☐ Collector ☐ Arterial ☒ Interstate

ADT (current) 53,800 AM Peak Current 4,600 PM Peak Current 4,800 % Trucks 27.0

Project Designation: ☒ Significant ☐ Other: _____

Traffic Control Plan Design:

Taper and Diversion Design Speeds 55 mph

Minimum Lane Width 11' Minimum Shoulder Width 2'

Minimum Bridge Width 25'

Minimum Radius N/A Maximum Grade N/A

Minimum Taper Length see below Minimum Intersection Level of Service N/A

Existing Traffic Queue Lengths 0 Projected Traffic Queue Lengths 1 mile

Comments:

FROM MUTCD, CURRENT EDITION
LANE CLOSURE TAPER – 55:1, SHIFTING TAPER – 27.5:1

Kentucky Transportation Cabinet
Division of Highway Design
TRAFFIC MANAGEMENT PLAN

Item No. 11-9.10

Discussion:

1) Public Information Plan	
a) Prepare with assistance from ☒ KYTC or ☐ _____	
b) Identify Trip Generators N/A	f) Railroad Involvement N/A
c) Identify Types of Road Users Referenced	g) Address Pedestrians, Bikes Mass Transit N/A
d) Public Information Message Referenced	h) Address Timing, Frequency, Updates, Effectiveness of Plan Referenced
e) Public Information Strategies to be used Referenced	i) Police & Other Emergency Services Referenced

Kentucky Transportation Cabinet
Division of Highway Design
TRAFFIC MANAGEMENT PLAN

Item No. 11-9.10

2) Temporary Traffic Control Plan (For Each Phase of Construction) Phase I

Exposure Control Measures		**Positive Protection Measures**	
a) Is Road Closure Allowed Type: Lane	Referenced	a) Address Drop Off Protection Criteria	Referenced
b) Detour Conditions	Referenced	b) Temporary Barrier Requirements	Referenced
c) Working Hour Restrictions	Referenced	c) Evaluation of Existing Guardrail Conditions	Referenced
d) Holiday or Special Event Work Restrictions	Referenced	d) Address Temporary Drainage	Referenced
e) Evaluation of Intersection LOS	N/A	**Uniformed Law Enforcement Officers**	Referenced
f) Evaluation of Queue Lengths	Referenced	**Payment for Traffic Control***	
g) Evaluation of User Costs and Incentives/Disincentives	Referenced	a) Method of Project Bidding	Referenced
h) Address Pedestrians, Bikes, Mass Transit	N/A	b) Special Notes	Referenced
Work Vehicles and Equipment	Referenced	*Payment for traffic control items shall be in accordance with the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction	

Comments:

Kentucky Transportation Cabinet
Division of Highway Design
TRAFFIC MANAGEMENT PLAN

Item No. 11-9.10

2) Temporary Traffic Control Plan (For Each Phase of Construction) Phase II

Exposure Control Measures		**Positive Protection Measures**	
a) Is Road Closure Allowed Type: Lane	Referenced	a) Address Drop Off Protection Criteria	Referenced
b) Detour Conditions	Referenced	b) Temporary Barrier Requirements	Referenced
c) Working Hour Restrictions	Referenced	c) Evaluation of Existing Guardrail Conditions	Referenced
d) Holiday or Special Event Work Restrictions	Referenced	d) Address Temporary Drainage	Referenced
e) Evaluation of Intersection LOS	N/A	**Uniformed Law Enforcement Officers**	Referenced
f) Evaluation of Queue Lengths	Referenced	**Payment for Traffic Control***	
g) Evaluation of User Costs and Incentives/Disincentives	Referenced	a) Method of Project Bidding	Referenced
h) Address Pedestrians, Bikes, Mass Transit	N/A	b) Special Notes	Referenced
Work Vehicles and Equipment	Referenced	*Payment for traffic control items shall be in accordance with the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction	

Comments:

Kentucky Transportation Cabinet
Division of Highway Design
TRAFFIC MANAGEMENT PLAN

Item No. 11-9.10

2) Temporary Traffic Control Plan (For Each Phase of Construction) Phase III+

Exposure Control Measures		**Positive Protection Measures**	
a) Is Road Closure Allowed Type: Lane	Referenced	a) Address Drop Off Protection Criteria	Referenced
b) Detour Conditions	Referenced	b) Temporary Barrier Requirements	Referenced
c) Working Hour Restrictions	Referenced	c) Evaluation of Existing Guardrail Conditions	Referenced
d) Holiday or Special Event Work Restrictions	Referenced	d) Address Temporary Drainage	Referenced
e) Evaluation of Intersection LOS	N/A	**Uniformed Law Enforcement Officers**	Referenced
f) Evaluation of Queue Lengths	Referenced	**Payment for Traffic Control***	
g) Evaluation of User Costs and Incentives/Disincentives	Referenced	a) Method of Project Bidding	Referenced
h) Address Pedestrians, Bikes, Mass Transit	N/A	b) Special Notes	Referenced
Work Vehicles and Equipment	Referenced	*Payment for traffic control items shall be in accordance with the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction	

Comments:

Kentucky Transportation Cabinet
Division of Highway Design
TRAFFIC MANAGEMENT PLAN

Item No. 11-9.10

APPROVAL:

Project Manager — JAN 22, 2019 — Date

Project Delivery and Preservation Manager — 01/22/2019 — Date

Engineering Support Manager — 1-22-19 — Date

FHWA Representative — Date

Revisions to the TMP require review/approval by the signatories.

Delay		WZ CAP	Route	BegMP	EndMP	CntMP	Station	Truck %	Speed Limit:	70	WZ Speed Limit:	55	WZ Length (miles):	3
		1250	I-75	28.872	38.187	30.66	547	27.0%	Long-Term Cap (1 ln):	1,250 vplph	Short-Term Cap (1 ln):	1,082 vplph		
%diverted		NB	NB	NB	NB	NB	NB	NB	%diverted	SB	SB	SB	SB	SB	SB	SB
0%		Monday	Tuesday	Wed	Thurs	Friday	Sat	Sun	0%	Monday	Tuesday	Wed	Thurs	Friday	Sat	Sun
12-1 am	1	331	280	298	336	389	429	403	Yes	344	404	421	420	518	723	411
1-2 am	2	230	215	209	247	282	331	274	Yes	263	282	276	315	359	476	336
2-3 am	3	217	254	225	248	281	298	220	Yes	212	281	235	256	328	433	237
3-4 am	4	221	260	311	281	337	326	183	Yes	203	221	234	269	325	464	209
4-5 am	5	351	348	350	420	387	310	206	Yes	238	256	275	306	341	480	206
5-6 am	6	585	582	616	625	632	399	256	Yes	371	386	410	409	510	629	227
6-7 am	7	751	787	803	839	823	579	368	Yes	659	624	630	730	814	806	409
7-8 am	8	1,195	1,125	1,180	1,290	1,292	844	561	Yes	956	853	960	980	1,164	1,034	604
8-9 am	9	1,223	1,163	1,261	1,337	1,363	1,216	969	Yes	1,038	979	1,085	1,272	1,312	1,265	887
9-10 am	10	1,301	1,180	1,306	1,456	1,545	1,581	1,544	Yes	1,253	1,163	1,261	1,445	1,520	1,683	1,229
10-11 am	11	1,595	1,374	1,446	1,612	2,071	2,020	2,110	Yes	1,505	1,281	1,258	1,591	1,963	1,921	1,769
11-12 am	12	1,644	1,476	1,637	1,948	2,134	2,300	2,520	Yes	1,572	1,380	1,506	1,776	2,343	2,131	2,082
12-1 pm	13	1,832	1,479	1,632	1,918	2,234	2,365	2,802	Yes	1,778	1,530	1,558	1,909	2,167	2,195	2,243
1-2 pm	14	1,808	1,518	1,660	1,894	2,221	2,226	2,841	Yes	1,925	1,593	1,612	1,964	2,310	2,309	2,340
2-3 pm	15	1,671	1,592	1,598	1,964	2,241	2,169	2,812	Yes	1,959	1,671	1,748	2,107	2,452	2,261	2,284
3-4 pm	16	1,678	1,563	1,565	1,851	2,016	1,941	2,556	Yes	1,763	1,754	1,719	1,888	2,687	1,944	2,207
4-5 pm	17	1,669	1,633	1,634	1,760	1,900	1,207	2,364	Yes	1,688	1,654	1,648	2,048	2,388	1,701	1,797
5-6 pm	18	1,492	1,445	1,476	1,519	1,643	1,473	2,166	Yes	1,659	1,560	1,631	1,975	1,667	1,445	1,411
6-7 pm	19	1,148	1,109	1,145	1,267	1,426	2,197	1,698	Yes	1,275	1,186	1,374	1,520	2,615	1,345	1,802
7-8 pm	20	971	946	976	1,113	1,377	1,593	1,411	Yes	953	902	959	1,105	1,793	1,018	1,181
8-9 pm	21	771	838	790	909	1,225	1,262	1,188	Yes	832	890	977	1,094	1,633	922	970
9-10 pm	22	656	640	710	854	939	976	912	Yes	642	612	824	951	1,313	749	780
10-11 pm	23	497	525	452	646	827	760	568	Yes	565	738	643	850	1,032	632	604
11-12 pm	24	393	399	467	442	674	508	456	Yes	443	489	518	603	784	464	470
	Total	24,230	22,731	23,747	26,776	30,259	29,310	31,388	ADT Both 53,833	24,096	22,689	23,762	27,783	34,338	29,030	26,695
Number of lanes Needed (I-75)		Mon	Tue	Wed	Thu	Fri	Sat	Sun	Station 547	Mon	Tue	Wed	Thu	Fri	Sat	Sun
		NB	NB	NB	NB	NB	NB	NB	MP 30.66	SB	SB	SB	SB	SB	SB	SB
12:00 AM - 1:00 AM		1	1	1	1	1	1	1	12:00 AM - 1:00 AM	1	1	1	1	1	1	1
1:00 AM - 2:00 AM		1	1	1	1	1	1	1	1:00 AM - 2:00 AM	1	1	1	1	1	1	1
2:00 AM - 3:00 AM		1	1	1	1	1	1	1	2:00 AM - 3:00 AM	1	1	1	1	1	1	1
3:00 AM - 4:00 AM		1	1	1	1	1	1	1	3:00 AM - 4:00 AM	1	1	1	1	1	1	1
4:00 AM - 5:00 AM		1	1	1	1	1	1	1	4:00 AM - 5:00 AM	1	1	1	1	1	1	1
5:00 AM - 6:00 AM		1	1	1	1	1	1	1	5:00 AM - 6:00 AM	1	1	1	1	1	1	1
6:00 AM - 7:00 AM		1	1	1	1	1	1	1	6:00 AM - 7:00 AM	1	1	1	1	1	1	1
7:00 AM - 8:00 AM		1	1	1	2	2	1	1	7:00 AM - 8:00 AM	1	1	1	1	1	1	1
8:00 AM - 9:00 AM		1	1	2	2	2	1	1	8:00 AM - 9:00 AM	1	1	1	2	2	2	1
9:00 AM - 10:00 AM		2	1	2	2	2	2	2	9:00 AM - 10:00 AM	2	1	2	2	2	2	1
10:00 AM - 11:00 AM		2	2	2	2	2	2	2	10:00 AM - 11:00 AM	2	2	2	2	2	2	2
11:00 AM - 12:00 PM		2	2	2	2	2	2	3	11:00 AM - 12:00 PM	2	2	2	2	2	2	2
12:00 PM - 1:00 PM		2	2	2	2	2	2	3	12:00 PM - 1:00 PM	2	2	2	2	2	2	2
1:00 PM - 2:00 PM		2	2	2	2	2	2	3	1:00 PM - 2:00 PM	2	2	2	2	2	2	2
2:00 PM - 3:00 PM		2	2	2	2	2	2	3	2:00 PM - 3:00 PM	2	2	2	2	2	2	2
3:00 PM - 4:00 PM		2	2	2	2	2	2	3	3:00 PM - 4:00 PM	2	2	2	2	3	2	2
4:00 PM - 5:00 PM		2	2	2	2	2	1	2	4:00 PM - 5:00 PM	2	2	2	2	2	2	2
5:00 PM - 6:00 PM		2	2	2	2	2	2	2	5:00 PM - 6:00 PM	2	2	2	2	2	2	2
6:00 PM - 7:00 PM		1	1	1	2	2	2	2	6:00 PM - 7:00 PM	2	1	2	2	3	2	2
7:00 PM - 8:00 PM		1	1	1	1	2	2	2	7:00 PM - 8:00 PM	1	1	1	1	2	1	1
8:00 PM - 9:00 PM		1	1	1	1	1	2	1	8:00 PM - 9:00 PM	1	1	1	1	2	1	1
9:00 PM - 10:00 PM		1	1	1	1	1	1	1	9:00 PM - 10:00 PM	1	1	1	1	2	1	1
10:00 PM - 11:00 PM		1	1	1	1	1	1	1	10:00 PM - 11:00 PM	1	1	1	1	1	1	1
11:00 PM - 12:00 AM		1	1	1	1	1	1	1	11:00 PM - 12:00 AM	1	1	1	1	1	1	1

*- Analysis is based on current counts and capacity with minimal to no delays

I-75 MP 30.66 Station 547 User Cost Analysis (2 lanes to 1 NB, 2 lanes to 1 SB)

Queue Delay	NB Monday		NB Tuesday		NB Wed		NB Thurs		NB Friday		NB Sat		NB Sun	
	Queue (miles)	Delay (min)	Queue (miles)	Delay (min)	Queue (miles)	Delay (min)	Queue (miles)	Delay (min)	Queue (miles)	Delay (min)	Queue (miles)	Delay (min)	Queue (miles)	Delay (min)
12-1 am	1	8	na	0	na	0	13	92	33	242	33	241	53	390
1-2 am	na	0	na	0	na	0	7	49	27	199	27	201	47	346
2-3 am	na	0	na	0	na	0	2	13	21	157	22	159	41	300
3-4 am	na	0	na	0	na	0	na	0	16	116	16	118	35	254
4-5 am	na	0	na	0	na	0	na	0	7	48	7	49	16	115
5-6 am	na	0	na	0	na	0	na	0	na	0	na	0	na	0
6-7 am	na	0	na	0	na	0	na	0	na	0	na	0	na	0
7-8 am	na	0	na	0	na	0	0	1	0	1	na	0	na	0
8-9 am	na	0	na	0	0	0	1	4	1	5	na	0	na	0
9-10 am	0	1	na	0	0	2	2	11	2	15	1	8	1	7
10-11 am	2	11	0	3	1	8	3	26	6	45	5	37	5	38
11-12 am	4	30	2	12	3	23	7	54	12	90	12	87	13	97
12-1 pm	7	55	3	23	6	42	12	88	19	140	20	145	25	180
1-2 pm	11	84	5	35	8	62	17	122	26	191	27	198	37	269
2-3 pm	15	107	7	50	11	80	22	158	33	244	34	247	49	357
3-4 pm	18	128	9	67	13	96	26	189	39	284	39	283	58	426
4-5 pm	20	149	12	84	16	114	29	215	43	316	38	279	66	482
5-6 pm	22	163	13	97	17	128	31	230	46	335	40	290	72	525
6-7 pm	22	161	13	95	17	127	32	231	47	342	47	343	73	536
7-8 pm	20	150	11	83	16	116	31	225	47	347	48	355	73	536
8-9 pm	18	130	9	66	13	97	29	210	47	345	48	352	72	527
9-10 pm	14	104	6	42	10	73	26	192	45	328	46	337	69	504
10-11 pm	10	72	2	14	6	42	23	165	42	308	43	313	64	466
11-12 pm	5	36	na	0	2	12	18	131	38	281	38	278	59	429
MAX	**22**	**163**	**13**	**97**	**17**	**128**	**32**	**231**	**47**	**347**	**48**	**355**	**73**	**536**

Queue Delay	SB Monday		SB Tuesday		SB Wed		SB Thurs		SB Friday		SB Sat		SB Sun	
	Queue (miles)	Delay (min)	Queue (miles)	Delay (min)	Queue (miles)	Delay (min)	Queue (miles)	Delay (min)	Queue (miles)	Delay (min)	Queue (miles)	Delay (min)	Queue (miles)	Delay (min)
12-1 am	4	27	na	0	1	11	22	164	59	432	23	170	24	179
1-2 am	0	3	na	0	na	0	17	124	53	390	19	137	19	139
2-3 am	na	0	na	0	na	0	11	81	48	349	14	101	13	96
3-4 am	na	0	na	0	na	0	5	37	42	308	9	66	7	50
4-5 am	na	0	na	0	na	0	1	8	20	144	3	24	2	14
5-6 am	na	0	na	0	na	0	na	0	na	0	na	0	na	0
6-7 am	na	0	na	0	na	0	na	0	na	0	na	0	na	0
7-8 am	na	0	na	0	na	0	na	0	na	0	na	0	na	0
8-9 am	na	0	na	0	na	0	0	1	0	1	0	0	na	0
9-10 am	0	0	na	0	0	0	1	6	1	10	2	12	na	0
10-11 am	1	6	0	1	0	1	3	19	5	35	5	40	2	13
11-12 am	3	21	1	5	1	7	6	41	12	85	11	82	7	49
12-1 pm	6	43	2	15	3	21	10	72	19	136	18	130	13	98
1-2 pm	10	74	4	30	5	38	15	108	26	191	25	185	21	154
2-3 pm	15	110	7	50	8	60	21	151	35	255	33	239	29	210
3-4 pm	19	139	10	73	12	84	25	185	46	335	38	275	36	261
4-5 pm	22	161	13	95	14	105	31	226	54	393	41	297	39	288
5-6 pm	25	182	15	112	17	124	36	263	55	405	42	306	40	295
6-7 pm	25	186	16	114	18	134	38	276	68	495	42	310	44	324
7-8 pm	24	174	14	102	17	125	37	269	69	503	41	298	43	317
8-9 pm	21	156	12	85	15	112	36	261	71	518	39	282	41	303
9-10 pm	18	130	8	60	13	94	34	247	70	513	35	259	38	280
10-11 pm	14	100	5	35	9	69	31	229	68	496	31	230	34	251
11-12 pm	9	65	2	11	5	38	27	200	64	470	27	196	30	216
MAX	**25**	**186**	**16**	**114**	**18**	**134**	**38**	**276**	**71**	**518**	**42**	**310**	**44**	**324**

USER COST	NB Monday	SB	NB Tuesday	SB	NB Wed	SB	NB Thurs	SB	NB Friday	SB	NB Sat	SB	NB Sun	SB
	USER COST ($)		USER COST ($)		USER COST ($)		USER COST ($)		USER COST ($)		USER COST ($)		USER COST ($)	
12-1 am	$1,881	$12,644	$169	$244	$180	$3,338	$41,535	$73,931	$108,705	$193,603	$108,520	$76,974	$174,921	$80,573
1-2 am	$139	$461	$130	$170	$126	$167	$22,361	$55,780	$89,642	$174,752	$90,349	$62,109	$154,973	$62,681
2-3 am	$131	$128	$153	$170	$136	$142	$4,053	$36,534	$70,601	$156,373	$71,654	$46,000	$134,604	$43,203
3-4 am	$133	$122	$157	$133	$188	$141	$170	$17,200	$52,410	$138,113	$53,347	$30,149	$113,715	$23,017
4-5 am	$212	$144	$210	$154	$211	$166	$253	$1,670	$54,450	$460,044	$51,619	$15,898	$259,901	$4,091
5-6 am	$353	$224	$351	$233	$372	$247	$377	$247	$381	$308	$241	$379	$154	$137
6-7 am	$453	$398	$475	$376	$484	$380	$506	$440	$497	$491	$349	$486	$222	$247
7-8 am	$721	$577	$679	$515	$712	$579	$1,902	$591	$1,925	$702	$509	$624	$338	$364
8-9 am	$738	$626	$702	$591	$1,563	$655	$3,319	$1,692	$3,672	$2,160	$734	$1,610	$585	$535
9-10 am	$2,031	$1,470	$712	$702	$2,327	$1,563	$6,650	$4,222	$8,372	$6,013	$5,397	$7,001	$4,943	$741
10-11 am	$6,700	$4,533	$2,893	$1,797	$5,216	$1,764	$13,169	$10,325	$22,164	$17,898	$18,676	$19,966	$19,096	$7,754
11-12 am	$14,992	$10,989	$6,831	$3,637	$11,940	$4,896	$26,014	$20,424	$42,273	$40,435	$41,046	$38,672	$46,116	$23,928
12-1 pm	$26,472	$20,948	$11,818	$8,316	$20,479	$11,184	$41,532	$34,327	$64,830	$63,156	$67,278	$60,441	$83,109	$46,001
1-2 pm	$39,284	$35,125	$17,356	$15,312	$29,382	$18,716	$56,380	$50,325	$87,785	$87,717	$90,888	$85,077	$123,075	$71,395
2-3 pm	$49,584	$51,157	$24,289	$24,011	$37,558	$28,734	$72,424	$69,465	$111,159	$116,444	$112,542	$109,130	$162,251	$96,150
3-4 pm	$59,102	$63,791	$31,432	$34,672	$44,736	$39,472	$86,467	$84,840	$128,770	$152,240	$128,266	$124,994	$192,686	$118,777
4-5 pm	$68,493	$73,898	$39,435	$44,377	$52,858	$48,799	$98,132	$102,961	$143,360	$178,172	$125,873	$134,664	$217,653	$130,679
5-6 pm	$74,449	$83,107	$44,899	$51,786	$58,622	$57,364	$104,249	$119,668	$151,199	$182,509	$131,253	$138,239	$236,906	$133,305
6-7 pm	$73,299	$84,489	$43,820	$52,323	$57,855	$61,253	$104,665	$125,053	$154,114	$223,672	$155,319	$139,993	$241,001	$146,807
7-8 pm	$67,996	$78,923	$38,403	$46,476	$52,869	$56,873	$101,785	$121,265	$156,647	$226,539	$160,108	$134,107	$240,838	$143,012
8-9 pm	$58,841	$70,590	$30,553	$39,075	$44,295	$51,087	$94,774	$117,954	$155,396	$233,195	$158,700	$127,037	$236,721	$136,447
9-10 pm	$47,252	$58,843	$19,495	$27,797	$33,712	$43,056	$86,643	$111,560	$147,628	$230,734	$151,595	$116,444	$226,416	$126,269
10-11 pm	$32,977	$45,358	$5,907	$16,454	$19,398	$31,742	$74,732	$103,240	$138,481	$222,937	$140,659	$103,805	$209,004	$112,883
11-12 pm	$16,619	$29,907	$241	$3,890	$4,276	$17,861	$59,166	$90,206	$126,314	$210,751	$125,001	$88,128	$192,145	$97,208
TOTAL	**$642,852**	**$728,451**	**$321,107**	**$373,209**	**$479,494**	**$480,181**	**########**	**########**	**########**	**########**	**########**	**########**	**########**	**########**

Note: Assumes 0% diversion EB in traffic, 0% WB.

COUNTY OF	ITEM NO.	SHEET NO.
LAUREL	11-9.10	R69

MAINTENANCE OF TRAFFIC I-75
TRAFFIC CONTROL NOTES

MAINTENANCE OF TRAFFIC NOTES

1. The Contractor shall maintain a four-lane traveling way on I-75 with a minimum lane width of 11', except where noted. The Contractor shall notify the London/Laurel Dispatch Center and Kentucky State Police a minimum of 24 hours in advance of all mainline closures. If police assistance is deemed desirable by the Contractor, any fee required by the police shall be at the Contractor's expense.

2. The Contractor will not be allowed to drive or haul construction equipment across the median from one side of the interstate to the other side, unless appropriate Barrier Wall Gates and/or lane closures are installed. All other equipment movements from one side of the interstate to the other shall utilize the nearest interchange. Hauling equipment that uses I-75 shall be restricted to licensed vehicles only. Vehicles shall not park or stop except within work areas designated by the Engineer. Any shoulder used for the deceleration lane and acceleration lane shall be widened and paved to adequately support heavy truck traffic. All expense to construct Barrier Wall Gates including but not limited to signing, widening and surfacing the existing shoulders, delineation, additional temporary barrier wall and crash cushions, and the concrete removal of the access shall be borne by the Contractor and be incidental to the contract. Pavement to construct barrier wall gates that will be incorporated into the permanent work will be measure for payment.

   The Contractor's vehicles shall always move with and not against the flow of traffic. Vehicles shall enter and leave work areas in a manner which will not be hazardous to or interfere with normal traffic. The design for access gates into and out of the median area are shown within these plans. The location and number of gates shall be approved by the Engineer.

3. On I-75, a minimum of two 11' traffic lanes in each direction shall be maintained at all times except as provided herein. If the Contractor desires to deviate from the traffic control scheme and construction schedule outlined in these plans or in the proposal, an alternate plan shall be presented in writing to the Engineer. This alternate plan can only be used after review and approval of the Division of Traffic, Design, Construction and the FHWA.

   a. ROAD CLOSURE
   When setting beams, removing and setting overhead sign supports, and changing from one traffic pattern to another, traffic may be halted at the nearest interchange for a period not longer than 15 minutes. Road Closures shall be allowed only during hours of 'minimum traffic volumes' as described in these Traffic Control Notes. These interruptions to traffic shall not occur more often than once in a period of 'minimum traffic volumes' unless normal traffic has been restored in the opinion of the Engineer. The Contractor shall submit in writing, plans for approval by the Department and FHWA for stopping traffic.

   b. LANE CLOSURE
   When construction within 8 feet of the traveled way is in progress and/or when installing barrier wall adjacent to a traveled way, one lane shall be closed. Lane closures shall be allowed only during 'hours of low traffic volumes' as described in these Traffic Control Notes. All sign placement shall also be done during 'hours of low traffic volume'. Once construction adjacent to a traveled way has begun, that construction shall be expedited until complete. Existing guardrail shall be maintained at all times while traffic is in Phase I. If construction cannot be completed in a single-approved period of 'hours of low traffic volumes' the Contractor will be required to remove the lane closure and provide the proper signing and delineation for a shoulder closure. Use Standard Drawing TCS-120-Current Edition (Lane Closure Case II) for delineation of open construction areas adjacent to pavement. Drums or Barricades Type II shall be required by the Engineer regardless of closure time and a portable flashing arrow shall be required. Contrary to the Standard Specifications, Lane Closure will not be a bid item on this contract and all signs, delineators, labor, etc. for lane closures will be incidental to the bid item Maintain and Control Traffic.

Southbound	Northbound
Mon 7:00 P.M. - Tue 7:00 A.M.	Mon 7:00 P.M. - Tue 7:00 A.M.
Tue 7:00 P.M. - Wed 7:00 A.M.	Tue 7:00 P.M. - Wed 7:00 A.M.
Wed 7:00 P.M. - Thu 7:00 A.M.	Wed 7:00 P.M. - Thu 7:00 A.M.
Thu 9:00 P.M. - Fri 7:00 A.M.	Thu 9:00 P.M. - Fri 7:00 A.M.
Sun 9:00 P.M. - Mon 7:00 A.M.	Sun 9:00 P.M. - Mon 7:00 A.M.

   c. SHOULDER CLOSURE
   In open construction areas within 30 feet of the edge of a traveled roadway, the shoulder shall be closed unless positive separation has already been provided. Use Standard Drawing TTC-135-Current Edition (Shoulder Closure) for delineation of open construction areas adjacent to pavement. Drums or Barricades Type II may be required by the Engineer regardless of the time of shoulder closure.

   d. HOURS OF LOW TRAFFIC VOLUMES
   In these notes and following the sequences of construction, the phrase 'hours of low traffic volumes' is used to specify a time frame in which a lane closure is allowed in order to perform a particular construction sequence adjacent to a traveled way. Listed below are the periods of time for each day of the week that are to be considered 'hours of low traffic volumes'.

   Prior to the Contractor performing any construction sequence, he/she must apply in writing to the Engineer for approval of the period of time selected. The Engineer may, at his/her discretion, cancel or shorten any period of time before and during a construction sequence. If the Engineer shortens a period of time during a construction sequence, the Contractor must remove all equipment and install all necessary traffic control devices.

Southbound	Northbound
Mon 7:00 P.M. - Tue 7:00 A.M.	Mon 7:00 P.M. - Tue 7:00 A.M.
Tue 7:00 P.M. - Wed 7:00 A.M.	Tue 7:00 P.M. - Wed 7:00 A.M.
Wed 7:00 P.M. - Thu 7:00 A.M.	Wed 7:00 P.M. - Thu 7:00 A.M.
Thu 9:00 P.M. - Fri 7:00 A.M.	Thu 7:00 P.M. - Fri 7:00 A.M.
Fri 10:00 P.M. - Sat 7:00 A.M.	Fri 7:00 P.M. - Sat 7:00 A.M.
Sat 7:00 P.M. - Sun 7:00 A.M.	Sat 10:00 P.M. - Sun 7:00 A.M.
Sun 7:00 P.M. - Mon 7:00 A.M.	Sun 10:00 P.M. - Mon 7:00 A.M.

   e. HOURS OF MINIMUM TRAFFIC VOLUMES
   In the notes and the following sequences of construction, the phrase 'hours of minimum traffic volumes' is used to specify a time frame in which a roadway can be completely closed between two (2) adjacent interchanges in order to perform a particular construction sequence. Listed below are the periods of time for each day of the week that are to be considered 'hours of minimum traffic volumes'. Prior to the Contractor performing any construction sequence, he/she must apply in writing to the engineer for approval of the period of time selected. The Engineer may, at his/her discretion, cancel or shorten any period of time before and during a construction sequence. If the Engineer shortens a period of time during a construction sequence, the Contractor must remove all equipment and install all necessary traffic control devices. The time that a roadway is completely closed shall not exceed 15 minutes.

Southbound	Northbound
Mon 8:00 P.M. - Tue 6:00 A.M.	Mon 8:00 P.M. - Tue 6:00 A.M.
Tue 8:00 P.M. - Wed 6:00 A.M.	Tue 8:00 P.M. - Wed 6:00 A.M.
Wed 8:00 P.M. - Thu 6:00 A.M.	Wed 8:00 P.M. - Thu 6:00 A.M.
Thu 10:00 P.M. - Fri 6:00 A.M.	Thu 9:00 P.M. - Fri 6:00 A.M.
Fri 11:00 P.M. - Sat 6:00 A.M.	Fri 10:00 P.M. - Sat 6:00 A.M.
Sat 8:00 P.M. - Sun 6:00 A.M.	Sat 11:00 P.M. - Sun 6:00 A.M.
Sun 8:00 P.M. - Mon 6:00 A.M.	Sun 11:00 P.M. - Mon 6:00 A.M.

   f. HOLIDAYS
   Listed below are dates and times for holidays when lane closures, road closures, or blasting will not be allowed:

2019

Christmas & New Year	6:00 A.M. December 20, 2018 to 6:00 A.M. January 2, 2019
KEA (Spring Break)	To Be Determined by the Department
Bristol Race (Spring)	6:00 A.M. April 4, 2019 to 6:00 A.M. April 8, 2019
Easter	6:00 A.M. April 19, 2019 to 6:00 A.M. April 22, 2019
Memorial Day	6:00 A.M. May 24, 2019 to 6:00 A.M. May 28, 2019
July 4th	6:00 A.M. July 3, 2019 to 6:00 A.M. July 8, 2019
Bristol Race (Fall)	6:00 A.M. August 15, 2019 to 6:00 A.M. August 19, 2019
Labor Day	6:00 A.M. August 30, 2019 to 6:00 A.M. September 3, 2019
Thanksgiving	6:00 A.M. November 27, 2019 to 6:00 A.M. December 2, 2019
Christmas & New Year	6:00 A.M. December 20, 2019 to 6:00 A.M. January 2, 2020

2020

KEA (Spring Break)	To Be Determined by the Department
Bristol Race (Spring)	6:00 A.M. April 2, 2020 to 6:00 A.M. April 6, 2020
Easter	6:00 A.M. April 10, 2020 to 6:00 A.M. April 13, 2020
Memorial Day	6:00 A.M. May 22, 2020 to 6:00 A.M. May 26, 2020
July 4th	6:00 A.M. July 2, 2020 to 6:00 A.M. July 6, 2020
Bristol Race (Fall)	6:00 A.M. August 13, 2020 to 6:00 A.M. August 17, 2020
Labor Day	6:00 A.M. September 3, 2020 to 6:00 A.M. September 8, 2020
Thanksgiving	6:00 A.M. November 25, 2020 to 6:00 A.M. November 30, 2020
Christmas & New Year	6:00 A.M. December 18, 2020 to 6:00 A.M. January 2, 2021

   Future holiday dates when lane closures will not be allowed shall be determined by the Department if necessary, comparable to above dates. The above dates are subject to change if the Department deems necessary.

   g. BLASTING OPERATIONS
   During blasting operations, traffic may be halted a maximum of 15 minutes per hour to allow the execution of the 'shot' and to allow for removal of rock fragments and debris. The Contractor, when using explosive charges of any kind for the purpose of excavating, removal, etc., on this project shall halt all traffic a safe distance on either side of the impending explosion. The Contractor shall immediately inspect the pavements for any debris that may be a hazard to traffic before allowing traffic to proceed on the affected section. When blasting, the Contractor shall halt traffic, blast, clean the existing pavements and return traffic to normal operation in the least amount of time possible. Listed below are the periods of time for each day of the week traffic halts for blasting will be allowed:

Southbound	Northbound
Mon 9:00 A.M. - 3:00 P.M.	Mon 9:00 A.M. - 3:00 P.M.
Tue 9:00 A.M. - 3:00 P.M.	Tue 9:00 A.M. - 3:00 P.M.
Wed 9:00 A.M. - 3:00 P.M.	Wed 9:00 A.M. - 3:00 P.M.
Thu 9:00 A.M. - 3:00 P.M.	Thu 9:00 A.M. - 3:00 P.M.
Fri 9:00 A.M. - 11:00 A.M.	Fri 9:00 A.M. - 11:00 A.M.

4. PAVEMENT EDGE DROP-OFFS
   Pavement edges that traffic is not expected to cross, except accidentally, should be treated as follows:

   Less than 2" - No protection required. Uneven lanes signs W8-11 should be placed in advance and throughout the drop-off area.

   2" to 4" - Place plastic drums, vertical panels, or barricades every 100 feet on tangent sections for speeds of 50 miles per hour or greater. Cones may be used in place of plastic drums, panels, and barricades during daylight hours only. Spacing for tapers should be in accordance with the Manual on Uniform Traffic Control Devices.

   Greater than 4" - Concrete Barrier Walls or wedge with 3:1 or flatter slope needed. If there is 8 feet or more distance between the edge of pavement and drop-off drums, panels, or barricades may be used. If concrete barriers are used, special reflective devices or steady burn lights should be used for overnight installations. For temporary conditions, drop-offs greater than 4" may be protected with plastic drums, vertical panels, or barricades for short distances during daylight hours while work is being done in the drop-off area. Payment will be allowed for the DGA materials used for wedging.

5. TRAFFIC CONTROL COORDINATOR

   A Traffic Control Coordinator shall be required on this project.

6. BUFFER ZONE
   Barrels and other traffic control devices will be extended 0.5 miles beyond the project limits on the Northbound and Southbound lanes to create a buffer zone before entering the project area.

7. QUEUE PROTECTION VEHICLE
   A truck with a changeable message sign will be provided in each direction of travel to warn approaching traffic of a queue ahead. The truck will stay approximately one mile ahead of the queue. All labor, equipment and materials will be incidental to the 'MAINTAIN AND CONTROL TRAFFIC' Bid Item.

MicroStation v8.11.9.357
E-SHEET NAME: R06900MT
USER: mwirtzberger
DATE PLOTTED: November 20, 2018
FILE NAME: u:\11502\ROADWAY\MOT\R06900MT.DGN

COUNTY OF	ITEM NO.	SHEET NO.
LAUREL	11-9.10	R70

MAINTENANCE OF TRAFFIC I-75
TRAFFIC CONTROL NOTES

8. REMOVAL OF EXISTING PAVEMENT MARKERS
The lenses of the existing pavement markers shall be removed prior to showing a conflicting marking scheme in Phase I when lane line markings are shifted. No direct payment will be allowed for this and will be considered incidental to the "MAINTAIN AND CONTROL TRAFFIC" Bid Item.

9. DOUBLE FINE NOTE:
Locations not routinely protected by a barrier wall are eligible for DOUBLE FINE signs. A highway zone which has barrier wall but in which unusual or hazardous conditions exist which expose the workers to traffic hazards shall be eligible for the placement of the DOUBLE FINE signs. However, the double fine signs shall only be placed in portion of highway work zone where workers are exposed to traffic hazards.

The Contractor shall notify the Project Engineer at least 12 hours prior to using the DOUBLE FINE signs.

The Project Engineer shall contact the "Drive Smart Coordinator" with any project with double fines.

At the beginning of highway work zone, the "FINE DOUBLED IN WORK ZONE" sign will be placed. At the end of the highway work zone, the "END DOUBLE FINE" sign will be placed. The signs shall be removed or covered when the highway work zone does not have workers for more than two (2) hour period of time.

Payment for the signs shall be a unit bid price for sign erected. The moving and covering of signs shall be incidental to "MAINTAIN AND CONTROL TRAFFIC" Bid Item.

10. SPEED LIMIT
The speed limit will be reduced to 55mph in the work zone. Reduce Speed Ahead signs (R2-5A) and 55mph signs (R2-1) shall be installed both Northbound and Southbound. Payment for these signs shall be included in the bid item signs Code 2562.

11. CONCRETE BARRIER WALL DELINEATORS
An estimated quantity of delineators for the existing and permanent concrete barrier walls (mon white and mon yellow) is included on the General Summary. Delineators are to be installed on the existing and permanent barrier walls, bridge barrier walls and temporary barrier walls, prior to shifting traffic next to them. Contrary to the Standard Drawing RBM-020, delineators for permanent barrier walls will be required every 50 feet and delineators on temporary barrier walls will be required every 20 feet.

Delineators placed on the permanent concrete barrier wall shall conform to the location of traffic in each phase. Specifically, during construction Phase III when one lane of traffic is shifted to opposite side of the barrier wall, the delineators placed on the opposing side of the roadway during Phase II will not conform to the Phase III traffic configuration. Likewise in Phase III with the delineators placed in Phase II. After Phase III construction the delineators shall conform to the permanent traffic pattern.

Delineators placed on temporary concrete barrier wall will be incidental to the temporary barrier wall bid item and will become the property of the Contractor at completion of the project.

12. CONSTRUCTION ACCESS (INSIDE TO OUTSIDE)
The proposed location of access opening and the position of the changeable message sign will be approved by the Engineer before being placed in operation.

13. EXISTING RUMBLE STRIPS
The existing rumble strips on the Northbound and Southbound outside shoulder shall be removed prior to shifting traffic in Phase I by milling of 1 1/2" deep and 4 feet wide may be field adjusted to match existing surface layer. This area shall then be overlaid with 1 1/2" CL3 ASPH SURF 0.38B PG 64-22. All exposed areas that have been milled will be replaced with Asphalt before the lane closure can be removed. Quantities for both milling and the asphalt surface have been included in the plans.

14. LIQUIDATED DAMAGES AND DISINCENTIVES
The following damages will be assessed if road closures are kept for longer than 15 minutes:

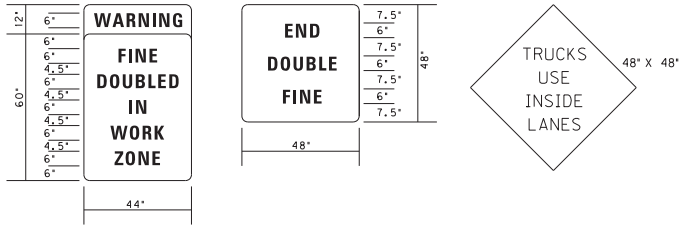
15 minutes to 30 minutes: $1,000.00
30 minutes to 45 minutes: $2,000.00
45 minutes to 60 minutes: $4,000.00

All road closures longer than 60 minutes will be assessed damages of $4,000.00 per hour of fraction thereof. Damages for any fraction of an hour will be charged at the full $4,000.00 hourly rate. Interruptions to traffic shall not occur more than once in a period of permitted road closures unless normal traffic flow has been restored and the Engineer approves another road closure.

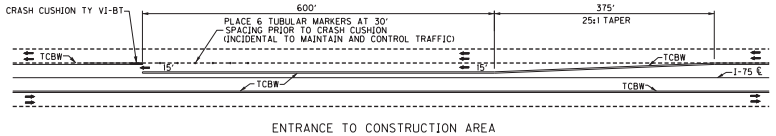
The contractor shall submit in writing plans for stopping traffic which will be reviewed for approval by the Department of Highways and the FHWA.

A disincentive fee of $1,300.00 per lane closure per hour will be charged for the first hour or fraction of an hour that two lanes in each direction of I-75 are not open excepting for the permitted hours as defined as "Hours of Low Traffic Volume". The $1,300.00 per lane closure per hour disincentive also will be assessed for any single lane closure not specifically permitted in the traffic control plan. Lane closures in place for more than one hour in excess of permitted hours will be charged disincentive fees at a higher rate. The disincentive fee for the second hour of lane closure in place beyond permitted hours will be $2,600.00 per lane closure per hour. The disincentive fee for the third hour of lane closure in place beyond permitted hours and for any additional hour or portion of an hour will be $4,000.00 per lane closure per hour.

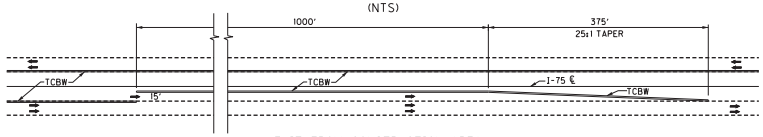
SIGN DETAIL EXAMPLE
(SEE NOTES)



CONSTRUCTION ACCESS DETAILS



ENTRANCE TO CONSTRUCTION AREA
(NTS)



EXIT FROM CONSTRUCTION AREA
(NTS)

Maintenance of Traffic

COUNTY OF	ITEM NO.	SHEET NO.
LAUREL	11-9.10	R71

MAINTENANCE OF TRAFFIC I-75
TRAFFIC CONTROL NOTES

This project involves the construction of a new six-lane highway to replace the existing I-75. This project will require partial-width construction to maintain traffic because most of the new route overlaps the existing road. Approximately 1.5 miles of the I-75 is bifurcated.

GENERAL NOTES

Traffic shall be maintained in accordance with the Manual on Uniform Traffic Control Devices, the Standard Specifications for Road and Bridge Construction and the Standard Drawings (Current Edition). The temporary construction speed limit shall be posted at 55 MPH. Double fines shall also be posted on the project.

Mainline traffic shall be maintained on two driving lanes in each direction with a minimum lane width of 11' during all periods.

A Traffic Control Coordinator shall be required on this project.

A Law Enforcement Officer will be required on this project as directed by the Engineer, shall be incidental to the 'Maintain and Control Traffic' bid item.

During blasting operations, traffic may be halted a maximum of 15 minutes per hour to allow execution of the 'blast' and allow for removal of rock fragments and debris. Blasting shall occur within the times listed in the closure schedule. A second closing for blasting will not occur before Interstate traffic has been restored to normal flow as determined by the Engineer.

No direct payment will be made for lane closures. All lane closures (long-term or short-term) will be incidental to Lump Sum item for MAINTAIN & CONTROL TRAFFIC.

All removal of pavement markings/striping will be incidental to MAINTAIN & CONTROL TRAFFIC. Any necessary removal from final surface layer must be done by water blasting.

PORTABLE CHANGEABLE MESSAGE SIGN

The contractor shall furnish and maintain four (4) changeable message signs. The contractor shall install, operate and maintain the changeable Message Signs through the completion of the project. They shall be placed in a location designated or approved by the Engineer. The changeable message signs will be in accordance with 'Special Note for Portable Changeable Message Signs'. The Portable Changeable Message Signs will remain the property of the Contractor after construction is finished.

TEMPORARY STRIPING

Phase I
After existing stripes are removed, temporary stripes shall be placed four feet to the outside of the original position.

Phase II
White Stripes shall be painted on the newly constructed inside shoulder, driving lane, and median cross-overs to maintain two lanes of travel in one direction. The other direction shall be maintained on Phase I construction.

Phase III
Remove temporary striping in the median cross-overs and restrip to cross-over traffic from the other direction. A yellow stripe, a skip line, and a white stripe shall be painted on the newly constructed lanes and outside shoulder to maintain two lanes of travel.

CONSTRUCTION PHASING

Phase I

Temporary concrete barriers shall be placed on the inside edge of the existing driving lanes. Traffic will be maintained on existing driving lanes narrowed to 11 feet.

Constructed this Phase:
Common Median & Bifurcated Sections
- Grade, drain and base course construction through final base course shall be performed in the median for Mainline and Median cross-over.
- KY 552 dig-out section : grade, drain and base course construction through final base course shall be performed in the median
- Construct Laurel River Bridge part width
- Construct SB Little Laurel Bridge part width

Phase II

The temporary concrete barriers adjacent to the southbound lanes shall be relocated to the previously constructed base course and traffic maintained as follows:
- Sta. 1340+00 to 1398+50 & Sta. 1411+50 to 1429+50
  Southbound traffic shall be maintained on the newly constructed area, one lane on each side of the Permanent Median Barrier.
- Sta. 1402+00 to 1409+00
  Two adjacent 11 foot southbound lanes over Laurel River Bridge part width constructed in Phase I.
- 1435+00 to end of Construction
  Two adjacent 11 foot southbound lanes on newly constructed southbound pavement.
- Northbound traffic shall be maintained the same as Phase I.

Constructed this Phase:
- Common Median & Bifurcated Sections
  Complete grade, drain and base course construction through final base course to southbound lanes.
- KY 552 dig-out section : grade, drain and base course construction through final base course shall be completed to southbound lanes
- Continue part width construction of Laurel River structure on southbound side.
- Complete Southbound Little Laurel River Structure.

Phase III

The temporary concrete barriers adjacent to the northbound lanes shall be relocated to the previously constructed base course and traffic maintained as follows:
- Sta. 1340+00 to 1398+50 & Sta. 1411+50 to 1429+50
  Northbound traffic shall be maintained on the previously constructed area, one lane on each side of the Permanent Median Barrier.
- Sta. 1402+00 to 1409+00
  Two adjacent 11 foot northbound lanes over aurel River Bridge part width constructed in Phase I.
- 1435+00 to end of Construction
  Two adjacent 11 foot southbound lanes on pavement constructed in Phase II.
  Two northbound 11 foot traffic lanes shall be maintained on pavement constructed in Phase I.

Constructed this Phase:
- Common Median & Bifurcated Sections
  Complete grade, drain and base course construction through final base course to northbound lanes.
- KY 552 dig-out section : grade, drain and base course construction through final base course shall be shall be completed to northbound lanes
- Complete construction of Laurel River structure.

Phase III-A

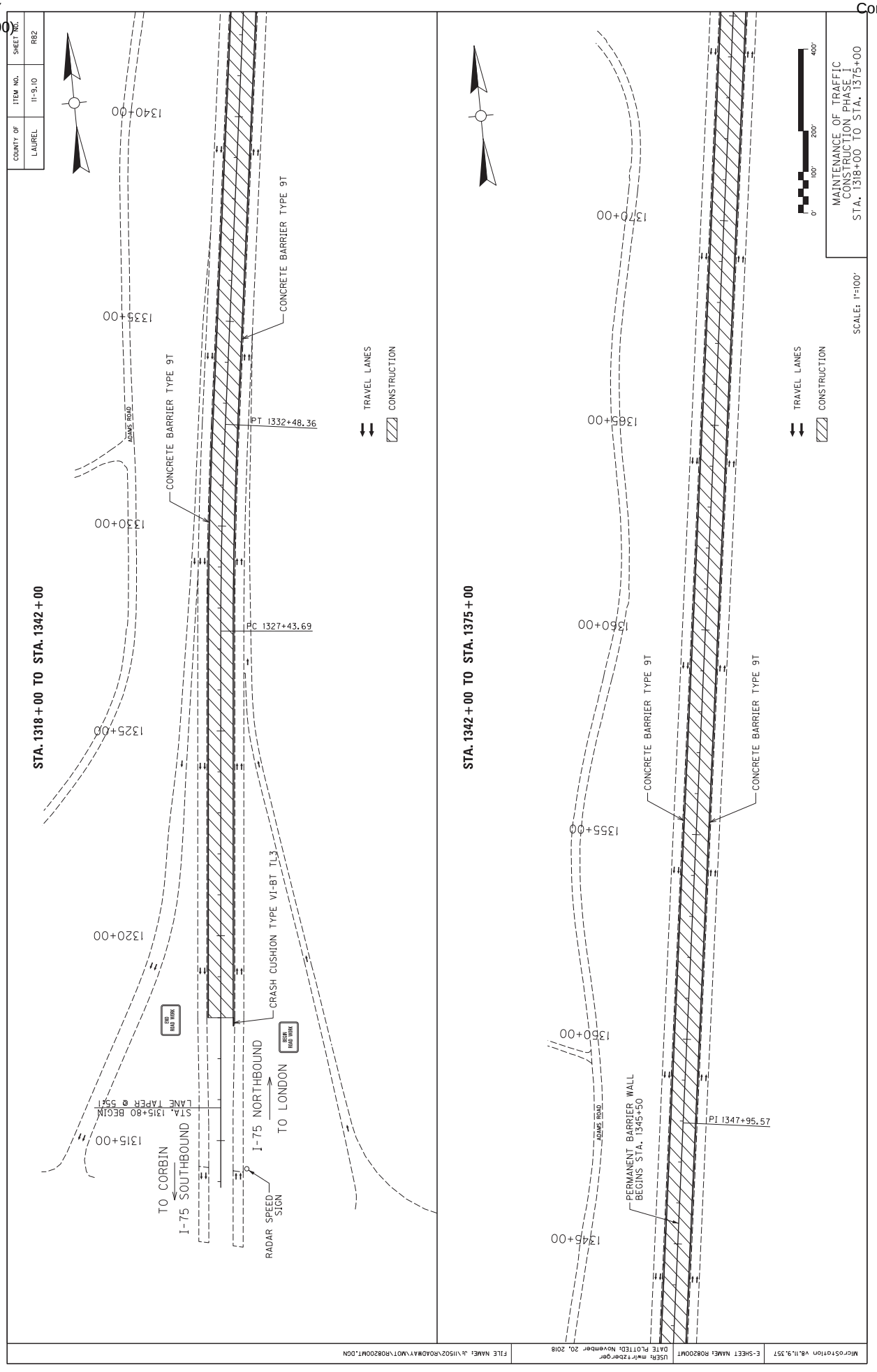
Constructed this Phase:
Complete Ramp C & Ramp D

Phase IV

Project surfacing completed under traffic.
No final surface shall be completed at night.

Maintenance of Traffic

MicroStation v8.11.9.357 | E-SHEET NAME: R0710OMT | USER: mwirtzberger DATE PLOTTED: November 20, 2018 | FILE NAME: w:\11502\ROADWAY\MOT\R0710OMT.DGN


COUNTY OF LAUREL
ITEM NO. 11-9.10
SHEET NO. R82
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE 1
STA. 1318+00 TO STA. 1375+00
SCALE: 1"=100'
STA. 1318+00 TO STA. 1342+00
STA. 1342+00 TO STA. 1375+00
TRAVEL LANES
CONSTRUCTION
CONCRETE BARRIER TYPE 9T
CRASH CUSHION TYPE VI-BT TL3
PC 1327+43.69
PT 1332+48.36
PI 1347+95.57
PERMANENT BARRIER WALL BEGINS STA. 1345+50
ADAMS ROAD
I-75 NORTHBOUND
TO LONDON
TO CORBIN
I-75 SOUTHBOUND
STA. 1315+80 BEGIN LANE TAPER @ 55:1
RADAR SPEED SIGN
END ROAD WORK
BEGIN ROAD WORK
1315+00
1320+00
1325+00
1330+00
1335+00
1340+00
1345+00
1350+00
1355+00
1360+00
1365+00
1370+00
0'
100'
200'
400'
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USER: mwirtzberger
DATE PLOTTED: November 20, 2018
E-SHEET NAME: R08200MT
MicroStation V8.11.9.357

COUNTY OF
LAUREL
ITEM NO.
11-9.10
SHEET NO.
R83
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE 1
STA. 1375+00 TO STA. 1439+00
SCALE: 1"=100'
0'
100'
200'
400'
STA. 1375+00 TO STA. 1407+00
STA. 1407+00 TO STA. 1439+00
LAUREL RIVER
LAUREL RIVER STRUCTURE
PHASE 1 PART WIDTH CONST.
(SEE STRUCTURES PLANS)
PERMANENT BARRIER WALL
ENDS STA. 1398+50
CONCRETE BARRIER TYPE 9T
PT 1394+72.19
PC 1383+06.33
TO CORBIN
I-75 SOUTHBOUND
I-75 NORTHBOUND
TO LONDON
PERMANENT BARRIER WALL
ENDS STA. 1429+50
PERMANENT BARRIER WALL
BEGINS STA. 1411+50
TRAVEL LANES
CONSTRUCTION
1405+00
1400+00
1395+00
1390+00
1385+00
1380+00
1435+00
1430+00
1425+00
1420+00
1415+00
1410+00
MicroStation V8.11.9.357
E-SHEET NAME: R8330OMT
USER: mwirtzberger
DATE PLOTTED: November 20, 2018
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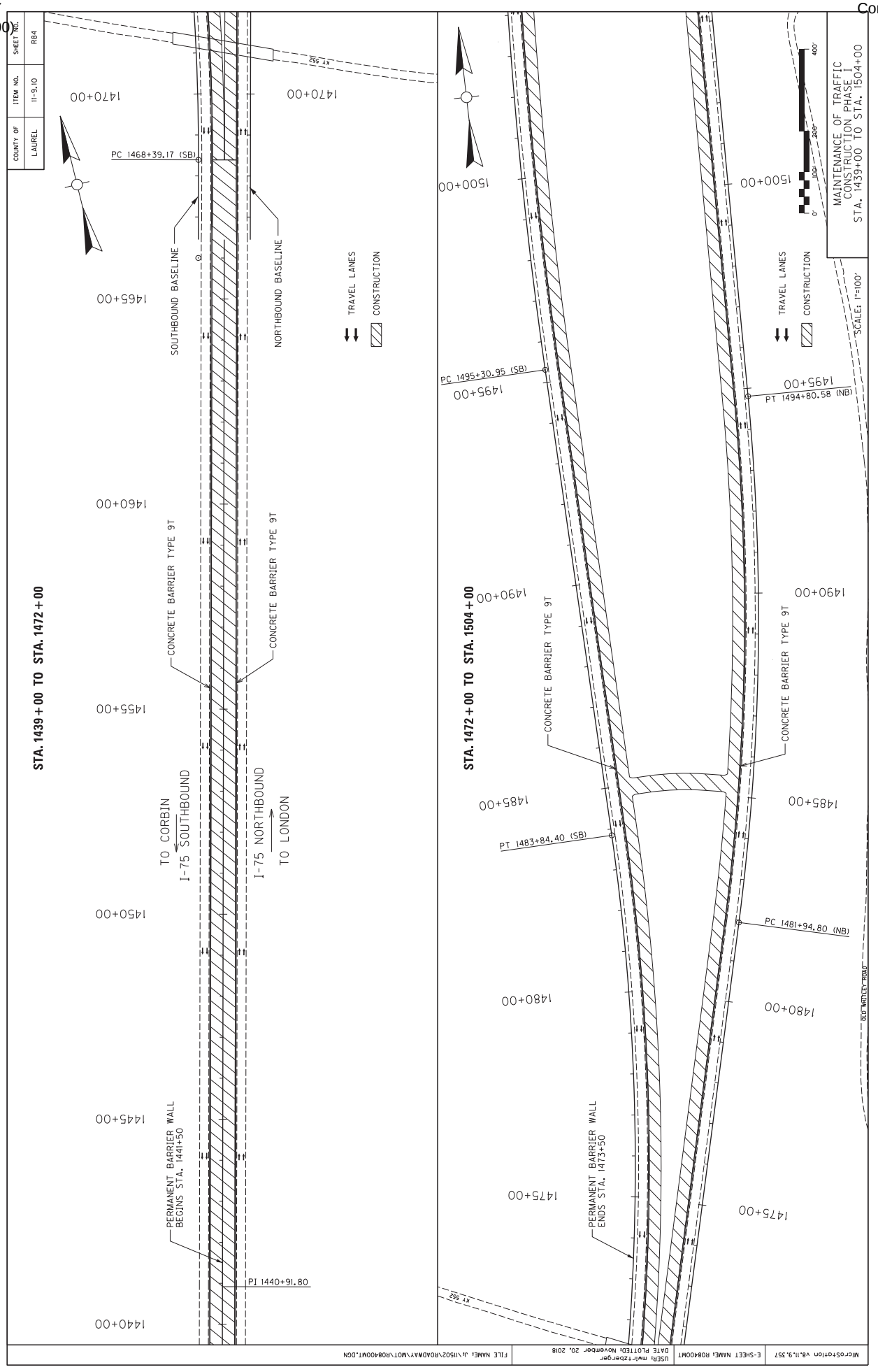
COUNTY OF LAUREL
ITEM NO. 11-9.10
SHEET NO. R84
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE I
STA. 1439+00 TO STA. 1504+00
SCALE: 1"=100'
STA. 1439+00 TO STA. 1472+00
STA. 1472+00 TO STA. 1504+00
SOUTHBOUND BASELINE
NORTHBOUND BASELINE
TRAVEL LANES
CONSTRUCTION
PC 1468+39.17 (SB)
PC 1495+30.95 (SB)
PT 1494+80.58 (NB)
PT 1483+84.40 (SB)
PC 1481+94.80 (NB)
PI 1440+91.80
CONCRETE BARRIER TYPE 9T
PERMANENT BARRIER WALL
BEGINS STA. 1441+50
ENDS STA. 1473+50
TO CORBIN
I-75 SOUTHBOUND
I-75 NORTHBOUND
TO LONDON
OLD WHITLEY ROAD
KY 552
1440+00
1445+00
1450+00
1455+00
1460+00
1465+00
1470+00
1475+00
1480+00
1485+00
1490+00
1495+00
1500+00
0'
100'
200'
400'
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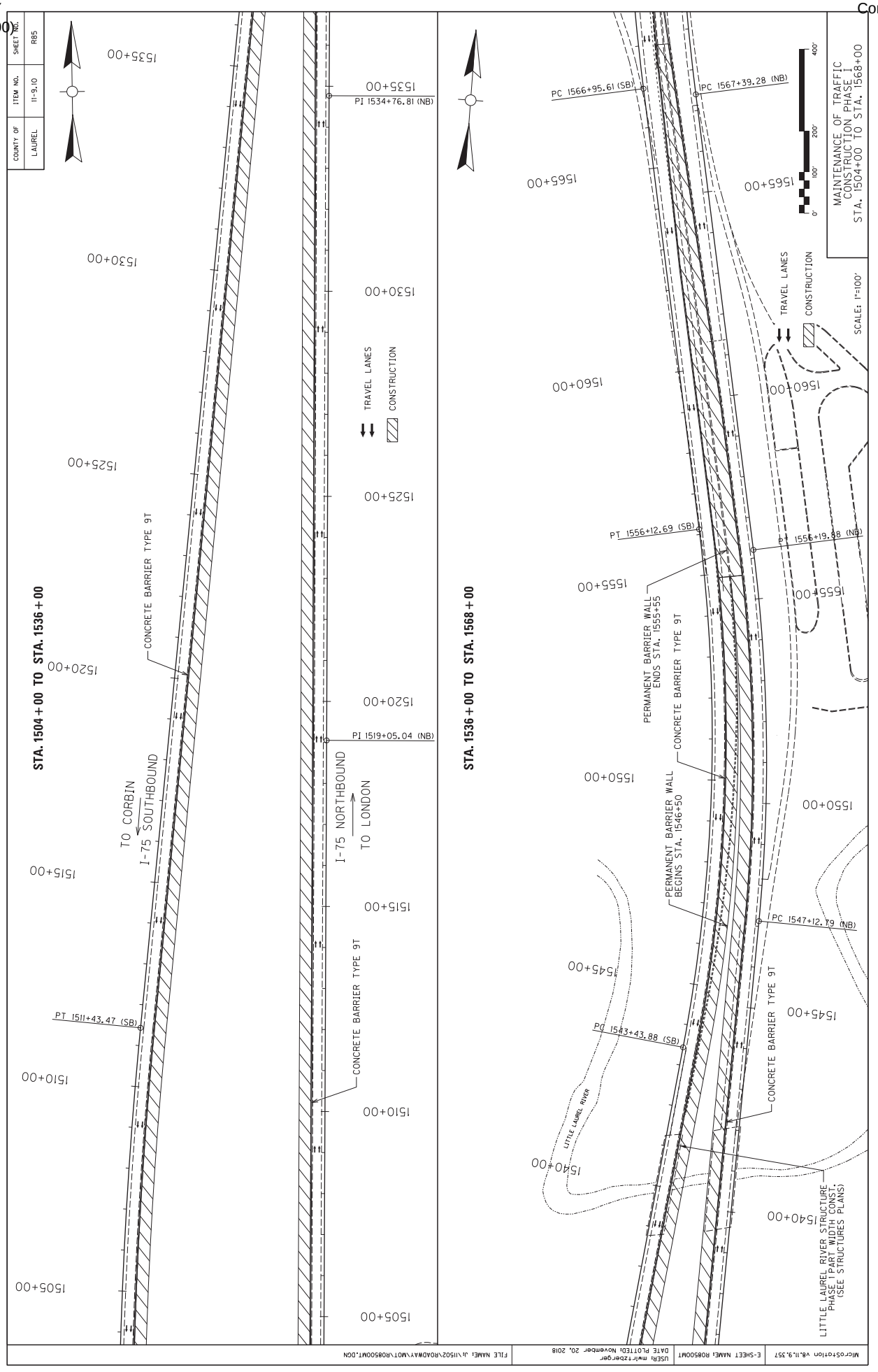
DATE PLOTTED: November 20, 2018
E-SHEET NAME: R084000MT
MicroStation V8.11.9.357


COUNTY OF LAUREL
ITEM NO. 11-9.10
SHEET NO. R85
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE 1
STA. 1504+00 TO STA. 1568+00
SCALE: 1"=100'
STA. 1504+00 TO STA. 1536+00
STA. 1536+00 TO STA. 1568+00
TRAVEL LANES
CONSTRUCTION
CONCRETE BARRIER TYPE 9T
PERMANENT BARRIER WALL
ENDS STA. 1555+55
PERMANENT BARRIER WALL
BEGINS STA. 1546+50
I-75 SOUTHBOUND
TO CORBIN
I-75 NORTHBOUND
TO LONDON
PI 1534+76.81 (NB)
PI 1519+05.04 (NB)
PT 1511+43.47 (SB)
PC 1566+95.61 (SB)
PC 1567+39.28 (NB)
PT 1556+12.69 (SB)
PT 1556+19.88 (NB)
PC 1547+12.79 (NB)
PT 1543+43.88 (SB)
LITTLE LAUREL RIVER
LITTLE LAUREL RIVER STRUCTURE
PHASE I PART WIDTH CONST.
(SEE STRUCTURES PLANS)
1535+00
1530+00
1525+00
1520+00
1515+00
1510+00
1505+00
1565+00
1560+00
1555+00
1550+00
1545+00
1540+00
0'
100'
200'
400'
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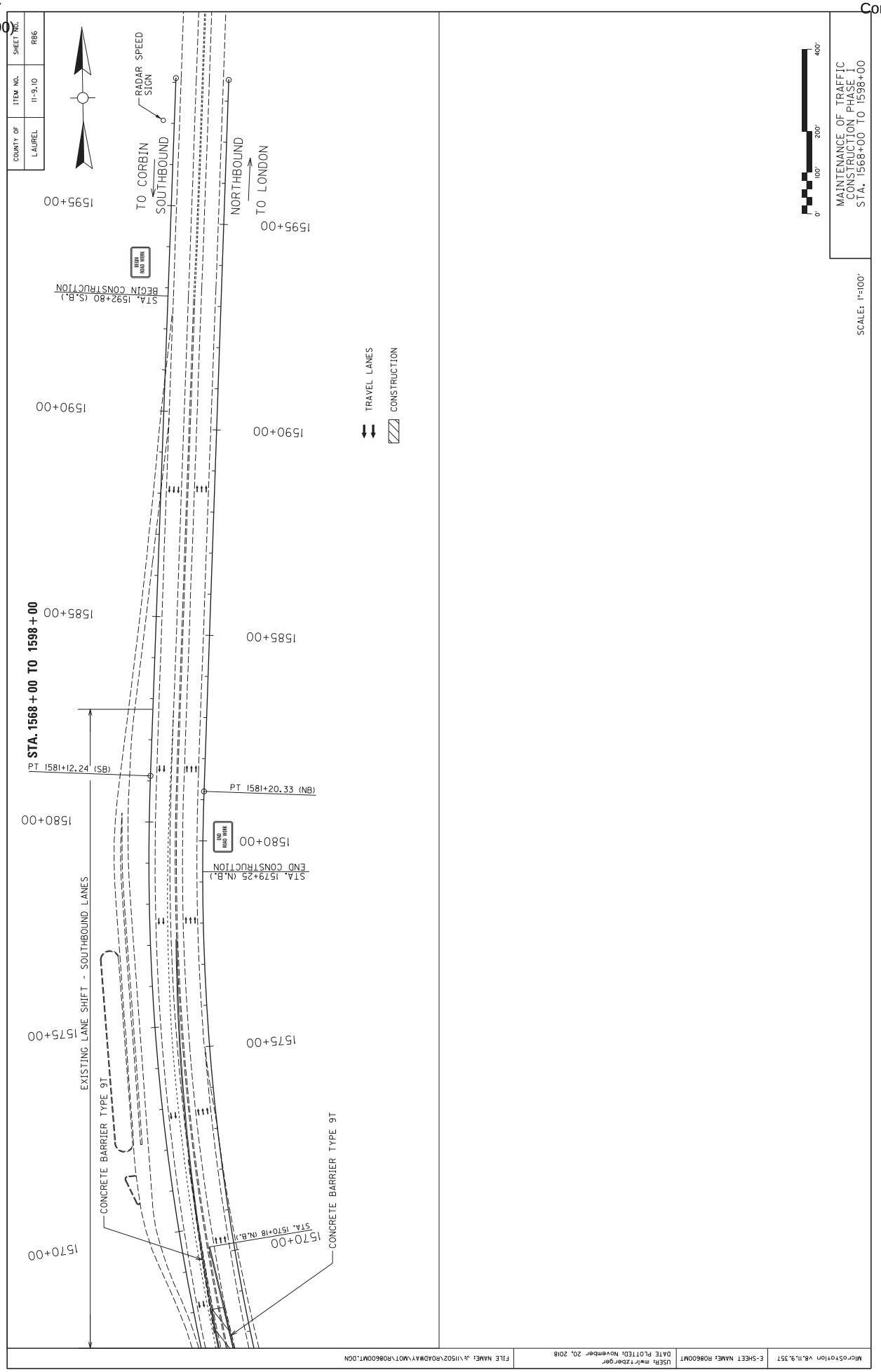
USER: mwirtzberger
DATE PLOTTED: November 20, 2018
E-SHEET NAME: R08500MT
MicroStation V8.11.9.357


COUNTY OF
LAUREL
ITEM NO.
11-9.10
SHEET NO.
R86
RADAR SPEED SIGN
TO CORBIN
SOUTHBOUND
NORTHBOUND
TO LONDON
STA. 1592+80 (S.B.)
BEGIN CONSTRUCTION
BEGIN ROAD WORK
STA. 1579+25 (N.B.)
END CONSTRUCTION
END ROAD WORK
PT 1581+12.24 (SB)
PT 1581+20.33 (NB)
STA. 1570+18 (N.B.)
STA. 1568+00 TO 1598+00
EXISTING LANE SHIFT - SOUTHBOUND LANES
CONCRETE BARRIER TYPE 9T
CONCRETE BARRIER TYPE 9T
TRAVEL LANES
CONSTRUCTION
1595+00
1590+00
1585+00
1580+00
1575+00
1570+00
0'
100'
200'
400'
SCALE: 1"=100'
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE 1
STA. 1568+00 TO 1598+00
MicroStation V8.11.9.357
E-SHEET NAME: R0860OMT
USER: mwirtzberger
DATE PLOTTED: November 20, 2018
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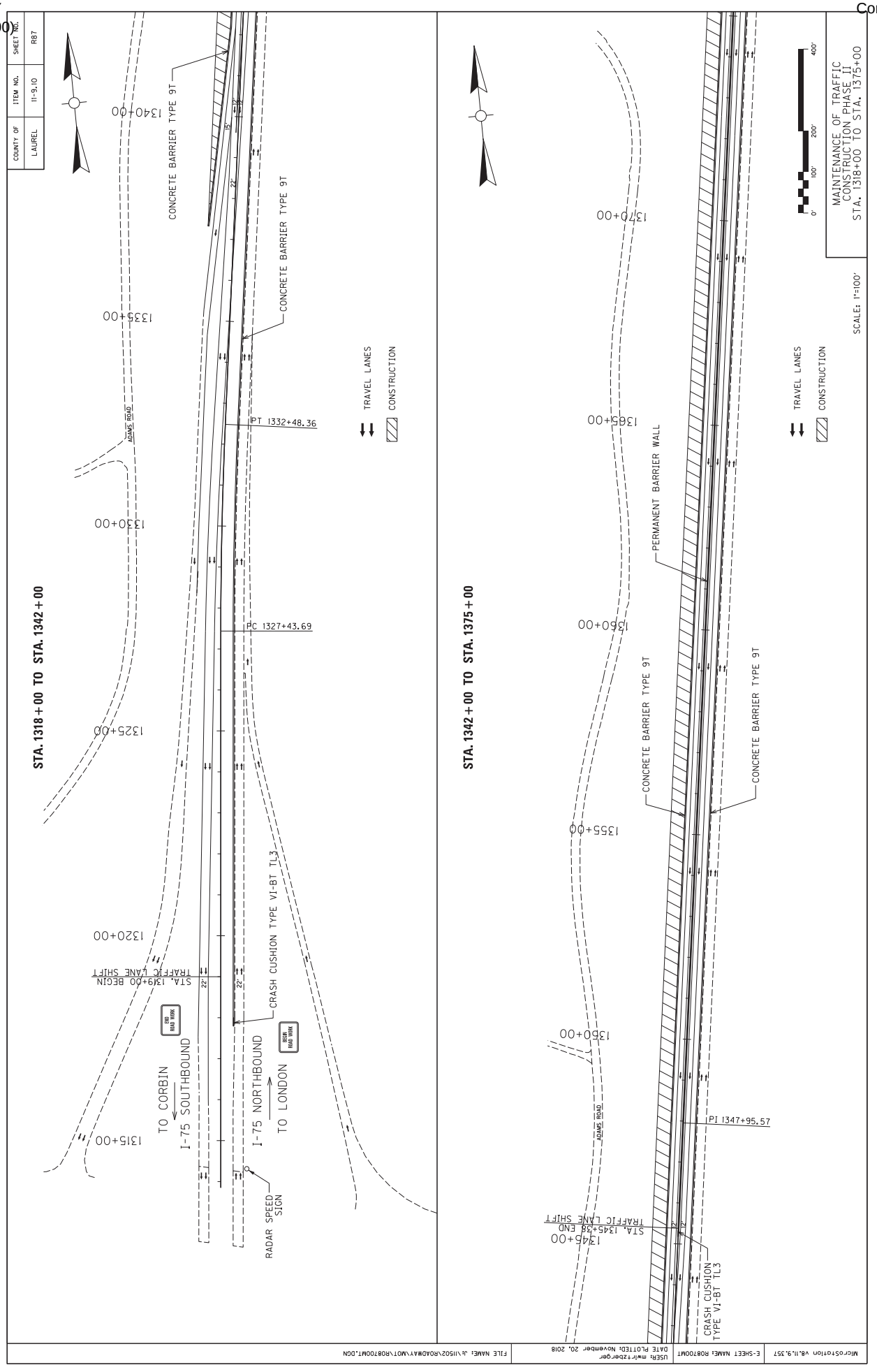
COUNTY OF LAUREL
ITEM NO. 11-9.10
SHEET NO. R87
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE II
STA. 1318+00 TO STA. 1375+00
SCALE: 1"=100'
STA. 1318+00 TO STA. 1342+00
STA. 1342+00 TO STA. 1375+00
CONCRETE BARRIER TYPE 9T
PERMANENT BARRIER WALL
CRASH CUSHION TYPE VI-BT TL3
TRAVEL LANES
CONSTRUCTION
ADAMS ROAD
PT 1332+48.36
PC 1327+43.69
PI 1347+95.57
STA. 1319+00 BEGIN TRAFFIC LANE SHIFT
STA. 1345+38 END TRAFFIC LANE SHIFT
RADAR SPEED SIGN
TO CORBIN
I-75 SOUTHBOUND
I-75 NORTHBOUND
TO LONDON
END ROAD WORK
BEGIN ROAD WORK
1315+00
1320+00
1325+00
1330+00
1335+00
1340+00
1345+00
1350+00
1355+00
1360+00
1365+00
1370+00
0'
100'
200'
400'
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USER: mwirtzberger
DATE PLOTTED: November 20, 2018
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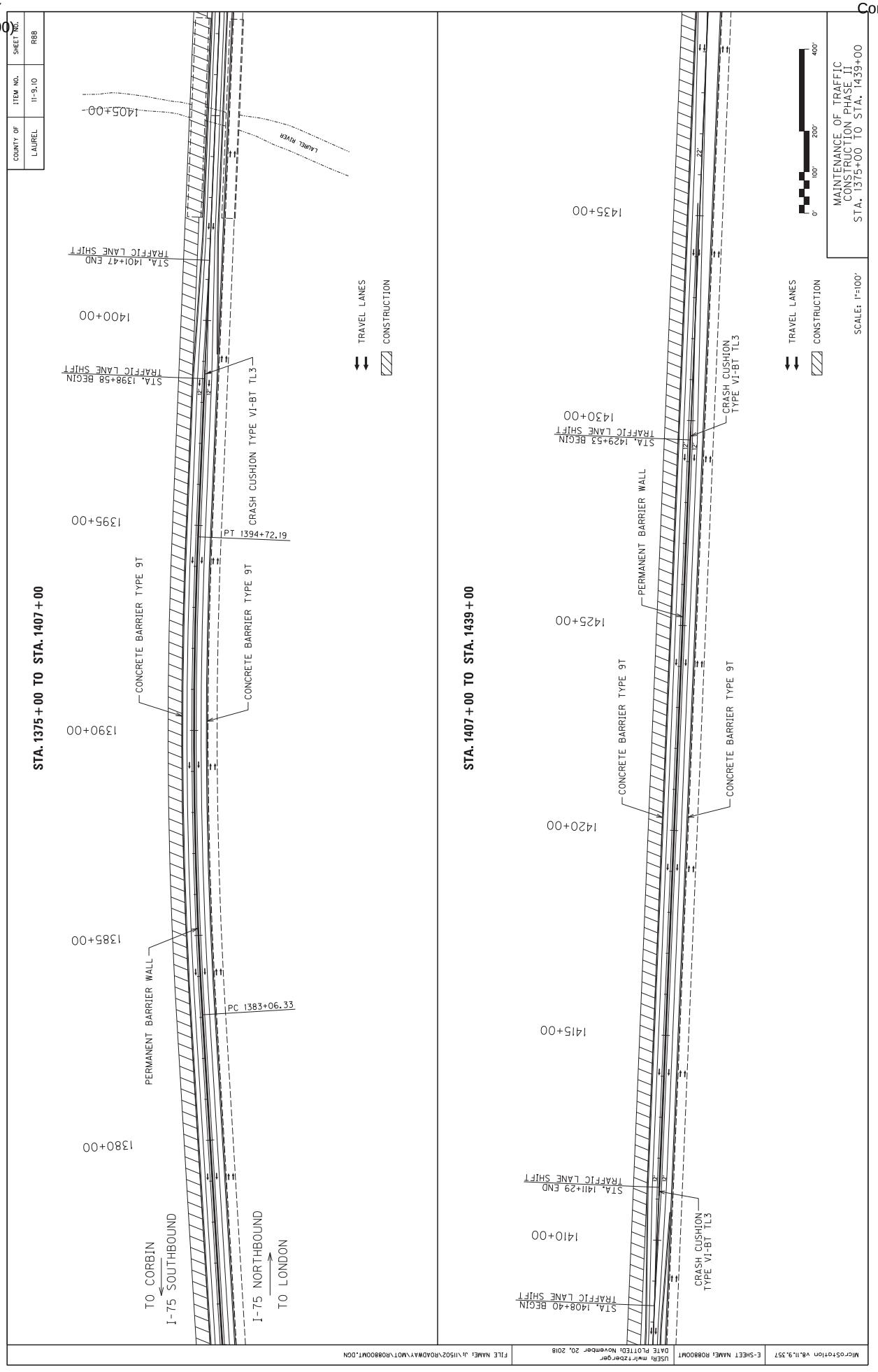
MicroStation V8.11.9.357


COUNTY OF LAUREL
ITEM NO. 11-9.10
SHEET NO. R88
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE II
STA. 1375+00 TO STA. 1439+00
SCALE: 1"=100'
0' 100' 200' 400'
TRAVEL LANES
CONSTRUCTION
STA. 1375+00 TO STA. 1407+00
STA. 1407+00 TO STA. 1439+00
TO CORBIN
I-75 SOUTHBOUND
I-75 NORTHBOUND
TO LONDON
LAUREL RIVER
STA. 1405+00
STA. 1401+47 END TRAFFIC LANE SHIFT
STA. 1398+58 BEGIN TRAFFIC LANE SHIFT
CRASH CUSHION TYPE VI-BT TL3
PT 1394+72.19
CONCRETE BARRIER TYPE 9T
PERMANENT BARRIER WALL
PC 1383+06.33
1380+00
1385+00
1390+00
1395+00
1400+00
1405+00
STA. 1429+53 BEGIN TRAFFIC LANE SHIFT
1425+00
1430+00
1435+00
STA. 1411+29 END TRAFFIC LANE SHIFT
STA. 1408+40 BEGIN TRAFFIC LANE SHIFT
1410+00
1415+00
1420+00
MicroStation V8.11.9.357
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USER: mwirtzberger
DATE PLOTTED: November 20, 2018
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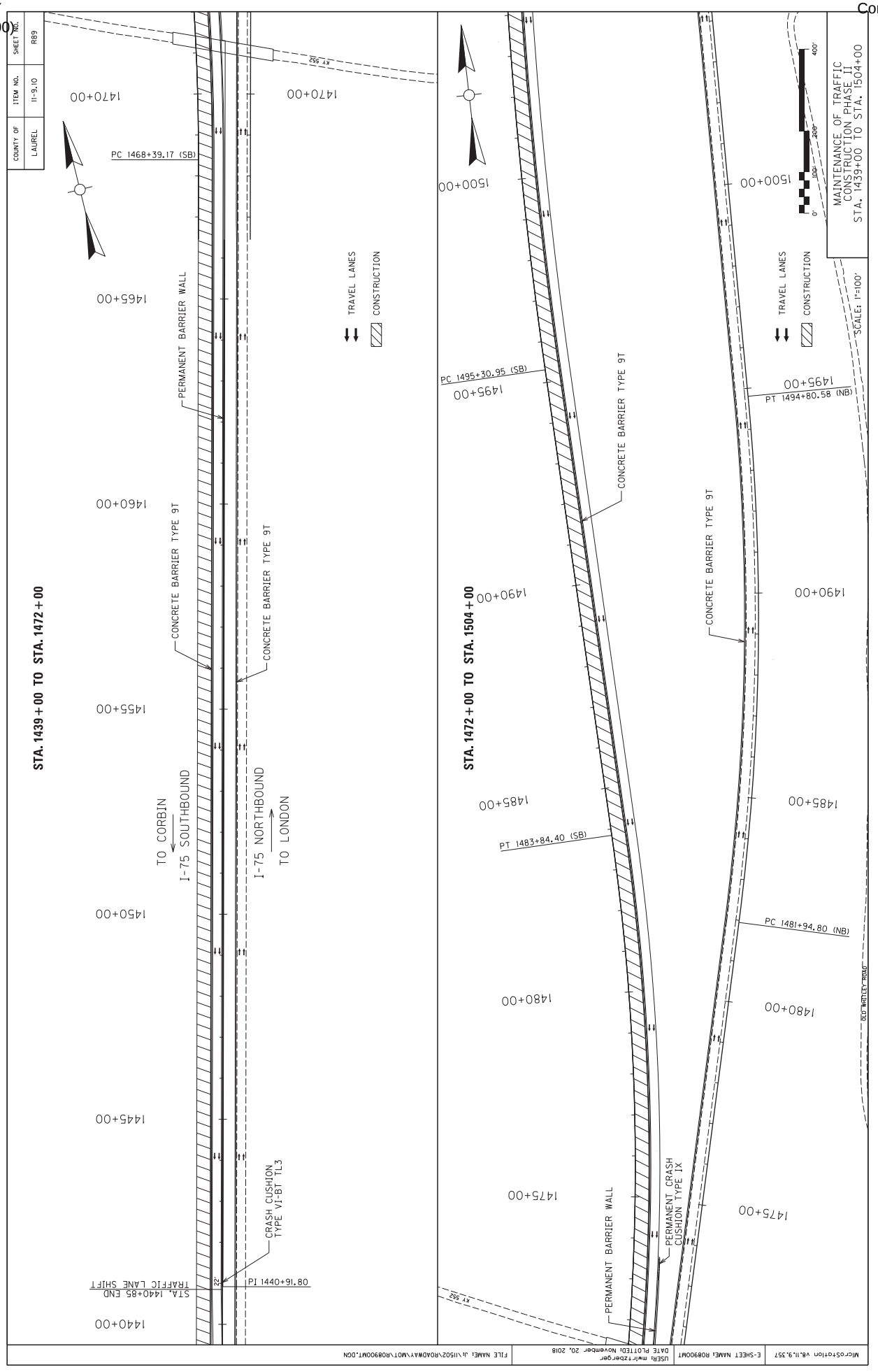
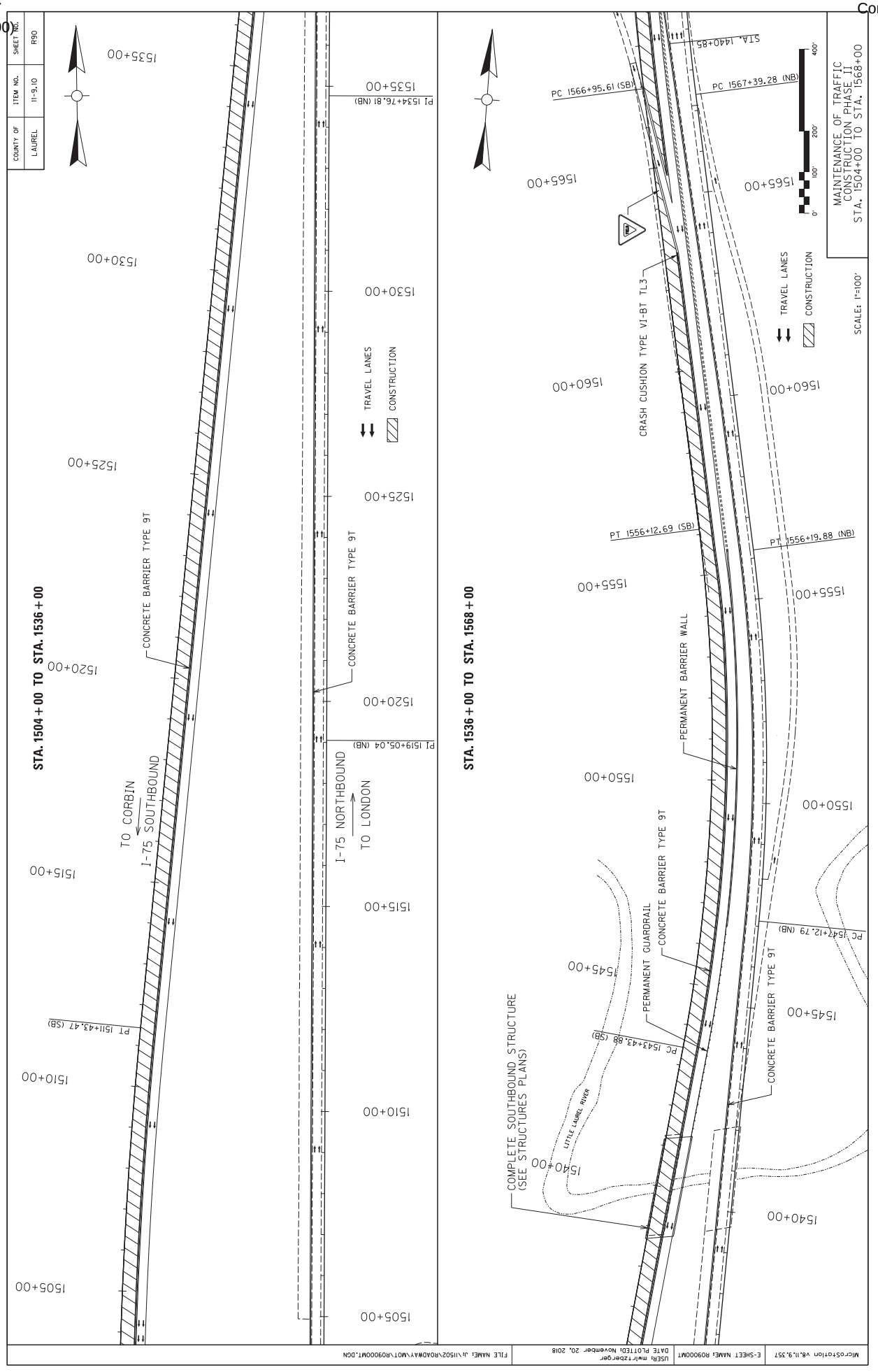

COUNTY OF LAUREL
ITEM NO. 11-9.10
SHEET NO. R89
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE II
STA. 1439+00 TO STA. 1504+00
SCALE: 1"=100'
STA. 1439+00 TO STA. 1472+00
STA. 1472+00 TO STA. 1504+00
TRAVEL LANES
CONSTRUCTION
PERMANENT BARRIER WALL
CONCRETE BARRIER TYPE 9T
PC 1468+39.17 (SB)
PC 1495+30.95 (SB)
PT 1494+80.58 (NB)
PT 1483+84.40 (SB)
PC 1481+94.80 (NB)
TO CORBIN
I-75 SOUTHBOUND
I-75 NORTHBOUND
TO LONDON
CRASH CUSHION
TYPE VI-BT TL3
PERMANENT CRASH
CUSHION TYPE 1X
STA. 1440+85 END
TRAFFIC LANE SHIFT
PI 1440+91.80
KY 552
OLD WHITLEY ROAD
1440+00
1445+00
1450+00
1455+00
1460+00
1465+00
1470+00
1475+00
1480+00
1485+00
1490+00
1495+00
1500+00


COUNTY OF LAUREL
ITEM NO. 11-9.10
SHEET NO. R90
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE II
STA. 1504+00 TO STA. 1568+00
SCALE: 1"=100'
STA. 1504+00 TO STA. 1536+00
STA. 1536+00 TO STA. 1568+00
TRAVEL LANES
CONSTRUCTION
CONCRETE BARRIER TYPE 9T
CRASH CUSHION TYPE VI-BT TL3
PERMANENT BARRIER WALL
PERMANENT GUARDRAIL
COMPLETE SOUTHBOUND STRUCTURE (SEE STRUCTURES PLANS)
I-75 SOUTHBOUND
TO CORBIN
I-75 NORTHBOUND
TO LONDON
LITTLE LAUREL RIVER
PC 1566+95.61 (SB)
PC 1567+39.28 (NB)
PT 1556+12.69 (SB)
PT 1556+19.88 (NB)
PC 1543+43.88 (SB)
PC 1547+12.79 (NB)
PT 1511+43.47 (SB)
PT 1519+05.04 (NB)
PI 1534+76.81 (NB)
STA. 1440+85
1535+00
1530+00
1525+00
1520+00
1515+00
1510+00
1505+00
1565+00
1560+00
1555+00
1550+00
1545+00
1540+00
MicroStation V8.11.9.357
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USER: mwirtzberger
DATE PLOTTED: November 20, 2018
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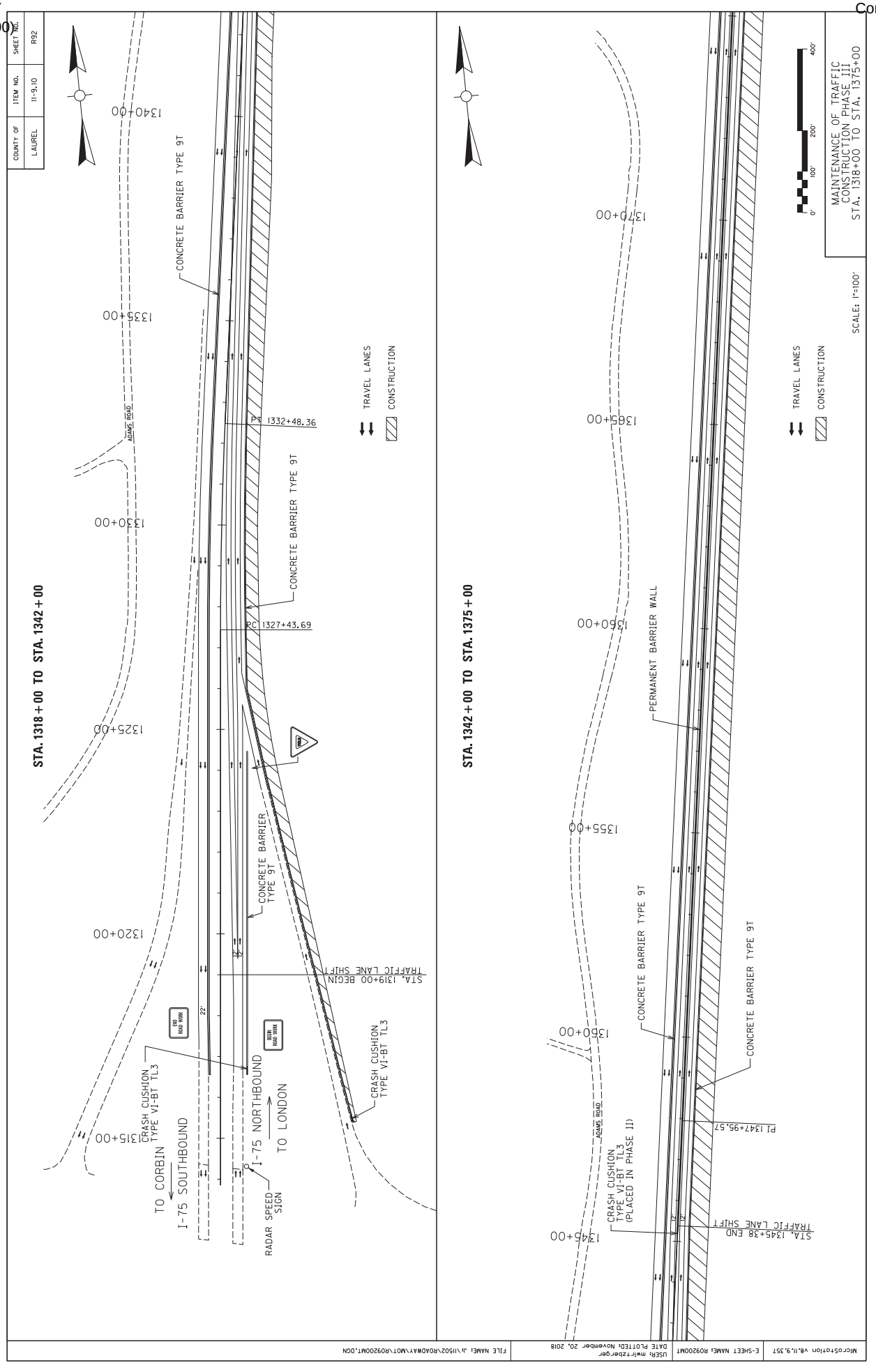
COUNTY OF LAUREL
ITEM NO. 11-9.10
SHEET NO. R92
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE III
STA. 1318+00 TO STA. 1375+00
SCALE: 1"=100'
STA. 1318+00 TO STA. 1342+00
STA. 1342+00 TO STA. 1375+00
TRAVEL LANES
CONSTRUCTION
CONCRETE BARRIER TYPE 9T
PC 1327+43.69
PT 1332+48.36
CONCRETE BARRIER TYPE 9T
CONCRETE BARRIER TYPE 9T
STA. 1319+00 BEGIN TRAFFIC LANE SHIFT
CRASH CUSHION TYPE VI-BT TL3
CRASH CUSHION TYPE VI-BT TL3
TO CORBIN
I-75 SOUTHBOUND
I-75 NORTHBOUND
TO LONDON
RADAR SPEED SIGN
ADAMS ROAD
PERMANENT BARRIER WALL
CONCRETE BARRIER TYPE 9T
CONCRETE BARRIER TYPE 9T
P1 1347+95.57
CRASH CUSHION TYPE VI-BT TL3 (PLACED IN PHASE II)
STA. 1345+38 END TRAFFIC LANE SHIFT
1315+00
1320+00
1325+00
1330+00
1335+00
1340+00
1345+00
1350+00
1355+00
1360+00
1365+00
1370+00
FILE NAME: u:\11502\ROADWAY\MOT\R09200MT.DGN
USER: mwirtzberger
DATE PLOTTED: November 20, 2018
E-SHEET NAME: R09200MT
MicroStation V8.11.9.357

COUNTY OF
LAUREL
ITEM NO.
11-9.10
SHEET NO.
R91
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE II
STA. 1568+00 TO 1598+00
SCALE: 1"=100'
0'
100'
200'
400'
RADAR SPEED SIGN
TO CORBIN
I-75 SOUTHBOUND
I-75 NORTHBOUND
TO LONDON
BEGIN ROAD WORK
STA. 1592+80 (S.B.)
BEGIN CONSTRUCTION
TRAVEL LANES
CONSTRUCTION
CRASH CUSHION TYPE VI-BT TL3
STA. 1568+00 TO 1598+00
PT 1581+12.24 (SB)
PT 1581+20.33 (NB)
END ROAD WORK
STA. 1579+25 (N.B.)
END CONSTRUCTION
CONCRETE BARRIER TYPE 9T
STA. 1570+18 (N.B.)
CONCRETE BARRIER TYPE 9T
1595+00
1590+00
1585+00
1580+00
1575+00
1570+00
MicroStation V8.11.9.357
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USER: mwirtzberger
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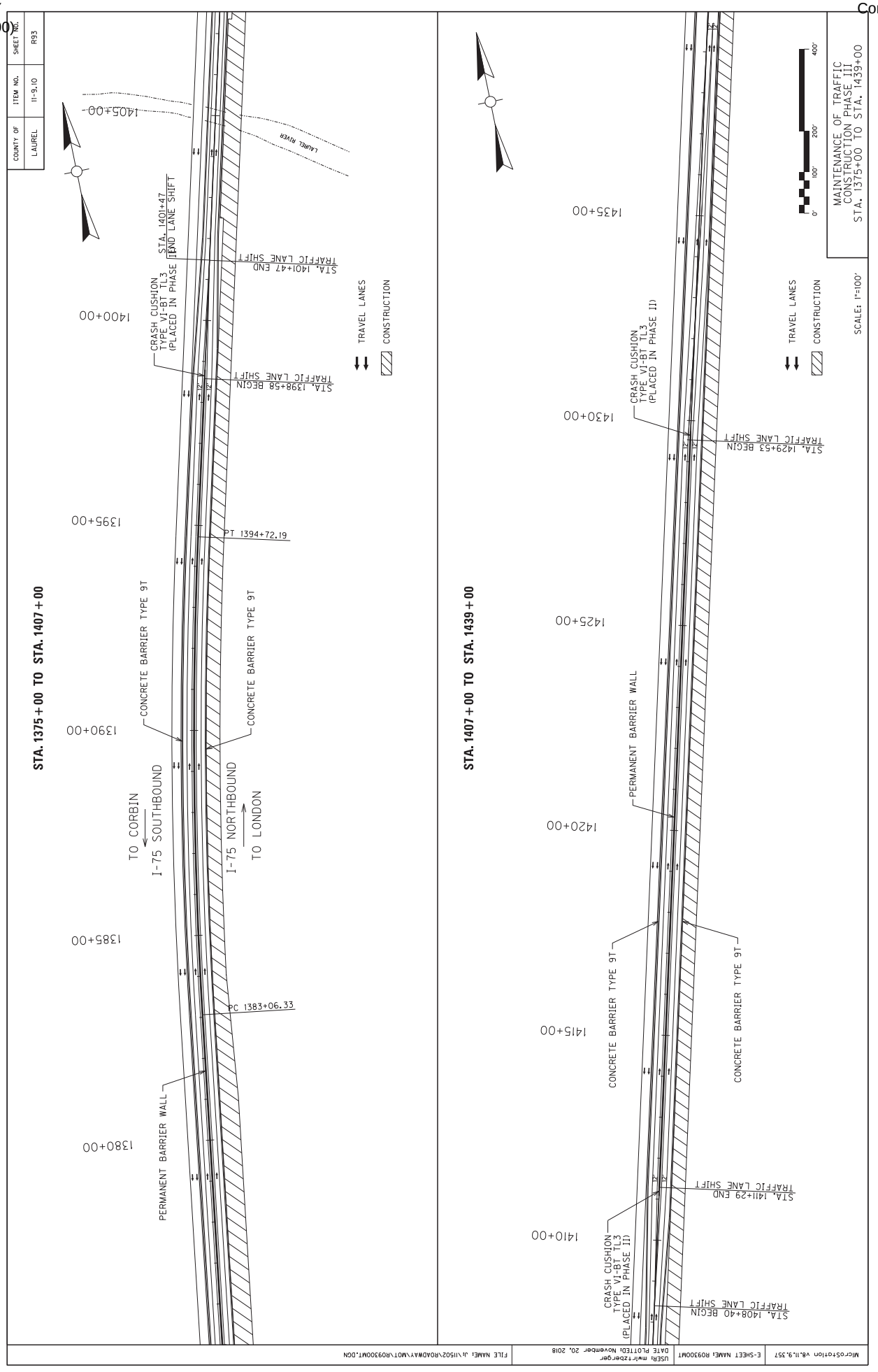
COUNTY OF LAUREL
ITEM NO. 11-9.10
SHEET NO. R93
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE III
STA. 1375+00 TO STA. 1439+00
SCALE: 1"=100'
0' 100' 200' 400'
TRAVEL LANES
CONSTRUCTION
STA. 1375+00 TO STA. 1407+00
STA. 1407+00 TO STA. 1439+00
1405+00
1400+00
1395+00
1390+00
1385+00
1380+00
1435+00
1430+00
1425+00
1420+00
1415+00
1410+00
LAUREL RIVER
TO CORBIN
I-75 SOUTHBOUND
I-75 NORTHBOUND
TO LONDON
CONCRETE BARRIER TYPE 9T
PERMANENT BARRIER WALL
PC 1383+06.33
PT 1394+72.19
CRASH CUSHION
TYPE V1-BT TL3
(PLACED IN PHASE II)
STA. 1398+58 BEGIN
TRAFFIC LANE SHIFT
STA. 1401+47 END
TRAFFIC LANE SHIFT
STA. 1401+47
END LANE SHIFT
STA. 1429+53 BEGIN
TRAFFIC LANE SHIFT
STA. 1411+29 END
TRAFFIC LANE SHIFT
STA. 1408+40 BEGIN
TRAFFIC LANE SHIFT
12'
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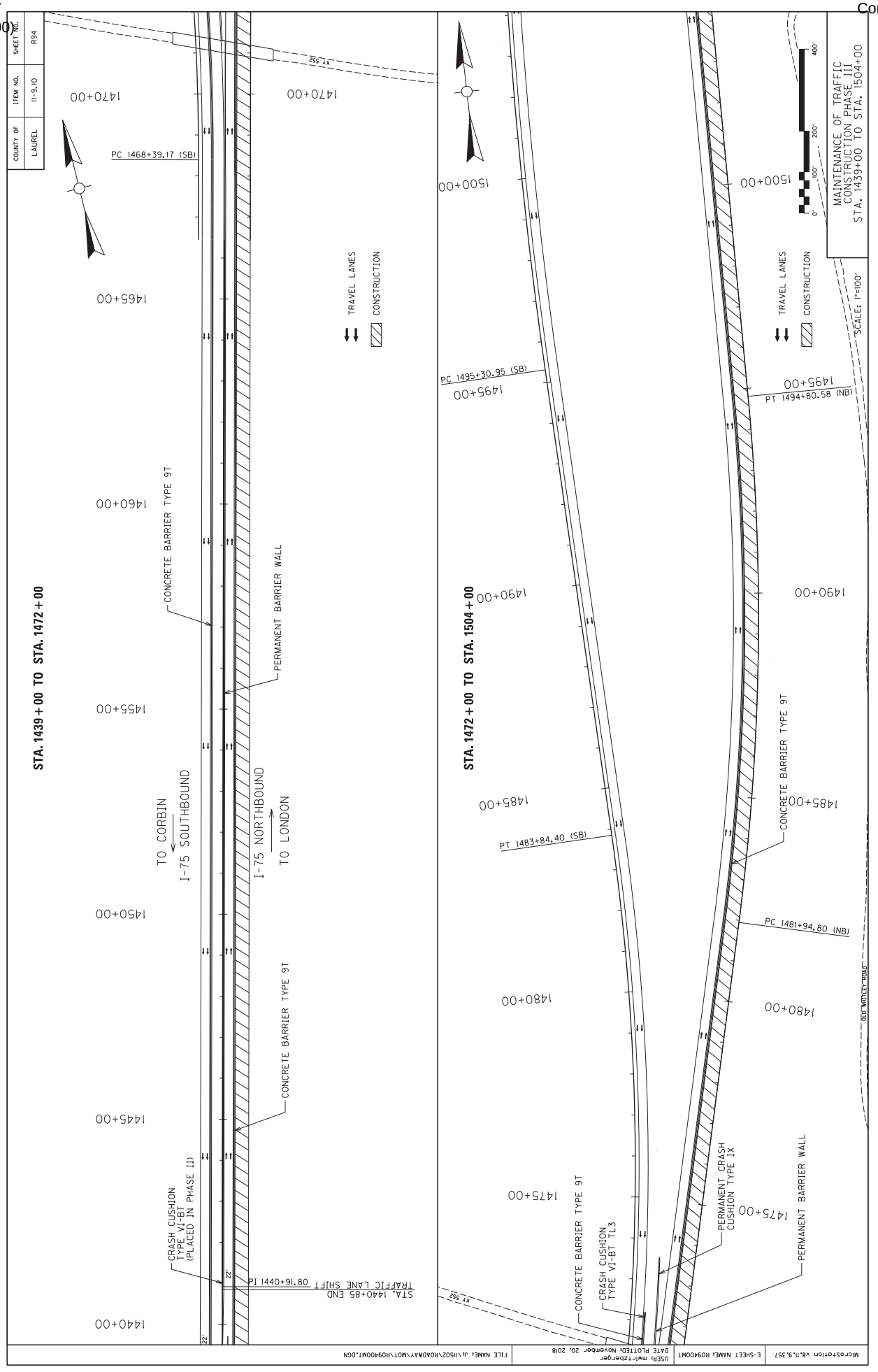
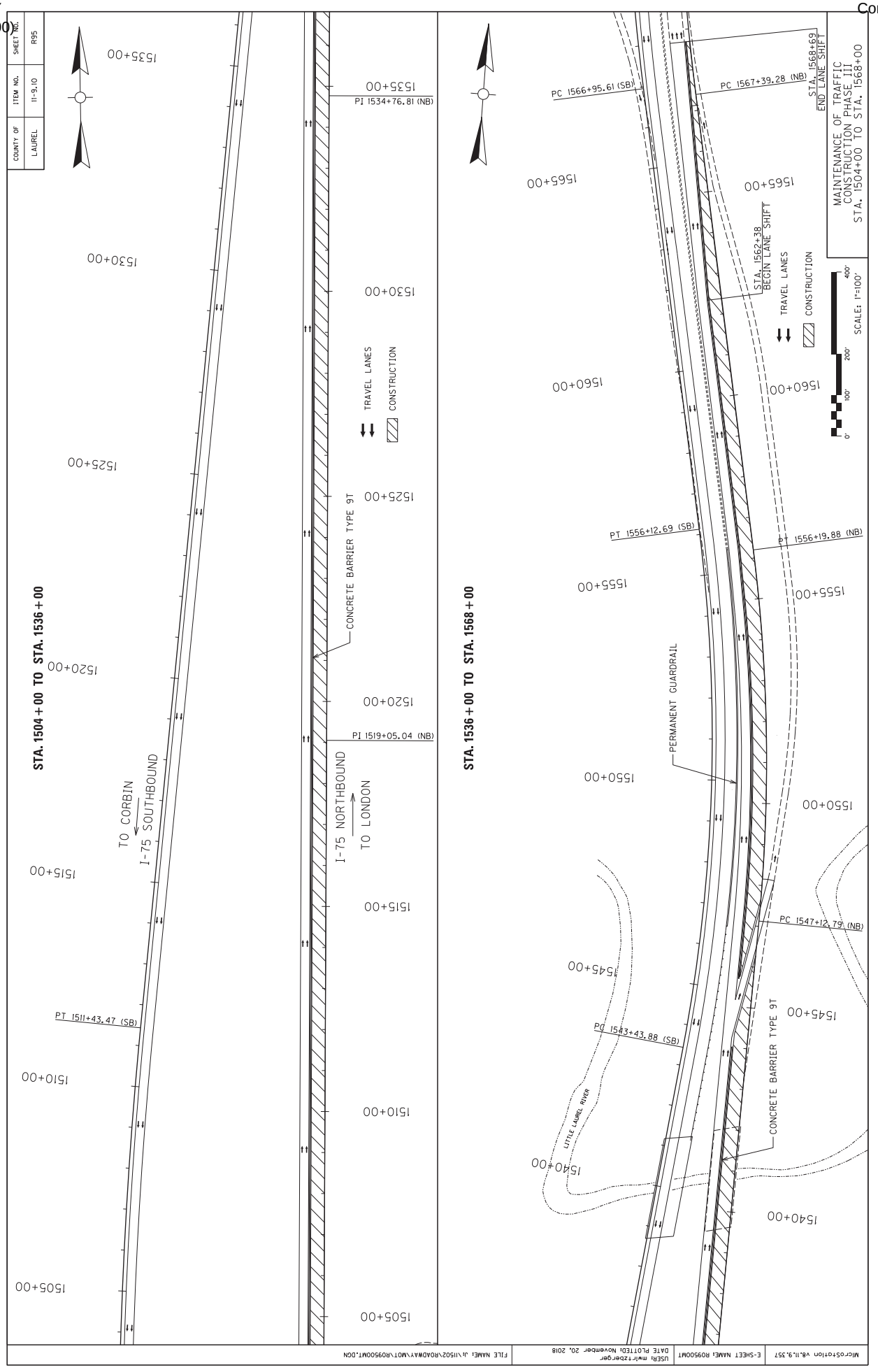
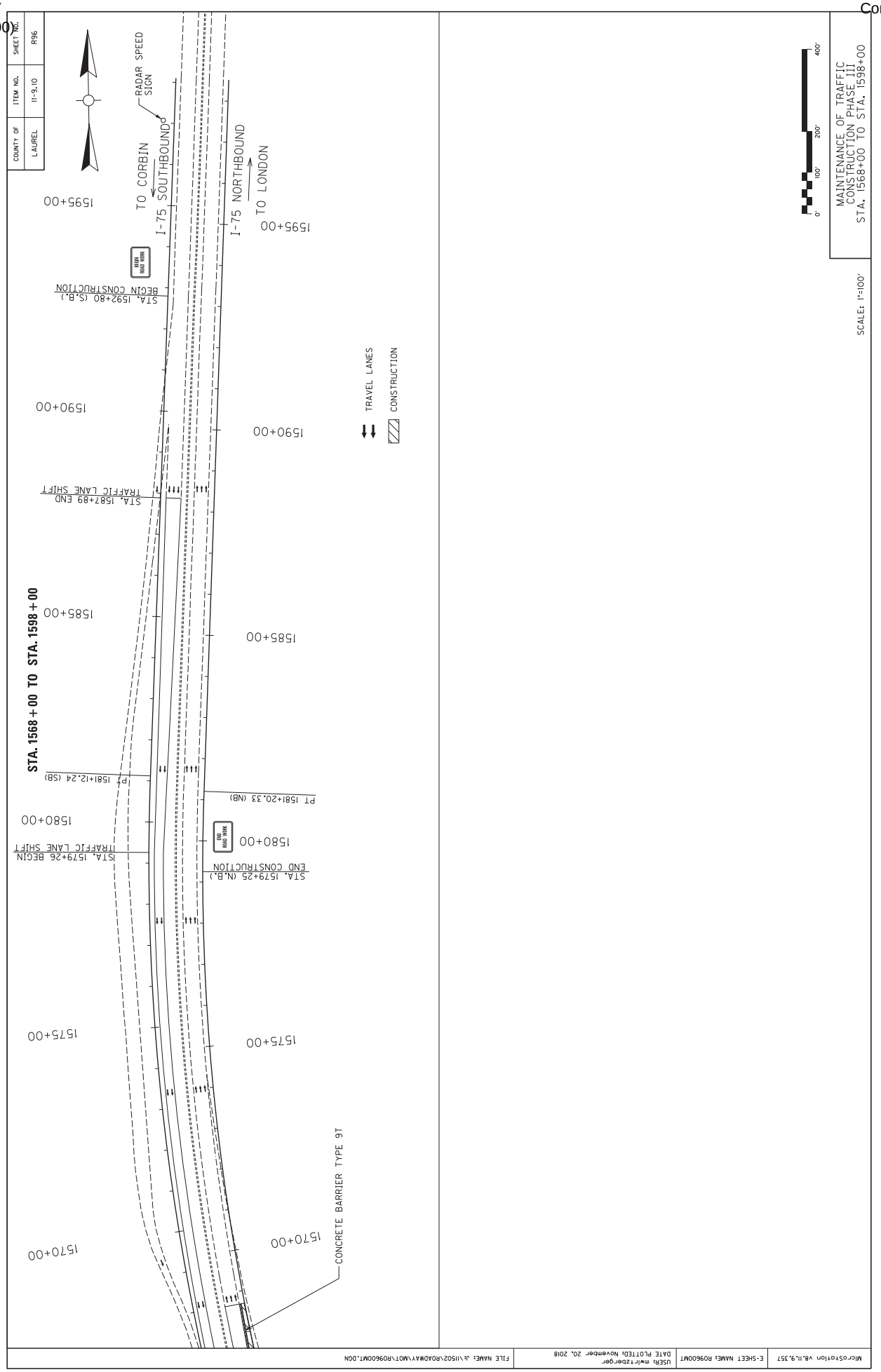
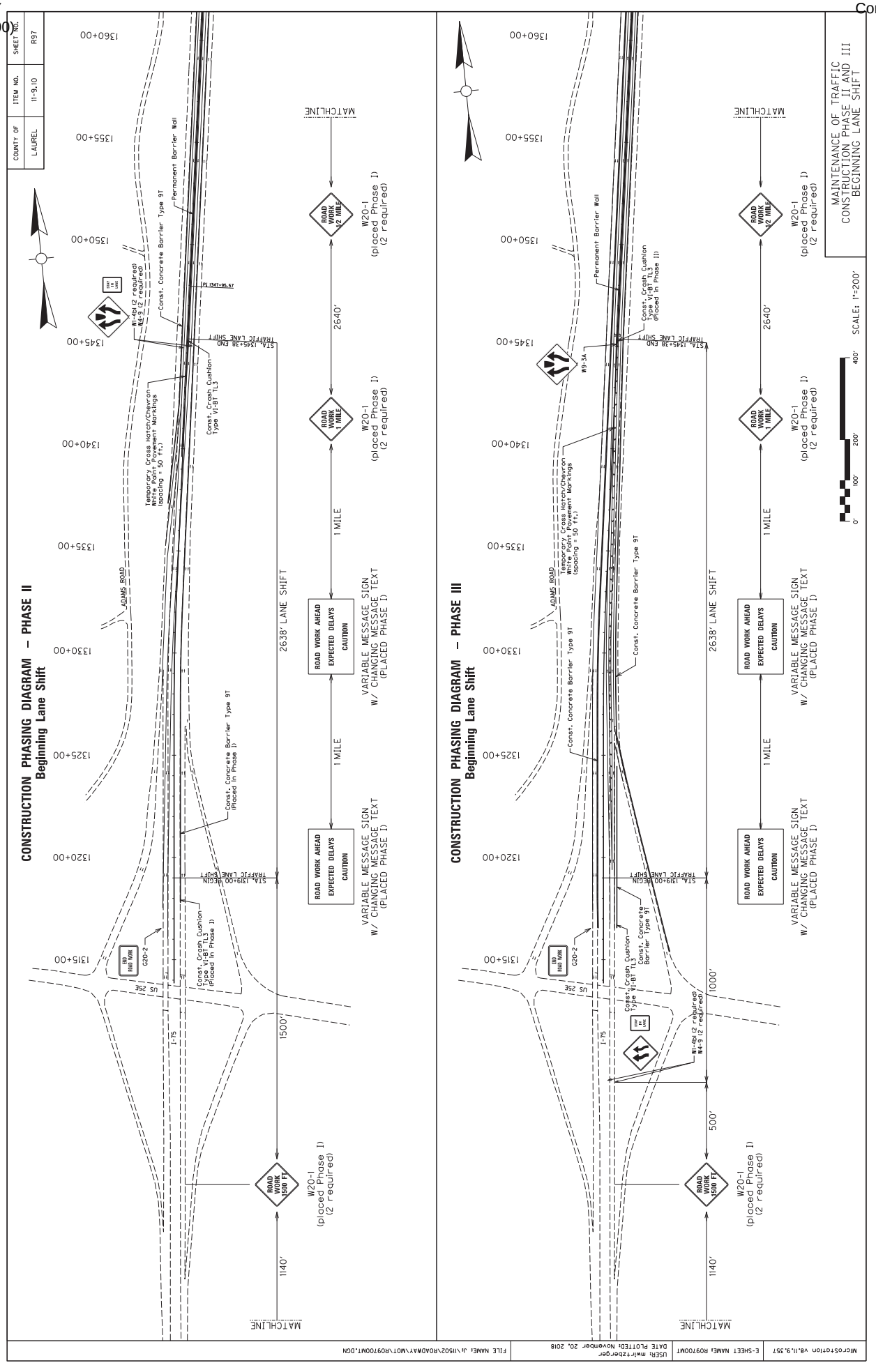
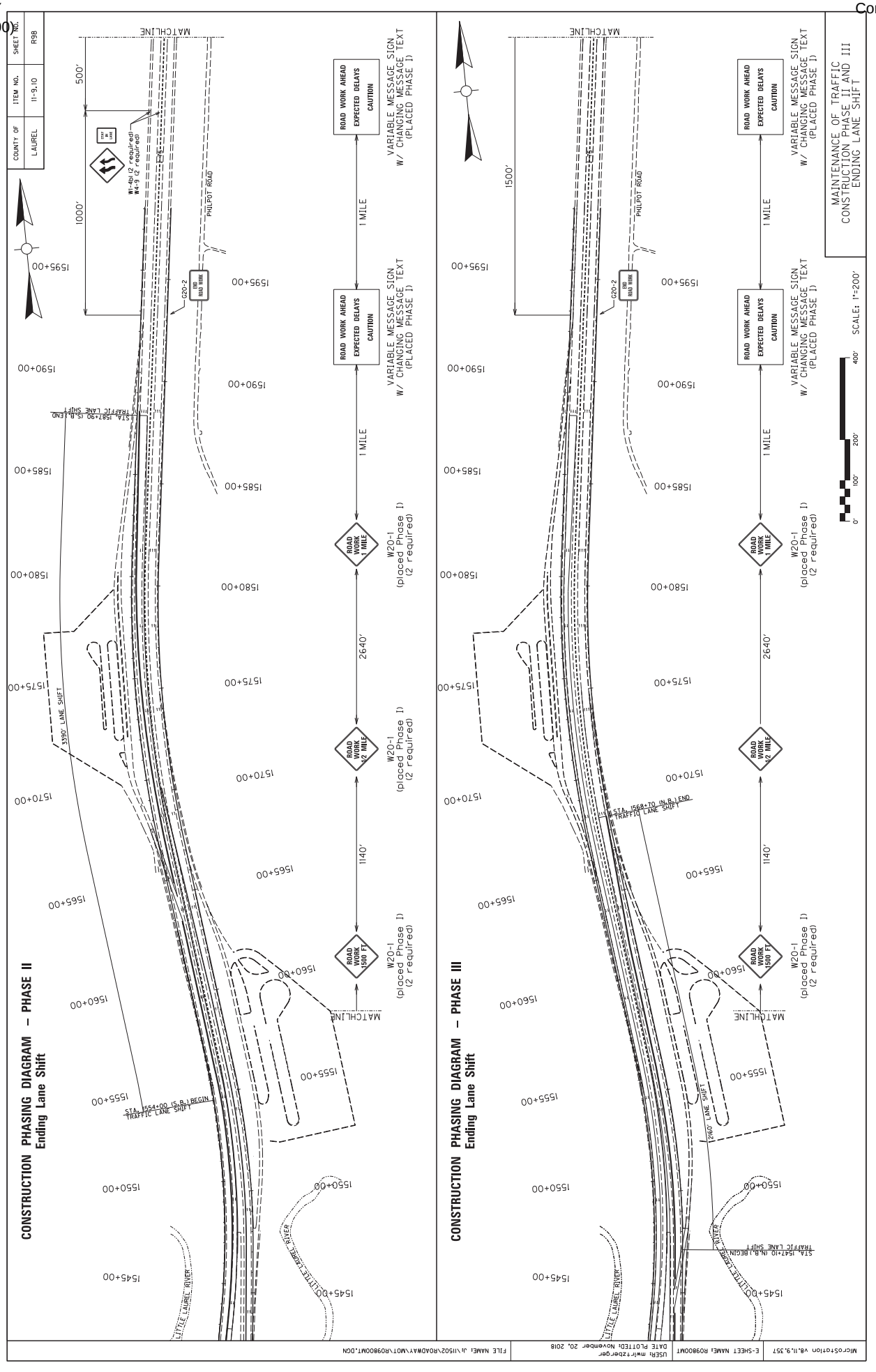
DATE PLOTTED: November 20, 2018
USER: mwirtzberger
E-SHEET NAME: R093000MT
MicroStation V8.11.9.357


COUNTY OF LAUREL
ITEM NO. 11-9.10
SHEET NO. R94
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE III
STA. 1439+00 TO STA. 1504+00
SCALE: 1"=100'
STA. 1439+00 TO STA. 1472+00
STA. 1472+00 TO STA. 1504+00
TRAVEL LANES
CONSTRUCTION
PC 1468+39.17 (SB)
PC 1495+30.95 (SB)
PT 1494+80.58 (NB)
PT 1483+84.40 (SB)
PC 1481+94.80 (NB)
CONCRETE BARRIER TYPE 9T
PERMANENT BARRIER WALL
I-75 SOUTHBOUND
TO CORBIN
I-75 NORTHBOUND
TO LONDON
CRASH CUSHION TYPE V1-BT (PLACED IN PHASE II)
STA. 1440+85 END TRAFFIC LANE SHIFT PI 08+16.0 1
PERMANENT CRASH CUSHION TYPE 1X
CRASH CUSHION TYPE V1-BT TL3
OLD WHITLEY ROAD
1440+00
1445+00
1450+00
1455+00
1460+00
1465+00
1470+00
1475+00
1480+00
1485+00
1490+00
1495+00
1500+00
22'
0'
100'
200'
400'
MicroStation V8.11.9.357
E-SHEET NAME: R9400MT
USER: mwirtzberger
DATE PLOTTED: November 20, 2018
FILE NAME: J:\1502\ROADWAY\MOT\R9400MT.DGN


COUNTY OF LAUREL
ITEM NO. 11-9.10
SHEET NO. R95
STA. 1504+00 TO STA. 1536+00
STA. 1536+00 TO STA. 1568+00
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE III
STA. 1504+00 TO STA. 1568+00
TO CORBIN
I-75 SOUTHBOUND
I-75 NORTHBOUND
TO LONDON
TRAVEL LANES
CONSTRUCTION
CONCRETE BARRIER TYPE 9T
PERMANENT GUARDRAIL
PI 1534+76.81 (NB)
PI 1519+05.04 (NB)
PT 1511+43.47 (SB)
PC 1566+95.61 (SB)
PC 1567+39.28 (NB)
STA. 1568+69
END LANE SHIFT
STA. 1562+38
BEGIN LANE SHIFT
PT 1556+12.69 (SB)
PT 1556+19.88 (NB)
PC 1547+12.79 (NB)
PC 1543+43.88 (SB)
LITTLE LAUREL RIVER
SCALE: 1"=100'
1535+00
1530+00
1525+00
1520+00
1515+00
1510+00
1505+00
1565+00
1560+00
1555+00
1550+00
1545+00
1540+00
FILE NAME: J:\1502\ROADWAY\MOT\R09500MT.DGN
USER: mwirtzberger
DATE PLOTTED: November 20, 2018
E-SHEET NAME: R09500MT
MicroStation V8.11.9.357


COUNTY OF
LAUREL
ITEM NO.
11-9.10
SHEET NO.
R96
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE III
STA. 1568+00 TO STA. 1598+00
SCALE: 1"=100'
0'
100'
200'
400'
RADAR SPEED SIGN
TO CORBIN
I-75 SOUTHBOUND
I-75 NORTHBOUND
TO LONDON
BEGIN ROAD WORK
STA. 1592+80 (S.B.)
BEGIN CONSTRUCTION
END ROAD WORK
STA. 1587+89 END
TRAFFIC LANE SHIFT
STA. 1579+26 BEGIN
TRAFFIC LANE SHIFT
PT 1581+12.24 (SB)
PT 1581+20.33 (NB)
STA. 1579+25 (N.B.)
END CONSTRUCTION
STA. 1568 + 00 TO STA. 1598 + 00
TRAVEL LANES
CONSTRUCTION
CONCRETE BARRIER TYPE 9T
1595+00
1590+00
1585+00
1580+00
1575+00
1570+00
MicroStation V8.11.9.357
E-SHEET NAME: R9600MT
USER: mwirtzberger
DATE PLOTTED: November 20, 2018
FILE NAME: J:\1502\ROADWAY\MOT\R9600MT.DGN


COUNTY OF
LAUREL
ITEM NO.
11-9.10
SHEET NO.
R97
CONSTRUCTION PHASING DIAGRAM – PHASE II
Beginning Lane Shift
CONSTRUCTION PHASING DIAGRAM – PHASE III
Beginning Lane Shift
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE II AND III
BEGINNING LANE SHIFT
SCALE: 1"=200'
MATCHLINE
ADAMS ROAD
I-75
US 25E
Permanent Barrier Wall
Const. Concrete Barrier Type 9T
Temporary Cross Hatch/Chevron White Paint Pavement Markings (spacing = 50 ft.)
Const. Crash Cushion Type VI-BT TL3 (Placed in Phase II)
Const. Crash Cushion Type VI-BT TL3 (Placed in Phase I)
STA. 1345+38 END TRAFFIC LANE SHIFT
STA. 1319+00 BEGIN TRAFFIC LANE SHIFT
2638' LANE SHIFT
1 MILE
1500'
1000'
500'
1140'
W1-4bi(2 required)
W4-9 (2 required)
W9-3A
G20-2
END ROAD WORK
ROAD WORK 1500 FT
ROAD WORK 1/2 MILE
ROAD WORK 1 MILE
ROAD WORK AHEAD
EXPECTED DELAYS
CAUTION
W20-1 (placed Phase 1) (2 required)
VARIABLE MESSAGE SIGN W/ CHANGING MESSAGE TEXT (PLACED PHASE 1)
1315+00
1320+00
1325+00
1330+00
1335+00
1340+00
1345+00
1350+00
1355+00
1360+00
0'
100'
200'
400'
FILE NAME: J:\1150ZROADWAY\MOT\R09700MT.DGN
USER: mwirtzberger
DATE PLOTTED: November 20, 2018
E-SHEET NAME: R09700MT
MicroStation V8.11.9.357


CONSTRUCTION PHASING DIAGRAM – PHASE II
Ending Lane Shift
CONSTRUCTION PHASING DIAGRAM – PHASE III
Ending Lane Shift
MAINTENANCE OF TRAFFIC
CONSTRUCTION PHASE II AND III
ENDING LANE SHIFT
COUNTY OF LAUREL
ITEM NO. 11-9.10
SHEET NO. R98
MATCHLINE
PHILPOT ROAD
LITTLE LAUREL RIVER
500'
1000'
1500'
1 MILE
2640'
1140'
3390' LANE SHIFT
2169' LANE SHIFT
G20-2 END ROAD WORK
ROAD WORK AHEAD
EXPECTED DELAYS
CAUTION
VARIABLE MESSAGE SIGN
W/ CHANGING MESSAGE TEXT
(PLACED PHASE 1)
ROAD WORK 1 MILE
ROAD WORK 1/2 MILE
ROAD WORK 1500 FT
W20-1
(placed Phase 1)
(2 required)
W4-40 (2 required)
W4-9 (2 required)
STA. 1564+00 (S.B.) BEGIN TRAFFIC LANE SHIFT
STA. 1587+90 (S.B.) END TRAFFIC LANE SHIFT
STA. 1568+70 (N.B.) END TRAFFIC LANE SHIFT
STA. 1547+10 (N.B.) BEGIN TRAFFIC LANE SHIFT
SCALE: 1"=200'
0' 100' 200' 400'
1595+00
1590+00
1585+00
1580+00
1575+00
1570+00
1565+00
1560+00
1555+00
1550+00
1545+00
MicroStation V8.11.9.357
E-SHEET NAME: R9980OMT
USER: mwirtzberger
DATE PLOTTED: November 20, 2018
FILE NAME: J:\1502\ROADWAY\MOT\R9980OMT.DGN

INTERSTATE 75 WIDENING AND RECONSTRUCTION
M.P. 28.9 TO M.P. 34.2
ITEM # 11-9.10
PUBLIC INFORMATION PLAN

The primary goal of the Public Information Plan (PIP) is to inform the motoring public and area stakeholders of project information including Maintenance of Traffic (MOT) which includes widening to six lanes and resurfacing I-75 lanes (northbound and southbound) at mile points 28.9 to 34.2 including reconstruction of the bridges over Little Laurel River. The KYTC District 11 Public Information Officer (PIO) will coordinate and disseminate to stakeholders and the media appropriate information regarding the construction plans.

LOCAL STAKEHOLDERS

- Elected Officials
  - State Senator Albert Robinson – (502) 564-8100 ext. 604; Albert.Robinson@lrc.ky.gov
  - State Representative Regina Huff – (502) 564-8100 ext. 683; 606-549-3439 Regina.Huff@lrc.ky.gov
  - State Representative Robert Goforth – (502) 564-8100 ext. 630; 606-305-1321 Robert.Goforth@lrc.ky.gov
  - State Representative Derek Lewis – (502) 564-8100 ext. 654; 606-594-0061 Derek.Lewis@lrc.ky.gov
  - State Representative Jim Stewart – (502) 564-8100 ext. 690; 606-542-5210 Jim.Stewart@lrc.ky.gov
  - State Representative Tommy Turner – (502) 564-8100 ext. 716; 606-274-5175 Tommy.Turner@lrc.ky.gov
  - London Mayor – Troy Rudder – (606) 864-4169; troyrudder@londonky.gov
  - Laurel County Judge/Executive -- David Westerfield – 864-4640; lcjudgeexec@windstream.net

- Local Agencies
  - Jerry Rains, Area Manager Kentucky Emergency Management – (606) 877-3149, (606) 280-6303, (606) 524-2315; jerry.l.rains2.nfg@mail.mil
  - Todd Cox, Director of Transportation for Laurel County Public Schools – (606) 682-6936; todd.cox@laurel.kyschools.us
  - City of London Police Chief -- Darrel Kilburn (606) 682-2671; darrelkilburn@londonpd.com
  - Laurel County Fire Department -- Terry Wattenbarger (606) 682-1102
  - City of London Fire Chief Carl Hacker – (606) 682-2241; carl.hacker@londonky.gov
  - Laurel County Sheriff John Root -- (606) 682-8900; johnroot10@gmail.com
  - Laurel County Emergency Management -- Justin Noe (606) 682-4352, (606) 682-7371, (606) 862-7904; lcdps1306@gmail.com
  - Ambulance Inc. of Laurel County -- James Hacker (606) 682-3002 jhacker@ambulanceinc.com

  - Whitley County EM – Danny Moses (606) 215-0510; dmoses@2geton.net
  - Corbin Fire Department – Barry McDonald (606) 215-6202 & (606) 215-0742; barry.mcdonald@corbin-ky.gov
  - Corbin Police Department – Rusty Hedrick (606) 528-1122, (606) 523-6513, (606) 657-8531; rusty.hedrick@corbin-ky.gov
  - West Knox Fire Department Chief Darryl Baker – (606) 215-5417 & (606) 312-2700; chief@westknoxfd.com
  - Whitley County Sheriff Todd Shelley – (606) 549-6006, (606) 524-6583, (606) 549-1082; wcso@2geton

- State & Federal Agencies
  - KSP London Post – Lloyd Cochran – (606) 878-6622; Lloyd.Cochran@ky.gov
  - Kentucky Transportation Operations Center 502-564-2080
  - KY Over Dimensional Permits owod.dmc@ky.gov
  - KYTC District 11 Incident Management JR Pearce – (606) 312-1929; Roy.Pearce@ky.gov

- Utility Companies
  - Not Applicable

Neighborhoods and their Mayors

- Mayor Suzie Razmus, City of Corbin – (606) 523-6520; suzie.razmus@corbin-ky.gov

TRUCKING FIRMS AND OUT OF STATE STAKEHOLDERS

Information will be distributed electronically to trucking firms via Rick Taylor at the Department of Vehicle Regulation (502-564-4540; rick.taylor@ky.gov). Information will also be posted on the GoKY website (http://goky.ky.gov).

PRESENTATIONS

A project description including anticipated schedule will be provided to the media, stakeholders and other emergency service agencies via e-mail prior to construction. Information will be provided to these groups via traffic advisories, press releases, the District 11 Facebook and Twitter accounts, and the District 11 website.

MEDIA RELATIONS

The District PIO will prepare an initial new release regarding the contract award for the project. The District PIO will conduct interviews with the media throughout the project duration to keep the public informed of construction progress. Traffic advisories will be submitted to the media when a change in the MOT occurs. The contractor must provide to the PIO via the Resident Engineer notification of any change in the MOT at least three (3) days prior to the change.

Special Note for Bridge Demolition, Renovation and Asbestos Abatement

If the project includes any bridge demolition or renovation, the successful bidder is required to notify Kentucky Division for Air Quality (KDAQ) via filing of form (DEP 7036) a minimum of 10 days prior to commencement of any bridge demolition or renovation work.

Any available information regarding possible asbestos containing materials (ACM) on or within bridges to be affected by the project has been included in the bid documents. These are to be included with the Contractor's notification filed with the KDAQ. If not included in the bid documents, the Department will provide that information to the successful bidder for inclusion in the KDAQ notice as soon as possible. If there are no documents stating otherwise, the bidders should assume there are no asbestos containing materials that will in any way affect the work.

Matthew G. Bevin
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Greg Thomas
Secretary

Asbestos Inspection Report

To: Andre Johannes

District: Central Office

Date: December 5, 2018

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Laurel 11-0009.1

Structure ID: 063B00042L

Structure Location: I-75 over the Little Laurel River

Sample Description: The samples collected were negative for asbestos.

Inspection Date: November 28th, 2018

Results and Recommendations

The results of the samples collected were negative for the presence of asbestos above 1%. No abatement is required at this time.

It is recommended that this report accompany the 10-Day Notice of Intent for Demolition (DEP7036 Form) which is to be submitted to the Kentucky Division of Air Quality prior to abatement, demolition, or renovation of any building or structure in the Commonwealth.

Chain of Custody Record

Kentucky Transportation Cabinet

200 Mero Street, 5th Floor West
Frankfort, Kentucky 40622
(502) 564-7250 fax (502) 564-5655

O'Dail Lawson o'dail.lawson@ky.gov
KYTC
Address: 200 Mero Street
Frankfort KY
Phone: 502-564-7250 Fax: 502-564-5655
PO#:

Client Information KY TRANS CABINET
Results Code:
ND = None Detected
FTD = Filter Tampering or Damaged
N/A = Not Applicable

I-75 over Little Laurel River.

Samplers (signature):

Project or Subject Reference Laurel 11 9.1 063B00042L

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Grab/ Comp.	No. of Cont.	Cont. Type	Preservative
42-1	Joint Compound (Filler)	11/28/18	12:30	Asbestos Bulk	Grab	1	Mason	N/A
42-2	Joint Compound (Rubber)	↓	↓	↓	Grab	1	Rubber	

Relinquished By: Date/Time:

Received By: Date/Time: 11/28/18

Relinquished By: Date/Time:

Received at Lab By: Date/Time:

MRS, INC. *MRS, Inc. Analytical Laboratory Division*
332 West Broadway / Suite # 902
Louisville, Kentucky - 40202 - 2133
(502) 495-1212
Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N # # 12042
Client Name: KYTC
Sampled By: O'Dail Lawson
Address: Laurel - 063B00042 L

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Sample ID	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
# 42-1	Black	Yes	No				None				100%
# 42-2	Black	Yes	No				None				100%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 4-Dec-18
Analyst : Winterford Mensah
Reviewed By: Winterford Mensah
Signature

AIHA # 102459
AJHA #1 02459

ENVIRONMENTAL TRAINING CONCEPTS, INC
P.O Box 99603 Louisville, KY 40269
(502)640-2951

Certification Number: ETC-AIR-060518-00303

O'Dail Lawson

has on 06-05-2018, attended and successfully completed the requirements and passed the examination with a score of 70% of better on the entitled course.

ASBESTOS INSPECTOR REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the Commonwealth of Kentucky, the Indiana Department of Environmental Management, Tennessee Department of Environment & Conservation and the Arkansas Department of Environmental Quality. The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 2660 Technology Drive, Louisville, KY

Name – Training Manager

Expiration Date: 06-05-2019

Name - Instructor

Matthew G. Bevin
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Greg Thomas
Secretary

Asbestos Inspection Report

To: Andre Johannes

District: Central Office

Date: December 5, 2018

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Laurel 11-0009.1

Structure ID: 063B00043R

Structure Location: I-75 over the Laurel River

Sample Description: The samples collected were negative for asbestos.

Inspection Date: November 28th, 2018

Results and Recommendations

The results of the samples collected were negative for the presence of asbestos above 1%. No abatement is required at this time.

It is recommended that this report accompany the 10-Day Notice of Intent for Demolition (DEP7036 Form) which is to be submitted to the Kentucky Division of Air Quality prior to abatement, demolition, or renovation of any building or structure in the Commonwealth.

MRS, INC. *MRS, Inc. Analytical Laboratory Division*
332 West Broadway / Suite # 902
Louisville, Kentucky - 40202 - 2133
(502) 495-1212
Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N # # 12043 Address: Laurel - 063B00043R
Client Name: KYTC
Sampled By: O'Dail Lawson

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Sample ID	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
# 43-1	Black	Yes	No				None				100%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 4-Dec-18
Analyst : Winterford Mensah
Reviewed By: Winterford Mensah
Signature

AIHA # 102459

AJHA #1 02459

Chain of Custody Record

Kentucky Transportation Cabinet

200 Mero Street, 5th Floor West
Frankfort, Kentucky 40622
(502) 564-7250 fax (502) 564-5655

O'Dail Lawson o'dail.lawson@ky.gov
KYTC
Address: 200 Mero Street
Frankfort KY
Phone: 502-564-7250 Fax: 502-564-5655
PO#:

Client Information KY TRANS CABINET

Results Code:
ND = None Detected
FTD = Filter Tampering or Damaged
N/A = Not Applicable

I-75 over Laurel River.

Samplers (signature): O'Dail Lawson

Project or Subject Reference: Laurel 11 9.1 063B00043R

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Grab/ Comp.	No. of Cont.	Cont. Type	Preservative
43-1	Joint Compound Rubber	11/28/18	12:53	Asbestos bulk	black	Rubber		N/A

Relinquished By: Date/Time:

Received By: Winterfield Mercer Date/Time: 11/28/18

Relinquished By: Date/Time:

Received at Lab By: Date/Time:

ENVIRONMENTAL TRAINING CONCEPTS, INC
P.O Box 99603 Louisville, KY 40269
(502)640-2951

Certification Number: ETC-AIR-060518-00303

O'Dail Lawson

has on 06-05-2018, attended and successfully completed the requirements and passed the examination with a score of 70% of better on the entitled course.

ASBESTOS INSPECTOR REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the Commonwealth of Kentucky, the Indiana Department of Environmental Management, Tennessee Department of Environment & Conservation and the Arkansas Department of Environmental Quality. The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 2660 Technology Drive, Louisville, KY

Name – Training Manager

Expiration Date: 06-05-2019

Name - Instructor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Matthew G. Bevin
Governor

Greg Thomas
Secretary

Asbestos Inspection Report

To: Andre Johannes

District: Central Office

Date: December 5, 2018

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Laurel 11-0009.1

Structure ID: 063B00111R

Structure Location: I-75 over the Little Laurel River

Sample Description: The samples collected were negative for asbestos.

Inspection Date: November 28th, 2018

Results and Recommendations

The results of the samples collected were negative for the presence of asbestos above 1%. No abatement is required at this time.

It is recommended that this report accompany the 10-Day Notice of Intent for Demolition (DEP7036 Form) which is to be submitted to the Kentucky Division of Air Quality prior to abatement, demolition, or renovation of any building or structure in the Commonwealth.

MRS, INC. *MRS, Inc. Analytical Laboratory Division*
332 West Broadway / Suite # 902
Louisville, Kentucky - 40202 - 2133
(502) 495-1212
Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N #: # 12044
Client Name: KYTC
Sampled By: O'Dail Lawson
Address: Laurel - 063B00111R

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Sample ID	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
# 111-1	Gray	Yes	No				None	2%			98%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 4-Dec-18
Analyst : Winterford Mensah
Reviewed By: Winterford Mensah (Signature)

AIHA # 102459
AJHA #1 02459

Chain of Custody Record

Kentucky Transportation Cabinet

200 Mero Street, 5th Floor West
Frankfort, Kentucky 40622
(502) 564-7250 fax (502) 564-5655

O'Dail Lawson o'dail.lawson@ky.gov KYTC Address: 200 Mero Street Frankfort KY Phone: 502-564-7250 Fax: 502-564-5655 PO#:	**Client Information** KY TRANS CABINET Results Code: ND = None Detected FTD = Filter Tampering or Damaged N/A = Not Applicable

I-75 over Little Laurel River

Samplers (signature):

Project or Subject Reference Laurel 11 9.1 063B00111R

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Grab/ Comp.	No. of Cont.	Cont. Type	Preservative
111-1	Reflector Marker	11/28/18	12:25	Asbestos bulk	grey	MASTR.		N/A

Relinquished By:	Date/Time:
Received By: Markford Marsh	Date/Time:
Relinquished By:	Date/Time:
Received at Lab By:	Date/Time:

ENVIRONMENTAL TRAINING CONCEPTS, INC
P.O Box 99603 Louisville, KY 40269
(502)640-2951

Certification Number: ETC-AIR-060518-00303

O'Dail Lawson

has on 06-05-2018, attended and successfully completed the requirements and passed the examination with a score of 70% of better on the entitled course.

ASBESTOS INSPECTOR REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the Commonwealth of Kentucky, the Indiana Department of Environmental Management, Tennessee Department of Environment & Conservation and the Arkansas Department of Environmental Quality. The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 2660 Technology Drive, Louisville, KY

Name – Training Manager

Expiration Date: 06-05-2019

Name - Instructor

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

TC 62-226
Rev. 01/2016
Page 1 of 1

RIGHT OF WAY CERTIFICATION

☒ Original ☐ Re-Certification — RIGHT OF WAY CERTIFICATION

ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
11-9.1	Laurel	FD52 063 0075 028-034	NHPP IM 0752 (100)

PROJECT DESCRIPTION

I-75 widening in Laurel County

☒ **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.

☐ **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.

☐ **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

☐ **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	Greg Combs
Date		Date	1-25-2019
Right of Way Director		**FHWA**	
Printed Name		Printed Name	
Signature	DM Loy Digitally signed by DM Loy Date: 2019.01.25 13:03:59 -05'00'	Signature	No Signature Required as per FHWA-KYTC Current Stewardship Agreement
Date		Date	

UTILITIES AND RAIL CERTIFICATION NOTE

LAUREL COUNTY, NHPP IM 0752 (100)
FD52 063 0075 028-034
MP: 28.9 - 33.2
IMPROVE I-75 FROM US25E TO LITTLE LAUREL RIVER
ITEM NUMBER: 11-0009.10

PROJECT NOTES ON UTILITIES

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

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 this note 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.

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.

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.

UTILITIES AND RAIL CERTIFICATION NOTE

LAUREL COUNTY, NHPP IM 0752 (100)
FD52 063 0075 028-034
MP: 28.9 - 33.2
IMPROVE I-75 FROM US25E TO LITTLE LAUREL RIVER
ITEM NUMBER: 11-0009.10

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

Corbin City Utilities Commission has water & sanitary sewer facilities crossing I-75 at approximately STA 1328+50, 1331+50, & 1404+00. There is also a sanitary sewer line east of Ramp D.

KU's electric lines stop at the bottom of Ramp D; underground electric lines that continue up Ramp D to power the lighting poles belonging to the Cabinet.

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

THE FOLLOWING FACILITY OWNERS ARE RELOCATING/ADJUSTING THEIR FACILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

N/A

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE OWNER OR THEIR SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

N/A

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

N/A

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☒**No Rail Involvement** ☐**Rail Involved** ☐**Rail Adjacent**

UTILITIES AND RAIL CERTIFICATION NOTE

LAUREL COUNTY, NHPP IM 0752 (100)
FD52 063 0075 028-034
MP: 28.9 - 33.2
IMPROVE I-75 FROM US25E TO LITTLE LAUREL RIVER
ITEM NUMBER: 11-0009.10

AREA FACILITY OWNER CONTACT LIST

Utility Company/Agency	Contact Name	Contact Information
Corbin City Utilities	Ron Herd	606-528-4026
KU	David Laun	606-864-2821

Kentucky Transportation
Cabinet Project: 11-9.10, I-75 Widening, Laurel County

NOTICE

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NATIONWIDE SECTION 404 PERMIT AUTHORIZATION

DEPARTMENT FOR ENVIRONMENTAL PROTECTION
KENTUCKY DIVISION OF WATER
SECTION 401 WATER QUALITY CERTIFICATION

PROJECT DESCRIPTION:

The Sections 404 and 401 activities for this project have previously been permitted under the authority of the Department of the Army, Nationwide Section 404 Permit Number 14, *Linear Transportation Projects* (with additional *Kentucky Regional General Conditions*), and the Division of Section 401 Water General Water Quality Certification. For these authorized permits to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Number 14 permit and General Water Quality Certification in a conspicuous location at the project site, with unencumbered public access, for the duration of construction and comply with the general conditions required.

Locations Impacting Water Quality

Station-Location	Description
1342+46	Extend 18" pipe culvert downstream 30 LF which will result in 0.001 acres of additional impact to an ephemeral stream of an UT of Horse Creek. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 36.9851 deg. Longitude: -84.1091 deg.

Kentucky Transportation
Cabinet Project: 11-9.10, I-75 Widening, Laurel County

Station-Location	Description
1346+46	Extend 15" pipe culvert downstream 25 LF which will result in 0.0007 acres of additional impact to an ephemeral stream of an UT of Horse Creek. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 36.98579 deg. Longitude: -84.10907 deg.
1353+69	Extend 24" pipe culvert upstream 10 LF which will result in 0.0005 acres of additional impact to an ephemeral stream in an UT of the Laurel River. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 36.98779 deg. Longitude: -84.10892 deg.
1356+70	Extend 24" pipe culvert upstream 10 LF which will result in 0.0001 acres of additional impact to an ephemeral stream in an UT of the Laurel River. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 36.98872 deg. Longitude: -84.10845 deg.
1357+46	Extend 15" pipe culvert downstream 5 LF which will result in 0.0005 acres of additional impact to an ephemeral stream in an UT of Horse Creek. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 36.98877 Longitude: -84.10761 deg.
1374+04	Extend 15" pipe culvert downstream 14 LF which will result in 0.0004 acres of additional impact to an ephemeral stream in an UT of Horse Creek. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 36.99328 deg. Longitude: -84.10761 deg.
1377+45	Extend 18" pipe culvert upstream 12 LF and downstream 13 LF which will result in 0.0009 acres of additional impact to an ephemeral stream in an UT of the Laurel River. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 36.99425 deg. Longitude: -84.10777 deg.
1385+44	Extend 15" pipe culvert downstream 2 LF which will result in 0.0001 acres of additional impact to an ephemeral stream in an UT of the Laurel River. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 36.99646 deg. Longitude: -84.10767 deg.
1423+43	Extend 18" pipe culvert downstream 10 LF which will result in 0.0005 acres of additional impact to an ephemeral stream in an UT of the Laurel River. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 37.00651 deg. Longitude: -84.10458 deg.
1448+62	Extend 24" pipe culvert downstream 25 LF which will result in 0.0011 acres of additional impact to an emphemeral stream in an UT of the Little Laurel River. (continued on next page)

Kentucky Transportation
Cabinet Project: 11-9.10, I-75 Widening, Laurel County

Station-Location	Description
	Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 37.0138 deg. Longitude: -84.10231
NB 1490+08	Extend 18" pipe culvert upstream 8 LF and downstream 8 LF which will result in 0.0006 acres of additional impact to an ephemeral stream in an UT of the Little Laurel River. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 37.02424 deg. Longitude: -84.09826 deg.
NB 1494+17	Extend 48" pipe culvert downstream 35 LF which will result in 0.0032 acres of additional impact to an ephemeral stream in an UT of the Little Laurel River. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 37.02499 deg. Longitude: -84.09849
1499+31	Extend 18" pipe culvert downstream 11 LF which will result in 0.0004 acres of additional impact to an ephemeral stream in an UT of the Little Laurel River. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 37.02674 deg. Longitude: -84.09823
NB 1517+89	Extend 30" pipe culvert downstream 15 LF which will result in 0.0009 acres of additional impacts to an ephemeral stream in an UT of the Little Laurel River. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 37.03161 deg. Longitude: -84.09823 deg.
SB 1469+41	Extend 15" pipe culvert downstream 20 LF which will result in 0.0006 acres of additional impact to an ephemeral stream in an UT of the Little Laurel River. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 37.01885 deg. Longitude: -84.10026 deg.
SB 1492+61	Extend 54" pipe culvert upstream 15 LF and downstream 15 LF which will result in 0.0031 acres of additional impact to an ephemeral stream in an UT of the Little Laurel River. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 37.0251 deg. Longitude: -84.09959 deg.
SB 1509+38	Extend 60" pipe culvert upstream 20 LF which will result in 0.0023 acres of additional impact to a perennial stream located in an UT of the Little Laurel River. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 37.02975 deg. Longitude: -84.09905 deg.
SB 1514+93	Extend 30" pipe culvert upstream 50 LF which will result in 0.0029 acres of additional impact to an ephemeral stream in an UT of the Little Laurel River. Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 37.03124 deg. Longitude: -84.0988 deg.
Rmp D 502+87	Extend 24" pipe culvert upstream 14 LF which will result in 0.0006 acres of additional impact to an ephemeral stream in an UT of the Laurel River.

Kentucky Transportation
Cabinet Project: 11-9.10, I-75 Widening, Laurel County

Station-Location	Description
	Impacts will be minimized utilizing BMP during construction and will be stabilized utilizing riprap/seeding. Latitude: 36.97816 deg. Longitude: -84.10981 deg.

Note: Bridges over the Laurel River and Little Laurel River will be reconstructed/widened at their current location so as to avoid/minimize additional water related impacts at these locations.

For pipe extensions to one end of the existing pipe, Lat/Long is shown at the extension site. For pipes with extensions proposed at both ends, the Lat/Long is shown near the middle of the pipe.

This project involves work near and/or within Jurisdictional Waters of the United States as defined by the U. S. Army Corps of Engineers; therefore, requiring a Nationwide Number 14 General Section 404 permit. The Division of Water conditionally certified this General Permit. Importantly, one of those conditions regards the use of heavy equipment in any stream channel, or streambed. If there is need to cross the stream channel with heavy equipment, or conduct work within the stream channel, a work platform or temporary crossing, is authorized. This should be constructed with clean rock (preferably sandstone or granite east of a line stretching from the McCreary-Wayne County line to the southwest, northeasterly to Lewis-Greenup County line), and sufficient pipe to allow stream flow to continue, unimpeded (refer to the attached standard drawing for low-water crossings at end of the document). Other conditions may be found under the heading, *General Certification—Nationwide Permit # 14 Linear Transportation Projects.*

In order for this authorization to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Number 14 Approval in a conspicuous location at the project site, for the duration of the construction, and comply with the general conditions as required.

To more readily expedite construction, the contractor may elect to alter the design, or perform the work in a manner different from what was originally proposed and specified. Prior to commencing such alternative work, the contractor shall obtain written permission from the Division of Construction and the Kentucky Transportation Cabinet, Division of Environmental Analysis. If such changes necessitate further permitting, then the contractor will be responsible for applying to the U. S. Army Corps of Engineers and the Kentucky Division of Water. A copy of any request to the Corps of Engineers or Division of Water to alter this proposal and subsequent responses shall be forwarded to the Division of Environmental Analysis, DA Permit Coordinator, for office records and for informational purposes.

Regulatory Division
Public Notice No. LRL-2016-00006

Notifications for all Nationwide Permits (NWPs) shall be in accordance with General Condition No. 32.

1. For activities that would impact Outstanding State or National Resource Waters (OSNRWs), Exceptional Waters (EWs), Coldwater Aquatic Habitat Waters (CAHs) under the Endangered Species Act for the NWPs listed below, a Pre-Construction Notification (PCN) will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWPs (Section 404 activities), for impacts to these waters.

NWP 3 (Maintenance)
NWP 4 (Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities)
NWP 5 (Scientific Measurement Devices)
NWP 6 (Survey Activities)
NWP 7 (Outfall Structures and Associated Intake Structures)
NWP 12 (Utility Line Activities)
NWP 13 (Bank Stabilization)
NWP 14 (Linear Transportation Projects)
NWP 15 (U.S. Coast Guard Approved Bridges)
NWP 16 (Return Water from Upland Contained Disposal Areas)
NWP 17 (Hydropower Projects)
NWP 18 (Minor Discharges)
NWP 19 (Minor Dredging)
NWP 20 (Response Operations for Oil or Hazardous Substances)
NWP 21 (Surface Coal Mining Activities)
NWP 22 (Removal of Vessels)
NWP 23 (Approved Categorical Exclusions)
NWP 25 (Structural Discharges)
NWP 27 (Aquatic Habitat Restoration, Establishment, and Enhancement Activities)
NWP 29 (Residential Developments)
NWP 30 (Moist Soil Management for Wildlife)
NWP 31 (Maintenance of Existing Flood Control Facilities)
NWP 32 (Completed Enforcement Actions)
NWP 33 (Temporary Construction, Access, and Dewatering)
NWP 34 (Cranberry Production Activities)
NWP 36 (Boat Ramps)
NWP 37 (Emergency Watershed Protection and Rehabilitation)
NWP 38 (Cleanup of Hazardous and Toxic Waste)
NWP 39 (Commercial and Institutional Developments)
NWP 40 (Agricultural Activities)
NWP 41 (Reshaping Existing Drainage Ditches)
NWP 42 (Recreational Facilities)
NWP 43 (Stormwater Management Facilities)
NWP 44 (Mining Activities)
NWP 45 (Repair of Uplands Damaged by Discrete Events)

Regulatory Division
Public Notice No. LRL-2016-00006

COORDINATING RESOURCE AGENCIES

Chief, Wetlands Regulatory Section
U.S. Environmental Protection Agency
Region IV
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303

Supervisor
U.S. Fish & Wildlife Service
JC Watts Federal Building, Room 265
330 West Broadway
Frankfort, Kentucky 40601

Supervisor
401 Water Quality Certification
Kentucky Division of Water
300 Sower Boulevard, 3rd Floor
Frankfort, Kentucky 40601

Commissioner
Department of Fish and Wildlife Resources
#1 Game Farm Road
Frankfort, Kentucky 40601

Executive Director and State Historic Preservation Officer
Kentucky Heritage Council
300 Washington Street
Frankfort, Kentucky 40601

ADDITIONAL COORDINATING RESOURCE AGENCY FOR NWPS 21, 49, AND 50

Kentucky Department for Natural Resources
Division of Mine Permits
300 Sower Boulevard
Frankfort, Kentucky 40601

2017 Nationwide Permit

14. Linear Transportation Projects. Activities required for crossings of waters of the United States associated with the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: For linear transportation projects crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Linear transportation projects must comply with 33 CFR 330.6(d).

Note 2: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under section 404(f) of the Clean Water Act (see 33 CFR 323.4).

Note 3: For NWP 14 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to

ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

(b) In addition to the notification requirements contained in NWP 14, the permittee must submit a PCN to the district engineer prior to commencing the activity for the permanent loss of greater than 300 feet of ephemeral, intermittent and perennial stream of all "waters of the U.S." (See General Condition 32 and the definition of "loss of waters of the United States" in the Nationwide Permits for further information.)

5. Notification in accordance with General Condition 32 is required to the Corps for all activities which are subject to jurisdiction under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

6. All applications are required as both a paper copy and in an electronic media format, including electronic mail or compact disc.

7. For all activities, the applicant shall review the U.S. Fish and Wildlife Service's IPaC website: http://ecos.fws.gov/ipac to determine if the activity might affect threatened and/or endangered species or designated critical habitat. If federally-listed species or designated critical habitat are identified, a PCN in accordance with General Condition 18 and 32 would be triggered and the official species list generated from the IPaC website must be submitted with the PCN.

Further information:

Outstanding State or National Resource Water (OSNRWs), Exceptional Waters (EWs), and Coldwater Aquatic Habitat Waters (CAHs) are waters designated by the Commonwealth of Kentucky, Natural Resources and Environmental Protection Cabinet. The list can be found at the following link: http://eppcapp.ky.gov/spwaters/

Information on Pre-Construction Notification (PCN) can be found at NWP General Condition No. 32 in the Federal Register (Volume 81, No. 105 of June 1, 2017, pp 35211).

Public Notice

US Army Corps
of Engineers
Louisville District ®

Public Notice No.
LRL-2016-00006

Expiration Date
18 MAR 2022

Please address all comments and inquiries to
U S Army Corps of Engineers, Louisville District
ATTN Ms Meagan Knuckles, CELRL-RDS
P.O Box 59
Louisville, Kentucky 40201-0059
Phone (502) 315-6709

PUBLIC NOTICE ANNOUNCING REGIONAL CONDITIONS AND WATER QUALITY CERTIFICATIONS FOR NATIONWIDE PERMITS

On January 6, 2017, the U.S. Army Corps of Engineers (Corps) published a notice in the *Federal Register* (82 FR 1860) announcing the reissuance of all 50 existing Nationwide Permits (NWPs), general conditions, and definitions with some modifications. The Corps also issued two new NWPs, one new general condition, and five new definitions. The NWPs became effective on March 19, 2017, and will expire on March 18, 2022.

On March 17, 2017, the Great Lakes and Ohio River Division (LRD) Engineer approved Regional Conditions for the NWPs in Kentucky. These conditions apply to all activities authorized by NWPs. Regional Conditions provide additional protection for the aquatic environment by ensuring that the NWPs authorize only those activities with minimal adverse effects on the aquatic environment. The Regional Conditions for Kentucky are attached to this public notice. Additionally, the Louisville District has posted the Regional Conditions for the NWPs on its Internet home page at: http://www.lrl.usace.army.mil/Missions/Regulatory/Obtain-a-Permit/Nationwide/

The Kentucky Division of Water (KDOW) denied the 401 Water Quality Certification (WQC) for NWPs 16, 17, 32, 38, 43, 44, 52, 53 and 54. An individual 401 WQC from KDOW will be required for any project authorized by one of the NWPs with a 401 WQC denial. The KDOW conditioned the 401 WQC for NWPs 3, 5, 7, 12, 13, 14, 15, 18, 19, 21, 23, 25, 27, 29, 30, 31, 33, 36, 37, 39, 42, 45, 46, 49, 50, and 51. An individual 401 WQC will be required by KDOW under certain conditions. The full text of the Water Quality Certifications issued by KDOW is available on the Louisville District website at the link listed above.

Questions concerning implementation of the new and modified NWPs and conditions or the Corps Regional Conditions should be sent to the Louisville District, Corps of Engineers, ATTN: Ms. Meagan Knuckles, CELRL-RDS, P.O. Box 59, Louisville, Kentucky 40201-0059.

2017 Nationwide Permits Regional and Permit-Specific Conditions
COMMONWEALTH OF KENTUCKY

These regional conditions are in addition to, but do not supersede, the requirements in the Federal Register (Volume 82, No. 4 of January 6, 2017, pp 1860).

MATTHEW G. BEVIN
GOVERNOR

CHARLES G. SNAVELY
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

R. BRUCE SCOTT
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

General Certification--Nationwide Permit # 14
Linear Transportation Projects

This General Certification is issued March 19, 2017, in conformity with the requirements of Section 401 of the Clean Water Act of 1977, as amended (33 U.S.C. §1341), as well as Kentucky Statute KRS 224.16-050.

For this and all nationwide permits, the definition of surface water is as per 401 KAR 10:001 Chapter 10, Section 1(80): Surface Waters means those waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface. Lagoons used for waste treatment and effluent ditches that are situated on property owned, leased, or under valid easement by a permitted discharger are not considered to be surface waters of the commonwealth.

Agricultural operations, as defined by KRS 224.71-100(1) conducting activities pursuant to KRS 224.71-100 (3), (4), (5), (6), or 10 are deemed to have certification if they are implementing an Agriculture Water Quality Plan pursuant to KRS 224.71-145.

For all other operations, the Commonwealth of Kentucky hereby certifies under Section 401 of the Clean Water Act (CWA) that it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 304, 306 and 307 of the CWA, will not be violated for the activity covered under NATIONWIDE PERMIT 14, namely Linear Transportation Projects, provided that the following conditions are met:

1. The activity will not occur within surface waters of the Commonwealth identified by the Kentucky Division of Water as Outstanding State or National Resource Water, Cold Water Aquatic Habitat, or Exceptional Waters.

2. The activity will not occur within surface waters of the Commonwealth identified as perpetually-protected (e.g. deed restriction, conservation easement) mitigation sites.

3. The activity will impact less than 1/2 acre of wetland/marsh.

4. The activity will impact less than 300 linear feet of surface waters of the Commonwealth. Stream realignment greater than 100 feet and in-stream stormwater detention/retention basins are not covered under this general water quality certification.

5. For complete linear transportation projects, all impacts shall not exceed a cumulative length of 500 linear feet within each Hydrologic Unit Code (HUC) 14.

6. Any crossings must be constructed in a manner that does not impede natural water flow.

7. Stream impacts covered under this General Water Quality Certification and undertaken by those persons defined as an agricultural operation under the Agricultural Water Quality Act must be completed in compliance with the Kentucky Agricultural Water Quality Plan (KWQP).

8. The Kentucky Division of Water may require submission of a formal application for an individual certification for any project if the project has been determined to likely have a significant adverse effect upon water quality or degrade the waters of the Commonwealth so that existing uses of the water body or downstream waters are precluded.

9. Activities that do not meet the conditions of this General Water Quality Certification require an Individual Section 401 Water Quality Certification.

10. Activities qualifying for coverage under this General Water Quality Certification are subject to the following conditions:

    - Projects requiring in-stream stormwater detention/retention basins shall require individual water quality certifications.
    - Erosion and sedimentation pollution control plans and Best Management Practices must be designed, installed, and maintained in effective operating condition at all times during construction activities so that violations of state water quality standards do not occur (401 KAR 10:031 Section 2 and KRS 224.70-100).
    - Sediment and erosion control measures, such as check-dams constructed of any material, silt fencing, hay bales, etc., shall not be placed within surface waters of the Commonwealth, either temporarily or permanently, without prior approval by the Kentucky Division of Water's Water Quality Certification Section. If placement of sediment and erosion control measures in surface waters is unavoidable, design and placement of temporary erosion control measures shall not be conducted in such a manner that may result in instability of streams that are adjacent to,

upstream, or downstream of the structures. All sediment and erosion control devices shall be removed and the natural grade restored within the completion timeline of the activities.

- Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse.
- Removal of riparian vegetation in the utility line right-of-way shall be limited to that necessary for equipment access.
- To the maximum extent practicable, all in-stream work under this certification shall be performed under low-flow conditions.
- Heavy equipment, e.g. bulldozers, backhoes, draglines, etc., if required for this project, should not be used or operated within the stream channel. In those instances in which such in-stream work is unavoidable, then it shall be performed in such a manner and duration as to minimize turbidity and disturbance to substrates and bank or riparian vegetation.
- Any fill shall be of such composition that it will not adversely affect the biological, chemical, or physical properties of the receiving waters and/or cause violations of water quality standards. If rip-rap is utilized, it should be of such weight and size that bank stress or slump conditions will not be created because of its placement.
- If there are water supply intakes located downstream that may be affected by increased turbidity and suspended solids, the permittee shall notify the operator when such work will be done.
- Should evidence of stream pollution or jurisdictional wetland impairment and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the KDOW shall be notified immediately by calling (800) 928-2380.

Non-compliance with the conditions of this general certification or violation of Kentucky state water quality standards may result in civil penalties.

GENERAL CONDITIONS FOR WATER QUALITY CERTIFICATION

1. The Kentucky Division of Water may require submission of a formal application for an Individual Certification for any project if the project has been determined to likely have a significant adverse effect upon water quality or degrade the waters of the Commonwealth so that existing uses of the water body or downstream waters are precluded.

2. Nationwide permits issued by the U.S. Army Corps of Engineers for projects in Outstanding State Resource Waters, Cold Water Aquatic Habitats, and Exceptional Waters as defined by 401 KAR 10:026 shall require individual water quality certifications.

3. Projects requiring in-stream stormwater detention/retention basins shall require individual water quality certifications.

4. Erosion and sedimentation pollution control plans and Best Management Practices must be designed, installed, and maintained in effective operating condition at all times during construction activities so that violations of state water quality standards do not occur.

5. Sediment and erosion control measures (e.g., check-dams, silt fencing, or hay bales) shall not be placed within surface waters of the Commonwealth, either temporarily or permanently, without prior approval by the Kentucky Division of Water's Water Quality Certification Section. If placement of sediment and erosion control measures in surface waters is unavoidable, placement shall not be conducted in such a manner that may cause instability of streams that are adjacent to, upstream, or downstream of the structures. All sediment and erosion control measures shall be removed and the natural grade restored prior to withdrawal from the site.

6. Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse.

7. To the maximum extent practicable, all in-stream work under this certification shall be performed during low flow.

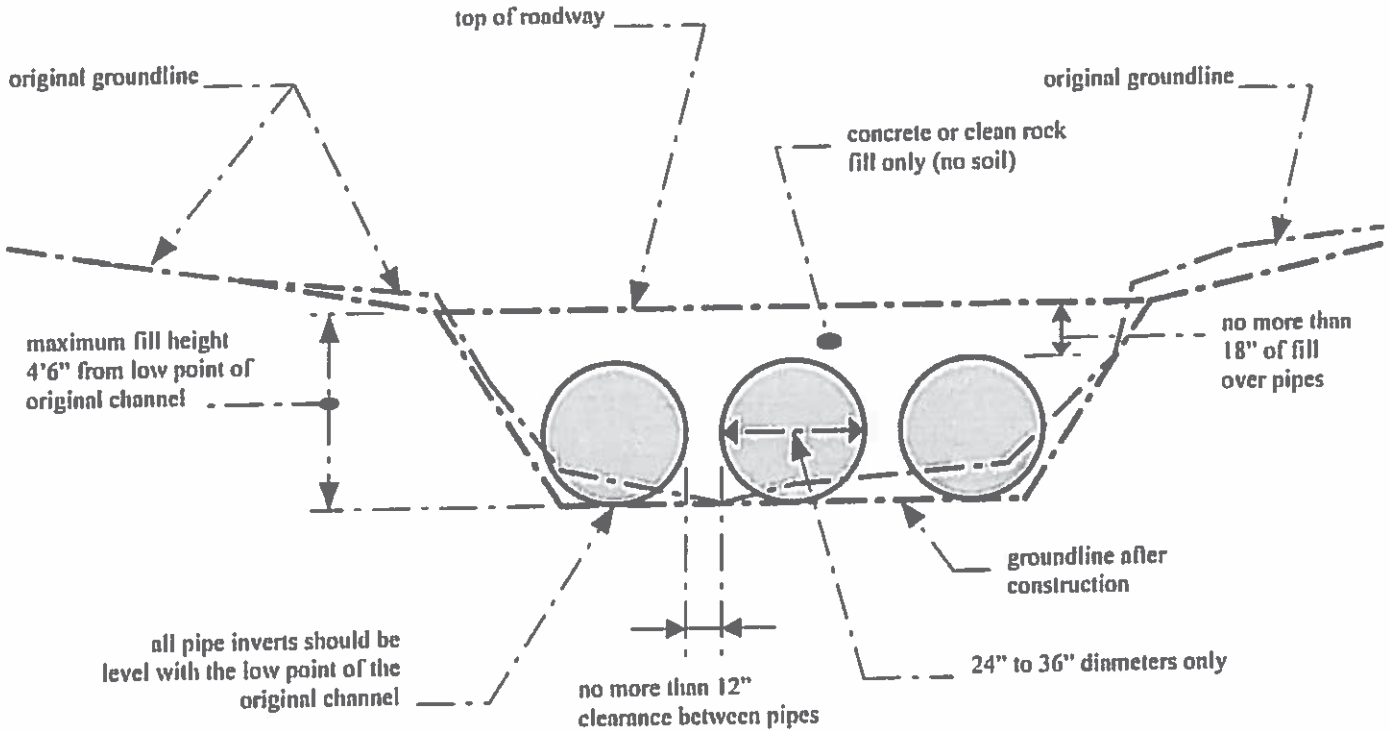
8. Heavy equipment (e.g. bulldozers, backhoes, draglines, etc.), if required for this project, should not be used or operated within the stream channel. In those instances where such in-stream work is unavoidable, then it shall be performed in such a manner and duration as to minimize re-suspension of sediments and disturbance to the channel, banks, or riparian vegetation.

9. If there are water supply intakes located downstream that may be affected by increased turbidity, the permittee shall notify the operator when work will be performed.

10. Removal of existing riparian vegetation should be restricted to the minimum necessary for project construction.

11. Should stream pollution, wetland impairment, and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the Kentucky Division of Water shall be notified immediately by calling 800/564-2380.

ATTACHMENT 1



NOTES:

1. This is a conceptual drawing. The number and size of pipes and other details will vary depending on specific site conditions.
2. The pipes and backfill must be contained within the stream channel as shown above. During the construction of the approaches and access roadway across the floodplain, unstable and unconsolidated materials unsuitable for roadways may be excavated and replaced with riprap, crushed stone, or other stable road construction materials. This may only be done, however, with the following provisions: (1) the disposal of excess, unconsolidated materials thus excavated must be outside of the floodplain and (2) the finished surface of the completed road may be no more than three inches (3") above the pre-construction surface of the floodplain at any point beyond the top of banks.

LOW-WATER CROSSING

STANDARD DRAWING
Not to Scale

SPECIAL NOTE

Filing of eNOI for KPDES Construction Stormwater Permit

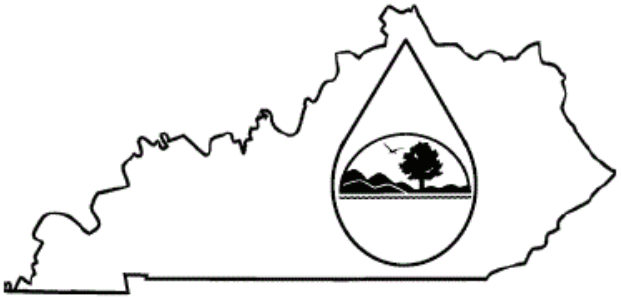
County: Laurel **Route: I-75**
Item No.: 11-0009.10 **KDOW Submittal ID: 150683**

Project Description:

Widening I-75 to six lanes in Laurel County mile point 28.9 to 34.2

A Notice of Intent for obtaining coverage under the Kentucky Pollutant Discharge Elimination System (KPDES) General Permit for Stormwater Discharges Associated with Construction Activities (KYR10) has been drafted, copy of which is attached. Upon award, the Contractor will be identified in Section III of the form as the "Building Contractor" and it will be submitted for approval to the Kentucky Division of Water. The Contractor shall be responsible for advancing the work in a manner that is compliant with all applicable and appropriate KYTC specifications for sediment and erosion control as well as meeting the requirements of the KYR10 permit and the KDOW.

If there are any questions regarding this note, please contact David Waldner, Director, Division of Environmental Analysis, TCOB, 200 Mero Street, Frankfort, KY 40622, Phone: (502) 564-7250.



KENTUCKY POLLUTION DISCHARGE

ELIMINATION SYSTEM (KPDES)

Notice of Intent (NOI) for coverage of Storm Water Discharge Associated with Construction Activities Under the KPDES Storm Water General Permit KYR100000

Click here for Instructions (Controls/KPDES_FormKYR10_Instructions.htr

Click here to obtain information and a copy of the KPDES General Permit. (http://dep.ky.gov/formslibrary/Documents/KYR10PermitPage.pdf)

(*) indicates a required field; (✓) indicates a field may be required based on user input or is an optionally required field

General Comments:

Applicant Comment:

EEC Reviewer Comment:

Reason for Submittal:(*)	Agency Interest ID:	Permit Number:(✓)
Application for New Permit C	63629	KPDES Permit Number

If change to existing permit coverage is requested, describe the changes for which modification of coverage is being sought:(✓)

ELIGIBILITY:
Stormwater discharges associated with construction activities disturbing individually one (1) acre or more, including, in the case of a common plan of development, contiguous construction activities that cumulatively equal one (1) acre or more of disturbance.

EXCLUSIONS:
The following are excluded from coverage under this general permit:
1) Are conducted at or on properties that have obtained an individual KPDES permit for the discharge of other wastewaters which requires the development and implementation of a Best Management Practices (BMP) plan;
2) Any operation that the DOW determines an individual permit would better address the discharges from that operation;
3) Any project that discharges to an Impaired Water listed in the most recent Integrated Report, §305(b) as impaired for sediment and for which an approved TMDL has been developed.

SECTION I -- FACILITY OPERATOR INFORMATION (PERMITTEE)

Company Name:(✓)	First Name:(✓)	M.I.:	Last Name:(✓)
Kentucky Transportation Cabinet	Tyler	M	Kirby

Mailing Address:(*)	City:(*)	State:(*)	Zip:(*)
603 Railroad Avenue	Manchester	Kentucky	40962

eMail Address:(*)	Business Phone:(*)	Alternate Phone:
tyler.kirby@ky.gov	6065982145	Phone

Section I Comments:

Applicant Comment:

EEC Reviewer Comment:

SECTION II -- GENERAL SITE LOCATION INFORMATION

Project Name:(*)	Status of Owner/Operator(*)	SIC Code(*)
11-0009.10 I-75	State Government	1611 Highway and

Company Name:(✓)	First Name:(✓)	M.I.:	Last Name:(✓)
Kentucky Transportation Cabenit	First Name	M	Last Name

Site Physical Address:(*)
I-75 MP 28.9 - 34.2

City:(*)	State:(*)	Zip:(*)
London	Kentucky	40744

County:(*)	Latitude(decimal degrees)(*)DMS to DD Converter (https://www.fcc.gov/media/radio/dms-decimal)	Longitude(decimal degrees)(*)
Laurel	37.01333	-84.10167

Section II Comments:

Applicant Comment:

EEC Reviewer Comment:

SECTION III -- SPECIFIC SITE ACTIVITY INFORMATION

Project Description:(*)

Widening Interstate 75 to Six Lanes mile points 28.9 to 34.2 in Laurel County

a. For single projects provide the following information

Total Number of Acres in Project:(✓)	Total Number of Acres Disturbed:(✓)
166.5	166.5
Anticipated Start Date:(✓)	Anticipated Completion Date:(✓)
5/1/2019	6/30/2021

b. For common plans of development provide the following information

Total Number of Acres in Project:(✓)	Total Number of Acres Disturbed:(✓)
# Acre(s)	# Acre(s)
Number of individual lots in development, if applicable: (✓)	Number of lots in development:(✓)
# lot(s)	# lot(s)
Total acreage of lots intended to be developed:(✓)	Number of acres intended to be disturbed at any one time:(✓)
Project Acres	Disturbed Acres
Anticipated Start Date:(✓)	Anticipated Completion Date:(✓)

List Building Contractor(s) at the time of Application:(*)

Company Name

Section III Comments:

Applicant Comment:

EEC Reviewer Comment:

SECTION IV -- IF THE PERMITTED SITE DISCHARGES TO A WATER BODY THE FOLLOWING INFORMATION IS REQUIRED

Discharge Point(s):

Unnamed Tributary?	Latitude	Longitude	Receiving Water Name
Yes	36.977885	-84.110253	Laurel River
Yes	36.978747	-84.110387	Laurel River
Yes	36.980455	-84.110950	Laurel River
Yes	36.982999	-84.109494	Laurel River
Yes	36.984257	-84.110122	Laurel River
Yes	36.985123	-84.109048	Laurel River
Yes	36.985785	-84.109025	Laurel River
Yes	36.987429	-84.108807	Laurel River
Yes	36.987885	-84.109687	Laurel River
Yes	36.988446	-84.109675	Laurel River
Yes	36.988767	-84.108416	Laurel River
Yes	36.990233	-84.109005	Laurel River
Yes	36.993271	-84.107585	Laurel River
Yes	36.994283	-84.107294	Laurel River
Yes	36.994771	-84.107326	Laurel River
Yes	36.996466	-84.107687	Laurel River
Yes	36.99687	-84.107570	Laurel River
Yes	36.997822	-84.107339	Laurel River
Yes	36.999295	-84.106894	Laurel River
Yes	36.999427	-84.106839	Laurel River
No	37.000882	-84.106322	Laurel River
No	37.002267	-84.105239	Laurel River
No	37.002373	-84.105735	Laurel River
No	37.002736	-84.105747	Laurel River
No	37.003025	-84.105576	Laurel River
Yes	37.004031	-84.105313	Laurel River
Yes	37.006046	-84.104603	Laurel River
Yes	37.006509	-84.104576	Laurel River
Yes	37.007518	-84.104146	Laurel River
Yes	37.007928	-84.104172	Laurel River
Yes	37.010072	-84.103451	Laurel River
Yes	37.010317	-84.103536	Laurel River
Yes	37.012672	-84.101675	Laurel River
Yes	37.013790	-84.102292	Laurel River

Yes	37.013865	-84.102315	Laurel River
Yes	37.014402	-84.101828	Laurel River
Yes	37.016104	-84.101219	Little Laurel River
Yes	37.018861	-84.100262	Little Laurel River
Yes	37.022747	-84.099985	Little Laurel River
Yes	37.024444	-84.098602	Little Laurel River
Yes	37.024953	-84.098537	Little Laurel River
Yes	37.025091	-84.099892	Little Laurel River
Yes	37.026741	-84.098279	Little Laurel River
Yes	37.028854	-84.099640	Little Laurel River
Yes	37.029661	-84.099642	Little Laurel River
Yes	37.029967	-84.098350	Little Laurel River
No	37.031182	-84.099424	Little Laurel River
Yes	37.031596	-84.098249	Little Laurel River
No	37.038449	-84.098068	Little Laurel River
No	37.038466	-84.097760	Little Laurel River
No	37.038549	-84.097251	Little Laurel River
No	37.040045	-84.097102	Little Laurel River
Yes	37.042299	-84.098207	Little Laurel River
Yes	37.043636	-84.098505	Little Laurel River
Yes	37.045115	-84.098910	Little Laurel River
Yes	37.045452	-84.099238	Little Laurel River

Section IV Comments:

Applicant Comment:

EEC Reviewer Comment:

SECTION V -- IF THE PERMITTED SITE DISCHARGES TO A MS4 THE FOLLOWING INFORMATION IS REQUIRED

Name of MS4:

Date of application/notification to the MS4 for construction site permit coverage:

Date

Discharge Point(s):(*)

Latitude | Longitude

Date

Section V Comments:

Applicant Comment:

EEC Reviewer Comment:

SECTION VI -- WILL THE PROJECT REQUIRE CONSTRUCTION ACTIVITIES IN A WATER BODY OR THE RIPARIAN ZONE?

Will the project require construction activities in a water body or the riparian zone?:(*)	No
If Yes, describe scope of activity: (✓)	describe scope of activity
Is a Clean Water Act 404 permit required?:(*)	Yes
Is a Clean Water Act 401 Water Quality Certification required?:(*)	Yes

Section VI Comments:

Applicant Comment:

EEC Reviewer Comment:

SECTION VII -- NOI PREPARER INFORMATION

First Name:(*)	M.I.:	Last Name:(*)	Company Name:(*)
Tyler	M	Kirby	Kentucky Transportation Cabinet

Mailing Address:(*)	City:(*)	State:(*)	Zip:(*)
603 Railroad Avenue	Manchester	Kentucky	40962

eMail Address:(*)	Business Phone:(*)	Alternate Phone:
tyler.kirby@ky.gov	6065982145	Phone

Section VII Comments:

Applicant Comment:

EEC Reviewer Comment:

SECTION VIII -- ATTACHMENTS

Facility Location Map:(*)	Upload file
Supplemental Information:	Upload file

Section VIII Comments:

Applicant Comment:

EEC Reviewer Comment:

SECTION IX -- CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:(*)		Title:(*)	
Tyler Kirby		Engineer-In-Training II & Interim Environme	
First Name:(*)	M.I.:	Last Name:(*)	
Tyler	MI	Kirby	
eMail Address:(*)	Business Phone:(*)	Alternate Phone:	Signature Date:(*)
tyler.kirby@ky.gov	6065982145	Phone	2/20/2019

Section IX Comments:

Applicant Comment:

EEC Reviewer Comment:

The person in Section 1 must be the same person signing in section 1X

Click to Save Values for Future Retrieval | Click to Submit to EEC

KYTC BMP Plan for Contract ID ######

Kentucky Transportation Cabinet

Highway District 11

And

_____(2), Construction

Kentucky Pollutant Discharge Elimination System
Permit KYR10
Best Management Practices (BMP) Plan
Groundwater Protection Plan
For Highway Construction Activities

For

I-75 Widening in

Laurel County

Contract ID ~~######~~ (2)

Six Year Plan Item 11-9.1

KYTC BMP Plan for Contract ID ######

Project Information

Note — (1) = Design (2) = Construction (3) = Contractor

1. Owner — Kentucky Transportation Cabinet, District 11
2. Resident Engineer: (2)
3. Contractor Name: (2)
   Address: (2)
   Phone number: (2)
   Contact: (2)
   Contractor's agent responsible for compliance with the KPDES permit requirements: (3)
4. Contract ID Number: (2)
5. Route (Address): I-75, Laurel County, KY
6. Latitude/Longitude (project mid-point)

   37° 00' 48" N - 84° 06' 6" W
7. County (project mid-point): Laurel County
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

1.0 SITE DESCRIPTION.

1) **Nature of construction activity (from letting project description).** Major widening of I-75 to 6 lanes from Mile point 28.9 – 34.2 in Laurel County.
2) **Order of major soil disturbing activities.** (2) and (3)
3) **Projected volume of material to be moved.** Approximately 320,000 C Y.
4) **Estimate of total project area (acres).** 166.5 acres.
5) **Estimate of area to be disturbed (acres).** 166.5 acres
6) **Post construction runoff coefficient will be included in the project drainage folder. Persons needing information pertaining to the runoff coefficient will contact the resident engineer to request this information.**
7) **Data describing existing soil condition.** According to the US Agriculture Soil Survey for this area, the soils include the Allegheny Loam, Bonnie Silt Loam, Lily Loam, Shelocta Loam and Whitley Silt Loam.
8) **Data describing existing discharge water quality (if any).** Existing discharge is in the form of point discharges with little to no BMPs associated with them.
9) **Receiving water name.** Laurel and Little Laurel River and un-named tributaries to those rivers.
10) **TMDLs and Pollutants of Concern in Receiving Waters.** There are no TMDLs on Laurel and Little Laurel Rivers.
11) **Site Map. Project layout sheet plus the erosion control sheets in the project plans that depict Disturbed Drainage Areas (DDAs) and related information. These sheets depict the existing project conditions with areas delineated by DDA (drainage area bounded by watershed breaks and right of way limits), the storm water discharge locations (either as a point discharge or as overland flow) and the areas that drain to each discharge point. These plans define the limits of areas to be disturbed and the location of control measures. Controls will be either site specific as designated by the designer or will be annotated by the contractor and resident engineer before disturbance commences. The project layout sheet shows the surface waters and wetlands.**
12) **Potential sources of pollutants. The primary source of pollutants is solids that are mobilized during storm events. Other sources of pollutants include oil/fuel/grease from servicing and operating construction equipment, concrete washout water, sanitary wastes and trash/debris.** (3)

2.0 SEDIMENT AND EROSION CONTROL MEASURES.

2.1 Erosion Control Sheets. Plans for highway construction projects will include erosion control sheets that depict Disturbed Drainage Areas (DDAs) and related information. These plan sheets will show the existing project conditions with areas delineated by DDA within the right of way limits, the discharge points and the areas that drain to each discharge point.

Project managers and designers will analyze the DDAs and identify Best Management Practices (BMPs) that are site specific. The balance of the BMPs for the project will be listed in the bid documents for selection and use by the contractor on the project with approval by the resident engineer.

Projects that do not have DDAs annotated on the erosion control sheets will employ the same concepts for development and managing BMP plans.

KYTC BMP Plan for Contract ID ######

The following non-structural BMPs will be implemented throughout the project duration:

- Sediment control BMPs will be maintained when the sediment reaches 1/3 the depth of the BMP.
- Appropriate stock of straw erosion control blanket (ECB) and straw bales shall be available onsite at all times.
- Straw ECB or seeding mulched with blown straw followed by crimping shall be applied within 7 days of the cessation of the land disturbing activity. If blown straw is used, the blower and crimping equipment shall be kept on-site during land disturbing activities.
- Disturbed areas shall be stabilized prior to a forecasted rain event.
- EPSC/SWPPP inspections shall be performed at least twice a week.

2.2 Annotations. Following award of the contract, the contractor and resident engineer will annotate the erosion control sheets showing location and type of BMPs for each of the DDAs that will be disturbed at the outset of the project. This annotation will be accompanied by an order of work that reflects the order or sequence of major soil moving activities. The remaining DDAs are to be designated as "Do Not Disturb" until the contractor and resident engineer prepare the plan for BMPs to be employed. The initial BMPs shall be for the first phase (generally Clearing and Grubbing) and shall be modified as needed as the project changes phases. The BMP Plan will be modified to reflect disturbance in additional DDA's as the work progresses. All DDA's will have adequate BMPs in place before being disturbed.

2.3 Disturbed Drainage Areas. As DDAs are prepared for construction, the following will be addressed for the project as a whole or for each DDA as appropriate:

A) Construction Access. This is the first land-disturbing activity. As soon as construction begins, bare areas will be stabilized with straw ECB or straw followed by crimping and designated construction entrances will be installed.

B) Sources. At the beginning of the project, all DDAs for the project will be inspected for areas that are a source of storm water pollutants. Areas that are a source of pollutants will receive appropriate cover or BMPs to arrest the introduction of pollutants into storm water. Areas that have not been opened by the contractor will be inspected periodically (once per month) to determine if there is a need to employ BMPs to keep pollutants from entering storm water.

C) Clearing and Grubbing. The following BMPs will be considered and used where appropriate.

1) Leaving areas undisturbed when possible.
2) Silt Basins to provide silt volume for large areas.
2) Silt Traps Type A for small areas.
3) Silt Traps Type C in front of existing and drop inlets which are to be saved.
4) Diversion ditches to catch sheet runoff and carry it to basins or traps or to divert it around areas to be disturbed.
5) Brush and/or other barriers to slow and/or divert runoff.
6) Silt fences to catch sheet runoff on short slopes. For longer slopes, multiple rows of silt fence may be considered.
7) Temporary Mulch for areas which are not feasible for the fore mentioned types of protections.

8) Non-standard or innovative methods.
9) Spill Containment Areas to protect sinkholes and outfalls.

D) Cut and FM and Placement of Drainage Structures. The BMP Plan will be modified to show additional BMPs such as:

1) Silt Traps Type B in ditches and/or drainways as they are completed.
2) Silt Traps Type C in front of pipes after they are placed.
3) Channel Lining
4) Erosion Control Blanket
5) ECB and/or straw, seeding and crimping for areas where construction activities will be ceased for seven days or more.
6) Non-standard or innovative methods.

E) Profile and X-Section in Place. The BMP Plan will be modified to show elimination of BMPs which had to be removed and the addition of new BMPs as the roadway was shaped. Probably changes include:

1) Silt Trap Type A, Brush and/or other barriers, Temporary Mulch, and any other BMP which had to be removed for final grading to take place.
2) Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
3) Additional Channel Lining and/or Erosion Control Blanket and/or Turf Reinforcement Mats.
4) Temporary Mulch and/or seeding for areas where construction activities will be ceased for seven days or more.

F) Finish Work (Paving, Seeding, Protect, etc.). A final BMP Plan will result from modifications during this phase of construction. Probable changes include:

1) Removal of Silt Traps Type B from ditches and drainways if they are protected with other BMPs which are sufficient to control erosion, i.e. Erosion Control Blanket, Turf Reinforcement Mats or Permanent Seeding and Protection on moderate grades.
2) Permanent Seeding and Protection.
3) Placing Sod.

G) Post Construction. BMPs, including Karst policy BMPs, to be installed during construction to control the pollutants in stormwater discharges that will occur after construction has been completed are:

- Filter ditches: Filter ditches are grass swales placed at the outlets of some of the spill containment areas to promote infiltration and vegetative filtering.

- Spill containment areas: Detention/containment basins for capturing accidental spills on the newly constructed roadway will be provided in accordance with KYTC's Design Policy.

3.0 OTHER CONTROL MEASURES.

1) Solid Materials. No solid materials, including building materials, shall be discharged to waters of the commonwealth, except as authorized by a Section 404 permit.
2) Waste Materials. All waste materials that may leach pollutants (paint and paint containers, caulk tubes, oil/grease containers, liquids of any kind, soluble materials, etc.) will be collected and stored in appropriate covered waste containers. Waste containers shall be removed from the project site on a sufficiently frequent basis as to not allow wastes to become a source of pollution. All personnel will be instructed regarding the correct procedure for waste disposal. Wastes will be disposed in accordance with appropriate regulations. Notices stating these practices will be posted in the office.
3) Hazardous Waste. All hazardous waste materials will be managed and disposed of in the manner specified by local or state regulation. The contractor shall notify the Resident Engineer if there are any hazardous wastes being generated at the project site and how these wastes are being managed. Site personnel will be instructed with regard to proper storage and handling of hazardous wastes when required. The Transportation Cabinet will file for generator, registration when appropriate, with the Division of Waste Management and advise the contractor regarding waste management requirements.
4) Spill Prevention. The following material management practices will be used to reduce the risk of spills or other exposure of materials and substances to the weather and/or runoff. (3)

3.1 Good Housekeeping. The following good housekeeping practices will be followed onsite during the construction project.

1) An effort will be made to store only enough product required to do the job.
2) All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
3) Products will be kept in their original containers with the original manufacturer's label.
4) Substances will not be mixed with one another unless recommended by the manufacturer.
5) Whenever possible, all of the product will be used up before disposing of the container.
6) Manufacturers' recommendations for proper use and disposal will be followed
7) The site contractor will inspect daily to ensure proper use and disposal of materials onsite.

3.2 Hazardous Products. These practices will be used to reduce the risks associated with any and all hazardous materials.

1) Products will be kept in original containers unless they are not re-sealable.
2) Original labels and material safety data sheets (MSDS) will be reviewed and retained.
3) Contractor will follow procedures recommended by the manufacturer when handling hazardous materials.
4) If surplus product must be disposed of, manufacturers' or state/local recommended methods for proper disposal will be followed.

3.3 The following product-specific practices will be followed onsite:

A) Petroleum Products. Vehicles and equipment that are fueled and maintained on site will be monitored for leaks, and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products onsite will be stored in tightly sealed containers, which are clearly labeled and will be protected from exposure to weather.

The contractor shall prepare an Oil Pollution Spill Prevention Control and Countermeasure plan when the project that involves the storage of petroleum products in 55 gallon or larger containers with a total combined storage capacity of 1,320 gallons. This is a requirement of 40 CFR 112.

This project (will / will not) (3) have over 1,320 gallons of petroleum products with a total capacity, sum of all containers 55 gallon capacity and larger.

B) Fertilizers. Fertilizers will be applied at rates prescribed by the contract, standard specifications or as directed by the resident engineer. Once applied, fertilizer will be covered with mulch or blankets or worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

C) Paints. All containers will be tightly sealed and stored indoors or under roof when not being used. Excess paint or paint wash water will not be discharged to the drainage or storm sewer system but will be properly disposed of according to manufacturers' instructions or state and local regulations.

D) Concrete Truck Washout. Concrete truck mixers and chutes will not be washed on pavement, near storm drain inlets, or within 75 feet of any ditch, stream, wetland, lake, or sinkhole. Where possible, excess concrete and wash water will be discharged to areas prepared for pouring new concrete, flat areas to be paved that are away from ditches or drainage system features, or other locations that will not drain off site. Where this approach is not possible, a shallow earthen wash basin will be excavated away from ditches to receive the wash water.

E) Spill Control Practices. In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup:

1) Manufacturers' recommended methods for spill cleanup will be clearly posted. All personnel will be made aware of procedures and the location of the information and cleanup supplies.
2) Materials and equipment necessary for spill cleanup will be kept in the material storage area. Equipment and materials will include as appropriate, brooms, dust pans, mops, rags, gloves, oil absorbents, sand, sawdust, and plastic and metal trash containers.
3) All spills will be cleaned up immediately after discovery.
4) The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contract with a hazardous substance.
5) Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.
6) The spill prevention plan will be adjusted as needed to prevent spills

from reoccurring and improve spill response and cleanup.

7) Spills of products will be cleaned up promptly. Wastes from spill clean-up will be disposed in accordance with appropriate regulations. Spills will be addressed in the "dry", and will not be "washed away" to clean.

4.0 OTHER STATE AND LOCAL PLANS. This BMP plan shall include any requirements specified in sediment and erosion control plans, storm water management plans or permits that have been approved by other state or local officials. Upon submittal of the NOI, other requirements for surface water protection are incorporated by reference into and are enforceable under this permit (even if they are not specifically included in this BMP plan). This provision does not apply to master or comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit issued for the construction site by state or local officials. (1)

5.0 MAINTENANCE. The BMP plan shall include a clear description of the maintenance procedures necessary to keep the control measures in good and effective operating condition.

Maintenance of BMPs during construction shall be a result of twice a week and post rain event inspections with action being taken by the contractor to correct deficiencies within three working days.

Post Construction maintenance will be a function of normal highway maintenance operations. Following final project acceptance by the cabinet, district highway crews will be responsible for identification and correction of deficiencies regarding ground cover and cleaning of storm water BMPs. Post-construction BMP maintenance will be covered in the cabinets MS4 permit under MCM 5 activities.

6.0 INSPECTIONS. Inspection and maintenance practices that will be used to maintain erosion and sediment controls:

1) All erosion prevention and sediment control measures will be inspected by the Contractor at least twice each week.
2) Inspections will be conducted by individuals that have received Kentucky Erosion Prevention and Sediment Control – Roadway Inspector (KEPSC-RI) training or other qualification as prescribed by the Cabinet that includes instruction concerning erosion prevention and sediment control.
3) Inspection reports will be written, signed, dated, and kept on file.
4) Stabilization of disturbed areas shall be performed within 7 days of the cessation of the land disturbing activity.
5) Disturbed areas shall be stabilized prior to a forecasted rain event.
6) Sediment control BMPs will be maintained when the sediment reaches 1/3 the depth of the BMP.
7) All measures will be maintained in good working order. If a repair is necessary, it will be initiated within 24 hours of being reported and completed within three working days.
8) Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
9) Diversion dikes and berms will be inspected and any breaches promptly repaired. Areas that are eroding or scouring will be repaired and re-seeded / mulched as needed.

10) Temporary and permanent seeding and mulching will be inspected for bare spots, washouts, and healthy growth. Bare or eroded areas will be repaired as needed.
11) All material storage and equipment servicing areas that involve the management of bulk liquids, fuels, and bulk solids will be inspected weekly for conditions that represent a release or possible release of pollutants to the environment.

7.0 NON-STORM WATER DISCHARGES. It is expected that non-storm water discharges may occur from the site during the construction period. Examples of non-storm water discharges include:

1) Water from water line flushings.
2) Water form cleaning concrete trucks and equipment.
3) Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
4) Uncontaminated groundwater and rain water (from dewatering during excavation).

All non-storm water discharges will be directed to the sediment basin or to a filter fence enclosure in a flat vegetated infiltration area or be filtered via another approved commercial product.

8.0 GROUNDWATER PROTECTION PLAN.

This plan serves as the groundwater protection plan as required by 401 KAR 5:037.

Contractor's statement: (3)

The following activities, as enumerated by 401 KAR 5:037 Section 2, require the preparation and implementation of a groundwater protection plan, and will or may be conducted as part of this construction project: (2)

____ (a) Land treatment or land disposal of a pollutant;

_ (b) Storing, treating, disposing, or related handling of hazardous waste, solid waste or
special waste, or special waste in landfills, incinerators, surface impoundments, tanks, drums, or other containers, or in piles, (This does not include wastes managed in a container placed for collection and removal of municipal solid waste for disposal off site);

(c) Handling of materials in bulk quantities (equal or greater than 55 gallons or 100 pounds net dry weight transported held in an individual container) that, if released to the environment, would be a pollutant;

(d) Storing or related handling of road oils, dust suppressants, or deicing agents at a
central location;

_____ (e) Application or related handling of road oils, dust suppressants or deicing

materials,
(does not include use of chloride-based deicing materials applied to roads or parking lots);

(f) Installation, construction, operation, or abandonment of wells, bore holes, or core holes, (this does not include bore holes for the purpose of explosive demolition);

Or, check the following only if there are no qualifying activities

____ There are no activities for this project as listed in 401 KAR 5:037 Section 2 that require
the preparation and implementation of a groundwater protection plan.

The contractor is responsible for the preparation of a plan that addresses the 401 KAR 5:037 Section 3. (3)

Elements of site specific groundwater protection plan:

(a) General information about this project is covered in the Project information;
(b) Activities that require a groundwater protection plan have been identified above;
(c) Practices that will protect groundwater from pollution are addressed in Section 3. Other Control Measures.
(d) Implementation schedule — all practices required to prevent pollution of groundwater are to be in place prior to conducting the activity;
(e) Training is required as a part of the ground water protection plan. All employees of the contractor, sub-contractor and resident engineer personnel will be trained to understand the nature and requirements of this plan as they pertain to their job function(s). Training will be accomplished within one week of employment and annually thereafter. A record of training will be maintained by the contractor with a copy provide to the resident engineer.
(f) Groundwater plan activities will be inspected during the EPSC inspections
(g) Certification (see signature page.)

KYTC BMP Plan for Contract ID ######

Contractor and Resident Engineer Plan Certification

The contractor that is responsible for implementing this BMP plan is identified in the Project Information section of this plan.

The following certification applies to all parties that are signatory to this BMP plan:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Further, this plan complies with the requirements of 401 KAR 5:037. By this certification, the undersigned state that the individuals signing the plan have reviewed the terms of the plan and will implement its provisions as they pertain to ground water protection.

Contractor and Resident Engineer Certification:

([3]) Signed _____ title _____

typed or printed name' *signature*

(2) Signed _____ title _____

typed or printed name[2] *signature*

1. *Contractors Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5: 060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 200 Fair Oaks Lane, Fourth Floor, Frankfort, Kentucky 40601. Reference the Contract ID number and KPDES number when one has been issued.*

2. *KYTC Note: to be signed by the Chief District Engineer or a person designated to have the authority to sign reports by such a person (usually the resident engineer) in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 300 Sower Blvd, Frankfort, Kentucky 40601 Reference the Contract ID number and KPDES number when one has been issued.*

Sub-Contractor Certification

The following sub-contractor shall be made aware of the BMP plan and responsible for implementation of BMPs identified in this plan as follows:

Subcontractor Name:

Address:

Phone:

The part of BMP plan this subcontractor is responsible to implement is:

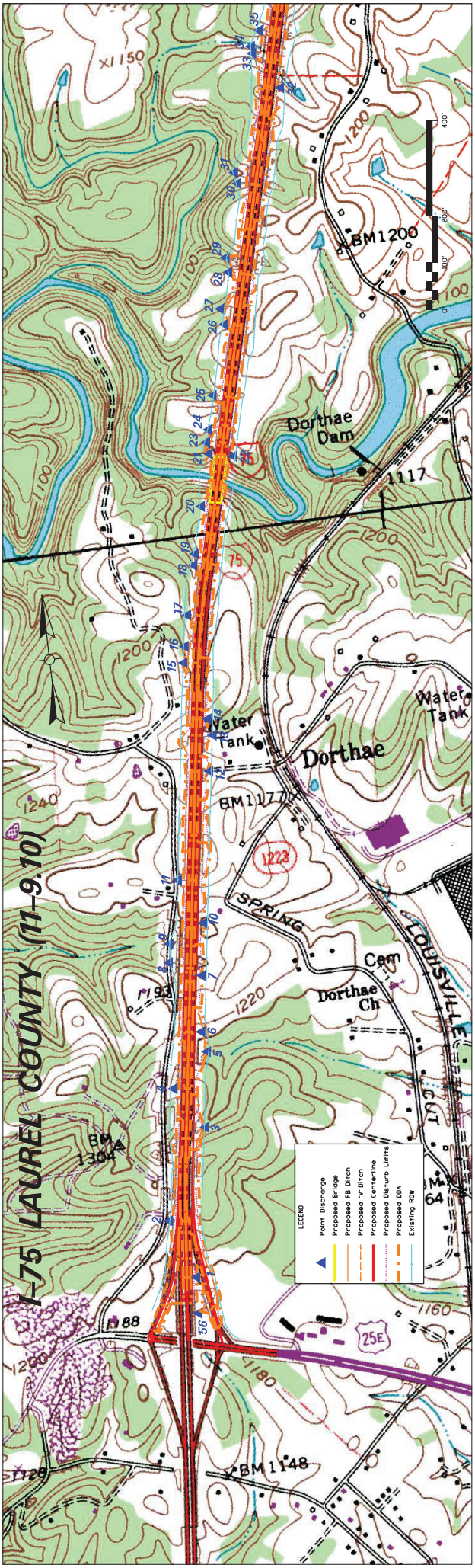
I certify under penalty of law that I understand the terms and conditions of the general Kentucky Pollutant Discharge Elimination System permit that authorizes the storm water discharges, the BMP plan that has been developed to manage the quality of water to be discharged as a result of storm events associated with the construction site activity and management of non-storm water pollutant sources identified as part of this certification.

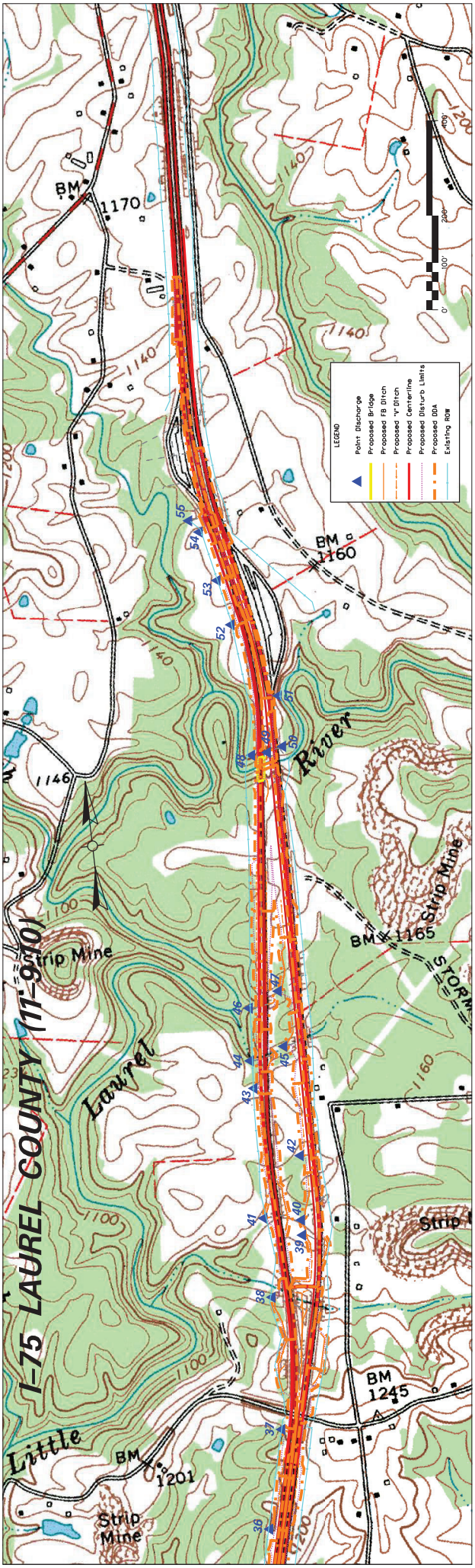
Signed _____ _____ _____

typed *or*

printed name[1] *title* *signature*

1. *Sub Contractor Note: To be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 300 Sower Blvd., Frankfort, Kentucky 40601. Reference the Contract ID number and KPDES number when one has been issued.*


I-75 LAUREL COUNTY (11-9.10)
BM1200
Dorthae Dam
1117
Water Tank
Dorthae
BM1177
1223
SPRING
Cem
Dorthae Ch
LOUISVILLE
BM 1304
25E
BM1148
LEGEND
Point Discharge
Proposed Bridge
Proposed FB Ditch
Proposed V-Ditch
Proposed Centerline
Proposed Disturb Limits
Proposed DDA
Existing ROW


I-75 LAUREL COUNTY (11-9010)
Laurel River
Little
Strip Mine
Strip Mine
Strip Mine
BM 1170
BM 1160
BM 1165
BM 1245
BM 1201
1140
1100
1160
1200
LEGEND
Point Discharge
Proposed Bridge
Proposed FB Ditch
Proposed V Ditch
Proposed Centerline
Proposed Disturb Limits
Proposed DDA
Existing ROW

COUNTY OF	ITEM NO.	SHEET NO.
LAUREL	11-9.10	

I-75 DISCHARGE POINTS

ROAD	DDA	STATION	OFFSET	NORTHING	EASTING	LATITUDE	LONGITUDE
				STATE PLANE COORDINATES			
I-75	1	1320+46.97	100.50	3520053.6085	5400191.5788	36.9787474	84.1103870
I-75	2	1326+46.08	-134.26	3520672.6970	5400016.1559	36.9804559	84.1109502
I-75	3	1336+22.29	154.71	3521606.2773	5400425.1182	36.9829998	84.1094942
I-75	4	1340+45.35	-98.85	3522060.8113	5400233.6237	36.9842572	84.1101224
I-75	5	1344+06.42	161.08	3522381.6970	5400541.7897	36.9851235	84.1090482
I-75	6	1346+45.63	129.61	3522622.9588	5400544.3051	36.9857859	84.1090251
I-75	7	1352+46.57	97.21	3523222.2633	5400597.3901	36.9874290	84.1088073
I-75	8	1353+69.62	-183.19	3523383.8978	5400337.3154	36.9878854	84.1096878
I-75	9	1355+71.77	-212.06	3523588.0994	5400337.4575	36.9884462	84.1096750
I-75	10	1357+46.01	132.29	3523711.6529	5400703.0692	36.9887678	84.1084161
I-75	11	1362+45.38	-122.76	3524242.1882	5400521.5577	36.9902334	84.1090055
I-75	12	1374+03.37	110.44	3525355.3103	5400916.9078	36.9932710	84.1075850
I-75	13	1377+80.86	135.46	3525725.4077	5400995.3021	36.9942835	84.1072943
I-75	14	1379+54.80	97.72	3525902.9529	5400982.6618	36.9947716	84.1073269
I-75	15	1385+45.02	-107.26	3526518.1361	5400866.4017	36.9964666	84.1076879
I-75	16	1387+03.98	-102.91	3526675.4888	5400897.8559	36.9968971	84.1075707
I-75	17	1390+44.47	-107.05	3527013.5569	5400959.3428	36.9978225	84.1073398
I-75	18	1395+92.17	-112.15	3527551.9772	5401079.8156	36.9992952	84.1068949
I-75	19	1396+42.99	-109.02	3527600.5447	5401095.1328	36.9994278	84.1068395
I-75	20	1401+93.77	-100.15	3528132.8707	5401236.7617	37.0008828	84.1063226
I-75	21	1407+62.42	-74.93	3528678.5944	5401398.5755	37.0023735	84.1057356
I-75	22	1407+62.42	74.92	3528642.4004	5401543.9970	37.0022671	84.1052399
I-75	23	1408+89.08	-112.46	3528810.5681	5401392.7565	37.0027362	84.1057476
I-75	24	1410+03.76	-91.32	3528916.7542	5401440.9640	37.0030254	84.1055761
I-75	25	1413+77.42	-112.04	3529284.3557	5401511.1098	37.0040315	84.1053138
I-75	26	1421+39.68	-101.29	3530021.4541	5401705.6368	37.0060462	84.1046032
I-75	27	1423+04.53	-137.33	3530190.1269	5401710.4799	37.0065091	84.1045765
I-75	28	1426+91.90	-111.11	3530559.6875	5401829.4848	37.0075182	84.1041467
I-75	29	1428+34.24	-156.87	3530708.8746	5401819.4553	37.0079283	84.1041720
I-75	30	1436+42.84	-155.48	3531493.1931	5402016.1000	37.0100725	84.1034513
I-75	31	1437+22.50	-202.53	3531581.8616	5401989.6797	37.0103173	84.1035364
I-75	32	1446+91.48	100.76	3532448.9665	5402517.8836	37.0126728	84.1016753
I-75	33	1450+38.14	-178.47	3532852.7574	5402330.5480	37.0137907	84.1022924
I-75	34	1450+73.10	-194.81	3532890.6235	5402323.1262	37.0138950	84.1023155
I-75	35	1452+88.18	-105.16	3533077.7210	5402462.0201	37.0144021	84.1018286
I-75	36	1459+33.07	-93.45	3533700.7327	5402628.9835	37.0161048	84.1012192

I-75 DISCHARGE POINTS

ROAD	DDA	STATION	OFFSET	NORTHING	EASTING	LATITUDE	LONGITUDE
				STATE PLANE COORDINATES			
I-75 S.B.	37	1469+75.19	-17.85	3534709.0669	5402890.6616	37.0188610	84.1002620
I-75 S.B.	38	1484+07.96	-96.11	3536125.2121	5402946.3884	37.0227470	84.0999854
I-75 N.B.	39	1490+88.70	-135.81	3536750.5329	5403339.2082	37.0244451	84.0986022
I-75 N.B.	40	1492+79.14	-133.55	3536935.8677	5403354.8264	37.0249533	84.0985375
I-75 S.B.	41	1492+61.41	-60.66	3536979.3175	5402958.4328	37.0250919	84.0998924
I-75 N.B.	42	1499+37.44	-86.59	3537588.2882	5403418.5939	37.0267418	84.0982796
I-75 S.B.	43	1506+29.81	-26.27	3538350.4200	5403007.8524	37.0288545	84.0996401
I-75 S.B.	44	1509+21.16	-55.94	3538644.2454	5403001.8810	37.0296617	84.0996428
I-75 N.B.	45	1511+10.29	-152.19	3538762.2268	5403376.9981	37.0299674	84.0983509
I-75 S.B.	46	1514+77.51	-62.61	3539199.1080	5403055.8630	37.0311827	84.0994243
I-75 N.B.	47	1517+04.17	-145.13	3539355.8401	5403396.2071	37.0315966	84.0982491
I-75 S.B.	48	1541+52.51	-14.42	3541851.6862	5403404.8743	37.0384498	84.0980681
I-75 S.B.	49	1541+70.07	73.69	3541859.2113	5403494.4086	37.0384661	84.0977609
I-75 N.B.	50	1542+45.16	49.92	3541892.3133	5403642.4207	37.0385498	84.0972519
I-75 N.B.	51	1547+89.52	73.24	3542437.4480	5403676.3453	37.0400451	84.0971026
I-75 S.B.	52	1555+72.01	-55.03	3543252.3013	5403339.2419	37.0422991	84.0982079
I-75 S.B.	53	1560+67.04	-52.28	3543737.4683	5403243.6748	37.0436361	84.0985059
I-75 S.B.	54	1566+18.20	-70.38	3544273.9799	5403116.1781	37.0451155	84.0989101
I-75 S.B.	55	1567+54.87	-142.62	3544395.0755	5403018.1859	37.0454528	84.0992385
RAMP D	56	502+28.28	-97.63	3519740.6565	5400236.1080	36.9778859	84.1102534

MicroStation v8.11.9.357 | E-SHEET NAME: | USER: mwirtzberger DATE PLOTTED: February 14, 2019 | FILE NAME: w:\1502\EXHIBITS\ENGLDGN

SCALE: N/A

I-75
EROSION CONTROL
DISCHARGE POINTS

GUARDRAIL DELIVERY VERIFICATION SHEET

Contract Id: _____ **Contractor: _____**

Section Engineer: _____ **District & County: _____**

DESCRIPTION	UNIT	QTY LEAVING PROJECT	QTY RECEIVED@BB YARD
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

1I

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.

1I

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

1I

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:

Code	Pay Item	Pay Unit
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

11D

SPECIAL NOTE FOR ROCK BLASTING

This Special Note will apply when 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 work consists of fracturing rock and constructing stable final rock cut faces using presplit blasting and production blasting techniques.

2.0 MATERIALS. Deliver, store, and use explosives according to the manufacturer's recommendations and applicable laws. Do not use explosives outside their recommended use date. Verify date of manufacture and provide copies of the technical data sheets (TDS) and material safety data sheets (MSDS) to the Engineer. Explosives and initiating devices include, but are not necessarily limited to, dynamite and other high explosives, slurries, water gels, emulsions, blasting agents, initiating explosives, detonators, blasting caps, and detonating cord.

3.0 CONSTRUCTION. Furnish copies or other proof of all-applicable permits and licenses. Comply with Federal, State, and local regulations on the purchase, transportation, storage, and use of explosive material. Regulations include but are not limited to the following:

1) KRS 351.310 through 351.9901.
2) 805 KAR 4:005 through 4:165
3) Applicable rules and regulations issued by the Office of Mine Safety and Licensing.
4) Safety and health. OSHA, 29 CFR Part 1926, Subpart U.
5) Storage, security, and accountability. Bureau of Alcohol, Tobacco, and Firearms (BATF), 27 CFR Part 181.
6) Shipment. DOT, 49 CFR Parts 171-179, 390-397.

3.1 Blaster-in-Charge. Designate in writing a blaster-in-charge and any proposed alternates for the position. Submit documentation showing the blaster-in-charge, and alternates, have a valid Kentucky blaster's license. Ensure the blaster-in-charge or approved alternate is present at all times during blasting operations.

3.2 **Blasting Plans.** Blasting plans and reports are for quality control and record keeping purposes. Blasting reports are to be signed by the blaster-in-charge or the alternate blaster-in-charge. The general review and acceptance of blasting plans does not relieve the Contractor of the responsibility whatsoever for conformance to regulations or for obtaining the required results. All blasting plans shall be submitted to the Engineer. The Engineer will be responsible for submitting the plan to the Central Office Division of Construction and the Division of Mine Reclamation and Enforcement, Explosives and Blasting Branch at the following address: 2 Hudson Hollow, Frankfort, Kentucky, 40601.

A) General Blasting Plan. Submit a general blasting plan for acceptance at least 15 working days before drilling operations begin. Include, as a minimum, the following safety and procedural details:

1) Working procedures and safety precautions for storing, transporting, handling, detonating explosives. Include direction on pre and post blast audible procedures, methods of addressing misfires, and methods of addressing inclement weather, including lightning.
2) Proposed product selection for both dry and wet holes. Furnish Manufacturer's TDS and MSDS for all explosives, primers, initiators, and other blasting devices.
3) Proposed initiation and delay methods.
4) Proposed format for providing all the required information for the site specific blasting shot reports.

B) Preblast Meeting. Prior to drilling operations, conduct a preblast meeting to discuss safety and traffic control issues and any site specific conditions that will need to be addressed. Ensure, at a minimum, that the Engineer or lead inspector, Superintendent, blaster-in-charge, and all personnel involved in the blasting operation are present. Site specific conditions include blast techniques; communication procedures; contingency plans and equipment for dealing with errant blast material. The conditions of the General Blasting plan will be discussed at this meeting. Record all revisions and additions made to the blasting plan and obtain written concurrence by the blaster-in-charge. Provide a copy of the signed blast plan to the Engineer along with the sign in sheet from the preblast meeting.

3.3 Preblast Condition Survey and Vibration Monitoring and Control. Before blasting, arrange for a preblast condition survey of nearby buildings, structures, or utilities, within 500 feet of the blast or that could be at risk from blasting damage. Provide the Engineer a listing of all properties surveyed and any owners denying entry or failing to respond. Notify the Engineer and occupants of buildings at risk at least 24 hours before blasting.

Limit ground vibrations and airblast to levels that will not exceed limits of 805 KAR 4:005 through 4:165. More restrictive levels may be specified in the Contract.

Size all blast designs based on vibration, distance to nearest building or utility, blast site geometry, atmospheric conditions and other factors. Ground vibrations are to be controlled according to the blasting standards and scaled distance formulas in 805 KAR 4:020 or by the use of seismographs as allowed in 805 KAR 4:030. The Department will require seismographs at the nearest allowable location to the protected site when blasting occurs within 500 feet of buildings, structures, or utilities.

3.4 Blasting. Drill and blast at the designated slope lines according to the blasting plan. Perform presplitting to obtain smooth faces in the rock and shale formations. Perform the presplitting before blasting and excavating the interior portion of the specified cross section at any location. The Department may allow blasting for fall benches and haul roads prior to presplitting when blasting is a sufficient distance from the final slope and results are satisfactory to the Engineer. Use the types of explosives and blasting accessories necessary to obtain the required results.

Free blast holes of obstructions for their entire depth. Place charges without caving the blast hole walls. Stem the upper portion of all blast holes with dry sand or other granular material passing the 3/8-inch sieve. Dry drill cuttings are acceptable for stemming when blasts are more than 800 feet from the nearest dwelling.

Stop traffic during blasting operations when blasting near any road and ensure traffic does not pass through the Danger Zone. The blaster-in-charge will define the Danger Zone prior to each blast. Ensure traffic is stopped outside the Danger Zone, and in no case within 800 feet of the blast location.

Following a blast, stop work in the entire blast area, and check for misfires before allowing worker to return to excavate the rock.

Remove or stabilize all cut face rock that is loose, hanging, or potentially dangerous. Leave minor irregularities or surface variations in place if they do not create a hazard. Drill the next lift only after the cleanup work and stabilization work is complete.

When blasting operations cause fracturing of the final rock face, repair or stabilize it in an approved manner at no cost to the Department.

Halt blasting operations in areas where any of the following occur:

1) Slopes are unstable;
2) Slopes exceed tolerances or overhangs are created;
3) Backslope damage occurs;
4) Safety of the public is jeopardized;
5) Property or natural features are endangered;
6) Fly rock is generated; or
7) Excessive ground or airblast vibrations occur in an area where damage to buildings, structures, or utilities is possible.
8) The Engineer determines that materials have become unsuitable for blasting

Blasting operations may continue at a reasonable distance from the problem area or in areas where the problems do not exist. Make the necessary modifications to the blasting operations and perform a test blast to demonstrate resolution of the problem.

A) Drill Logs. Maintain a layout drawing designating hole numbers with corresponding drill logs and provide a copy of this information to the blaster prior to loading the hole. Ensure the individual hole logs completed by the driller(s) show their name; date drilled; total depth drilled; and depths and descriptions of significant conditions encountered during drilling that may affect loading such as water, voids, changes in rock type.

B) Presplitting. Conduct presplitting operations in conformance with Subsection 204.03.04 of the Standard Specifications for Road and Bridge Construction.

3.5 Shot Report. Maintain all shot reports on site for review by the Department. Within one day after a blast, complete a shot report according to the record keeping requirements of 805 KAR 4:050. Include all results from airblast and seismograph monitoring.

3.6 Unacceptable Blasting. When unacceptable blasting occurs, the Department will halt all blasting operations. Blasting will not resume until the Department completes its investigation and all concerns are addressed. A blast is unacceptable when it results in fragmentation beyond the final rock face, fly rock, excessive vibration or airblast, overbreak, damage to the final rock face or overhang. Assume the cost for all resulting damages to private and public property and hold the Department harmless.

11D

When an errant blast or fly rock causes damage to or blocks a road or conveyance adjacent to the roadway, remove all debris from the roadway as quickly as practicable and perform any necessary repairs. Additionally, when specified in the Contract, the Department will apply a penalty.

Report all blasting accidents to the Division of Mine Reclamation and Enforcement, Explosives and Blasting Branch at 502-564-2340.

4.0 MEASUREMENT AND PAYMENT. The Department will not measure this work for payment and will consider all items contained in this note to be incidental to either Roadway Excavation or Embankment-in-Place, as applicable. However, if the Engineer directs in writing slope changes, then the Department will pay for the second presplitting operation as Extra Work.

The Department will measure for payment material lying outside the typical section due to seams, broken formations, or earth pockets, including any earth overburden removed with this material, only when the work is performed under authorized adjustments.

The Department will not measure for payment any extra material excavated because of the drill holes being offset outside the designated slope lines.

The Department will not measure for payment any material necessary to be removed due to the inefficient or faulty blasting practices.

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).

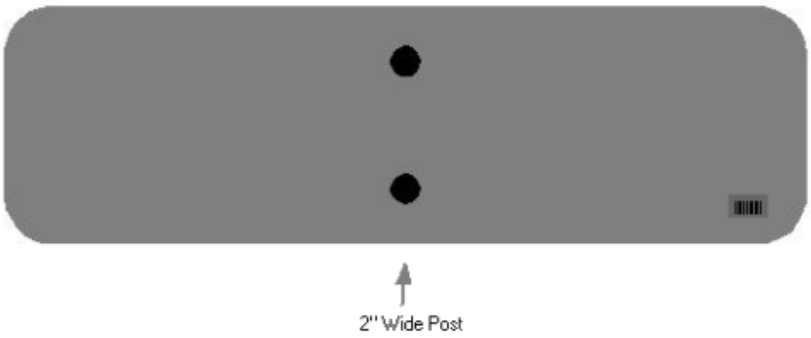
The installation of the permanent sign will be measured in accordance to Section 715.

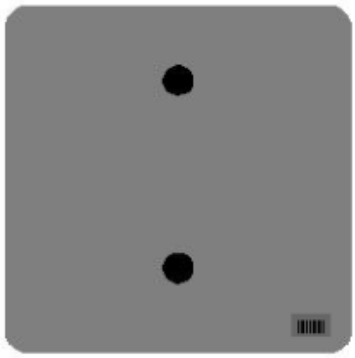
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
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





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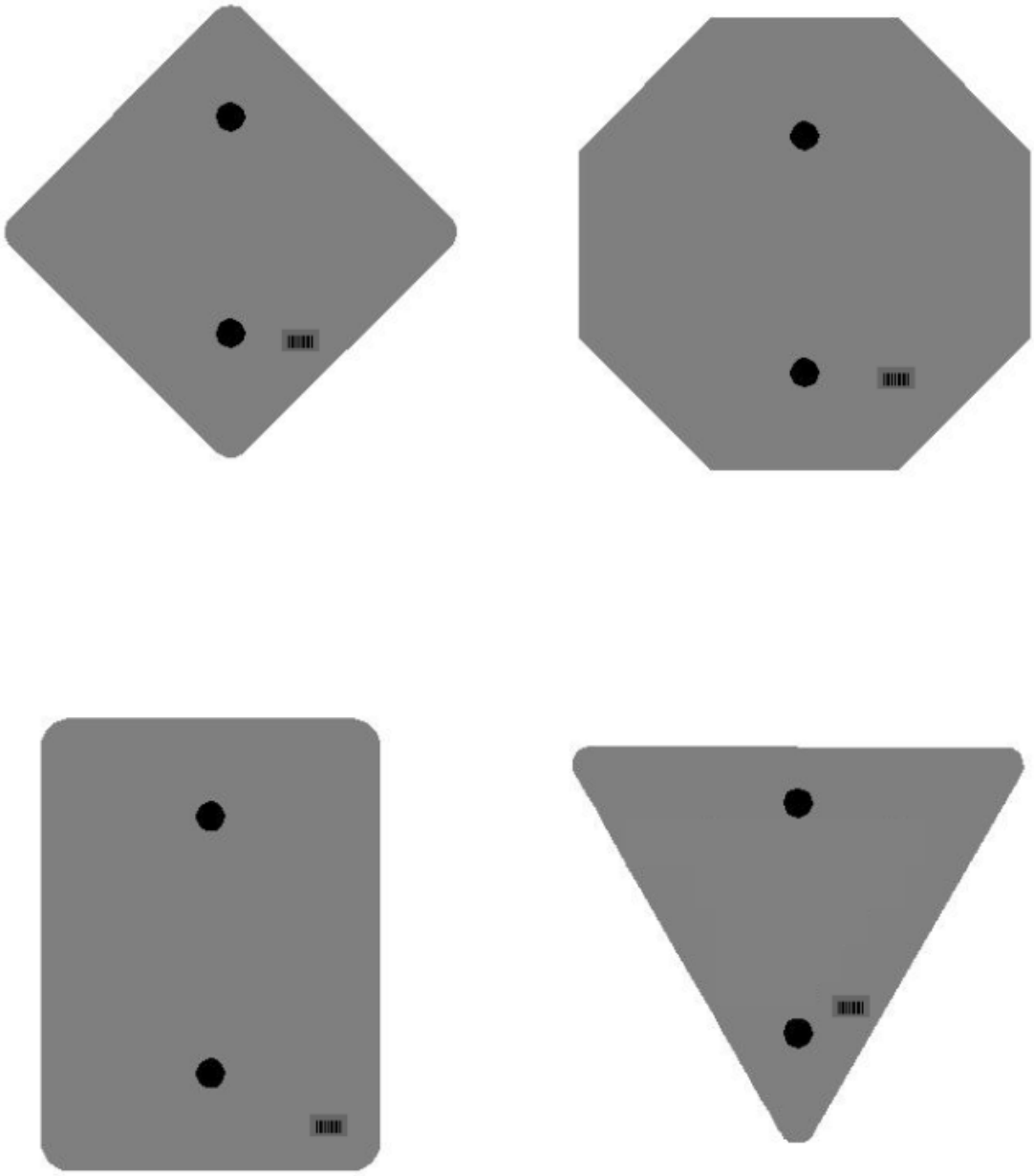
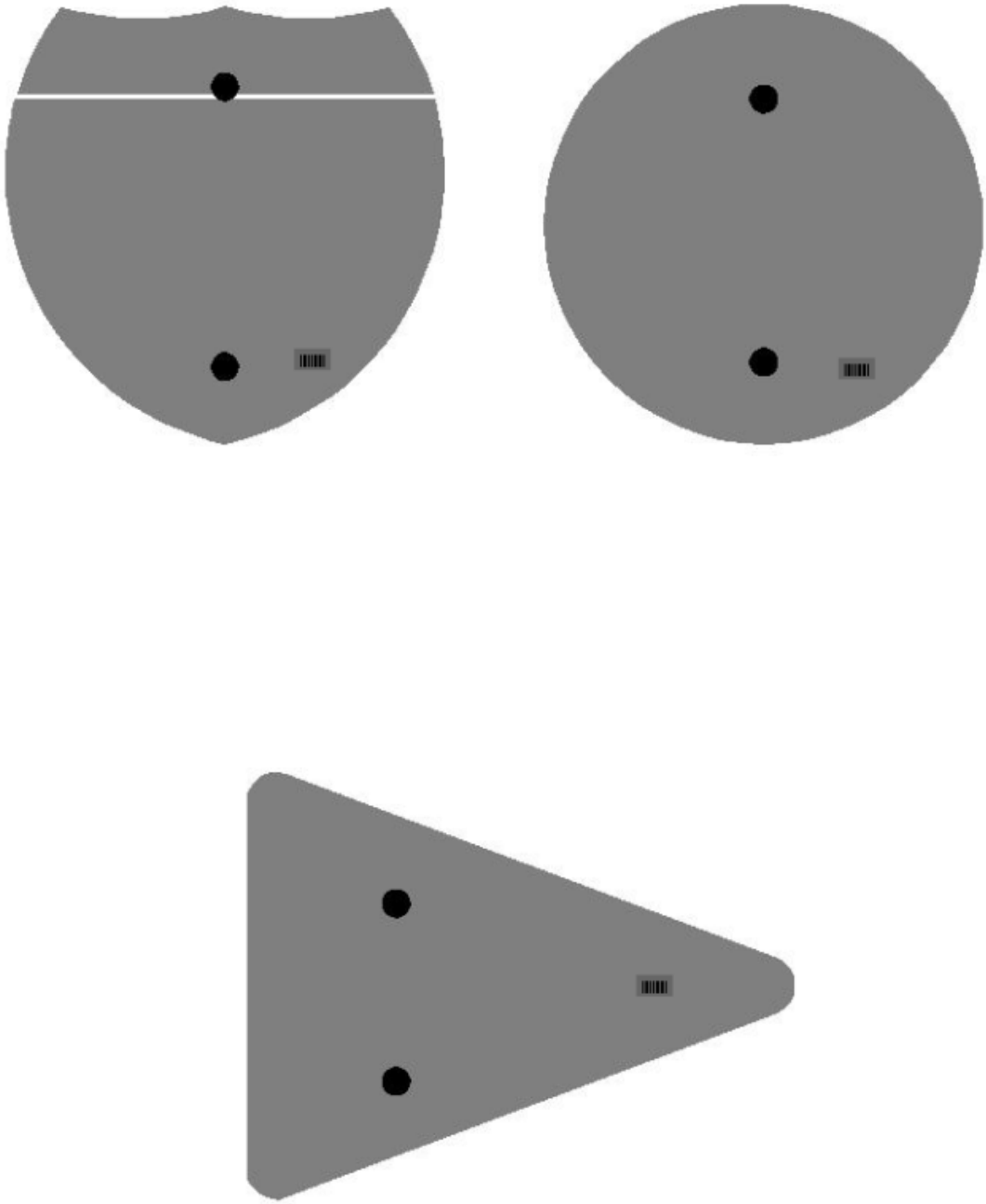
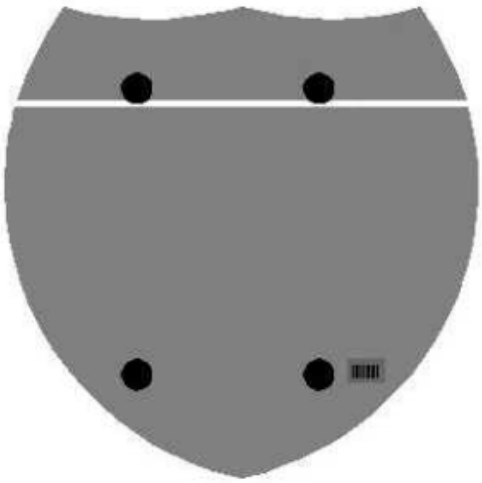


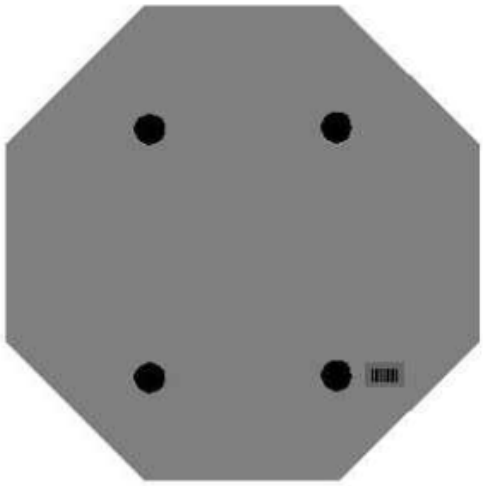
One Sign Post



Double Sign Post

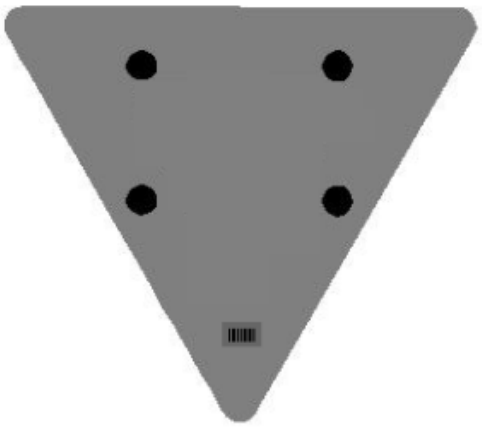


Interstate
Shield



48" Stop

2 Post Signs



11N

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.

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 ^{o} 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.

11N

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	Pay Item	Pay Unit
20071EC	Joint Adhesive	Linear Foot

May 7, 2014

SPECIAL PROVISION FOR EMBANKMENT AT BRIDGE END BENT STRUCTURES

This Special Provision 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. Construct a soil, granular, or rock embankment with soil, granular or cohesive pile core and place structure granular backfill, as the Plans require. Construct the embankment according to the requirements of this Special Provision, the Plans, Standard Drawing RGX 100 and 105, and the Standard Specifications, Current Edition.

2.0 MATERIALS.

2.1 Granular Embankment. Conform to Subsection 805.10. When Granular Embankment materials are erodible or unstable according to Subsection 805.03.04, use the Special Construction Methods found in 3.2 of the Special Provision.

2.2 Rock Embankment. Provide durable rock from roadway excavation that consists principally of Unweathered Limestone, Durable Shale (SDI equal to or greater than 95 according to KM 64-513), or Durable Sandstone.

2.3 Pile Core. Provide a pile core in the area of the embankments where deep foundations are to be installed unless otherwise specified. The Pile Core is the zone indicated on Standard Drawings RGX 100 and 105 designated as Pile Core. Material control of the pile core area during embankment construction is always required. Proper Pile Core construction is required for installation of foundation elements such as drilled or driven piles or drilled shafts. The type of material used to construct the pile core is as directed in the plans or below. Typically, the pile core area will be constructed from the same material used to construct the surrounding embankment. Pile Core can be classified as one of three types:

A) Pile Core - Conform to Section 206 of the Standard Specifications. Provide pile core material consisting of the same material as the adjacent embankment except the material in the pile core area shall be free of boulders or particle sizes larger than 4 inches in any dimension or any other obstructions that may hinder pile driving operations. If the pile core material hinders pile driving operations, take the appropriate means necessary to reach the required pile tip elevation, at no expense to the Department.

B) Granular Pile Core. Granular pile core is required only when specified in the plans. Select a gradation of durable rock to facilitate pile driving that conforms to Subsection 805.11. If granular pile core material hinders pile driving operations, take appropriate means necessary to reach the required pile tip elevation, at no expense to the Department.

C) Cohesive Pile Core. Cohesive Pile Core is required only when specified in the plans. Conform to Section 206 of the Standard Specifications and use soil with at least 50 percent passing a No. 4 sieve having a minimum Plasticity Index (PI) of 10. In addition, keep the cohesive pile core free of boulders, larger than 4 inches in any dimension, or any other obstructions, which would interfere with drilling operations. If cohesive pile core material interferes with drilling operations, take appropriate means necessary to maintain

excavation stability, at no expense to the Department.

2.4 Structure Granular Backfill. Conform to Subsection 805.11

2.5 Geotextile Fabric. Conform to Type I or Type IV in Section 214 and 843.

3.0 CONSTRUCTION.

3.1 General. Construct roadway embankments at end bents according to Section 206 and in accordance with the Special Provision, the Plans, and Standard Drawings for the full embankment section. In some instances, granular or rock embankment will be required for embankment construction for stability purposes, but this special provision does not prevent the use of soil when appropriate. Refer to the plans for specific details regarding material requirements for embankment construction.

Place and compact the pile core and structure granular backfill according to the applicable density requirements for the project. If the embankment and pile core are dissimilar materials (i.e., a granular pile core is used with a soil embankment or a cohesive pile core is used with a granular embankment), a Geotextile Fabric, Type IV, will be required between the pile core and embankment in accordance with Sections 214 and 843 of the Standard Specifications.

When granular or rock embankment is required for embankment construction, conform to the general requirements of Subsection 206.03.02 B. In addition, place the material in no greater than 2-foot loose lifts and compact with a vibrating smooth wheel roller capable of producing a minimum centrifugal force of 15 tons. Apply these requirements to the full width of the embankment for a distance of half the embankment height or 50 feet, whichever is greater, as shown on Standard Drawing RGX-105.

When using granular pile core, install 8-inch perforated underdrain pipe at or near the elevation of the original ground in the approximate locations depicted on the standard drawing, and as the Engineer directs, to ensure positive drainage of the embankment. Wrap the perforated pipe with a fabric of a type recommended by the pipe manufacturer.

After constructing the embankment, excavate for the end bent cap, drive piling, install shafts or other foundation elements, place the mortar bed, construct the end bent, and complete the embankment to finish grade according to the construction sequence shown on the Plans or Standard Drawings and as specified hereinafter.

Certain projects may require widening of existing embankments and the removal of substructures. Construct embankment according to the plans. Substructure removal shall be completed according to the plans and Section 203. Excavation may be required at the existing embankment in order to place the structure granular backfill as shown in the Standard Drawings.

After piles are driven or shafts installed (see design drawings), slope the bottom of the excavation towards the ends of the trench as noted on the plans for drainage. Using a separate pour, place concrete mortar, or any class concrete, to provide a base for forming and placing the cap. Place side forms for the end bent after the mortar has set sufficiently to support workmen and forms without being disturbed.

Install 4-inch perforated pipe in accordance with the plans and Standard Drawings. In the event slope protection extends above the elevation of the perforated pipe, extend the pipe through the slope protection.

After placing the end bent cap and achieving required concrete cylinder strengths, remove adjacent forms and fill the excavation with compacted structure granular backfill material (maximum 1’ loose lifts) to the level of the berm prior to placing beams for the bridge. Place Type IV geotextile fabric between embankment material and structure granular backfill. After completing the end bent backwall, or after completing the span end

wall, place the compacted structure granular backfill (maximum 1' loose lifts) to subgrade elevation. If the original excavation is enlarged, fill the entire volume with compacted structure granular backfill (maximum 1' loose lifts) at no expense to the Department. Do not place backfill before removing adjacent form work. Place structure granular backfill material in trench ditches at the ends of the excavation. Place Geotextile Fabric, Type IV over the surface of the compacted structure granular backfill prior to placing aggregate base course.

Tamp the backfill with hand tampers, pneumatic tampers, or other means approved by the Engineer. Thoroughly compact the backfill under the overhanging portions of the structure to ensure that the backfill is in intimate contact with the sides of the structure.

Do not apply seeding, sodding, or other vegetation to the exposed granular embankment.

3.2 Special Construction Methods. Erodible or unstable materials may erode even when protected by riprap or channel lining; use the special construction method described below when using these materials.

Use fine aggregates or friable sandstone granular embankment at "dry land" structures only. Do not use them at stream crossings or locations subject to flood waters.

For erodible or unstable materials having 50 percent or more passing the No. 4 sieve, protect with geotextile fabric. Extend the fabric from the original ground to the top of slope over the entire area of the embankment slopes on each side of, and in front of, the end bent. Cover the fabric with at least 12 inches of non-erodible material.

For erodible or unstable materials having less than 50 percent passing a No. 4 sieve, cover with at least 12 inches of non-erodible material.

Where erodible or unstable granular embankment will be protected by riprap or channel lining, place Type IV geotextile fabric between the embankment and the specified slope protection.

4.0 MEASUREMENT.

4.1 Granular Embankment. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The Department will not measure for payment any Granular Embankment that is not called for in the plans.

The Department will not measure for payment any special construction caused by using erodible or unstable materials and will consider it incidental to the Granular Embankment regardless of whether the erodible or unstable material was specified or permitted.

4.2 Rock Embankment. The Department will not measure for payment any rock embankment and will consider it incidental to roadway excavation or embankment in place, as applicable. Rock embankments will be constructed using granular embankment on projects where there is no available rock present within the excavation limits of the project.

4.3 Pile Core. Pile core will be measured and paid under roadway excavation or embankment in place, as applicable. The Department will not measure the pile core for separate payment. The Department will not measure for payment the 8-inch perforated underdrain pipe and will consider it incidental to the Pile Core.

4.4 Structure Granular Backfill. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The Department will not measure any additional material required for backfill outside the limits shown on the Plans and Standard Drawings for payment and will

consider it incidental to the work.

The Department will not measure for payment the 4-inch perforated underdrain pipe and will consider it incidental to the Structure Granular Backfill.

4.5 Geotextile Fabric. The Department will not measure the quantity of fabric used for separating dissimilar materials when constructing the embankment and pile core and will consider it incidental to embankment construction.

The Department will not measure for payment the Geotextile Fabric used to separate the Structure Granular Backfill from the embankment and aggregate base course and will consider it incidental to Structure Granular Backfill.

The Department will not measure for payment the Geotextile Fabric required for construction with erodible or unstable materials and will consider it incidental to embankment construction.

4.6 End Bent. The Department will measure the quantities according to the Contract. The Department will not measure furnishing and placing the 2-inch mortar or concrete bed for payment and will consider it incidental to the end bent construction.

4.7 Structure Excavation. The Department will not measure structure excavation on new embankments for payment and will consider it incidental to the Structure Granular Backfill or Concrete as applicable.

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

Code	Pay Item	Pay Unit
02223	Granular Embankment	Cubic Yards
02231	Structure Granular Backfill	Cubic Yards

The Department will consider payment as full compensation for all work required in this provision.

September 16, 2016

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

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 contacting 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 administrating 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

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

TRAINING SPECIAL PROVISIONS

This Training Special Provision supersedes subparagraph 7b of the Special Provision entitled ``Specific Equal Employment Opportunity Responsibilities," (Attachment 1), and is in implementation of 23 U.S.C. 140(a).

As part of the contractor's equal employment opportunity affirmative action program training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeymen in the type of trade or job classification involved.

The number of trainees to be trained under these special provisions and in this contract is shown in “Special Notes Applicable to Project” in the bid proposal.

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

The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment. Prior to commencing construction the contractor shall submit to the Kentucky Transportation Cabinet, Department of Highways for its approval, an acceptable training program on forms provided by the Cabinet indicating the number of trainees to be trained in each selected classification. Failure to provide the Cabinet with the proper documentation evidencing an acceptable training program prior to commencing construction shall cause the Cabinet to suspend the operations of the contractor with (if applicable) working days being charged as usual against the contract time or (if applicable), no additional contract time being granted for the suspension period. The Cabinet will not be liable for the payment of any work performed during the suspension period due to the failure of the contractor to provide an acceptable training program. Said suspension period shall be terminated when an acceptable training program is received by the Cabinet. Furthermore, the contractor shall specify the starting time for training in each of the classifications. The contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such trainees as provided hereinafter.

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

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the contractor's records should document the findings in each case. The minimum length and type of training for each classification will be as established in the training program selected by the contractor and approved by the Kentucky Transportation Cabinet, Department of Highways and the Federal Highway Administration shall approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the division office. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the contractor will be reimbursed for each hour of training given an employee on this contract in accordance with an approved training program. As approved by the engineer, reimbursement will be made for training persons in excess of the number specified herein. This reimbursement will be made even though the contractor receives additional training program funds from other sources, provided such other source does not specifically prohibit the contractor from receiving other reimbursement. Reimbursement for offsite training indicated above may only be made to the contractor where he does one or more of the following and the trainees are concurrently employed on a Federal-aid project; contributes to the cost of the training, provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment shall be made to the contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the contractor and evidences a lack of good faith on the part of the contractor in meeting the requirements of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program. It is not required that all trainees be on board for the entire length of the contract. A contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The contractor shall furnish the trainee a copy of the program he will follow in providing the training. The contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

The contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

1-1-93

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
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
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
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, Batcher 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.

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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 after an employee works eight (8) hours a day or forty (40) hours a week, whichever gives the employee the greater wages. At least time and one-half the base rate is required for all overtime. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. 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.

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

191210

PROPOSAL BID ITEMS

Report Date 3/21/19

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	115,232.00	TON		$	
0020	00018		DRAINAGE BLANKET-TYPE II-ASPH	42,274.00	TON		$	
0030	00100		ASPHALT SEAL AGGREGATE	615.00	TON		$	
0040	00103		ASPHALT SEAL COAT	75.00	TON		$	
0050	00190		LEVELING & WEDGING PG64-22	28,150.00	TON		$	
0060	00214		CL3 ASPH BASE 1.00D PG64-22	35,605.00	TON		$	
0070	00217		CL4 ASPH BASE 1.00D PG64-22	19,276.00	TON		$	
0080	00219		CL4 ASPH BASE 1.00D PG76-22	32,752.00	TON		$	
0090	00293		EMULSIFIED ASPHALT SS-1H	762.00	TON		$	
0110	00339		CL3 ASPH SURF 0.38D PG64-22 (REVISED: 3-21-19)	13,311.00	TON		$	
0120	00342		CL4 ASPH SURF 0.38A PG76-22	23,254.00	TON		$	
0130	00358		ASPHALT CURING SEAL	119.00	TON		$	
0140	02107		BREAKING AND SEATING PAVEMENT	13,371.00	SQYD		$	
0150	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		$	
0160	02677		ASPHALT PAVE MILLING & TEXTURING	19,422.00	TON		$	
0170	02702		SAND FOR BLOTTER	373.00	TON		$	
0180	20071EC		JOINT ADHESIVE	118,396.00	LF		$	
0190	24904EC		CL3 ASPH BASE CK PG64-22	38,594.00	TON		$	
0200	24905EC		CL4 ASPH BASE CK PG64-22	46,296.00	TON		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0210	00078		CRUSHED AGGREGATE SIZE NO 2	12,994.00	TON		$	
0220	01000		PERFORATED PIPE-4 IN	60,410.00	LF		$	
0230	01001		PERFORATED PIPE-6 IN	15,430.00	LF		$	
0240	01010		NON-PERFORATED PIPE-4 IN	2,364.00	LF		$	
0250	01011		NON-PERFORATED PIPE-6 IN	420.00	LF		$	
0260	01015		INSPECT & CERTIFY EDGE DRAIN SYSTEM	1.00	LS		$	
0270	01020		PERF PIPE HEADWALL TY 1-4 IN	37.00	EACH		$	
0280	01024		PERF PIPE HEADWALL TY 2-4 IN	3.00	EACH		$	
0290	01028		PERF PIPE HEADWALL TY 3-4 IN	46.00	EACH		$	
0300	01032		PERF PIPE HEADWALL TY 4-4 IN	107.00	EACH		$	
0310	01033		PERF PIPE HEADWALL TY 4-6 IN	1.00	EACH		$	
0320	01741		CORED HOLE DRAINAGE BOX CON-6 IN	35.00	EACH		$	
0330	01891		ISLAND HEADER CURB TYPE 2	200.00	LF		$	
0340	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	204.00	EACH		$	
0350	01983		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	16.00	EACH		$	
0360	01984		DELINEATOR FOR BARRIER - WHITE	1,240.00	EACH		$	
0370	01985		DELINEATOR FOR BARRIER - YELLOW	2,485.00	EACH		$	
0380	01986		DELINEATOR FOR BARRIER WALL-B/Y	193.00	EACH		$	
0390	02002		REMOVE TEMP CONC BARRIER WALL	1,366.00	LF		$	
0400	02003		RELOCATE TEMP CONC BARRIER	46,000.00	LF		$	
0410	02014		BARRICADE-TYPE III	6.00	EACH		$	

191210

PROPOSAL BID ITEMS

Report Date 3/21/19

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0420	02159		TEMP DITCH	19,168.00	LF		$	
0430	02160		CLEAN TEMP DITCH	9,584.00	LF		$	
0440	02200		ROADWAY EXCAVATION	199,140.00	CUYD		$	
0450	02242		WATER (FOR DUST CONTROL)	7,689.00	MGAL		$	
0460	02268		REMOVE & REPLACE FENCE	46,907.00	LF		$	
0470	02351		GUARDRAIL-STEEL W BEAM-S FACE	18,475.00	LF		$	
0480	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	5.00	EACH		$	
0490	02367		GUARDRAIL END TREATMENT TYPE 1	25.00	EACH		$	
0500	02369		GUARDRAIL END TREATMENT TYPE 2A	26.00	EACH		$	
0510	02373		GUARDRAIL END TREATMENT TYPE 3	2.00	EACH		$	
0520	02381		REMOVE GUARDRAIL	21,445.50	LF		$	
0530	02383		REMOVE & RESET GUARDRAIL	550.00	LF		$	
0540	02387		GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	6.00	EACH		$	
0550	02483		CHANNEL LINING CLASS II	1,861.00	TON		$	
0560	02484		CHANNEL LINING CLASS III	2,251.00	TON		$	
0570	02545		CLEARING AND GRUBBING (APPROXLIMATELY 166.5 ACRES)	1.00	LS		$	
0580	02555		CONCRETE-CLASS B	63.00	CUYD		$	
0590	02562		TEMPORARY SIGNS	1,000.00	SQFT		$	
0600	02585		EDGE KEY	180.00	LF		$	
0610	02600		FABRIC GEOTEXTILE TY IV FOR PIPE	30,973.00	SQYD	$2.00	$	$61,946.00
0620	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
0630	02671		PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH		$	
0640	02696		SHOULDER RUMBLE STRIPS	110,460.00	LF		$	
0650	02701		TEMP SILT FENCE	19,168.00	LF		$	
0660	02703		SILT TRAP TYPE A	167.00	EACH		$	
0670	02704		SILT TRAP TYPE B	167.00	EACH		$	
0680	02705		SILT TRAP TYPE C	167.00	EACH		$	
0690	02706		CLEAN SILT TRAP TYPE A	167.00	EACH		$	
0700	02707		CLEAN SILT TRAP TYPE B	167.00	EACH		$	
0710	02708		CLEAN SILT TRAP TYPE C	167.00	EACH		$	
0720	02726		STAKING	1.00	LS		$	
0730	02775		ARROW PANEL	4.00	EACH		$	
0740	02898		RELOCATE CRASH CUSHION	5.00	EACH		$	
0750	02929		CRASH CUSHION TYPE IX	2.00	EACH		$	
0760	03147		CONC MEDIAN BARRIER TYPE 12C MOD	655.00	LF		$	
0770	03171		CONCRETE BARRIER WALL TYPE 9T (REVISED: 3-19-19)	51,600.00	LF		$	
0780	04903		REFERENCE MARKER	32.00	EACH		$	
0790	04904		BARRIER MOUNTING BRACKET	32.00	EACH		$	
0800	05950		EROSION CONTROL BLANKET	22,551.00	SQYD		$	
0810	05952		TEMP MULCH	539,959.00	SQYD		$	
0820	05953		TEMP SEEDING AND PROTECTION	402,954.00	SQYD		$	
0830	05963		INITIAL FERTILIZER	25.00	TON		$	
0840	05964		MAINTENANCE FERTILIZER	41.70	TON		$	
0850	05985		SEEDING AND PROTECTION	805,908.00	SQYD		$	
0860	05992		AGRICULTURAL LIMESTONE	499.50	TON		$	
0870	06401		FLEXIBLE DELINEATOR POST-M/W	65.00	EACH		$	

PROPOSAL BID ITEMS

Report Date 3/21/19

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0880	06403		FLEXIBLE DELINEATOR POST-B/W	153.00	EACH		$	
0890	06404		FLEXIBLE DELINEATOR POST-M/Y	77.00	EACH		$	
0900	06407		SBM ALUM SHEET SIGNS .125 IN	128.50	SQFT		$	
0910	06410		STEEL POST TYPE 1	180.00	LF		$	
0915	06511		PAVE STRIPING-TEMP PAINT-6 IN (ADDED: 3-19-19)	540,000.00	LF		$	
0920	06513		PAVE STRIPING-TEMP PAINT-12 IN	9,443.00	LF		$	
0930	06542		PAVE STRIPING-THERMO-6 IN W	83,651.00	LF		$	
0940	06543		PAVE STRIPING-THERMO-6 IN Y	55,251.00	LF		$	
0950	06546		PAVE STRIPING-THERMO-12 IN W	4,293.00	LF		$	
0960	06549		PAVE STRIPING-TEMP REM TAPE-B (REVISED: 3-19-19)	20,100.00	LF		$	
0970	06550		PAVE STRIPING-TEMP REM TAPE-W (REVISED: 3-19-19)	22,300.00	LF		$	
0980	06551		PAVE STRIPING-TEMP REM TAPE-Y (REVISED: 3-19-19)	18,200.00	LF		$	
0985	06556		PAVE STRIPING-DUR TY 1-6 IN W (ADDED: 3-19-19)	3,600.00	LF		$	
0987	06557		PAVE STRIPING-DUR TY 1-6 IN Y (ADDED: 3-19-19)	2,400.00	LF		$	
0990	06569		PAVE MARKING-THERMO CROSS-HATCH	15,311.00	SQFT		$	
1000	06574		PAVE MARKING-THERMO CURV ARROW	15.00	EACH		$	
1010	06578		PAVE MARKING-THERMO MERGE ARROW	10.00	EACH		$	
1020	06580		PAVEMENT MARKER TYPE IV-MW	264.00	EACH		$	
1030	06600		REMOVE PAVEMENT MARKER TYPE V	784.00	EACH		$	
1040	08100		CONCRETE-CLASS A	16.90	CUYD		$	
1050	08150		STEEL REINFORCEMENT	922.00	LB		$	
1060	08903		CRASH CUSHION TY VI CLASS BT TL3	12.00	EACH		$	
1070	10020NS		FUEL ADJUSTMENT	464,833.00	DOLL	$1.00	$	$464,833.00
1080	10030NS		ASPHALT ADJUSTMENT	815,101.00	DOLL	$1.00	$	$815,101.00
1090	20191ED		OBJECT MARKER TY 3	25.00	EACH		$	
1100	20550ND		SAWCUT PAVEMENT	44,641.00	LF		$	
1110	20912ND		BARRIER WALL POST	30.00	EACH		$	
1120	21373ND		REMOVE SIGN	7.00	EACH		$	
1130	21430ES508		CONC MEDIAN BARRIER TYPE 12C(50)	15,855.00	LF		$	
1140	24255EC		REMOVE CABLE GUARDRAIL BARRIER SYSTEM	15,125.00	LF		$	
1150	24489EC		INLAID PAVEMENT MARKER	1,875.00	EACH		$	
1160	24631EC		BARCODE SIGN INVENTORY	52.00	EACH		$	
1170	24779EC		INTELLIGENT COMPACTION FOR SOIL	120,778.00	CUYD		$	
1180	24780EC		INTELLIGENT COMPACTION FOR AGGREGATE	115,232.00	TON		$	
1190	24781EC		INTELLIGENT COMPACTION FOR ASPHALT	225,175.00	TON		$	
1200	24873EC		CONTROL SYSTEM FOR INCIDENT MANAGEMENT	1.00	L S		$	
1210	24891EC		PAVE MOUNT INFRARED TEMP EQUIPMENT	12,542,796.00	SF		$	
1220	30012		MILE MARKER	11.00	EACH		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT

PROPOSAL BID ITEMS

Report Date 3/21/19

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1230	00461		CULVERT PIPE-15 IN	187.00	LF		$	
1240	00462		CULVERT PIPE-18 IN	314.00	LF		$	
1250	00464		CULVERT PIPE-24 IN	150.00	LF		$	
1260	00466		CULVERT PIPE-30 IN	54.00	LF		$	
1270	00470		CULVERT PIPE-48 IN	27.00	LF		$	
1280	00471		CULVERT PIPE-54 IN	60.00	LF		$	
1290	00472		CULVERT PIPE-60 IN	32.00	LF		$	
1300	00521		STORM SEWER PIPE-15 IN	585.00	LF		$	
1310	00524		STORM SEWER PIPE-24 IN	708.00	LF		$	
1320	00530		STORM SEWER PIPE-48 IN	4.00	LF		$	
1330	00531		STORM SEWER PIPE-54 IN	68.00	LF		$	
1340	01202		PIPE CULVERT HEADWALL-15 IN	7.00	EACH		$	
1350	01204		PIPE CULVERT HEADWALL-18 IN	14.00	EACH		$	
1360	01208		PIPE CULVERT HEADWALL-24 IN	8.00	EACH		$	
1370	01210		PIPE CULVERT HEADWALL-30 IN	2.00	EACH		$	
1380	01216		PIPE CULVERT HEADWALL-48 IN	1.00	EACH		$	
1390	01220		PIPE CULVERT HEADWALL-60 IN	1.00	EACH		$	
1400	01310		REMOVE PIPE	413.00	LF		$	
1410	01480		CURB BOX INLET TYPE B	4.00	EACH		$	
1420	01490		DROP BOX INLET TYPE 1	6.00	EACH		$	
1430	01650		JUNCTION BOX	3.00	EACH		$	
1440	01761		MANHOLE TYPE B	6.00	EACH		$	
1450	01767		MANHOLE TYPE C	4.00	EACH		$	
1460	21601NN		CONC MED BAR BOX INLET TY 12A2-50	3.00	EACH		$	
1470	21602NN		CONC MED BARR BOX INLET TY 12B2-50	25.00	EACH		$	
1480	23611NN		CONC MED BAR BOX INLET TY 12B1-50	3.00	EACH		$	
1490	24026EC		PIPE CULVERT HEADWALL-54 IN	2.00	EACH		$	
1500	24814EC		PIPELINE INSPECTION	9,210.00	LF		$	
1510	24861EC		PVC FOLD AND FORM PIPE LINER-15 IN	2,253.00	LF		$	
1520	24862EC		PVC FOLD AND FORM PIPE LINER-18 IN	1,942.00	LF		$	
1530	24863EC		PVC FOLD AND FORM PIPE LINER-24 IN	2,435.00	LF		$	
1540	24864EC		PVC FOLD AND FORM PIPE LINER-30 IN	393.00	LF		$	

Section: 0004 - BRIDGE - LAUREL RIVER - STA. 1540+01.69 - DWG. 24534

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1550	02231		STRUCTURE GRANULAR BACKFILL	228.00	CUYD		$	
1560	02403		REMOVE CONCRETE MASONRY	100.00	CUYD		$	
1570	02998		MASONRY COATING	865.00	SQYD		$	
1580	03299		ARMORED EDGE FOR CONCRETE	131.00	LF		$	
1590	08001		STRUCTURE EXCAVATION-COMMON	233.00	CUYD		$	
1600	08002		STRUCTURE EXCAV-SOLID ROCK	26.00	CUYD		$	
1610	08019		CYCLOPEAN STONE RIP RAP	172.00	TON		$	
1620	08033		TEST PILES	56.00	LF		$	
1630	08037		COFFERDAM (PIER 1)	1.00	LS		$	
1640	08037		COFFERDAM (PIER 2)	1.00	LS		$	
1650	08046		PILES-STEEL HP12X53	256.00	LF		$	

PROPOSAL BID ITEMS

Report Date 3/21/19

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1660	08094		PILE POINTS-12 IN	12.00	EACH		$	
1670	08100		CONCRETE-CLASS A	271.00	CUYD		$	
1680	08104		CONCRETE-CLASS AA	555.60	CUYD		$	
1690	08150		STEEL REINFORCEMENT	30,834.00	LB		$	
1700	08151		STEEL REINFORCEMENT-EPOXY COATED	147,186.00	LB		$	
1710	08160		STRUCTURAL STEEL (APPROXIMATELY 1,006 LBS)	1.00	LS		$	
1720	08269		ELECTRICAL CONDUIT (3-IN PVC)	1.00	LS		$	
1730	08634		PRECAST PC I BEAM TYPE 4	1,958.70	LF		$	
1740	20608NC		REMOVE EXIST SUPERSTRUCTURE AND ABUTMENT	1.00	LS		$	
1750	21532ED		RAIL SYSTEM TYPE III	563.00	LF		$	

Section: 0005 - BRIDGE - LAUREL RIVER - STA. 1404+94.0 - DWG. 24536

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1760	02231		STRUCTURE GRANULAR BACKFILL	120.00	CUYD		$	
1770	02403		REMOVE CONCRETE MASONRY	109.50	CUYD		$	
1780	02998		MASONRY COATING	2,067.00	SQYD		$	
1790	03299		ARMORED EDGE FOR CONCRETE	244.70	LF		$	
1800	08001		STRUCTURE EXCAVATION-COMMON	907.00	CUYD		$	
1810	08002		STRUCTURE EXCAV-SOLID ROCK	220.00	CUYD		$	
1820	08033		TEST PILES	49.00	LF		$	
1830	08039		PRE-DRILLING FOR PILES	43.00	LF		$	
1840	08046		PILES-STEEL HP12X53	187.00	LF		$	
1850	08094		PILE POINTS-12 IN	15.00	EACH		$	
1860	08100		CONCRETE-CLASS A	826.80	CUYD		$	
1870	08104		CONCRETE-CLASS AA	2,300.80	CUYD		$	
1880	08150		STEEL REINFORCEMENT	88,136.00	LB		$	
1890	08151		STEEL REINFORCEMENT-EPOXY COATED	570,468.00	LB		$	
1900	08160		STRUCTURAL STEEL (APPROXIMATELY 2,130,198 LBS)	1.00	LS		$	
1910	08170		SHEAR CONNECTORS (APPROXIMATELY 10,301 LBS)	1.00	LS		$	
1920	08269		ELECTRICAL CONDUIT (3-IN PVC)	1.00	LS		$	
1930	08301		REMOVE SUPERSTRUCTURE	1.00	LS		$	
1940	21532ED		RAIL SYSTEM TYPE III	1,042.00	LF		$	
1950	21679EN		FIBERGLASS DRAIN PIPE (6-IN)	246.00	LF		$	

Section: 0006 - TRAFFIC LOOPS

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1960	04793		CONDUIT-1 1/4 IN	60.00	LF		$	
1970	04795		CONDUIT-2 IN	30.00	LF		$	
1980	04820		TRENCHING AND BACKFILLING	80.00	LF		$	
1990	04829		PIEZOELECTRIC SENSOR	6.00	EACH		$	

191210

PROPOSAL BID ITEMS

Report Date 3/21/19

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2000	04830		LOOP WIRE	2,900.00	LF		$	
2010	04895		LOOP SAW SLOT AND FILL	600.00	LF		$	
2020	20359NN		GALVANIZED STEEL CABINET	2.00	EACH		$	
2030	20360ES818		WOOD POST	4.00	EACH		$	
2040	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	2.00	EACH		$	

Section: 0007 - TRAINEES

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2050	02742		TRAINEE PAYMENT REIMBURSEMENT GROUP 2, 3, 4 OPERATOR	1,400.00	HOUR		$	
2060	02742		TRAINEE PAYMENT REIMBURSEMENT GROUP 2, 3,4 OPERATOR	1,400.00	HOUR		$	

Section: 0008 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2070	02568		MOBILIZATION	1.00	LS		$	
2080	02569		DEMOBILIZATION	1.00	LS		$	

SPECIAL NOTE FOR
PORTABLE QUEUE WARNING ALERT SYSTEM

LAUREL COUNTY
I-75
NHPP IM 0752 (100)
ITEM NO. 11-00009.10

1.0 Description

This item shall consist of furnishing, installing, relocating, operating, servicing, and removing various components of a portable, quickly deployable, real-time automated ITS queue warning alert system (PQWAS), in accordance with the standard specifications and this special provision. The Contractor shall also provide the maintenance of the complete system for the duration of the project or as directed by the Project Engineer.

2.0 Materials
Materials shall be in accordance as follows:

All materials used shall meet the manufacturer's specifications and recommendations.

All PQWAS materials installed on the project shall be provided by the Contractor in excellent quality condition, shall be corrosion resistant and in strict accordance with all of the details show within Contractor's Plans approved by KYTC. The Contractor shall maintain an adequate inventory of parts and replacement units to support maintenance and repair of the PQWAS. Pre-deployment is a condition of the system's acceptance and is based on the successful performance demonstration for a (5) day continuous period in accordance to this specification and as set forth in the plans. Ensure compliance to all FCC and Department specifications.

The Contractor shall maintain this system and shall be locally available to service and maintain system components, move portable devices as necessary and respond to emergency situations. The Contractor has oversight responsibility for directing placement of devices in the project area. The Contractor is to be accessible seven (7) days a week and twenty-four (24) hours a day while the system is deployed. The Contractor shall provide contact information for the system's coordinator and others responsible for maintenance of the system prior to installation of the system. Furnish a System Coordinator for monitoring the PQWAS throughout all periods of deployment.

A. General Capabilities and Performance Requirements

1. Overall PQWAS capabilities and performance requirements include the following:

a. Furnish a system capable of providing advance traffic information to motorists when there is a queueing of traffic due to congestion resulting from lane reductions, emergency events or other conditions. The condition-responsive notification to the motorist occurs with the use of Portable Changeable Message Signs (PCMS) in accordance to the below capabilities and performance requirements, activated through real-time traffic data collected downstream of the PCMS locations. This equipment must be a packaged system, pre-programmed and operates as a stand-alone PQWAS meeting this specification. Conditions might exist that

require relocation of the portable sensors at any given time, the sensors shall be portable and shall not require re-calibration in the field for fast and easy deployments. Due to the potential need to replace damaged sensors or to change the position of one or more sensors at any given time, sensors must be interchangeable and re-locatable by an unskilled laborer. The system must continue to function if as many as half the sensors fail to function.

b. Provide a PQWAS that consists of the following field equipment: portable radar sensors and portable changeable message signs (PCMS). Provide a system capable of withstanding inclement weather conditions while continuing to provide adequate battery power. The portable radar sensor battery, in a stand-alone state and without a solar panel for recharging, shall be capable of keeping power and capable of sending data for (10) consecutive days or longer. The system shall notify drivers of real-time queue events via specifically placed PCMS units up stream of the work zone. All predetermined/preprogrammed messages are to be approved by KYTC. The number and location of portable radar sensors and PCMS units are defined in the plans (see attachment-A) or as directed by the Project Engineer. The decision to deploy or relocate field equipment is made by the Project Engineer and instrumented through the System Coordinator. The decision for equipment removal is made by the Project Engineer after work is complete. The sensors and PCMS units shall be identifiable via global positioning system (GPS) and shall contain an accelerometer to detect and alert of unauthorized movement.

c. The portable radar sensor shall be capable of collecting traffic speed data. The processed data is used to remotely control PCMS units to display user definable, Engineer approved and locally stored messages. The message trigger state thresholds for slow and stopped speeds shall be user configurable and revisable in less than (1) hour from the Project Engineer's request. Weekly Traffic Data Reports shall be presented to the Project Engineer and shall include speed data per sensor location, travel times, and queue lengths in graphical and numerical formats. In the event the Project Engineer requires a report, other than a weekly report, for any reason; then the Contractor shall provide report within (48) hours of request. Unlimited data reports shall be included within price of system. Sensors shall require no calibration or adjustments in the field. It should take no longer than (30) minutes to apply (1) Type-1 queue warning system and no more than (45) minutes to apply (1) Type-2 queue warning system (see attachment-A below). Sensor should begin transmitting data within (30) seconds of being turned on. If sensor loses cellular communication, then network functions shall automatically utilize satellite communications until cell communication is reconnected. Contractor shall identify the most trustworthy cellular provider within the project area.

d. Data shall be accessible through a website and the Contractor shall provide a username and password for protection. The website shall be accessible seven (7) days a week and twenty-four (24) hours a day. The website shall provide historical & real-time data in graphical and numerical formats and shall have the capability of being integrated within the Department's Traffic Management Center (if requested). The website should be compatible to most hand held devices. Data shall be saved on the manufacturer's network for up to (5) years from the deployment date of system and shall be provided at the request of the Department at any time within the (5) year window. The use of the website shall be included within the price of system.

e. Warning Alerts: queue events, low battery voltage warnings, sensor movement alerts, high and low speed alerts shall be provided via cellular text messaging and/or via email messaging at the request of select Contractor personnel and KYTC officials.

f. The PQWAS system shall have the capabilities to provide alternate route messaging on specifically placed portable changeable message units and/or fixed Variable Message Systems (VMS). The intent of this service is to provide alternate route messaging to motorists before entering the project limits from all directions and giving them appropriate time to adjust their routes. Alternative routes shall be predefined and approved by KYTC. Additional PCMS units may be required for alternate route messaging and will be paid separately from the PQWAS pay item. KYTC's Traffic Management Center will provide detour messages via fixed VMS units during the term of the project.

B. Portable Radar Sensor Capabilities and Performance Requirements

The PQWAS shall include portable radar sensors (PRD) to monitor and detect queue events.

1. The Radar Sensor shall be FHWA accepted to meet NCHRP 350 test requirements
2. The Radar Sensor shall be locatable at all times via an internal Global Positioning System (GPS) and shall be capable of Cellular & Satellite Communications
3. The Radar Sensor shall have a dry-cell battery capable of powering the system for (10) consecutive days or longer
4. The Radar sensor shall be K-Band technology and have a line of sight up to 200 linear feet without obstruction
5. The Radar sensor shall have the ability to be charged in the field through adaptable solar recharging technology in the case the sensor is utilized for more than 10 consecutive days

C. PCMS Capabilities and Performance Requirements

The PQWAS shall include portable changeable message signs (PCMS) designated to relay automated messaging of queue events, alternate route messages, and caution for the work area defined by the project limits. PCMS placements shall meet the requirements set forth by the Cabinet in each direction of the National Highway System (NHS) – see **attachment-A** for specified PCMS & Sensor quantities below.

1. The PCMS unit shall be a Full Matrix 24 rows x 50 columns and shall be capable of 1 line, 2 line or 3 line messages
2. The PCMS unit shall be legible from a distance over twelve hundred feet (1200')
3. The height and size of characters shall be 18" to 58"
4. The PCMS shall be capable of storing up to 199 pre-programmed messages and up to 199 user-defined messages
5. The PCMS shall have a weather tight control cabinet with back lit LCD handheld controller.
6. The PCMS shall utilize a hydraulic lift to raise the unit to display height
7. The PCMS unit shall include solar recharging ports to allow for recharging of the portable radar sensors when they are not deployed.
8. The PCMS shall be NTCIP compliant and shall have an active Modem with active cellular service to be included within the price of the PQWAS System.

9. The user shall have the ability to communicate and override the PCMS remotely in the event of an emergency, Amber Alert, etc.
10. The PCMS unit shall have a docking station to include safety rails that allow a commercial safety strap to tie down the portable radar sensors while in transport. The docking station shall hold-up to (4) sensors safely and securely at all times.

3.0 Construction Requirements

All communication costs include cellular telephone services, FCC licensing, wireless data networks, satellite and internet subscription charges, and battery charging and maintenance. Additional to these requirements, the Contractor shall assume all responsibility for any and all damaged equipment due to crashes, vandalism, and adverse weather that may occur during the contract period.

The PQWAS shall operate continuously (24 hours / 7 Days) when deployed on the project. The system is in a constant "data collection" mode when deployed. The Contractor shall provide technical support for the PQWAS for all periods of operation.

In the event communication is lost with any component of the PQWAS, provide a means and staff to manually program a PCMS message. If communication is lost for more the 10 consecutive minutes, the system shall revert to a fail-safe ROADWORK/# MILES/AHEAD message displayed on the PCMS units until communication is restored.

System Operator, local control function and remote management operation must be password protected.

The PQWAS shall be capable of acquiring traffic information and selecting messages automatically without operator intervention after system utilization. The lag time between changes in threshold ranges and the posting of the appropriate PCMS message(s) shall be no greater than (60) seconds. The system operation and accuracy must not be appreciably degraded by inclement weather or degraded visibility conditions including precipitation, fog, darkness, excessive dust, and road debris.

The system shall be capable of storing ad-hoc messages created by the System Coordinator and logging this action when overriding any default or automatic advisory message.

The PQWAS communication system shall incorporate an error detection/correction mechanism to insure the integrity of all traffic conditions data and motorists information messages. Any required configuration of the PQWAS communication system shall be performed automatically during system initialization.

The system's acceptance is based on the successful performance demonstration of PQWAS for a (5) day continuous period in accordance to this specification and as set forth in the plans. Ensure compliance to all FCC and Department specifications.

4.0 Equipment Maintenance.

Maintain system components in good working condition at all times. Repair or replace damaged or malfunctioning components, at no cost to the Department, as soon as possible and within (12) hours of notification by the Engineer. Periodically clean PCMS units if necessary.

5.0 Method of Measurement.

Portable Queue Warning Alert System includes portable radar sensors, PCMS units, cellular/SAT communications, all supporting field equipment, website, and unlimited data reports will be measured by Type-1 or Type-2 queue warning plan for the PQWAS installed, maintained and removed. See plan Types 1 & 2 for specific number of radar sensors and PCMS units required for this project (see attachment-A). Specific Plan Type will be identified within proposal and/or project plans.

6.0 Basis of Payment.

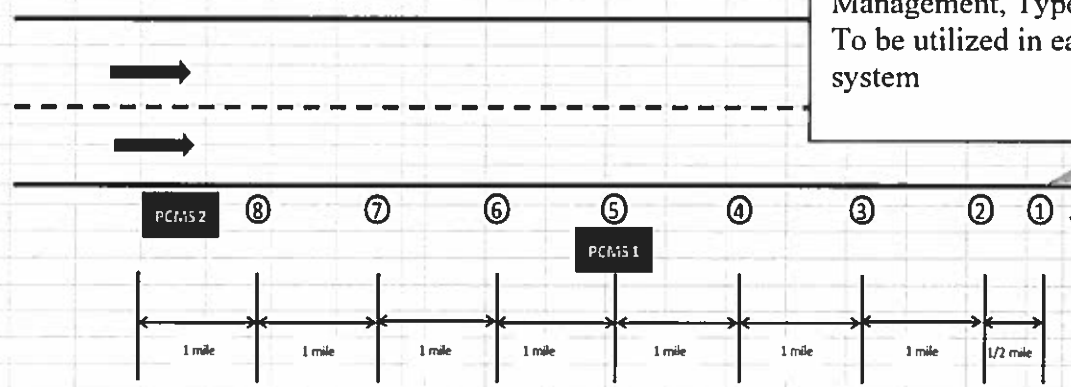
Portable Queue Warning Alert System includes portable radar sensors, PCMS units, Cell/SAT communications, all supporting field equipment, website, and unlimited data reports for the term of the project will be paid for at the contract unit price per PQWAS system as defined as a Type-1 or Type-2 Queue Warning plan (see attachment-A for specified PCMS & sensor quantities). Price and payment shall include furnishing of all labor, equipment, and materials for the installation, maintenance, and relocation of sensors and supporting field equipment.

PCMS Units are included

Payment will be made under:

Pay Item	Pay Unit Symbol
Control System for Incident Management	Lump Sum

Attachment-A: Control System for Incident Management, Type-2 Queue Detection Plan
To be utilized in each direction on Interstate system



PCMS Operations Rules: Deployment Plan 1 (Max Design Quue ≤ 7.5 Miles)

PCMS 2 Message	PCMS 1 Message	Last 5-Minute Average Speed V (mph)							
		⑧	⑦	⑥	⑤	④	③	②	①
WATCH YOUR SPEED	ROAD WORK AHEAD	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0
WATCH YOUR SPEED	SLOW TRAFFIC 3 MILES	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	40 ≤ V < 55
WATCH YOUR SPEED	SLOW TRAFFIC 2 MILES	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	40≤ V< 55	V > 40 OR V = 0.0
WATCH YOUR SPEED	SLOW TRAFFIC 1 MILE	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	40≤ V< 55	V > 40 OR V = 0.0	V > 40 OR V = 0.0
WATCH YOUR SPEED	SLOW TRAFFIC AHEAD	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	40≤ V< 55	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0
WATCH YOUR SPEED	STOPPED TRAFFIC 3 MILES	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 ≤ V < 40
WATCH YOUR SPEED	STOPPED TRAFFIC 2 MILES	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any value
WATCH YOUR SPEED	STOPPED TRAFFIC 1 MILE	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any value	Any value
WATCH YOUR SPEED	STOPPED TRAFFIC AHEAD	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any value	Any value	Any value

PCMS 2 Message	PCMS 1 Message	Last 5-Minute Average Speed V (mph)							
		⑧	⑦	⑥	⑤	④	③	②	①
SLOW TRAFFIC 3 MILES	LANE CLOSED 3 MILES	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	40 ≤ V < 55	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0
SLOW TRAFFIC 2 MILES	LANE CLOSED 3 MILES	V > 55 OR V = 0.0	V > 55 OR V = 0.0	40 ≤ V < 55	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0
SLOW TRAFFIC 1 MILE	LANE CLOSED 3 MILES	V > 55 OR V = 0.0	40 ≤ V < 55	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0
SLOW TRAFFIC AHEAD	LANE CLOSED 3 MILES	40 ≤ V < 55	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0
STOPPED TRAFFIC 3 MILES	LANE CLOSED 3 MILES	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any value	Any value	Any value	Any value
STOPPED TRAFFIC 2 MILES	LANE CLOSED 3 MILES	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any value	Any value	Any value	Any value	Any value
STOPPED TRAFFIC 1 MILE	LANE CLOSED 3 MILES	V > 40 OR V = 0.0	0.0 ≤ V < 40	Any value	Any value	Any value	Any value	Any value	Any value
STOPPED TRAFFIC AHEAD	LANE CLOSED 3 MILES	0.0 ≤ V < 40	Any value	Any value	Any value	Any value	Any value	Any value	Any value

① *Non-Intrusive Traffic Speed Detector*

PCMS *Portable Changeable Message Sign*

Note: Location of the sensors and the PCMS can be adjusted slightly based on site conditions (ramp locations, other static signing, overpasses, etc.)

LANE CLOSURE MONITORING SYSTEM PLAN 2

DN.: - LR/MT		SHEET 1 of 1			
CK.: -					
DW.: - DN					
STATE DIST.	FED. REGION	FEDERAL AID PROJECT			SHEET
D-11	TBD	TBD			
COUNTY		CONTROL	SEC	JOB	HIGHWAY
Laruel					NHS I-75