CALL NO. 201

CONTRACT ID. 141291

FAYETTE COUNTY

FED/STATE PROJECT NUMBER 121GR14D091-NHPP & JL04

DESCRIPTION NEW CIRCLE ROAD (KY 4) AND US 60 INTERCHANGE

WORK TYPE BRIDGE WITH GRADE, DRAIN & SURFACE

PRIMARY COMPLETION DATE 9/30/2016

LETTING DATE: November 21,2014

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN STANDARD TIME November 21,2014. Bids will be publicly announced at 10:00 AM EASTERN STANDARD TIME.

PLANS AVAILABLE FOR THIS PROJECT.

DBE CERTIFICATION REQUIRED - 5%

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

TABLE OF CONTENTS

PART I SCOPE OF WORK

- PROJECT(S), COMPLETION DATE(S), & LIQUIDATED DAMAGES
- CONTRACT NOTES
- FEDERAL CONTRACT NOTES
- TRAINEES
- EXPEDITE WORK ORDER
- ASPHALT MIXTURE
- DGA BASE
- DGA BASE FOR SHOULDERS
- INCIDENTAL SURFACING
- FUEL AND ASPHALT PAY ADJUSTMENT
- ASPHALT PAVEMENT RIDE QUALITY CAT A
- COMPACTION OPTION A
- MATERIAL TRANSFER VEHICLE (MTV)
- SPECIAL NOTE(S) APPLICABLE TO PROJECT
- REPAIR OF EXISTING BLOW-UP
- BRIDGE DEMOLITION, RENOVATION
- ASBESTOS ABATEMENT REPORT
- RAILROAD NOTES
- RIGHT OF WAY NOTES
- UTILITY CLEARANCE
- DEPT OF ARMY - NATIONWIDE PERMIT
- KPDES STORM WATER PERMIT, BMP AND NOI
- COMMUNICATING ALL PROMISES
- MATERIAL SUMMARY
- GUARDRAIL DELIVERY VERIFICATION SHEET

PART II SPECIFICATIONS AND STANDARD DRAWINGS

- SPECIFICATIONS REFERENCE
- SUPPLEMENTAL SPECIFICATION
- PORTABLE CHANGEABLE SIGNS
- DRILLED SHAFTS
- ROCK BLASTING
- BORING JACKING STEEL PIPE WITHOUT CARRIER PIPE
- TURF REINFORCEMENT MAT
- [SN-11M] SPECIAL NOTE FOR BARCODES ON PERMANENT SIGNS
- EMBANKMENT AT BRIDGE END BENT STRUCTURES

PART III EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

- FEDERAL-AID CONSTRUCTION CONTRACTS - FHWA 1273
- NONDISCRIMINATION OF EMPLOYEES
- EXECUTIVE BRANCH CODE OF ETHICS
- TRAINING SPECIAL PROVISIONS
- PROJECT WAGE RATES LOCALITY 3 / FEDERAL & STATE
- NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EEO FAYETTE

PART IV INSURANCE

PART V BID ITEMS

PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 07

CONTRACT ID - 141291

121GR14D091-NHPP & JL04

COUNTY - FAYETTE

PCN - DE03400041490
NHPP 2682 (014)

US 60 AND KY 4 (NEW CIRCLE ROAD) INTERCHANGE (MP 4.335) RECONSTRUCTION OF KY-4 / US60 (VERSAILLES ROAD) INTERCHANGE (MP 4.951), A DISTANCE OF 0.80 MILES.BRIDGE WITH GRADE, DRAIN & SURFACE SYP NO. 07-00279.00.

GEOGRAPHIC COORDINATES LATITUDE 38:02:44.00 LONGITUDE 84:33:57.00

PCN - DE03400041491
JL04 FD04 SPP 034 0004 004-008

NEW CIRCLE ROAD (KY 4) (MP 4.860) NEW CIRCLE ROAD REHAB AND WIDENING FROM VERSAILLES ROAD TO LEESTOWN (MP 7.260), A DISTANCE OF 02.40 MILES.BRIDGE WITH GRADE, DRAIN & SURFACE SYP NO. 07-00113.01.

GEOGRAPHIC COORDINATES LATITUDE 38:04:15.00 LONGITUDE 84:31:52.00

COMPLETION DATE(S):

COMPLETED BY 09/30/2016	APPLIES TO ENTIRE CONTRACT
COMPLETED BY 09/30/2015	INTERMEDIATE MILESTONE-PHASE 2 COMPLETION
COMPLETED BY 08/01/2016	INTERMEDIATE MILESTONE - 3 LANES EA DIRECTION NCR

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 Expedite Bidding Program available on the Internet web site of the Department of Highways, Division of Construction Procurement. (www.transportation.ky.gov/construction-procurement)

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 is advised that the Underground Facility Damage Protection Act of 1994, became law January 1, 1995. It is the contractor's responsibility to determine the impact of the act regarding this project, and take all steps necessary to be in compliance with the provision of the act.

SPECIAL NOTE FOR PIPE INSPECTION

Contrary to Section 701.03.08 of the 2012 Standard Specifications for Road and Bridge Construction and Kentucky Method 64-114, certification by the Kentucky Transportation Center for prequalified Contractors to perform laser/video inspection is not required on this contract. It will continue to be a requirement for the Contractor performing any laser/video pipe inspection to be prequalified for this specialized item with the Kentucky Transportation Cabinet-Division of Construction Procurement.

SPECIAL NOTE FOR COMPOSITE OFFSET BLOCKS

Contrary to the Standard Drawings (2012 edition) the Cabinet will allow 6" composite offset blocks in lieu of wooden offset blocks, except as specified on proprietary end treatments and crash cushions. The composite blocks shall be selected from the Cabinet's List of Approved Materials.

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. (See attachment)

10/29/12

Commonwealth of Kentucky
Finance and Administration Cabinet
OFFICE OF THE SECRETARY
Room 383, Capitol Annex
702 Capital Avenue
Frankfort, KY 40601-3462
(502) 564-4240
Fax (502) 564-6785

Steven L. Beshear
Governor

Lori H. Flanery
Secretary

SECRETARY'S ORDER 11-004

FINANCE AND ADMINISTRATION CABINET

Vendor Document Disclosure

WHEREAS, in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary to conduct a review of the records of a private vendor that holds a contract to provide goods and/or services to the Commonwealth; and

WHEREAS, in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary during the course of an audit, investigation or any other inquiry by an Executive Branch agency that involves the review of documents; and

WHEREAS, KRS 42.014 and KRS 12.270 authorizes the Secretary of the Finance and Administration Cabinet to establish the internal organization and assignment of functions which are not established by statute relating to the Finance and Administration Cabinet; further, KRS Chapter 45A.050 and 45A.230 authorizes the Secretary of the Finance and Administration Cabinet to procure, manage and control all supplies and services that are procured by the Commonwealth and to intervene in controversies among vendors and state agencies; and

NOW, THEREFORE, pursuant to the authority vested in me by KRS 42.014, KRS 12.270, KRS 45A.050, and 45A.230, I, Lori H. Flanery, Secretary of the Finance and Administration Cabinet, do hereby order and direct the following:

I. Upon the request of an Executive Branch agency, the Finance and Administration Cabinet ("FAC") shall formally review any dispute arising where the agency has requested documents from a private vendor that holds a state contract and the vendor has refused access to said documents under a claim that said documents are not directly pertinent or relevant to the agency's inquiry upon which the document request was predicated.

II. Upon the request of an Executive Branch agency, the FAC shall formally review any situation where the agency has requested documents that the agency deems necessary to

conduct audits, investigations or any other formal inquiry where a dispute has arisen as to what documents are necessary to conclude the inquiry.

III. Upon receipt of a request by a state agency pursuant to Sections I & II, the FAC shall consider the request from the Executive Branch agency and the position of the vendor or party opposing the disclosure of the documents, applying any and all relevant law to the facts and circumstances of the matter in controversy. After FAC's review is complete, FAC shall issue a Determination which sets out FAC's position as to what documents and/or records, if any, should be disclosed to the requesting agency. The Determination shall be issued within 30 days of receipt of the request from the agency. This time period may be extended for good cause.

IV. If the Determination concludes that documents are being wrongfully withheld by the private vendor or other party opposing the disclosure from the state agency, the private vendor shall immediately comply with the FAC's Determination. Should the private vendor or other party refuse to comply with FAC's Determination, then the FAC, in concert with the requesting agency, shall effectuate any and all options that it possesses to obtain the documents in question, including, but not limited to, jointly initiating an action in the appropriate court for relief.

V. Any provisions of any prior Order that conflicts with the provisions of this Order shall be deemed null and void.

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
102.08 Irregular Proposals 102.14 Disqualification of Bidders
102.09 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 63-35 DBE, within 10 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 submit certified reports on monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal. These reports must be submitted within 14 days of payment made to the DBE contractor.

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 form to be submitted 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.

06/20/2014

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.

EXPEDITE PROJECT WORK ORDER

The Contractor may request that the Department expedite the work order for this project to allow for maximization of time to complete the work. In order for the Department to accomplish this task, the Contractor may be required to “hand carry” all required project documentation to facilitate the process. Immediately UPON NOTIFICATION OF AWARD OF THE CONTRACT, deliver required project documentation to:
Division of Construction Procurement
200 Mero St.
Frankfort, KY 40602

ASPHALT MIXTURE

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

DGA BASE

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

DGA BASE FOR SHOULDERS

Unless otherwise noted, the Department estimates the rate of application for DGA Base for Shoulders to be 115 lbs/sy per inch of depth. The Department will not measure necessary grading and/or shaping of existing shoulders prior to placing of DGA Base, but shall be incidental to the Contract unit price per ton for DGA Base.
Accept payment at the Contract unit price per ton as full compensation for all labor, materials, equipment, and incidentals for grading and/or shaping of existing shoulders and furnishing, placing, and compacting the DGA Base.

INCIDENTAL SURFACING

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

FUEL AND ASPHALT PAY ADJUSTMENT

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

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.

MATERIAL TRANSFER VEHICLE (MTV)

Provide and use a MTV in accordance with Sections 403.02.10 and 403.03.05.

Special Note for Soil Nail Walls

Fayette County
KY 4, Ramp E Retaining Wall
Item No. 7-279.00

1.0 DESCRIPTION

1.1 This work is for the design and construction of permanent “Soil Nail Walls". Use an approved Soil Nail Wall Contractor that has the expertise and capability to complete the work required by this Special Note. Only Contractors pre-qualified by the Kentucky Department of Highways (the Department) and that meet any specific requirements for this project may perform soil nail wall design and construction for this project.

1.2 Subsurface data from the geotechnical exploration is included in the Contract Plans. Rock cores (if applicable) are available for viewing at the Geotechnical Branch in Frankfort, 502-564-2374. Contractors may view rock cores (if applicable); call a minimum of two (2) days in advance to schedule a viewing. A link to the Geotechnical Report can be provided under Project Related Information for the letting if requested.

2.0 SCOPE OF WORK

2.1 The contract item "Soil Nail Wall" includes furnishing the design calculations and construction plans, materials, labor, tools, equipment, and other incidental items required for the design, construction, and testing of permanent soil nail walls as described herein. See the contract plans for an overview of the soil nail wall(s).

2.2 Soil nail wall construction includes excavating in staged lifts; drilling soil nail drillholes; providing, placing and grouting the encapsulated or epoxy coated nail bar tendons into the drillholes; placing drainage elements; placing shotcrete reinforcement; applying shotcrete facing over the reinforcement; attaching bearing plates and nuts; performing nail testing; and installing permanent facing. Refer to Figure 2.1 in the FHWA Geotechnical Engineering Circular No. 7 "Soil Nail Walls" for the components of a soil nail wall.

2.3 Soil nail wall construction requires excavation in staged lifts***. Excavation in the vicinity of the wall face requires special care and effort compared to general earthwork excavation and close coordination between the earthwork contractor and the Soil Nail Wall Contractor.*** The Prime Contractor should take this into account during bidding and should consult the Excavation Section of this Special Note and the Contract Plans for details.

2.4 Subject to the requirements in the Contract Plans and this Special Note, select the method of excavation, drilling method and equipment, final drillhole diameter(s), and grouting procedures to meet the performance requirements specified herein.

2.5 In design and construction of the wall, consider the potential risks involved due to slope failure. Excavation stability, slope stability, wall alignment, and wall stability are the Contractor's responsibilities from the beginning of work until final acceptance. Damage to property (public or private) or to the wall itself during construction is the responsibility of the Contractor. Analyze the soil nail wall system in order to ensure that the wall system will function as intended.

2.6 The main body of this Special Note is general for permanent soil nail walls. Refer to the Appendix or Appendices for any project specific requirements.

2.7 Contract Plans are defined as plans prepared by the Department and/or authorized representative containing the Soil Nail Wall Profile and Layout, Soil Nail Wall Details, Subsurface Data, etc., to be used by the Soil Nail Specialty Contractor to design the soil nail wall. These plans are included in the Bid Proposal.

2.8 Construction Plans are defined as plans prepared by or for the Soil Nail Wall Contractor under the direction of the Wall Design Engineer and accepted by the Engineer for construction of the soil nail wall.

3.0 REFERENCES

The documents below apply to this work. Unless noted otherwise, use the current edition as of the letting date of this project.

3.1 Contract Plans and Plan Notes

3.2 The "Kentucky Standard Specifications for Road and Bridge Construction", Current Edition with supplements. This document may be referred to as "Specifications" or "Standard Specifications" elsewhere in this Special Note.

3.3 The Department Manuals "Kentucky Methods", "List of Approved Materials", and "Field Sampling and Testing Practices".

3.4 American Society for Testing and Materials (ASTM) Standards, Current Edition.

3.5 American Association of State Highway and Transportation Officials (AASHTO) Standards, Current Edition.

3.6 FHWA Publication FHWA-IF-03-017, " Geotechnical Engineering Circular No. 7: Soil Nail Walls" (GEC No. 7), March 2003.

3.7 AASHTO LRFD Bridge Design Specifications, Current Edition, with all interims.

3.8 AISC Steel Construction Manual for the design of structural hardware applies if the design is not covered in the AASHTO Standard Specifications for Highway Bridges, Current Edition, with all interims.

4.0 EXPERIENCE REQUIREMENTS AND SUBMITTALS

Requirements for personnel experience and pre-construction submittals, **including submittal deadlines**, are in this section. Do not begin construction on any soil nail wall, other than stockpiling of wall materials, until the Engineer receives and accepts all submittals required in this section. Additional submittals and records required during

and after construction may be included in other sections of this Special Note. The use of electronic submittals (preferably in .pdf format) will expedite the approval process.

4.1 Experience Requirements The Department considers a satisfactory record of experience in soil nail wall design and construction important to successfully complete this work. Use personnel meeting the requirements below on this project and submit electronically in PDF format all information necessary to verify that they meet the requirements. **Submit this information no later than thirty (30) calendar days after receiving Notice to Begin Work.** As a minimum, include the following for each project necessary to satisfy the requirements:

1. The names and current phone numbers of the owner's representative(s) who can verify that the Contractor meets the requirements.
2. The dates of construction.
3. The type (temporary/permanent) of structure.
4. The number of nails.
5. The maximum wall design height.

The Department will review the experience requirements and respond to the Contractor within twenty-one (21) calendar days. Review and acceptance by the Engineer is for evidence of the required experience and does not in any way relieve the Contractor of full responsibility for the successful and satisfactory completion of the work.

4.2 Contractor Experience Requirements The requirements for the Soil Nail Wall Contractor are:

a. A minimum of five (5) years experience constructing temporary and/or permanent soil nail retaining walls, with a minimum of three (3) projects and at least 600 soil nails or 15,000 ft^2 of wall face completed in the past five (5) years.
b. A minimum of three (3) soil nail retaining wall projects with permanent soil nail retaining walls at least 15 ft high completed in the past five (5) years, and at least 600 permanent soil nails or 15,000 ft^2 of wall face completed in the past five (5) years.

Only drilled and grouted soil nails will satisfy these requirements. Some projects may be used to satisfy more than one requirement.

4.3 Personnel Experience Requirements

4.3.1 Wall Design Engineer Experience Requirements

Use a Wall Design Engineer meeting the requirements below to assume full responsibility for soil nail wall design on this project. One or more other Engineers may assist with the design and plan preparation under the supervision of the Wall Design Engineer, who may be an employee of the Soil Nail Wall Contractor or a Consultant. However, manufacturers' representatives may not be used to satisfy these requirements. The requirements for the Wall Design Engineer are:

a. Licensed Professional Engineer (Civil and/or Structural) in Kentucky.
b. A minimum of five (5) years design and/or construction experience on temporary and/or permanent soil nail retaining walls, with experience on a minimum of three (3) projects and at least 600 soil nails or 15,000 ft^2 of wall face, constructed in the past five (5) years.

4.3.1 Project Engineer Experience Requirements

Use an engineer meeting the requirements below to have overall technical responsibility for soil nail wall construction on this project. It is not necessary for the Project Engineer to be on site on a daily basis. Consultants or manufacturers' representatives may not be used to satisfy these requirements. The requirements for the Project Engineer are:

a. Licensed Professional Engineer in the U.S.
b. A minimum of five (5) years design and/or construction experience on temporary and/or permanent soil nail retaining walls, with experience on a minimum of three (3) projects and at least 600 soil nails or 15,000 ft^2 of wall face, constructed in the past five (5) years.
c. An employee of the Soil Nail Wall Contractor.

The Project Engineer and the Wall Design Engineer may be the same person if that person meets all the stated requirements.

4.3.3 On-Site Supervisor Experience Requirements

Use an on-site supervisor (project manager, superintendent, etc.) meeting the requirements below to be responsible for the daily soil nail wall construction activities on this project. Consultants or manufacturers' representatives may not be used to satisfy the requirements of this section. The requirements for the On-Site Supervisor are:

a. A minimum of five (5) years construction experience on temporary and/or permanent soil nail retaining walls, with experience on a minimum of three (3) projects and at least 600 soil nails or 15,000 ft^2 of wall face, constructed in the past five (5) years.
b. An employee of the Soil Nail Wall Contractor.

The On-Site Supervisor and the Project Engineer may be the same person if that person meets all the stated requirements. The Department will consider allowing a team of more than one supervisor to satisfy these requirements and perform the associated functions, subject to certain conditions at the discretion of the Engineer. The Department may consider related experience with other similar types of specialty construction.

4.3.4 Shotcrete Nozzlemen and Finishers Experience Requirements

Use shotcrete nozzlemen and finishers meeting the requirements below:

a. Certification in accordance with the ACI 506.3R "Guide to Certification of Shotcrete Nozzlemen" by an ACI recognized shotcrete testing lab and/or recognized shotcreting consultant and covering the type of shotcrete to be

used (plain wet-mix, plain dry-mix or steel fiber reinforced). Provide proof of ACI certification.

b. Experience with similar shotcrete application on at least three (3) projects constructed in the past five (5) years, with work totaling at least 5,000 square feet of area.

4.3.5 The Engineer may suspend work on the wall if the Contractor substitutes unqualified and/or unapproved personnel or if the personnel are not performing the required duties. If work is suspended due to substitution of unqualified and/or unapproved personnel, the Contractor is fully liable for all costs resulting from the suspension of work. No adjustment in contract time resulting from this suspension of work will be allowed.

4.4 Design Calculations and Construction Plans For each wall, submit electronically in PDF format for review Construction Plans and Design Calculations prepared by or under the supervision of the Wall Design Engineer and signed by the Wall Design Engineer. Submit in the same format revisions to construction plans and design calculations each time corrections are required. In the design calculations and construction plans, show explicit details sufficient to allow an expeditious review of the proposed design and construction procedures. Hard copies of the reviewed and accepted plans and calculations will required as noted in Section 4.4.2. **Submit this information no later than sixty (60) calendar days after receiving Notice to Begin Work.**

Submit any changes or deviations from the Construction Plans for additional review and acceptance. No adjustments in contract time will be allowed due to incomplete submittals. Revise the drawings when plan dimensions are revised due to field conditions, evaluation of verification or proof test results, or for other reasons. Provide revised design calculations signed by the Wall Design Engineer for all design changes made during construction of the wall.

4.4.1 Design Calculations As a minimum, include the following items:

1. A written summary report that describes the overall soil nail wall design.
2. Applicable code requirements and design references.
3. Nail wall critical design cross sections geometry including soil/rock strata and location, magnitude, and direction of the design slope or external surcharge loads and piezometric levels.
4. Design criteria including, soil/rock shear strengths (friction angle and cohesion), unit weights, and ground-grout pullout resistances and nail drillhole diameter assumptions for each soil/rock strata.
5. Partial safety factors/strength factors (for Service Load Design) used in the design on the pullout resistance, surcharges, soil/rock unit weights, nail head strengths, and steel, shotcrete, and concrete materials. Minimum required global stability soil factor of safety for SLD design.
6. Seismic design acceleration coefficient.

7. Design calculation sheets with the project number, wall location, designation, date of preparation, initials of designer and checker, and page number at the top of each page. Provide an index page with the design calculations.
8. Design notes including an explanation of any symbols and computer programs used in the design.
9. Nail wall final design cross-sections geometry including soil/rock strata and location, magnitude, and direction of slope or external surcharge loads and piezometric levels with critical slip surface shown along with minimum calculated Global stability soil factor of safety of SLD design and required nail lengths and strengths (nail bar sizes and grades) for each nail row.
10. Structural design calculations for wall facings and nail head/facing connections including consideration of facing flexural and punching shear strength, headed studs tensile strength, upper cantilever, minimum reinforcement ratio, cover and splice requirements.
11. Any other necessary design calculations.

4.4.2 Construction Plans As a minimum, include the following items:

1. A natural scale plan view of the wall identifying:
   a. A reference baseline and north arrow.
   b. The offset and offset from the construction centerline or baseline to the face of the wall at its base at all changes in horizontal alignment.
   c. Beginning and end of wall stations and offsets.
   d. Right-of-way and permanent or temporary construction easement limits, location of all known active and abandoned existing utilities, adjacent structures or other potential interferences. The centerline of any drainage structure or drainage pipe behind, passing through or passing under the wall.
   e. Limits of longest nails.
   f. Subsurface exploration locations shown on a plan view of the proposed wall alignment with appropriate references base lines to fix the locations of the explorations relative to the wall.

2. A natural scale elevation view of the wall identifying:
   a. The elevation at the top of the wall, at all horizontal and vertical break points, and at least every 25 ft. along the wall.
   b. Elevations at the wall base and the top of leveling pads for casting CIP facing (if applicable).
   c. Beginning and end of wall stations and stations of alignment breaks.
   d. The distance along the face of the wall to all steps in the wall base.
   e. Wall elevation view showing nail locations and elevations; vertical and horizontal nail spacing; and the location of wall drainage

elements and permanent facing expansion/contraction joints (if applicable) along the wall length.

f. Existing and finish grade profiles both behind and in front of the wall.

g. Elevation Datum

3. Design parameters, including ultimate and allowable nail pullout resistance.
4. General notes for constructing the wall including construction sequencing or other special construction requirements.
5. Horizontal and vertical curve data affecting the wall and wall control points. Match lines or other details to relate wall station to centerline stationing.
6. A summary of quantities of each wall showing estimated square feet of wall face.
7. Nail wall typical section including staged excavation lifts, wall and excavation face batter, nail spacing and inclination, nail bar sizes, and corrosion protection details.
8. A typical detail of production and test nails defining the nail length, minimum drillhole diameter, inclination, test nail bonded and unbonded test lengths and Design Test Loads (DTL's).
9. A soil nail schedule including:
   a. Soil nail numbers
   b. Soil nail design loads
   c. Type, size, and number of bars
   d. Total nail lengths
   e. Nail hole diameters
   f. Angle of nail inclination
   g. Nail locations and spacing
10. Details, dimensions, and schedules for all nails, reinforcing steel, wire mesh, bearing plates, headed studs, etc. and/or attachment devices for shotcrete, cast-in-place or prefabricated facings.
11. Dimensions and schedules of all reinforcing steel including reinforcing bar bending details.
12. Details and dimensions for wall appurtenances such as barriers, coping, drainage gutters, fences, etc.
13. Details for constructing wall around drainage facilities.
14. Details for terminating wall and adjacent slope construction.
15. Facing finishes, color and architectural treatment requirements (if applicable) for permanent wall facing details.

The Department will complete the review within thirty (30) calendar days of each submittal; the Department will not suspend charging working days for this review period. Insufficient design and/or plan details, as judged by the Engineer, will be cause for withholding acceptance. The Contractor is fully liable for all costs resulting from acceptance being withheld; the Department will not suspend

charging working days as the result of not accepting the design, details, or plans. Review and acceptance of the plans by the Engineer is for evidence of work to be performed and does not in any way relieve the Contractor of full responsibility for the design and for successful and satisfactory completion of the work.

After the review is completed and the Engineer accepts the Design Calculations and Construction Plans, furnish the Resident Engineer one full set of accepted Final Construction Plans on mylar, 36 x 22 x 0.004 inch, which will produce clear prints and microfilms, ten (10) full sets of accepted Final Construction Plans for the Department's use, and four (4) sets of accepted Final Design Calculations. Submit design calculations and construction plans, stamped and signed by the Soil Nail Wall Design Engineer. Provide a set of the above information electronically in PDF format.

4.5 Construction and Materials Submittals Submit electronically in PDF format the following. **Submit this information no later than one hundred twenty (120) calendar days after receiving Notice to Begin Work and sixty (60) calendar days prior to beginning wall construction.**

1. The proposed start date and proposed wall construction sequence and schedule including:
   a. Plan describing how surface water will be diverted, controlled and disposed of.
   b. Proposed methods and equipment for excavating the soil and/or rock to the staged excavation lifts, including the proposed grade elevations for each excavation lift.
   c. Measures to ensure wall and slope stability during various stages of wall construction and excavation where discontinuous rows of nails will be installed (if applicable); information on space requirements for installation equipment; temporary shoring plans (if applicable); information on provisions for working in the proximity of underground facilities or utilities (if applicable).
   d. Proposed nail drilling and grouting methods and equipment including drillhole diameter proposed to achieve the required pullout resistance values and any variation of these along the wall alignment.
2. Grout submittal including:
   a. type of mixer;
   b. water/cement ratio;
   c. type of additives;
   d. design grout pressure;
   e. type of cement;
   f. quantity of flyash;
   g. mix design;
   h. design strength of grout; and
   i. mix verification testing;

3. Certified mill test results for nail bars and couplers from each heat specifying the ultimate strength, yield strength, elongation and composition.
4. Certificates of Compliance for the following materials, if used. Provide certificates stating that the material or assemblies to be provided will fully comply with the contract requirements:
   a. Nail Centralizers
   b. Nail Encapsulation
   c. Bearing Plates
   c. Nuts
   d. Portland Cement
   e. Documentation to support any other requirements in the Materials Section of this Special Note.
5. Shotcrete and Drainage submittals including:
   a. Proposed methods of shotcrete placement and of controlling and maintaining facing alignment and location and shotcrete thickness.
   b. Shotcrete mix design performed by a certified ACI Level II or KRMCA Level II technician including:
      - Type of Portland cement.
      - Aggregate source and gradation.
      - Proportions of mix by weight and water-cement ratio.
      - Proposed admixtures, manufacturer, dosage, technical literature.
      - If prepackaged shotcrete is used, previous strength test results for the same shotcrete mix from the same manufacturer completed within one year of the start of shotcreting may be submitted for initial verification of the required compressive strengths at start of production work.
   c. Certificates of Compliance, manufacturers' engineering data and installation instructions for the PVC drain piping, drainage geotextile, geocomposite drain strip, drain grate and accessories.
6. Proposed nail testing methods and equipment setup including:
   a. Details of the jacking frame and appurtenant bracing.
   b. Details showing methods of isolating test nails during shotcrete application (i.e., methods to prevent bonding of the soil nail bar and the shotcrete facing during testing).
   c. Details showing methods of providing the temporary unbonded length and of grouting the temporary unbonded length of test nails after completion of testing.
   d. Specific test nail locations including stations and elevations.
   e. Equipment list.
   f. Identification number and certified calibration records for each test jack and pressure gauge (calibrated as a unit no more than 12 months prior to use) and load cell to be used.

7. Instrumentation submittals, if required.
8. Any other documentation required to verify that proposed construction procedures and materials fully comply with all requirements in the contract documents.

The Department will complete the review within thirty (30) calendar days after accepting the Design Calculations and Construction plans or within thirty (30) calendar days after receiving each submittal; the Department will not suspend charging working days for this review period. Unacceptable methods or documentation, as judged by the Engineer, will be cause for withholding acceptance. The Contractor is fully liable for all costs resulting from acceptance being withheld; the Department will not suspend charging working days as the result of not accepting the design, details, or plans. Review and acceptance by the Engineer is for evidence of work to be performed and does not in any way relieve the Contractor of full responsibility for the successful and satisfactory completion of the work.

4.6 Soil Nail Wall Pre-Construction Meeting A Pre-Construction Meeting to discuss soil nail wall construction will be required. This meeting will be held after all soil nail submittals in Sections 4.1, 4.2, 4.3, and 4.4 have been received, reviewed, and accepted by the Department, after the submittals in Section 4.5 have been received by the Department, and at least ten (10) working days prior to the beginning of soil nail construction. The purpose of the meeting is to discuss construction procedures, personnel, and equipment to be used. The following will be expected to attend:

- Representing the Contractor and Subcontractors - Prime Contractor Representative, Soil Nail Wall Design Engineer, Soil Nail Wall Project Engineer, and Soil Nail Wall On-Site Supervisor. Also, representatives of the Excavation Contractor, Shotcreting Contractor, and Surveyor, if different than the Prime or Soil Nail Wall Contractor.
- Representing the Quality Control Team - QCP Manager and Lead Inspector.
- Representing the Department - Section Engineer, Central Office Construction Engineer, Geotechnical Branch Representative and others as deemed appropriate by the Section Engineer.

If the Contractor's key personnel change or if the Contractor proposes a significant revision to soil nail construction procedures, additional Soil Nail Pre-Construction meetings may be required at the discretion of the Engineer.

5.0 DESIGN

Design the soil nail wall using the Allowable Stress Design (ASD) method, also known as Service Load Design (SLD). Primary design references include but are not limited to: FHWA Publication FHWA-IF-03-017, "Geotechnical Engineering Circular No.7, Soil

Nail Walls", March 2003; AASHTO Standard Specifications for Highway Bridges, Current Edition, with all interims. Use required partial safety factors, allowable strength factors, and minimum global stability soil factors of safety in accordance with the FHWA GEC No. 7, unless specified otherwise; critical structure requirements apply. Perform structural design of any individual wall elements not covered in FHWA GEC No. 7 by the Service Load Design methods in conformance with appropriate articles of the AASHTO Specifications. Estimated soil/rock design shear strength parameters, slope and external surcharge loads, type of wall facing and facing architectural requirements, soil nail corrosion protection requirements, known utility locations, easements, and right-of-ways will be as shown in the Contract Plans or specified elsewhere in this Special Note.

Refer to the Contract Plans for additional information to be used for the design of the soil nail wall, including: Wall Plan and Elevation Views, Soil Nail Wall Details, and Subsurface Data.

5.1 Soil Nail Capacity Determine the allowable pullout resistance necessary to develop the required design loads using theoretical and empirical methods, and based on evaluation of the subsurface data in the Contract Plans and/or inspection of the site. Verify the desired soil nail capacities in accordance with the Soil Nail Testing and Acceptance Section of this Special Note.

5.2 Soil Nail Geometry

- Unless specified in the Contract Plans or elsewhere in this Special Note, provide a minimum soil nail length of 10 ft.
- Provide a minimum nail hole diameter of 6 inches.
- Provide a nail inclination of at least 10° but no more than 20°, unless otherwise specified in the Contract Plans or elsewhere in the Special Note.
- Do not extend the nails beyond the right-of-way or easement limits shown in the Contract Plans.

5.3 Corrosion Protection Provide design and details for Class I Protection in accordance with FHWA GEC No. 7 (Sections C.3 and C.4), except that the required thickness of bar-coating epoxy is 7-12 mils rather than 16 mils.

5.4 Structural Hardware Design structural hardware in accordance with the current edition of the AISC Steel Construction Manual and the current edition of the AASHTO Standard Specifications for Highway Bridges with interims. Where these conflict, AASHTO Specifications with interims govern.

5.5 Temporary Shotcrete and Wall Drainage Design a temporary shotcrete and permanent wall drainage system as shown in the Contract Plans and/or specified elsewhere in this Special Note. The Wall Design Engineer is responsible for providing all necessary details required to successfully construct the temporary shotcrete facing and wall drainage system (including weep drains and/or toe drains as applicable) to satisfy the design intent of the wall. Comply with AASHTO Specifications or the FHWA GEC No. 7 for any specific items that may not be addressed herein or elsewhere in the Contract Documents.

5.6 Wall Alignment Ensure that the wall is compatible with the horizontal and vertical alignment indicated in the Contract Plans. Survey control is the front face of the wall.

5.7 Permanent Concrete Facing When permanent concrete facing is required, provide cast-in-place concrete facing unless otherwise specified in the plans. Refer to the plans for detail concerning formliners or other architectural treatments that may be required. Design concrete facing for full loads at final condition (in-place facing and complete construction). Provide a minimum facing thickness according to the following:

Cast-in-Place Concrete with 1 Mat of Reinforcement	10 inches
Cast-in-Place Concrete with 2 Mats of Reinforcement	12 inches

The minimum concrete cover over reinforcement is 3 inches against temporary shotcrete and 2 inches on the front face. Provide joints and joint materials as shown in the Contract Plans.

Protrusions beyond the face of the wall are not allowed. Completely fill any voids between the permanent facing and the construction facing with grout.

Include details for formwork connections to the shotcrete facing and/or nails (if applicable), proposed concrete placement method and placement rates, and accompanying structural calculations verifying the structural adequacy of the formwork, connections, and shotcrete facing and/or nails to support the loading induced by the fluid CIP concrete. When anchors embedded into the shotcrete facing will be used to support the 1-sided CIP face form, include calculations illustrating the anchor design load (calculated as the design concrete fluid pressure times the anchor tributary area).

5.8 Surface Drainage Coordinate design of surface drainage above the walls with the wall design.

6.0 MATERIALS

Provide materials conforming to the requirements below when the materials are required by the Contract Plans, this Special Note, the Construction Plans, or elsewhere in the Contract Documents.

6.1 Soil Nails

6.1.1 Solid Bar Nails AASHTO M31/ASTM A615, Grade 60 or 75, ASTM A722 for Grade 150. Deformed bar, continuous without splices or welds, new, straight, undamaged, and encapsulated. Threaded a minimum of 6 inches on the wall anchorage end to allow proper attachment of bearing plate and nut. Threading may be continuous spiral deformed ribbing provided by the bar deformations (e.g. continuous threadbars) or may be cut into a reinforcing bar. If threads are

cut into a reinforcing bar, provide the effective area used for design, at no additional cost. Use mechanical splicers only for nails greater than 40 ft. in length.

6.1.2 Bar Couplers Bar couplers that develop the full ultimate tensile strength of the bar as certified by the manufacturer.

6.1.3 Fusion Bonded Epoxy Coating ASTM A 775, 7-12 mil thickness electrostatically applied. Bend test requirements are waived. Coating at the wall anchorage end of epoxy-coated bars may be omitted over the length provided for threading the nut against the bearing plate.

6.1.4 Encapsulation Minimum 40 mils thick corrugated HDPE tube conforming to AASHTO M252 or corrugated PVC tube conforming to ASTM D1784, Class 13464-B.

6.2 Soil Nail Appurtenances

6.2.1 Centralizers Manufactured from Schedule 40 PVC pipe or tube, steel or other material not detrimental to the nail steel (do not use wood); securely attached to the nail bar; sized to position the nail bar within 1 inch of the center of the drillhole; sized to allow tremie pipe insertion to the bottom of the drillhole; and sized to allow grout to freely flow up the drillhole.

6.2.2 Nail Grout Provide Type I or III Portland Cement conforming to ASTM C 150 and Section 801 of the Standard Specifications. Provide fresh cement that does not contain any lumps or other indication of hydration or “pack set.” Provide water in the grout that is potable, clean and free of injurious substances, and meets the requirements of Section 803 of the Standard Specifications, except that the chloride content of the water does not exceed 100 ppm.

Provide grout consisting of a pumpable neat mixture of cement and water and is stable (bleed less than 2 percent), fluid, with a minimum 28-day compressive strength of 2000 psi and 1000 psi at 3 days, measured in accordance with ASTM C 109. No later than thirty days prior to beginning grouting operations, submit to the Engineer results of tests performed by an approved laboratory which demonstrate that the proposed grout mixture meets the requirements of this note. Include a graph with this information relating compressive strength of the grout to age covering a range of ages from 24 hours to 28 days.

Add water to the mixer first followed by cement and the admixtures. Mix the grout in mechanical mixing equipment of a type capable of continuous mixing which produce a grout free of lumps and undispersed cement. Auger mixing of the grout is not permitted. Retempering to the grout is not permitted.

Required Grout Physical Properties		
Property	**Test Value**	**Test Method**
Water-Cement Ratio	Max. 0.45	----------
28 Day Compressive Strength (Average of 3 cubes)	Min. 2000 psi	ASTM C109
3 Day Compressive Strength (Average of 3 cubes)	Min. 1000 psi	ASTM C109
Expansion	0.5% min 2% max	ASTM C1090

6.2.3 Admixtures Section 802 of the Standard Specifications. Admixtures which control bleed, improve flowability, reduce water content and use retard set in the grout, subject to review and acceptance by the Engineer. Accelerators are not permitted. Expansive admixtures may only be used in grout used for filling sealed encapsulations. Use admixtures compatible with the grout and mixed in accordance with the manufacturer's recommendations.

6.2.4 Film Protection Polyethylene film per AASHTO M171.

6.3 Bearing Plates, Nuts, and Welded Stud Shear Connectors

6.3.1 Bearing Plates ASTM A36

6.3.2 Nuts AASHTO M291, Class B, hexagonal, fitted with beveled washer or spherical seat to provide uniform bearing.

6.3.3 Shear Connectors AASHTO Construction Specifications, Section 11.3.3.1

6.4 Temporary Shotcrete and Wall Drainage Materials

Deliver, store and handle materials to prevent contamination, segregation, corrosion or damage. Store liquid admixtures to prevent evaporation and freezing.

Provide drainage geotextile and geocomposite drain strips in rolls wrapped with a protective covering and stored in a manner which protects the fabric from mud, dirt, dust, debris, and shotcrete rebound. Do not remove protective wrapping until immediately before the geotextile or drain strip is installed. Avoid extended exposure to ultra-violet light. Label each roll of geotextile or drain strip in the shipment to identify the production run.

Cement	Section 801, Type I, II, III or IV
Fine Aggregate	Section 804, Concrete Sand
Coarse Aggregate	Section 805, No. 11
Water	Section 803
Chemical Admixtures:	
Accelerator	Section 802, Fluid type, applied at nozzle
Water-reducer and Superplastisizer	Section 802
Retarders	Section 802
Mineral Admixtures:	
Fly Ash	Section 844, Cement replacement up to 35% by weight of cement
Silica Fume	Section 844, 90% minimum silicon dioxide solids content, not to exceed 12% by weight of cement
Welded Steel Wire Fabric	Section 811/AASHTO M55
Reinforcing Bars for Shotcrete Facing	Section 811, Grade 60, deformed
Bearing Plates	ASTM A36
Nuts	AASHTO M291, Class B, hexagonal, fitted with beveled washer or spherical seat to provide uniform bearing
Prepackaged Shotcrete	ASTM C928
Toe Drain Geotextile	Section 843, Type II
Drainage Aggregate	Section 805.08, with no more than 2% passing the No. 200 sieve
Geocomposite Drain Strip	Amerdrain 500 or approved equal
Film Protection	Polyethylene films per AASHTO M-171
PVC Connector and Drain Pipes:	
Pipe	ASTM 1785 Schedule 40 PVC, solid and perforated wall, cell classification 12454-B or 12354-C, wall thickness SDR 35, with solvent weld or elastomeric gasket joints
Fittings	ASTM D3034, cell classification 12454-B or 12454-C, wall thickness SDR35, with solvent weld or elastomeric gasket joints
Solvent Cement	ASTM D2564
Primer	ASTM F656
Section References are in the Kentucky Standard Specifications, Current Edition	

6.4.1 Shotcrete Mix Design Use shotcrete complying with the requirements of ACI 506.2, "Specifications for Materials, Proportioning and Application of Shotcrete", except as otherwise specified. The Contractor must receive notification from the Engineer that the proposed mix design and method of placement are acceptable before shotcrete placement can begin.

6.4.1.1 Proportioning and Use of Admixtures Proportion the shotcrete to be pumpable with the concrete pump furnished for the work, with a cementing materials content of at least 650 lb/cy and water/cement ratio not greater than 0.50. Do not use admixtures unless approved by the Engineer. Thoroughly mix admixtures into the shotcrete at the rate specified by the manufacturer. Use only accelerators compatible with the cement used, non-corrosive to steel, and not promoting other detrimental effects such as cracking or excessive shrinkage. The maximum allowable chloride ion content of all ingredients is 0.10% when tested to AASHTO T260.

6.4.1.2 Air Entrainment Air entrainment is not required for temporary shotcrete construction facings.

6.4.1.3 Strength Requirements Provide shotcrete with a compressive strength of 2000 psi in 3 days and 4000 psi in 28 days. The average compressive strength of each set of three test cores extracted from test panels or wall face must equal or exceed 85 percent of the specified compressive strength, with no individual core less than 75 percent of the specified compressive strength, in accordance with ACI 506.2.

6.4.1.4 Mixing and Batching Batch aggregate and cement by weight or by volume in accordance with the requirements of ASTM C94 or AASHTO M241/ASTM C685. Use mixing equipment that thoroughly blends the materials in sufficient quantity to maintain placing continuity. Produce ready mix shotcrete complying with AASHTO M157. Batch, deliver, and place shotcrete within 90 minutes of mixing. The use of retarding admixtures may extend application time beyond 90 minutes if approved by the Engineer.

Premixed and packaged shotcrete mix may be provided for on-site mixing. Use packages containing materials conforming to the Materials Section. Placing time limit after mixing is per the manufacturers' recommendations.

6.4.2 Field Quality Control Production test panels or test cores from the wall facing are required. Perform shotcreting and coring of test panels using qualified personnel in the presence of the Engineer. Provide equipment, materials, and personnel as necessary to obtain shotcrete cores for testing including construction of test panel boxes, field curing requirements and coring.. Shotcrete final acceptance will be based on the 28-day strength.

Begin shotcrete production work only upon initial approval of the design mix and nozzlemen and continue if the specified strengths are obtained. The shotcrete work by a crew will be suspended if the test results for their work do not satisfy the strength requirements. Change all or some of the following: the mix, the crew, the equipment, or the procedures. Before resuming work, the crew must shoot additional test panels and demonstrate that the shotcrete in the panels

satisfies the specified strength requirements. Provide all work required to obtain satisfactory strength tests at no additional cost to the Department.

6.4.2.1 Production Test Panels Furnish at least one production test panel or, in lieu of production test panels, six 3 inch diameter cores taken from the shotcrete facing, during the first production application of shotcrete and henceforth for every 5000 ft^2 of shotcrete placed. Construct the production test panels simultaneously with the shotcrete facing installation at times designated by the Engineer. Make production test panels with minimum dimensions of 18x18inches square and at least 4 inches thick.

6.4.2.2 Test Panel Curing, Test Specimen Extraction and Testing
Immediately after shooting, field moist cure the test panels by covering and tightly wrapping with a sheet of material meeting the requirements of ASTM C171 until they are delivered to the testing lab or test specimens are extracted. Do not immerse the test panels in water. Do not further disturb test panels for the first 24 hours after shooting. Provide at least six 3 inch diameter core samples cut from each preconstruction test panel and production test panel. Contractor has the option of extracting test specimens from test panels in the field or transporting to another location for extraction. Keep panels in their forms when transported. Do not take cores from the outer 6 inches of test panels measured in from the top outside edges of the panel form. Trim the ends of the cores to provide test cylinders at least 3 inches long. If the Contractor chooses to take cores from the wall face in lieu of making production test panels, the Engineer will designate locations. Clearly mark the cores and container to identify the core locations and whether they are for preconstruction or production testing. If for production testing, mark the section of the wall represented by the cores on the cores and container. Immediately wrap cores in wet burlap or material meeting requirements of ASTM C171 and seal in a plastic bag. Deliver cores to the testing lab within 48 hours of shooting the panels. The remainder of the panels will become the property of the Contractor. Upon delivery to the testing lab, place the samples in the moist room until the time of test. When the test length of a core is less than twice the diameter, apply the correction factors given in AASHTO T24/ASTM C42 to obtain the compressive strength of individual cores. Test three cores will be tested at 3 days and three cores at 28 days in accordance with AASHTO T24/ASTM C42.

Fill core holes in the wall by dry-packing with non-shrink patching mortar after the holes are cleaned and dampened. Do not fill core holes with shotcrete.

6.5 Permanent Concrete Facing

6.5.1 Cast-in-Place Concrete Conform to the Standard Specifications for Class A concrete.

6.5.2 Precast Concrete Panels Conform to the Standard Specifications for Class D or Class D Modified concrete. Obtain panels from an approved Precast Concrete Producer on the KYTC List of Approved Materials.

6.5.3 Reinforcing Steel Conform to the Standard Specifications. Epoxy coating is not required.

6.6 Materials Handling and Storage Comply with the Standard Specifications and the items below:

1. Do not move or transport encapsulated nails until the encapsulation grout has reached sufficient strength to resist damage during handling.
2. Handle encapsulated nails in a manner that will prevent large deflections, distortions or damage.
3. Repair encapsulated nails that are damaged or defective in accordance with the manufacturer's recommendations or remove them from the site.

7.0 MATERIALS TESTING AND ACCEPTANCE

7.1 Materials Sampling and Testing will be in accordance with Section 106 of the Standard Specifications, the Department's current "Kentucky Methods", the current "Manual of Field Sampling and Testing Practices", and other referenced documents.

7.2 Use only materials accepted by the Department before use. The Engineer may suspend work on the wall if the Contractor does not have acceptance of materials to be used and there is no other work on the wall that may be done. If work is suspended due to lack of material acceptance, the Contractor is fully liable for additional cost from the suspension of work. No additional contract time resulting from the suspension of work will be allowed.

8.0 CONSTRUCTION

Construct the wall(s) according to the Contract Plans, Construction Plans, the Standard Specifications, and the requirements below. In all cases, provide materials conforming to the Materials Section of this Special Note.

8.1 Excavation ***Coordinate the work and the excavation so the soil nail wall is safely constructed.*** Perform the wall construction and excavation sequence in accordance with the Construction Plans. Proceed with excavation in stages exposing the minimum amount of soil or rock face that will allow the practical and expeditious application of the shotcrete and the installation of soil nails while assuring stability of the excavated face and minimizing ground movements. Excavate a neatline face to facilitate application of temporary shotcrete and limit excavation in front of walls to 2 ft. below any soil nail until that nail has been completed and tested (if applicable). Leave temporary excavation lifts open no more than 24 hours without the temporary shotcrete facing or nails installed. After temporary shotcrete has been applied, excavate the next lift only after the shotcrete strength reaches 2000 psi .

8.2 Drilling Drill holes for soil nails at the locations shown in the Construction Plans. Use drilling methods and soil nail lengths necessary to develop adequate load capacity to satisfy testing acceptance criteria for the design load required, but not less than the lengths and diameters shown on the Construction Plans. It is the Contractor's responsibility to choose drilling methods that will maintain open drill holes and that do not promote mining or loosening of the soil at the perimeter of the drill hole or fracture soil with weak stratification planes by use of high flush volumes and pressures. At the ground surface, locate the drill hole within 6 inches of the location shown on the Construction Plans. At the point of entry, angle the nail within plus or minus 3° of that shown on the Construction Plans. Do not extend the nails beyond the right-of-way or easement limits shown in the Contract Plans provided in the contract documents.

8.3 Nail Installation Place centralizers as shown in the Construction Plans as necessary for corrosion protection.

8.4 Grouting Provide grouting equipment capable of continuous mixing and producing a grout free of lumps. Place nails in each drilled hole either prior to grouting or within 15 minutes of the grout injection. Grout until the hole is completely filled with grout and clean grout is seen to run from the top of the hole. Accomplish mortar packing and secondary grouting to the wall face as soon as practical after nail installation. Provide secondary grouting to the small ungrouted zone at the face and place a bearing plate over the bar and dry pack with cement or a cement mortar to provide even bearing against the shotcrete face.

Test grout according to AASHTO T106/ASTM C109 at a frequency of no less than one test every 50 CY of grout placed. Provide grout cube test results to the Engineer within 24 hours of testing.

8.5 Temporary Shotcrete and Wall Drainage Shotcrete facing and wall drainage work consists of furnishing all materials and labor required for placing and securing geocomposite drainage material, connection pipes, weepholes and horizontal drains (if required), drainage gutter, reinforcing steel and shotcrete for the temporary shotcrete construction facing and nail head bearing plates and nuts for the soil nail walls. The Work includes any preparatory trimming and cleaning of soil/rock surfaces and shotcrete cold joints to receive new shotcrete.

Use shotcrete complying with the requirements of ACI 506.2, "Specifications for Materials, Proportioning and Application of Shotcrete", except as otherwise specified. Shotcreting consists applying of one or more layers of concrete conveyed through a hose pneumatically projected at a high velocity against a prepared surface.

Produce shotcrete by either a wet-mix or dry-mix process. The wet-mix process consists of thoroughly mixing all the ingredients except accelerating admixtures, but including the mixing water, introducing the mixture into the delivery equipment and delivering it, by positive displacement, to the nozzle. Air jet the wet-mix shotcrete from the nozzle at high velocity onto the surface. The dry-mix process consists of shotcrete without mixing water that is conveyed through the

hose pneumatically with the mixing water introduced at the nozzle. For additional descriptive information, refer to the American Concrete Institute ACI 506R "Guide to Shotcrete."

All temporary shotcrete and wall drainage construction is incidental to the Contract Unit Bid Price for “Soil Nail Wall” per “Square Foot”.

8.6 Wall Drainage Network Install and secure all elements of the wall drainage network as shown in the Construction Plans, specified herein, or as required to suit the site conditions. Install geocomposite drain strips and PVC connection pipes as shown on the Construction Plans. Install all elements of the drainage network prior to shotcreting. Capture unanticipated subsurface drainage features exposed in the excavation cut face independently of the wall drainage network and mitigate prior to shotcrete application.

8.6.1 Geocomposite Drain Strips Install geocomposite drain strips centered between offset nail columns as shown in the Construction Plans. The maximum horizontal spacing between drain strips is 5 feet. Use drain strips at least 12 inches wide and place the geotextile side against the ground. Secure the strips to the excavation face and prevent shotcrete from contaminating the ground side of the geotextile. Install vertically continuous drain strips. Make splices with a 12 inch minimum overlap such that the flow of water is not impeded. Repair damage to the geocomposite drain strip, which may interrupt the flow of water.

8.6.2 Toe Drains If required, install toe drains at the bottom of each wall. Wrap the drainage geotextile around the toe drain aggregate and pipe and conform to the dimensions of the trench. Conform to Section 214 of the Standard Specifiations for Geotextile Construction. Overlap the drainage geotextile on top of the drainage aggregate as shown in the Construction Plans. Replace or repair damaged or defective drainage geotextile.

8.6.3 Connection Pipes and Weepholes Install connection pipes as shown in the Construction Plans. Connection pipes are lengths of solid PVC pipe installed to direct water from the geocomposite drain strips to the exposed face of the wall. Connect the connection pipes to the drain strips using either prefabricated drain grates as shown in the Construction Plans or using the alternate connection method described below. Install the drain grate per the manufacturer's recommendations. Seal the joint between the drain grate and the drain strip and the discharge end of the connector pipe to prevent shotcrete intrusion.

The alternative acceptable method for connection of the connector pipe to the drain strip involves cutting a hole slightly larger than the diameter of the pipe into the strip plastic core but not through the geotextile. Wrap both ends of the connection pipe in geotextile in a manner that prevents migration of fines through the pipe. Tape or seal the inlet end of the pipe where it penetrates the drain strip and the discharge end of the connector pipe in a manner that prevents penetration of shotcrete into the drain strip or pipe. To assure passage of groundwater from the drain strip into the connector pipe, slot the inlet end of the

connector pipe at every 45 degrees around the perimeter of the pipe to a depth of ¼ inch.

Provide weepholes, if required, through the construction facing to drain water from behind the facing. Install as shown in the Construction Plans. Use PVC pipe to form the weephole through the shotcrete. Cover the end of the pipe contacting the soil with a drainage geotextile. Prevent shotcrete intrusion into the discharge end of the pipe.

8.7 Temporary Shotcrete Construction Facing

8.7.1 Shotcrete Alignment and Thickness Control Ensure that the minimum thickness of shotcrete that shown in the Construction Plans, using shooting wires, thickness control pins, or other devices acceptable to the Engineer. Install thickness control devices normal to the surface such that they protrude the required shotcrete thickness outside the surface. Ensure that the front face of the shotcrete does not extend beyond the limits shown in the Construction Plans.

8.7.2 Surface Preparation Clean the face of the excavation and other surfaces to be shotcreted of loose materials, mud, rebound, overspray or other foreign matter that could prevent or reduce shotcrete bond. Protect adjacent surfaces from overspray during shooting. Avoid loosening, cracking, or shattering the ground during excavation and cleaning. Remove any surface material that is so loosened or damaged, to a sufficient depth to provide a base that is suitable to receive the shotcrete. Remove material that loosens as the shotcrete is applied. The cost of additional shotcrete is incidental to the work. Divert water flow and remove standing water so that shotcrete placement will not be detrimentally affected by standing water. Do not place shotcrete on frozen surfaces.

8.7.3 Delivery and Application Maintain a clean, dry, oil-free supply of compressed air sufficient for maintaining adequate nozzle velocity at all times. Use equipment capable of delivering the premixed material accurately, uniformly, and continuously through the delivery hose. Control shotcrete application thickness, nozzle technique, air pressure, and rate of shotcrete placement to prevent sagging or sloughing of freshly-applied shotcrete.

Apply the shotcrete from the lower part of the area upward to prevent accumulation of rebound. Orient nozzle at a distance and approximately perpendicular to the working face so that rebound will be minimal and compaction will be maximized. Pay special attention to encapsulating reinforcement. Do not work rebound back into the construction. Where shotcrete is used to complete the top ungrouted zone of the nail drill hole near the face, position the nozzle into the mouth of the drillhole to completely fill the void.

A clearly defined pattern of continuous horizontal or vertical ridges or depressions at the reinforcing elements after they are covered with shotcrete will be considered an indication of insufficient reinforcement cover or poor nozzle techniques. In this case immediately suspend the application of shotcrete and

implement corrective measures before resuming the shotcrete operations. Correct the shotcreting procedure by adjusting the nozzle distance and orientation, by insuring adequate cover over the reinforcement, by adjusting the water content of the shotcrete mix or other means. Adjustment in water content of wet-mix will require requalifying the shotcrete mix.

8.7.4 Defective Shotcrete Repair shotcrete surface defects as soon as possible after placement. Remove and replace shotcrete that exhibits segregation, honeycombing, lamination, voids, or sand pockets. In-place shotcrete not meeting the specified strength requirement will be subject to remediation. Possible remediation options include placement of additional shotcrete thickness or removal and replacement, at no additional cost to the Department.

8.7.5 Construction Joints Taper construction joints uniformly toward the excavation face over a minimum distance equal to the thickness of the shotcrete layer. Provide a minimum reinforcement overlap at reinforcement splice joints as shown in the Construction Plans. Clean and wet the surface of a joint before adjacent shotcrete is applied. Where shotcrete is used to complete the top ungrouted zone of the nail drill hole near the face, to the maximum extent practical, clean and dampen the upper grout surface to receive shotcrete, similar to a construction joint.

8.7.6 Finish Use either an undisturbed gun finish as applied from the nozzle or a rough screeded finish. Remove shotcrete extending into the CIP finish face section beyond the tolerances specified herein.

8.7.7 Attachment of Nail Head Bearing Plate and Nut Attach a bearing plate and nut to each nail head as shown on the Construction Plans. While the shotcrete is still plastic and before its initial set, uniformly seat the plate on the shotcrete by hand wrench tightening the nut. Where uniform contact between the plate and the shotcrete cannot be provided, set the plate in a bed of grout. After grout has set for 24 hours, tighten the nut using a hand wrench. Ensure bearing plates with headed studs are in intimate contact with the construction facing and the studs are located within the tolerances shown in the Construction Plans or specified herein.

8.7.8 Weather Limitations Protect the shotcrete if it must be placed when the ambient temperature is below 32°F and falling or when it is likely to be subjected to freezing temperatures before gaining sufficient strength. Maintain cold weather protection until the in-place compressive strength of the shotcrete is greater than 700 psi. Cold weather protection includes blankets, heating under tents, or other means acceptable to the Engineer. Deposit the shotcrete mix at a temperature of not less than 50°F or more than 95°F.

Suspend shotcrete application during high winds and heavy rains unless suitable protective covers, enclosures or wind breaks are installed. Remove and replace newly placed shotcrete exposed to rain that washes out cement or otherwise makes the shotcrete unacceptable. Provide a polyethylene film or equivalent to protect the work from exposure to adverse weather.

8.7.9 Curing Curing is not required for temporary construction facings to be covered by a CIP facing or whose service life is less than 36 months.

8.7.10 Construction Facing Tolerances

Construction Tolerances for Temporary Shotcrete Construction Facing	
Horizontal Location of Wire Mesh; Rebar; Headed Studs on Bearing Plates, from Plan location	+/- 0.6 inch
Headed studs location on bearing plate, from plan location	0.25 inch
Spacing between reinforcing bars, from plan dimension	1 inch
Reinforcing lap, from specified dimension	1 inch
Thickness of shotcrete	0.4 inch
Nail head bearing plate, deviation from parallel to wall face	10 degrees

8.7.11 Safety Requirements Equip nozzlemen and helpers with gloves, eye protection, and adequate protective clothing during the application of shotcrete. The Contractor is responsible for meeting all federal, state and local safety code requirements.

8.8 Backfilling Behind Wall Facing Upper Cantilever If possible, compact backfill within 3 ft. behind the wall facing upper cantilever using light mechanical tampers.

8.9 CIP Concrete Form or PC Panel Connection to Shotcrete Facing

When mechanical, grouted, or epoxied anchors embedded into the shotcrete facing are used to support a one-sided CIP face form or PC Panel, perform pullout testing of the embedded anchors in accordance with ASTM C900 and as modified herein. Perform pullout testing of installed anchors prior to attachment of the face form. Select test anchor locations to be representative of the full wall surface area to be covered.

For facing areas up to 5000 ft^2, perform a minimum of three flexure/shear pullout tests with the anchor located approximately mid-span between two adjacent nail heads and with the nail heads or other reaction points located approximately one-half the nail spacing from the anchor. For facing areas in excess of 5000 ft^2, perform one additional flexure/shear pullout test for each additional 2500 ft^2 of face area. Test these anchors to 1.5 times their required design load (calculated as the design concrete fluid pressure times the anchor tributary area).

Perform local punching shear pullout testing on 2 percent of the installed anchors. Place the load reaction support no closer to the edge of the anchor than the embedment depth of the anchor into the construction facing. Test these anchors to 2.0 times their required design load.

Modify the anchor and/or face form support system if the tested anchors do not meet the above test acceptance criteria. Modified anchor installation will require re-testing in accordance with the above testing criteria. Cost of anchor pullout testing is incidental to the work.

8.10 Wall Alignment and Permanent Facing Ensure that the wall is compatible with the horizontal and vertical alignment indicated in the Contract Plans. Survey control is the front face of the wall. Construct the exposed face of the wall to be straight and smooth with no discontinuities. Protrusions beyond the face of the walls are not allowed. Completely fill any voids between the temporary and permanent facing with shotcrete or grout. Provide architectural treatment for concrete facing if shown in the Contract Plans.

8.11 Site Drainage Control Provide positive control and discharge of all surface water that will affect construction of the soil nail retaining wall. Maintain all pipes or conduits used to control surface water during construction. Repair damage caused by surface water at no additional cost. Upon substantial completion of the wall, remove surface water control pipes or conduits from the site. Alternatively, with the approval of the Engineer, pipes or conduits that are left in place, may be fully grouted and abandoned or left in a way that protects the structure and all adjacent facilities from migration of fines through the pipe or conduit and potential ground loss.

If water is used in the drilling operation, dispose of the water in such a manner that erosion in the vicinity of the wall is minimized. The Contractor is cautioned against the indiscriminate use of water that could create unstable slopes above and/or below the wall. Immediately repair any damage to the site by water or erosion at no cost to the Department.

9.0 SOIL NAIL TESTING AND ACCEPTANCE REQUIREMENTS

9.1 General Perform both verification and proof testing on designated test nails and record required nail test data. Perform nail testing after the nail grout and shotcrete facing have cured for at least 72 hours and attained at least their specified 3-day compressive strength. Perform testing in less than 72 hours only if compressive strength test results, for tests performed verifies that the nail grout and shotcrete mixes being used will provide the specified 3-day compressive strengths in less time.

Specified test nail locations and/or testing frequencies are provided in an Appendix to this Special Note.

Test each production nail designated for testing within 21 calendar days of installation and provide a written summary of the test results to the Engineer within 7 calendar days after each test; include the following:

1. bonded and unbonded lengths
2. jacking length
3. bar size and area

Failure to begin testing within the specified time and/or failure to meet the submittal deadlines for nail test results may result in the Engineer suspending soil nail installation.

The Department will not make separate payment for the testing required in this section. All testing required in this section is included in the price of the wall(s).

9.2 Testing Equipment Testing equipment includes 2 dial gauges, dial gauge support, jack and pressure gauge, electronic load cell, and a reaction frame. The load cell is required only for the creep test portion of the verification test. Provide a description of test setup and jack, pressure gauge and load cell calibration curves in accordance with the submittals section of this Special Note.

Design the testing reaction frame to be sufficiently rigid and of adequate dimensions such that excessive deformation of the testing equipment does not occur. If the reaction frame will bear directly on the shotcrete facing, design it to prevent cracking of the shotcrete. Independently support and center the jack over the nail bar so that the bar does not carry the weight of the testing equipment. Align the jack, bearing plates, and stressing anchorage with the bar such that unloading and repositioning of the equipment will not be required during the test.

Apply and measure the test load with a hydraulic jack and pressure gauge. Use a pressure gauge graduated in 75 psi increments or less. Use a jack and pressure gauge with a pressure range not exceeding twice the anticipated maximum test pressure. Use a jack with a ram travel no less than 125% of the anticipated maximum movement and sufficient travel to allow the test to be done without resetting the equipment. Monitor the nail load during verification tests with both the pressure gauge and the load cell. Use the load cell to maintain constant load hold during the creep test load hold increment of the verification test.

Measure the nail head movement with a minimum of 2 dial gauges capable of measuring to 0.001 inch. Use a dial gauge with a travel no less than 125% of the anticipated maximum movement and travel sufficient to allow the test to be done without having to reset the gauge. Visually align the gauge to be parallel with the axis of the nail and support the gauge independently from the jack, wall or reaction frame. Use two dial gauges when the test setup requires reaction against a soil cut face.

9.3 Verification Testing of Sacrificial Test Nails Perform verification testing of sacrificial test nails to verify the installation methods and design nail pullout resistance. Sacrificial test nails will not be incorporated as production nails.

Perform verification tests to failure, or no less than 3.0 times the allowable pullout resistance. Bare bars can be used for the sacrificial verification test nails.

Develop and submit the details of the verification testing arrangement including the method of distributing test load pressures to the excavation surface (reaction frame), test nail bar size, grouted drillhole diameter and reaction frame dimensioning to the Engineer for approval in accordance with the Construction Submittals section. Construct verification test nails using the same equipment, installation methods, nail inclination, and drillhole diameter as planned for the production nails. Changes in the drilling or installation method may require additional verification testing as determined by the Engineer at no additional cost to the Department.

Use test nails with both bonded and temporary unbonded lengths. Prior to testing, grout only the bonded length of the test nail. Use a temporary unbonded length of at least 3 ft. Determine the bonded length of the test nail based on the production nail bar grade and size such that the allowable bar structural load is not exceeded during testing; use a bonded length not less than 10 ft. The maximum allowable bar structural load during testing is 90% of the yield strength for Grade 60 and Grade 75 bars, or 80% of the ultimate strength for Grade 150 bars. Provide larger verification test bar sizes, if required to safely accommodate the 10 ft. minimum test bond length and test to failure, at no additional cost to the Department.

Use the following equation for determining the verification test nail maximum bonded length to be used to avoid structurally overstressing the verification test nail bar size:

$L_{BV} = (C\ f_Y\ A_S) / (3\ Q_d)$, or 10 ft., whichever is greater.

L_{BV} = Maximum Verification Test Nail Bonded Length (ft.)
C = 0.9 for Grade 60 and 75 bars and 0.8 for Grade 150 bars
f_Y = Bar Yield or Ultimate Stress (ksi)
(f_Y = 60, 75, and 150 ksi, respectively, for Grade 60, 75 and 150 bars)
A_S = Bar Steel Area (in^2)
3 = Factor of Safety against tensile failure during a Verification Test
Q_d = Allowable pullout resistance (kips/ft., kips per linear foot of grouted nail lengths specified in the Construction Plans)

Determine the Design Test Load (DTL) during verification testing by the following equation:

DTL = Design Test Load (kips) = L_{BV} x Q_d

L_{BV} = As-built bonded test length (ft.)
Q_d = Allowable pullout resistance (kips/ft., kips per linear foot of grouted nail length specified in the Construction Plans)
MTL= 3.0 x DTL = Maximum Test Load (kips)

Incrementally load verification test nails to failure or a maximum test load of 300 percent of the Design Test Load (DTL) in accordance with the following loading schedule. Record the soil nail movements at each load increment.

Verification Test of Sacrificial Nails Loading Schedule

Step	Load	Hold Time
1	AL (0.05 DTL max.)	1 minute
2	0.25 DTL	10 minutes
3	0.50 DTL	10 minutes
4	0.75 DTL	10 minutes
5	1.00 DTL (Creep Test)	30 minutes
6	1.25 DTL (Creep Test)	60 minutes
7	1.50 DTL (Creep Test)	300 minutes
8	1.75 DTL	10 minutes
9	2.00 DTL	10 minutes
10	2.50 DTL or Failure	10 minutes max.
11	3.00 DTL or Failure	10 minutes max.
12	AL (0.05 DTL max.)	1 minute (record permanent set)
AL – Alignment Load, DTL – Design Test Load		

The alignment load (AL) should be the minimum load required to align the testing apparatus and should not exceed 5 percent of the Design Test Load (DTL). Dial gauges should be set to "zero" after the alignment load has been applied. Following application of the maximum test load (3.0 DTL) reduce the load to the alignment load (0.05 DTL maximum) and record the permanent set.

Hold each load increment for at least 10 minutes. Monitor the verification test nail for creep at the 1.00 DTL, 1.25 DTL, and 1.50 DTL load increments. Measure and record nail movements during the creep portion of the test (as applicable) at 1 minute, 2, 3, 5, 6, 10, 15, 20, 25, 30, 45, 60, 75, 90, 100, 150, 180, 210, 240, 270, and 300 minutes. Maintain the load during the creep test within 2 percent of the intended load by use of the load cell.

9.4 Verification Testing of Production Nails Perform verification testing of production nails using the same procedures as for verification testing of sacrificial nails with the following exceptions:

1. The specified corrosion protection is required (bare bars are not allowed).
2. The Maximum Test Load is 2.00 DTL.
3. Creep testing is required only at a load of 1.50 DTL and the creep portion of the test is 60 minutes.

Verification Test of Production Nails Loading Schedule		
Step	**Load**	**Hold Time**
1	AL (0.05 DTL max.)	1 minute
2	0.25 DTL	10 minutes
3	0.50 DTL	10 minutes
4	0.75 DTL	10 minutes
5	1.00 DTL	10 minutes
6	1.25 DTL	10 minutes
7	1.50 DTL (Creep Test)	60 minutes
8	1.75 DTL	10 minutes
9	2.00 DTL	10 minutes
10	AL (0.05 DTL max.)	1 minute (record permanent set)
AL – Alignment Load, DTL – Design Test Load		

Hold each load increment for at least 10 minutes. Monitor the verification test nail for creep at the 1.50 DTL load increment. Measure and record nail movements during the creep portion of the test at 1 minute, 2, 3, 5, 6, 10, 20, 30, 50, and 60 minutes. Maintain the load during the creep test within 2 percent of the intended load by use of the load cell.

9.5 Proof Testing of Production Nails Provide temporary unbonded lengths for each test nail. Isolate the test nail bar from the shotcrete facing and/or the reaction frame used during testing. Isolation of a test nail through the shotcrete facing will not affect the location of the reinforcing steel under the bearing plate. Submit the proposed test nail isolation methods, methods for providing an unbonded test length and methods for grouting the unbonded length subsequent to testing to the Engineer in accordance with the Construction Submittals section. Where temporary casing of the unbonded length of test nails is provided, install the casing in a way that prevents any reaction between the casing and the grouted bond length of the nail and/or the stressing apparatus.

Use production proof test nails with both bonded and temporary unbonded lengths. Prior to testing grout only the bonded length of the test nail. The minimum temporary unbonded length of the test nail is 3 ft. Determine the

bonded length of the test nail based on the production nail bar grade and size such that the allowable bar structural load is not exceeded during testing. The maximum allowable bar structural load during testing is 90 percent of the yield strength for Grade 60 and Grade 75 bars, or 80 percent of the ultimate strength for Grade 150 bars.

Use the following equation for sizing the proof test nail bonded length to avoid overstressing the production nail bar size:

L_{BP} = $(C\ f_Y\ A_S) / (1.5\ Q_d)$, or 10 ft., whichever is greater. *

L_{BP} = Maximum Proof Test Nail Bonded Length (ft.)
C = 0.9 for Grade 60 and 75 bars and 0.8 for Grade 150 bars
f_Y = Bar Yield or Ultimate Stress (ksi)
(f_Y = 60, 75, and 150 ksi, respectively, for Grade 60, 75 and 150 bars)
A_S = Bar Steel Area (in^2)
1.5 = Factor of Safety against tensile failure during a Proof Test
Q_d = Allowable pullout resistance (kips/ft., kips per linear foot of grouted nail length specified in the Construction Plans)

* Production proof test nails shorter than 12 ft. in length may be constructed with less than the minimum 10 ft. bond length; however the unbonded length is limited to 3 ft.

Determine the Design Test Load (DTL) during verification testing by the following equation:

DTL = Design Test Load (kips) = L_{BP} x Q_d

L_{BP} = As-built bonded test length (ft.)
Q_d = Allowable pullout resistance (kips/ft., kips per linear foot of grouted nail length specified in the Construction Plans)
MTL = 1.5 x DTL = Maximum Test Load (kips)

Perform proof tests by incrementally loading the proof test nail to a maximum test load of 150 percent of the Design Test Load (DTL). Measure and record the nail movement at each load in the same manner as for verification tests. Monitor the test load by a jack pressure gauge with a sensitivity and range meeting the requirements of pressure gauges used for verification test nails. At load increments other than maximum test load, hold the load long enough to obtain a stable reading. Apply incrementally loads in accordance with the following loading schedule. Record the soil nail movements at each load increment.

Proof Test Loading Schedule		
Step	**Load**	**Hold Time**
1	AL (0.05 DTL max.)	Until Stable
2	0.25 DTL	Until Stable
3	0.50 DTL	Until Stable
4	0.75 DTL	Until Stable
5	1.00 DTL	Until Stable
6	1.25 DTL	Until Stable
7	1.50 DTL (Max Test Load)	Creep Test (See Below)
AL – Alignment Load, DTL – Design Test Load		

The alignment load (AL) should be the minimum load required to align the testing apparatus and should not exceed 5 percent of the Design Test Load (DTL). Dial gauges should be set to "zero" after the alignment load has been applied.

Start the creep tests as soon as the maximum test load (1.50 DTL) is applied. Depending on performance, perform either 10 minute or 60 minute creep tests at the maximum test load (1.50 DTL). Start the creep period as soon as the maximum test load is applied and measure and record the nail movement at 1 minute, 2, 3, 5, 6, and 10 minutes. Where the nail movement between 1 minute and 10 minutes exceeds 0.04 inches, maintain the maximum test load an additional 50 minutes and record movements at 20 minutes, 30, 50, and 60 minutes. Maintain all load increments within 5 percent of the intended load.

9.6 Test Nail Acceptance Criteria A test nail is considered acceptable when all of the following criteria are met:

1. For verification tests on sacrificial nails, a total creep movement of less than 0.08 inches per log cycle of time over the final log cycle of time of each load increment (between 3 and 30 minutes for 1.00 DTL, 6 and 60 minutes for 1.25 DTL, 30 and 300 minutes for 1.50 DTL) and the creep rate is linear or decreasing throughout the creep test load hold period.
2. For verification tests on production nails, a total creep movement of less than 0.08 inches between the 6 and 60 minute readings is measured during creep testing and the creep rate is linear or decreasing throughout the creep test load hold period.
3. For proof tests, a total creep movement of less than 0.04 inches is measured between the 1 and 10 minute readings, or a total creep movement of less than 0.08 inches is measured between the 6 and 60 minute readings and the creep rate is linear or decreasing throughout the creep test load hold period.
4. For verification tests, the total measured movement at 2.0 x DTL exceeds 80% of the theoretical elastic elongation of the test nail unbonded length.
5. For proof tests, the total measured movement at 1.5 x DTL exceeds 80% of the theoretical elastic elongation of the test nail unbonded length.

6. A pullout failure does not occur prior to or at 2.0 x DTL during verification testing of sacrificial or production nails or 1.5 x DTL during proof testing. Pullout failure is defined as the load at which attempts to further increase the test load simply result in continued pullout movement of the test nail. Record the pullout failure load as part of the test data.

   Successful verification or proof tested production nails meeting the above test acceptance criteria may be incorporated as production nails, provided that (1) the unbonded length of the test nail drillhole has not collapsed during testing, (2) the minimum required drillhole diameter has been maintained, (3) the specified corrosion protection is provided, and (4) the test nail length is equal to or greater than the scheduled production nail length. Complete test nails meeting these requirements by satisfactorily grouting up the unbonded test length. Maintain the temporary unbonded test length for subsequent grouting. If the unbonded test length of production proof test nails cannot be satisfactorily grouted subsequent to testing, replace with an additional production nail installed at no additional cost.

9.7 Test Nail Rejection If a test nail does not satisfy the acceptance criterion, the Engineer will implement the procedures below.

1. For Verification Tests on Sacrificial Nails, the Engineer will evaluate the results of each verification test and will reject installation methods that do not satisfy the nail testing requirements. Propose alternative methods and install replacement verification test nails. Install and test replacement test nails at no additional cost to the Department and with no extension of contract time. The Engineer may require the Contractor to replace some or all of any production nails installed prior to acceptance of Sacrificial Nails; alternatively, the Engineer may require additional verification or proof tests on these production nails.
2. For Verification or Proof Tests on Production Nails, the Engineer may require the Contractor to replace some or all of the installed production nails between a failed test nail and the adjacent passing test nail. Alternatively, the Engineer may require the installation and testing of additional test nails to verify that adjacent previously installed production nails have sufficient load carrying capacity. Contractor modifications may include, but are not limited to: the installation of additional test nails; increasing the drillhole diameter to provide increased capacity; modifying the installation or grouting methods; reducing the production nail spacing from that shown on the Construction Plans and installing more production nails at a reduced capacity; or installing longer production nails if sufficient right-of way is available and the pullout capacity behind the failure surface controls the allowable nail design capacity. The nails may not be lengthened beyond the right-of-way or easement. Installation and testing of additional test nails or installation of additional or modified nails as a result of test nail failure(s) will be at no additional cost to the Department.

10.0 RECORDS

Provide the Engineer with the following final records:

1. As-built drawings showing:
   a. The actual location and orientation of the soil nails, including deviation from specified tolerances.
   b. Nail capacity, nail type, installed drillhole and bar diameter, designed and installed nail length.
   c. The type of testing performed for each soil nail and test results.
   d. The locations of any instrumentation installed and any required instrumentation records.
   e. Finished ground line elevations behind the wall and finished grade elevations in front of the wall.
2. Other records as required by Section 106 of the Standard Specifications.
3. Structural Steel records required by Section 607 of the Standard Specifications.
4. Record plans conforming to Section 105.03 of the Standard Specifications.
5. Construction Records including:
   a. Contractor's name
   b. Drill rig operator's name
   c. Date and time of start and finish of drilling
   d. Drilling difficulties
   e. Caving or sloughing of excavation or drillhole
   f. Groundwater conditions
   g. Drill casing requirements
   h. Grouting records including:
      date, time and method grout was placed
      cement type
      volume of grout placed
      grout pressure

11.0 MEASUREMENT AND PAYMENT

11.1 The Department will pay for the accepted quantities of "Soil Nail Wall" at the contract unit bid price per "Square Foot" and will measure quantities as shown in the Contract Plans. This will constitute full compensation for all costs including materials, labor, tools, equipment, and other incidental items required for designing, constructing, and performing nail testing for the permanent soil nail wall(s) as described herein. This may include but is not limited to the following items: installing sacrificial and production soil nails, providing corrosion protection, shotcrete, concrete facing (if required), wall drainage, toe drainage, surface drainage, anchorage hardware, verification tests, proof tests, all required submittals and records, and other incidental items necessary to provide a

complete permanent soil nail wall. Earth moving, backfilling, drainage, any temporary shoring due to phased construction, and any other earthwork necessary to complete these walls and not included in other bid items, is included as an incidental part of this work.

11.2 Additional areas of wall, required due to unforeseen foundation conditions or other reasons and approved in writing by the Engineer will be paid at the contract unit prices. In the event a decrease in the area of a wall is required, subject to acceptance by the Department, payment will be reduced due to the decrease in the wall area or length.

11.3 All measurement will be based on plan dimensions or dimensions as ordered in writing.

11.4 Refer to an Appendix to this Special Note for Project Specific Measurement and Payment information.

Code	**Pay Item**	**Pay Unit**
20603ED	Soil Nail Wall	Square Foot

Special Note for Soil Nail Walls
Appendix A - Project Specific Requirements

Fayette County
KY 4, Ramp E Wall
Item No. 7-279.00

A1.0 VALUE ENGINEERING

The Department will not consider any Value Engineering Proposals that would result in changes in wall location and/or elevations.

A2.0 SUBSURFACE CONDITIONS

The subsurface conditions encountered at test boring locations are presented on the Subsurface Data Sheets in the Contract Plans. Subsurface Conditions may vary between boring locations. Rock fragments and boulders were encountered during exploratory drilling, and it is possible they may be encountered during soil nail installation.

A3.0 LOCATIONS OF EXISTING STRUCTURE UNITS

Approximate locations and elevations of the existing substructure and superstructure units are provided in the Contract Plans. These locations are based on plans in the Department's archives. However, the Department does not guarantee the accuracy of these locations. Although no specific scale is provided, the existing structure locations were drawn approximately to scale. Field verify the locations of existing structure units, including footing elevations, prior to excavating and installing soil nails.

The existing bridge plans are Drawing No. 16321. Plans for information only are available from archive records. Contact the Division of Structural Design at 502-564-4560.

A4.0 GROUNDWATER CONTROL

Measured groundwater elevations at this site range from approximately 947 to 931 ft. and the bottom elevation of the wall ranges from 955 to 948 ft. Temporary sheeting, shoring, or dewatering methods may be needed for groundwater control during construction. Appropriate drainage systems behind the wall and weep holes shall also be provided.

A5.0 SITE INSPECTIONS

During construction, observe the conditions behind the soil nail walls on a daily basis for signs of ground movement in the vicinity of the wall. Notify the Engineer immediately if signs of movements such as new cracks or increased size of old cracks are observed. If the Engineer determines that the movements exceed those anticipated for typical soil nail wall construction and requires corrective action, immediately take corrective actions necessary to stop the movement or perform repairs at no additional cost to the Department.

A6.0 FIELD ADJUSTMENTS AND CONSTRUCTION TOLERANCES

Field adjustments of nail locations may be necessary due to the existing structure units or other considerations. Redesign and/or additional analyses will be required for field adjustments exceeding the specified tolerances.

A7.0 PERMANENT FACING

Provide permanent facing consisting of cast-in-place concrete. Conform to applicable sections of FHWA Geotechnical Engineering Circular No. 7 for any items not addressed in the contract proposal or plans. Construct the permanent facing within 3 months of nail installation.

A8.0 SACRIFICIAL TEST NAILS

Prior to installing any production nails, install a minimum of one non-production sacrificial test nail.

Submit the proposed locations and sacrificial test nail design with the wall design and construction plans. Install the sacrificial test nails using the drilling and grouting procedures to be used on the production nails. Conduct Verification Tests on the sacrificial nails as described in Section 9.3 of this Special Note within five (5) calendar days after completing the installation and submit the test results within two (2) calendar days after completing the test. Acceptance criteria and rejection procedures are in Sections 9.6 and 9.7.

If a sacrificial test nail is loaded to 2.5 x DTL or higher during a verification test and meets all acceptance criteria, the Contractor may reduce the diameter of production nails in the adjacent wall based on the ultimate bond stress measured during the verification test. The Contractor assumes all responsibility for providing production nails meeting the acceptance criteria. All minimum cover and/or any other design requirements are applicable for the reduced diameter nails. The Engineer may require revisions to the Construction Plans. Any modifications proposed by the Contractor other than the drill hole diameter will require a detailed review by the Department.

The Contractor may, at its own risk, install production nails before the Engineer receives the Verification Test results and accepts the non-production sacrificial nails. Production nails may not be installed until after verification testing on the sacrificial nail has been performed. The Engineer may suspend production nail installation if the Contractor has not submitted the verification test results on the sacrificial nail within two (2) calendar days after completion of the test.

A9.0 PRODUCTION NAIL VERIFICATION TESTING

Perform a minimum of six (6) verification tests on production nails according to Section 9.4 and the test schedule below.

Production Nail Verification Test Schedule South and North Walls	
Top Row	Approximate Stations 13+75, 14+20, & 14+65
2nd Row	Approximate Stations 13+90 & 14+50
3rd Row & Subsequent Rows (If Needed)	Approximate Station 14+20

A10.0 PRODUCTION NAIL PROOF TESTING

Perform proof tests according to Section 9.5 on a minimum of 5% of nails installed, including the first nail installed in each row. A verification test of a production nail will be considered equivalent to a proof test nail and will be accounted for in determining the number of proof tests required. If problems occur during nail installation that, in the opinion of the Engineer, may adversely affect the capacity of one or more nails, the Engineer may specify nails for proof testing or may require additional proof testing.

A11.0 SUMMARY OF LABORATORY TEST DATA

Summary of SPT "N" Values and Soil Index Laboratory Test Results											
Hole No.	Sample Depth (ft)	Sample Type	SPT "N" Value	w (%)	LL	PL	PI	LI	Soil Classification		% Silt + Clay
									AASHTO	Unified	
1015	4.5-6.5	ST	-	39	67	32	35	0.21	A-7-5(32)	CH	81
1016	4.9-6.9	ST	-	30	56	20	36	0.28	A-7-6(34)	CH	89
	9.9-11.9	ST	-	30	47	19	28	0.38	A-7-6(27)	CL	91
	14.9-16.9	ST	-	20	32	20	12	0.03	A-6(9)	CL	85
	19.9-21.9	ST	-	29	52	25	27	0.16	A-7-6(25)	CH	86
	21.9-23.4	SP	11	25	39	20	19	0.24	A-6(13)	CL	73
	24.8-24.9	SP	50/0.1*	-	-	-	-	-	-	-	-
	29.8-31.8	ST	-	31	57	28	29	0.09	A-7-6(21)	CH	71
1017	4.8-6.8	ST	-	26	54	25	29	0.05	A-7-6(27)	CH	85
	9.8-11.8	ST	-	28	39	21	18	0.39	A-6(16)	CL	89
	14.8-16.8	ST	-	27	42	21	21	0.29	A-7-6(29)	CL	87
	19.8-21.8	ST	-	32	50	24	26	0.29	A-7-6(18)	CH	70
	24.8-26.8	ST	-	29	40	21	19	0.41	A-6(16)	CL	83
	29.8-31.8	ST	-	27	42	20	22	0.33	A-7-6(14)	CL	69
1018	5.0-7.0	ST	-	27	48	22	26	0.20	A-7-6(24)	CL	86
	10.0-11.5	SP	14	25	**	**	**	**	**	**	22
	15.0-17.0	ST	-	39	43	26	17	0.76	A-7-6(11)	CL	66

*Blow counts were likely influenced by a rock fragment or boulder. No sample was recovered.
**Insufficient sample retrieved to classify material.

Summary of Groundwater Depths and Elevations					
Hole No.	Station	Offset (ft)	Ground Surface Elev. (ft)	April 4, 2014	
				Depth (ft)	Elevation (ft)
1015	12+93.00	8.40 Rt.	950.1	2.8	947.3
1017	13+93.10	56.60 Rt.	972.4	26.1	946.3
1018	15+37.50	8.60 Rt.	949.7	18.2	931.5

Table 3 Summary of Unconfined Compression Test Data							
Hole No.	Station	Offset (ft)	Depth (ft)	Unified Classification	Plasticity Index, PI	Unconfined Compressive Strength, Q_u (psf)	Undrained Shear Strength, S_u or c_u (psf)
1015	12+93.00	8.40 Rt.	4.5-6.5	CH	35	3731	1865
1016	13+97.80	47.10 Rt.	4.9-6.9	CH	36	6319	3160
			29.8-31.8	CH	29	5497	2750
1017	13+93.10	56.60 Rt.	4.8-6.8	CH	29	3650	1825
			14.8-16.8	CL	21	1755	875
			24.8-26.8	CL	19	4517	2255
1018	15+67.50	8.60 Rt.	5.0-7.0	CL	26	2804	1400
			15.0-17.0	CL	17	1692	850

Summary of CU Triaxial Test Results							
Soils	**Hole No.**	**Station**	**Offset (ft)**	**Depth**	**Unified Classification**	**c' (psf)**	**ϕ' (deg)**
Embankment	1016	13+97.80	47.10 Rt.	9.9-11.9	CL	260	33
				14.9-16.9	CL		
	1017	13+93.10	56.60 Rt.	14.8-16.8	CL		
Foundation	1015	12+93.00	8.40 Rt.	4.5-6.5	CH	220	34.5
	1018	15+37.50	8.60 Rt.	15.0-17.0*	CL		
*Two samples were tested from this depth.							

A12.0 SOIL PARAMETERS AND FACTORS OF SAFETY

Design the walls using the soil strength parameters and external factors of safety in the tables below. The Designer shall verify wall stability based on final wall design dimensions. These requirements are based on the Department's judgment and interpretation of the geotechnical data and are provided to ensure that bidders' designs will be comparable relative to the integrity and performance of the walls. Any modifications proposed by the Contractor, if accepted by the Department, will be subject to price adjustment.

Design Soil Strength Parameters		
Parameter	**Embankment**	**Foundation (below Elev. 950)**
Total Unit Weight (pcf)	125	125
Effective Angle of Internal Friction, ϕ' (deg)	28	28
Effective Cohesion, c' (psf)	260	200
Undrained Shear Strength, S_u or c_u (psf)	1900	1350

Minimum Required Factors of Safety for External Failure Modes			
Case No.	**Design Case**	**Temporary/ Short Term**	**Permanent/ Long Term**
1	Excavation Stability[1]	1.3	N/A
2	Global Stability[2]	1.3	1.5
3	External Stability[3]	1.3	1.6
4	Sliding	1.3	1.5

[1]Excavation Stability analyses consider excavation lifts left unsupported for up to 24 hours before nails are installed.
[2]In Global Stability analyses, failure surfaces intersect some or all nails.
[3]In External Stability analyses, failure surfaces do not intersect the nails.

A13.0 DESIGN CONSTRAINTS

Design the walls according to the design constraints provided below. Items 7 – 12 are specifically to limit wall deformation. These constraints are based on the Department's judgment and interpretation of the geotechnical data and are provided to ensure that bidders' designs will be comparable relative to the integrity and performance of the walls. Any modifications proposed by the Contractor, if accepted by the Department, will be subject to price adjustment.

1. Neglect any resistance from the bridge in wall analysis and design.
2. Perform analyses with the groundwater table no lower than Elevation 950 feet.
3. Design for a traffic surcharge loading in accordance with AASHTO LRFD Bridge Design Specifications, current edition.
4. Perform Soil Nail Wall analyses using either GOLDNAIL or SNAIL; the use of other computer programs requires prior approval from the Department.
5. Perform analyses for the temporary condition assuming the excavation will be at least 1 ft. below the bottom of wall elevation or to the elevation that will be needed for construction, if lower.
6. The maximum allowable soil nail bond stress is 5 psi.
7. A minimum of three (3) rows of nails is required.
8. The maximum vertical and horizontal nail spacing is 5 feet.
9. The maximum distance from the top of the wall to the top row of nails is 3 feet unless prohibited by obstructions in the field; exceptions require prior approval from the Department.
10. The maximum nail inclination is 15°.
11. The minimum nail length is 20 feet and the nail length of any row may not be shorter than the row below it.
12. In the top and second rows, the maximum allowable bar tensile stress is $0.4f_Y$ (i.e. $FS_T = 2.5$).

A14.0 MEASUREMENT AND PAYMENT

A14.1 The Department will measure and pay for the accepted quantity of "Soil Nail Wall" as described in the Contract Plans, Section 11 of this Special Note, and below, at the Contract Unit Bid Price per Square Foot. As shown in the Contract Plans, the soil nail wall quantities are based on a vertical projection of the wall surface rather than along the actual battered surface. The following are incidental to the Soil Nail Wall: any temporary and/or permanent facing (at the Contractor's option) below the defined bottom of wall provided in the contract plans; all components of the wall drainage system (except horizontal drains); the cost of all materials, labor, and equipment needed to texture the retaining wall.

A14.2 If drilling into solid rock is necessary to install soil nails, the cost of solid rock drilling is included in the unit price for "Soil Nail Wall" and there will be no additional compensation for rock drilling.

A14.3 The Department will measure and pay for the accepted quantity of "Foundation Preparation" according to Section 603 of the Standard Specifications at the Contract Lump Sum Bid Price. This includes the following:

- all common excavation required behind the front face of the wall;
- construction and removal of any working platform if necessary to construct the soil nail wall;
- any incidental grading required behind the wall; and
- all materials and labor described in Appendix B of this Special Note.

A14.4 All excavation in front of the front face of the wall, common and solid rock, will be paid as "Roadway Excavation" and quantities are included in the roadway plans.

Code	Pay Item	Pay Unit
20603ED	Soil Nail Wall	Square Foot
8003	Foundation Preparation	Lump Sum

Special Note for Soil Nail Walls
Appendix B - Monitoring

Fayette County
KY 4, Ramp E Wall
Item No. 7-279.00

The work described in this Appendix is incidental to the Lump Sum bid price for "Foundation Preparation".

B1.0 DESCRIPTION

B1.1 This work consists of furnishing all instruments, tools, materials, and labor necessary to install and monitor survey monuments.

B1.2 During the course of construction, the Contractor will be responsible for monitoring survey points. Cooperate as necessary with the Department in facilitating these readings. Any monitoring data that indicates excessive structure deflections, the potential for unstable conditions, or damage to adjacent facilities, as determined by the Engineer, is cause for preventative measures to be taken in the affected area until the causes are identified and resolved to the satisfaction of the Engineer. At completion of the soil nail walls, the Department will take post construction readings.

B2.0 MATERIALS

Provide the materials described below.

B2.1 Survey Points Provide permanent survey points necessary to monitor bridge end bent movements.

B3.0 SURVEY POINTS

Install four survey points at approximately the left and right sides of each bridge end bent. Install the survey points to measure end bent movement during excavation and construction of the soil nail wall.

B4.0 MONITORING

B4.1 Monitor the survey points at weekly during excavation and until the permanent facing has been completed.

B4.2 Perform all necessary surveying using qualified technicians with a minimum of one (1) year of field surveying experience and working under the general

supervision of a licensed Professional Engineer or Professional Land Surveyor. Read the survey point movements to the nearest 0.01 ft.

B5.3 Provide monitoring data electronically to the Department within one day.

B6.0 METHOD OF MEASUREMENT AND BASIS OF PAYMENT

The labor and materials described in this Appendix are incidental to the Lump Sum Bid Price for "Foundation Preparation".

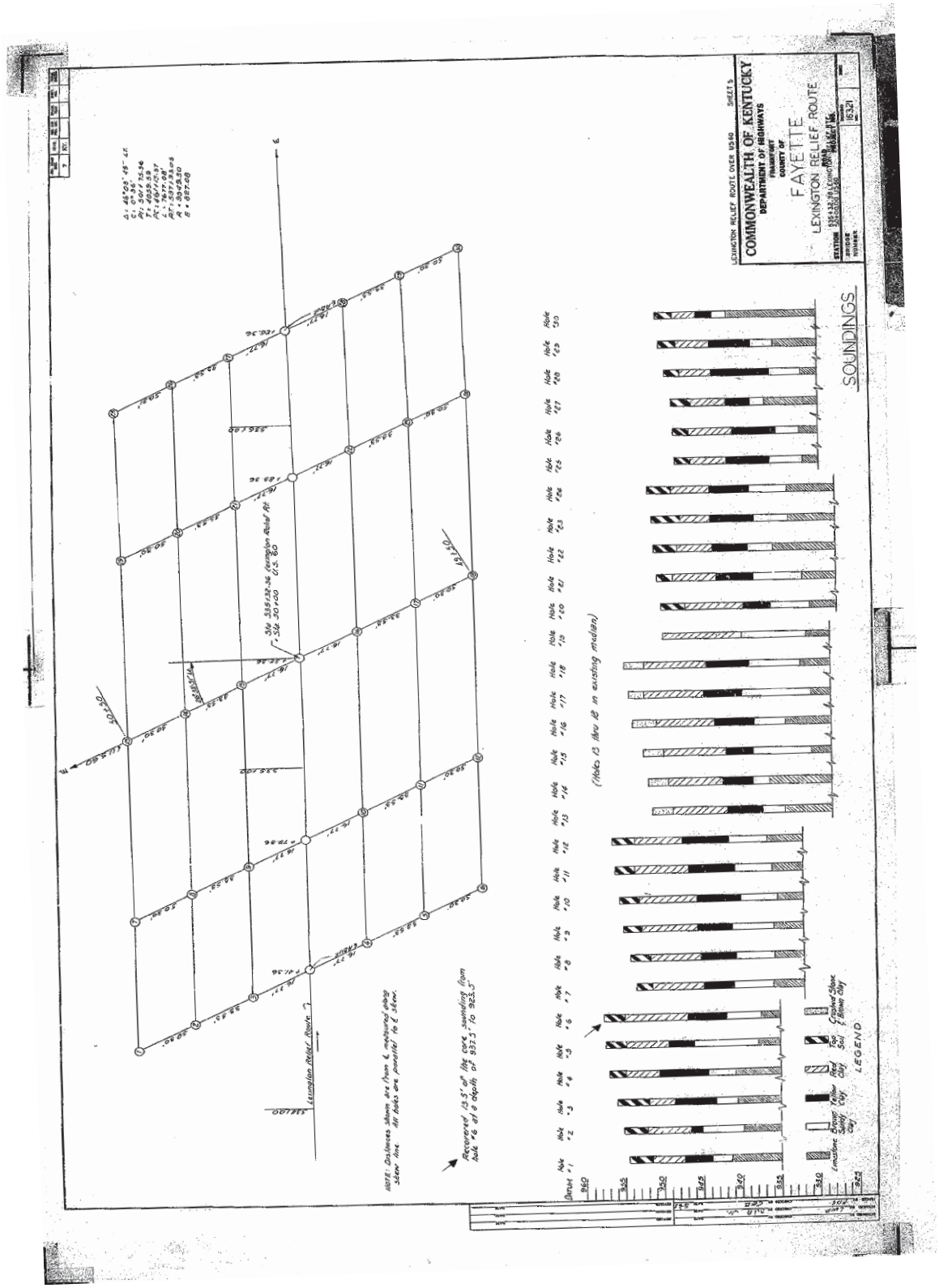
Special Note for Soil Nail Walls

Appendix C - Data from Previous Subsurface Explorations

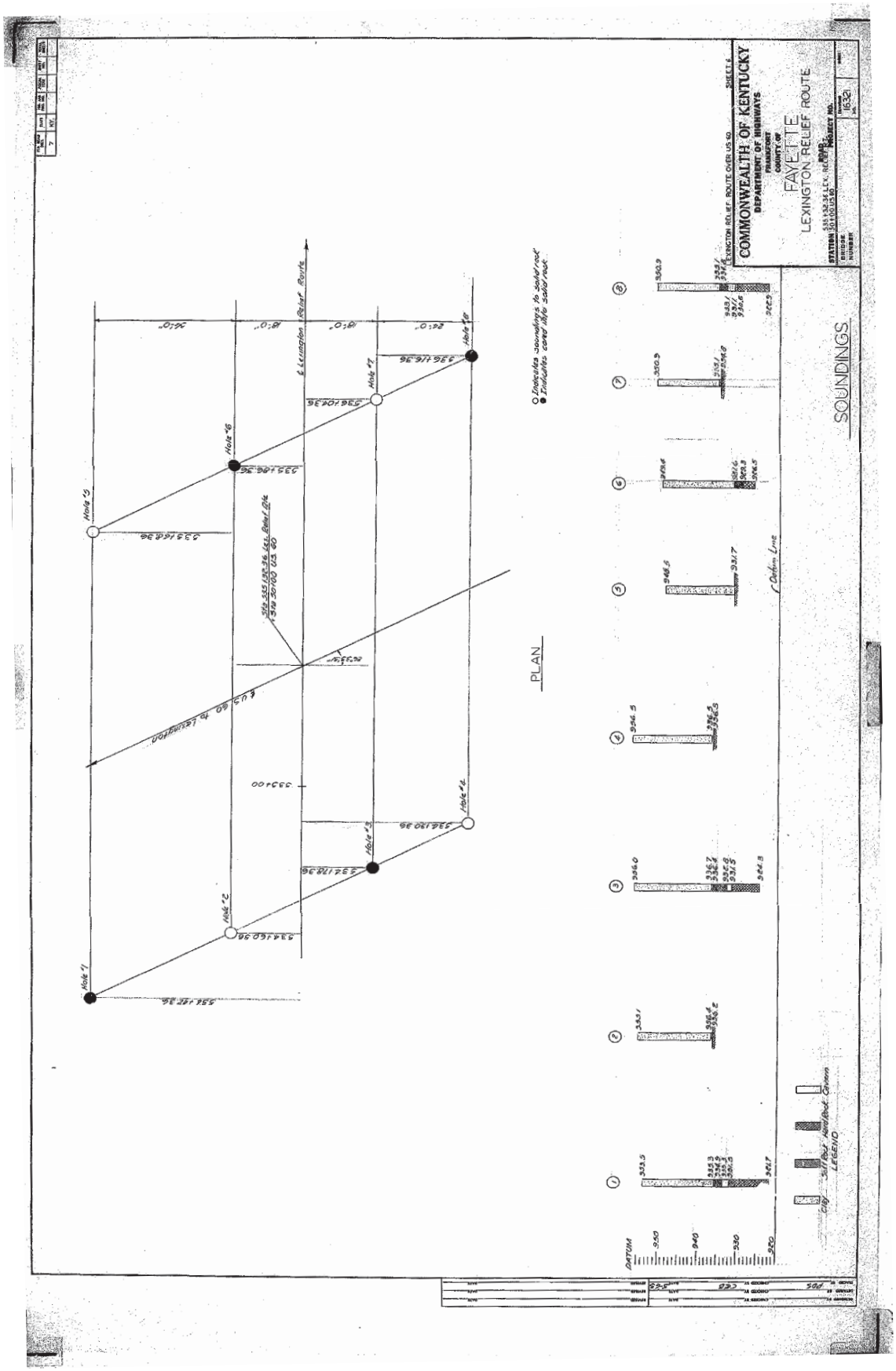
Fayette County

KY 4, Retaining Wall E

Item No. 7-279.00



This drawing contains data from 1965.
NOT TO SCALE



This drawing contains data from 1965.
NOT TO SCALE

Special Note for Soil Nail Wall Quality Control Inspection

Fayette County
KY 4, Ramp E Wall
Item No. 7-279.00

This Special Note is in addition to the requirements set forth in Section 113 of the Standard Specifications for Road and Bridge Construction, current edition.

The Federal Highway Administration's **Geotechnical Engineering Circular No. 7, Soil Nail Walls** (FHWA-IF-03-017) presents state-of-the-practice information on soil nails for highway applications. Ensure that Quality Control field and office personnel have access to and are familiar with this document.

1.0 DESCRIPTION

This work consists of developing, furnishing, executing, and maintaining a Quality Control Plan (QCP) for the inspection of the retaining wall(s). QC personnel will answer directly to the Department's Resident Engineer. The work includes but is not limited to inspecting, testing, and ensuring conformance to the contract. The Contractor is responsible for executing the QCP, which includes checking and tracking material shipments, construction inspection, and on-site materials testing pertaining to drilling, installation and testing of soil nails and instrumentation. This includes ensuring conformance with all sections and Appendices of the Special Note for Soil Nail Walls.

The Department will be responsible for quality assurance, any off-site material testing, and inspection of all other items in the contract.

2.0 QUALITY CONTROL PLAN (QCP) PERSONNEL

In addition to conforming to Subsection 113.03 of the Standard Specifications for Road and Bridge Construction, conform to the following requirements.

The QCP personnel's sole duty on the project will be implementing the QCP. Provide a QCP organization to be on the site at all times during the progress of work on the specified bid items, with complete authority to take any action necessary to ensure compliance with the Contract. These individuals must not be responsible for the production of the project and may not be employed by the general contractor, specialty subcontractor, or any other subcontractor responsible for any construction activities on the project.

Soil Nail testing is considered production work performed by the Specialty Contractor's production personnel (verification and proof testing). However, the QCP personnel will be responsible for monitoring the tests, independently recording data, and reviewing the Contractor's test reports.

The size and composition of the QCP organization may vary as the job progresses but at all times must be compatible with the level of effort and capability required by the Contract requirements.

Any engineering firm that performed engineering analyses and/or design for this project will not be permitted to perform QC Inspection, due to the potential for conflict of interest.

2.1 QCP Personnel

As part of the QCP organization, provide a QCP Manager and specialized inspection personnel to assist and be responsible to the QCP Manager and to be physically present at the construction site during all activities covered by the QCP. Provide a QCP organization with a minimum of six (6) persons, as follows:

- 1 QCP Manager and 1 Alternate QCP Manager
- 1 Lead Inspector and 1 Alternate Lead Inspector
- Assistant Inspectors (if necessary)

The actual number of personnel required may be less than four (4) and will be dictated by the project size, complexity, and schedule, and is subject to Department approval. However, the four persons above must be available.

Provide personnel with the experience and credentials below. For lead and assistant inspectors, education may be substituted for experience as follows:

- A Bachelors Degree in Engineering, Engineering Technology, Surveying, Construction Management, Geology, or other related technical field (at the discretion of the Department), will count for two (2) years of experience.
- An Associates Degree in Engineering Technology, Surveying, Construction Management or other related technical field (at the discretion of the Department), will count for one (1) year of experience.

2.1.1 QCP Manager and Alternate QCP Manager(s)

- Licensed Professional Engineer with a minimum of five (5) years of engineering experience in one or more of the following areas: construction, materials, geotechnical, or structure design. A Master's Degree in Engineering will count for one (1) year of experience.
- Experience on a minimum of three (3) projects involving the interpretation of pullout test results for drilled and grouted anchors such as soil and/or rock anchors, soil nails, rock bolts, etc.; or experience on a minimum of one (1) project involving the interpretation of pullout test results for drilled and grouted anchors such as soil and/or rock anchors, soil nails, rock bolts, etc.

supplemented by design-related experience on a minimum of one (1) soil nail or tieback ground anchor retaining wall project and other experience with interpretation of geotechnical-related field test results (e.g. deep foundation load testing, geotechnical instrumentation, etc.)

- Field construction engineering and/or inspection experience on a minimum of three (3) geotechnical-related projects.

2.1.2 Lead Inspector and Alternate Lead Inspector(s)

- A minimum of six (6) years of construction and/or materials inspection experience showing evidence of supervisory experience on geotechnical-related projects.
- Construction inspection experience on a minimum of two (2) projects involving inspection of installation and pullout testing of drilled and grouted anchors such as soil and/or rock anchors, soil nails, rock bolts, etc.; or experience on a minimum of one (1) project involving inspection of installation and pullout testing of drilled and grouted anchors such as soil and/or rock anchors, soil nails, rock bolts, etc., supplemented by related experience such as post-tensioned concrete inspection, deep foundation load testing, etc.
- ACI Level I Concrete Field Testing Technician, supplemented by a minimum of one (1) other construction-related technician certification (NICET, KYTC, etc.).

2.1.3 Assistant Inspectors

- A minimum of four (4) years of construction and/or materials inspection experience on geotechnical-related projects.
- Construction inspection experience on a minimum of one (1) project involving inspection of installation and pullout testing of drilled and grouted anchors such as soil and/or rock anchors, soil nails, rock bolts, etc. or one (1) project involving drilled deep foundations (drilled shafts, auger cast piles, drilled-in soldier piles, etc.) or other drilling-related experience (geotechnical exploration drilling, etc.).

2.2 QCP Personnel Duties

Duties for the QCP personnel include, but are not limited to the duties described below.

2.2.1 QCP Manager and Alternate QCP Manager(s)

The QCP Manager must be available during construction activities as indicated on the QCP Plan. The QCP Manager may be removed from the project for noncompliance of quality products. Identify an Alternate QCP Manager in the QCP Plan to manage the QCP effort during the QCP Manager's absence. In no instance may the QCP Manager be absent and the Alternate QCP Manager serve for more than a 2 week period without written permission from the Engineer.

The QCP Manager must visit the project site at least one time during the first two (2) weeks of activities covered by the QCP. The QCP Manager and/or Alternate QCP Manager must review all QCP reports and documentation and submit letters to the Resident Engineer documenting that they have done such.

2.2.2 Lead Inspector

The Lead Inspector or Alternate Lead Inspector must be present during all activities covered by the QCP. The Lead Inspector or Alternate Lead Inspector may request prior verbal approval for short absences from the Resident Engineer or authorized representative. Approval will be subject to the experience and competency of the Assistant Inspector(s) on the project.

The Lead Inspector or Alternate Lead Inspector must review and sign all QCP reports and documentation prior to submittal to the Department.

3.0 QCP Organization and Procedures

The QCP must include the following:

3.1 A description of the quality control organization, including an organizational chart showing lines of authority and acknowledgment that the QCP staff shall implement at least a 3-phase control system for all aspects of work as specified herein. Phase I Preparatory Phase prior to beginning work; Phase II Construction Phase during execution of work; and Phase III Acceptance of Work.

3.2 The name, qualifications in resume format, duties responsibilities and authorities and certifications of the QCP Manager, Alternate QCP Manager, Lead Inspector and Alternate Lead Inspector and all other personnel.

3.3 A copy of the letter to the QCP Manager, signed by an authorized official of the Contractor which describes the responsibilities and delegates sufficient authority to adequately perform the functions of the QCP Manager, including authority to stop work which is not in compliance with the Contract. The QCP Manager must issue a letter of direction to all other various quality control representatives outlining duties, authorities and responsibilities. Include copies of these letters in the QCP.

3.4 Procedures for managing submittals and approvals, including but not limited to, source of materials, shop drawings and subletting requests.

3.5 Procedures for tracking construction deficiencies from identification through acceptable corrective action shall be on the QCP. These procedures will establish verifications that identified deficiencies have been corrected. A Non-Conformance Report (NCR) with each item numbered consecutively will be prepared and signed by the QCP Manager at least weekly with recommended action, action taken and date corrected and filed separately.

3.6 The scope of the project, including a list of definable work activities. A definable work activity is separate and distinct from other tasks, requires specific crews or Subcontractors, has different specifications, and has separate control requirements. It could be identified by different crews or Subcontractors, or it could be work performed by the same trade in a different environment. Each activity must have construction tolerances and workmanship standards identified for use by construction crews and sampling/testing frequencies identified for the QCP personnel. This list will be agreed upon during the coordination meeting.

4.0 CONTROL

QCP is the means by which the Contractor ensures the quality and construction, to include subcontractors and suppliers, and complies with the requirements of the Contract. At least 3 phases of control must be conducted by the QCP Manager for each definable work activity as follows:

4.1 Preparatory Phase Perform this phase prior to beginning work in an activity and include:

4.1.1 Review all the Contractor's Construction and Materials Submittals (including those required by the Special Note for Soil Nail Walls, steel mill test reports, nail QC reports, shop drawings, etc.) and provide written comments signed by the QCP Manager and Lead Inspector, to the Department within 14 calendar days; include specific recommendations for acceptance, acceptance with revisions, or non-acceptance of each submittal.

4.1.2 Prior to the start of each work activity, the Contractor and QCP Manager are encouraged to conduct a meeting with each crew to discuss in detail with each crew member the quality standards and workmanship identified in the Preparatory Phase. The importance and role of each crew member in achieving quality should be stressed.

4.1.2 A review of each paragraph of applicable specifications.

4.1.3 A review of Contract and Construction Drawings.

4.1.4 A check to assure that all materials and equipment and subletting requests have been submitted, tested and approved.

4.1.5 A review of control inspection and testing requirement has been completed.

4.1.6 Examination of the work area to assure that all required preliminary work has been completed and complies with the Contract.

4.1.7 A physical examination to assure all required materials and equipment are on hand, and conform to approved shop drawings, or submitted data and are properly stored.

4.1.8 Notify the Department at least 24 hours prior to beginning aggregate or concrete work.

4.1.9 Preparation and approval of QCP staffing plan which corresponds to the working schedule.

4.1.10 Discussion of procedures for controlling quality of work, including repetitive deficiencies, with all contractor managers. Assure availability of appropriate documentation.

4.2 Construction Phase This phase includes the control measures from start to completion of a work activity.

4.2.1 Once the work zone has been established, check it to ensure conformance with the Contract requirements.

4.2.2 Monitor the producers' QC testing to ensure specifications are being met.

4.2.3 Inspect, test and document in accordance with the Contract requirements to ensure quality standards are being identified, corrective actions taken and documented using the NCR. The Lead Inspector will be responsible for completing a Daily Work Report (DWR) to document each day's activities on the retaining wall work. Submit the DWR to the Resident Engineer or representative no later than the close of the next workday. Verify quality standards as work progresses and make adjustments to the QCP.

4.3 Acceptance Phase

4.3.1 Pre-final Inspection At the completion of any work activity or any increment thereof, the QCP Manger, Contractor, and Resident Engineer (or representative) must conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings and specifications. Include such a list of deficiencies in the QCP documentation as required herein and include the estimated date by which the deficiencies will be corrected. The Contractor must ensure all items on this list have been corrected when the Final Inspection is scheduled.

4.3.2 Final Acceptance Inspection Final acceptance and any corrective work will be in accordance with the requirements of Section 105.12 of the Standard Specifications.

5.0 QCP SUBMITTAL

5.1 Original Submittal for Approval Submit the QCP to the Engineer no later than sixty (60) calendar days after receiving Notice to Begin Work and at least thirty (30) calendar days before beginning a specific work activity. The Department will return the QCP to the Contractor within twenty-one (21) calendar days after submittal with requests for changes, if applicable. The Contractor will then have seven (7) calendar days to correct and make changes and resubmit the QCP to the Engineer. Work cannot begin on an activity until after the QCP for that activity has been approved by the Engineer.

5.2 Subsequent Approvals Once the Contractor begins work under the approved QCP, continuously prosecute the work in accordance with the QCP. Changes must be approved by the Engineer prior to implementation.

6.0 DOCUMENTATION

The Contractor and QCP personnel are advised that any deliberate action to the detriment of the QCP will be grounds for defaulting the Contract. This includes but is not limited to any deliberate omissions, deliberate cover-ups, or attempts by the Contractor to withhold information from the Department. Allow direct communication between QCP personnel and the Department. The Contractor and any Subcontractor involved in such detrimental action will not be considered for future bids until requalified.

Maintain current records providing factual evidence that required quality control activities and tests have been performed. Include the work of subcontractors and suppliers. Document verification and proof tests in accordance with the Special Note for Soil Nail Walls. Generate and update a soil nail test summary. Forms for these records must be approved by the Department. Submit all records with the last pay estimate, including but not limited to sketch books, and as-built plans. The Department will make the final payment only after all documentation has been submitted.

7.0 PAYMENT

The Department will pay for Quality Control at the contract Lump Sum amount. The Department considers payment as full compensation for all labor and costs associated with performing Quality Control. In addition to conforming to Subsection 113.09 of the Standard Specifications for Road and Bridge Construction, there are the following requirements. The Department will include payment for 20 percent Lump Sum for the QCP in the first estimate. The Department will pay the remaining 80 percent based on the percentage of work completed.

Additional payment for the QCP will be made when time or extra work is added according to Subsection 104.03 for the bid items included in the QCP. Additional work added to other parts of the contract will not permit additional payment for the QCP.

Code	Pay Item	Pay Unit
2572	Quality Control	Lump Sum

SPECIAL NOTE FOR
GUARDRAIL END TREATMENT TYPE 1

Contrary to KYTC Standard Drawing RBR-020-05 the guardrail end treatment ET-Plus manufactured by Trinity Industries will not be permitted as an option for bid item “Guardrail End Treatment Type 1”.

Date: October 15, 2014

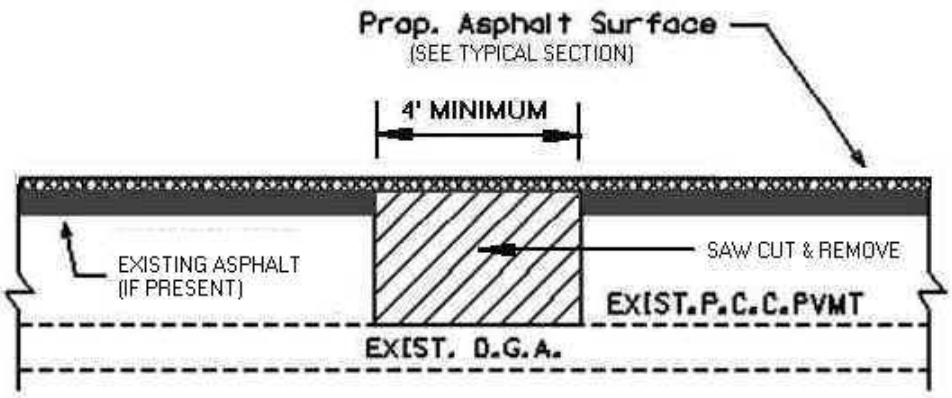
Item No.: 7-113.01

Subject: Fayette County
KY 4 (New Circle Road) Widening Project
NHPP 2682 (011)
JL04 FD04 SPP 034 0004 004-008
Final Grade, Drain, and Surfacing Plans Submittal

Project Construction Schedule:

This project has a milestone date of September 30, 2015 for completion of Phase 2 work and a second milestone date of August 1, 2016 for 3 lanes in each direction through the top course of base on New Circle Road. The final fixed completion date is September 30, 2016.

SPECIAL NOTE FOR REPAIR OF EXISTING BLOW-UP



The Engineer will determine the location of blow-up repairs at the time of construction. Saw cut the existing PCC Pavement, and asphalt overlay if present, full depth to allow for the removal of the existing PCC Pavement, down to the existing DGA and back to solid concrete, a minimum of 2 feet either side of the transverse centerline of the blowup. Dispose of removed materials off the Right-of-way at sites obtained by the Contractor at no additional cost to the Department (see Special Note for Waste and Borrow). Fill the removed area with Class ___ Asphalt Base 1.00 D PG___-22 in lifts not to exceed ____ inches. Compact the asphalt base to the compaction required by Section 403.03.10. Seal the asphalt base with leveling and wedging. Perform all blow-up repairs in such a manner that removal and replacement are completed on the same day. Complete this work as one of the Contractor's first operations in order to allow further compaction by traffic. Do not mill or place new asphalt surface over repaired blow-up areas until a minimum of 7 calendar days have elapsed after placement of the asphalt base. After a minimum of 7 calendar days and when the Engineer determines the blow-up repair areas have sufficiently stabilized, begin milling and/or resurfacing operations. Prior to milling and/or constructing the new asphalt surface, level and wedge any settlement of the repair areas.

The bidder must draw conclusions as to the conditions to be encountered. The Department does not give any guarantee as to the accuracy of the data and will not consider any claim for additional compensation if the materials encountered are not in accord with the classification shown.

Accept payment at the Contract unit prices per square yard for Repair Existing Blow-Up and per ton for Leveling and Wedging as full compensation for all labor, materials, equipment, and incidentals for saw cutting and removing pavement and disposing of the materials, furnishing and placing asphalt base, leveling and wedging, and all other items necessary to complete the work according to these notes to the satisfaction of the Engineer.

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.

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

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

Memorandum

To: Robert Hoagland

CC: Scott Tingle

From: O'Dail Lawson
Environmental Scientist II
Division of Environmental Analysis

Date: 10/28/2014

Re: Asbestos Inspection Report for Fayette 7-113.00

This report is prepared to accompany the 10-Day NOI for Demolition to the Division of Air Quality. Please include all pages with submittal.

Project and Structure Information

Project # 07-113.00

Bridge # 034B00032L

Description: The guard rail mastic and joint compound samples collected were point counted below 1%; no abatement necessary.

Inspection Date: October 17th, 2014

Results

The results revealed that there is no ACM abatement required at this time.

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N # 2410253A
Client Name: KYTC
Sampled By: O'Dail Lawson

Address: Item # 7 - 113.00 - 034B00032L

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Number	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
#32L-1	Gray	Yes	No	3%	(To Be	Point Counted)		2%			95%
#32L-2	Black	Yes	No	3%	(To Be	Point Counted)		2%			95%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 25-Oct-14
Analyst : Winterford Mensah

Reviewed By: Signature

The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S Government. Partial Reproduction of any part of this report is strictly prohibited. Samples shall be retained for (30) days.

AIHA # 102459

AJHA #1 02459

MRS, INC. MRS, Inc. Analytical Laboratory Division

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	KY Transportation Cabinet	**Project No:**	2410253 B
Address:	200 Mero Street	**Sample ID:**	# 32L - 2
	Frankfort, KY	**Sampled:**	17-Oct-14
	40601	**Received:**	20-Oct-14
		Analyzed:	25-Oct-14 - Point Count -
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Item # 7 - 113.00 - 034B00032L

Field Description: Joint Compound

Laboratory Description:

Black Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: **The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.**

Analyst: Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA #102459 / **AIHA #102459** / **AIHA #102459**

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	**KY Transportation Cabinet**	**Project No:**	**2410253 B**
Address:	**200 Mero Street**	**Sample ID:**	**# 32L - 1**
	Frankfort, KY	**Sampled:**	**17-Oct-14**
	40601	**Received:**	**20-Oct-14**
		Analyzed:	**25-Oct-14 - Point Count -**
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Item # 7 - 113.00 - 034B00032L

Field Description: Mastic

Laboratory Description:

Thick Gray Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA #102459 / **AIHA #102459** / **AIHA #102459**

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: 502-782-5020 Fax: 502-564-5655
PO#:

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

Sampler's (signature):

Project or Subject Reference 7-113.00 - 034300032L

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Matrix	Color	Cont. Type	Preservative
32L-1	MASTIC	10/17	11:50	ASBESTOS	SOLID	GREY		N/A
32L-2	JOINT COMPOUND	↓	↓	↓	SOLID	BLACK		

Relinquished By: Date/Time:

Received By: Date/Time: 10/20/14

Relinquished By: Date/Time:

Received at Lab By: Date/Time:

The EI Group, Inc.

This certifies that

Tilmon O'Dail Lawson

Student Address: 132 Old Fort Drive, Georgetown, Kentucky 40324

Has attended and satisfactorily passed an examination covering the contents of an EPA/AHERA approved course entitled

Asbestos Inspector Refresher (4-Hour) Training Course

7214080013
Certificate Number

7910
Social Security Number

August 15, 2014
Course Dates

August 15, 2014
Exam Date

August 15, 2015
Expiration Date

3240 Office Pointe Place, Suite 102
Louisville, KY 40220
888-372-5859

Louisville, KY
Course Location

Barry Maxwell, Training Manager

Kerri Boddy, Principal Instructor

Kerri Boddy, Exam Administrator

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

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

Memorandum

To: Robert Hoagland

CC: Scott Tingle

From: O'Dail Lawson
Environmental Scientist II
Division of Environmental Analysis

Date: 10/28/2014

Re: Asbestos Inspection Report for Fayette 7-113.00

This report is prepared to accompany the 10-Day NOI for Demolition to the Division of Air Quality. Please include all pages with submittal.

Project and Structure Information

Project # 07-113.00

Bridge # 034B00037L

Description: The guard rail mastic and joint compound samples collected were point counted below 1%; no abatement necessary.

Inspection Date: October 17th, 2014

Results

The results revealed that there is no ACM abatement required at this time.

Kentucky
UNBRIDLED SPIRIT

An Equal Opportunity Employer M/F/D

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N # 2410254 A
Client Name: KYTC
Sampled By: O'Dail Lawson

Address: Item # 7 - 113 - 034B00037L

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Number	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
#37L-1	Gray	Yes	No	3%	(To Be	Point Counted)		2%			95%
#37-2L	Black	Yes	No	3%	(To Be	Point Counted)		2%			95%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 25-Oct-14
Analyst : Winterford Mensah

Reviewed By: Winterford Mensah
Signature

The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S Government. Partial Reproduction of any part of this report is strictly prohibited. Samples shall be retained for (30) days.

AIHA # 102459

AIHA #1 02459

MRS, INC. MRS, Inc. Analytical Laboratory Division

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	KY Transportation Cabinet	**Project No:**	2410254 B
Address:	200 Mero Street	**Sample ID:**	# 37L - 1
	Frankfort, KY	**Sampled:**	17-Oct-14
	40601	**Received:**	20-Oct-14
		Analyzed:	25-Oct-14 - Point Count -
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Item # 7-113 - 034B00037L

Field Description: Mastic

Laboratory Description:

Thick Gray Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA #102459 / AIHA #102459 / AIHA #102459

MRS, INC. MRS, Inc. Analytical Laboratory Division

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	KY Transportation Cabinet	**Project No:**	2410254 B
Address:	200 Mero Street	**Sample ID:**	# 37L - 2
	Frankfort, KY	**Sampled:**	17-Oct-14
	40601	**Received:**	20-Oct-14
		Analyzed:	25-Oct-14 - Point Count -
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Item # 7-113 - 034B00037L

Field Description: Joint Compound

Laboratory Description:

Thick Black Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA #102459 / AIHA #102459 / AIHA #102459

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

Samplers (signature):

Project or Subject Reference 7-113.00 - 034B00037L

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Grab/ Comp.	No. of Cont.	Cont. Type	Preservative
37L-1	MASTIC	10/17	12:26	ASBESTOS	SOLID	GREY		N/A
37L-2	JOINT COMPOUND	↓	↓	↓	↓	BLACK		

Relinquished By: Date/Time:

Received By: Winterport Mecado Date/Time: 10/20/14

Relinquished By: Date/Time:

Received at Lab By: Date/Time:

The EI Group, Inc.

This certifies that

Tilmon O'Dail Lawson

Student Address: 132 Old Fort Drive, Georgetown, Kentucky 40324

Has attended and satisfactorily passed an examination covering the contents of an EPA/AHERA approved course entitled

Asbestos Inspector Refresher (4-Hour) Training Course

7214080013
Certificate Number

7910
Social Security Number

August 15, 2014
Course Dates

August 15, 2014
Exam Date

August 15, 2015
Expiration Date

Louisville, KY
Course Location

Barry Maxwell, Training Manager

Kerri Boddy, Principal Instructor

Kerri Boddy, Exam Administrator

3240 Office Pointe Place, Suite 102
Louisville, KY 40220
888-372-5859

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

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

Memorandum

To: Robert Hoagland

CC: Scott Tingle

From: O'Dail Lawson
Environmental Scientist II
Division of Environmental Analysis

Date: 10/28/2014

Re: Asbestos Inspection Report for Fayette 7-113.00

This report is prepared to accompany the 10-Day NOI for Demolition to the Division of Air Quality. Please include all pages with submittal.

Project and Structure Information

Project # 07-113.00

Bridge # 034B00038L

Description: The joint compound samples collected were point counted below 1%; no abatement necessary.

Inspection Date: October 17th, 2014

Results

The results revealed that there is no ACM abatement required at this time.

Kentucky
UNBRIDLED SPIRIT

An Equal Opportunity Employer M/F/D

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N # 2410255A
Client Name: KYTC
Sampled By: O'Dail Lawson

Address: Item # 7 - 113 - 03400038L

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Number	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
# 38L - 1	Black	Yes	No	3%	(To Be	Point Counted)		2%			95%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 25-Oct-14
Analyst : Winterford Mensah

Reviewed By: Signature

The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S Government. Partial Reproduction of any part of this report is strictly prohibited. Samples shall be retained for (30) days.

AIHA # 102459

AJHA #1 02459

MRS, INC. MRS, Inc. Analytical Laboratory Division

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	**KY Transportation Cabinet**	**Project No:**	**241025 B**
Address:	**200 Mero Street**	**Sample ID:**	**# 38L - 1**
	Frankfort, KY	**Sampled:**	**17-Oct-14**
	40601	**Received:**	**20-Oct-14**
		Analyzed:	**25-Oct-14 - Point Count -**
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Item # 7 - 113.00 - 03400038L

Field Description: Joint Compound

Laboratory Description:

Black Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: **The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.**

Analyst: Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA #102459 / **AIHA #102459** / **AIHA #102459**

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: 502-782-5020 Fax: 502-564-5655
PO#:

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

Samplers (signature):

Project or Subject Reference 7-113.00 - 034000381

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Matrix	Color	Cont. Type	Preservative
38L-1	Joint Compound	10/17	12:37	ASBESTOS	SOLID	BLACK		N/A

Relinquished By: Date/Time:

Received By: Date/Time: 10/20/14

Relinquished By: Date/Time:

Received at Lab By: Date/Time:

The EI Group, Inc.

This certifies that

Tilmon O'Dail Lawson

Student Address: 132 Old Fort Drive, Georgetown, Kentucky 40324

Has attended and satisfactorily passed an examination covering the contents of an EPA/AHERA approved course entitled

Asbestos Inspector Refresher (4-Hour) Training Course

7214080013
Certificate Number

7910
Social Security Number

August 15, 2014
Course Dates

August 15, 2014
Exam Date

August 15, 2015
Expiration Date

3240 Office Pointe Place, Suite 102
Louisville, KY 40220
888-372-5859

Louisville, KY
Course Location

Barry Maxwell, Training Manager

Kerri Boddy, Principal Instructor

Kerri Boddy, Exam Administrator

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

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

Memorandum

To: Robert Hoagland

CC: Scott Tingle

From: O'Dail Lawson
Environmental Scientist II
Division of Environmental Analysis

Date: 10/28/2014

Re: Asbestos Inspection Report for Fayette 7-113.00

This report is prepared to accompany the 10-Day NOI for Demolition to the Division of Air Quality. Please include all pages with submittal.

Project and Structure Information

Project # 07-113.00

Bridge # 034B00039R

Description: The guard rail mastic samples collected were point counted below 1%; no abatement necessary.

Inspection Date: October 17th, 2014

Results

The results revealed that there is no ACM abatement required at this time.

Kentucky
UNBRIDLED SPIRIT

An Equal Opportunity Employer M/F/D

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N # 2410256 A
Client Name: KYTC
Sampled By: O'Dail Lawson

Address: Item # 7 - 113.00 - 034B00039R

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Number	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
# 39R-1	Gray	Yes	No	3%	(To Be	Point Counted)		2%			95%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 25-Oct-14
Analyst : Winterford Mensah

Reviewed By: Winterford Mensah
Signature

The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S Government. Partial Reproduction of any part of this report is strictly prohibited. Samples shall be retained for (30) days.

AIHA # 102459

AJHA #1 02459

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	**KY Transportation Cabinet**	**Project No:**	**2410256 B**
Address:	**200 Mero Street**	**Sample ID:**	**# 39R - 1**
	Frankfort, KY	**Sampled:**	**17-Oct-14**
	40601	**Received:**	**20-Oct-14**
		Analyzed:	**25-Oct-14 - Point Count -**
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Item # 7 - 113.00 - 034B00039R

Field Description: Mastic

Laboratory Description:

Thick Gray Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah

Reviewed By: Signature

AIHA #102459 / AIHA #102459 / AIHA #102459

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: 502-782-5020 Fax: 502-564-5655
PO#:

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

Samplers (signature):

Project or Subject Reference 7.113.00 - 034B00039R

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Matrix	Color	Cont. Type	Preservative
39R-1	MASTIC	10/17		ASBESTOS	SOLID	GREY		N/A

Relinquished By: Date/Time:

Received By: Date/Time: 10/20/14

Relinquished By: Date/Time:

Received at Lab By: Date/Time:

The EI Group, Inc.

This certifies that

Tilmon O'Dail Lawson

Student Address: 132 Old Fort Drive, Georgetown, Kentucky 40324

Has attended and satisfactorily passed an examination covering the contents of an EPA/AHERA approved course entitled

Asbestos Inspector Refresher (4-Hour) Training Course

7214080013
Certificate Number

7910
Social Security Number

August 15, 2014
Course Dates

August 15, 2014
Exam Date

August 15, 2015
Expiration Date

3240 Office Pointe Place, Suite 102
Louisville, KY 40220
888-372-5859

Louisville, KY
Course Location

Barry Maxwell, Training Manager

Kerri Boddy, Principal Instructor

Kerri Boddy, Exam Administrator

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

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

Memorandum

To: Robert Hoagland

CC: Scott Tingle

From: O'Dail Lawson
Environmental Scientist II
Division of Environmental Analysis

Date: 10/28/2014

Re: Asbestos Inspection Report for Fayette 7-113.00

This report is prepared to accompany the 10-Day NOI for Demolition to the Division of Air Quality. Please include all pages with submittal.

Project and Structure Information

Project # 07-113.00

Bridge # 034B00069N

Description: The guard rail mastic and joint compound samples collected were point counted below 1%; no abatement necessary.

Inspection Date: October 17th, 2014

Results

The results revealed that there is no ACM abatement required at this time.

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N # 2410252A
Client Name: KYTC
Sampled By: O'Dail Lawson

Address: Item # 7 - 113.00 - 034B00069N

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Number	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
#69-1	Gray	Yes	No	3%	(To Be	Point Counted)		2%			95%
#69-2	Black	Yes	No	3%	(To Be	Point Counted)		2%			95%
#69-3	Gray	Yes	No	3%	(To Be	Point Counted)		2%			95%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 25-Oct-14
Analyst : Winterford Mensah

Reviewed By: Signature

The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S Government. Partial Reproduction of any part of this report is strictly prohibited. Samples shall be retained for (30) days.

AIHA # 102459

AJHA #1 02459

MRS, INC. MRS, Inc. Analytical Laboratory Division

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	**KY Transportation Cabinet**	**Project No:**	**2104257 A**
Address:	**200 Mero Street**	**Sample ID:**	**# 69 - 1**
	Frankfort, KY	**Sampled:**	**17-Oct-14**
	40601	**Received:**	**20-Oct-14**
		Analyzed:	**25-Oct-14 - Point Count -**
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Item # 7 - 113.00 - 034B00069N

Field Description: Joint Compound

Laboratory Description:

Black Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA #102459 / AIHA #102459 / AIHA #102459

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

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

Memorandum

To: Robert Hoagland

CC: Scott Tingle

From: O'Dail Lawson
Environmental Scientist II
Division of Environmental Analysis

Date: 10/28/2014

Re: Asbestos Inspection Report for Fayette 7-113.00

This report is prepared to accompany the 10-Day NOI for Demolition to the Division of Air Quality. Please include all pages with submittal.

Project and Structure Information

Project # 07-113.00

Bridge # 034B00069N

Description: The guard rail mastic and joint compound samples collected were point counted below 1%; no abatement necessary.

Inspection Date: October 17th, 2014

Results

The results revealed that there is no ACM abatement required at this time.

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N # 2410252A
Client Name: KYTC
Sampled By: O'Dail Lawson

Address: Item # 7 - 113.00 - 034B00069N

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Number	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
#69-1	Gray	Yes	No	3%	(To Be	Point Counted)		2%			95%
#69-2	Black	Yes	No	3%	(To Be	Point Counted)		2%			95%
#69-3	Gray	Yes	No	3%	(To Be	Point Counted)		2%			95%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 25-Oct-14
Analyst : Winterford Mensah

Reviewed By: Signature

The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S Government. Partial Reproduction of any part of this report is strictly prohibited. Samples shall be retained for (30) days.

AIHA # 102459

AJHA #1 02459

MRS, INC. MRS, Inc. Analytical Laboratory Division

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	**KY Transportation Cabinet**	**Project No:**	**2104257 A**
Address:	**200 Mero Street**	**Sample ID:**	**# 69 - 1**
	Frankfort, KY	**Sampled:**	**17-Oct-14**
	40601	**Received:**	**20-Oct-14**
		Analyzed:	**25-Oct-14 - Point Count -**
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Item # 7 - 113.00 - 034B00069N

Field Description: Joint Compound

Laboratory Description:

Black Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA #102459 / AIHA #102459 / AIHA #102459

MRS, INC. MRS, Inc. Analytical Laboratory Division

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	KY Transportation Cabinet	**Project No:**	2104257 A
Address:	200 Mero Street	**Sample ID:**	# 69 - 2
	Frankfort, KY	**Sampled:**	17-Oct-14
	40601	**Received:**	20-Oct-14
		Analyzed:	25-Oct-14 - Point Count -
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Item # 7 - 113.00 - 034B00069N

Field Description: Mastic

Laboratory Description:

Thick Gray Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA #102459 / AIHA #102459 / AIHA #102459

MRS, INC. MRS, Inc. Analytical Laboratory Division

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	KY Transportation Cabinet	**Project No:**	2104257 A
Address:	200 Mero Street	**Sample ID:**	# 69 - 3
	Frankfort, KY	**Sampled:**	17-Oct-14
	40601	**Received:**	20-Oct-14
		Analyzed:	25-Oct-14 - Point Count -
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Item # 7 - 113.00 - 034B00069N

Field Description: Sealant

Laboratory Description:

Thick Gray Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA #102459 / AIHA #102459 / AIHA #102459

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: 502-782-5020 Fax: 502-564-5655
PO#:

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

Sampler (signature):

Project or Subject Reference 7-113.00-B034B000 ~~[illegible]~~ 69N

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Matrix	Color	Cont. Type	Preservative
6[illegible]9-1	JOINT COMPOUND	10/17	11:31	ASBESTOS	SOLID	BLACK		N/A
6[illegible]9-2	MASTIC	↓	↓	↓	↓	GREY		
6[illegible]9-3	SEALANT	↓	↓	↓	↓	GREY		

Relinquished By: Date/Time:

Received By: [illegible] Date/Time: 10/20/14

Relinquished By: Date/Time:

Received at Lab By: Date/Time:

The EI Group, Inc.

This certifies that

Tilmon O'Dail Lawson

Student Address: 132 Old Fort Drive, Georgetown, Kentucky 40324

Has attended and satisfactorily passed an examination covering the contents of an EPA/AHERA approved course entitled

Asbestos Inspector Refresher (4-Hour) Training Course

7214080013
Certificate Number

7910
Social Security Number

August 15, 2014
Course Dates

August 15, 2014
Exam Date

August 15, 2015
Expiration Date

3240 Office Pointe Place, Suite 102
Louisville, KY 40220
888-372-5859

Louisville, KY
Course Location

Barry Maxwell, Training Manager

Kerri Boddy, Principal Instructor

Kerri Boddy, Exam Administrator

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

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

Memorandum

To: Robert Hoagland

CC: Scott Tingle

From: O'Dail Lawson
Environmental Scientist II
Division of Environmental Analysis

Date: 10/28/2014

Re: Asbestos Inspection Report for Fayette 7-113.00

This report is prepared to accompany the 10-Day NOI for Demolition to the Division of Air Quality. Please include all pages with submittal.

Project and Structure Information

Project # 07-113.00

Bridge # 034B00021L

Description: The guard rail mastic and joint compound samples collected were point counted below 1%; no abatement necessary.

Inspection Date: October 17th, 2014

Results

The results revealed that there is no ACM abatement required at this time.

Kentucky
UNBRIDLED SPIRIT

An Equal Opportunity Employer M/F/D

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N # 2410252A
Client Name: KYTC
Sampled By: O'Dail Lawson

Address: Item # 7-113.00 - 034B00021L

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Number	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
#21L-1	Gray	Yes	No	3%	(To Be	Point Counted)		2%			95%
#21L-2	Black	Yes	No	3%	(To Be	Point Counted)		2%			95%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 25-Oct-14
Analyst : Winterford Mensah

Reviewed By: Signature

The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S Government. Partial Reproduction of any part of this report is strictly prohibited. Samples shall be retained for (30) days.

AIHA # 102459

AJHA #1 02459

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	**KY Transportation Cabinet**	**Project No:**	**241025 B**
Address:	**200 Mero Street**	**Sample ID:**	**# 21L - 1**
	Frankfort, KY	**Sampled:**	**17-Oct-14**
	40601	**Received:**	**20-Oct-14**
		Analyzed:	**25-Oct-14 - Point Count -**
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Item # 7 - 113 - 034B00021L

Field Description: Mastic

Laboratory Description:

Thick Gray Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA #102459 / AIHA #102459 / AIHA #102459

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	**KY Transportation Cabinet**	**Project No:**	**241025 B**
Address:	**200 Mero Street**	**Sample ID:**	**# 21L - 2**
	Frankfort, KY	**Sampled:**	**17-Oct-14**
	40601	**Received:**	**20-Oct-14**
		Analyzed:	**25-Oct-14 - Point Count -**
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: **O'Dail Lawson**

Facility/Location: **Item # 7 - 113 - 034B00021L**

Field Description: **Joint Compound**

Laboratory Description:

Black Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah

Reviewed By: Signature

AIHA #102459 / **AIHA #102459** / **AIHA #102459**

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: 502-782-5020 Fax: 502-564-5655
PO#:

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

Samplers (signature):

Project or Subject Reference 7113.00 - 034B000021L

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Matrix	Color	Cont. Type	Preservative
21L-1	MASTIC	10:17	11:57	ASBECTOS	SOLID	GREY		N/A
21L-2	JOINT COMPOUND	↓	11:57	↓	↓	BLACK		

Relinquished By: Date/Time:

Received By: Winfred Meade Date/Time: 10/20/14

Relinquished By: Date/Time:

Received at Lab By: Date/Time:

The EI Group, Inc.

This certifies that

Tilmon O'Dail Lawson

Student Address: 132 Old Fort Drive, Georgetown, Kentucky 40324

Has attended and satisfactorily passed an examination covering the contents of an EPA/AHERA approved course entitled

Asbestos Inspector Refresher (4-Hour) Training Course

7214080013
Certificate Number

7910
Social Security Number

August 15, 2014
Course Dates

August 15, 2014
Exam Date

August 15, 2015
Expiration Date

Louisville, KY
Course Location

Barry Maxwell, Training Manager

Kerri Boddy, Principal Instructor

Kerri Boddy, Exam Administrator

3240 Office Pointe Place, Suite 102
Louisville, KY 40220
888-372-5859

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

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

Memorandum

To: Robert Hoagland

CC: Scott Tingle

From: O'Dail Lawson
Environmental Scientist II
Division of Environmental Analysis

Date: 10/28/2014

Re: Asbestos Inspection Report for Fayette 07-279.00

This report is prepared to accompany the 10-Day NOI for Demolition to the Division of Air Quality. Please include all pages with submittal.

Project and Structure Information

Project # 07-279.00

Bridge # 034B00022R

Description: The guard rail mastic and joint compound samples collected were point counted below 1%; no abatement necessary.

Inspection Date: October 17th, 2014

Results

The results revealed that there is no ACM abatement required at this time.

Kentucky
UNBRIDLED SPIRIT

An Equal Opportunity Employer M/F/D

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N # 2410258 A
Client Name: KYTC
Sampled By: O'Dail Lawson

Address: Item # 7 - 279.00 - 034B00022R

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Number	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
# 22R-1	Gray	Yes	No	3%	(To Be	Point Counted)		2%			95%
# 22R-2	Black	Yes	No	3%	(To Be	Point Counted)		2%			95%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 25-Oct-14
Analyst : Winterford Mensah

Reviewed By: Winterford Mensah
Signature

The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S Government. Partial Reproduction of any part of this report is strictly prohibited. Samples shall be retained for (30) days.

AIHA # 102459

AJHA #1 02459

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	**KY Transportation Cabinet**	**Project No:**	**2410258 B**
Address:	**200 Mero Street**	**Sample ID:**	**# 22R-1**
	Frankfort, KY	**Sampled:**	**17-Oct-14**
	40601	**Received:**	**20-Oct-14**
		Analyzed:	**25-Oct-14 - Point Count -**
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: O'Dail Lawson

Facility/Location: Item # 7 - 279.00 - 03400022R

Field Description: Mastic

Laboratory Description:

Thick Gray Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA #102459 / AIHA #102459 / AIHA #102459

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway, Suite 613
Louisville, Kentucky 40202

(502) 495-1212
Fax: (502) 491-7111

Client:	**KY Transportation Cabinet**	**Project No:**	**2410258 B**
Address:	**200 Mero Street**	**Sample ID:**	**# 22R - 2**
	Frankfort, KY	**Sampled:**	**17-Oct-14**
	40601	**Received:**	**20-Oct-14**
		Analyzed:	**25-Oct-14 - Point Count -**
	Attention O'Dail Lawson		

Bulk Sample Analysis

Sampled by: **O'Dail Lawson**

Facility/Location: **Item # 7 - 279.00 - 034B00022R**

Field Description: **Joint Compound**

Laboratory Description:

Black Material

Asbestos Materials:

Chrysotile = 2/400 = 0.50 % (< 1 %) Sample Is Negative

Non-asbestos Fibrous Materials & Matrix Materials:

Cellulose	0.25 %
Binders	99.25 %

Remarks: The sample was analyzed for asbestos content following the EPA Methodology (600/R-93/116). The test relates only to the items tested. This report does not represent endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA #102459 / **AIHA #102459** / **AIHA #102459**

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: 502-782-5020 Fax: 502-564-5655
PO#:

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

Samplers (signature):

Project or Subject Reference 7-279.00 - 034B00022R

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Matrix	Color	Cont. Type	Preservative
22R-1	MASTIC	10/17	12:05	ASBESTOS	SOLID	GREY		N/A
22R-2	JOINT COMPOUND	↓	↓	↓	↓	BLACK		

Relinquished By: Date/Time:

Received By: [illegible] Date/Time: 10/20/12

Relinquished By: Date/Time:

Received at Lab By: Date/Time:

The EI Group, Inc.

This certifies that

Tilmon O'Dail Lawson

Student Address: 132 Old Fort Drive, Georgetown, Kentucky 40324

Has attended and satisfactorily passed an examination covering the contents of an EPA/AHERA approved course entitled

Asbestos Inspector Refresher (4-Hour) Training Course

7214080013
Certificate Number

7910
Social Security Number

August 15, 2014
Course Dates

August 15, 2014
Exam Date

August 15, 2015
Expiration Date

3240 Office Pointe Place, Suite 102
Louisville, KY 40220
888-372-5859

Louisville, KY
Course Location

Barry Maxwell, Training Manager

Kerri Boddy, Principal Instructor

Kerri Boddy, Exam Administrator

Special Note for Railroad Bridges

There are 2 bridges over Railroads on this project:

1. New Circle Road over RJ Corman Railroad Company/Central Kentucky Lines
2. New Circle Road over RJ Corman Railroad Company/Versailles Line

Insurance:

The Contractor may secure 1 policy meeting the RR's requirements to cover both bridges. The policy must name both bridges and both companies, in accordance with the Special Notes for Protection of Railroad Interest.

Right of Entry Permit:

The Contractor shall sign and submit the Right of Entry Permit. One Permit will cover both bridges. **There is a $750.00 fee associated with the permit**, for which the contractor will be responsible. The partially completed Right of Entry Permit can be found later in this proposal.

Flagging:

The Contractor will be responsible for ordering flagging services for each bridge separately as they are with different companies and different rail lines.

SPECIAL NOTES FOR
PROTECTION OF RAILROAD INTEREST

RJ Corman Railroad Company/Central Kentucky Lines

I. AUTHORITY OF RAILROAD ENGINEER AND STATE ENGINEER:

A. The authorized representative of the Railroad Company, hereinafter referred to as Railroad Engineer, shall have final authority in all matters affecting the safe maintenance of Railroad traffic of his Company including the adequacy of the foundations and structures supporting the Railroad tracks.

B. The authorized representative of the State, hereinafter referred to as the Engineer, shall have authority over all other matters as prescribed herein and in the Project Specifications.

II. NOTICE OF STARTING WORK:

A. The Contractor shall not commence any work on Railroad rights of way until he has complied with the following conditions:

1. Given the Railroad written notice, with copy to the Engineer who has been designated to be in charge of the work, **at least ten (10) days in advance** of the date he proposes to begin work on Railroad rights of way. **If flagging service is required, such notice shall be submitted at least thirty (30) days in advance** of the date scheduled to commence work. The Railroad's Contact information is on the Summary Sheet.

2. Obtain written authorization from the Railroad to begin work on Railroad rights of way, such authorization to include an outline of specific conditions with which he must comply.

3. Obtain written approval from the Railroad of Railroad Protective Insurance Liability coverage as required by paragraph 14 herein.

4. Furnish a schedule for all work within the Railroad rights of way as required by paragraph 7, B, 1.

B. The Railroad's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railroad's representatives who

are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

III. INTERFERENCE WITH RAILROAD OPERATIONS:

A. *The Contractor shall so arrange and conduct his work that there will be no interference with Railroad operations, including train, signal, telephone and telegraphic services, or damage to the property of the Railroad Company or to poles, wires, and other facilities of tenants on the rights of way of the Railroad Company. Whenever work is liable to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad Engineer for approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor which requires flagging service or inspection service (watchman) shall be deferred by the Contractor until the flagging protection required by the Railroad is available at the job site.*

B. *Whenever work within Railroad rights of way is of such a nature that impediment to Railroad operations such as use of runaround tracks or necessity for reduced speed is unavoidable, the Contractor shall schedule and conduct his operations so that such impediment is reduced to the absolute minimum.*

C. *Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations and property of the Railroad, the Contractor shall make such provisions. If in the judgment of the Railroad Engineer, or in his absence, the Engineer, such provisions are insufficient, either may require or provide such provisions, as he deems necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost and/or time to the Railroad or the State.*

IV. TRACK CLEARANCES

A. *The minimum track clearances to be maintained by the Contractor during construction are shown on the Project Plans. However, before undertaking any work within Railroad rights of way, or before placing any obstruction over any track, the Contractor shall:*

1. Notify the Railroad's representative **at least 72 hours in advance** of the work.

2. Receive assurance from the Railroad's representative that arrangements have been made for flagging service as necessary.

3. Receive permission from the Railroad's representative to proceed with the work.

4. Ascertain that the Engineer has received copies of notice to the Railroad and of the Railroad's response thereto.

V. CONSTRUCTION PROCEDURES

A. General:

1. Construction work on Railroad property shall be:

   a) Subject to the inspection and approval of the Railroad.

   b) In accord with the Railroad's written outline of specific conditions.

   c) In accord with the Railroad's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment.

   d) In accord with all Special Notes, Summaries, and Addendums.

2. The Railroad requires a submission of construction procedure that meets the requirements of these Special Notes and attachments. The Railroad's **submittal review period is thirty (30) days. Resubmissions will be reviewed within 2 weeks.**

B. Excavation and shoring:

1. The sub grade of an operated track shall be **maintained with edge of berm at least 25'0" from centerline of track and not more than 24 inches below top of rail.** Contractor will not be required to make existing section meet this specification if substandard, in which case the existing section will be maintained.

2. The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles, or sheeting for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material. The procedure for doing such work, including need of and plans for shoring, shall first be approved by the Engineer and the Railroad Engineer, but such approval shall not relieve the Contractor from liability.

3. The Contractor shall submit a detailed procedure for the installing of sheeting/shoring adjacent to Railroad Tracks.

4. Shoring protection shall be provided when excavating adjacent to an active track or railroad facility or as determined by the Railroad. Shoring will be provided in accordance with AREMA *Manual for Railway Engineering* Chapter 8, part 28; except as noted below.

5. Shoring may not be required if all of the following conditions are satisfied:

   a. Excavation does not encroach upon a 1½ horizontal: 1 vertical theoretical slope line starting 1'-6" below top of rail and at 12'-0" minimum from centerline of the track (live load influence zone).

   b. Track is on level ground or in a cut section and on stable soil.

   c. Excavation does not adversely impact the stability of a Railroad facility (i.e. signal bungalow, drainage facility, undergrade bridge, building, etc.)

   d. Shoring is not required by any governing construction code.

6. When the track is on an embankment, excavating the toe of the embankment without shoring may affect the stability of the embankment. Therefore, excavation of the embankment toe without shoring will not be permitted.

7. Trench boxes are prohibited for use on Railroad property within the theoretical live load influence zone.

8. The required protection is the cofferdam type that completely encloses the excavation. Where dictated by conditions, partial cofferdams with opened sides away from the track may be used. Cofferdams shall be constructed using steel piling, or when approved by the engineer, steel soldier piles with timber lagging. Wales and struts shall be provided and designed as needed. The following shall be considered when designing cofferdams:

   a. Shoring shall be designed to resist a vertical lice load surcharge of 1,880 lbs. per square foot, in addition to active earth pressure. The surcharge shall be assumed to act on a continuous strip, 8'6" wide. Lateral pressures due to surcharge shall be computed using the strip load formula shown in AREMA *Manual for Railway Engineering*, Chapter 8, Part 20.

   b. Allowable stresses in materials shall be in accordance with AREMA *Manual for Railway Engineering*, Chapter 7, 8, and 15.

   c. A construction procedure for temporary shoring shall be shown on the drawing.

   d. All shoring systems on or adjacent to Railroad right-of-way shall be equipped with railings or other approved fall protection.

e. A minimum horizontal clearance of 25’-0” from centerline of the track to face of nearest point of shoring shall be maintained with a temporary walkway and handrail system.

9. The Contractor shall submit the following drawings and calculations (all shall be signed/sealed by a Professional Engineer) for the Railroad’s review and approval.

a. Six (6) sets of detailed drawings of the shoring systems showing sizes of all structural members, details of connections, and distances from centerline of track to face of shoring. Drawing shall show a section showing height of shoring and track elevation in relation to bottom of excavation.

b. Six (6) sets of calculations of the shoring design. The drawings and calculations shall be prepared by a Licensed Professional Engineer and shall bear the Engineer’s seal and signature. Shoring plans shall be approved by the Railroad’s construction engineering and inspection representative.

c. For sheeting and shoring within 18’-0” of the centerline of the track, the live load influence zone, and in sloes, the Contractor shall use interlocked steel sheeting (sheet pile).

d. Sheet pile installed in slopes or within 18’-0” of the centerline shall <u>not</u> be removed.

e. Sheet pile shall be cut off a minimum of 3’-0” below the finished grade, ditch line invert, or as directed by the Engineer. The ground shall be backfilled and compacted immediately after sheet pile is cut off.

f. A procedure for cutting off the sheet pile and restoring the embankment shall be submitted to the Engineer for review and acceptance.

C. Demolition Procedure:

1. Railroad tracks and other railroad property, including signals, structures, and other facilities, must be protected from damage during the procedure. No crane or equipment may be set on the rails or track structure and no material may be dropped on Railroad property.

2. The Contractor is required to submit a plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or disposal locations shown. The location of all tracks and other railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.

3. Crane rating sheets showing cranes to be adequate for **150% of the actual weight of the pick.** A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted.

4. Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the existing and/or proposed structure showing complete and sufficient details with supporting data for the demolition or erection of the structure. If plans do not exist, lifting weights must be calculated from field measurements. If possible, field measurements shall be taken with a Railroad representative present.

5. A data sheet must be submitted listing the types, size, and arrangements of all rigging and connection equipment. The safe working load capacity of all rigging and connecting equipment shall be 150% above the calculated weight of the pick.

6. A complete procedure is to be submitted, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.

7. All erection or demolition plans, procedures, data sheets, etc. submitted must be prepared, signed and sealed by a Registered Professional Engineer.

8. The Railroad's representative must be present at the site during the entire demolition and erection procedure period.

9. All procedures, plans and calculations shall first be approved by the Engineer and the Railroad Engineer, but such approval does not relieve the Contractor from liability.

10. Loads shall not be supported while any trains are passing if that piece of equipment has the capacity to foul a 50' envelope.

11. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.

12. Existing, obsolete, bridge piers shall be removed to a minimum of 3'-0" below the finished grade, final ditch line invert, or as directed by the Engineer.

13. A minimum quantity of 25 tons of Railroad approved track ballast may be required to be furnished and stockpiled on site by the Contractor, or as directed by the Engineer.

14. On-track or ground debris shields such as crane mats are prohibited.

15. Overhead Demolition Debris Shield – Shall be installed prior to the demolition of a bridge deck or other relevant portions of the superstructure.

    a. The demolition debris shield shall be erected from the underside of the bridge over the track area to catch all falling debris.

    b. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed Controlled Demolition procedure submission.

    c. The demolition debris shield shall provide 23'-0" minimum vertical clearance if the existing clearance is less than 23'-0" as approved by the Railroad. Horizontal clearance to the centerline of the track should not be reduced unless approved by the Engineer.

    d. The vertical clearance ATR (above top of rail) is measured from the top of rail to the lowest point on the overhead shielding system measured within a distance of 6'-0" out from each side of the track centerline.

    e. The demolition debris shield design and supporting calculations, all signed/sealed by a Professional Engineer, shall be submitted for review and acceptance.

    f. The demolition debris shield shall have a **minimum** design load of 50 pounds per square foot **plus** the weight of the equipment, debris, personnel, and other loads to be carried.

    g. The Contractor shall include the proposed bridge deck removal procedure in its demolition means and methods and shall verify that the size and quantity of the demolition debris generated by the procedure does not exceed the shield design loads.

h. The contractor shall clean the demolition debris shield daily or more frequently as dictated either by the approved design parameters or as directed by the Engineer.

16. Vertical Demolition Shield – This type of shield may be required for substructure removals in close proximity to track and other facilities, as determined by the Engineer.

a. Prior to commencing the demolition activity, the Contractor shall install a ballast protection system consisting of geotextile to keep the railroad ballast from becoming fouled with construction or demolition debris and fines. The geotextile ballast protection system shall be installed and maintained by the Contractor for the project duration in accordance with the attached plan, or with additional measures as directed by the Engineer.

b. The Contractor shall submit detailed plans, with detailed calculations, prepared and submitted by a Professional Engineer of the protection shield and ballast protection systems for approval prior to the start of demolition.

c. Blasting will not be permitted to demolish a structure over or within Railroad right-of-way.

17. The Controlled Demolition procedure must be approved by the Engineer prior to undertaking work on the project.

18. The Contractor shall provide timely communication to the Engineer when scheduling the demolition related work so that the Engineer may be present during the entire demolition procedure.

19. At any time during demolition activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances which may create a potential hazard to rail operations or Railroad facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer’s satisfaction. The Railroad shall not be responsible for any additional costs or time claims associated with such revisions.

D. *Erection Procedure:*

The Contractor shall submit a detailed procedure for performing erection on/about Railroad property.

1. The Contractor shall submit six (6) copies of the detailed procedure for erection of the proposed structures over or adjacent to the tracks or right-of-way. This procedure shall include a plan showing the locations of cranes, horizontally and vertically, operating radii, with staging locations shown, including beam placement on ground or truck unloading staging plan. Plan should also include the location of all tracks, other railroad facilities; wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions should be shown. No crane or equipment may be set on the rails or track structure.

2. Also included with this submittal the following information:

   a. As-Built Bridge Seat Elevations - All as-built bridge seats and top of rail elevations shall be furnished to the Engineer for review and verification at least 30 days in advance of construction or erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.

   b. Computations showing weight of picks must be submitted. Computations shall be made from plans of the structure beams being erected and those plans or sections thereof shall also be included in the submittal; the weight shall include the weight of concrete or other materials including lifting rigging.

   c. Crane rating sheets showing cranes to be adequate for 150% of the actual weight of the pick. A complete set of crane charts, including crane, counterweight, maximum boom angle, and boom nomenclature is to be submitted. Safety factors that may have been “built in” to the crane charts are not to be considered when determining the 150% Factor of Safety.

   d. A data sheet shall be prepared listing the type, size and arrangements of slings, shackles, or other connecting equipment. Include copies of a catalog or information sheets for specialized equipment. All specific components proposed for use shall be clearly identified and highlighted in the submitted documents. The safe working load capacity of the connecting equipment shall be 150% above the calculated weight of the pick.

   e. A complete written procedure is to be included that describes the sequence of events, indicating the order of lifts and any repositioning or rehitching of the crane or cranes.

f. A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical sub tasks (i.e., performing aerial splices, installing temporary bracing, etc.) shall be furnished so that the potential impact(s) to Railroad operations may be assessed and eliminated or minimized.

g. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.

h. Design and supporting calculations prepared by the Professional Engineer for items including the temporary support of components or intermediate stages shall be submitted for review. A guardrail will be required to be installed in a track where a temporary bent is located within twelve (12) feet from the centerline of that track.

3. The proposed Erection procedure must be approved by the Engineer prior to undertaking work on the project.

4. The Contractor shall provide timely communication to the Engineer when scheduling the erection related work so that the Engineer may be present during the entire erection procedure.

5. At any time during construction activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances which may create a potential hazard to rail operations or Railroad facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. The Railroad shall not be responsible for any additional costs or time claims associated with such revisions.

E. Blasting:

1. The Contractor shall obtain advance approval of the Railroad Engineer and the Engineer for use of explosive on or adjacent to Railroad property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:

a) Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor and a licensed blaster.

b) Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.

c) No blasting shall be done without the presence of an authorized representative of the Railroad. **At least 10 days advance notice** to the person designated in the Railroad's notice of authorization to proceed (see paragraph 2B above) will be required to arrange for the presence of an authorized Railroad representative and such flagging as the Railroad may require.

d) Have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting at his expense any track misalignment or other damage to Railroad property resulting from the blasting as directed by the Railway's authorized representative. If his actions result in delay of trains, the Contractor shall bear the entire cost thereof.

e) Explosives shall not be stored on Railroad Property.

f) At any time during the blasting activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions, or other circumstance which may create a potential hazard to rail operations or Railroad facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer’s satisfaction. The Railroad shall not be responsible for any additional costs or time claims associated with such revisions.

2. The Railroad representative will:

a) Determine the approximate location of trains and advise the Contractor the approximate amount of time available for the blasting operation and clean-up.

b) Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accord with these Special Notes.

F. Track Monitoring:

The Contractor shall submit for Railroad review and approval, a detailed track monitoring program to detect both horizontal and vertaical movement of the track and roadbed, a minimum of 30-days in advance of start of work.

1. For the installation of temporary or permanent shoring systems, including but not limited to soldier piles and lagging, and interlocked steel sheeting on or adjacent to the Railroad's right-of-way, the contractor may be required to submit a detailed track monitoring program for the Railroad's approval prior to performing any work near the Railroad's right-of-way.

2. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. The Railroad reserves the right to modify the survey locations and monitoring frequency as necessary during the project.

3. The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Engineer for analysis.

4. If any movement has occurred as determined by the Engineer, the Railroad will be immediately notified. The Railroad, at its sole discretion, shall have the right to immediately require all contractor operations to be ceased, have the excavated area immediately backfilled and/or determine what corrective action is required. Any corrective action required by the Railroad or performed by the Railroad including monitoring of corrective action of the contractor will be at project expense.

G. Maintenance of Railroad Facilities:

1. The Contractor will be required to maintain all ditches and drainage structures free of silt or other obstructions which may result from his operations and provide and maintain any erosion control measures as required. The Contractor shall provide erosion control measures during construction and use methods that accord with applicable state standard specifications for road and bridge construction, including either (1) silt fence; (2) berm or temporary ditches; (3) sediment basin; (4) aggregate checks; and (5) channel lining. The Contractor will promptly repair eroded areas with Railroad rights of way and to repair any other damage to the property of the Railroad or its tenants at the Contractor's expense.

2. All maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

H. Storage of Materials and Equipment:

1. Materials and equipment shall not be stored where they will interfere with Railroad operations, nor on the rights of way of the Railroad Company without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the Railroad Company will not be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment.

2. All grading or construction machinery that is left parked near the track unattended by a watchman shall be effectively immobilized so that it cannot be moved by unauthorized persons. The Contractor shall protect, defend, indemnify and save Railroad, and any associated, controlled or affiliated corporation, harmless from and against all losses, costs, expenses, claim or liability for loss or damage to property or the loss of life or personal injury, arising out of or incident to the Contractor's failure to immobilize grading or construction machinery.

I. Cleanup:

1. Upon completion of the work, the Contractor shall remove from within the limits of the Railroad rights of way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the Contractor, and leave said rights of way in a neat condition satisfactory to the Chief Engineer of the Railroad or his authorized representative.

VI. DAMAGES:

A. The Contractor shall assume all liability for any and all damages to his/her work, employees, equipment and materials caused by Railroad traffic.

B. Any cost incurred by the Railroad for repairing damages to its property or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the Railroad by the Contractor.

VII. FLAGGING SERVICES:

A. When Required:

1. Flagging services will not be provided until the contractor's insurance has been reviewed & approved by the Railroad.

2. Under the terms of the agreement between the Department and the Railroad, the **Railroad has sole authority to determine the need for flagging** required to protect its operations. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are likely to be, working on the Railroad's rights of way, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging. If any element (workers, equipment, tools, scaffolding, etc.) may exist or fall within 25-feet of the edge of track, a flagman is necessary.

3. Normally, the Railroad will assign one flagman to a project; but in some cases, more than one may be necessary, such as yard limits where three- (3) flagmen may be required. However, if the Contractor works within distances that violate instructions given by the Railroad's authorized representative or performs work that has not been scheduled with the Railroad's authorized representative, a flagman or flagmen may be required until the project has been completed.

B. Scheduling and Notification:

1. Not later than the time that approval is initially requested to begin work on Railroad rights of way, Contractor shall furnish to the Railroad and the Department a schedule for all work required to complete the portion of the project within Railroad rights of way and arrange for a job site meeting between the Contractor, the Department, and the Railroad's authorized representative. Flagman or Flagmen may not be provided until the job site meeting has been conducted and the Contractor's work scheduled.

2. The Contractor will be required to give the Railroad representative **at least 10 working days of advance written notice** of intent to begin work within Railroad rights of way. If it is necessary for the Railroad to advertise a flagging job for bid, it **may take up to 90-days to obtain service**. Once begun, when work is suspended at any time for any reason, the Contractor will be required to give the Railroad representative **at least 3 working days of notice** before resuming work on Railroad rights of way. Such notice shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If such

notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally it shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagman, or flagmen is present at the job site. It **may take up to 30 days to obtain flagging initially** from the Railroad. When flagging begins the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and may not be able to be called for on a spot basis. If flagging becomes unnecessary and is suspended, it **may take up to 10 days to again obtain flagging services** from the Railroad. Due to labor agreements, it is necessary to give **5 working days notice before flagging service may be discontinued** and responsibility for payment stopped.

3. If, after the flagman is assigned to the project site, emergencies arise which require the flagman's presence elsewhere, and then the Contractor shall delay work on Railroad rights of way until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the Department or Railroad.

4. When demobilizing, the Contractor shall contact the flagman to avoid unnecessary flagging charges. This communication shall be documented.

C. Payment:

1. **The Cabinet will be responsible for paying the Railroad directly for any and all costs of flagging,** which may be required to accomplish the construction.

2. The estimated cost of flagging is listed on the Summary Sheet. The charge to the Cabinet by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required.

3. Railroad work involved in preparing and handling bills will also be charged to the Cabinet. Charges to the Cabinet by the Railroad shall be in accordance with applicable provisions of 23 CRF 140, Subpart I and 23 CRF 646, Subpart B. Flagging costs are subject to change. The above estimates of flagging cost are provided for information only and are not binding in any way.

D. Verification:

1. The Contractor and Department will review and sign the Railroad flagman's time sheet, attesting that the flagman was present during the time recorded. Flagman may be removed by Railroad if form is not signed. If flagman is removed, the Contractor will not be allowed to re-enter the Railroad rights of way until the issue is resolved. Any complaints concerning flagman or flagmen must be resolved in a timely manner. If need for flagman or flagmen is questioned, please contact the Railroad's Representative listed on the Project Summary Sheet. All verbal complaints must be confirmed in writing by the Contractor within 5 working days with copy to the Highway Engineer. All written correspondence should be addressed to the Railroad's Representative listed on the Project Summary Sheet.

2. The Railroad flagman assigned to the project will be responsible for notifying the Project Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Project Engineer will document such notification in the project records. When requested, the Project Engineer will also sign the flagman's diary showing daily time spent and activity at the project site.

VIII. HAUL ACROSS RAILROAD:

A. Where the plans show or imply that materials of any nature must be hauled across a Railroad, unless the plans clearly show that the State has included arrangements for such haul in its agreement with the Railroad, the Contractor will be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad. The Contractor will be required to bear all costs incidental, including flagging, to such crossings whether services are performed by his own forces or by Railroad personnel.

B. *No crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the Railroad Company unless specific authority for is installation, maintenance, necessary watching and flagging thereof and removal, all at the expense of the Contractor, is first obtained from the Railroad Engineer.* ***The approval process for an agreement normally takes 90-days.***

IX. WORK FOR THE BENEFIT OF THE CONTRACTOR:

A. *All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans; included in the force account agreement between the State and the Railroad or will be covered by appropriate revisions to same which will be initiated and approved by the State and/or the Railroad.*

B. *Should the Contractor desire any changes in addition to the above, then he shall make separate arrangements with the Railroad for same to be accomplished at the Contractor's expense.*

X. COOPERATION AND DELAYS:

A. *It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad or tenants of the Railroad. In arranging his schedule he shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.*

B. *Train schedules cannot be provided to the Contractor. It is the Contractor's responsibility to contact the Railroad in order to arrange "Track Time." This "Track Time" will be an agreed upon prearranged time period that the Railroad will, without undue burden, schedule no train traffic to facilitate the Contractor's work on or near Railroad right-of-way. This track time must be arranged* ***at least 48 hours prior to the date of need.***

C. *No charge or claims of the Contractor against either the Department or the Railroad will be allowed for hindrance or delay on account of railroad traffic; any work done by the Railroad or other delay incident to or necessary for safe maintenance of Railroad traffic or for any delays due to compliance with these Special Notes.*

D. *The Contractor shall cooperate with others participating in the construction of the Project to the end that all work may be carried on to the best advantage.*

E. *The Railroad does not assume any responsibility for work performed by others in connection with the Project. No claims of the Contractor against the Railroad shall be filed for any inconvenience, delay, or additional cost incurred by the Contractor on account of operations by others.*

XI. TRAINMAN'S WALKWAYS:

A. *Along the outer side of each exterior track of multiple operated track, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 10 feet from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railroad's protective service is provided shall be removed before the close of each day. If there is any excavation near the walkway, a handrail, with* ***10'-0" minimum clearance from centerline of track,*** *shall be placed.*

XII. GUIDELINES FOR PERSONNEL ON RAILROAD RIGHTS OF WAY:

A. *All persons shall wear hard hats. Appropriate eye and hearing protection must be used. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip on type boots is prohibited. Hard-sole, lace-up footwear, zippered boots cinched with straps which fit snugly about the ankle are adequate. Safety boots are strongly recommended.*

B. *No one is allowed within* ***25' of the centerline of the track*** *without specific authorization from the flagman.*

C. *All persons working near track when train is passing are to look out for dragging bands, chains and protruding or shifting cargo.*

D. *No one is allowed to cross tracks without specific authorization from the flagman.*

E. *All welders and cutting torches working within* ***25' of track must stop when train is passing.***

F. *No steel tape or chain will be allowed to cross or touch rails without permission.*

XIII. GUIDELINES FOR EQUIPMENT ON RAILROAD RIGHTS OF WAY:

A. *No crane or boom equipment will be allowed to set up to work or park within* ***boom distance plus 15' of centerline of track*** *without specific permission from railroad official and flagman.*

B. *No crane or boom equipment will be allowed to foul track or lift a load over the track without flag protection and track time.*

C. *All employees will stay with their machines when crane or boom equipment is pointed toward track.*

D. *All cranes and boom equipment under load will stop work while a train is passing (including pile driving).*

E. Swinging loads must be secured to prevent movement while train is passing.

F. No loads will be suspended above a moving train.

*G. No equipment will be allowed within **25' of centerline of track** without specific authorization of the flagman.*

H. Trucks, tractors or any equipment will not touch ballast line without specific permission from railroad official and flagman.

*I. No equipment or load movement **within 25' or above a standing train or other equipment** without specific authorization of the flagman.*

*J. All operating equipment within **25' of track must halt operations when a train is passing**. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.*

K. All equipment, loads and cables are prohibited from touching rails.

L. While clearing and grubbing, no vegetation will be removed from railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.

M. No equipment or materials will be parked or stored on Railroad's property unless specific permission is granted from the Railroad Engineer.

N. All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it can not be moved by unauthorized persons.

O. All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.

XIV. INSURANCE:

A. In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Contractor will be required to carry insurance of the following kinds:

1. Commercial General Liability coverage at their sole cost and expense with limits of not less than **$5,000,000** in combined single limits for bodily injury and/or property damage per occurrence, and such policies shall name the Railroad as an additional insured.

2. Statutory Worker's Compensation and Employers Liability Insurance with limits of not less than **$1,000,000**, which insurance must contain a waiver of subrogation against the Railroad and its affiliates.

3. Commercial automobile liability insurance with limits of not less than **$1,000,000** combined single limit for bodily injury and/or property damage per occurrence, and such policies shall name the Railroad as an additional insured.

4. Railroad protective liability insurance with limits of not less than **$5,000,000** combined single limite for bodily injury and/or property damage per occurrence and an aggregate annual limit of **$10,000,000**, which insurance shall satisfy the following additional requirements:

   a. The Railroad Protective Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance – Insurance Services Office (ISO) Form CG 00 35.

   b. The Railroad must be the named insured on the Railroad Protective Insurance Policy

   c. Name and Address of the Contractor must be shown on the Declarations page.

   d. Description of operations must appear on the Declarations page and must match the Project description, including project or contract identification numbers.

   e. Authorized endorsements must include the Pollution Exclusion Amendment – CG 28 31, unless using form CG 00 35 version 96 and later.

   f. Authorized endorsements may include:

      (i). Broad form Nuclear Exclusion – IL 00 21
      (ii). 30-day Advance Notices of Non-renewal or cancellation
      (iii). Required State Cancellation Endorsement
      (iv). Quick Reference or Index – CL/IL 240

   g. Authorized endorsements may not include:

      (i). A Pollution Exclusion Endorsement except CG 28 31
      (ii). A Punitive or Exemplary Damages Exclusion
      (iii). A “Common Policy Conditions” Endorsement
      (iv). And endorsement that is not named in Section 4 (e) or (f) above.
      (v). Policies that contain any type of deductible

5. All insurance companies must be A. M. Best rated A- and Class VII or better.

6. Such additional or different insurance as the Railroad may require.

B. Additional Terms:

1. Contractor must submit the original Railroad Protective Liability policy, Certificates of Insurance, and all notices and correspondence regarding the insurance policy to the contact listed on the Project Summary Sheet.

2. The Contractor may not begin work on the Project until it has received the Railroad's written approval or the required insurance.

C. Insurance policies shall follow the requirements of 23 CRF 646, Subpart A.

D. Evidence of insurance as required above shall be furnished to the address shown on the attached Summary Sheet for review by the Department and transmittal to the Railroad.

E. If any part of the work is sublet, similar insurance and evidence thereof in the same amounts as required of the Prime Contractor shall be provided by or in behalf of the subcontractor to cover his operations. Endorsements to the Prime Contractor's policies specifically naming subcontractors and describing their operations will be acceptable for this purpose.

F. All insurance herein before specified shall be carried until all work required to be performed under the terms of the contract has been satisfactorily completed within the limits of the rights of way of the Railroad as evidenced by the formal acceptance by the Department. Insuring Companies may cancel insurance by permission of the Department and Railroad or on ***thirty (30) days written notice*** *to the Department and Railroad Insurance Contacts as listed on the Project Summary Sheet.*

XV. FAILURE TO COMPLY:

A. *These Special Notes are supplemental and amendatory to the current edition of the Kentucky Department of Highways' Standard Specifications for Road and Bridge Construction, and amendments thereof, and where in conflict therewith, these Special Notes shall govern.*

B. *In the event the Contractor violates or fails to comply with any of the requirements of these Special Notes:*

1. The Railroad Engineer may require that the Contractor vacate Railroad property.

2. The Engineer may withhold any and all monies due the Contractor on pay estimates.

3. Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

XVI. PAYMENT FOR COST OF COMPLIANCE:

A. *No separate payment will be made for any extra cost incurred on account of compliance with these Special Notes. All such cost shall be included in prices bid for other items of the work as specified in the payment items.*

Kentucky Transportation Cabinet
Division of Right of Way & Utilities

TC 69-008
08/2010
Page 1 of 2

SUMMARY FOR KYTC PROJECTS THAT INVOLVE A RAILROAD

Date: 3/21/2014 *(enter using M/d/yyyy format)*

This project actively involves the below listed railroad company. This Project Summary provides an abbreviated listing of project specific railroad data. The detailed needs of the specified railroad company are included in the Special Notes for Protection of Railroad Interest in the proposal package. By submitting a bid, the contractor attests that they have dutifully considered and accepted the provisions as defined in both documents.

GENERAL ROAD PROJECT INFORMATION *(This section must be provided by KYTC)*

County: Fayette
Federal Number: N/A
State Number: FD04 034 85341 01U
Route: KY 4
Project Description: New Circle Road Rehab and widening
Item Number: 07-113.00 **Highway Milepost:** 008-011

GENERAL RAIL INFORMATION *(The below sections must be provided by Railroad Company)*

Rail Company Name: RJ Corman Railroad Company/Central Kentucky Lines
AAR-DOT# (if applicable): 346 819L **Railroad Milepost:** W 91.66
Train Count (6am to 6pm): 3 **Train Count (6pm to 6am):** 2 **Train Count (24 hr total):** 5
Maximum Train Speed: 40 mph

(This information is necessary to acquire the necessary insurances when working with Railroad Right of Way)

INSURANCE REQUIREMENTS

The named insured, description of the work and designation of the job site to be shown on the Policy are as follows:

(a) Named Insured: RJ Corman Railroad Company/Central Kentucky Lines
(b) The project description should be as indicated in the General Road Project Information section.
(c) The designation of the jobsite is the route, Milepost, and AAR-DOT# listed above.

FLAGGING INFORMATION

Flagging Estimate:

KYTC will be responsible for paying all flagging costs.

Hourly Rate:

$65.00 per hour based on a 8 hour day effective as of the date of this document.

Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 ½ times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime pay at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 ½ times the normal rate.

Forecasted Rate Increases:

Rates will increase to $0.00 per hour based on a 0 hour day effective _____ *(enter using M/d/yyyy format).*

RAILROAD CONTACTS

(to be provided by Railroad Company)

General Railroad Contact:

Debbie Hawley
R.J. Corman Railroad Company
Central Kentucky Lines
P.O. Box 788
Nicholasville, KY 40356
(Phone) 859-881-2499
(Email) djhawley@rjcorman.com

Regional Representative (Roadmaster):

Adam Boyles
R.J. Corman Railroad Company
Central Kentucky Lines
_____
_____
(Phone) 859-388-0288
(Email) Adam.Boyles@rjcorman.com

Insurance contact:

Debbie Hawley
R.J. Corman Railroad Company
Central Kentucky Lines
P.O. Box 788
Nicholasville, KY 40356
(Phone) 859-881-2499
(Email) djhawley@rjcorman.com

Railroad Designer Contact:

Contractor or In-House Employee? Consultant

George Zimmerman, PE
Sr. Associate/Engineering Director
STV Ralph Whitehead Assc.
3505 Kroger Blvd., Suite 205
Duluth, GA 30096
(Phone) 770-452-0797
(Email) George.Zimmerman@stvinc.com

Railroad Construction Contact:

Contractor or In-House Employee? Consultant

George Zimmerman, PE
Sr. Associate/Engineering Director
STV Ralph Whitehead Assc.
3505 Kroger Blvd., Suite 205
Duluth, GA 30096
(Phone) 770-452-0797
(Email) George.Zimmerman@stvinc.com

KENTUCKY TRANSPORTATION CABINET CONTACTS

(to be provided by KYTC)

KYTC Railroad Coordinator:

Allen Rust, PE
Div. of Right of Way & Utilities
Kentucky Transportation Cabinet
200 Mero Street, 5th Floor East
Frankfort, Kentucky 40622
(Phone) 502-782-4950
(Email) allen.rust@ky.gov

KYTC Construction Procurement Director:

Diana Radcliffe, Director
Div. of Construction Procurement
Kentucky Transportation Cabinet
200 Mero Street, 3rd Floor West
Frankfort, Kentucky 40622
(Phone) 502-564-3500
(Email) Diana.radcliffe@ky.gov

KYTC Construction Director:

Ryan Griffith, Director
Div. of Construction
Kentucky Transportation Cabinet
200 Mero Street, 3rd Floor West
Frankfort, Kentucky 40622
(Phone) 502-564-4780
(Email) ryan.griffith@ky.gov

The project specific information provided herein is valid as of the date indicated. However, the specific information may be subject to change due to the normal business operations of all parties. The terms and conditions defined here, and in the bid proposal in its entirety, are inclusive and constant.

SPECIAL NOTES FOR
PROTECTION OF RAILROAD INTEREST

RJ Corman Railroad Company/Central Kentucky Lines
dba RJ Corman Railroad Company/Versailles Line

I. AUTHORITY OF RAILROAD ENGINEER AND STATE ENGINEER:

A. The authorized representative of the Railroad Company, hereinafter referred to as Railroad Engineer, shall have final authority in all matters affecting the safe maintenance of Railroad traffic of his Company including the adequacy of the foundations and structures supporting the Railroad tracks.

B. The authorized representative of the State, hereinafter referred to as the Engineer, shall have authority over all other matters as prescribed herein and in the Project Specifications.

II. NOTICE OF STARTING WORK:

A. The Contractor shall not commence any work on Railroad rights of way until he has complied with the following conditions:

1. Given the Railroad written notice, with copy to the Engineer who has been designated to be in charge of the work, **at least ten (10) days in advance** of the date he proposes to begin work on Railroad rights of way. **If flagging service is required, such notice shall be submitted at least thirty (30) days in advance** of the date scheduled to commence work. The Railroad's Contact information is on the Summary Sheet.

2. Obtain written authorization from the Railroad to begin work on Railroad rights of way, such authorization to include an outline of specific conditions with which he must comply.

3. Obtain written approval from the Railroad of Railroad Protective Insurance Liability coverage as required by paragraph 14 herein.

4. Furnish a schedule for all work within the Railroad rights of way as required by paragraph 7, B, 1.

B. The Railroad's written authorization to proceed with the work shall include the

names, addresses, and telephone numbers of the Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

III. INTERFERENCE WITH RAILROAD OPERATIONS:

A. *The Contractor shall so arrange and conduct his work that there will be no interference with Railroad operations, including train, signal, telephone and telegraphic services, or damage to the property of the Railroad Company or to poles, wires, and other facilities of tenants on the rights of way of the Railroad Company. Whenever work is liable to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad Engineer for approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor which requires flagging service or inspection service (watchman) shall be deferred by the Contractor until the flagging protection required by the Railroad is available at the job site.*

B. *Whenever work within Railroad rights of way is of such a nature that impediment to Railroad operations such as use of runaround tracks or necessity for reduced speed is unavoidable, the Contractor shall schedule and conduct his operations so that such impediment is reduced to the absolute minimum.*

C. *Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations and property of the Railroad, the Contractor shall make such provisions. If in the judgment of the Railroad Engineer, or in his absence, the Engineer, such provisions are insufficient, either may require or provide such provisions, as he deems necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost and/or time to the Railroad or the State.*

IV. TRACK CLEARANCES

A. *The minimum track clearances to be maintained by the Contractor during construction are shown on the Project Plans. However, before undertaking any work within Railroad rights of way, or before placing any obstruction over any track, the Contractor shall:*

1. Notify the Railroad's representative **at least 72 hours in advance** of the work.

2. Receive assurance from the Railroad's representative that arrangements have been made for flagging service as necessary.

3. Receive permission from the Railroad's representative to proceed with the work.

4. Ascertain that the Engineer has received copies of notice to the Railroad and of the Railroad's response thereto.

V. CONSTRUCTION PROCEDURES

A. General:

1. Construction work on Railroad property shall be:

   a) Subject to the inspection and approval of the Railroad.

   b) In accord with the Railroad's written outline of specific conditions.

   c) In accord with the Railroad's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment.

   d) In accord with all Special Notes, Summaries, and Addendums.

2. The Railroad requires a submission of construction procedure that meets the requirements of these Special Notes and attachments. The Railroad's **submittal review period is thirty (30) days. Resubmissions will be reviewed within 2 weeks.**

B. Excavation and shoring:

1. The sub grade of an operated track shall be **maintained with edge of berm at least 25'0" from centerline of track and not more than 24 inches below top of rail.** Contractor will not be required to make existing section meet this specification if substandard, in which case the existing section will be maintained.

2. The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles, or sheeting for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material. The procedure for doing such work, including need of and plans for shoring, shall first be approved by the Engineer and the Railroad Engineer, but such approval shall not relieve the Contractor from liability.

3. The Contractor shall submit a detailed procedure for the installing of sheeting/shoring adjacent to Railroad Tracks.

4. Shoring protection shall be provided when excavating adjacent to an active track or railroad facility or as determined by the Railroad. Shoring will be provided in accordance with AREMA *Manual for Railway Engineering* Chapter 8, part 28; except as noted below.

5. Shoring may not be required if all of the following conditions are satisfied:

   a. Excavation does not encroach upon a 1½ horizontal: 1 vertical theoretical slope line starting 1'-6" below top of rail and at 12'-0" minimum from centerline of the track (live load influence zone).

   b. Track is on level ground or in a cut section and on stable soil.

   c. Excavation does not adversely impact the stability of a Railroad facility (i.e. signal bungalow, drainage facility, undergrade bridge, building, etc.)

   d. Shoring is not required by any governing construction code.

6. When the track is on an embankment, excavating the toe of the embankment without shoring may affect the stability of the embankment. Therefore, excavation of the embankment toe without shoring will not be permitted.

7. Trench boxes are prohibited for use on Railroad property within the theoretical live load influence zone.

8. The required protection is the cofferdam type that completely encloses the excavation. Where dictated by conditions, partial cofferdams with opened sides away from the track may be used. Cofferdams shall be constructed using steel piling, or when approved by the engineer, steel soldier piles with timber lagging. Wales and struts shall be provided and designed as needed. The following shall be considered when designing cofferdams:

   a. Shoring shall be designed to resist a vertical lice load surcharge of 1,880 lbs. per square foot, in addition to active earth pressure. The surcharge shall be assumed to act on a continuous strip, 8'6" wide. Lateral pressures due to surcharge shall be computed using the strip load formula shown in AREMA *Manual for Railway Engineering*, Chapter 8, Part 20.

   b. Allowable stresses in materials shall be in accordance with AREMA *Manual for Railway Engineering*, Chapter 7, 8, and 15.

   c. A construction procedure for temporary shoring shall be shown on the drawing.

   d. All shoring systems on or adjacent to Railroad right-of-way shall be equipped with railings or other approved fall protection.

e. A minimum horizontal clearance of 25’-0” from centerline of the track to face of nearest point of shoring shall be maintained with a temporary walkway and handrail system.

9. The Contractor shall submit the following drawings and calculations (all shall be signed/sealed by a Professional Engineer) for the Railroad’s review and approval.

a. Six (6) sets of detailed drawings of the shoring systems showing sizes of all structural members, details of connections, and distances from centerline of track to face of shoring. Drawing shall show a section showing height of shoring and track elevation in relation to bottom of excavation.

b. Six (6) sets of calculations of the shoring design. The drawings and calculations shall be prepared by a Licensed Professional Engineer and shall bear the Engineer’s seal and signature. Shoring plans shall be approved by the Railroad’s construction engineering and inspection representative.

c. For sheeting and shoring within 18’-0” of the centerline of the track, the live load influence zone, and in sloes, the Contractor shall use interlocked steel sheeting (sheet pile).

d. Sheet pile installed in slopes or within 18’-0” of the centerline shall <u>not</u> be removed.

e. Sheet pile shall be cut off a minimum of 3’-0” below the finished grade, ditch line invert, or as directed by the Engineer. The ground shall be backfilled and compacted immediately after sheet pile is cut off.

f. A procedure for cutting off the sheet pile and restoring the embankment shall be submitted to the Engineer for review and acceptance.

C. Demolition Procedure:

1. Railroad tracks and other railroad property, including signals, structures, and other facilities, must be protected from damage during the procedure. No crane or equipment may be set on the rails or track structure and no material may be dropped on Railroad property.

2. The Contractor is required to submit a plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or disposal locations shown. The location of all tracks and other railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.

3. Crane rating sheets showing cranes to be adequate for **150% of the actual weight of the pick.** A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted.

4. Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the existing and/or proposed structure showing complete and sufficient details with supporting data for the demolition or erection of the structure. If plans do not exist, lifting weights must be calculated from field measurements. If possible, field measurements shall be taken with a Railroad representative present.

5. A data sheet must be submitted listing the types, size, and arrangements of all rigging and connection equipment. The safe working load capacity of all rigging and connecting equipment shall be 150% above the calculated weight of the pick.

6. A complete procedure is to be submitted, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.

7. All erection or demolition plans, procedures, data sheets, etc. submitted must be prepared, signed and sealed by a Registered Professional Engineer.

8. The Railroad's representative must be present at the site during the entire demolition and erection procedure period.

9. All procedures, plans and calculations shall first be approved by the Engineer and the Railroad Engineer, but such approval does not relieve the Contractor from liability.

10. Loads shall not be supported while any trains are passing if that piece of equipment has the capacity to foul a 50' envelope.

11. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.

12. Existing, obsolete, bridge piers shall be removed to a minimum of 3'-0" below the finished grade, final ditch line invert, or as directed by the Engineer.

13. A minimum quantity of 25 tons of Railroad approved track ballast may be required to be furnished and stockpiled on site by the Contractor, or as directed by the Engineer.

14. On-track or ground debris shields such as crane mats are prohibited.

15. Overhead Demolition Debris Shield – Shall be installed prior to the demolition of a bridge deck or other relevant portions of the superstructure.

    a. The demolition debris shield shall be erected from the underside of the bridge over the track area to catch all falling debris.

    b. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed Controlled Demolition procedure submission.

    c. The demolition debris shield shall provide 23'-0" minimum vertical clearance if the existing clearance is less than 23'-0" as approved by the Railroad. Horizontal clearance to the centerline of the track should not be reduced unless approved by the Engineer.

    d. The vertical clearance ATR (above top of rail) is measured from the top of rail to the lowest point on the overhead shielding system measured within a distance of 6'-0" out from each side of the track centerline.

    e. The demolition debris shield design and supporting calculations, all signed/sealed by a Professional Engineer, shall be submitted for review and acceptance.

    f. The demolition debris shield shall have a **minimum** design load of 50 pounds per square foot **plus** the weight of the equipment, debris, personnel, and other loads to be carried.

    g. The Contractor shall include the proposed bridge deck removal procedure in its demolition means and methods and shall verify that the size and quantity of the demolition debris generated by the procedure does not exceed the shield design loads.

h. The contractor shall clean the demolition debris shield daily or more frequently as dictated either by the approved design parameters or as directed by the Engineer.

16. Vertical Demolition Shield – This type of shield may be required for substructure removals in close proximity to track and other facilities, as determined by the Engineer.

a. Prior to commencing the demolition activity, the Contractor shall install a ballast protection system consisting of geotextile to keep the railroad ballast from becoming fouled with construction or demolition debris and fines. The geotextile ballast protection system shall be installed and maintained by the Contractor for the project duration in accordance with the attached plan, or with additional measures as directed by the Engineer.

b. The Contractor shall submit detailed plans, with detailed calculations, prepared and submitted by a Professional Engineer of the protection shield and ballast protection systems for approval prior to the start of demolition.

c. Blasting will not be permitted to demolish a structure over or within Railroad right-of-way.

17. The Controlled Demolition procedure must be approved by the Engineer prior to undertaking work on the project.

18. The Contractor shall provide timely communication to the Engineer when scheduling the demolition related work so that the Engineer may be present during the entire demolition procedure.

19. At any time during demolition activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances which may create a potential hazard to rail operations or Railroad facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer’s satisfaction. The Railroad shall not be responsible for any additional costs or time claims associated with such revisions.

D. *Erection Procedure:*

The Contractor shall submit a detailed procedure for performing erection on/about Railroad property.

1. The Contractor shall submit six (6) copies of the detailed procedure for erection of the proposed structures over or adjacent to the tracks or right-of-way. This procedure shall include a plan showing the locations of cranes, horizontally and vertically, operating radii, with staging locations shown, including beam placement on ground or truck unloading staging plan. Plan should also include the location of all tracks, other railroad facilities; wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions should be shown. No crane or equipment may be set on the rails or track structure.

2. Also included with this submittal the following information:

   a. As-Built Bridge Seat Elevations - All as-built bridge seats and top of rail elevations shall be furnished to the Engineer for review and verification at least 30 days in advance of construction or erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.

   b. Computations showing weight of picks must be submitted. Computations shall be made from plans of the structure beams being erected and those plans or sections thereof shall also be included in the submittal; the weight shall include the weight of concrete or other materials including lifting rigging.

   c. Crane rating sheets showing cranes to be adequate for 150% of the actual weight of the pick. A complete set of crane charts, including crane, counterweight, maximum boom angle, and boom nomenclature is to be submitted. Safety factors that may have been “built in” to the crane charts are not to be considered when determining the 150% Factor of Safety.

   d. A data sheet shall be prepared listing the type, size and arrangements of slings, shackles, or other connecting equipment. Include copies of a catalog or information sheets for specialized equipment. All specific components proposed for use shall be clearly identified and highlighted in the submitted documents. The safe working load capacity of the connecting equipment shall be 150% above the calculated weight of the pick.

   e. A complete written procedure is to be included that describes the sequence of events, indicating the order of lifts and any repositioning or rehitching of the crane or cranes.

f. A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical sub tasks (i.e., performing aerial splices, installing temporary bracing, etc.) shall be furnished so that the potential impact(s) to Railroad operations may be assessed and eliminated or minimized.

g. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.

h. Design and supporting calculations prepared by the Professional Engineer for items including the temporary support of components or intermediate stages shall be submitted for review. A guardrail will be required to be installed in a track where a temporary bent is located within twelve (12) feet from the centerline of that track.

3. The proposed Erection procedure must be approved by the Engineer prior to undertaking work on the project.

4. The Contractor shall provide timely communication to the Engineer when scheduling the erection related work so that the Engineer may be present during the entire erection procedure.

5. At any time during construction activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances which may create a potential hazard to rail operations or Railroad facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. The Railroad shall not be responsible for any additional costs or time claims associated with such revisions.

E. Blasting:

1. The Contractor shall obtain advance approval of the Railroad Engineer and the Engineer for use of explosive on or adjacent to Railroad property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:

a) Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor and a licensed blaster.

b) Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.

c) No blasting shall be done without the presence of an authorized representative of the Railroad. **At least 10 days advance notice** to the person designated in the Railroad's notice of authorization to proceed (see paragraph 2B above) will be required to arrange for the presence of an authorized Railroad representative and such flagging as the Railroad may require.

d) Have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting at his expense any track misalignment or other damage to Railroad property resulting from the blasting as directed by the Railway's authorized representative. If his actions result in delay of trains, the Contractor shall bear the entire cost thereof.

e) Explosives shall not be stored on Railroad Property.

f) At any time during the blasting activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions, or other circumstance which may create a potential hazard to rail operations or Railroad facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer’s satisfaction. The Railroad shall not be responsible for any additional costs or time claims associated with such revisions.

2. The Railroad representative will:

a) Determine the approximate location of trains and advise the Contractor the approximate amount of time available for the blasting operation and clean-up.

b) Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accord with these Special Notes.

F. Track Monitoring:

The Contractor shall submit for Railroad review and approval, a detailed track monitoring program to detect both horizontal and vertaical movement of the track and roadbed, a minimum of 30-days in advance of start of work.

1. For the installation of temporary or permanent shoring systems, including but not limited to soldier piles and lagging, and interlocked steel sheeting on or adjacent to the Railroad's right-of-way, the contractor may be required to submit a detailed track monitoring program for the Railroad's approval prior to performing any work near the Railroad's right-of-way.

2. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. The Railroad reserves the right to modify the survey locations and monitoring frequency as necessary during the project.

3. The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Engineer for analysis.

4. If any movement has occurred as determined by the Engineer, the Railroad will be immediately notified. The Railroad, at its sole discretion, shall have the right to immediately require all contractor operations to be ceased, have the excavated area immediately backfilled and/or determine what corrective action is required. Any corrective action required by the Railroad or performed by the Railroad including monitoring of corrective action of the contractor will be at project expense.

G. Maintenance of Railroad Facilities:

1. The Contractor will be required to maintain all ditches and drainage structures free of silt or other obstructions which may result from his operations and provide and maintain any erosion control measures as required. The Contractor shall provide erosion control measures during construction and use methods that accord with applicable state standard specifications for road and bridge construction, including either (1) silt fence; (2) berm or temporary ditches; (3) sediment basin; (4) aggregate checks; and (5) channel lining. The Contractor will promptly repair eroded areas with Railroad rights of way and to repair any other damage to the property of the Railroad or its tenants at the Contractor's expense.

2. All maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

H. Storage of Materials and Equipment:

1. Materials and equipment shall not be stored where they will interfere with Railroad operations, nor on the rights of way of the Railroad Company without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the Railroad Company will not be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment.

2. All grading or construction machinery that is left parked near the track unattended by a watchman shall be effectively immobilized so that it cannot be moved by unauthorized persons. The Contractor shall protect, defend, indemnify and save Railroad, and any associated, controlled or affiliated corporation, harmless from and against all losses, costs, expenses, claim or liability for loss or damage to property or the loss of life or personal injury, arising out of or incident to the Contractor's failure to immobilize grading or construction machinery.

I. Cleanup:

1. Upon completion of the work, the Contractor shall remove from within the limits of the Railroad rights of way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the Contractor, and leave said rights of way in a neat condition satisfactory to the Chief Engineer of the Railroad or his authorized representative.

VI. DAMAGES:

A. The Contractor shall assume all liability for any and all damages to his/her work, employees, equipment and materials caused by Railroad traffic.

B. Any cost incurred by the Railroad for repairing damages to its property or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the Railroad by the Contractor.

VII. FLAGGING SERVICES:

A. When Required:

1. Flagging services will not be provided until the contractor's insurance has been reviewed & approved by the Railroad.

2. Under the terms of the agreement between the Department and the Railroad, the **Railroad has sole authority to determine the need for flagging** required to protect its operations. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are likely to be, working on the Railroad's rights of way, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging. If any element (workers, equipment, tools, scaffolding, etc.) may exist or fall within 25-feet of the edge of track, a flagman is necessary.

3. Normally, the Railroad will assign one flagman to a project; but in some cases, more than one may be necessary, such as yard limits where three- (3) flagmen may be required. However, if the Contractor works within distances that violate instructions given by the Railroad's authorized representative or performs work that has not been scheduled with the Railroad's authorized representative, a flagman or flagmen may be required until the project has been completed.

B. Scheduling and Notification:

1. Not later than the time that approval is initially requested to begin work on Railroad rights of way, Contractor shall furnish to the Railroad and the Department a schedule for all work required to complete the portion of the project within Railroad rights of way and arrange for a job site meeting between the Contractor, the Department, and the Railroad's authorized representative. Flagman or Flagmen may not be provided until the job site meeting has been conducted and the Contractor's work scheduled.

2. The Contractor will be required to give the Railroad representative **at least 10 working days of advance written notice** of intent to begin work within Railroad rights of way. If it is necessary for the Railroad to advertise a flagging job for bid, it **may take up to 90-days to obtain service**. Once begun, when work is suspended at any time for any reason, the Contractor will be required to give the Railroad representative **at least 3 working days of notice** before resuming work on Railroad rights of way. Such notice shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If such

notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally it shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagman, or flagmen is present at the job site. It **may take up to 30 days to obtain flagging initially** from the Railroad. When flagging begins the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and may not be able to be called for on a spot basis. If flagging becomes unnecessary and is suspended, it **may take up to 10 days to again obtain flagging services** from the Railroad. Due to labor agreements, it is necessary to give **5 working days notice before flagging service may be discontinued** and responsibility for payment stopped.

3. If, after the flagman is assigned to the project site, emergencies arise which require the flagman's presence elsewhere, and then the Contractor shall delay work on Railroad rights of way until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the Department or Railroad.

4. When demobilizing, the Contractor shall contact the flagman to avoid unnecessary flagging charges. This communication shall be documented.

C. Payment:

1. **The Cabinet will be responsible for paying the Railroad directly for any and all costs of flagging,** which may be required to accomplish the construction.

2. The estimated cost of flagging is listed on the Summary Sheet. The charge to the Cabinet by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required.

3. Railroad work involved in preparing and handling bills will also be charged to the Cabinet. Charges to the Cabinet by the Railroad shall be in accordance with applicable provisions of 23 CRF 140, Subpart I and 23 CRF 646, Subpart B. Flagging costs are subject to change. The above estimates of flagging cost are provided for information only and are not binding in any way.

D. Verification:

1. The Contractor and Department will review and sign the Railroad flagman's time sheet, attesting that the flagman was present during the time recorded. Flagman may be removed by Railroad if form is not signed. If flagman is removed, the Contractor will not be allowed to re-enter the Railroad rights of way until the issue is resolved. Any complaints concerning flagman or flagmen must be resolved in a timely manner. If need for flagman or flagmen is questioned, please contact the Railroad's Representative listed on the Project Summary Sheet. All verbal complaints must be confirmed in writing by the Contractor within 5 working days with copy to the Highway Engineer. All written correspondence should be addressed to the Railroad's Representative listed on the Project Summary Sheet.

2. The Railroad flagman assigned to the project will be responsible for notifying the Project Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Project Engineer will document such notification in the project records. When requested, the Project Engineer will also sign the flagman's diary showing daily time spent and activity at the project site.

VIII. HAUL ACROSS RAILROAD:

A. Where the plans show or imply that materials of any nature must be hauled across a Railroad, unless the plans clearly show that the State has included arrangements for such haul in its agreement with the Railroad, the Contractor will be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad. The Contractor will be required to bear all costs incidental, including flagging, to such crossings whether services are performed by his own forces or by Railroad personnel.

B. *No crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the Railroad Company unless specific authority for is installation, maintenance, necessary watching and flagging thereof and removal, all at the expense of the Contractor, is first obtained from the Railroad Engineer.* ***The approval process for an agreement normally takes 90-days.***

IX. WORK FOR THE BENEFIT OF THE CONTRACTOR:

A. *All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans; included in the force account agreement between the State and the Railroad or will be covered by appropriate revisions to same which will be initiated and approved by the State and/or the Railroad.*

B. *Should the Contractor desire any changes in addition to the above, then he shall make separate arrangements with the Railroad for same to be accomplished at the Contractor's expense.*

X. COOPERATION AND DELAYS:

A. *It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad or tenants of the Railroad. In arranging his schedule he shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.*

B. *Train schedules cannot be provided to the Contractor. It is the Contractor's responsibility to contact the Railroad in order to arrange "Track Time." This "Track Time" will be an agreed upon prearranged time period that the Railroad will, without undue burden, schedule no train traffic to facilitate the Contractor's work on or near Railroad right-of-way. This track time must be arranged* ***at least 48 hours prior to the date of need.***

C. *No charge or claims of the Contractor against either the Department or the Railroad will be allowed for hindrance or delay on account of railroad traffic; any work done by the Railroad or other delay incident to or necessary for safe maintenance of Railroad traffic or for any delays due to compliance with these Special Notes.*

D. *The Contractor shall cooperate with others participating in the construction of the Project to the end that all work may be carried on to the best advantage.*

E. *The Railroad does not assume any responsibility for work performed by others in connection with the Project. No claims of the Contractor against the Railroad shall be filed for any inconvenience, delay, or additional cost incurred by the Contractor on account of operations by others.*

XI. TRAINMAN'S WALKWAYS:

A. *Along the outer side of each exterior track of multiple operated track, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 10 feet from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railroad's protective service is provided shall be removed before the close of each day. If there is any excavation near the walkway, a handrail, with* ***10'-0" minimum clearance from centerline of track,*** *shall be placed.*

XII. GUIDELINES FOR PERSONNEL ON RAILROAD RIGHTS OF WAY:

A. *All persons shall wear hard hats. Appropriate eye and hearing protection must be used. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip on type boots is prohibited. Hard-sole, lace-up footwear, zippered boots cinched with straps which fit snugly about the ankle are adequate. Safety boots are strongly recommended.*

B. *No one is allowed within* ***25' of the centerline of the track*** *without specific authorization from the flagman.*

C. *All persons working near track when train is passing are to look out for dragging bands, chains and protruding or shifting cargo.*

D. *No one is allowed to cross tracks without specific authorization from the flagman.*

E. *All welders and cutting torches working within* ***25' of track must stop when train is passing.***

F. *No steel tape or chain will be allowed to cross or touch rails without permission.*

XIII. GUIDELINES FOR EQUIPMENT ON RAILROAD RIGHTS OF WAY:

A. *No crane or boom equipment will be allowed to set up to work or park within* ***boom distance plus 15' of centerline of track*** *without specific permission from railroad official and flagman.*

B. *No crane or boom equipment will be allowed to foul track or lift a load over the track without flag protection and track time.*

C. *All employees will stay with their machines when crane or boom equipment is pointed toward track.*

D. *All cranes and boom equipment under load will stop work while a train is passing (including pile driving).*

E. Swinging loads must be secured to prevent movement while train is passing.

F. No loads will be suspended above a moving train.

*G. No equipment will be allowed within **25' of centerline of track** without specific authorization of the flagman.*

H. Trucks, tractors or any equipment will not touch ballast line without specific permission from railroad official and flagman.

*I. No equipment or load movement **within 25' or above a standing train or other equipment** without specific authorization of the flagman.*

*J. All operating equipment within **25' of track must halt operations when a train is passing**. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.*

K. All equipment, loads and cables are prohibited from touching rails.

L. While clearing and grubbing, no vegetation will be removed from railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.

M. No equipment or materials will be parked or stored on Railroad's property unless specific permission is granted from the Railroad Engineer.

N. All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it can not be moved by unauthorized persons.

O. All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.

XIV. INSURANCE:

A. In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Contractor will be required to carry insurance of the following kinds:

1. Commercial General Liability coverage at their sole cost and expense with limits of not less than **$5,000,000** in combined single limits for bodily injury and/or property damage per occurrence, and such policies shall name the Railroad as an additional insured.

2. Statutory Worker's Compensation and Employers Liability Insurance with limits of not less than **$1,000,000**, which insurance must contain a waiver of subrogation against the Railroad and its affiliates.

3. Commercial automobile liability insurance with limits of not less than **$1,000,000** combined single limit for bodily injury and/or property damage per occurrence, and such policies shall name the Railroad as an additional insured.

4. Railroad protective liability insurance with limits of not less than **$5,000,000** combined single limite for bodily injury and/or property damage per occurrence and an aggregate annual limit of **$10,000,000**, which insurance shall satisfy the following additional requirements:

   a. The Railroad Protective Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance – Insurance Services Office (ISO) Form CG 00 35.

   b. The Railroad must be the named insured on the Railroad Protective Insurance Policy

   c. Name and Address of the Contractor must be shown on the Declarations page.

   d. Description of operations must appear on the Declarations page and must match the Project description, including project or contract identification numbers.

   e. Authorized endorsements must include the Pollution Exclusion Amendment – CG 28 31, unless using form CG 00 35 version 96 and later.

   f. Authorized endorsements may include:

      (i). Broad form Nuclear Exclusion – IL 00 21
      (ii). 30-day Advance Notices of Non-renewal or cancellation
      (iii). Required State Cancellation Endorsement
      (iv). Quick Reference or Index – CL/IL 240

   g. Authorized endorsements may not include:

      (i). A Pollution Exclusion Endorsement except CG 28 31
      (ii). A Punitive or Exemplary Damages Exclusion
      (iii). A “Common Policy Conditions” Endorsement
      (iv). And endorsement that is not named in Section 4 (e) or (f) above.
      (v). Policies that contain any type of deductible

5. All insurance companies must be A. M. Best rated A- and Class VII or better.

6. Such additional or different insurance as the Railroad may require.

B. Additional Terms:

1. Contractor must submit the original Railroad Protective Liability policy, Certificates of Insurance, and all notices and correspondence regarding the insurance policy to the contact listed on the Project Summary Sheet.

2. The Contractor may not begin work on the Project until it has received the Railroad's written approval or the required insurance.

C. Insurance policies shall follow the requirements of 23 CRF 646, Subpart A.

D. Evidence of insurance as required above shall be furnished to the address shown on the attached Summary Sheet for review by the Department and transmittal to the Railroad.

E. If any part of the work is sublet, similar insurance and evidence thereof in the same amounts as required of the Prime Contractor shall be provided by or in behalf of the subcontractor to cover his operations. Endorsements to the Prime Contractor's policies specifically naming subcontractors and describing their operations will be acceptable for this purpose.

F. All insurance herein before specified shall be carried until all work required to be performed under the terms of the contract has been satisfactorily completed within the limits of the rights of way of the Railroad as evidenced by the formal acceptance by the Department. Insuring Companies may cancel insurance by permission of the Department and Railroad or on ***thirty (30) days written notice*** *to the Department and Railroad Insurance Contacts as listed on the Project Summary Sheet.*

XV. FAILURE TO COMPLY:

A. *These Special Notes are supplemental and amendatory to the current edition of the Kentucky Department of Highways' Standard Specifications for Road and Bridge Construction, and amendments thereof, and where in conflict therewith, these Special Notes shall govern.*

B. *In the event the Contractor violates or fails to comply with any of the requirements of these Special Notes:*

1. The Railroad Engineer may require that the Contractor vacate Railroad property.

2. The Engineer may withhold any and all monies due the Contractor on pay estimates.

3. Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

XVI. PAYMENT FOR COST OF COMPLIANCE:

A. *No separate payment will be made for any extra cost incurred on account of compliance with these Special Notes. All such cost shall be included in prices bid for other items of the work as specified in the payment items.*

Kentucky Transportation Cabinet
Division of Right of Way & Utilities

TC 69-008
08/2010
Page 1 of 2

SUMMARY FOR KYTC PROJECTS THAT INVOLVE A RAILROAD

Date: 3/21/2014 *(enter using M/d/yyyy format)*

This project actively involves the below listed railroad company. This Project Summary provides an abbreviated listing of project specific railroad data. The detailed needs of the specified railroad company are included in the Special Notes for Protection of Railroad Interest in the proposal package. By submitting a bid, the contractor attests that they have dutifully considered and accepted the provisions as defined in both documents.

GENERAL ROAD PROJECT INFORMATION *(This section must be provided by KYTC)*

County: Fayette
Federal Number: N/A
State Number: FD04 034 85341 01U
Route: KY 4
Project Description: New Circle Road Rehab and widening
Item Number: 07-113.00 **Highway Milepost:** 008-011

GENERAL RAIL INFORMATION *(The below sections must be provided by Railroad Company)*

Rail Company Name: RJ Corman Railroad Company/Central Kentucky Lines dba RJ Corman Railroad Company/Versailles Line
AAR-DOT# (if applicable): 719 884A & 719 885G **Railroad Milepost:** 21.65 & 21.67
Train Count (6am to 6pm): 0 **Train Count (6pm to 6am):** 2 **Train Count (24 hr total):** 2
Maximum Train Speed: 10 mph
(This information is necessary to acquire the necessary insurances when working with Railroad Right of Way)

INSURANCE REQUIREMENTS

The named insured, description of the work and designation of the job site to be shown on the Policy are as follows:

(a) Named Insured: RJ Corman Railroad Company/Versailles Line
(b) The project description should be as indicated in the General Road Project Information section.
(c) The designation of the jobsite is the route, Milepost, and AAR-DOT# listed above.

FLAGGING INFORMATION

Flagging Estimate:

KYTC will be responsible for paying all flagging costs.

Hourly Rate:

$65.00 per hour based on a 8 hour day effective as of the date of this document.

Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 ½ times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime pay at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 ½ times the normal rate.

Forecasted Rate Increases:

Rates will increase to $0.00 per hour based on a 0 hour day effective _____ *(enter using M/d/yyyy format).*

RAILROAD CONTACTS

(to be provided by Railroad Company)

General Railroad Contact:

Debbie Hawley
R.J. Corman Railroad Company
Central Kentucky Lines
P.O. Box 788
Nicholasville, KY 40356
(Phone) 859-881-2499
(Email) djhawley@rjcorman.com

Regional Representative (Roadmaster):

Adam Boyles
R.J. Corman Railroad Company
Central Kentucky Lines
_____
_____
(Phone) 859-388-0288
(Email) Adam.Boyles@rjcorman.com

Insurance contact:

Debbie Hawley
R.J. Corman Railroad Company
Central Kentucky Lines
P.O. Box 788
Nicholasville, KY 40356
(Phone) 859-881-2499
(Email) djhawley@rjcorman.com

Railroad Designer Contact:

Contractor or In-House Employee? Consultant

George Zimmerman, PE
Sr. Associate/Engineering Director
STV Ralph Whitehead Assc.
3505 Kroger Blvd., Suite 205
Duluth, GA 30096
(Phone) 770-452-0797
(Email) George.Zimmerman@stvinc.com

Railroad Construction Contact:

Contractor or In-House Employee? Consultant

George Zimmerman, PE
Sr. Associate/Engineering Director
STV Ralph Whitehead Assc.
3505 Kroger Blvd., Suite 205
Duluth, GA 30096
(Phone) 770-452-0797
(Email) George.Zimmerman@stvinc.com

KENTUCKY TRANSPORTATION CABINET CONTACTS

(to be provided by KYTC)

KYTC Railroad Coordinator:

Allen Rust, PE
Div. of Right of Way & Utilities
Kentucky Transportation Cabinet
200 Mero Street, 5th Floor East
Frankfort, Kentucky 40622
(Phone) 502-782-4950
(Email) allen.rust@ky.gov

KYTC Construction Procurement Director:

Diana Radcliffe, Director
Div. of Construction Procurement
Kentucky Transportation Cabinet
200 Mero Street, 3rd Floor West
Frankfort, Kentucky 40622
(Phone) 502-564-3500
(Email) Diana.radcliffe@ky.gov

KYTC Construction Director:

Ryan Griffith, Director
Div. of Construction
Kentucky Transportation Cabinet
200 Mero Street, 3rd Floor West
Frankfort, Kentucky 40622
(Phone) 502-564-4780
(Email) ryan.griffith@ky.gov

The project specific information provided herein is valid as of the date indicated. However, the specific information may be subject to change due to the normal business operations of all parties. The terms and conditions defined here, and in the bid proposal in its entirety, are inclusive and constant.

ENTRY PERMIT
RJCC_____

This agreement, made as of _____ by and between the R.J. Corman Railroad Company/Central Kentucky Lines, hereafter referred to as "Railroad" whose mailing address is P.O. Box 788, Nicholasville, Kentucky 40340, and, _____, hereafter referred to as "Company", whose mailing address is_____.

The Railroad agrees to allow Company to enter its property to perform project #FD52 034085341 01U, Item #07-113.00 to rehab and widen the bridges located at MP 91.64 on the Central Kentucky Line and MP 21.8 on the Versailles Line, both in Fayette County. Company has permission to enter the railroad property but is not to cross the track(s) with any equipment without first notifying the Railroad of its intent to do so. The Railroad may elect to have a representative present should any equipment need to cross the track. Should the Railroad incur any costs or suffer services interruption associated with Company's entry, all costs will be reimbursed by Company to Railroad within 30 days.

In consideration for this access, Company agrees to the following:

1. Payment of $750.00 to be paid to R.J. Corman Railroad Company/Central Kentucky Lines and returned with this signed agreement.

2. To obtain all necessary permits and licenses from any Federal, State or local public authority at its sole cost and expense. Agrees to observe and comply with all applicable laws, regulations and codes governing work. Shall defend, protect and hold railroad harmless for failure to do so.

3. To assume, and shall at all times hereafter release, indemnify, defend and save harmless from and against any and all liability, loss, claim, suit, damage, charge or expense which Railroad may suffer, sustain, incur or in any way be subjected to, on account of death or injury to any person whomsoever (including officers, agents, employees or invitees of Railroad), and for damage to or loss of or destruction of any property whatsoever, arising out of, resulting from, or in any way connected with the entry of Company and its Contractors, Subcontractors and invitees on Railroad property.

4. To provide certificate of Railroad Protective Liability Insurance with a limit of not less than FIVE MILLION DOLLARS ($5,000,000) Combined Single Limit per occurrence and TEN MILLION DOLLARS ($10,000,000) aggregate, if working within fifty (50) feet of the railroad tracks. Railroad must be named as insured on certificate.

5. To provide certificate of General Liability Insurance with a coverage limit of not less than FIVE MILLION DOLLARS ($5,000,000.00) Combined Single Limit per occurrence. Railroad must be named as additional insured on certificate.

6. Company will be responsible for flagging costs of $65.00 per hour with 1 ½ times the rate over 8 hours and 2 times the rate over 10 hours per day should flagging be needed. Railroad Superintendent will determine the need for flagging service.

7. If any work is taking place within 50 feet of a Signal Warning System you must contact Aaron Ballard, Signal Superintendent, 859-469-2896.

Witness

_____

_____
Company Name

_____

Title:_____

Witness

_____

R.J. Corman Railroad Company/Central Kentucky Lines

_____

Title:_____

*The Railroad must always be notified of the date you plan to enter the property.
Failure to notify Railroad can result in STOP WORK.

***Railroad Contact Information: Adam Boyles 859-314-0891*

Right-of-Way Certification Form

Revised 2/22/11

☑ Federal Funded ☑ Original

☐ State Funded ☐ Re-Certification

This form must be completed and submitted to FHWA with the PS&E package for federal-aid funded Interstate, Appalachia, and Major projects. This form shall also be submitted to FHWA for all federal-aid projects that fall under Conditions No. 2 or 3 outlined elsewhere in this form. When Condition No. 2 or 3 apply, KYTC shall resubmit this ROW Certification prior to construction contract Award. For all other federal-aid projects, this form shall be completed and retained in the KYTC project file.

Date: March 13, 2014

Project Name: Versailles Road Interchange
Letting Date: Jul 2014
Project #: 8145901D
County: Fayette
Item #: 07-0279.00
Federal #: NH2682(009)

Description of Project: Reconstruction of KY 4 / US 60 Interchange

Projects that require NO new or additional right-of-way acquisitions and/or relocations

☐ The proposed transportation improvement will be built within the existing rights-of -way and there are no properties to be acquired, individuals, families, and businesses ("relocatees") to be relocated, or improvements to be removed as a part of this project.

Projects that require new or additional right-of-way acquisitions and/or relocations

☐ Per 23 CFR 635.309, the KYTC hereby certify that all relocatees have been relocated to decent, safe, and sanitary housing or that KYTC has made available to relocatees adequate replacement housing in accordance with the provisions of the current FHWA directive(s) covering the administration of the Highway Relocation Assistance Program and that at least one of the following three conditions has been met. (Check those that apply.)

☐ **Condition 1.** All necessary rights-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. Fair market value has been paid or deposited with the court.

☐ **Condition 2.** Although all necessary rights-of-way have 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. Trial or appeal of 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. Fair market value has been paid or deposited with the court for most parcels. Fair market value for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract. (See note 1 below.)

Note 1: The KYTC shall re-submit a right-of-way certification form for this project prior to AWARD of **all** Federal-Aid construction contracts. Award must not to be made until after KYTC has obtained full legal possession and fair market value for all parcels has been paid or deposited with the court and FHWA has concurred in the re-submitted right-of-way certification.

Right-of-Way Certification Form

Revised 2/22/11

☐ **Condition 3.** The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. However, all remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. The KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary rights-of-way will not be fully acquired, and/or some occupants will not be relocated, and/or the fair market value 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. A full explanation and reason for this request, including identification of each such parcel and dates on which acquisitions, payments, and relocations will be completed, is attached to this certification form for FHWA concurrence. (See note 2.)

Note 2: The KYTC may request authorization on this basis only in unique and unusual circumstances. Proceeding to bid letting shall be the exception and never become the rule. In all cases, the KYTC shall make extraordinary efforts to expedite completion of the acquisition, payment for all affected parcels, and the relocation of all relocatees prior to AWARD of all Federal-Aid construction contracts or force account construction.

Approved: Robert Nunley — Printed Name
Bob Nunley by KMC — Signature — Right-of-Way Supervisor

Approved: Keith McDonald — Printed Name
K. McDonald 3/13/14 — Signature — KYTC, Director of ROW &Utilities

Approved: _____ Printed Name
No Signature Required as per FHWA - KYTC 2013 Stewardship Agreement — Signature — FHWA, ROW Officer (when applicable)

Right-of-Way Certification Form

Revised 2/22/11

Date: _____

Project Name: _____.
Project #: _____ County: _____
Item #: _____ Federal #: _____
Letting Date: _____

This project has _____ total number of parcels to be acquired, and _____ total number of individuals or families to be relocated, as well as _____ total number of businesses to be relocated.

_____ Parcels where acquired by a signed fee simple deed and fair market value has been paid

_____ Parcels have been acquired by IOJ through condemnation and fair market value has been deposited with the court

_____ Parcels have not been acquired at this time (*explain below for each parcel*)

_____ Parcels have been acquired or have a "right of entry" but fair market value has not been paid or has not been deposited with the court *(explain below for each parcel)*

_____ Relocatees have not been relocated from parcels ____, ____, ____, ____, ____, ____, and ____ *(explain below for each parcel)*

Parcel #	Name/Station	Explanation for delayed acquisition, delayed relocation, or delayed payment of fair market value	Proposed date of payment or of relocation

There are _____ billboards and/or _____ cemeteries involved on this project.

There are _____ water or monitoring wells on parcels ____, ____, ____, ____, and ____. All have been acquired and are the responsibility of the project contractor to close/cap.

Form Effective Date: April 1, 2006
Last Revised: February 22, 2011

Right-of-Way Certification Form

Revised 2/22/11

☑ Federal Funded ☐ Original

☐ State Funded ☐ Re-Certification

This form must be completed and submitted to FHWA with the PS&E package for federal-aid funded Interstate, Appalachia, and Major projects. This form shall also be submitted to FHWA for all federal-aid projects that fall under Conditions No. 2 or 3 outlined elsewhere in this form. When Condition No. 2 or 3 apply, KYTC shall resubmit this ROW Certification prior to construction contract Award. For all other federal-aid projects, this form shall be completed and retained in the KYTC project file.

Date: October 15, 2015

Project Name: NEW CIRCLE ROAD

Letting Date: November 2014

Project #: FD04 C034 8534101R

County: FAYETTE

Item #: 7-113.00

Federal #:

Description of Project: WIDEN NEW CIRCLE ROAD

Projects that require NO new or additional right-of-way acquisitions and/or relocations

☐ The proposed transportation improvement will be built within the existing rights-of -way and there are no properties to be acquired, individuals, families, and businesses ("relocatees") to be relocated, or improvements to be removed as a part of this project.

Projects that require new or additional right-of-way acquisitions and/or relocations

☐ Per 23 CFR 635.309, the KYTC hereby certify that all relocatees have been relocated to decent, safe, and sanitary housing or that KYTC has made available to relocatees adequate replacement housing in accordance with the provisions of the current FHWA directive(s) covering the administration of the Highway Relocation Assistance Program and that at least one of the following three conditions has been met. (Check those that apply.)

☐ **Condition 1.** All necessary rights-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. Fair market value has been paid or deposited with the court.

☐ **Condition 2.** Although all necessary rights-of-way have 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. Trial or appeal of 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. Fair market value has been paid or deposited with the court for most parcels. Fair market value for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract. (See note 1 below.)

Note 1: The KYTC shall re-submit a right-of-way certification form for this project prior to AWARD of all Federal-Aid construction contracts. Award must not to be made until after KYTC has obtained full legal possession and fair market value for all parcels has been paid or deposited with the court and FHWA has concurred in the re-submitted right-of-way certification.

Right-of-Way Certification Form

Revised 2/22/11

☐ **Condition 3.** The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. However, all remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. The KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary rights-of-way will not be fully acquired, and/or some occupants will not be relocated, and/or the fair market value 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. A full explanation and reason for this request, including identification of each such parcel and dates on which acquisitions, payments, and relocations will be completed, is attached to this certification form for FHWA concurrence. (See note 2.)

Note 2: The KYTC may request authorization on this basis only in unique and unusual circumstances. Proceeding to bid letting shall be the exception and never become the rule. In all cases, the KYTC shall make extraordinary efforts to expedite completion of the acquisition, payment for all affected parcels, and the relocation of all relocatees prior to AWARD of all Federal-Aid construction contracts or force account construction.

Approved: REX ALEXANDER — Printed Name; Rex Alexander — Signature; Right-of-Way Supervisor

Approved: D M Lay — Printed Name; D M Lay — Signature; 31 OCT 2014; KYTC, Director of ROW &Utilities

No Signature Required
as per FHWA - KYTC
2013 Stewardship Agreement

Approved: _____ Printed Name; _____ Signature; FHWA, ROW Officer (when applicable)

Right-of-Way Certification Form

Revised 2/22/11

Date: October

Project Name: New Circle Road
Project #: FD04 C034 8534101R
Item #: 7-113.00
Letting Date: November 2014

County: Fayette
Federal #: _____

This project has 13 total number of parcels to be acquired, and 0 total number of individuals or families to be relocated, as well as 0 total number of businesses to be relocated.

3 Parcels where acquired by a signed fee simple deed and fair market value has been paid

0 Parcels have been acquired by IOJ through condemnation and fair market value has been deposited with the court

5 Parcels have not been acquired at this time (*explain below for each parcel*)

5 Parcels have been acquired or have a "right of entry" but fair market value has not been paid or has not been deposited with the court *(explain below for each parcel)*

____ Relocatees have not been relocated from parcels ____, ____, ____, ____, ____, ____, and ____ *(explain below for each parcel)*

Parcel #	Name/Station	Explanation for delayed acquisition, delayed relocation, or delayed payment of fair market value	Proposed date of payment or of relocation
4	Morrison Properties, LLC	Have been signed. Plan revision, revised offer to be made and acquired	
5	L&M Asphalt Partners	Have been signed. Plan revision; revised offer to be made and acquired	
8	Newton Realty Co., Inc.	Final meeting w/ owners 10/21. Should be in agreement.	
9	Conley Properties, LLC	Plan revision. Appraisal revision. Revised offer to be made.	
11	Clark Material Handling Co.	Plan revision/ No description impact. Owner should sign.	
13, 14, 15, 16, 17		Owner signed. Checks to be delivered.	
30 & 31	RJ Corman; CSX	Railroads being acquired by C.O. Rails	

There are 0 billboards and/or 0 cemeteries involved on this project.

There are 0 water or monitoring wells on parcels ____, ____, ____, ____, and ____. All have been acquired and are the responsibility of the project contractor to close/cap.

Form Effective Date: April 1, 2006
Last Revised: February 22, 2011

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

FAYETTE COUNTY
FD04 034 85341
NEW CIRCLE ROAD (KY-4)
REHAB AND WIDENING FROM VERSAILLES ROAD (US-60) TO NEAR LEESTOWN ROAD (KY-421)
ITEM NUMBER 7-113.01

GENERAL PROJECT NOTE ON UTILITY PROTECTION

Utility relocations have not yet begun on this project. It is unknown if the highway contractor will have productive work available through the project, that is for the highway contractor to determine. The highway contractor should not anticipate that any utility relocation work will be complete before the letting, or before the award of the contract; consequently, the highway contractor should prepare the construction schedule accordingly.

Kentucky Utilities Company – Transmission has determined that the project will not necessitate the relocation of their facilities; consequently, there will be NO relocation of the transmission facilities. However, the company has stated that the reconstruction of the bridges, specifically those over the railroads, and other construction occurring beneath their facilities will require the Cabinet's contractor to exercise additional diligence and caution. Therefore, in order to provide additional protection to both their facility and any personnel working in the area, they have established a twenty (20) foot clear zone around the conductor and neutral cables. The contractor is cautioned that this clear zone should not be breached in any manner, and should take this into account when determining construction methods and procedures. This note should be viewed as an addition to any other regularly employed safety measures, and is not intended to eliminate any safety measures.

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

Kentucky Utilities Company – Distribution – Power distribution crossings at approximate stations 238+00 and 305+05, in addition to locations adjacent to the corridor.

Kentucky Utilities Company – Transmission – Power transmission facilities located adjacent to the corridor.

Time-Warner Cable – cable television fiber optic facility crossings at approximate stations 238+00 and 305+25, in addition to locations adjacent to the corridor.

Kentucky American Water Company – water distribution crossing at approximate station 219+00 and 283+00, in addition to facility located adjacent to the southern right-of-way line from approximate station 283+00 to approximate station 289+00, and continuing adjacent to Duncan Machinery Drive and Ramp A. With facility also located adjacent to Laco Drive and Ramp D. The company also has 24-inch facility located adjacent to Alexandria Drive, crossing under New Circle Road at approximate station 249+50.

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

FAYETTE COUNTY
FD04 034 85341
NEW CIRCLE ROAD (KY-4)
REHAB AND WIDENING FROM VERSAILLES ROAD (US-60) TO NEAR LEESTOWN ROAD (KY-421)
ITEM NUMBER 7-113.01

Columbia Gas of Kentucky – gas distribution six-inch medium pressure line adjacent to Alexandria Drive, and crossing under New Circle Road at approximate station 249+50, a four-inch medium pressure line along the northeast side of Old Frankfort Pike (inside and outside of New Circle Road), a two-inch line along both Laco Drive and Duncan Machinery Drive, and a four-inch medium pressure crossing of New Circle Road, at approximate station 331+00.

Marathon Pipeline – petroleum products eight-inch high pressure crossing of New Circle Road, adjacent to the CSX / RJ Corman railroad facility, at approximate station 277+00

Lexington-Fayette Urban County Government (LFUCG) – sanitary sewer, both force main and gravity facilities. LFUCG has identified a gravity facility at approximate station 275+00, and multiple force main and gravity facilities along the CSX / RJ Corman railroad right-of-way at approximate station 317+50.

Windstream Communications – telecommunications fiber optic and copper facility crossings at approximate stations 238+00, 296+00, and 305+25, in addition to locations adjacent to the corridor.

Windstream / KDL – telecommunications fiber optic facility crossing at approximate station 296+00.

US Sprint – telecommunications fiber optic facility adjacent to the CSX / RJ Corman railroad facility, and crossing New Circle Road at approximate station 317+00.

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

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

It is not anticipated that any of the utility facilities will be relocated prior to the letting of this project.

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

Kentucky American Water Company – The company currently has an eight-inch watermain crossing at approximate station 219+50, which will be replaced with an eight-inch facility at approximate station

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

FAYETTE COUNTY
FD04 034 85341
NEW CIRCLE ROAD (KY-4)
REHAB AND WIDENING FROM VERSAILLES ROAD (US-60) TO NEAR LEESTOWN ROAD (KY-421)
ITEM NUMBER 7-113.01

218+00. A 24-inch facility adjacent to Alexandria Drive where no impact is anticipated. A 24-inch facility at approximate station 282+75, which will be replaced with a 24-inch facility at approximate station 283+25. Several hundred feet of 24-inch pipe located along Laco Drive, at approximate station 300+00, and several hundred feet along Duncan Machinery Drive and Ramp A, that will be relocated adjacent to the existing facility. The company has estimated approximately six months to complete their relocation work; however, a delay in easement acquisition has caused a subsequent delay in the start of their relocation. Consequently, the company has been assigned a completion date of May 1, 2015.

Columbia Gas of Kentucky – gas distribution six-inch medium pressure line adjacent to Alexandria Drive, a four-inch medium pressure line along the northeast side of Old Frankfort Pike, a two-inch line along both Laco Drive and Duncan Machinery Drive, and a four-inch medium pressure crossing of New Circle Road, at approximate station 331+00. The company has estimated an approximate completion date of December 31, 2014.

Windstream Communications – The company has identified a pole line west of the Old Frankfort Pike interchange, at approximate station 296+00, which will require the installation of two poles, and the transfer of the existing aerial facility. The company anticipates that this work can be completed by December 31, 2014.

Windstream / KDL – The company is currently attached to the poles owned by Windstream, at approximate station 296+00, which will be replaced. The company anticipates that their facility will be transferred approximately 30 days after the poles have been made available to them.

US Sprint – The company has a facility currently crossing under New Circle Road along the CSX / RJ Corman railroad facility located east of Old Frankfort Pike, at approximate station 317+50. An agreement has been prepared for the company to adjust and/or install additional protection to the facility; however, the agreement has yet to be executed, and the company cannot begin until that time. The company has estimated a minimal amount of time to complete their work; consequently, the company has been assigned a completion date of January 31, 2015.

The Department will consider submission of a bid as the Contractor's agreement to not make any claims for additional compensation due to delays or other conditions created by the operations of the utility

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

FAYETTE COUNTY
FD04 034 85341
NEW CIRCLE ROAD (KY-4)
REHAB AND WIDENING FROM VERSAILLES ROAD (US-60) TO NEAR LEESTOWN ROAD (KY-421)
ITEM NUMBER 7-113.01

companies. Working days will not be charged for those days on which work on the utility companies facilities is delayed, as provided in the current edition of the KY Standard Specifications for Road and Bridge Construction. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to the project, the KYTC Resident Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and his decision shall be final and binding upon the Contractor. .

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

The sanitary sewer facilities of Lexington-Fayette Urban County Government have been included as a part of the Cabinet's project proposal, and are to be relocated and/or adjusted by the Cabinet's highway contractor, according to the plans provided.

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

FAYETTE COUNTY
FD04 034 85341
NEW CIRCLE ROAD (KY-4)
REHAB AND WIDENING FROM VERSAILLES ROAD (US-60) TO NEAR LEESTOWN ROAD (KY-421)
ITEM NUMBER 7-113.01

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

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

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

BEFORE YOU DIG

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

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

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

FAYETTE COUNTY, STP 2682 (013)
FD52 034 81459
NEW CIRCLE ROAD (KY-4)
RECONSTRUCTION OF THE KY-47 / US-60 INTERCHANGE
SIX YEAR PLAN ITEM NUMBER 7-279.00

GENERAL PROJECT NOTE ON UTILITY PROTECTION

Utility relocations have not yet begun on this project. The full extent of the necessary Utility relocation work will not be known until the Utility Companies have submitted their relocation plan and estimate. It is unknown if the highway contractor will have productive work available through the project, that is for the highway contractor to determine. The highway contractor should not anticipate that any utility relocation work will be complete before the letting, or before the award of the contract; consequently, the highway contractor should prepare the construction schedule accordingly.

Kentucky Utilities Company – Transmissions. The company has stated that construction occurring beneath their facilities will require the Cabinet's contractor to exercise additional diligence and caution. Therefore, in order to provide additional protection to both their facility and any personnel working in the area, they have established a twenty (20) foot clear zone around the conductor and neutral cables. The contractor is cautioned that this clear zone should not be breached in any manner, and should take this into account when determining construction methods and procedures. This note should be viewed as an addition to any other regularly employed safety measures, and is not intended to eliminate any safety measures.

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

Kentucky Utilities Company – Transmission. Located through the project north of Versailles Road (US-60)

Kentucky American Water Company. Located north of Versailles Road (US-60), and extending north along the west side of New Circle Road (KY-4), and outside of right-of-way, to approximate station 27+00, of Ramp G, where it crosses New Circle Road to the east side, then extends south, outside of right-of-way, to the right-of-way of Versailles Road, where it again proceeds east.

Lexington-Fayette Urban County Government. The LFUCG currently has a six-inch sanitary sewer force main located north of Versailles Road, extending through the project; and, a four-inch sanitary sewer force main located south of Versailles Road, extending through the project.

Windstream Communications. The company currently has underground copper and fiber optic cables extending through the project, along the south side of Versailles Road.

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

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

FAYETTE COUNTY, STP 2682 (013)
FD52 034 81459
NEW CIRCLE ROAD (KY-4)
RECONSTRUCTION OF THE KY-47 / US-60 INTERCHANGE
SIX YEAR PLAN ITEM NUMBER 7-279.00

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

It is not anticipated that any utility facilities will be relocated prior to the letting of the project.

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

Kentucky Utilities Company – Transmission. Located through the project north of Versailles Road (US-60). The company's existing structure located at approximate station 52+50, will be replaced with a 115-foot steel structure, the company's existing structure at approximate station 60+50, will be "topped" and left for the use of Kentucky Utilities Company – Distribution, and the existing structure at approximate station 63+00, will be replaced with a 70-foot steel self-supporting structure. The delivery of the company's steel structures has been delayed until January 2015, and the company has estimated that the relocation work will be completed by April 1, 2015; however, this will also depend on allowable/scheduled outages of the transmission facility, and weather in the area, and through-out the region which may cause unexpected delays.

Kentucky American Water Company. The company has an eight-inch facility located north of Versailles Road (US-60), and extending north along the west side of New Circle Road (KY-4), and outside of right-of-way, to approximate station 27+00, of Ramp G, where it crosses New Circle Road to the east side, then extends south, outside of right-of-way, to the right-of-way of Versailles Road, where it again proceeds east. This crossing will be replaced approximately 100 feet south of the current location, as a part of the relocation work associated with the New Circle Road widening project (7-113.01). The company has determined that this project will not impact their facility, and will not require relocation as a part of this project.

Lexington-Fayette Urban County Government. The LFUCG currently has a six-inch sanitary sewer force main located north of Versailles Road, extending through the project; and, a four-inch sanitary sewer force main located south of Versailles Road, extending through the project. The relocation of the LFUCG force mains have been included as a part of the Cabinet's highway project proposal, and is to be accomplished by the Cabinet's contractor, in coordination with the Lexington-Fayette Urban County Government Sanitary Sewer Division.

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

FAYETTE COUNTY, STP 2682 (013)
FD52 034 81459
NEW CIRCLE ROAD (KY-4)
RECONSTRUCTION OF THE KY-47 / US-60 INTERCHANGE
SIX YEAR PLAN ITEM NUMBER 7-279.00

Windstream Communications. The company currently has underground copper and fiber optic cables extending through the project, along the south side of Versailles Road. The company has not yet completed their relocation plans; however, during coordination discussions the company has indicated their intent to relocate to a crossing of New Circle Road south of Versailles; basically, installing parallel to the proposed LFUCG force main. Also, installing south along the right-of-way for Ramp F-1, crossing New Circle Road to the east side, then utilizing existing utility easement to extend the facility north to reconnect with the existing facility along the south side of Versailles Road. The company has estimated that their relocation work will be completed approximately June 1, 2015.

The Department will consider submission of a bid as the Contractor's agreement to not make any claims for additional compensation due to delays or other conditions created by the operations of the utility facilities. Working days will not be charged for those days on which work on (Utility Company(s) Name) facilities is delayed, as provided in the current edition of the KY Standard Specifications for Road and Bridge Construction. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to the project, the KYTC Resident Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and his decision shall be final and binding upon the Contractor. .

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

The six and four-inch sanitary sewer force main facilities of the Lexington-Fayette Urban County Government have been included as a part of the Cabinet's highway proposal, and will be relocated by the Cabinet's highway contractor, as contained in the design plans included with the Cabinet's proposal.

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

FAYETTE COUNTY, STP 2682 (013)
FD52 034 81459
NEW CIRCLE ROAD (KY-4)
RECONSTRUCTION OF THE KY-47 / US-60 INTERCHANGE
SIX YEAR PLAN ITEM NUMBER 7-279.00

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

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

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

BEFORE YOU DIG

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

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

N O T I C E

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NATIONWIDE PERMIT AUTHORIZATION
KENTUCKY DIVISION OF WATER 401 WQC

PROJECT: Fayette County, Item No. 7-113

The Section 404 activities for this project have been previously permitted under the authority of the Department of the Army Nationwide Permit No. 14 "Linear Transportation Crossings" as the project impacts are BELOW NOTIFICATION THRESHOLDS. Specifically all stream impacts are below 300', less than 0.10 acres and no special aquatic sites will be impacted.

This project involves work near and/or within Jurisdictional Waters of the United States as defined by the United States Army Corps of Engineers and therefore requires a Nationwide 14 General 404 Permit. The Division of Water certified this General Permit with several conditions (See attached). One that should be brought to your attention is regarding the use of heavy equipment in the stream channel. If there is need to cross the stream channel with heavy equipment or conduct work from within the stream channel a working platform or temporary crossing is authorized. This should be constructed with clean rock and sufficient pipe to allow stream flow to continue unimpeded.

In order for this authorization to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Approval in a conspicuous location at the project site for the duration of 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 Division of Environmental Analysis. If such changes necessitate further permitting then the contractor will be responsible for applying to the Army Corps of Engineers and the Kentucky Division of Water (KDOW). A copy of any request to the Corps of Engineers or the KDOW 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.

STEVEN L. BESHEAR
GOVERNOR

LEONARD K. PETERS
SECRETARY

ENERGY AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

General Certification--Nationwide Permit # 14
Linear Transportation Projects

This General Certification is issued March 19, 2012, 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 is not covered under this general water quality certification.

General Certification--Nationwide Permit # 14
Linear Transportation Projects
Page 2

5. For a single and complete linear transportation project, the cumulative length of impacts less than 300 linear feet of surface waters within each Hydrologic Unit Code (HUC) 14 watershed will not exceed 500 linear feet.

6. 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).

7. 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.

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

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

    - 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.

General Certification--Nationwide Permit # 14
Linear Transportation Projects
Page 2

- 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.

KENTUCKY REGIONAL GENERAL CONDITIONS

These regional conditions are in addition to, but do not supersede, the requirements in the Federal Register (Volume 77 No. 34 of February 21, 2012)

Notifications for all Nationwide Permits (NWPs) shall be in accordance with General Condition No. 31.

1. For activities that would result in a loss of Outstanding State or National Resource Waters (OSNRWs), Exceptional Waters (EWs), Coldwater Aquatic Habitat Waters (CAHs) and waters with Designated Critical Habitat (DCH) 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 for impacts to these waters.

   NWP 3 (Maintenance)
   NWP 7 (Outfall Structures and Associated Intake Structures)
   NWP 12 (Utility Line Activities)
   NWP 14 (Linear Transportation Projects)
   NWP 29 (Residential Developments)
   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 51 (Land-Based Renewable Energy Generation Facilities)
   NWP 52 (Water-Based Renewable Energy Generation Pilot Projects)

2. In addition to the notification and agency coordination requirements in the NWPs, for impacts greater than 0.25 acres in all "waters of the U.S." for the NWPs listed below, a PCN will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWPs:

   NWP 3 (Maintenance)
   NWP 7 (Outfall Structures and Associated Intake Structures)
   NWP 12 (Utility Line Activities)
   NWP 14 (Linear Transportation Projects)
   NWP 29 (Residential Developments)
   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 51 (Land-Based Renewable Energy Generation Facilities)
   NWP 52 (Water-Based Renewable Energy Generation Pilot Projects)

3. For activities in all "waters of the U.S." for the NWPs listed below, a PCN will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWPs:

   NWP 21 (Surface Coal Mining Activities)
   NWP 27 (Aquatic Habitat Restoration, Establishment & Enhancement Activities)
   NWP 49 (Coal Remining Activities)
   NWP 50 (Underground Coal Mining Activities)

4. Nationwide Permit No. 14 – Linear Transportation Projects.

   (a) Activities in Section 10 navigable waters will require a PCN to the Corps.

   (b) New public road alignments or realignments are limited to a permanent loss of 500 linear feet of intermittent or perennial stream length at each crossing. Public road crossings with permanent losses greater than 500 linear feet of intermittent or perennial stream associated with new alignments or realignments will be evaluated as an individual permit i.e., a Letter of Permission or as a Standard Individual Permit.

   (c) All linear transportation project crossings resulting in the permanent loss of greater than 300 linear feet of intermittent or perennial stream will require mitigation to compensate for impacts to the "waters of the U.S." The permanent loss of "waters of the U.S." includes the linear feet of water that is permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity and not restored to pre-construction contours and elevations after construction. 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 intermittent and perennial stream of all "waters of the U.S.". (See General Condition 31 and the definition of "loss of waters of the United States" in the Nationwide Permits for further information.)

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/
Designated Critical Habitat (DCH) under the Endangered Species Act is determined within the Commonwealth of Kentucky by the U.S. Fish and Wildlife Service. The current list of Kentucky's Threatened, Endangered, and Federal Candidate Species can be found at the following link: http://www.fws.gov/frankfort/EndangeredSpecies.html

Information on Pre-Construction Notification (PCN) can be found at NWP General Condition No. 31 (Federal Register, Volume 77, No. 34, Tuesday, February 21, 2012, pp 10286-10288).
Mitigation includes activities that avoid, minimize, and compensate for impacts.

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
200 Fair Oaks Lane, 4th 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 of Natural Resources
Division of Mine Permits
#2 Hudson Hollow
Frankfort, Kentucky 40601

US Army Corps of Engineers

Nationwide Permit
No. 14, Linear Transportation Projects

Activities required for 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.

a. 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.

b. 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.

c. This NWP also authorizes temporary structures, fills, and work 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.

d. 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 31.) (Sections 10 and 404)

Note: 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).

Valid from March 19, 2012 through March 18, 2017

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR §§ 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR § 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car

bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River

designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.noaa.gov/fisheries.html respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must

still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.

(2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist

of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with

any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____
(Transferee)

_____
(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

31. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; 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. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative

description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments.

The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

D. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (a) that the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

E. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

STEVEN L. BESHEAR
GOVERNOR

TOURISM, ARTS AND HERITAGE CABINET
KENTUCKY HERITAGE COUNCIL

MARCHETA SPARROW
SECRETARY

THE STATE HISTORIC PRESERVATION OFFICE
300 WASHINGTON STREET
FRANKFORT, KENTUCKY 40601
PHONE (502) 564-7005
FAX (502) 564-5820
www.heritage.ky.gov

LINDY CASEBIER
ACTING EXECUTIVE DIRECTOR AND
STATE HISTORIC PRESERVATION OFFICER

March 8, 2013

Mr. David Waldner, P. E., Director
Division of Environmental Analysis
Kentucky Transportation Cabinet
200 Mero Street
Frankfort, KY 40622

Re: ***An Archaeological Survey of the Proposed New Circle Road (KY 4) Rehabilitation and Widening from Versailles Road Interchange to Near the Georgetown Road Interchange in Fayette County, Kentucky (KYTC Item No. 7-113.00)*** **by Gavin R. Davies, of Cultural Resource Analysts, Inc. Lexington, KY**

Mr. Waldner,

This office has received the above mentioned Phase I report for review. The report documented two previously unrecorded archaeological sites (15FA360 and 15FA361) and a single isolated find. The author recommends no further archaeological investigation in the project area due to low artifact densities, a lack of depositional integrity, and the subsequent lack of research potential. I concur with the author's recommendations.

If you have any questions, please do not hesitate to contact Phillip Johnson of my staff at (502) 564-7005 ext 122.

Sincerely,

Lindy Casebier, Acting Executive Director
Kentucky Heritage Council and
State Historic Preservation Officer

LC:prj

Cc: Dr. George Crothers (UK-OSA)
Dan Davis (KYTC-DEA)
Charles M. Niquette (CRAI)

Version 1.0
June 14, 2011

37907

KYTC Historic Architectural Investigation Form

KYTC Item No: 7-113.00 County: Fayette
Route: KY 4 Project Description: Widening of New Circle from Versailles Rd. to Georgetown Rd.

Project Type listed in Attachment 1 (in Section 106 Programmatic Agreement)?

☐ Yes

☑ No (Continue)

Project Type listed in Attachment 2 (in Section 106 Handbook)?

☑ Yes (List project activity types) 9

☐ No (This project is not considered a small scale project under the Section 106 Programmatic Agreement. This checklist cannot be used. Process with full baseline or joint memorandum)

☐ No (However, SHPO has agreed that this project may be documented using the Historic Architectural Investigation Form)

Project Area of Potential Effect is defined as:

☐ Within 150 feet of project centerline (Small Scale Project - within existing corridor)
☐ Within view shed of project (Discuss):
☑ Other (Discuss): APE defined in CH baseline (CRAI 2012)

Version 1.0
June 14, 2011

Are there Historical Resources within the project APE (per KHC database)?

☑ Yes

☐ No

☐ N/A (Explain):

Are there Historical Resources (50 years old or older) identified within the project APE?

☑ Yes

☐ No

Date of Field Investigation: 2012

Investigator Name(s): CRAI

Discuss Basis for finding (Historic Mapping, PVA, Building Permit, Date of Construction, Deed/Title, etc.): **Field survey, previous research**

NRHP listed or potentially eligible sites/districts (> 50 years old) are:

☑ Present within the APE (Continue)

Sections below to be completed by KYTC Architectural Historian

---

Discuss eligibility determinations (criteria, integrity):
Eligibility determinations in CH baseline

Determination of Effect (when eligible sites have been identified)**:**

☐ No Historic Properties Affected

☑ No Adverse Effect (May result in Section 4(f) *De minimis* finding – Document appropriately)

☐ Adverse Effect

Version 1.0
June 14, 2011

Discuss No Effect/No Adverse Effect Determination:
Effect determination listed in CH baseline addendum (attached)

☐ No Historic Properties
☑ No Adverse Effect to Historic Properties

As Determined By:

	11/27/12		1-14-12
KYTC HISTORIAN	**Date**	**SHPO Representative**	**Date**

Attachments:
☐ Map Showing APE and identified Historic Resources
☐ Individual Site Maps
☐ Photographs
☐ Project Plans
☑ KHC Site Survey Forms
☑ Other (Describe): 2012 CRAI report and effects addendum
☑ Copy EPM
☑ Copy DEC
☑ Copy DEA Architectural Historian
☑ Copy FHWA (w/De minimis Memo if appropriate)
☑ Copy SHPO

MYSO Habitat Acreage Cost Calculator for Use of the Programmatic IBCMOA v1.2

USFWS KFO-determined price per acre: $ 3,150.00

TOTAL PROGRAMMATIC IBCMOA COST (Figure is an estimate. Final cost may vary due to future changes in acreage price.) $ -

Project Number: 7-113 **County:** FAYETTE **Road:** KY-4 New Circle Road

Table from September 6th, 2012 Indiana bat Programmatic Agreement	# of Acres (lower constant)	# of Acres (higher constant)	NOV 15 - MAR 31 all habitats unoccupied	Project Cost Per Acreage Type between NOV 15 - MAR 31	# of Acres (lower constant)	# of Acres (higher constant)	APR 1 - AUG 15 swarming unoccupied* potential occupied maternity occupied** non-maternity occupied	Project Cost Per Acreage Type between APR 1 - AUG 15 if using higher constant*	# of Acres (lower constant)	# of Acres (higher constant)	AUG 16 - OCT 14 Swarming occupied potential occupied maternity unoccupied non-maternity unoccupied	Project Cost Per Acreage Type between AUG 16 - OCT 14	# of Acres (lower constant)	# of Acres (higher constant)	OCT 15 - NOV 14 swarming occupied potential unoccupied maternity unoccupied non-maternity unoccupied	Project Cost Per Acreage Type between AUG 16 - OCT 14
Known maternity AND P1 & P2 swarming			2.5	$ -			3.0(4.0)*	$ -			3.5	$ -			3.5	$ -
Known maternity AND P3 & P4 swarming			2.0	$ -			2.5(3.5)*	$ -			3.0	$ -			3.0	$ -
Known non-maternity AND P1 & P2 swarming			2.0	$ -			2.5(3.5)*	$ -			3.0	$ -			3.0	$ -
Known non-maternity AND P3 & P4 swarming			1.5	$ -			2.0(3.0)*	$ -			2.5	$ -			2.5	$ -
P1 & P2 swarming			1.5	$ -			2.0(3.0)*	$ -			2.5	$ -			2.5	$ -
P3 & P4 swarming			1.0	$ -			1.5(2.5)*	$ -			2.0	$ -			2.0	$ -
Known maternity			1.5	$ -			2.0**	$ -			1.5	$ -			1.5	$ -
Known non-maternity			1.0	$ -			1.5	$ -			1.0	$ -			1.0	$ -
Potential	3.34		0.0 (0.5)****	$ -			0.5 (1.0)***	$ -			0.5 (1.0)***	$ -			0.0 (0.5)****	$ -
SUBTOTALS	3.34	0.00		$ -	0.00	0.00		$ -	0.00	0.00		$ -	0.00	0.00		$ -

* Spring emergence occurs close to the hibernaculum entrances in early spring with females emerging in early-to-mid April and males emerging between late April-early May. Swarming habitat within one mile of P1 & P2 hibernaculum entrances and within 0.5 miles of P3 & P4 hibernaculum entrances will be considered occupied between April 1 and May 14. Projects within these areas require project-specific evaluation bu the USFWS and may require additional mitigation (see page 7 in the guidance).

** Projects within known maternity habitat that occur from June 1 through July 31 require project-specific evaluation by USFWS (see page 7 in the guidance).

***Projects that occur entirely within potential areas and are determined to be along existing alignment will mitigate with a multiplier of 0.5 if the impacts occur between April 1 and October 14.

****Projects that occur within potential areas, regardless if they are determined to be existing or new alignment, will not be required to mitigate for impacts if the clearing of habitat occurs between October 15-March 31.

Individual Trees converted to acreage*****

# of trees	Use this acreage

*****NOTE. Individual trees may only be used for projects that contain less than 20 trees which are isolated or widely spaced. Standard mapping requirements still apply.

Comments: KYTC proposes to clear 3.34 acres of potential habitat along an existing road during the time when it is unoccupied (Oct 15-March 31). No impacts to winter habitat.

The amount listed above has been determined in accordance with the Programmatic Biological Opinion issued by the US Fish and Wildlife Service September 6, 2012, and any subsequent amendments thereto.

DEA Biologist	Signature	Date	EA TS Date
Andrew Logsdon		10/15/20144	October 15, 2014

As Project Manager, I understand that this authorization for use of the programmatic IBCMOA represents an irretrievable commitment for the referenced project. Furthermore, I acknowledge that funds are available for payment of this expense.

Project Manager	Signature	Date
Joshua Samples	Joshua Samples	10/16/2014

TOTAL ACRES: 3.34

Aerial map showing project footprint, habitat acreage, 1 km buffer & 5 km buffer, and coordinates MUST be attached to this form. Multiple maps may be necessary.

Kentucky Transportation Cabinet

Highway District 7

And

_____(2), Construction

Kentucky Pollutant Discharge Elimination System Permit KYR10 Best Management Practices (BMP) plan

Groundwater protection plan

For Highway Construction Activities

For

REHAB/WIDENING OF KY-4 (NEW CIRCLE ROAD) FROM VERSAILLES ROAD TO LEESTOWN ROAD

Project: PCN ## -

Project information

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

1. Owner – Kentucky Transportation Cabinet, District 7

2. Resident Engineer: (2)

3. Contractor name: (2)
   Address: (2)

   Phone number: (2)
   Contact: (2)
   Contractors agent responsible for compliance with the KPDES permit requirements (3):

4. Project Control Number (2)

5. Route (Address): West New Circle Road, Lexington, KY 40510

6. Latitude/Longitude (project mid-point): 38/04/15, 84/31/52

7. County (project mid-point): FAYETTE

8. Project start date (date work will begin): (2)

9. Projected completion date: (2)

A. Site description:

1. Nature of Construction Activity (from letting project description): REHAB AND WIDENING OF NEW CIRCLE ROAD FROM VERSAILLES ROAD TO LEESTOWN ROAD

2. Order of major soil disturbing activities (2) and (3)

3. Projected volume of material to be moved: 241,072 CY

4. Estimate of total project area (acres): 93.3

5. Estimate of area to be disturbed (acres): 83.3

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 (2)

8. Data describing existing discharge water quality (if any) (2)

9. Receiving water name: Wolf Run Creek

10. TMDLs and Pollutants of Concern in Receiving Waters: (1DEA)

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)

B. Sediment and Erosion Control Measures:

1. 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.

2. 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 BMP’s 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. <u>All DDA’s will have adequate BMP’s in place before being disturbed.</u>

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

   - Construction Access – This is the first land-disturbing activity. As soon as construction begins, bare areas will be stabilized with gravel and temporary mulch and/or vegetation.
   - 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.

- Clearing and Grubbing – The following BMP's will be considered and used where appropriate.
  - Leaving areas undisturbed when possible.
  - Silt basins to provide silt volume for large areas.
  - Silt Traps Type A for small areas.
  - Silt Traps Type C in front of existing and drop inlets which are to be saved
  - Diversion ditches to catch sheet runoff and carry it to basins or traps or to divert it around areas to be disturbed.
  - Brush and/or other barriers to slow and/or divert runoff.
  - Silt fences to catch sheet runoff on short slopes. For longer slopes, multiple rows of silt fence may be considered.
  - Temporary Mulch for areas which are not feasible for the fore mentioned types of protections.
  - Non-standard or innovative methods.
- Cut & Fill and placement of drainage structures - The BMP Plan will be modified to show additional BMP's such as:
  - Silt Traps Type B in ditches and/or drainways as they are completed
  - Silt Traps Type C in front of pipes after they are placed
  - Channel Lining
  - Erosion Control Blanket
  - Temporary mulch and/or seeding for areas where construction activities will be ceased for 21 days or more.
  - Non-standard or innovative methods
- Profile and X-Section in place – The BMP Plan will be modified to show elimination of BMP's which had to be removed and the addition of new BMP's as the roadway was shaped. Probably changes include:
  - 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.
  - Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
  - Additional Channel Lining and/or Erosion Control Blanket.
  - Temporary Mulch for areas where Permanent Seeding and Protection cannot be done within 21 days.
  - Special BMP's such as Karst Policy
- Finish Work (Paving, Seeding, Protect, etc.) – A final BMP Plan will result from modifications during this phase of construction. Probably changes include:
  - Removal of Silt Traps Type B from ditches and drainways if they are protected with other BMP's which are sufficient to

control erosion, i.e. Erosion Control Blanket or Permanent Seeding and Protection on moderate grades.

- Permanent Seeding and Protection
- Placing Sod
- Planting trees and/or shrubs where they are included in the project

➢ BMP's including Storm Water Management Devices such as velocity dissipation devices and Karst policy BMP's to be installed during construction to control the pollutants in storm water discharges that will occur after construction has been completed are : N/A

C. Other Control Measures

1. 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 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.

➢ **Good Housekeeping:**

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

- An effort will be made to store only enough product required to do the job
- 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
- Products will be kept in their original containers with the original manufacturer's label
- Substances will not be mixed with one another unless recommended by the manufacturer
- Whenever possible, all of the product will be used up before disposing of the container
- Manufacturers' recommendations for proper use and disposal will be followed
- The site contractor will inspect daily to ensure proper use and disposal of materials onsite

➢ **Hazardous Products:**

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

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

The following product-specific practices will be followed onsite:

➢ **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.

- **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.

- **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.

- **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

- **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**:**

- 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.
- 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.
- All spills will be cleaned up immediately after discovery.

- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contract with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.
- The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
- Spills of products will be cleaned up promptly. Wastes from spill clean up will be disposed in accordance with appropriate regulations.

D. 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.

E. Maintenance

1. 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 weekly and post rain event inspections with action being taken by the contractor to correct deficiencies.

- 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. The project manager shall identify any BMPs that will be for the purpose of post construction storm water management with specific guidance for any non-routine maintenance.

F. Inspections

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

- All erosion prevention and sediment control measures will be inspected at least once each week and following any rain of one-half inch or more.
- Inspections will be conducted by individuals that have received KyTC Grade Level II training or other qualification as prescribed by the cabinet that includes instruction concerning sediment and erosion control.
- Inspection reports will be written, signed, dated, and kept on file.
- Areas at final grade will be seeded and mulched within 14 days.
- Areas that are not at final grade where construction has ceased for a period of 21 days or longer and soil stock piles shall receive temporary mulch no later than 14 days from the last construction activity in that area.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of being reported.
- Built-up sediment will be removed from behind the silt fence before it has reached halfway up the height of the fence.
- Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
- Sediment basins will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 70 percent of the design capacity and at the end of the job.
- 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.
- 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.
- 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.

G. 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:

- Water from water line flushings.

- Water form cleaning concrete trucks and equipment.
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
- 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.

H. Groundwater Protection Plan (3)

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

- Contractors statement: (3)

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

_____ 2. (e) land treatment or land disposal of a pollutant;

_____ 2. (f) Storing, …, or related handling of hazardous waste, solid waste or special waste, …, in 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);

_____ 2. (g) …. 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;

_____ 2. (j) Storing or related handling of road oils, dust suppressants, …., at a central location;

_____ 2. (k) 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);

_____ 2. (m) 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

KyTC BMP Plan for Project PCN ## - ####

_____ 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 C. 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) Areas of the project and groundwater plan activities will be inspected as part of the weekly sediment and erosion control inspections
(g) Certification (see signature page.)

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.

Resident Engineer and Contractor Certification:

(2) Resident Engineer signature

Signed _____title_____, _____
Typed or printed name[2] signature

(3) Signed _____title_____, _____
Typed or printed name[1] 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, 14 Reilly Road, Frankfort Kentucky 40601. Reference the Project Control Number (PCN) 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, 14 Reilly Road, Frankfort Kentucky 40601 Reference the Project Control Number (PCN) 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:
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 _____title_____, _____
Typed or printed name[1] signature

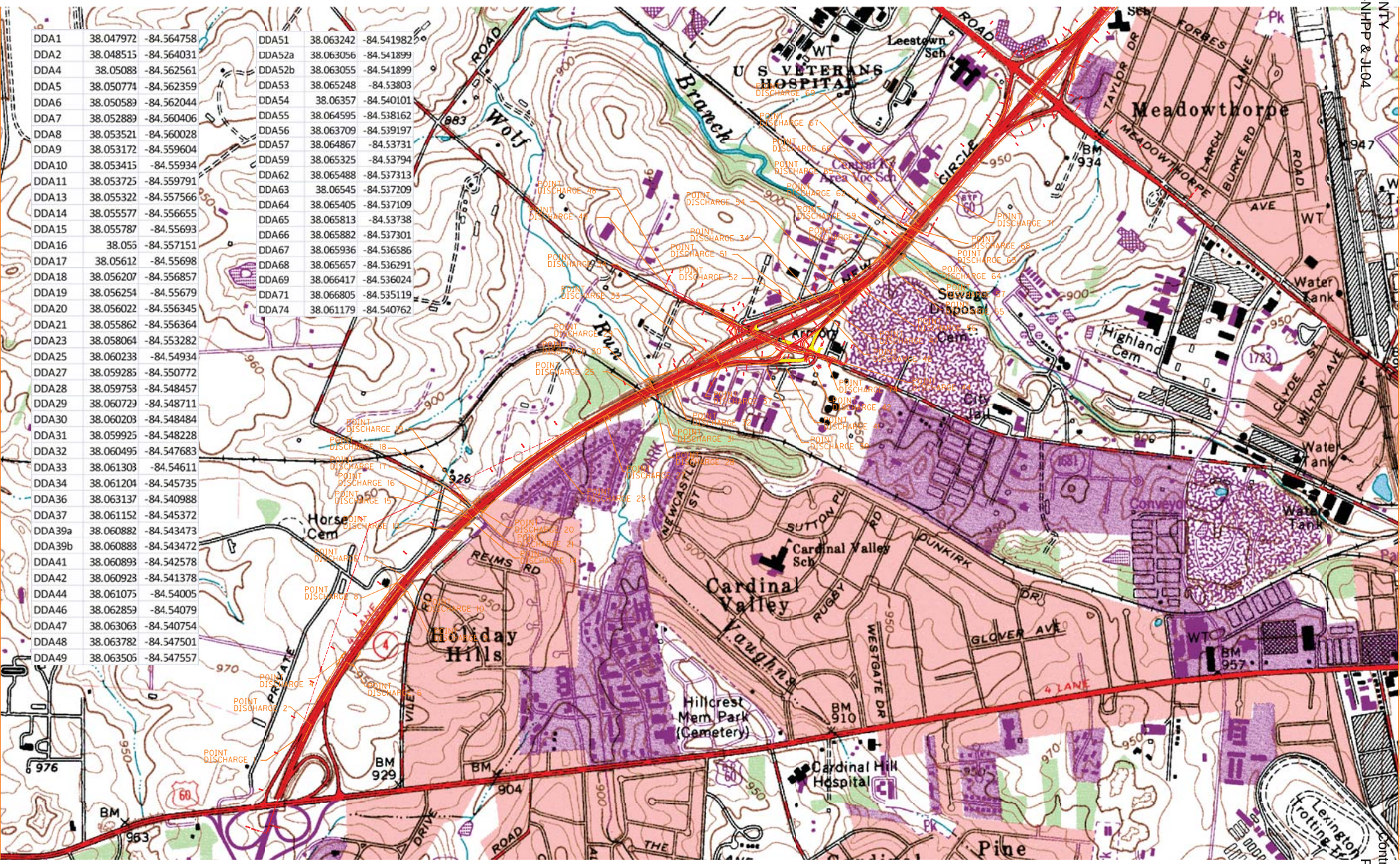
1. Sub Contractor Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.

Exhibit #2

New Circle Rd Widening

Fayette County

Transaction ID : 4fc74fc0-ec13-41ab-a448-387db4e66755



DDA1	38.047972	-84.564758
DDA2	38.048515	-84.564031
DDA4	38.05088	-84.562561
DDA5	38.050774	-84.562359
DDA6	38.050589	-84.562044
DDA7	38.052889	-84.560406
DDA8	38.053521	-84.560028
DDA9	38.053172	-84.559604
DDA10	38.053415	-84.55934
DDA11	38.053725	-84.559791
DDA13	38.055322	-84.557566
DDA14	38.055577	-84.556655
DDA15	38.055787	-84.55693
DDA16	38.055	-84.557151
DDA17	38.05612	-84.55698
DDA18	38.056207	-84.556857
DDA19	38.056254	-84.55679
DDA20	38.056022	-84.556345
DDA21	38.055862	-84.556364
DDA23	38.058064	-84.553282
DDA25	38.060238	-84.54934
DDA27	38.059285	-84.550772
DDA28	38.059753	-84.548457
DDA29	38.060729	-84.548711
DDA30	38.060203	-84.548484
DDA31	38.059925	-84.548228
DDA32	38.060495	-84.547683
DDA33	38.061303	-84.54611
DDA34	38.061204	-84.545735
DDA36	38.063137	-84.540988
DDA37	38.061152	-84.545372
DDA39a	38.060882	-84.543473
DDA39b	38.060888	-84.543472
DDA41	38.060893	-84.542578
DDA42	38.060923	-84.541378
DDA44	38.061075	-84.54005
DDA46	38.062859	-84.54079
DDA47	38.063063	-84.540754
DDA48	38.063782	-84.547501
DDA49	38.063505	-84.547557
DDA51	38.063242	-84.541982
DDA52a	38.063056	-84.541899
DDA52b	38.063055	-84.541899
DDA53	38.065248	-84.53803
DDA54	38.06357	-84.540101
DDA55	38.064595	-84.538162
DDA56	38.063709	-84.539197
DDA57	38.064867	-84.53731
DDA59	38.065325	-84.53794
DDA62	38.065488	-84.537313
DDA63	38.06545	-84.537209
DDA64	38.065405	-84.537109
DDA65	38.065813	-84.53738
DDA66	38.065882	-84.537301
DDA67	38.065936	-84.536586
DDA68	38.065657	-84.536291
DDA69	38.066417	-84.536024
DDA71	38.066805	-84.535119
DDA74	38.061179	-84.540762

Kentucky Transportation Cabinet

Highway District 7

And

_____(2), Construction

Kentucky Pollutant Discharge Elimination System Permit KYR10 Best Management Practices (BMP) plan

Groundwater protection plan

For Highway Construction Activities

For

RECONSTRUCTION OF KY-4 (NEW CIRCLE ROAD)/US-60 (VERSAILLES ROAD) INTERCHANGE

Project: PCN ## -

Project information

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

1. Owner – Kentucky Transportation Cabinet, District 7

2. Resident Engineer: (2)

3. Contractor name: (2)
   Address: (2)

   Phone number: (2)
   Contact: (2)
   Contractors agent responsible for compliance with the KPDES permit requirements (3):

4. Project Control Number (2)

5. Route (Address): West New Circle Road, Lexington, KY 40510

6. Latitude/Longitude (project mid-point): 38/02/44, 84/33/57

7. County (project mid-point): FAYETTE

8. Project start date (date work will begin): (2)

9. Projected completion date: (2)

A. Site description:

1. Nature of Construction Activity (from letting project description): Reconstruction KY 4/US 60 interchange

2. Order of major soil disturbing activities (2) and (3)

3. Projected volume of material to be moved: 70,502 CY

4. Estimate of total project area (acres): 58.9

5. Estimate of area to be disturbed (acres): 30

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 (2)

8. Data describing existing discharge water quality (if any) (2)

9. Receiving water name: Wolf Run Creek

10. TMDLs and Pollutants of Concern in Receiving Waters: (1DEA)

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)

B. Sediment and Erosion Control Measures:

1. 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.

2. 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 BMP’s 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. <u>All DDA’s will have adequate BMP’s in place before being disturbed.</u>

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

   - Construction Access – This is the first land-disturbing activity. As soon as construction begins, bare areas will be stabilized with gravel and temporary mulch and/or vegetation.
   - 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.

- Clearing and Grubbing – The following BMP's will be considered and used where appropriate.
  - Leaving areas undisturbed when possible.
  - Silt basins to provide silt volume for large areas.
  - Silt Traps Type A for small areas.
  - Silt Traps Type C in front of existing and drop inlets which are to be saved
  - Diversion ditches to catch sheet runoff and carry it to basins or traps or to divert it around areas to be disturbed.
  - Brush and/or other barriers to slow and/or divert runoff.
  - Silt fences to catch sheet runoff on short slopes. For longer slopes, multiple rows of silt fence may be considered.
  - Temporary Mulch for areas which are not feasible for the fore mentioned types of protections.
  - Non-standard or innovative methods.
- Cut & Fill and placement of drainage structures - The BMP Plan will be modified to show additional BMP's such as:
  - Silt Traps Type B in ditches and/or drainways as they are completed
  - Silt Traps Type C in front of pipes after they are placed
  - Channel Lining
  - Erosion Control Blanket
  - Temporary mulch and/or seeding for areas where construction activities will be ceased for 21 days or more.
  - Non-standard or innovative methods
- Profile and X-Section in place – The BMP Plan will be modified to show elimination of BMP's which had to be removed and the addition of new BMP's as the roadway was shaped. Probably changes include:
  - 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.
  - Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
  - Additional Channel Lining and/or Erosion Control Blanket.
  - Temporary Mulch for areas where Permanent Seeding and Protection cannot be done within 21 days.
  - Special BMP's such as Karst Policy
- Finish Work (Paving, Seeding, Protect, etc.) – A final BMP Plan will result from modifications during this phase of construction. Probably changes include:
  - Removal of Silt Traps Type B from ditches and drainways if they are protected with other BMP's which are sufficient to control erosion, i.e. Erosion Control Blanket or Permanent Seeding and Protection on moderate grades.

- Permanent Seeding and Protection
- Placing Sod
- Planting trees and/or shrubs where they are included in the project

➢ BMP's including Storm Water Management Devices such as velocity dissipation devices and Karst policy BMP's to be installed during construction to control the pollutants in storm water discharges that will occur after construction has been completed are : N/A

C. Other Control Measures

1. 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 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.

➢ **Good Housekeeping:**

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

- An effort will be made to store only enough product required to do the job
- 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
- Products will be kept in their original containers with the original manufacturer's label
- Substances will not be mixed with one another unless recommended by the manufacturer
- Whenever possible, all of the product will be used up before disposing of the container
- Manufacturers' recommendations for proper use and disposal will be followed
- The site contractor will inspect daily to ensure proper use and disposal of materials onsite

➢ **Hazardous Products:**

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

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

The following product-specific practices will be followed onsite:

➢ **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.

- **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.

- **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.

- **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

- **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**:**

- 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.
- 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.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contract with a hazardous substance.

- Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.
- The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
- Spills of products will be cleaned up promptly. Wastes from spill clean up will be disposed in accordance with appropriate regulations.

D. 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.

E. Maintenance

1. 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 weekly and post rain event inspections with action being taken by the contractor to correct deficiencies.

- 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. The project manager shall identify any BMPs that will be for the purpose of post construction storm water management with specific guidance for any non-routine maintenance.

F. Inspections

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

- All erosion prevention and sediment control measures will be inspected at least once each week and following any rain of one-half inch or more.
- Inspections will be conducted by individuals that have received KyTC Grade Level II training or other qualification as prescribed by the cabinet that includes instruction concerning sediment and erosion control.
- Inspection reports will be written, signed, dated, and kept on file.
- Areas at final grade will be seeded and mulched within 14 days.
- Areas that are not at final grade where construction has ceased for a period of 21 days or longer and soil stock piles shall receive temporary mulch no later than 14 days from the last construction activity in that area.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of being reported.
- Built-up sediment will be removed from behind the silt fence before it has reached halfway up the height of the fence.
- Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
- Sediment basins will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 70 percent of the design capacity and at the end of the job.
- 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.
- 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.
- 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.

G. 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:

- Water from water line flushings.
- Water form cleaning concrete trucks and equipment.
- Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).

- 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.

H. Groundwater Protection Plan (3)

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

- Contractors statement: (3)

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

_____ 2. (e) land treatment or land disposal of a pollutant;

_____ 2. (f) Storing, …, or related handling of hazardous waste, solid waste or special waste, …, in 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);

_____ 2. (g) …. 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;

_____ 2. (j) Storing or related handling of road oils, dust suppressants, …., at a central location;

_____ 2. (k) 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);

_____ 2. (m) 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 C. 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) Areas of the project and groundwater plan activities will be inspected as part of the weekly sediment and erosion control inspections
(g) Certification (see signature page.)

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.

Resident Engineer and Contractor Certification:

(2) Resident Engineer signature

Signed _____title_____, _____
Typed or printed name[2] signature

(3) Signed _____title_____, _____
Typed or printed name[1] 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, 14 Reilly Road, Frankfort Kentucky 40601. Reference the Project Control Number (PCN) 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, 14 Reilly Road, Frankfort Kentucky 40601 Reference the Project Control Number (PCN) 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:
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 _____title_____, _____
Typed or printed name[1] 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, 14 Reilly Road, Frankfort Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.

Exhibit #1

Point Discharge	Latitude	Longitude
DDA1	38.045079	-84.570492
DDA3	38.041242	-84.567366
DDA4	38.042644	-84.566556
DDA10	38.050456	-84.562157
DDA11	38.052104	-84.560873
DDA16A	38.045819	-84.561085
DDA16B	38.045688	-84.562659
DDA19	38.045079	-84.570492
DDA20	38.045500	-84.571620

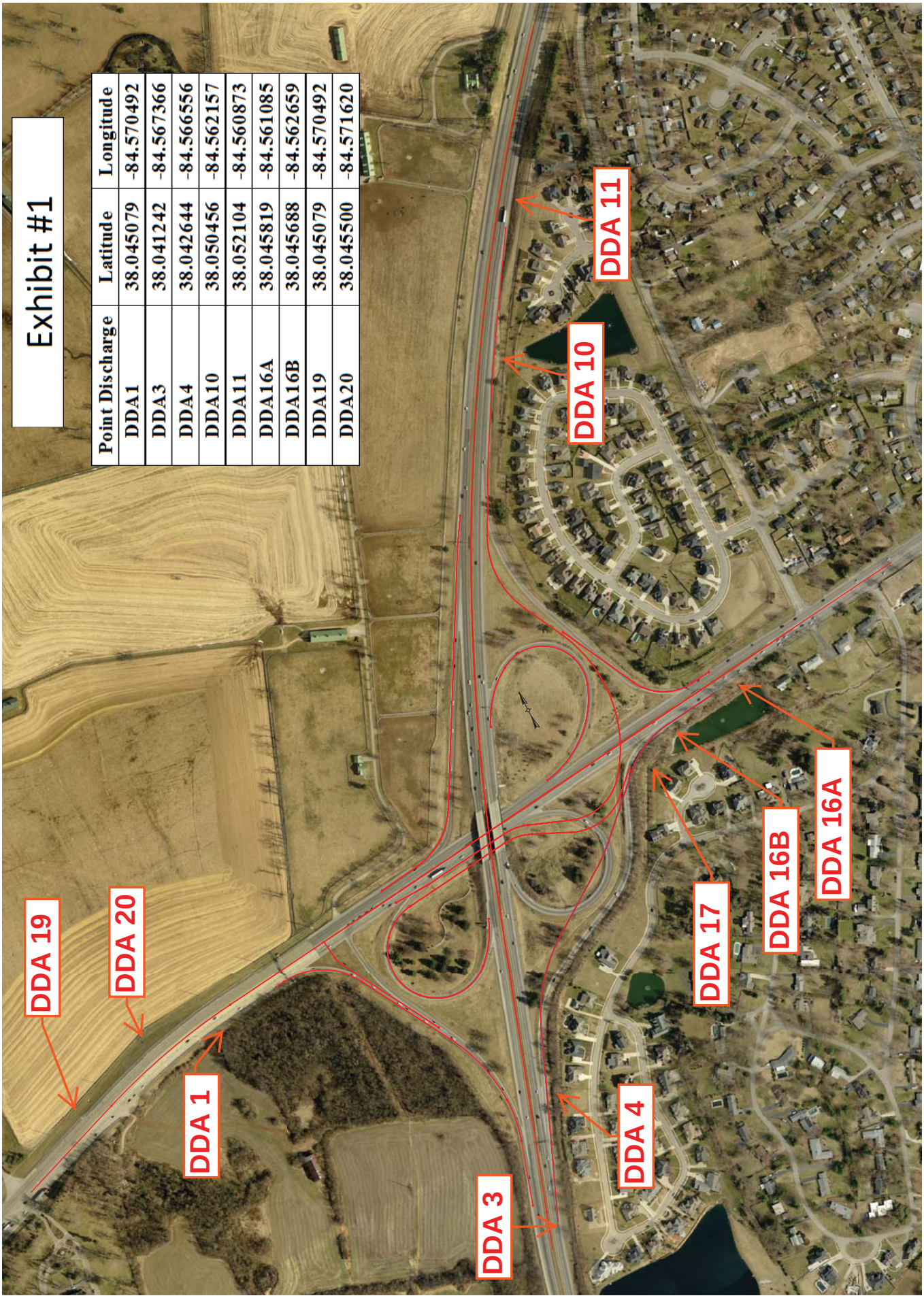


EXHIBIT #2

KY 4 / US 60 Interchange

Transaction ID: a1892bff-a7dc-429e-8737-27e8c6d1f124

KENTUCKY TRANSPORTATION CABINET
COMMUNICATING ALL PROMISES (CAP)

Item No. 7 - 113 **Project Mgr.** kytc\joshua.samples

County FAYETTE **Route** KY-4

CAP #	Date of Promise	Promise made to:	Location of Promise
1	27-FEB-13	Marathon Pipe Line, LLC by Joshua Samples	Below Proposed Bridge Station 276+78

CAP Description

The Contractor will call 811 before beginning work on the bridge over the 8" high pressure petroleum pipeline to insure the Marathon inspector is notified. The Contractor will leave the existing bridge supports in place below groundline. The Contractor will have timber mats or steal platting in place over the pipeline in any area which will have equipment over the pipeline or the possibility of falling material from the bridge removal.

2	10-OCT-14	LEXTRAN by Joshua Samples	Right Old Frankfort Pike Sta. 40+00

CAP Description

LEXTRAN will remove, store, and replace the bus stop shelter right of Old Frankfort Pike Sta. 40+00. The Contractor will call Michael Nagy (859-489-7956) with LEXTRAN 1 month prior to that work needing to be completed and will give Michael Nagy notice when the shelter can be replaced.

3	15-OCT-14	USFWS by Becky Barrick	entire project

CAP Description

The Contractor shall complete any tree cutting necessary for the project between October 15 and March 31.

4	09-OCT-14	Clark Material Handling Co. by Joshua Samples	Parcel 11

CAP Description

With this note, the Contractor is made aware that Clark Material Handling Co. uses the pavement along Old Frankfort Pike anc New Circle Ramp E for loading and unloading operations. The Contractor shall limit activities in the Temporary Easement at Rt. Old Frankfort Pike Station 43+00 to 46+00 in such a manner that those operations at Clark Material Handling Co. are not impeded in any way. Any damage to the pavement or drainage system on P11 due to the construction activities will be repaired by the Contractor.

MATERIAL SUMMARY

CONTRACT ID: 141291 **121GR14D091-NHPP & JL04** **DE03400041490**

US 60 AND KY 4 (NEW CIRCLE ROAD) INTERCHANGE RECONSTRUCTION OF KY-4 / US60 (VERSAILLES ROAD) INTERCHANGE BRIDGE WITH GRADE, DRAIN & SURFACE, A DISTANCE OF .8 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0001	00001	DGA BASE	16,916.00	TON
0002	00190	LEVELING & WEDGING PG64-22	8,997.00	TON
0003	00193	ASPHALT SCRATCH COURSE PG76-22	358.00	TON
0004	00212	CL2 ASPH BASE 1.00D PG64-22	6,415.00	TON
0005	00214	CL3 ASPH BASE 1.00D PG64-22	10,336.00	TON
0006	00216	CL3 ASPH BASE 1.00D PG76-22	9,733.00	TON
0007	00301	CL2 ASPH SURF 0.38D PG64-22	2,051.00	TON
0008	00336	CL3 ASPH SURF 0.38A PG76-22	5,285.00	TON
0009	01820	LIP CURB AND GUTTER	3,471.00	LF
0010	01890	ISLAND HEADER CURB TYPE 1	1,902.00	LF
0011	01947	MOUNTABLE MEDIAN TYPE 3A	247.00	SQYD
0012	01949	MOUNTABLE MEDIAN TYPE 6A	277.00	SQYD
0013	02677	ASPHALT PAVE MILLING & TEXTURING	2,975.00	TON
0014	00078	CRUSHED AGGREGATE SIZE NO 2	13.00	TON
0015	01000	PERFORATED PIPE-4 IN	3,090.00	LF
0016	01010	NON-PERFORATED PIPE-4 IN	66.50	LF
0017	01015	INSPECT & CERTIFY EDGE DRAIN SYSTEM - (7-279)	1.00	LS
0018	01020	PERF PIPE HEADWALL TY 1-4 IN	1.00	EACH
0019	01028	PERF PIPE HEADWALL TY 3-4 IN	11.00	EACH
0020	01310	REMOVE PIPE	217.00	LF
0021	01706	REMOVE CATCH BASIN	16.00	EACH
0022	01740	CORED HOLE DRAINAGE BOX CON-4 IN	6.00	EACH
0023	01904	REMOVE CURB	16,027.00	LF
0024	01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	38.00	EACH
0025	01983	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	17.00	EACH
0026	01986	DELINEATOR FOR BARRIER WALL-B/Y	8.00	EACH
0027	01990	DELINEATOR FOR BARRIER WALL-B/W	10.00	EACH
0028	02014	BARRICADE-TYPE III	12.00	EACH
0029	02091	REMOVE PAVEMENT	3,848.00	SQYD
0030	02157	PAVED DITCH TYPE 1	107.00	SQYD
0031	02159	TEMP DITCH	38,356.00	LF
0032	02160	CLEAN TEMP DITCH	115,068.00	LF
0033	02165	REMOVE PAVED DITCH	558.00	SQYD
0034	02200	ROADWAY EXCAVATION	39,493.00	CUYD
0035	02203	STRUCTURE EXCAV-UNCLASSIFIED	188.00	CUYD
0036	02223	GRANULAR EMBANKMENT	200.00	CUYD
0037	02235	BACKFILLING UNDERCUT	200.00	CUYD
0038	02242	WATER - (FOR DUST CONTROL)	500.00	MGAL
0039	02352	GUARDRAIL-STEEL W BEAM-D FACE	50.00	LF
0040	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	4.00	EACH
0041	02364	GUARDRAIL TERMINAL SECTION NO 2	5.00	EACH
0042	02367	GUARDRAIL END TREATMENT TYPE 1	11.00	EACH

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0043	02369	GUARDRAIL END TREATMENT TYPE 2A	12.00	EACH
0044	02381	REMOVE GUARDRAIL	7,182.70	LF
0045	02387	GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	1.00	EACH
0046	02483	CHANNEL LINING CLASS II	121.90	TON
0047	02484	CHANNEL LINING CLASS III	33.00	TON
0048	02545	CLEARING AND GRUBBING - (APPROXIMATELY 30 ACRES, 7-279)	1.00	LS
0049	02555	CONCRETE-CLASS B	194.00	CUYD
0050	02562	TEMPORARY SIGNS	941.50	SQFT
0051	02596	FABRIC-GEOTEXTILE TYPE I	227.70	SQYD
0052	02599	FABRIC-GEOTEXTILE TYPE IV	200.00	SQYD
0053	02600	FABRIC GEOTEXTILE TY IV FOR PIPE	2,652.00	SQYD
0054	02625	REMOVE HEADWALL	23.00	EACH
0055	02650	MAINTAIN & CONTROL TRAFFIC - (7-279)	1.00	LS
0056	02651	DIVERSIONS (BY-PASS DETOURS) - (#1, 7-279)	1.00	LS
0057	02651	DIVERSIONS (BY-PASS DETOURS) - (#2, 7-279)	1.00	LS
0058	02651	DIVERSIONS (BY-PASS DETOURS) - (#3, 7-279)	1.00	LS
0059	02651	DIVERSIONS (BY-PASS DETOURS) - (#4, 7-279)	1.00	LS
0060	02671	PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH
0061	02676	MOBILIZATION FOR MILL & TEXT - (7-279)	1.00	LS
0062	02690	SAFELOADING	24.60	CUYD
0063	02701	TEMP SILT FENCE	38,356.00	LF
0064	02703	SILT TRAP TYPE A	60.00	EACH
0065	02704	SILT TRAP TYPE B	60.00	EACH
0066	02705	SILT TRAP TYPE C	60.00	EACH
0067	02706	CLEAN SILT TRAP TYPE A	180.00	EACH
0068	02707	CLEAN SILT TRAP TYPE B	180.00	EACH
0069	02708	CLEAN SILT TRAP TYPE C	180.00	EACH
0070	02709	CLEAN TEMP SILT FENCE	115,068.00	LF
0071	02726	STAKING - (7-279)	1.00	LS
0072	02775	ARROW PANEL	6.00	EACH
0073	03171	CONCRETE BARRIER WALL TYPE 9T	600.00	LF
0074	03225	TUBULAR MARKERS	120.00	EACH
0075	05950	EROSION CONTROL BLANKET	6,653.00	SQYD
0076	05952	TEMP MULCH	288,464.00	SQYD
0077	05953	TEMP SEEDING AND PROTECTION	85,000.00	SQYD
0078	05963	INITIAL FERTILIZER	6.40	TON
0079	05964	20-10-10 FERTILIZER	10.70	TON
0080	05985	SEEDING AND PROTECTION	206,184.00	SQYD
0081	05992	AGRICULTURAL LIMESTONE	127.80	TON
0082	06401	FLEXIBLE DELINEATOR POST-M/W	187.00	EACH
0083	06404	FLEXIBLE DELINEATOR POST-M/Y	88.00	EACH
0084	06510	PAVE STRIPING-TEMP PAINT-4 IN	16,600.00	LF
0085	06511	PAVE STRIPING-TEMP PAINT-6 IN	57,700.00	LF
0086	06514	PAVE STRIPING-PERM PAINT-4 IN - (WHITE)	14,162.00	LF
0087	06514	PAVE STRIPING-PERM PAINT-4 IN - (YELLOW)	13,157.00	LF
0088	06516	PAVE STRIPING-PERM PAINT-8 IN - (WHITE)	1,430.00	LF
0089	06531	PAVE STRIPING REMOVAL-6 IN	14,100.00	LF
0090	06565	PAVE MARKING-THERMO X-WALK-6 IN	1,097.00	LF
0091	06568	PAVE MARKING-THERMO STOP BAR-24IN	255.00	LF

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0092	06574	PAVE MARKING-THERMO CURV ARROW	45.00	EACH
0093	06576	PAVE MARKING-THERMO ONLY	7.00	EACH
0094	06589	PAVEMENT MARKER TYPE V-MW	287.00	EACH
0095	06592	PAVEMENT MARKER TYPE V-B W/R	242.00	EACH
0096	06593	PAVEMENT MARKER TYPE V-B Y/R	211.00	EACH
0097	06600	REMOVE PAVEMENT MARKER TYPE V	160.00	EACH
0098	08900	CRASH CUSHION TY VI CLASS B TL2	1.00	EACH
0099	08904	CRASH CUSHION TY VI CLASS C	4.00	EACH
0100	10020NS	FUEL ADJUSTMENT	75,396.00	DOLL
0101	10030NS	ASPHALT ADJUSTMENT	101,015.00	DOLL
0102	20259ED	TEMPORARY MEDIAN CROSSOVER	2.00	EACH
0103	20411ED	LAW ENFORCEMENT OFFICER	3,000.00	HOUR
0104	21342ED	FORM LINER	2,514.00	SQFT
0105	21370ED	LONGITUDINAL SAW CUT- 6 IN	9,861.00	LF
0106	21802EN	G/R STEEL W BEAM-S FACE (7 FT POST)	3,850.00	LF
0107	23131ER701	PIPELINE VIDEO INSPECTION	1,650.00	LF
0108	23274EN11F	TURF REINFORCEMENT MAT 1	4,850.00	SQYD
0109	24035EC	CONC MED BAR END FOR CRASH CUSHION TY IX	1.00	EACH
0110	24189ER	DURABLE WATERBORNE MARKING-6 IN W	12,953.00	LF
0111	24190ER	DURABLE WATERBORNE MARKING-6 IN Y	9,069.00	LF
0112	24191ER	DURABLE WATERBORNE MARKING-12 IN W	4,162.00	LF
0113	00462	CULVERT PIPE-18 IN	87.00	LF
0114	00464	CULVERT PIPE-24 IN	476.00	LF
0115	00466	CULVERT PIPE-30 IN	82.00	LF
0116	00469	CULVERT PIPE-42 IN	24.00	LF
0117	00494	CULVERT PIPE-30 IN EQUIV	48.00	LF
0118	00521	STORM SEWER PIPE-15 IN	744.00	LF
0119	00522	STORM SEWER PIPE-18 IN	76.00	LF
0120	00524	STORM SEWER PIPE-24 IN	192.00	LF
0121	01202	PIPE CULVERT HEADWALL-15 IN	3.00	EACH
0122	01208	PIPE CULVERT HEADWALL-24 IN	2.00	EACH
0123	01210	PIPE CULVERT HEADWALL-30 IN	1.00	EACH
0124	01214	PIPE CULVERT HEADWALL-42 IN	1.00	EACH
0125	01373	METAL END SECTION TY 1-24 IN	1.00	EACH
0126	01432	SLOPED BOX OUTLET TYPE 1-15 IN	1.00	EACH
0127	01433	SLOPED BOX OUTLET TYPE 1-18 IN	3.00	EACH
0128	01434	SLOPED BOX OUTLET TYPE 1-24 IN - EQUIVALENT	1.00	EACH
0129	01440	SLOPED BOX INLET-OUTLET TYPE 1	4.00	EACH
0130	01456	CURB BOX INLET TYPE A	3.00	EACH
0131	01480	CURB BOX INLET TYPE B	2.00	EACH
0132	01490	DROP BOX INLET TYPE 1	5.00	EACH
0133	01559	DROP BOX INLET TYPE 13G	3.00	EACH
0134	01584	CAP DROP BOX INLET	2.00	EACH
0135	01585	REMOVE DROP BOX INLET	1.00	EACH
0136	01650	JUNCTION BOX	1.00	EACH
0137	01651	JUNCTION BOX-MOD	1.00	EACH
0138	01719	ADJUST INLET	3.00	EACH
0139	01720	RECONSTRUCT INLET	2.00	EACH
0140	21799EN	BORE AND JACK PIPE-24 IN	180.00	LF
0141	22628NN	DROP BOX INLET-MOD	1.00	EACH

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0142	23126EN	BORE AND JACK PIPE-18 IN	76.00	LF
0143	24575ES610	HEADWALL - (DOUBLE STANDARD, 24")	1.00	EACH
0144	02231	STRUCTURE GRANULAR BACKFILL	187.00	CUYD
0145	02998	MASONRY COATING	632.00	SQYD
0146	03299	ARMORED EDGE FOR CONCRETE	64.90	LF
0147	08020	CRUSHED AGGREGATE SLOPE PROT	152.00	TON
0148	08033	TEST PILES	63.00	LF
0149	08046	PILES-STEEL HP12X53	344.00	LF
0150	08094	PILE POINTS-12 IN	15.00	EACH
0151	08100	CONCRETE-CLASS A	183.10	CUYD
0152	08104	CONCRETE-CLASS AA	272.80	CUYD
0153	08150	STEEL REINFORCEMENT	50,860.00	LB
0154	08151	STEEL REINFORCEMENT-EPOXY COATED	71,167.00	LB
0155	08160	STRUCTURAL STEEL - (APPROXIMATELY 304,369 LBS.)	1.00	LS
0156	08170	SHEAR CONNECTORS	1.00	LS
0157	08434	CLEAN & PAINT STRUCTURAL STEEL	1.00	LS
0158	20745ED	ROCK SOUNDINGS	78.00	LF
0159	20746ED	ROCK CORINGS	90.00	LF
0160	21342ED	FORM LINER	724.00	SQFT
0161	21420ED	DRILLED SHAFT-66 IN (COMMON)	78.00	LF
0162	21421ED	DRILLED SHAFT-60 IN (SOLID ROCK)	60.00	LF
0163	21532ED	RAIL SYSTEM TYPE III	615.00	LF
0164	02403	REMOVE CONCRETE MASONRY	31.00	CUYD
0165	02998	MASONRY COATING	489.00	SQYD
0166	03298	EXPAN JOINT REPLACE 4 IN	161.00	LF
0167	03299	ARMORED EDGE FOR CONCRETE	161.00	LF
0168	08100	CONCRETE-CLASS A	124.20	CUYD
0169	08104	CONCRETE-CLASS AA	50.30	CUYD
0170	08150	STEEL REINFORCEMENT	5,078.00	LB
0171	08151	STEEL REINFORCEMENT-EPOXY COATED	3,130.00	LB
0172	08434	CLEAN & PAINT STRUCTURAL STEEL	1.00	LS
0173	08435	JACK & SUPPORT BRIDGE SPAN	1.00	LS
0174	21969NN	BEARING REPLACEMENT	22.00	EACH
0175	08003	FOUNDATION PREPARATION	1.00	LS
0176	08100	CONCRETE-CLASS A	94.30	CUYD
0177	08150	STEEL REINFORCEMENT	8,659.00	LB
0178	24596EN	GRANULAR BACKFILL	428.00	CUYD
0179	08003	FOUNDATION PREPARATION	1.00	LS
0180	08100	CONCRETE-CLASS A	245.00	CUYD
0181	08150	STEEL REINFORCEMENT	23,500.00	LB
0182	24596EN	GRANULAR BACKFILL	1,101.00	CUYD
0183	08003	FOUNDATION PREPARATION	1.00	LS
0184	08100	CONCRETE-CLASS A	161.00	CUYD
0185	08150	STEEL REINFORCEMENT	14,600.00	LB
0186	24596EN	GRANULAR BACKFILL	542.00	CUYD
0187	02572	QUALITY CONTROL	1.00	LS
0188	08003	FOUNDATION PREPARATION	1.00	LS
0189	20603ED	SOIL NAIL WALL	3,372.00	SQFT
0190	08003	FOUNDATION PREPARATION	1.00	LS
0191	08100	CONCRETE-CLASS A	942.00	CUYD

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0192	08150	STEEL REINFORCEMENT	127,000.00	LB
0193	24596EN	GRANULAR BACKFILL	6,122.00	CUYD
0194	01065	STEEL ENCASEMENT PIPE-8 IN	256.00	LF
0195	01067	STEEL ENCASEMENT PIPE-10 IN	150.00	LF
0196	03537	BEND 11.25 DEG 4 IN	4.00	EACH
0197	03538	BEND 11.25 DEG 6 IN	2.00	EACH
0198	03544	BEND 22.50 DEG 4 IN	3.00	EACH
0199	03545	BEND 22.50 DEG 6 IN	3.00	EACH
0200	03553	BEND 45 DEG 4 IN	1.00	EACH
0201	03554	BEND 45 DEG 6 IN	1.00	EACH
0202	03559	BEND 90 DEG 4 IN	1.00	EACH
0203	03560	BEND 90 DEG 6 IN	2.00	EACH
0204	20154ND	DRAIN ASSEMBLY - (4")	3.00	EACH
0205	20154ND	DRAIN ASSEMBLY - (6")	3.00	EACH
0206	21353ND	TIE-IN TO FORCE MAIN	4.00	EACH
0207	22082NN	AIR RELEASE VALVE ASSEMBLY - (4")	2.00	EACH
0208	22082NN	AIR RELEASE VALVE ASSEMBLY - (6")	2.00	EACH
0209	22960ED	BORE & JACK ENCASEMENT PIPE-INSTALL - (8")	256.00	LF
0210	22984EN	PVC FORCE MAIN-6 IN	3,291.00	LF
0211	23528EC	PVC FORCE MAIN-4 IN-INSTALL	2,823.00	LF
0212	24149EC	BORE AND JACK PIPE-10 IN	150.00	LF
0213	24544EC	REMOVE - (6" FORCE MAIN)	180.00	LF
0214	06405	SBM ALUMINUM PANEL SIGNS	2,164.00	SQFT
0215	06406	SBM ALUM SHEET SIGNS .080 IN	428.00	SQFT
0216	06407	SBM ALUM SHEET SIGNS .125 IN	673.00	SQFT
0217	06410	STEEL POST TYPE 1	1,715.00	LF
0218	06441	GMSS GALV STEEL TYPE C	454.00	LB
0219	06451	REMOVE SIGN SUPPORT BEAM	5.00	EACH
0220	06490	CLASS A CONCRETE FOR SIGNS	6.00	CUYD
0221	06491	STEEL REINFORCEMENT FOR SIGNS	228.00	LB
0222	20418ED	REMOVE & RELOCATE SIGNS	3.00	EACH
0223	20419ND	ROADWAY CROSS SECTION	3.00	EACH
0224	20912ND	BARRIER WALL POST	10.00	EACH
0225	21373ND	REMOVE SIGN	13.00	EACH
0226	21596ND	GMSS TYPE D	16.00	EACH
0227	24631EC	BARCODE SIGN INVENTORY	122.00	EACH
0228	04793	CONDUIT-1 1/4 IN	80.00	LF
0229	04795	CONDUIT-2 IN	20.00	LF
0230	04811	ELECTRICAL JUNCTION BOX TYPE B	5.00	EACH
0231	04820	TRENCHING AND BACKFILLING	170.00	LF
0232	04829	PIEZOELECTRIC SENSOR	6.00	EACH
0233	04830	LOOP WIRE	7,278.00	LF
0234	04850	CABLE-NO. 14/1 PAIR	2,250.00	LF
0235	04895	LOOP SAW SLOT AND FILL	2,280.00	LF
0236	20359NN	GALVANIZED STEEL CABINET	2.00	EACH
0237	20360ES818	WOOD POST	4.00	EACH
0238	20391NS835	ELECTRICAL JUNCTION BOX TYPE A	2.00	EACH
0239	04700	POLE 30 FT MTG HT	49.00	EACH
0240	04701	POLE 40 FT MTG HT	44.00	EACH
0241	04720	BRACKET 4 FT	9.00	EACH

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0242	04721	BRACKET 6 FT	53.00	EACH
0243	04723	BRACKET 10 FT	18.00	EACH
0244	04725	BRACKET 15 FT	14.00	EACH
0245	04740	POLE BASE	92.00	EACH
0246	04750	TRANSFORMER BASE	92.00	EACH
0247	04761	LIGHTING CONTROL EQUIPMENT	2.00	EACH
0248	04780	FUSED CONNECTOR KIT	190.00	EACH
0249	04797	CONDUIT-3 IN	1,380.00	LF
0250	04800	MARKER	2.00	EACH
0251	04820	TRENCHING AND BACKFILLING	17,030.00	LF
0252	04832	WIRE-NO. 12	13,435.00	LF
0253	04833	WIRE-NO. 8	1,050.00	LF
0254	04860	CABLE-NO. 8/3C DUCTED	20,390.00	LF
0255	04940	REMOVE LIGHTING - (7-279)	1.00	LS
0256	20391NS835	ELECTRICAL JUNCTION BOX TYPE A	21.00	EACH
0257	21543EN	BORE AND JACK CONDUIT	1,245.00	LF
0258	24589ED	LED LUMINAIRE	94.00	EACH
0259	20000ES724	TREE - (EUROPEAN CRANBERRY VIBURNUM)	251.00	EACH
0260	20511NS724	PIN OAK	44.00	EACH
0261	21426NS724	NORWAY SPRUCE	42.00	EACH
0262	21429NS724	GREY OWL JUNIPER	506.00	EACH
0263	22000ED	WOOD PLANK FENCE	435.00	LF
0264	24394ES724	HAWTHORN - (WINTER KING)	133.00	EACH
0265	02568	MOBILIZATION	1.00	LS
0266	02569	DEMOBILIZATION	1.00	LS
0267	02742	TRAINEE PAYMENT REIMBURSEMENT - GROUP 2, 3 OR 4 OPERATOR	1,400.00	HOUR

CONTRACT ID: 141291 **121GR14D091-NHPP & JL04** **DE03400041491**

NEW CIRCLE ROAD (KY 4) NEW CIRCLE ROAD REHAB AND WIDENING FROM VERSAILLES ROAD TO LEESTOWN BRIDGE WITH GRADE, DRAIN & SURFACE, A DISTANCE OF 2.4 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0001	00001	DGA BASE	91,608.00	TON
0002	00018	DRAINAGE BLANKET-TYPE II-ASPH	17,410.00	TON
0003	00020	TRAFFIC BOUND BASE	2,000.00	TON
0004	00100	ASPHALT SEAL AGGREGATE	287.00	TON
0005	00103	ASPHALT SEAL COAT	38.00	TON
0006	00190	LEVELING & WEDGING PG64-22	10,280.00	TON
0007	00212	CL2 ASPH BASE 1.00D PG64-22	69.00	TON
0008	00214	CL3 ASPH BASE 1.00D PG64-22	42,930.00	TON
0009	00216	CL3 ASPH BASE 1.00D PG76-22	4,755.00	TON
0010	00217	CL4 ASPH BASE 1.00D PG64-22	36,798.00	TON
0011	00219	CL4 ASPH BASE 1.00D PG76-22	16,346.00	TON
0012	00307	CL2 ASPH SURF 0.38B PG64-22	43.00	TON
0013	00336	CL3 ASPH SURF 0.38A PG76-22	1,611.00	TON

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0014	00339	CL3 ASPH SURF 0.38D PG64-22	4,061.00	TON
0015	00342	CL4 ASPH SURF 0.38A PG76-22	6,794.00	TON
0016	02069	JPC PAVEMENT-10 IN	1,740.00	SQYD
0017	02677	ASPHALT PAVE MILLING & TEXTURING	23,306.00	TON
0018	22861EN	HIGH STRENGTH GEOTEXTILE FABRIC	163,208.00	SQYD
0019	00021	DRAINAGE BLANKET-EMBANKMENT	6,200.00	CUYD
0020	00078	CRUSHED AGGREGATE SIZE NO 2	3,182.00	TON
0021	01310	REMOVE PIPE	390.00	LF
0022	01655	REMOVE JUNCTION BOX	1.00	EACH
0023	01691	FLUME INLET TYPE 2	1.00	EACH
0024	01718	REMOVE INLET	21.00	EACH
0025	01741	CORED HOLE DRAINAGE BOX CON-6 IN	39.00	EACH
0026	01787	REMOVE MANHOLE	1.00	EACH
0027	01825	ISLAND CURB AND GUTTER	242.00	LF
0028	01880	BARRIER HEADER CURB	32.00	LF
0029	01890	ISLAND HEADER CURB TYPE 1	1,078.00	LF
0030	01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	195.00	EACH
0031	01984	DELINEATOR FOR BARRIER - WHITE	1,129.00	EACH
0032	01985	DELINEATOR FOR BARRIER - YELLOW	4,796.00	EACH
0033	02003	RELOCATE TEMP CONC BARRIER	47,200.00	LF
0034	02014	BARRICADE-TYPE III	28.00	EACH
0035	02091	REMOVE PAVEMENT	2,625.00	SQYD
0036	02159	TEMP DITCH	20,664.00	LF
0037	02160	CLEAN TEMP DITCH	61,992.00	LF
0038	02165	REMOVE PAVED DITCH	190.00	SQYD
0039	02200	ROADWAY EXCAVATION	157,008.00	CUYD
0040	02203	STRUCTURE EXCAV-UNCLASSIFIED	387.00	CUYD
0041	02223	GRANULAR EMBANKMENT	3,536.00	CUYD
0042	02242	WATER	1,957.00	MGAL
0043	02262	FENCE-WOVEN WIRE TYPE 1	2,694.00	LF
0044	02274	FENCE-6 FT CHAIN LINK	585.00	LF
0045	02351	GUARDRAIL-STEEL W BEAM-S FACE	9,456.00	LF
0046	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	10.00	EACH
0047	02367	GUARDRAIL END TREATMENT TYPE 1	5.00	EACH
0048	02369	GUARDRAIL END TREATMENT TYPE 2A	10.00	EACH
0049	02381	REMOVE GUARDRAIL	9,122.00	LF
0050	02387	GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	6.00	EACH
0051	02391	GUARDRAIL END TREATMENT TYPE 4A	7.00	EACH
0052	02429	RIGHT-OF-WAY MONUMENT TYPE 1	10.00	EACH
0053	02432	WITNESS POST	10.00	EACH
0054	02478	CAP INLET	1.00	SQYD
0055	02483	CHANNEL LINING CLASS II	3,056.00	TON
0056	02484	CHANNEL LINING CLASS III	2,315.00	TON
0057	02545	CLEARING AND GRUBBING - (APPROXIMATELY 83.3 ACRES, 7-113.01)	1.00	LS
0058	02555	CONCRETE-CLASS B	262.70	CUYD
0059	02562	TEMPORARY SIGNS	1,771.10	SQFT
0060	02567	DELINEATOR POSTS	40.00	EACH
0061	02585	EDGE KEY	64.00	LF
0062	02596	FABRIC-GEOTEXTILE TYPE I	500.00	SQYD

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0063	02599	FABRIC-GEOTEXTILE TYPE IV	46,500.00	SQYD
0064	02600	FABRIC GEOTEXTILE TY IV FOR PIPE	42,500.00	SQYD
0065	02625	REMOVE HEADWALL	18.00	EACH
0066	02650	MAINTAIN & CONTROL TRAFFIC - (7-113.01)	1.00	LS
0067	02671	PORTABLE CHANGEABLE MESSAGE SIGN	8.00	EACH
0068	02676	MOBILIZATION FOR MILL & TEXT - (7-113.01)	1.00	LS
0069	02690	SAFELOADING	136.20	CUYD
0070	02696	SHOULDER RUMBLE STRIPS-SAWED	48,700.00	LF
0071	02701	TEMP SILT FENCE	20,664.00	LF
0072	02703	SILT TRAP TYPE A	74.00	EACH
0073	02704	SILT TRAP TYPE B	74.00	EACH
0074	02705	SILT TRAP TYPE C	74.00	EACH
0075	02706	CLEAN SILT TRAP TYPE A	222.00	EACH
0076	02707	CLEAN SILT TRAP TYPE B	222.00	EACH
0077	02708	CLEAN SILT TRAP TYPE C	222.00	EACH
0078	02709	CLEAN TEMP SILT FENCE	61,992.00	LF
0079	02726	STAKING - (7-113.01)	1.00	LS
0080	02731	REMOVE STRUCTURE - (TWIN BRIDGES OVER ALEXANDRIA DRIVE, STA. 249+65.73)	1.00	LS
0081	02731	REMOVE STRUCTURE - (TWIN BRIDGES OVER RJ CORMAN RAILROAD, STA. 276+91.5)	1.00	LS
0082	02731	REMOVE STRUCTURE - (SINGLE BRIDGE OVER NEW CIRCLE ROAD, STA. 293+54.79)	1.00	LS
0083	02731	REMOVE STRUCTURE - (TWIN BRIDGES OVER RJ CORMAN RAILROAD, STA. 317+31.29)	1.00	LS
0084	03171	CONCRETE BARRIER WALL TYPE 9T	25,640.00	LF
0085	03260	CLEAN ROADWAY DRAINS	11.00	EACH
0086	04793	CONDUIT-1 1/4 IN	160.00	LF
0087	04795	CONDUIT-2 IN	40.00	LF
0088	04810	ELECTRICAL JUNCTION BOX	40.00	EACH
0089	04820	TRENCHING AND BACKFILLING	180.00	LF
0090	04829	PIEZOELECTRIC SENSOR	12.00	EACH
0091	04830	LOOP WIRE	5,900.00	LF
0092	04895	LOOP SAW SLOT AND FILL	1,130.00	LF
0093	05950	EROSION CONTROL BLANKET	7,825.00	SQYD
0094	05952	TEMP MULCH	403,293.00	SQYD
0095	05953	TEMP SEEDING AND PROTECTION	10,163.00	SQYD
0096	05963	INITIAL FERTILIZER	7.00	TON
0097	05964	20-10-10 FERTILIZER	11.00	TON
0098	05985	SEEDING AND PROTECTION	203,261.00	SQYD
0099	05989	SPECIAL SEEDING CROWN VETCH	53,600.00	SQYD
0100	05992	AGRICULTURAL LIMESTONE	126.00	TON
0101	06511	PAVE STRIPING-TEMP PAINT-6 IN	275,184.00	LF
0102	06514	PAVE STRIPING-PERM PAINT-4 IN	1,563.00	LF
0103	06514	PAVE STRIPING-PERM PAINT-4 IN	6,895.00	LF
0104	06515	PAVE STRIPING-PERM PAINT-6 IN	54,697.00	LF
0105	06515	PAVE STRIPING-PERM PAINT-6 IN	24,555.00	LF
0106	06517	PAVE STRIPING-PERM PAINT-12 IN	4,018.00	LF
0107	06568	PAVE MARKING-THERMO STOP BAR-24IN	71.00	LF
0108	06569	PAVE MARKING-THERMO CROSS-HATCH	2,647.00	SQFT
0109	06574	PAVE MARKING-THERMO CURV ARROW	7.00	EACH

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0110	06589	PAVEMENT MARKER TYPE V-MW	34.00	EACH
0111	06591	PAVEMENT MARKER TYPE V-BY	141.00	EACH
0112	06592	PAVEMENT MARKER TYPE V-B W/R	730.00	EACH
0113	06593	PAVEMENT MARKER TYPE V-B Y/R	124.00	EACH
0114	08100	CONCRETE-CLASS A	50.40	CUYD
0115	08901	CRASH CUSHION TY VI CLASS BT TL2	37.00	EACH
0116	08904	CRASH CUSHION TY VI CLASS C	2.00	EACH
0117	10020NS	FUEL ADJUSTMENT	294,073.00	DOLL
0118	10030NS	ASPHALT ADJUSTMENT	551,633.00	DOLL
0119	20099ES842	PAVE MARK TEMP PAINT STOP BAR	142.00	LF
0120	20100ES842	PAVE MARK TEMP PAINT LINE ARROW	14.00	EACH
0121	20209EP69	GRANULAR PILE CORE	328.00	CUYD
0122	20210EP69	COHESIVE PILE CORE	46.00	CUYD
0123	20359NN	GALVANIZED STEEL CABINET	4.00	EACH
0124	20360ES818	WOOD POST	8.00	EACH
0125	20391NS835	ELECTRICAL JUNCTION BOX TYPE A	4.00	EACH
0126	20394ES835	PVC CONDUIT-3 IN- IN MEDIAN BARRIER WALL	8,953.00	LF
0127	20411ED	LAW ENFORCEMENT OFFICER	200.00	HOUR
0128	20430ED	SAW CUT	47,444.00	LF
0129	20432ES112	REMOVE CRASH CUSHION	2.00	EACH
0130	22664EN	WATER BLASTING EXISTING STRIPE	105,272.00	LF
0131	23131ER701	PIPELINE VIDEO INSPECTION	7,777.00	LF
0132	23148EN	END ANCHORS	1.00	EACH
0133	23274EN11F	TURF REINFORCEMENT MAT 1	11,066.00	SQYD
0134	24255EC	REMOVE CABLE GUARDRAIL BARRIER SYSTEM	9,318.00	LF
0135	24654ED	SINGLE SLOPE MEDIAN BARRIER	9,899.00	LF
0136	24654ED	SINGLE SLOPE MEDIAN BARRIER	142.00	LF
0137	24654ED	SINGLE SLOPE MEDIAN BARRIER	147.00	LF
0138	00445	ENTRANCE PIPE-30 IN	48.00	LF
0139	00461	CULVERT PIPE-15 IN	11.00	LF
0140	00461	CULVERT PIPE-15 IN - (REINFORCED CONCRETE PIPE)	34.00	LF
0141	00462	CULVERT PIPE-18 IN	152.00	LF
0142	00464	CULVERT PIPE-24 IN	68.00	LF
0143	00464	CULVERT PIPE-24 IN - (REINFORCED CONCRETE PIPE)	24.00	LF
0144	00521	STORM SEWER PIPE-15 IN	3,223.00	LF
0145	00522	STORM SEWER PIPE-18 IN	2,507.00	LF
0146	00522	STORM SEWER PIPE-18 IN - (REINFORCED CONCRETE PIPE)	31.00	LF
0147	00524	STORM SEWER PIPE-24 IN	1,794.00	LF
0148	01000	PERFORATED PIPE-4 IN	12,265.00	LF
0149	01001	PERFORATED PIPE-6 IN	9,761.00	LF
0150	01010	NON-PERFORATED PIPE-4 IN	1,017.00	LF
0151	01011	NON-PERFORATED PIPE-6 IN	312.00	LF
0152	01015	INSPECT & CERTIFY EDGE DRAIN SYSTEM - (7-113.01)	1.00	LS
0153	01020	PERF PIPE HEADWALL TY 1-4 IN	50.00	EACH
0154	01024	PERF PIPE HEADWALL TY 2-4 IN	2.00	EACH
0155	01028	PERF PIPE HEADWALL TY 3-4 IN	11.00	EACH
0156	01032	PERF PIPE HEADWALL TY 4-4 IN	19.00	EACH
0157	01202	PIPE CULVERT HEADWALL-15 IN	4.00	EACH
0158	01204	PIPE CULVERT HEADWALL-18 IN	5.00	EACH

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0159	01208	PIPE CULVERT HEADWALL-24 IN	5.00	EACH
0160	01210	PIPE CULVERT HEADWALL-30 IN	1.00	EACH
0161	01432	SLOPED BOX OUTLET TYPE 1-15 IN	1.00	EACH
0162	01450	S & F BOX INLET-OUTLET-18 IN	2.00	EACH
0163	01451	S & F BOX INLET-OUTLET-24 IN	1.00	EACH
0164	01480	CURB BOX INLET TYPE B	5.00	EACH
0165	01496	DROP BOX INLET TYPE 3	5.00	EACH
0166	01517	DROP BOX INLET TYPE 5F	1.00	EACH
0167	01544	DROP BOX INLET TYPE 11	4.00	EACH
0168	01559	DROP BOX INLET TYPE 13G	2.00	EACH
0169	01568	DROP BOX INLET TYPE 13S	1.00	EACH
0170	01614	CONC MED BARR BOX INLET TY 14A2	3.00	EACH
0171	01615	CONC MED BARR BOX INLET TY 14B2	36.00	EACH
0172	01641	JUNCTION BOX-15 IN	2.00	EACH
0173	01642	JUNCTION BOX-18 IN	3.00	EACH
0174	01643	JUNCTION BOX-24 IN	3.00	EACH
0175	08100	CONCRETE-CLASS A	1.67	CUYD
0176	21799EN	BORE AND JACK PIPE-24 IN	357.00	LF
0177	21800EN	BORE AND JACK PIPE-30 IN	79.00	LF
0178	23126EN	BORE AND JACK PIPE-18 IN	501.00	LF
0179	24377EC	PREFAB BEND CONNECTION 25 DEG-15 IN	4.00	EACH
0180	24575ES610	HEADWALL - (DOUBLE 24 IN PIPE CULVERT)	1.00	EACH
0181	24634EC	BEND - (PREFAB CONNECTION 25 DEG-18 IN)	2.00	EACH
0182	24634EC	BEND - (PREFAB CONNECTION 25 DE-24 IN)	2.00	EACH
0183	02231	STRUCTURE GRANULAR BACKFILL	375.00	CUYD
0184	02998	MASONRY COATING	1,286.00	SQYD
0185	03299	ARMORED EDGE FOR CONCRETE	233.00	LF
0186	04797	CONDUIT-3 IN	539.00	LF
0187	08001	STRUCTURE EXCAVATION-COMMON	46.00	CUYD
0188	08020	CRUSHED AGGREGATE SLOPE PROT	829.00	TON
0189	08033	TEST PILES	155.00	LF
0190	08046	PILES-STEEL HP12X53	505.00	LF
0191	08094	PILE POINTS-12 IN	30.00	EACH
0192	08100	CONCRETE-CLASS A	273.60	CUYD
0193	08104	CONCRETE-CLASS AA	623.00	CUYD
0194	08130	MECHANICAL REINF COUPLER #5	24.00	EACH
0195	08133	MECHANICAL REINF COUPLER #8	32.00	EACH
0196	08140	MECHANICAL REINF COUPLER #5 EPOXY COATED	12.00	EACH
0197	08150	STEEL REINFORCEMENT	59,187.00	LB
0198	08151	STEEL REINFORCEMENT-EPOXY COATED	166,178.00	LB
0199	08671	PRECAST PC BOX BEAM SB33	2,090.70	LF
0200	20392NS835	ELECTRICAL JUNCTION BOX TYPE C	4.00	EACH
0201	20637ED	DRILLED SHAFT-ROCK 48 IN	22.70	LF
0202	20745ED	ROCK SOUNDINGS	172.20	LF
0203	20746ED	ROCK CORINGS	286.70	LF
0204	21532ED	RAIL SYSTEM TYPE III	306.00	LF
0205	23583EC	DRILLED SHAFT-48 IN-COMMON	148.30	LF
0206	23584EC	DRILLED SHAFT-42 IN-ROCK	96.00	LF
0207	24654ED	SINGLE SLOPE MEDIAN BARRIER	153.00	LF
0208	02223	GRANULAR EMBANKMENT	30.00	CUYD

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0209	02231	STRUCTURE GRANULAR BACKFILL	1,177.00	CUYD
0210	02998	MASONRY COATING	1,167.00	SQYD
0211	03299	ARMORED EDGE FOR CONCRETE	297.30	LF
0212	04797	CONDUIT-3 IN	600.00	LF
0213	08001	STRUCTURE EXCAVATION-COMMON	282.00	CUYD
0214	08020	CRUSHED AGGREGATE SLOPE PROT	984.00	TON
0215	08033	TEST PILES	245.00	LF
0216	08051	PILES-STEEL HP14X89	1,122.00	LF
0217	08095	PILE POINTS-14 IN	37.00	EACH
0218	08100	CONCRETE-CLASS A	633.80	CUYD
0219	08104	CONCRETE-CLASS AA	834.30	CUYD
0220	08130	MECHANICAL REINF COUPLER #5	48.00	EACH
0221	08130	MECHANICAL REINF COUPLER #5	40.00	EACH
0222	08133	MECHANICAL REINF COUPLER #8	32.00	EACH
0223	08140	MECHANICAL REINF COUPLER #5 EPOXY COATED	12.00	EACH
0224	08140	MECHANICAL REINF COUPLER #5 EPOXY COATED	16.00	EACH
0225	08150	STEEL REINFORCEMENT	126,832.00	LB
0226	08151	STEEL REINFORCEMENT-EPOXY COATED	243,815.00	LB
0227	08711	BRIDGE CHAIN LINK FENCE-6 FT	333.50	LF
0228	20392NS835	ELECTRICAL JUNCTION BOX TYPE C	4.00	EACH
0229	20637ED	DRILLED SHAFT-ROCK 48 IN	112.00	LF
0230	20743ED	DRILLED SHAFT 54 IN-SOLID ROCK	27.40	LF
0231	20745ED	ROCK SOUNDINGS	292.50	LF
0232	20746ED	ROCK CORINGS	331.40	LF
0233	21532ED	RAIL SYSTEM TYPE III	359.00	LF
0234	21777EN	DRILLED SHAFT COMMON-54 IN	253.60	LF
0235	23963EC	PPC I-BEAM TYPE HN36-49	2,365.90	LF
0236	24654ED	SINGLE SLOPE MEDIAN BARRIER	173.40	LF
0237	02231	STRUCTURE GRANULAR BACKFILL	564.00	CUYD
0238	02998	MASONRY COATING	940.00	SQYD
0239	03299	ARMORED EDGE FOR CONCRETE	267.30	LF
0240	04797	CONDUIT-3 IN	620.00	LF
0241	08001	STRUCTURE EXCAVATION-COMMON	58.40	CUYD
0242	08020	CRUSHED AGGREGATE SLOPE PROT	1,086.00	TON
0243	08033	TEST PILES	240.00	LF
0244	08039	PRE-DRILLING FOR PILES	760.00	LF
0245	08046	PILES-STEEL HP12X53	1,216.00	LF
0246	08094	PILE POINTS-12 IN	40.00	EACH
0247	08100	CONCRETE-CLASS A	399.60	CUYD
0248	08104	CONCRETE-CLASS AA	827.80	CUYD
0249	08130	MECHANICAL REINF COUPLER #5	40.00	EACH
0250	08133	MECHANICAL REINF COUPLER #8	32.00	EACH
0251	08140	MECHANICAL REINF COUPLER #5 EPOXY COATED	16.00	EACH
0252	08141	MECHANICAL REINF COUPLER #6 EPOXY COATED	1,432.00	EACH
0253	08150	STEEL REINFORCEMENT	104,587.00	LB
0254	08151	STEEL REINFORCEMENT-EPOXY COATED	282,552.00	LB
0255	08711	BRIDGE CHAIN LINK FENCE-6 FT	348.00	LF
0256	20392NS835	ELECTRICAL JUNCTION BOX TYPE C	4.00	EACH
0257	20637ED	DRILLED SHAFT-ROCK 48 IN	98.00	LF
0258	20743ED	DRILLED SHAFT 54 IN-SOLID ROCK	14.00	LF

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0259	20745ED	ROCK SOUNDINGS	203.00	LF
0260	20746ED	ROCK CORINGS	266.00	LF
0261	21532ED	RAIL SYSTEM TYPE III	360.20	LF
0262	21777EN	DRILLED SHAFT COMMON-54 IN	125.20	LF
0263	23963EC	PPC I-BEAM TYPE HN36-49	2,292.30	LF
0264	24405EC	MECHANICAL REINF COUPLER-#8 EPOXY COATED	4.00	EACH
0265	24654ED	SINGLE SLOPE MEDIAN BARRIER	180.10	LF
0266	02231	STRUCTURE GRANULAR BACKFILL	505.00	CUYD
0267	02998	MASONRY COATING	2,158.00	SQYD
0268	03299	ARMORED EDGE FOR CONCRETE	167.10	LF
0269	04797	CONDUIT-3 IN	720.00	LF
0270	04810	ELECTRICAL JUNCTION BOX	2.00	EACH
0271	08001	STRUCTURE EXCAVATION-COMMON	135.00	CUYD
0272	08002	STRUCTURE EXCAV-SOLID ROCK	591.00	CUYD
0273	08020	CRUSHED AGGREGATE SLOPE PROT	473.00	TON
0274	08033	TEST PILES	46.00	LF
0275	08039	PRE-DRILLING FOR PILES	290.00	LF
0276	08046	PILES-STEEL HP12X53	331.00	LF
0277	08094	PILE POINTS-12 IN	29.00	EACH
0278	08100	CONCRETE-CLASS A	581.90	CUYD
0279	08104	CONCRETE-CLASS AA	759.80	CUYD
0280	08150	STEEL REINFORCEMENT	130,405.00	LB
0281	08151	STEEL REINFORCEMENT-EPOXY COATED	195,643.00	LB
0282	08634	PRECAST PC I BEAM TYPE 4	2,516.20	LF
0283	20392NS835	ELECTRICAL JUNCTION BOX TYPE C	4.00	EACH
0284	21532ED	RAIL SYSTEM TYPE III	639.80	LF
0285	02403	REMOVE CONCRETE MASONRY	30.20	CUYD
0286	08002	STRUCTURE EXCAV-SOLID ROCK	43.00	CUYD
0287	08003	FOUNDATION PREPARATION	1.00	LS
0288	08100	CONCRETE-CLASS A	119.40	CUYD
0289	08150	STEEL REINFORCEMENT	11,014.00	LB
0290	23930EC	LIGHTWEIGHT CELLULAR CONCRETE FILL	1,909.00	CUYD
0291	02403	REMOVE CONCRETE MASONRY	77.00	CUYD
0292	08002	STRUCTURE EXCAV-SOLID ROCK	24.00	CUYD
0293	08003	FOUNDATION PREPARATION	1.00	LS
0294	08100	CONCRETE-CLASS A	229.20	CUYD
0295	08150	STEEL REINFORCEMENT	25,865.00	LB
0296	23930EC	LIGHTWEIGHT CELLULAR CONCRETE FILL	1,167.70	CUYD
0297	02203	STRUCTURE EXCAV-UNCLASSIFIED	3,549.00	CUYD
0298	02223	GRANULAR EMBANKMENT	760.00	CUYD
0299	08018	RETAINING WALL	7,275.00	SQFT
0300	02155	PAVED DITCH TYPE 1 MOD	774.00	SQYD
0301	02203	STRUCTURE EXCAV-UNCLASSIFIED	1,904.00	CUYD
0302	02231	STRUCTURE GRANULAR BACKFILL	314.00	CUYD
0303	02998	MASONRY COATING	459.00	SQYD
0304	08018	RETAINING WALL	30,660.00	SQFT
0305	08033	TEST PILES	730.00	LF
0306	08039	PRE-DRILLING FOR PILES	8,206.00	LF
0307	08170	SHEAR CONNECTORS - (APPROXIMATELY 7,196, 7-113.01)	1.00	LS

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0308	21432NC	CONCRETE FORMLINER	25,900.00	SQFT
0309	24718EC	PILES-STEEL W21 X 166	3,631.00	LF
0310	24719EC	PILES-STEEL W21 X 122	3,060.00	LF
0311	24720EC	PILES-STEEL W21 X 93	553.00	LF
0312	06400	GMSS GALV STEEL TYPE A	13,241.00	LB
0313	06401	FLEXIBLE DELINEATOR POST-M/W	70.00	EACH
0314	06404	FLEXIBLE DELINEATOR POST-M/Y	70.00	EACH
0315	06405	SBM ALUMINUM PANEL SIGNS	4,451.00	SQFT
0316	06406	SBM ALUM SHEET SIGNS .080 IN	70.00	SQFT
0317	06407	SBM ALUM SHEET SIGNS .125 IN	568.00	SQFT
0318	06410	STEEL POST TYPE 1	1,044.00	LF
0319	06412	STEEL POST MILE MARKERS	6.00	EACH
0320	06415	OSS GALV STEEL CANTILEVER	2.00	EACH
0321	06438	OSS ALUMINUM 80 FT TRUSS	1.00	EACH
0322	06441	GMSS GALV STEEL TYPE C	11,402.00	LB
0323	06449	REM OVERHEAD SIGN SUPPORT STR	1.00	EACH
0324	06450	REM OVERHEAD STRUC CONC BASE	1.00	EACH
0325	06451	REMOVE SIGN SUPPORT BEAM	40.00	EACH
0326	06490	CLASS A CONCRETE FOR SIGNS	76.00	CUYD
0327	06491	STEEL REINFORCEMENT FOR SIGNS	4,204.00	LB
0328	20418ED	REMOVE & RELOCATE SIGNS	3.00	EACH
0329	20419ND	ROADWAY CROSS SECTION	17.00	EACH
0330	21373ND	REMOVE SIGN	23.00	EACH
0331	21596ND	GMSS TYPE D	10.00	EACH
0332	24631EC	BARCODE SIGN INVENTORY	131.00	EACH
0333	04710	POLE 80 FT MTG HT HIGH MAST	9.00	EACH
0334	04741	POLE BASE IN MEDIAN WALL	40.00	EACH
0335	04761	LIGHTING CONTROL EQUIPMENT	2.00	EACH
0336	04780	FUSED CONNECTOR KIT	80.00	EACH
0337	04797	CONDUIT-3 IN	1,053.00	LF
0338	04800	MARKER	11.00	EACH
0339	04820	TRENCHING AND BACKFILLING	5,600.00	LF
0340	04832	WIRE-NO. 12	5,400.00	LF
0341	04833	WIRE-NO. 8	6,750.00	LF
0342	04834	WIRE-NO. 6	21,000.00	LF
0343	04860	CABLE-NO. 8/3C DUCTED	6,000.00	LF
0344	04861	CABLE-NO. 6/3C DUCTED	1,200.00	LF
0345	04862	CABLE-NO. 4/3C DUCTED	2,500.00	LF
0346	04940	REMOVE LIGHTING - (7-113.01)	1.00	LS
0347	20391NS835	ELECTRICAL JUNCTION BOX TYPE A	11.00	EACH
0348	20392NS835	ELECTRICAL JUNCTION BOX TYPE C	2.00	EACH
0349	20410ED	MAINTAIN LIGHTING - (7-113.01)	1.00	LS
0350	21543EN	BORE AND JACK CONDUIT	1,050.00	LF
0351	23161EN	POLE BASE-HIGH MAST	95.00	CUYD
0352	24589ED	LED LUMINAIRE	40.00	EACH
0353	24739EC	POLE 40 FT MTG HT W/12 IN ARM	40.00	EACH
0354	24749EC	HIGH MAST LED LUMINAIRE	48.00	EACH
0355	02568	MOBILIZATION	1.00	LS
0356	02569	DEMOBILIZATION	1.00	LS

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0357	02742	TRAINEE PAYMENT REIMBURSEMENT - GROUP 1 OPERATOR	1,600.00	HOUR
0358	02742	TRAINEE PAYMENT REIMBURSEMENT - CEMENT MASON	1,200.00	HOUR
0359	02742	TRAINEE PAYMENT REIMBURSEMENT - GROUP 2, 3 OR 4 OPERATOR	1,400.00	HOUR

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 2012 with the 2012 Revision.*

Supplemental Specifications to the Standard Specifications for Road and Bridge Construction, 2012 Edition Effective with the August 22, 2014 Letting

Subsection: **Revision:**	102.15 Process Agent. Replace the 1st paragraph with the following: Every corporation doing business with the Department shall submit evidence of compliance with KRS Sections 14A.4-010, 271B.11-010, 271B.11-070, 271B.11-080, 271B.5-010 and 271B.16-220, and file with the Department the name and address of the process agent upon whom process may be served.
Subsection: **Revision:**	105.13 Claims Resolution Process. Delete all references to TC 63-34 and TC 63-44 from the subsection as these forms are no longer available through the forms library and are forms generated within the AASHTO SiteManager software.
Subsection: **Revision:**	108.03 Preconstruction Conference. Replace 8) Staking with the following: 8) Staking (designated by a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	109.07.02 Fuel. Revise item Crushed Aggregate Used for Embankment Stabilization to the following: Crushed Aggregate Used for Stabilization of Unsuitable Materials Used for Embankment Stabilization
	Delete the following item from the table. ~~Crushed Sandstone Base (Cement Treated)~~
Subsection: **Revision:**	110.02 Demobilization. Replace the first part of the first sentence of the second paragraph with the following: Perform all work and operations necessary to accomplish final clean-up as specified in the first paragraph of Subsection 105.12;
Subsection: **Revision:**	112.03.12 Project Traffic Coordinator (PTC). Replace the last paragraph of this subsection with the following: Ensure the designated PTC has sufficient skill and experience to properly perform the task assigned and has successfully completed the qualification courses.
Subsection: **Revision:**	112.04.18 Diversions (By-Pass Detours). Insert the following sentence after the 2nd sentence of this subsection. The Department will not measure temporary drainage structures for payment when the contract documents provide the required drainage opening that must be maintained with the diversion. The temporary drainage structures shall be incidental to the construction of the diversion. If the contract documents fail to provide the required drainage opening needed for the diversion, the cost of the temporary drainage structure will be handled as extra work in accordance with section 109.04.
Subsection: **Revision:**	201.03.01 Contractor Staking. Replace the first paragraph with the following: Perform all necessary surveying under the general supervision of a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.

Supplemental Specifications to the Standard Specifications for Road and Bridge Construction, 2012 Edition Effective with the August 22, 2014 Letting

Subsection: **Revision:**	201.04.01 Contractor Staking. Replace the last sentence of the paragraph with the following: Complete the general layout of the project under the supervision of a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	206.04.01 Embankment-in-Place. Replace the fourth paragraph with the following: The Department will not measure **suitable** excavation included in the original plans that is disposed of for payment and will consider it incidental to Embankment-in-Place.
Subsection: **Revision:**	208.02.01 Cement. Replace paragraph with the following: Select Type I or Type II cement conforming to Section 801. Use the same type cement throughout the work.
Subsection: **Revision:**	208.03.06 Curing and Protection. Replace the fourth paragraph with the following: Do not allow traffic or equipment on the finished surface until the stabilized subgrade has cured for a total of 7-days with an ambient air temperature above 40 degrees Fahrenheit. A curing day consists of a continuous 24-hour period in which the ambient air temperature does not fall below 40 degrees Fahrenheit. Curing days will not be calculated consecutively, but must total seven (7) , 24-hour days with the ambient air temperature remaining at or above 40 degrees Fahrenheit before traffic or equipment will be allowed to traverse the stabilized subgrade. The Department may allow a shortened curing period when the Contractor requests. The Contractor shall give the Department at least 3 day notice of the request for a shortened curing period. The Department will require a minimum of 3 curing days after final compaction. The Contractor shall furnish cores to the treated depth of the roadbed at 500 feet intervals for each lane when a shortened curing time is requested. The Department will test cores using an unconfined compression test. Roadbed cores must achieve a minimum strength requirement of 80 psi.
Subsection: **Revision:**	208.03.06 Curing and Protection. Replace paragraph eight with the following: At no expense to the Department, repair any damage to the subgrade caused by freezing.
Subsection: **Part:** **Revision:**	212.03.03 Permanent Seeding and Protection. A) Seed Mixtures for Permanent Seeding. Revise **Seed Mix Type I** to the mixture shown below: 50% Kentucky 31 Tall Fescue (Festuca arundinacea) 35% Hard Fescue (Festuca (Festuca longifolia) 10% Ryegrass, Perennial (Lolium perenne) 5% White Dutch Clover (Trifolium repens)
Subsection: **Part:** **Number:** **Revision:**	212.03.03 Permanent Seeding and Protection. A) Seed Mixtures for Permanent Seeding. 2) Replace the paragraph with the following: Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 4, 5, 6, and 7. Apply seed mix Type II at a minimum application rate of 100 pounds per acre. If adjacent to a golf course replace the crown vetch with Kentucky 31 Tall Fescue.

Supplemental Specifications to the Standard Specifications for Road and Bridge Construction, 2012 Edition Effective with the August 22, 2014 Letting

Subsection: **Part:** **Number:** **Revision:**	212.03.03 Permanent Seeding and Protection. A) Seed Mixtures for Permanent Seeding. 3) Replace the paragraph with the following: Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 1, 2, 3, 8, 9, 10, 11, and 12. Apply seed mix Type III at a minimum application rate of 100 pounds per acre. If adjacent to crop land or golf course, replace the Sericea Lespedeza with Kentucky 31 Fescue.
Subsection: **Part:** **Revision:**	212.03.03 Permanent Seeding and Protection. B) Procedures for Permanent Seeding. Delete the first sentence of the section.
Subsection: **Part:** **Revision:**	212.03.03 Permanent Seeding and Protection. B) Procedures for Permanent Seeding. Replace the second and third sentence of the section with the following: Prepare a seedbed and apply an initial fertilizer that contains a minimum of 100 pounds of nitrogen, 100 pounds of phosphate, and 100 pounds of potash per acre. Apply agricultural limestone to the seedbed when the Engineer determines it is needed. When required, place agricultural limestone at a rate of 3 tons per acre.
Subsection: **Part:** **Revision:**	212.03.03 Permanent Seeding and Protection. D) Top Dressing. Change the title of part to D) Fertilizer.
Subsection: **Part:** **Revision:**	212.03.03 Permanent Seeding and Protection. D) Fertilizer. Replace the first paragraph with the following: Apply fertilizer at the beginning of the seeding operation and after vegetation is established. Use fertilizer delivered to the project in bags or bulk. Apply initial fertilizer to all areas prior to the seeding or sodding operation at the application rate specified in 212.03.03 B). Apply 20-10-10 fertilizer to the areas after vegetation has been established at a rate of 11.5 pounds per 1,000 square feet. Obtain approval from the Engineer prior to the 2nd fertilizer application. Reapply fertilizer to any area that has a streaked appearance. The reapplication shall be at no additional cost to the Department. Re-establish any vegetation severely damaged or destroyed because of an excessive application of fertilizer at no cost to the Department.
Subsection: **Part:** **Revision:**	212.03.03 Permanent Seeding and Protection. D) Fertilizer. Delete the second paragraph.
Subsection: **Revision:**	212.04.04 Agricultural Limestone. Replace the entire section with the following: The Department will measure the quantity of agricultural limestone in tons.
Subsection: **Revision:**	212.04.05 Fertilizer. Replace the entire section with the following: The Department will measure fertilizer used in the seeding or sodding operations for payment. The Department will measure the quantity by tons.

Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2012 Edition
Effective with the August 22, 2014 Letting

Subsection:	212.05 PAYMENT.
Revision:	Delete the following item code: Code — Pay Item — Pay Unit 05966 — Topdressing Fertilizer — Ton
Subsection:	212.05 PAYMENT.
Revision:	Add the following pay items: Code — Pay Item — Pay Unit 05963 — Initial Fertilizer — Ton 05964 — 20-10-10 Fertilizer — Ton 05992 — Agricultural Limestone — Ton
Subsection:	213.03.02 Progress Requirements.
Revision:	Replace the last sentence of the third paragraph with the following: Additionally, the Department will apply a penalty equal to the liquidated damages when all aspects of the work are not coordinated in an acceptable manner within 7 calendar days after written notification.
Subsection:	213.03.05 Temporary Control Measures.
Part:	E) Temporary Seeding and Protection.
Revision:	Delete the second sentence of the first paragraph.
Subsection:	304.02.01 Physical Properties.
Table:	Required Geogrid Properties
Revision:	Replace all references to Test Method "GRI-GG2-87" with ASTM D 7737.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	B) Sampling.
Revision:	Replace the second sentence with the following: The Department will determine when to obtain the quality control samples using the random-number feature of the mix design submittal and approval spreadsheet. The Department will randomly determine when to obtain the verification samples required in Subsections 402.03.03 and 402.03.04 using the Asphalt Mixture Sample Random Tonnage Generator.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	D) Testing Responsibilities.
Number:	3) VMA.
Revision:	Add the following paragraph below Number 3) VMA: Retain the AV/VMA specimens and one additional corresponding G_{mm} sample for 5 working days for mixture verification testing by the Department. For Specialty Mixtures, retain a mixture sample for 5 working days for mixture verification testing by the Department. When the Department's test results do not verify that the Contractor's quality control test results are within the acceptable tolerances according to Subsection 402.03.03, retain the samples and specimens from the affected sublot(s) for the duration of the project.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	D) Testing Responsibilities.
Number:	4) Density.
Revision:	Replace the second sentence of the Option A paragraph with the following: Perform coring by the end of the following work day.

Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2012 Edition
Effective with the August 22, 2014 Letting

Subsection: **Part:** **Number:** **Revision:**	402.03.02 Contractor Quality Control and Department Acceptance. D) Testing Responsibilities. 5) Gradation. Delete the second paragraph.
Subsection: **Part:** **Number:** **Revision:**	402.03.02 Contractor Quality Control and Department Acceptance. H) Unsatisfactory Work. 1) Based on Lab Data. Replace the second paragraph with the following: When the Engineer determines that safety concerns or other considerations prohibit an immediate shutdown, continue work and the Department will make an evaluation of acceptability according to Subsection 402.03.05.
Subsection: **Revision:**	402.03.03 Verification. Replace the first paragraph with the following: **402.03.03 Mixture Verification.** For volumetric properties, the Department will perform a minimum of one verification test for AC, AV, and VMA according to the corresponding procedures as given in Subsection 402.03.02. The Department will randomly determine when to obtain the verification sample using the Asphalt Mixture Sample Random Tonnage Generator. For specialty mixtures, the Department will perform one AC and one gradation determination per lot according to the corresponding procedures as given in Subsection 402.03.02. However, Department personnel will not perform AC determinations according to KM 64-405. The Contractor will obtain a quality control sample at the same time the Department obtains the mixture verification sample and perform testing according to the procedures given in Subsection 402.03.02. If the Contractor's quality control sample is verified by the Department's test results within the tolerances provided below, the Contractor's sample will serve as the quality control sample for the affected sublot. The Department may perform the mixture verification test on the Contractor's equipment or on the Department's equipment.
Subsection: **Part:** **Revision:**	402.03.03 Verification. A) Evaluation of Sublot(s) Verified by Department. Replace the third sentence of the second paragraph with the following: When the paired *t* -test indicates that the Contractor's data and Department's data are possibly not from the same population, the Department will investigate the cause for the difference according to Subsection 402.03.05 and implement corrective measures as the Engineer deems appropriate.
Subsection: **Part:** **Revision:**	402.03.03 Verification. B) Evaluation of Sublots Not Verified by Department. Replace the third sentence of the first paragraph with the following: When differences between test results are not within the tolerances listed below, the Department will resolve the discrepancy according to Subsection 402.03.05.

Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2012 Edition
Effective with the August 22, 2014 Letting

Subsection: **Part:** **Revision:**	402.03.03 Verification. B) Evaluation of Sublots Not Verified by Department. Replace the third sentence of the second paragraph with the following: When the *F* -test or *t* -test indicates that the Contractor's data and Department's data are possibly not from the same population, the Department will investigate the cause for the difference according to Subsection 402.03.05 and implement corrective measures as the Engineer deems appropriate.
Subsection: **Part:** **Revision:**	402.03.03 Verification. C) Test Data Patterns. Replace the second sentence with the following: When patterns indicate substantial differences between the verified and non-verified sublots, the Department will perform further comparative testing according to subsection 402.03.05.
Subsection: **Revision:**	402.03 CONSTRUCTION. Add the following subsection: **402.03.04 Testing Equipment and Technician Verification.** For mixtures with a minimum quantity of 20,000 tons and for every 20,000 tons thereafter, the Department will obtain an additional verification sample at random using the Asphalt Mixture Sample Random Tonnage Generator in order to verify the integrity of the Contractor's and Department's laboratory testing equipment and technicians. The Department will obtain a mixture sample of at least 150 lb at the asphalt mixing plant according to KM 64-425 and split it according to AASHTO R 47. The Department will retain one split portion of the sample and provide the other portion to the Contractor. At a later time convenient to both parties, the Department and Contractor will simultaneously reheat the sample to the specified compaction temperature and test the mixture for AV and VMA using separate laboratory equipment according to the corresponding procedures given in Subsection 402.03.02. The Department will evaluate the differences in test results between the two laboratories. When the difference between the results for AV or VMA is not within ± 2.0 percent, the Department will investigate and resolve the discrepancy according to Subsection 402.03.05.
Subsection: **Revision:**	402.03.04 Dispute Resolution. Change the subsection number to 402.03.05.
Subsection: **Part:** **Table:** **Revision:**	402.05 PAYMENT. Lot Pay Adjustment Schedule Compaction Option A Base and Binder Mixtures AC Replace the Deviation from JMF(%) that corresponds to a Pay Value of 0.95 to ±0.6.
Subsection: **Revision:**	403.02.10 Material Transfer Vehicle (MTV). Replace the first sentence with the following: In addition to the equipment specified above, provide a MTV with the following minimum characteristics:
Subsection: **Revision:**	412.02.09 Material Transfer Vehicle (MTV). Replace the paragraph with the following: Provide and utilize a MTV with the minimum characteristics outlined in section 403.02.10.

Subsection: **Revision:**	412.03.07 Placement and Compaction. Replace the first paragraph with the following: Use a MTV when placing SMA mixture in the driving lanes. The MTV is not required on ramps and/or shoulders unless specified in the contract. When the Engineer determines the use of the MTV is not practical for a portion of the project, the Engineer may waive its requirement for that portion of pavement by a letter documenting the waiver.
Subsection: **Revision:**	412.04 MEASUREMENT. Add the following subsection: 412.04.03. Material Transfer Vehicle (MTV). The Department will not measure the MTV for payment and will consider its use incidental to the asphalt mixture.
Subsection: **Part:** **Revision:**	501.03.19 Surface Tolerances and Testing Surface. B) Ride Quality. Add the following to the end of the first paragraph: The Department will specify if the ride quality requirements are Category A or Category B when ride quality is specified in the Contract. Category B ride quality requirements shall apply when the Department fails to classify which ride quality requirement will apply to the Contract.
Subsection: **Revision:**	603.03.06 Cofferdams. Replace the seventh sentence of paragraph one with the following: Submit drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	605.03.04 Tack Welding. Insert the subsection and the following: 605.03.04 Tack Welding. The Department does not allow tack welding.
Subsection: **Part:** **Number:** **Revision:**	606.03.17 Special Requirements for Latex Concrete Overlays. A) Existing Bridges and New Structures. 1) Prewetting and Grout-Bond Coat. Add the following sentence to the last paragraph: Do not apply a grout-bond coat on bridge decks prepared by hydrodemolition.
Subsection: **Revision:**	609.03 Construction. Replace Subsection 609.03.01 with the following: 609.03.01 A) Swinging the Spans. Before placing concrete slabs on steel spans or precast concrete release the temporary erection supports under the bridge and swing the span free on its supports. 609.03.01 B) Lift Loops. Cut all lift loops flush with the top of the precast beam once the beam is placed in the final location and prior to placing steel reinforcement. At locations where lift loops are cut, paint the top of the beam with galvanized or epoxy paint.
Subsection: **Revision:**	611.03.02 Precast Unit Construction. Replace the first sentence of the subsection with the following: Construct units according to ASTM C1577, **replacing Table 1 (Design Requirements for Precast Concrete Box Sections Under Earth, Dead and HL-93 Live Load Conditions) with KY Table 1 (Precast Culvert KYHL-93 Design Table)**, and Section 605 with the following exceptions and additions:

Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2012 Edition
Effective with the August 22, 2014 Letting

Subsection: **Number:** **Revision:**	613.03.01 Design. 2) Replace "AASHTO Standard Specifications for Highway Bridges" with "AASHTO LRFD Bridge Design Specifications"
Subsection: **Revision:**	615.06.02 Add the following sentence to the end of the subsection. The ends of units shall be normal to walls and centerline except exposed edges shall be beveled ¾ inch.
Subsection: **Revision:**	615.06.03 Placement of Reinforcement in Precast 3-Sided Units. Replace the reference of 6.6 in the section to 615.06.06.
Subsection: **Revision:**	615.06.04 Placement of Reinforcement for Precast Endwalls. Replace the reference of 6.7 in the section to 615.06.07.
Subsection: **Revision:**	615.06.06 Laps, Welds, and Spacing for Precast 3-Sided Units. Replace the subsection with the following: Tension splices in the circumferential reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. The overlap of welded wire fabric shall be measured between the outer most longitudinal wires of each fabric sheet. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. For splices other than tension splices, the overlap shall be a minimum of 12" for welded wire fabric or deformed billet-steel bars. The spacing center to center of the circumferential wires in a wire fabric sheet shall be no less than 2 inches and no more than 4 inches. The spacing center to center of the longitudinal wires shall not be more than 8 inches. The spacing center to center of the longitudinal distribution steel for either line of reinforcing in the top slab shall be not more than 16 inches.
Subsection: **Revision:**	615.06.07 Laps, Welds, and Spacing for Precast Endwalls. Replace the subsection with the following: Splices in the reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. The spacing center-to-center of the wire fabric sheet shall not be less than 2 inches or more than 8 inches.

Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2012 Edition
Effective with the August 22, 2014 Letting

Subsection: **Revision:**	615.08.01 Type of Test Specimen. Replace the subsection with the following: Start-up slump, air content, unit weight, and temperature tests will be performed each day on the first batch of concrete. Acceptable start-up results are required for production of the first unit. After the first unit has been established, random acceptance testing is performed daily for each 50 yd^3 (or fraction thereof). In addition to the slump, air content, unit weight, and temperature tests, a minimum of one set of cylinders shall be required each time plastic property testing is performed.
Subsection: **Revision:**	615.08.02 Compression Testing. Delete the second sentence.
Subsection: **Revision:**	615.08.04 Acceptability of Core Tests. Delete the entire subsection.
Subsection: **Revision:**	615.12 Inspection. Add the following sentences to the end of the subsection: Units will arrive at jobsite with the "Kentucky Oval" stamped on the unit which is an indication of acceptable inspection at the production facility. Units shall be inspected upon arrival for any evidence of damage resulting from transport to the jobsite.
Subsection: **Revision:**	716.02.02 Paint. Replace sentence with the following: Conform to Section 821.
Subsection: **Revision:**	716.03 CONSTRUCTION. Replace bullet 5) with the following: 5) AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims,
Subsection: **Revision:**	716.03.02 Lighting Standard Installation. Replace the second sentence with the following: Regardless of the station and offset noted, locate all poles/bases behind the guardrail a minimum of four feet from the front face of the guardrail to the front face of the pole base.
Subsection: **Part:** **Revision:**	716.03.02 Lighting Standard Installation. A) Conventional Installation. Replace the third sentence with the following: Orient the transformer base so the door is positioned on the side away from on-coming traffic.
Subsection: **Part:** **Number:** **Revision:**	716.03.02 Lighting Standard Installation. A) Conventional Installation. 1) Breakaway Installation and Requirements. Replace the first sentence with the following: For breakaway supports, conform to Section 12 of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
Subsection: **Part:** **Revision:**	716.03.02 Lighting Standard Installation. B) High Mast Installation Replace the first sentence with the following: Install each high mast pole as noted on plans.
Subsection: **Part:** **Number:** **Revision:**	716.03.02 Lighting Standard Installation. B) High Mast Installation 2) Concrete Base Installation Modification of Chart and succeeding paragraphs within this section:

Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2012 Edition
Effective with the August 22, 2014 Letting

Drilled Shaft Depth Data							
Level Ground		3:1 Ground Slope		2:1 Ground Slope		1.5:1 Ground Slope (2)	
Soil	Rock	Soil	Rock	Soil	Rock	Soil	Rock
17 ft	7 ft	19 ft	7 ft	20 ft	7 ft	(1)	7 ft

Steel Requirements			
Vertical Bars		Ties or Spiral	
Size	Total	Size	Spacing or Pitch
#10	16	#4	12 inch

(1): Shaft length is 22' for cohesive soil only. For cohesionless soil, contact geotechnical branch for design.
(2): Do not construct high mast drilled shafts on ground slopes steeper than 1.5:1 without the approval of the Division of Traffic.

If rock is encountered during drilling operations and confirmed by the engineer to be of sound quality, the shaft is only required to be further advanced into the rock by the length of rock socket shown in the table. The total length of the shaft need not be longer than that of soil alone. Both longitudinal rebar length and number of ties or spiral length shall be adjusted accordingly.

If a shorter depth is desired for the drilled shaft, the contractor shall provide, for the state's review and approval, a detailed column design with individual site specific soil and rock analysis performed and approved by a Professional Engineer licensed in the Commonwealth of Kentucky.

Spiral reinforcement may be substituted for ties. If spiral reinforcement is used, one and one-half closed coils shall be provided at the ends of each spiral unit. Subsurface conditions consisting of very soft clay or very loose saturated sand could result in soil parameters weaker than those assumed. Engineer shall consult with the geotechnical branch if such conditions are encountered.

The bottom of the drilled hole shall be firm and thoroughly cleaned so no loose or compressible materials are present at the time of the concrete placement. If the drilled hole contains standing water, the concrete shall be placed using a tremie to displace water. Continuous concrete flow will be required to insure full displacement of any water.

The reinforcement and anchor bolts shall be adequately supported in the proper positions so no movement occurs during concrete placement. Welding of anchor bolts to the reinforcing cage is unacceptable, templates shall be used. Exposed portions of the foundation shall be formed to create a smooth finished surface. All forming shall be removed upon completion of foundation construction.

Subsection: 716.03.03 Trenching.
Part: A) Trenching of Conduit for Highmast Ducted Cables.
Revision: Add the following after the first sentence: If depths greater than 24 inches are necessary, obtain the Engineer's approval and maintain the required conduit depths coming into the junction boxes. No payment for additional junction boxes for greater depths will be allowed.

Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2012 Edition
Effective with the August 22, 2014 Letting

Subsection: **Part:** **Revision:**	716.03.03 Trenching. B) Trenching of Conduit for Non-Highmast Cables. Add the following after the second sentence: If depths greater than 24 inches are necessary for either situation listed previously, obtain the Engineer's approval and maintain the required conduit depths coming into the junction boxes. No payment for additional junction boxes for greater depths will be allowed.
Subsection: **Revision:**	716.03.10 Junction Boxes. Replace subsection title with the following: Electrical Junction Box.
Subsection: **Revision:**	716.04.07 Pole with Secondary Control Equipment. Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure mounting the cabinet to the pole, backfilling, restoration, any necessary hardware to anchor pole, or electrical inspection fees, and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, specified conduits, meter base, transformer, service panel, fused cutout, fuses, lighting arrestors, photoelectrical control, circuit breaker, contactor, manual switch, ground rods, and ground wires and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.08 Lighting Control Equipment. Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure constructing the concrete base, excavation, backfilling, restoration, any necessary anchors, or electrical inspection fees, and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, specified conduits, meter base, transformer, service panel, fused cutout, fuses, lighting arrestors, photoelectrical control, circuit breakers, contactor, manual switch, ground rods, and ground wires and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.09 Luminaire. Replace the first sentence with the following: The Department will measure the quantity as each individual unit furnished and installed.
Subsection: **Revision:**	716.04.10 Fused Connector Kits. Replace the first sentence with the following: The Department will measure the quantity as each individual unit furnished and installed.
Subsection: **Revision:**	716.04.13 Junction Box. Replace the subsection title with the following: Electrical Junction Box Type Various.
Subsection: **Part:** **Revision:**	716.04.13 Junction Box. A) Junction Electrical. Rename A) Junction Electrical to the following: A) Electrical Junction Box.
Subsection: **Revision:**	716.04.14 Trenching and Backfilling. Replace the second sentence with the following: The Department will not measure excavation, backfilling, underground utility warning tape (if required), the restoration of disturbed areas to original condition, and will consider them incidental to this item of work.

Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2012 Edition
Effective with the August 22, 2014 Letting

Subsection: **Revision:**	716.04.18 Remove Lighting. Replace the paragraph with the following: The Department will measure the quantity as a lump sum for the removal of lighting equipment. The Department will not measure the disposal of all equipment and materials off the project by the contractor. The Department also will not measure the transportation of the materials and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.20 Bore and Jack Conduit. Replace the paragraph with the following: The Department will measure the quantity in linear feet. This item shall include all work necessary for boring and installing conduit under an existing roadway. Construction methods shall be in accordance with Sections 706.03.02, paragraphs 1, 2, and 4.
Subsection: **Revision:**	716.05 PAYMENT. Replace items 04810-04811, 20391NS835 and, 20392NS835 under Code, Pay Item, and Pay Unit with the following: Code — Pay Item — Pay Unit 04810 — Electrical Junction Box — Each 04811 — Electrical Junction Box Type B — Each 20391NS835 — Electrical Junction Box Type A — Each 20392NS835 — Electrical Junction Box Type C — Each
Subsection: **Revision:**	723.02.02 Paint. Replace sentence with the following: Conform to Section 821.
Subsection: **Revision:**	723.03 CONSTRUCTION. Replace bullet 5) with the following: 5) AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims,
Subsection: **Revision:**	723.03.02 Poles and Bases Installation. Replace the first sentence with the following: Regardless of the station and offset noted, locate all poles/bases behind the guardrail a minimum of four feet from the front face of the guardrail to the front face of the pole base.
Subsection: **Part:** **Revision:**	723.03.02 Poles and Bases Installation. A) Steel Strain and Mastarm Poles Installation Replace the second paragraph with the following: For concrete base installation, see Section 716.03.02, B), 2), Paragraphs 2-7. Drilled shaft depth shall be based on the soil conditions encountered during drilling and slope condition at the site. Refer to the design chart below:
Subsection: **Part:** **Revision:**	723.03.02 Poles and Bases Installation. B) Pedestal or Pedestal Post Installation. Replace the fourth sentence of the paragraph with the following: For breakaway supports, conform to Section 12 of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.

Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2012 Edition
Effective with the August 22, 2014 Letting

Subsection: **Part:** **Revision:**	723.03.03 Trenching. A) Under Roadway. Add the following after the second sentence: If depths greater than 24 inches are necessary, obtain the Engineer's approval and maintain ether required conduit depths coming into the junction boxes. No payment for additional junction boxes for greater depths will be allowed.
Subsection: **Revision:**	723.03.11 Wiring Installation. Add the following sentence between the fifth and sixth sentences: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes.
Subsection: **Revision:**	723.03.12 Loop Installation. Replace the fourth sentence of the 2nd paragraph with the following: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes.
Subsection: **Revision:**	723.04.02 Junction Box. Replace subsection title with the following: Electrical Junction Box Type Various.
Subsection: **Revision:**	723.04.03 Trenching and Backfilling. Replace the second sentence with the following: The Department will not measure excavation, backfilling, underground utility warning tape (if required), the restoration of disturbed areas to original condition, and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.10 Signal Pedestal. Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, specified conduits, fittings, ground rod, ground wire, backfilling, restoring disturbed areas, or other necessary hardware and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.15 Loop Saw Slot and Fill. Replace the second sentence with the following: The Department will not measure sawing, cleaning and filling induction loop saw slot, loop sealant, backer rod, and grout and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.16 Pedestrian Detector. Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished, installed and connected to pole/pedestal. The Department will not measure installing R10-3e (with arrow) sign, furnishing and installing mounting hardware for sign and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.18 Signal Controller- Type 170. Replace the second sentence with the following: The Department will not measure constructing the concrete base or mounting the cabinet to the pole, connecting the signal and detectors, excavation, backfilling, restoration, any necessary pole mounting hardware, electric service, or electrical inspection fees and will consider them incidental to this item of work. The Department will also not measure furnishing and connecting the induction of loop amplifiers, pedestrian isolators, load switches, model 400 modem card; furnishing and installing electrical service conductors, specified conduits, anchors, meter base, fused cutout, fuses, ground rods, ground wires and will consider them incidental to this item of work.

Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2012 Edition
Effective with the August 22, 2014 Letting

Subsection: **Revision:**	723.04.20 Install Signal Controller - Type 170. Replace the paragraph with the following: The Department will measure the quantity as each individual unit installed. The Department will not measure constructing the concrete base or mounting the cabinet to the pole, connecting the signal and detectors, and excavation, backfilling, restoration, any necessary pole mounting hardware, electric service, or electrical inspection fees and will consider them incidental to this item of work. The Department will also not measure connecting the induction loop amplifiers, pedestrian, isolators, load switches, model 400 modem card; furnishing and installing electrical service conductors, specified conduits, anchors, meter base, fused cutout, fuses, ground rods, ground wires and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.22 Remove Signal Equipment. Replace the paragraph with the following: The Department will measure the quantity as a lump sum removal of signal equipment. The Department will not measure the return of control equipment and signal heads to the Department of Highways as directed by the District Traffic Engineer. The Department also will not measure the transportation of materials of the disposal of all other equipment and materials off the project by the contractor and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.28 Install Pedestrian Detector Audible. Replace the second sentence with the following: The Department will not measure installing sign R10-3e (with arrow) and will consider it incidental to this item of work.
Subsection: **Revision:**	723.04.29 Audible Pedestrian Detector. Replace the second sentence with the following: The Department will not measure furnishing and installing the sign R10-3e (with arrow) and will consider it incidental to this item of work.
Subsection: **Revision:**	723.04.30 Bore and Jack Conduit. Replace the paragraph with the following: The Department will measure the quantity in linear feet. This item shall include all work necessary for boring and installing conduit under an existing roadway. Construction methods shall be in accordance with Sections 706.03.02, paragraphs 1, 2, and 4.
Subsection: **Revision:**	723.04.31 Install Pedestrian Detector. Replace the paragraph with the following: The Department will measure the quantity as each individual unit installed and connected to pole/pedestal. The Department will not measure installing sign R 10-3e (with arrow) and will consider it incidental to this item of work.
Subsection: **Revision:**	723.04.32 Install Mast Arm Pole. Replace the second sentence with the following: The Department will not measure arms, signal mounting brackets, anchor bolts, or any other necessary hardware and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.33 Pedestal Post. Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, anchor bolts, conduit, fittings, ground rod, ground wire, backfilling, restoration, or any other necessary hardware and will consider them incidental to this item of work.

Supplemental Specifications to the Standard Specifications for Road and Bridge Construction, 2012 Edition Effective with the August 22, 2014 Letting

Subsection: **Revision:**	723.04.36 Traffic Signal Pole Base. Replace the second sentence with the following: The Department will not measure excavation, reinforcing steel, anchor bolts, specified conduits, ground rods, ground wires, backfilling, or restoration and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.37 Install Signal Pedestal. Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, anchor bolts, specified conduits, fittings, ground rod, ground wire, backfilling, restoration, or any other necessary hardware and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.38 Install Pedestal Post. Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, anchor bolts, specified conduits, fittings, ground rod, ground wire, backfilling, restoration, or any other necessary hardware and will consider them incidental to this item of work.
Subsection: **Revision:**	723.05 PAYMENT. Replace items 04810-04811, 20391NS835 and, 20392NS835 under Code, Pay Item, and Pay Unit with the following: Code — Pay Item — Pay Unit 04810 — Electrical Junction Box — Each 04811 — Electrical Junction Box Type B — Each 20391NS835 — Electrical Junction Box Type A — Each 20392NS835 — Electrical Junction Box Type C — Each
Subsection: **Revision:**	804.01.02 Crushed Sand. Delete last sentence of the section.
Subsection: **Revision:**	804.01.06 Slag. Add subsection and following sentence. Provide blast furnace slag sand where permitted. The Department will allow steel slag sand only in asphalt surface applications.
Subsection: **Revision:**	804.04 Asphalt Mixtures. Replace the subsection with the following: Provide natural, crushed, conglomerate, or blast furnace slag sand, with the addition of filler as necessary, to meet gradation requirements. The Department will allow any combination of natural, crushed, conglomerate or blast furnace slag sand when the combination is achieved using cold feeds at the plant. The Engineer may allow other fine aggregates.
Subsection: **Revision:**	806.03.01 General Requirements. Replace the second sentence of the paragraph with the following: Additionally, the material must have a minimum solubility of 99.0 percent when tested according to AASHTO T 44 and PG 76-22 must exhibit a minimum recovery of 60 percent, with a J_{NR} (nonrecoverable creep compliance) between 0.1 and 0.5, when tested according to AASHTO TP 70.

Supplemental Specifications to the Standard Specifications for Road and Bridge Construction, 2012 Edition Effective with the August 22, 2014 Letting

Subsection: 806.03.01 General Requirements.
Table: PG Binder Requirements and Price Adjustment Schedule
Revision: Replace the Elastic Recovery, % [3] (AASHTO T301) and all corresponding values in the table with the following:

Test	Specification	100% Pay	90% Pay	80% Pay	70% Pay	50%Pay[1]
MSCR recovery, % [3] (AASHTO TP 70)	60 Min.	≥58	56	55	54	<53

Subsection: 806.03.01 General Requirements.
Table: PG Binder Requirements and Price Adjustment Schedule
Superscript: (3)
Revision: Replace [3] with the following:
Perform testing at 64°C.

Subsection: 813.04 Gray Iron Castings.
Revision: Replace the reference to "AASHTO M105" with "ASTM A48".

Subsection: 813.09.02 High Strength Steel Bolts, Nuts, and Washers.
Number: A) Bolts.
Revision: Delete first paragraph and "Hardness Number" Table. Replace with the following:
A) Bolts. Conform to ASTM A325 (AASHTO M164) or ASTM A490 (AASHTO 253) as applicable.

Subsection: 814.04.02 Timber Guardrail Posts.
Revision: Third paragraph, replace the reference to "AWPA C14" with "AWPA U1, Section B, Paragraph 4.1".

Subsection: 814.04.02 Timber Guardrail Posts.
Revision: Replace the first sentence of the fourth paragraph with the following:
Use any of the species of wood for round or square posts covered under AWPA U1.

Subsection: 814.04.02 Timber Guardrail Posts.
Revision: Fourth paragraph, replace the reference to "AWPA C2" with "AWPA U1, Section B, Paragraph 4.1".

Subsection: 814.04.02 Timber Guardrail Posts.
Revision: Delete the second sentence of the fourth paragraph.

Subsection: 814.05.02 Composite Plastic.
Revision: 1) Add the following to the beginning of the first paragraph: Select composite offset blocks conforming to this section and assure blocks are from a manufacturer included on the Department's List of Approved Materials.
2) Delete the last paragraph of the subsection.

Subsection: 816.07.02 Wood Posts and Braces.
Revision: First paragraph, replace the reference to "AWPA C5" with "AWPA U1, Section B, Paragraph 4.1".

Subsection: 816.07.02 Wood Posts and Braces.
Revision: Delete the second sentence of the first paragraph.

Subsection: 818.07 Preservative Treatment.
Revision: First paragraph, replace all references to "AWPA C14" with "AWPA U1, Section A".

Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2012 Edition
Effective with the August 22, 2014 Letting

Subsection: **Revision:**	834.14 Lighting Poles. Replace the first sentence with the following: Lighting pole design shall be in accordance with loading and allowable stress requirements of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims, with the exception of the following: The Cabinet will waive the requirement stated in the first sentence of Section 5.14.6.2 – Reinforced Holes and Cutouts for high mast poles (only). The minimum diameter at the base of the pole shall be 22 inches for high mast poles (only).
Subsection **Revision:**	834.14.03 High Mast Poles. Remove the second and fourth sentence from the first paragraph.
Subsection **Revision:**	834.14.03 High Mast Poles. Replace the third paragraph with the following: Provide calculations and drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	834.14.03 High Mast Poles. Replace paragraph six with the following: Provide a pole section that conforms to ASTM A 595 grade A with a minimum yield strength of 55 KSI or ASTM A 572 with a minimum yield strength of 55 KSI. Use tubes that are round or 16 sided with a four inch corner radius, have a constant linear taper of .144 in/ft and contain only one longitudinal seam weld. Circumferential welded tube butt splices and laminated tubes are not permitted. Provide pole sections that are telescopically slip fit assembled in the field to facilitate inspection of interior surface welds and the protective coating. The minimum length of the telescopic slip splices shall be 1.5 times the inside diameter of the exposed end of the female section. Use longitudinal seam welds as commended in Section 5.15 of the AASHTO 2013 Specifications. The thickness of the transverse base shall not be less than 2 inches. Plates shall be integrally welded to the tubes with a telescopic welded joint or a full penetration groove weld with backup bar. The handhole cover shall be removable from the handhole frame. One the frame side opposite the hinge, provide a mechanism on the handhole cover/frame to place the Department's standard padlock as specified in Section 834.25. The handhole frame shall have two stainless studs installed opposite the hinge to secure the handhole cover to the frame which includes providing stainless steel wing nuts and washers. The handhole cover shall be manufactured from 0.25 inch thick galvanized steel (ASTM A 153) and have a neoprene rubber gasket that is permanently secured to the handhole frame to insure weather-tight protection. The hinge shall be manufactured from 7-guage stainless steel to provide adjustability to insure weather-tight fit for the cover. The minimum clear distance between the transverse plate and the bottom opening of the handhole shall not be less than the diameter of the bottom tube of the pole but needs to be at least 15 inches. Provide products that are hot-dip galvanized to the requirements of either ASTM A123 (fabricated products) or ASTM A 153 (hardware items).
Subsection: **Revision:**	834.16 ANCHOR BOLTS. Insert the following sentence at the beginning of the paragraph: The anchor bolt design shall follow the NCHRP Report 494 Section 2.4 and NCHRP 469 Appendix A Specifications.

Subsection: **Revision:**	834.17.01 Conventional. Add the following sentence after the second sentence: Provide a waterproof sticker mounted on the bottom of the housing that is legible from the ground and indicates the wattage of the fixture by providing the first two numbers of the wattage.
Subsection: **Revision:**	834.21.01 Waterproof Enclosures. Replace the last five sentences in the second paragraph with the following sentences: Provide a cabinet door with a louvered air vent, filter-retaining brackets and an easy to clean metal filter. Provide a cabinet door that is keyed with a factory installed standard no. 2 corbin traffic control key. Provide a light fixture with switch and bulb. Use a 120-volt fixture and utilize a L.E.D. bulb (equivalent to 60 watts minimum). Fixture shall be situated at or near the top of the cabinet and illuminate the contents of the cabinet. Provide a 120 VAC GFI duplex receptacle in the enclosure with a separate 20 amp breaker.
Subsection: **Revision:**	835.07 Traffic Poles. Replace the first sentence of the first paragraph with the following: Pole diameter and wall thickness shall be calculated in accordance with the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
Subsection: **Revision:**	835.07 Traffic Poles. *Replace the first sentence of the fourth paragraph with the following: Ensure transverse plates have a thickness ≥ 2 inches. *Add the following sentence to the end of the fourth paragraph: The bottom pole diameter shall not be less than 16.25 inches.
Subsection: **Revision:**	835.07 Traffic Poles. Replace the third sentence of the fifth paragraph with the following: For anchor bolt design, pole forces shall be positioned in such a manner to maximize the force on any individual anchor bolt regardless of the actual anchor bolt orientation with the pole.
Subsection: **Revision:**	835.07 Traffic Poles. Replace the first and second sentence of the sixth paragraph with the following: The pole handhole shall be 25 inches by 6.5 inches. The handhole cover shall be removable from the handhole frame. On the frame side opposite the hinge, provide a mechanism on the handhole cover/frame to place the Department's standard padlock as specified in Section 834.25. The handhole frame shall have two stainless studs installed opposite the hinge to secure the handhole cover to the frame which includes providing stainless steel wing nuts and washers. The handhole cover shall be manufactured from 0.25 inch thick galvanized steel (ASTM 153) and have a neoprene rubber gasket that is permanently secured to the handhole frame to insure weather-tight protection. The hinge shall be manufactured from 7 gauge stainless steel to provide adjustability to insure a weather-tight fit for the cover. The minimum clear distance between the transverse plate and the bottom opening of the handhole shall not be less than the diameter of the bottom tube but needs to be at least 12 inches.

Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2012 Edition
Effective with the August 22, 2014 Letting

Subsection: **Revision:**	835.07 Traffic Poles. *Replace the first sentence of the last paragraph with the following: Provide calculations and drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky. *Replace the third sentence of the last paragraph with the following: All tables referenced in 835.07 are found in the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
Subsection: **Revision:**	835.07.01 Steel Strain Poles. Replace the second sentence of the second paragraph with the following: The detailed analysis shall be certified by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	835.07.01 Steel Strain Poles. Replace number 7. after the second paragraph with the following: 7. Fatigue calculations should be shown for all fatigue related connections. Provide the corresponding detail, stress category and example from table 11.9.3.1-1.
Subsection: **Revision:**	835.07.02 Mast Arm Poles. Replace the second sentence of the fourth paragraph with the following: The detailed analysis shall be certified by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	835.07.02 Mast Arm Poles. Replace number 7) after the fourth paragraph with the following: 7) Fatigue calculations should be shown for all fatigue related connections. Provide the corresponding detail, stress category and example from table 11.9.3.1-1.
Subsection: **Revision:**	835.07.03 Anchor Bolts. Add the following to the end of the paragraph: There shall be two steel templates (one can be used for the headed part of the anchor bolt when designed in this manner) provided per pole. Templates shall be contained within a 26.5 inch diameter. All templates shall be fully galvanized (ASTM A 153).
Subsection: **Revision:**	835.16.05 Optical Units. Replace the 3rd paragraph with the following: The list of certified products can be found on the following website: http://www.intertek.com.
Subsection: **Revision:**	835.19.01 Pedestrian Detector Body. Replace the first sentence with the following: Provide a four holed pole mounted aluminum rectangular housing that is compatible with the pedestrian detector.
Subsection: **Table:** **Revision:**	843.01.01 Geotextile Fabric. TYPE I FABRIC GEOTEXTILES FOR SLOPE PROTECTION AND CHANNEL LINING Add the following to the chart: Property — Minimum Value(1) — Test Method CBR Puncture (lbs) — 494 — ASTM D6241 Permittivity (1/s) — 0.7 — ASTM D4491

Supplemental Specifications to the Standard Specifications for Road and Bridge Construction, 2012 Edition Effective with the August 22, 2014 Letting

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE II FABRIC GEOTEXTILES FOR UNDERDRAINS
Revision: Add the following to the chart:

Property	Minimum Value[1]	Test Method
CBR Puncture (lbs)	210	ASTM D6241
Permittivity (1/s)	0.5	ASTM D4491

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE III FABRIC GEOTEXTILES FOR SUBGRADE OR EMBANKMENT STABILIZATION
Revision: Add the following to the chart:

Property	Minimum Value[1]	Test Method
CBR Puncture (lbs)	370	ASTM D6241
Permittivity (1/s)	0.05	ASTM D4491

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE IV FABRIC GEOTEXTILES FOR EMBANKMENT DRAINAGE BLANKETS AND PAVEMENT EDGE DRAINS
Revision: Add the following to the chart:

Property	Minimum Value[1]	Test Method
CBR Puncture (lbs)	309	ASTM D6241
Permittivity (1/s)	0.5	ASTM D4491

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE V HIGH STRENGTH GEOTEXTILE FABRIC
Revision: Make the following changes to the chart:

Property	Minimum Value[1]	Test Method
CBR Puncture (lbs)	618	ASTM D6241
Grab Strength (lbs)	700	ASTM D4632
Apparent Opening Size	U.S. #40[3]	ASTM D4751

[3] Maximum average roll value.

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.

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

11C

SPECIAL NOTE FOR DRILLED SHAFTS

1.0 DESCRIPTION. Furnish all equipment, materials and labor necessary for constructing reinforced concrete drilled shafts in cylindrically excavated holes according to the details shown on the plans or as the Engineer directs. Construct the shaft to the lines and dimensions shown on the plans, or as the Engineer directs. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

2.0 MATERIALS.

2.1 Concrete. Use Class A Modified concrete unless otherwise shown on the plans. The slump at the time of placement shall be 6.5 to 9.5 inches, the coarse aggregate shall be size 67, 68, 78, 8 or 9M, and the water/cementitious material ratio shall not exceed 0.45. Include water reducing and retarding admixtures. Type F high range water reducers used in combination with retarding admixtures or Type G high range water reducers fully meeting trial batch requirements are permitted and Class F fly ash is permitted in conformance with Section 601. Design the mix such that the concrete slump exceeds 4 inches at 4 hours after batching. If the estimated concrete transport, plus time to complete placement, exceeds 4 hours, design the concrete to have a slump that exceeds 4 inches or more for the greater time after batching and demonstrate that the slump requirement can be achieved after the extended time period using a trial batch.

Perform trial batches prior to beginning drilled shaft construction in order to demonstrate the adequacy of the proposed concrete mix. Demonstrate that the mix to be used will meet the requirements for temperature, slump, air content, water/cementitious material ratio, and compressive strength. Use the ingredients, proportions and equipment (including batching, mixing, and delivery) to be used on the project. Make at least 2 independent consecutive trial batches of 3 cubic yards each using the same mix proportions and meeting all specification requirements for mix design approval. Submit a report containing these results for slump, air content, water/cement ratio, temperature, and compressive strength and mix proportions for each trial batch to the Engineer for review and approval. Failure to demonstrate the adequacy of the concrete mix, methods, or equipment to the Engineer is cause for the Engineer to require appropriate alterations in concrete mix, equipment, and/or method by the Contractor to eliminate unsatisfactory results. Perform additional trial batches required to demonstrate the adequacy of the concrete mix, method, or equipment.

2.2 Steel Reinforcement. Provide Grade 60 deformed bars conforming to Section 811 of the Standard Specifications. Rail steel is permitted for straight bars only. Place according to Section 602 of the Standard Specifications, this Special Note, and the plans. Use non-corrosive centering devices and feet to maintain the specified reinforcement clearances.

2.3 Casings. Provide casing meeting the requirements of ASTM A 252 Grade 2 or better unless otherwise specified. Ensure casing is smooth, clean, watertight, true and straight, and of ample strength to withstand handling, installation, and extraction stresses and the pressure of both concrete and the surrounding earth materials. Ensure the outside diameter of casing is not less than the specified diameter of shaft.

Use only continuous casings. Cut off the casing at the prescribed elevation and trim to within tolerances prior to acceptance. Extend casing into bedrock a sufficient distance to stabilize the shaft excavation against collapse, excessive deformation, and/or flow of water if required and/or shown on the plans.

Install from the work platform continuous casing meeting the design thickness requirements, but not less than 3/8 inch, to the elevations shown on the plans. When drilled

shafts are located in open water areas, extend casings above the water elevation to the plan tip elevation to protect the shaft concrete from water action during concrete placement and curing. All casing is permanent unless temporary casing is specified in the contract drawings or documents. Permanent casing is incidental to the applicable drilled shaft unit bid price unless noted otherwise in the contract. Temporary casing may be required for drilled shafts not socketed into bedrock. If temporary surface casings are used, extend each casing up to the work platform. Remove all temporary surface casing prior to final acceptance unless otherwise permitted by the Central Office Construction Engineer.

Ensure casing splices have full penetration butt welds conforming to the current edition of AWS D1.1 with no exterior or interior splice plates and produce true and straight casing.

2.4 Slurry. When slurry is to be used for installation of the Drilled Shaft, submit a detailed plan for its use and disposal. The plan should include, but not be limited to the following:

1) Material properties
2) Mixing requirements and procedures
3) Testing requirements
4) Placement procedures
5) Disposal techniques

Obtain the Central Office Division of Construction's approval for the slurry use and disposal plan before installing drilled shafts.

2.5 Tremies. Provide tremies of sufficient length, weight, and diameter to discharge concrete at the shaft base elevation. Ensure the tremie diameter is least 6 times the maximum size coarse aggregate to be used in the concrete mix and no less than 10 inches. Provide adequate wall thickness to prevent crimping or sharp bends that restrict concrete placement. Support tremies used for depositing concrete in a dry drilled shaft excavation so that the free fall of the concrete does not cause the shaft excavation to cave or slough. Maintain a clean and smooth tremie surface to permit both flow of concrete and unimpeded withdrawal during concrete placement. Do not allow any aluminum parts to contact the concrete. Construct tremies used to deposit concrete for wet excavations so that they are watertight and will readily discharge concrete.

2.6 Concrete Pumps. Provide pump lines with a minimum diameter of 5 inches and watertight joints.

2.7 Drop Chutes. Do not use aluminum drop chutes.

3.0 CONSTRUCTION.

3.1 Preconstruction.

3.1.1 Prequalification. The Department will require prequalification by the Division of Construction Procurement before accepting a bid for the construction of Drilled Shafts.

3.1.2 Pre-Bid Inspection. Inspect both the project site and all subsurface information, including any soil or rock samples, prior to submitting a bid. Contact the Geotechnical Branch (502-564-2374) to schedule a viewing of the subsurface information. Failure to inspect the project site and view the

subsurface information will result in the forfeiture of the right to file a claim based on site conditions and may result in disqualification from the project.

3.1.3 Drilled Shaft Installation Plan. Upon request, the Department will review a Drilled Shaft Installation Plan. Submit the plan no later than 45 calendar days prior to constructing drilled shafts. Items covered in this plan should include, but not be limited to the following:

1) Name and experience record of jobsite drilled shaft superintendent and foremen in charge of drilled shaft operations for each shift.
2) List and size of proposed equipment including cranes, drills, augers, bailing buckets, final cleaning equipment, de-sanding equipment, slurry pumps, core sampling equipment, tremies or concrete pumps, casings, etc.
3) Details of overall construction operation sequence and the sequence of shaft construction in the bents or groups.
4) Details of shaft excavation methods including methods to over-ream or roughen shaft walls, if necessary.
5) Details of slurry when the use of slurry is anticipated. Include methods to mix, circulate, and de-sand the proposed slurry. Provide details of proposed testing, test methods, sampling methods, and test equipment.
6) Details of proposed methods to clean shaft and inside of casing after initial excavation.
7) Details of reinforcement handling, lifting, and placement including support and method to center in shaft. Also include rebar cage support during concrete placement and temporary casing removal.
8) Details of concrete placement including procedures for concrete tremie or pump. Include initial placement, raising during placement, and overfilling of the shaft to expel contaminated concrete.
9) Required submittals including shop drawings and concrete design mixes.
10) Other information shown in the plans or requested by the Engineer.
11) Special considerations for wet construction.
12) Details of environmental control procedures to protect the environment from discharge of excavation spoil, slurry (natural and mineral), and concrete over-pour.

The Division of Construction will review the submitted procedure and provide comments and recommendations. The Contractor is responsible for satisfactory construction and ultimate performance of the Drilled Shaft.

3.2 General Construction. Construct drilled shafts as indicated in the plans or described in this Special Note by either the dry or wet method. When the plans describe a particular method of construction, use this method unless the Engineer permits otherwise. When the plans do not describe a particular method, propose a method on the basis of its suitability to the site conditions. Approval of this proposed method is contingent upon the satisfactory results of the technique shaft.

The construction of the first drilled shaft or technique shaft will be used to determine if the methods and equipment used by the contractor are sufficient to produce a completed shaft meeting the requirements of the plans and specifications. Ability to control dimensions and alignment of excavations within tolerances; to seal the casing into impervious materials; to prevent caving or deterioration of subsurface materials by the use of slurry or other means; to

properly clean the completed shaft excavation; to construct excavations in open water areas when required by the plans; to establish methods for belling or over-reaming when required by the plans; to determine the elevation of ground water; to satisfactorily handle, lift, place, and support the reinforcement cage; to satisfactorily place concrete meeting the specifications within the prescribed time frame; and to satisfactorily execute any other necessary construction operations will be evaluated during construction of the first shaft(s). Revise the methods and equipment as necessary at any time during the construction of the first shaft when unable to satisfactorily carry out any of the necessary operations described above or unable to control the dimensions and alignment of the shaft excavation within tolerances. Accurately locate technique so they may be used in the finished structure unless directed otherwise in the contract document or by the Engineer.

If at any time the Contractor fails to satisfactorily demonstrate, to the satisfaction of the Engineer, the adequacy of methods or equipment and alterations are required, additional technique shafts will be required at no additional cost to the Department and with no extension of contract time. Additional technique shafts shall be located as near as possible to the proposed production shafts but in a location as not to interfere with other construction activities. Once approval has been given to construct production shafts, no changes will be permitted in the methods or equipment used to construct the satisfactory shaft without written approval of the Engineer.

Do not make a claim against the Department for costs of construction delays, or any materials, labor, or equipment that may be necessary due to the Contractor's failure to furnish drilled shafts of a length sufficient to obtain the required bearing values, or for variations in length due to subsurface conditions that may be encountered. Soundings, boring logs, soil profiles, or other subsurface data included in the Contract documents are used by the Department for design and making preliminary estimates of quantities and should be used only at the risk of the Contractor for determining equipment, materials, or labor necessary for drilling shafts as required by the contract.

When necessary, set temporary removable surface casing. Use surface casing of sufficient length to prevent caving of the surface soils and to aid in maintaining shaft position and alignment. Pre-drilling with slurry and/or over-reaming to the outside diameter of the casing may be required to install the surface casing at some sites.

Provide equipment capable of constructing shafts to the deepest shaft depth shown in the plans plus 15 feet, 20 percent greater than the longest shaft (measured from the ground or water surface to the tip of the shaft), or 3 times the shaft diameter, whichever is greater. Blasting excavation methods are not permitted.

Use permanent casing unless otherwise noted in the Contract. Place casing as shown on the plans before beginning excavation. If full penetration cannot be attained, the Engineer may direct that excavation through the casing be accomplished and the casing advanced until reaching the plan tip elevation. In some cases, over-reaming to the outside diameter of the casing may be required before placing the casing. Cut off the casing at the prescribed elevation and leave the remainder of the casing in place. Do not use vibratory hammers for casing installation within 50 feet of shafts that have been completed less than 24 hours.

3.2.1 Dry Construction Method. Use the dry construction method only at sites where the ground water table and soil conditions (generally stiff to hard clays or rock above the water table) make it feasible to construct the shaft in a relatively dry excavation and where the sides and bottom of the shaft are stable and may be visually inspected by the Engineer prior to placing the concrete. The dry construction method consists of drilling the shaft excavation, removing accumulated seepage water and loose material from the excavation, and placing the shaft concrete in a relatively dry excavation.

3.2.2 Wet Construction Method. Use the wet construction method at all sites where it is impractical to excavate by the dry method. The wet construction method consists of drilling the shaft excavation below the water table, keeping the shaft filled with water (including natural slurry formed during the drilling process) or slurry as defined in part 2.4 of this Special Note, desanding and cleaning the slurry as required, final cleaning of the excavation by means of a bailing bucket, air lift, submersible pump or other approved devices and placing the shaft concrete (with a tremie or concrete pump beginning at the shaft bottom) which displaces the water or slurry as concrete is placed.

Where drilled shafts are located in open water areas, construct the shafts by the wet method using casings extending from above water elevation to the plan casing tip elevation to protect the shaft concrete from water action during placement and curing. Install the casing in a manner that will produce a positive seal at the bottom of the casing.

3.3 Slurry. When the Contractor elects to use slurry, adjust construction operations so that the slurry is in contact with the bottom 5 feet of the shaft for less than 4 hours unless the Engineer approves otherwise. If the 4-hour limit is exceeded, over-ream the bottom 5 feet of shaft.

3.4 Cleaning. Over-reaming, cleaning, or wire brushing the sidewalls of the shaft excavation and permanent casings may be necessary to remove the depth of softening or to remove excessive slurry cake buildup as indicated by sidewall samples or other test methods employed by the Engineer. Over-ream around the perimeter of the excavation a minimum depth of 1/2 inch and maximum depth of 3 inches.

3.5 Subsurface Exploration. Take subsurface exploration borings when shown on the plans or as the Engineer directs to determine the character of the material that the shaft extends through and the material directly below the shaft excavation. Complete subsurface exploration borings prior to beginning excavation for any drilled shaft in a group. Unless directed otherwise, extend subsurface exploration borings a minimum depth of 3 shaft diameters but not less than 10 feet below the bottom of the anticipated tip of drilled shaft excavation as shown on the plans. For subsurface exploration borings where soil sampling is required use thin-wall tube samples and perform standard penetration tests according to the Department’s current Geotechnical Manual. When shafts extend into bedrock, soil samples are not required unless otherwise specified. Perform rock core drilling according to the Department’s Geotechnical Manual. When the Engineer directs, perform additional subsurface exploration borings prior to drilled shaft construction. Measure soil samples and/or rock cores and visually identify and describe them on the subsurface log according to the Department’s current Geotechnical Manual. Subsurface exploration borings must be performed by contractors/consultants prequalified by the Department’s Division of Professional Services for Geotechnical Drilling Services at the time that field work begins.

The Engineer or geotechnical branch representative may be on-site during the subsurface exploration process to evaluate the soil and/or rock core samples. The Engineer or geotechnical branch representative will determine the need to extend the borings to depths greater than the depths previously specified. Handle, label, identify, and store soil and/or rock samples according to the Department's current Geotechnical Manual and deliver them with the subsurface logs to the geotechnical branch’s rock core lab in Frankfort within 24-hours of completing the borings, unless directed otherwise.

The Engineer will inspect the soil samples and/or cores and determine the final depth of required excavation (final drilled shaft tip elevation) based on evaluation of the material's suitability. The Engineer will establish the final tip elevations for shaft locations, other than

those for which subsurface exploration borings have been performed, based on the results of the subsurface exploration. Within 15 calendar days after completion of the subsurface exploration borings, the Engineer will notify the contractor of the final tip elevations for shaft locations.

3.6 Excavations. The plans indicate the expected depths, the top of shaft elevations, and the estimated bottom of shaft elevations between which the drilled shaft are to be constructed. Drilled shafts may be extended deeper when the Engineer determines that the material encountered while drilling the shaft excavation is unsuitable and/or is not the same as anticipated in the design of the drilled shaft. Drilled shafts may be shortened when the Engineer determines the material encountered is better than that anticipated.

Begin drilled shaft excavation the excavation, excavation inspection, reinforcement placement, and concrete placement can be completed as one continuous operation. Do not construct new shafts within 24 hours adjacent to recently completed shafts if the center-to-center spacing is less than 3 shaft diameters.

Dispose of excavated material removed from the shaft according to the Standard Specifications or the contract documents.

Do not allow workmen to enter the shaft excavation for any reason unless both a suitable casing has been installed and adequate safety equipment and procedures have been provided to the workmen entering the excavation. Recommended Procedures for the Entry of Drilled Shaft Foundation Excavations, prepared by ADSC: The International Association of Foundation Drilling provides guideline recommendations for down-hole entry of drilled excavations.

3.7 Obstructions. Remove subsurface obstructions at drilled shaft locations. Such obstructions may include man-made materials such as old concrete foundations or natural materials such as boulders. Blasting is not permitted.

3.8 Inspections of Excavations. Provide equipment for checking the dimensions and alignment of each shaft excavation. Determine the dimensions and alignment of the shaft excavation under the observation and direction of the Engineer. Provide equipment necessary to verify shaft cleanliness for the method of inspection selected by the Engineer.

Measure final shaft depths with a weighted tape or other approved methods after final cleaning. Ensure the base of each shaft has less than ½ inch of sediment at the time of concrete placement. For dry excavations, do not allow the depth of water to exceed 3 inches for tremie or pump methods of concrete placement. Verify shaft cleanliness to the Engineer using direct visual inspection or other method the Engineers determines acceptable. Video camera or underwater inspection procedures may be used if specified in the plans. Inspect the side surfaces of rock sockets to ensure they are rough and of such condition to ensure bond between the shaft concrete and the rock. Calipers, bent rods, or other devices may be used to inspect the diameter and roughness of rock sockets. When the Engineer directs, mechanically roughen surfaces found to be smooth.

3.9 Reinforcing Steel Cage Fabrication and Placement. Assemble the reinforcing steel cage, consisting of longitudinal bars, ties, spirals, cage stiffener bars, spacers, centering devices, and other necessary appurtenances and place as a prefabricated unit immediately after the shaft excavation is inspected and accepted, and just prior to concrete placement.

Tie the reinforcing steel with 100 percent double-wire ties and provide support so that it will remain within allowable tolerances for position. Locate splices as shown on the plans. Splice no more than 50 percent of the longitudinal reinforcing within 2-lap splice lengths of any location or within 3 feet of the splice location if approved mechanical connectors are used. All splices are to be in accordance with plan details. Use bands, temporary cross ties,

etc. as required to provide a reinforcement cage of sufficient rigidity to prevent racking, permanent deformations, etc. during installation.

Use concrete centering devices or other approved non-corrosive centering devices at sufficient intervals along the length of the reinforcement cage to ensure concentric spacing for the entire cage length. As a minimum, provide a set of non-corrosive centering devices at intervals not exceeding 5 feet throughout the length of the shaft. When the size of the longitudinal reinforcement exceeds one inch in diameter the minimum spacing may be increased to 10 feet. As a minimum, provide a set of centering devices within 2 feet of the top and 2 feet of the bottom of the shaft. In addition provide one set of centering devices 2 feet above and 2 feet below each change in shaft diameter. Provide feet (bottom supports) at the bottom of the shaft on vertical bars. As a minimum, provide non-corrosive centering devices at 60 degree intervals around the circumference of the shaft to maintain the required reinforcement clearances. Ensure the centering devices maintain the specified annular clearance between the outside of the reinforcing cage and the side of the excavated hole or casing.

Concrete centering devices and feet will be constructed of concrete equal in quality and durability to the concrete specified for the shaft. Use epoxy coated centering devices fabricated from reinforcing steel. Use feet (bottom supports) of adequate size and number to assure the rebar cage is the proper distance above the bottom as determined by part 3.11 3) of this Special Note. The feet are not intended to support the weight of the cage. In the event that the shaft has been excavated below the anticipated tip elevation, extend the reinforcing cage at the tip (low) end by lap splices, mechanical connectors, or welded splices conforming to the Standard Specifications. In this instance, splices need not be staggered and 100 percent of the reinforcing bars may be spliced at a given location. The bottom 12 inches of the shaft may not be reinforced when below plan tip elevation.

During concrete placement, support the reinforcing cage at or near the top of shaft such that the concrete feet are positioned approximately one inch above the bottom of shaft excavation. Not sooner than 24 hours after the completion of concrete placement, remove temporary supports. Provide the needed equipment, including extra cranes if necessary, to provide this cage support.

Prior to placing the reinforcement cage, demonstrate to the satisfaction of the Engineer that the fabrication and handling methods to be used will result in a reinforcing cage placed in the proper position, with the proper clearances, and without permanent bending, squashing, or racking of the reinforcement cage. During this demonstration bring the cage to an upright position, lower into a shaft excavation, and support as if for concrete placement.

Check the elevation of the top of the reinforcing cage before and after the concrete is placed. If the reinforcing cage is not maintained within the specified tolerances, correct to the satisfaction of the Engineer. Do not construct additional shafts until the contractor has modified his reinforcing cage support to obtain the required tolerances.

3.10 Concrete Placement. Place concrete according to the applicable portions of the Standard Specifications and with the requirements set forth herein. Do not apply the provisions of the Special Note 6U for Structural Mass Concrete.

Place concrete as soon as practical after reinforcing steel placement but no later than 4 hours after completion of the shaft excavation. Place concrete continuously from the bottom to above the top elevation of the shaft. For shafts that extend above ground or water surface, place concrete continuously after the shaft is full until good quality concrete is evident at the top of the shaft. Form any portion of the shaft above ground with a removable form or other approved method to the dimensions shown on the plans.

For shafts constructed in the wet with the top of the shaft below the water surface and below top of casing, place concrete to approximately one shaft diameter but no less than 2 feet above the top of shaft elevation. Remove contaminated concrete and deleterious material, as

determined by the Engineer, accumulated above the top of shaft elevation immediately after completing concrete placement. Deleterious material and contaminated concrete may be airlifted under a head of water or slurry provided that the head is maintained at or near the exterior water surface elevation. Carefully remove any concrete remaining above plan top of shaft after curing and excess casing removal.

Place concrete either by free fall, through a tremie, or concrete pump. Use the free fall placement method in dry holes only. The maximum height of free fall placement is 20 feet. Do not allow concrete placed by free fall to contact either the reinforcing cage or hole sidewall. Drop chutes may be used to direct concrete to the base during free fall placement.

Place concrete in the shaft in one continuous operation. Maintain a minimum slump of 4 inches or more throughout the placement for 4 hours after batching. Adjust approved admixtures in the concrete mix for the conditions encountered on the job so that the concrete remains in a workable plastic state throughout the placement. Perform slump loss tests to demonstrate that the concrete will maintain a 4-inch or greater slump for a period of time equal to the estimated transport plus the 2-hour placement time, but not less than 4 hours.

When the Engineer determines the concrete placement methods and/or equipment during construction of any technique and/or production shafts to be inadequate, make appropriate alterations to eliminate unsatisfactory results.

Drilled shafts not meeting the concrete placement requirements of this Special Note or contract plans are unacceptable. Correct all unacceptable completed shafts to the satisfaction of the Engineer.

3.10.1 Tremie Placement. Tremies may be used for concrete placement in either wet or dry holes. Extend the tremie to the shaft base elevation before starting underwater placement. Valves, bottom plates, or plugs may be used only if concrete discharge can begin approximately 2 inches above the excavation bottom. Remove plugs from the excavation unless otherwise approved by the Engineer. Maintain tremie discharge at or near the bottom of excavation as long as practical during concrete placement. Immerse tremie discharge end as deep as practical in the concrete but not less than 10 feet.

If at any time during the concrete pour the tremie line orifice is removed from the fluid concrete column and discharges concrete above the rising concrete surface, the entire drilled shaft is considered defective. In such case, remove the reinforcing cage and concrete, complete any necessary sidewall cleaning or over-reaming as directed by the Engineer, and repour the shaft.

3.10.2 Pumped Concrete. Concrete pumps and lines may be used for concrete placement in either wet or dry excavations. Do not begin concrete placement until the pump line discharge orifice is at the shaft base elevation.

For wet excavations, use a plug or similar device to separate the concrete from the fluid in the hole until pumping begins. Remove the plug unless otherwise approved by the engineer.

Ensure the discharge orifice remains at least 10 feet below the surface of the fluid concrete. When lifting the pump line during concrete placement, reduce the line pressure until the orifice has been repositioned at a higher level in the excavation.

If at any time during the concrete pour the pump line orifice is removed from the fluid concrete column and discharges concrete above the rising concrete level, the Department will consider the shaft defective. In such case, remove the reinforcing cage and concrete, complete any necessary sidewall cleaning or over-reaming as the Engineer directs, and repour the shaft.

3.10.3 Drop Chutes. Drop chutes may be used to direct placement of free fall concrete in excavations where the maximum depth of water does not exceed one inch. Do not use the free fall method of placement in wet excavations. Concrete may be placed through either a hopper at the top of the tube or side openings as the drop chute is retrieved during concrete placement. Reduce the height of free fall and/or reduce the rate of concrete flow into the excavation if the concrete placement causes the shaft excavation to cave or slough, or if the concrete strikes the reinforcing cage or sidewall. When the Engineer determines free fall placement cannot be accomplished satisfactorily, use either tremie or pumping to accomplish the pour.

3.11 Construction Tolerances. The following construction tolerances apply to drilled shafts unless otherwise stated in the contract document:

1) Construct drilled shaft within 3 inches of plan position in the horizontal plane at the top of the shaft.
2) Do not vary the vertical alignment of a shaft excavation from the plan alignment by more than 1/4 inch per foot of depth or 6 inches total.
3) Maintain the top of the reinforcing steel cage no more than 6 inches above and no more than 3 inches below plan position.
4) All casing diameters shown on the plans refer to O.D. (outside diameter) dimensions. The casing dimensions are subject to American Pipe Institute tolerances applicable to regular steel pipe. A casing larger in diameter than shown in the plans may be used, at no additional cost, with prior approval by the Department.
5) Maintain the top of shaft concrete within ± 3 inches from the plan top of shaft elevation, measured after excess shaft concrete has been removed.
6) Design excavation equipment and methods so that the completed shaft excavation will have a planar bottom. Maintain the cutting edges of excavation equipment normal to the vertical axis of the equipment within a tolerance of ± 3/8 inch per foot of diameter. The tip elevation of the shaft has a tolerance of ± 6 inches from final shaft tip elevation unless otherwise specified in the plans.

Drilled shaft excavations and completed shafts not constructed within the required tolerances are unacceptable. Correct all unacceptable shaft excavations and completed shafts to the satisfaction of the Engineer. When a shaft excavation is completed with unacceptable tolerances, present corrective measures designed by a registered Professional Engineer for approval.

4.0 MEASUREMENT.

4.1 Drilled Shafts. The Department will not measure for payment any trial batches required to demonstrate the adequacy of the concrete mix, method, or equipment; concrete required to fill an oversized casing or oversized excavation; obstruction removal; over-reaming or sidewall cleaning; inspection work or inspection equipment; materials or work necessary, including engineering analyses and redesign, to alter unacceptable work methods or to complete corrections for unacceptable work; and will consider them incidental to the Drilled Shaft. Unless noted otherwise in the contract documents, casing is incidental to the drilled shaft.

4.1.1 Drilled Shaft, Common. The Department will measure the length, in linear feet, of drilled shaft above the top of rock elevation shown on the plans. The

Department will consider this quantity Drilled Shaft, Common regardless of the character of material actually encountered.

4.1.2 Drilled Shafts, Solid Rock. The Department will measure the length, in linear feet, of drilled shaft below the top of rock elevation shown on plans. The Department will consider this quantity Drilled Shafts, Solid Rock regardless of the character of material actually encountered during excavation.

4.2 Technique Shaft. The Department will pay for technique shaft at the contract unit price per each as detailed on the plans or as directed by the Engineer. This will constitute full compensation for all costs incurred during installation as described herein for 'Drilled Shaft' or in the contract documents. No additional compensation beyond the number of technique shafts allowed for in the plans will be permitted for additional technique shafts required because of failure to demonstrate adequacy of methods.

4.3 Rock Coring and Rock Sounding. The Department will measure Rock Sounding and Rock Coring shown on the plans, as specified in part 3.5 of this Special Note, and as the Engineer directs, in linear feet to the nearest 0.1-foot. If soil samples are specified in the contract documents they will be incidental to the unit price bid for Rock Sounding. The Department will not measure or pay for subsurface exploration performed deeper than the elevations indicated on the plans and/or in this Special Note, unless directed by the Engineer, and will consider it incidental to these items of work. Additionally, the Department will consider all mobilization, equipment, labor, incidental items, and operations necessary to complete the boring operations incidental to these items of work.

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

Code	Pay Item	Pay Unit
-----	Drilled Shaft, Diameter*, Common	Linear Foot
-----	Drilled Shaft, Diameter*, Solid Rock	Linear Foot
-----	Technique Shaft	Each
20745ED	Rock Sounding	Linear Foot
20746ED	Rock Coring	Linear Foot

* *See Plan Sheets for sizes of shafts.*

The Department will consider payment as full compensation for all work required in this note.

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.

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

11E

SPECIAL NOTE FOR BORING AND JACKING STEEL PIPE WITHOUT CARRIER PIPE

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

1.0 DESCRIPTION. Bore and jack steel pipe. Use this note when no carrier pipe will be encased.

2.0 MATERIALS.

2.1 Pipe. Provide plain end steel pipe with a specific minimum yield strength, SMYS, of at least 35,000 psi and tensile strength of 60,000 psi per API-5L grade B material. The steel pipe supplied shall be manufactured by the seamless, electric-weld, submerged-arc weld or gas metal-arc well process as specified in API –5L. Certification of 35,000 psi SMYS shall be furnished by the supplier through the Contractor to the Engineer to retain 3 copies.

MINIMUM WALL THICKNESS FOR STEEL PIPE	
Nominal Diameter (Inches)	Wall Thickness (Inches)
18 or less	0.375
24	0.500
30	0.500
36	0.532
42	0.625

2.2 Grout. Conform to Subsection 601.03.03.

2.3 High Grade Bentonite. Conform to the following:

API 13A Section 4		
Requirement	Specification	Result
Viscometer Dial Reading at 600 rpm	30, minimum	40
Yield Point/Plastic Viscosity Ratio	3, maximum	3.00 maximum
Filtrate Volume	15 cm3, maximum	14.50 maximum
Residue greater than 75 micrometers	4.0 wt percent maximum	1.0-1.5 %
Moisture	10.0 wt percent maximum	9.0-9.5%

3.0 CONSTRUCTION. Perform the following:

1. Locate a suitable pit and obtain the Engineer's approval.
2. Excavate the pit or trenches for the BORE AND JACK operation and for placing the end joints of pipe, when required. Securely sheet and brace the pits or trenches to prevent caving, where necessary.

3. When installing pipe under railroads, highways, streets, or other facilities by Bore and Jack, perform construction without interfering with the facility operation or weakening the roadbed or structure.
4. Place excavated material near the top of the working pit and dispose of it as required. Use water or other fluids with the boring operation to lubricate the cuttings. Do not perform jetting.
5. In unconsolidated soil formations, use a gel-forming collodial drilling fluid with at least 10 percent of high grade bentonite to consolidate excavated material, seal the walls of the hole, and lubricate subsequent removal of material and immediate pipe installation.
6. Ensure that the diameter of the excavation conforms to the outside diameter of the pipe as closely as possible.
7. Pressure grout voids that develop during the installation operation and that the Engineer determines are detrimental to the Work.
8. To force the pipe through the roadbed into the bored space, use a jack with a head constructed to apply uniform pressure around the ring of the pipe, which shall be square cut.
9. Set the pipe to be jacked on guides, braced together to properly support the pipe section and to direct it to the proper line and grade.
10. When the installation is made by concurrent boring and jacking, solidly weld all joints. Ensure the weld is strong enough to withstand the forces exerted from the boring and jacking operations as well as the vertical loading imposed on the pipe after installation and that it provides a smooth, non-obstructing joint in the interior of the pipe.
11. When the pipe is installed in open trench, bed and backfill according to Section 701.
12. The line and grade from the pipe's final position, as shown on plans, may vary no more than 2 percent in lateral alignment and one percent in vertical grade. Ensure that the final grade of the flow line is in the direction indicated on the Plans.
13. Use a cutting edge around the head end. Extend it a short distance beyond the pipe end with inside angles or lugs to keep the cutting edge from slipping back into the pipe.
14. Once the pipe installation begins, proceed with the operation without interruption to prevent the pipe from becoming firmly set in the embankment.
15. Remove and replace pipe damaged in jacking operations.
16. After completing the installation, backfill the excavated pits and trenches with flowable fill according to Section 601.03.03 B) 5 a) if the pit is in median area where it will have pavement over it.

4.0 MEASUREMENT. The Department will measure the completed length of Bore and Jacked pipe through the flowline from end to end in linear feet. The Department will not measure pressure grouting voids or removal and replacement of pipe damaged in jacking operations for payment and will consider it incidental to Bore and Jack. When abandoning a bore hole due to mechanical malfunction, improper alignment, or other problems due to construction operations, the Department will not measure the backfill and relocation for payment and will consider it incidental to this item of work. When abandoning a bore hole due to an unforeseen physical obstruction or situation, the Department will measure the work according to a negotiated supplemental agreement.

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

11E

Code	Pay Item	Pay Unit
----	Bore and Jack, Size Pipe	Linear Foot

The Department will consider payment as full compensation for all materials, earthwork, shoring, pipe and work required under this section.

June 15, 2012

SPECIAL NOTE FOR TURF REINFORCING MAT

1.0 DESCRIPTION. Install turf reinforcement mat at locations specified in the Contract or as the Engineer directs. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

2.0 MATERIALS.

2.1 Turf Reinforcement Mat (TRM). Use a Turf Reinforcement Mat defined as permanent rolled erosion control product composed of non-degradable synthetic fibers, filaments, nets, wire mesh and/or other elements, processed into a three-dimensional matrix of sufficient thickness and from the Department's List of Approved Materials. Mats must be 100% UV stabilized materials. For TRMs containing degradable components, all physical property values must be obtained on the non-degradable portion of the matting exclusively. Ensure product labels clearly show the manufacturer or supplier name, style name, and roll number. Ensure labeling, shipment and storage follows ASTM D-4873. The Department will require manufacturer to provide TRMs that are machine constructed web of mechanically or melt bonded nondegradable fibers entangled to form a three dimensional matrix. The Department will require all long term performance property values in table below to be based on non degradable portion of the matting alone. Approved methods include polymer welding, thermal or polymer fusion, or placement of fibers between two high strength biaxially oriented nets mechanically bound by parallel stitching with polyolefin thread. Ensure that mats designated in the plans as Type 4 mats, are not to be manufactured from discontinuous or loosely held together by stitching or glued netting or composites. Type 4 mats shall be composed of geosynthetic matrix that exhibits a very high interlock and reinforcement capacities with both soil and root systems and with high tensile modulus. The Department will require manufacturer to use materials chemically and biologically inert to the natural soil environments conditions. Ensure the blanket is smolder resistant without the use of chemical additives. When stored, maintain the protective wrapping and elevate the mats off the ground to protect them from damage. The Department will not specify these materials for use in heavily acidic coal seam areas or other areas with soil problems that would severally limit vegetation growth.

A) Dimensions. Ensure TRMs are furnished in strips with a minimum width of 4 feet and length of 50 feet.
B) Weight. Ensure that all mat types have a minimum mass per unit area of 7 ounces per square yard according to ASTM D 6566.
C) Performance Testing: The Department will require AASHTO's NTPEP index testing. The Department will also require the manufacturer to perform internal MARV testing at a Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP) accredited laboratory for tensile strength, tensile elongation, mass per unit area, and thickness once every 24,000 yds of production or whatever rate is required to ensure 97.7% confidence under ASTM D4439& 4354. The Department will require Full scale testing for slope and channel applications shear stress shall be done under ASTM D 6459, ASTM D 6460-07 procedures.

2.2 Classifications

The basis for selection of the type of mat required will be based on the long term shear stress level of the mat of the channel in question or the degree of slope to protect and will be designated in the contract. The Type 4 mats are to be used at structural backfills protecting critical

structures, utility cuts, areas where vehicles may be expected to traverse the mat, channels with large heavy drift, and where higher factors of safety, very steep slopes and/or durability concerns are needed as determined by project team and designer and will be specified in the plans by designer.

Turf Reinforcement Matting					
Properties[1]	Type 1	Type 2	Type 3	Type 4	Test Method
Minimum tensile Strength lbs/ft	125	150	175	3000 by 1500	ASTM D6818[2]
UV stability (minimum % tensile retention)	80	80	80	90	ASTM D4355[3] (1000-hr exposure)
Minimum thickness (inches)	0.25	0.25	0.25	0.40	ASTM D6525
Slopes applications	2H:1V or flatter	1.5H:1V or flatter	1H:1V or flatter	1 H: 1V or greater	
Shear stress lbs/ft^2 Channel applications	6.0[4]	8.0[4]	10.0[4]	12.0[4]	ASTM D6459 ASTM D6460-07

[1] For TRMs containing degradable components, all physical property values must be obtained on the non-degradable portion of the matting alone.
[2]Minimum Average Roll Values for tensile strength of sample material machine direction.
[3]Tensile Strength percentage retained after stated 1000 hr duration of exposure under ASTM D4355 testing. Based on nondegradable components exclusively.
[4]Maximum permissible shear design values based on short-term (0.5 hr) vegetated data obtained by full scale flume testing ASTM D6459, D6460-07. Based on nondegradable components exclusively. Testing will be done at Independent Hydraulics Facility such as Colorado State University hydraulics laboratory, Utah State University hydraulics laboratory, Texas Transportation Institute (TTI) hydraulics and erosion control laboratory.

2.3 Quality Assurance Sampling, Testing, and Acceptance

A) Provide TRM listed on the Department's List of Approved Materials. Prior to inclusion on the LAM, the manufacturer of TRM must meet the physical and performance criteria as outlined in the specification and submit a Letter Certifying compliance of the product under the above ASTM testing procedures and including a copy of report from Full Scale Independent Hydraulics Facility that Fully Vegetated Shear Stress meets shear stress requirements tested under D6459 and D6460-07.

B) Contractors will provide a Letter of Certification from Manufacturer stating the product name, manufacturer, and that the product MARV product unit testing results meets Department criteria. Provide Letters once per project and for each product.

C) Acceptance shall be in accordance with ASTM D-4759 based on testing performed by a Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP) accredited laboratory using Procedure A of ASTM D-4354.

Current mats meeting the above criteria are shown on the Department's List of Approved Materials.

2.4 Fasteners. When the mat manufacturer does not specify a specific fastener, use steel wire U-shaped staples with a minimum diameter of 0.09 inches (11 gauge), a minimum width of one inch and a minimum length of 12 inches. Use a heavier gauge when working in rocky or clay soils and longer lengths in sandy soils as directed by Engineer or Manufacturer's Representative. Provide staples with colored tops when requested by the Engineer.

3.0 CONSTRUCTION. When requested by the Engineer, provide a Manufacturer's Representative on-site to oversee and approve the initial installation of the mat. When requested by the Engineer, provide a letter from the Manufacturer approving the installation. When there is a conflict between the Department's criteria and the Manufacturer's criteria, construct using the more restrictive. The Engineer and Manufacturer's Representative must approve all alternate installation methods prior to execution. Construct according to the Manufacturer's recommendations and the following as minimum installation technique:

3.1 Site Preparation. Grade areas to be treated with matting and compact. Remove large rocks, soil clods, vegetation, roots, and other sharp objects that could keep the mat from intimate contact with subgrade. Prepare seedbed by loosening the top 2 to 3 inch of soil.

3.2 Installation. Install mats according to Standard Drawing Sepias "Turf Mat Channel Installation" and "Turf Mat Slope Installation." Install mats at the specified elevation and alignment. Anchor the mats with staples with a minimum length of 12 inches. Use longer anchors for installations in sandy, loose, or wet soils as directed by the Engineer or Manufacturer's Representative. The mat should be in direct contact with the soil surface.

4.0 MEASUREMENT. The Department will measure the quantity of Turf Reinforcement Mat by the square yard of surface covered. The Department will not measure preparation of the bed, providing a Manufacturer's Representative, topsoil, or seeding for payment and will consider them incidental to the Turf Reinforcement Mat. The Department will not measure any reworking of slopes or channels for payment as it is considered corrective work and incidental to the Turf Reinforcement Mat. Seeding and protection will be an incidental item.

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

Code	Pay Item	Pay Unit
23274EN11F	Turf Reinforcement Mat 1	Square Yard
23275EN11F	Turf Reinforcement Mat 2	Square Yard
23276EN11F	Turf Reinforcement Mat 3	Square Yard
23277EN11F	Turf Reinforcement Mat 4	Square Yard

SPECIAL NOTE FOR BARCODE LABEL ON PERMANENT SIGNS

1.0 DESCRIPTION. Install barcode label on sign as specified in the Contract. 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 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).

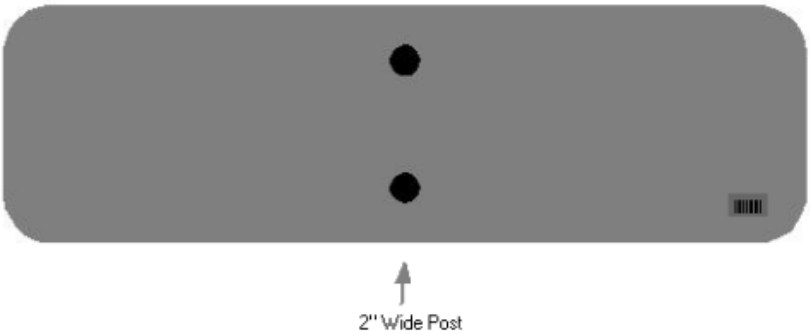
The installation of the permanent sign will be measured in accordance to Section 715.

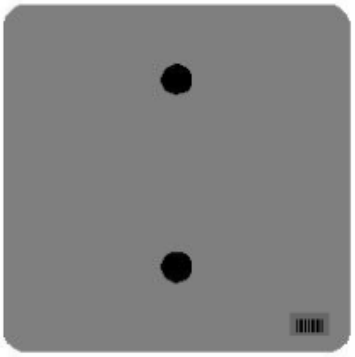
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24631EC	Barcode Sign Inventory	Each

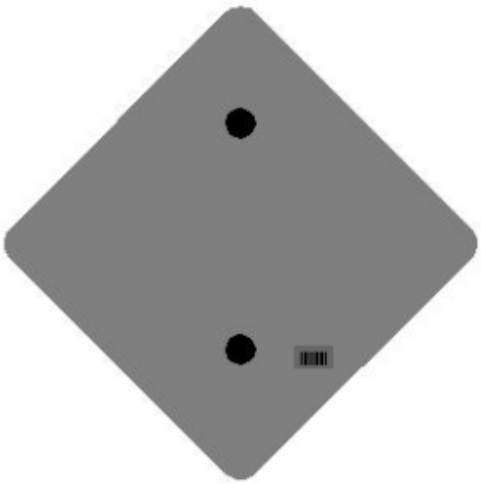
The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment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

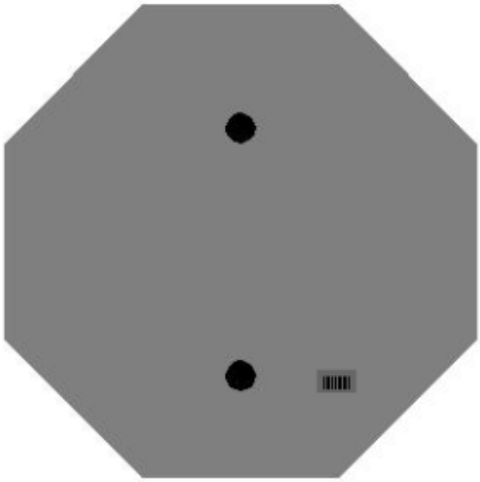
One Sign Post

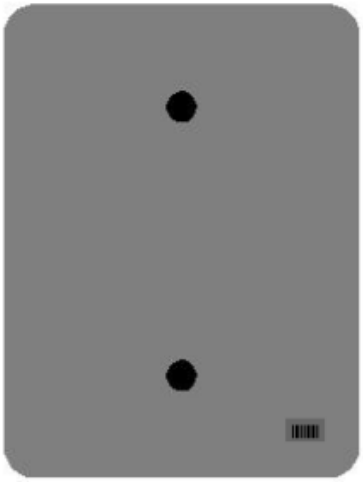


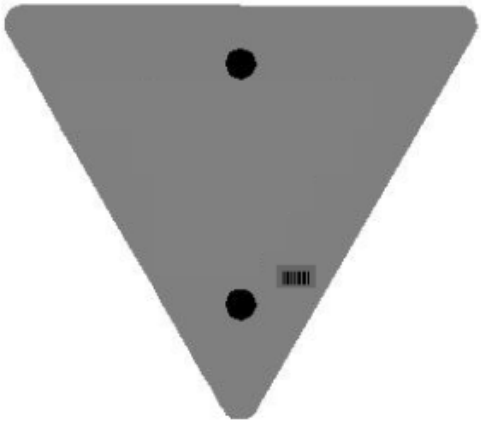


One Sign Post

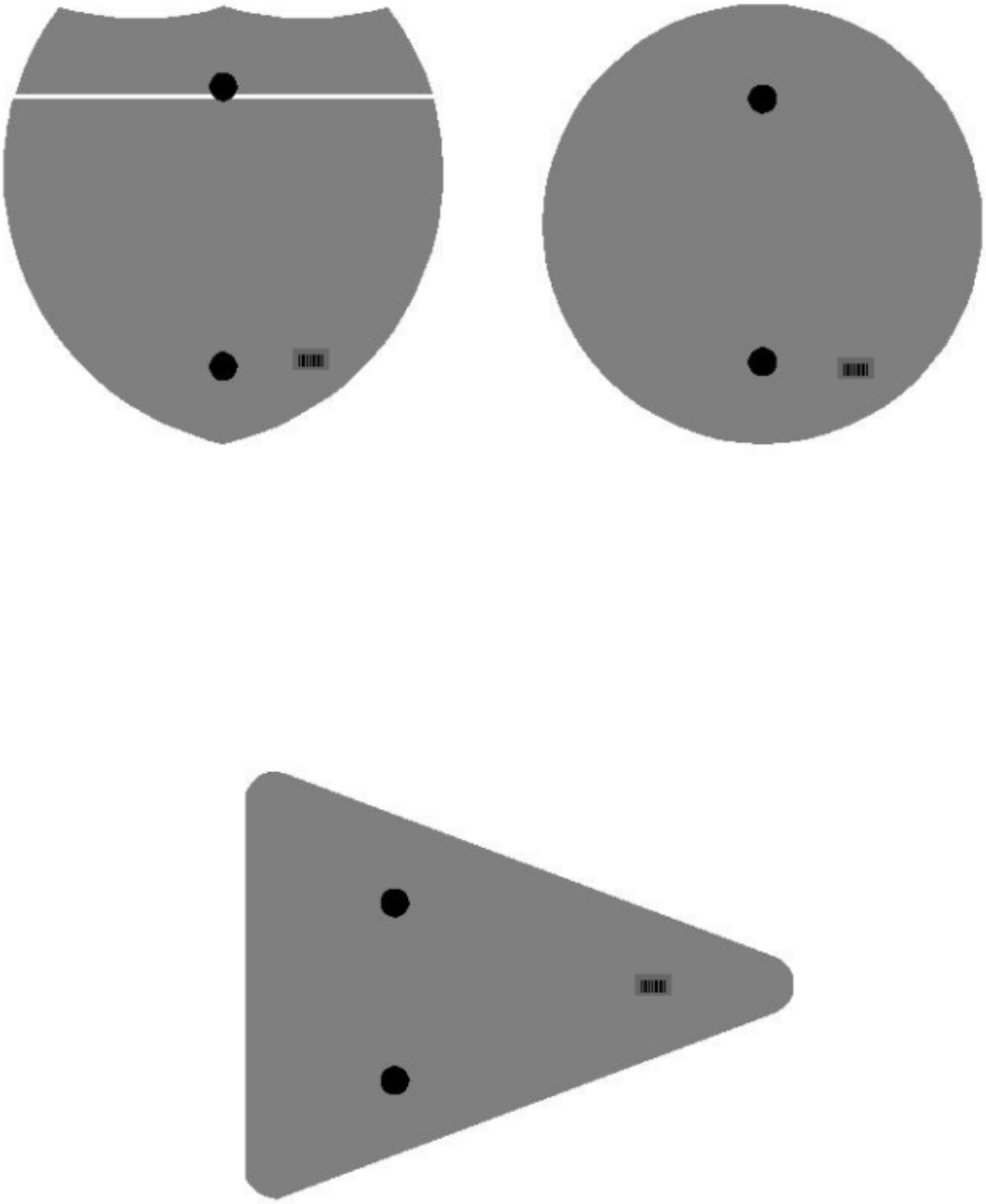




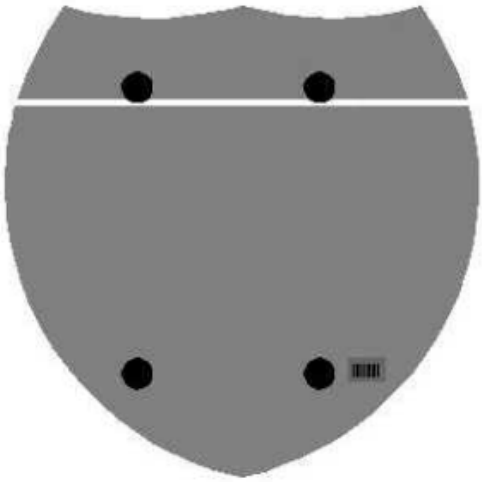




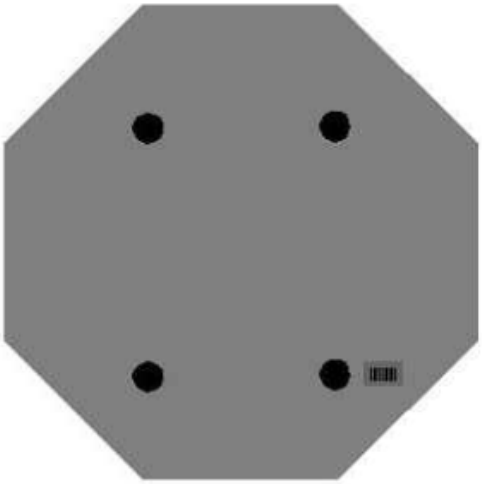
One Sign Post



Double Sign Post

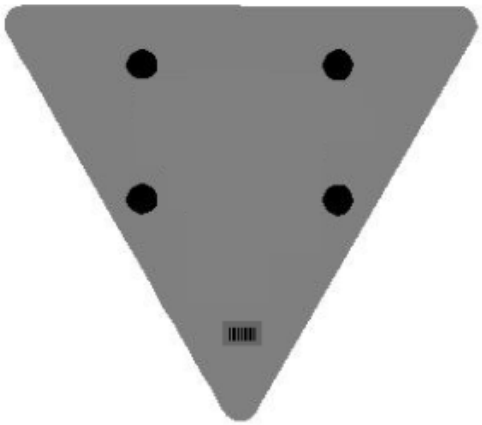


Interstate
Shield



48" Stop

2 Post Signs



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 2012 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Construct a soil, granular, or rock embankment with 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 2012 Standard Specifications.

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 Granular Pile Core. 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.

2.4 Cohesive Pile Core. 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 6 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.

2.5 Structure Granular Backfill. Conform to Subsection 805.11

2.6 Geotextile Fabric. Conform to Type I or Type IV in Section 214 and 843 as required in the plans.

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 granular or cohesive pile core, soil, granular or rock embankment, and structure granular backfill according to the applicable density requirements for the project. When constructing granular or rock embankments, use granular pile core for driven pile foundations and use cohesive pile core for pre-drilled pile or drilled shaft foundations. Place geotextile fabric, Type IV between cohesive pile core and structure

granular backfill and granular or rock embankment.

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 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 or install shafts, 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 removing adjacent forms, fill the excavation with structure granular backfill material to the level of the berm prior to placing beams for the bridge. For soil embankments, 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 structure granular backfill to subgrade elevation. If the original excavation is enlarged, fill the entire volume with compacted structure granular backfill 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 structure granular backfill prior to placing aggregate base course.

Tamp the backfill with hand tampers, pneumatic tampers, or other means the Engineer approves. 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 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 Granular Pile Core. 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 furnishing and placing 8-inch perforated underdrain pipe and will consider it incidental to the Granular pile core. The Department will not measure for payment any granular pile core that is necessary because the contractor elects to use granular or rock embankment when it is not specified in the plans.

4.4 Cohesive Pile Core. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204.

4.5 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 structure excavation at the end bent or an existing embankment for payment and will consider it incidental to Structure Granular Backfill.

The Department will not measure for payment the 4-inch perforated underdrain pipe and will consider it incidental to the Structure Granular Backfill.

4.6 Geotextile Fabric. The Department will measure the quantities as specified in Section 214. The Department will not measure the quantity of fabric used for separating granular or rock embankment and cohesive pile core and will consider it incidental to cohesive pile core.

4.7 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.

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
20209EP69	Granular Pile Core	Cubic Yards
20210EP69	Cohesive Pile Core	Cubic Yards
02231	Structure Granular Backfill	Cubic Yards
02596, 02599	Geotextile Fabric, Type	See Section 214

The Department will consider payment as full compensation for all work required in this provision.

June 15, 2012

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

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

ATTACHMENTS

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

I. GENERAL

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

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

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

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

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

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

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

II. NONDISCRIMINATION

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

6. Training and Promotion:

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

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

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

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

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

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

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

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

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

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

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

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

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

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

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

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

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

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

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

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

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

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

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

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

III. NONSEGREGATED FACILITIES

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

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

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

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

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

1. Minimum wages

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

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

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

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

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

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

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

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

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

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

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

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

2. Withholding

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

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

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

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

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

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

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

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

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

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

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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

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

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

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

b. Trainees (programs of the USDOL).

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

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

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

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

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

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

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

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

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

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

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

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

10. Certification of eligibility.

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

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

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

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

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

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

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

3. Withholding for unpaid wages and liquidated damages. The FHWA or the 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 (between forty and seventy); 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 (between forty and seventy). 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, disability or age (between forty and seventy), except that such notice or advertisement may indicate a preference, limitation, or specification based on religion, or national origin when religion, or national origin 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 (between forty and seventy), 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: 12-3-92

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 (6) provides:
>
> No present or former public servant shall, within six (6) months of 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 the state in matters in which he was directly involved during 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, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved 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.
>
> KRS 11A.040 (8) states:
>
> A former public servant shall not represent a person in a matter before a state agency in which the former public servant was directly involved, 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, Room 136, Capitol Building, 700 Capitol Avenue, Frankfort, Kentucky 40601; telephone (502) 564-7954.

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: KY140100 10/24/2014 KY100

Superseded General Decision Number: KY20130100

State: Kentucky

Construction Type: Highway

Counties: Anderson, Bath, Bourbon, Boyd, Boyle, Bracken, Breckinridge, Bullitt, Carroll, Carter, Clark, Elliott, Fayette, Fleming, Franklin, Gallatin, Grant, Grayson, Greenup, Hardin, Harrison, Henry, Jefferson, Jessamine, Larue, Lewis, Madison, Marion, Mason, Meade, Mercer, Montgomery, Nelson, Nicholas, Oldham, Owen, Robertson, Rowan, Scott, Shelby, Spencer, Trimble, Washington and Woodford Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Modification Number	Publication Date
0	01/03/2014
1	02/14/2014
2	04/18/2014
3	05/09/2014
4	05/23/2014
5	06/06/2014
6	06/27/2014
7	07/04/2014
8	07/18/2014
9	07/25/2014
10	08/22/2014
11	10/24/2014

BRIN0004-003 06/01/2011

BRECKENRIDGE COUNTY

	Rates	Fringes
BRICKLAYER	$ 24.11	10.07

---

* BRKY0001-005 06/01/2014

BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, & TRIMBLE COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 25.37	10.50

BRKY0002-006 06/01/2011

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

```
                                  Rates          Fringes

BRICKLAYER.......................$ 26.57            10.26
-----------------------------------------------------------------
* BRKY0007-004 06/01/2014

BOYD, CARTER, ELLIOT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:

                                  Rates          Fringes

BRICKLAYER.......................$ 30.57            17.94
-----------------------------------------------------------------
 BRKY0017-004 06/01/2009

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN,
HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS,
OWEN, SCOTT, WASHINGTON & WOODFORD COUNTIES:


                                  Rates          Fringes

BRICKLAYER.......................$ 24.11             9.97
-----------------------------------------------------------------
 CARP0064-001 04/01/2014

                                  Rates          Fringes

CARPENTER........................$ 27.50            14.96
Diver............................$ 41.63            14.96
PILEDRIVERMAN....................$ 27.75            14.96
-----------------------------------------------------------------
 ELEC0212-008 06/02/2014

BRACKEN, GALLATIN and GRANT COUNTIES

                                  Rates          Fringes

ELECTRICIAN......................$ 26.74            16.45
-----------------------------------------------------------------
 ELEC0212-014 07/01/2013

BRACKEN, GALLATIN & GRANT COUNTIES:

                                  Rates          Fringes

Sound & Communication
Technician.......................$ 22.50             9.51
-----------------------------------------------------------------
 ELEC0317-012 05/28/2014

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

                                  Rates          Fringes

ELECTRICIAN
     Cable Splicer...............$ 32.68            18.13
     Electrician.................$ 32.62            21.45
-----------------------------------------------------------------
 ELEC0369-007 05/29/2013
```

ANDERSON, BATH, BOURBON, BOYLE, BRECKINRIDGE, BULLITT, CARROLL, CLARK, FAYETTE, FRAONKLIN, GRAYSON, HARDIN, HARRISON, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, MONTGOMERY, NELSON, NICHOLAS, OLDHAM, OWEN, ROBERTSON, SCOTT, SHELBY, SPENCER, TRIMBLE, WASHINGTON, & WOODFORD COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 29.48	14.37

ELEC0575-002 06/02/2014

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 31.70	14.21

ENGI0181-018 07/01/2014

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1	$ 28.85	14.15
GROUP 2	$ 26.24	14.15
GROUP 3	$ 26.65	14.15
GROUP 4	$ 25.95	14.15

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller; Batcher Plant; Bituminous Paver; Bituminous Transfer Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All Scoop; Carry Deck Crane; Central Compressor Plant; Cherry Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over); Concrete Paver; Truck-Mounted Concrete Pump; Core Drill; Crane; Crusher Plant; Derrick; Derrick Boat; Ditching & Trenching Machine; Dragline; Dredge Operator; Dredge Engineer; Elevating Grader & Loaders; Grade-All; Gurries; Heavy Equipment Robotics Operator/Mechanic; High Lift; Hoe-Type Machine; Hoist (Two or More Drums); Hoisting Engine (Two or More Drums); Horizontal Directional Drill Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau; Locomotive; Mechanic; Mechanically Operated Laser Screed; Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel Bucket; Overhead Crane; Piledriver; Power Blade; Pumpcrete; Push Dozer; Rock Spreader, attached to equipment; Rotary Drill; Roller (Bituminous); Rough Terrain Crane; Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck Crane; Tunnel Mining Machines, including Moles, Shields or similar types of Tunnel Mining Equipment

GROUP 2 - Air Compressor (Over 900 cu. ft. per min.); Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft.); Dredge Engineer; Electric Vibrator; Compactor/Self-Propelled Compactor;

Elevator (One Drum or Buck Hoist); Elevator (When used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Conrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points; & Whirley Oiler

GROUP 3 - All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES - with booms 150 ft. & Over (Including JIB), and where the length of the boom in combination with the length of the piling leads equals or exceeds 150 ft. - $1.00 over Group 1 rate

EMPLOYEES ASSIGNED TO WORK BELOW GROUND LEVEL ARE TO BE PAID 10%
ABOVE BASIC WAGE RATE. THIS DOES NOT APPLY TO OPEN CUT WORK.

IRON0044-009 06/01/2013

BRACKEN, GALLATIN, GRANT, HARRISON, ROBERTSON,
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);
MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);
NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);
OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);
SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall)

	Rates	Fringes

IRONWORKER
Fence Erector.....$ 22.50 18.40
Structural.....$ 24.80 18.40

IRON0070-006 06/01/2014

ANDERSON, BOYLE, BRECKINRIDGE, BULLITT, FAYETTE, FRANKLIN, GRAYSON, HARDIN, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE, WASHINGTON & WOODFORD
BOURBON (Southern two-thirds, including Townships of Austerlity, Centerville, Clintonville, Elizabeth, Hutchison, Littlerock, North Middletown & Paris);
CARROLL (Western two-thirds, including Townships of Carrollton, Easterday, English, Locust, Louis, Prestonville & Worthville);
CLARK (Western two-thirds, including Townships of Becknerville, Flanagan, Ford, Pine Grove, Winchester & Wyandotte);
OWEN (Eastern eighth, including Townships of Glenmary, Gratz, Monterey, Perry Park & Tacketts Mill);
SCOTT (Southern third, including Townships of Georgetown, Great Crossing, Newtown, Stampling Ground & Woodlake);

	Rates	Fringes
IRONWORKER.....	$ 26.97	19.75

IRON0372-006 06/01/2013

BRACKEN, GALLATIN, GRANT, HARRISON and ROBERTSON
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, Excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains,
Ringos Mills, Tilton & Wallingford);
MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);
NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);
OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);
SCOTT (Northern two-thirds, including Townships of Biddle, Davis,Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall) COUNTIES

	Rates	Fringes
IRONWORKER, REINFORCING.....	$ 26.47	19.30

IRON0769-007 12/01/2012

BATH, BOYD, CARTER, ELLIOTT, GREENUP, LEWIS, MONTGOMERY & ROWAN
CLARK (Eastern third, including townships of Bloomingdale,
Hunt, Indian Fields, Kiddville, Loglick, Rightangele & Thomson);
FLEMING (Townships of Beechburg, Colfax, Elizaville,
Flemingsburg, Flemingsburg Junction, Foxport, Grange City,
Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton,
Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains,
Ringos Mills, Tilton & Wallingford);
MASON (Eastern third, including Townships of Helena, Marshall,
Orangeburg, Plumville & Springdale);
NICHOLAS (Eastern eighth, including the Township of Moorefield
Sprout)

	Rates	Fringes
IRONWORKER	$ 32.54	20.18

LABO0189-003 07/01/2014

BATH, BOURBON, BOYD, BOYLE, BRACKEN, CARTER, CLARK, ELLIOTT,
FAYETTE, FLEMING, FRANKLIN, GALLATIN, GRANT, GREENUP, HARRISON,
JESSAMINE, LEWIS, MADISON, MASON, MERCER, MONTGOMERY, NICHOLAS,
OWEN, ROBERTSON, ROWAN, SCOTT, & WOOLFORD COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 21.80	11.96
GROUP 2	$ 22.05	11.96
GROUP 3	$ 22.10	11.96
GROUP 4	$ 22.70	11.96

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger;

Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

---

LABO0189-008 07/01/2014

ANDERSON, BULLITT, CARROLL, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 22.71	11.05
GROUP 2	$ 22.96	11.05
GROUP 3	$ 23.01	11.05
GROUP 4	$ 23.61	11.05

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

---

LABO0189-009 07/01/2014

BRECKINRIDGE & GRAYSON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 22.66	11.10
GROUP 2	$ 22.91	11.10
GROUP 3	$ 22.96	11.10
GROUP 4	$ 23.56	11.10

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste

- Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

---

PAIN0012-005 06/11/2005

BATH, BOURBON, BOYLE, CLARK, FAYETTE, FLEMING, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, ROBERTSON, SCOTT & WOODFORD COUNTIES:

	Rates	Fringes
PAINTER		
Bridge/Equipment Tender and/or Containment Builder	$ 18.90	5.90
Brush & Roller	$ 21.30	5.90
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 22.30	5.90
Sandblasting & Waterblasting	$ 22.05	5.90
Spray	$ 21.80	5.90

PAIN0012-017 05/01/2014

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

	Rates	Fringes
PAINTER (Heavy & Highway Bridges - Guardrails - Lightpoles - Striping)		
Bridge Equipment Tender and Containment Builder	$ 20.73	8.71
Brush & Roller	$ 23.39	8.71
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 24.39	8.71
Sandblasting & Water Blasting	$ 24.14	8.71
Spray	$ 23.89	8.71

PAIN0118-004 06/01/2014

ANDERSON, BRECKINRIDGE, BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES:

	Rates	Fringes
PAINTER		
Brush & Roller	$ 18.50	12.02
Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning	$ 19.00	12.02

PAIN1072-003 12/01/2013

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS and ROWAN COUNTIES

	Rates	Fringes
Painters:		
Bridges; Locks; Dams; Tension Towers & Energized Substations	$ 31.03	15.10
Power Generating Facilities	$ 27.79	15.10

PLUM0248-003 06/01/2014

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
Plumber and Steamfitter	$ 33.00	18.95

PLUM0392-007 06/01/2014

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN & ROBERTSON COUNTIES:

	Rates	Fringes
Plumbers and Pipefitters	$ 29.80	17.79

PLUM0502-003 08/01/2013

BRECKINRIDGE, BULLITT, CARROLL (Western Half), FRANKLIN (Western three-fourths), GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
PLUMBER	$ 32.00	17.17

SUKY2010-160 10/08/2001

	Rates	Fringes
Truck drivers:		
GROUP 1	$ 16.57	7.34
GROUP 2	$ 16.68	7.34
GROUP 3	$ 16.86	7.34
GROUP 4	$ 16.96	7.34

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Mobile Batch Truck Tender

GROUP 2 - Greaser; Tire Changer; & Mechanic Tender

GROUP 3 - Single Axle Dump; Flatbed; Semi-trailer or Pole Trailer when used to pull building materials and equipment;

Tandem Axle Dump; Distributor; Mixer; & Truck Mechanic

GROUP 4 - Euclid & Other Heavy Earthmoving Equipment & Lowboy; Articulator Cat; 5-Axle Vehicle; Winch & A-Frame when used in transporting materials; Ross Carrier; Forklift when used to transport building materials; & Pavement Breaker

---

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

==========

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 union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows 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. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

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.

==========

END OF GENERAL DECISION

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

These rates are listed pursuant to the Kentucky Determination No. CR-14-III- HWY dated July 14, 2014.

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.

Diana Castle Radcliffe, P.E.
Director, Division of Construction Procurement
Frankfort, Kentucky 40622

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
10.8%	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 Fayette 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

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	108,524.00	TON		$	
0020	00018		DRAINAGE BLANKET-TYPE II-ASPH	17,410.00	TON		$	
0030	00020		TRAFFIC BOUND BASE	2,000.00	TON		$	
0040	00100		ASPHALT SEAL AGGREGATE	287.00	TON		$	
0050	00103		ASPHALT SEAL COAT	38.00	TON		$	
0060	00190		LEVELING & WEDGING PG64-22	19,277.00	TON		$	
0070	00193		ASPHALT SCRATCH COURSE PG76-22	358.00	TON		$	
0080	00212		CL2 ASPH BASE 1.00D PG64-22	6,484.00	TON		$	
0090	00214		CL3 ASPH BASE 1.00D PG64-22	53,266.00	TON		$	
0100	00216		CL3 ASPH BASE 1.00D PG76-22	14,488.00	TON		$	
0110	00217		CL4 ASPH BASE 1.00D PG64-22	36,798.00	TON		$	
0120	00219		CL4 ASPH BASE 1.00D PG76-22	16,346.00	TON		$	
0130	00301		CL2 ASPH SURF 0.38D PG64-22	2,051.00	TON		$	
0140	00307		CL2 ASPH SURF 0.38B PG64-22	43.00	TON		$	
0150	00336		CL3 ASPH SURF 0.38A PG76-22	6,896.00	TON		$	
0160	00339		CL3 ASPH SURF 0.38D PG64-22	4,061.00	TON		$	
0170	00342		CL4 ASPH SURF 0.38A PG76-22	6,794.00	TON		$	
0180	01820		LIP CURB AND GUTTER	3,471.00	LF		$	
0190	01890		ISLAND HEADER CURB TYPE 1	1,902.00	LF		$	
0200	01947		MOUNTABLE MEDIAN TYPE 3A	247.00	SQYD		$	
0210	01949		MOUNTABLE MEDIAN TYPE 6A	277.00	SQYD		$	
0220	02069		JPC PAVEMENT-10 IN	1,740.00	SQYD		$	
0230	02677		ASPHALT PAVE MILLING & TEXTURING	26,281.00	TON		$	
0240	22861EN		HIGH STRENGTH GEOTEXTILE FABRIC	163,208.00	SQYD		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1060	00021		DRAINAGE BLANKET-EMBANKMENT	6,200.00	CUYD		$	
1070	00078		CRUSHED AGGREGATE SIZE NO 2	3,195.00	TON		$	
1080	01000		PERFORATED PIPE-4 IN	3,090.00	LF		$	
1090	01010		NON-PERFORATED PIPE-4 IN	66.50	LF		$	
1100	01015		INSPECT & CERTIFY EDGE DRAIN SYSTEM (7-279)	1.00	LS		$	
1110	01020		PERF PIPE HEADWALL TY 1-4 IN	1.00	EACH		$	
1120	01028		PERF PIPE HEADWALL TY 3-4 IN	11.00	EACH		$	
1130	01310		REMOVE PIPE	607.00	LF		$	
1140	01655		REMOVE JUNCTION BOX	1.00	EACH		$	
1150	01691		FLUME INLET TYPE 2	1.00	EACH		$	
1160	01706		REMOVE CATCH BASIN	16.00	EACH		$	
1170	01718		REMOVE INLET	21.00	EACH		$	
1180	01740		CORED HOLE DRAINAGE BOX CON-4 IN	6.00	EACH		$	
1190	01741		CORED HOLE DRAINAGE BOX CON-6 IN	39.00	EACH		$	
1200	01787		REMOVE MANHOLE	1.00	EACH		$	
1210	01825		ISLAND CURB AND GUTTER	242.00	LF		$	
1220	01880		BARRIER HEADER CURB	32.00	LF		$	
1230	01890		ISLAND HEADER CURB TYPE 1	1,078.00	LF		$	

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1240	01904		REMOVE CURB	16,027.00	LF		$	
1250	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	233.00	EACH		$	
1260	01983		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	17.00	EACH		$	
1270	01984		DELINEATOR FOR BARRIER - WHITE	1,129.00	EACH		$	
1280	01985		DELINEATOR FOR BARRIER - YELLOW	4,796.00	EACH		$	
1290	01986		DELINEATOR FOR BARRIER WALL-B/Y	8.00	EACH		$	
1300	01990		DELINEATOR FOR BARRIER WALL-B/W	10.00	EACH		$	
1310	02003		RELOCATE TEMP CONC BARRIER	47,200.00	LF		$	
1320	02014		BARRICADE-TYPE III	40.00	EACH		$	
1330	02091		REMOVE PAVEMENT	6,473.00	SQYD		$	
1340	02157		PAVED DITCH TYPE 1	107.00	SQYD		$	
1350	02159		TEMP DITCH	59,020.00	LF		$	
1360	02160		CLEAN TEMP DITCH	177,060.00	LF		$	
1370	02165		REMOVE PAVED DITCH	748.00	SQYD		$	
1380	02200		ROADWAY EXCAVATION	196,501.00	CUYD		$	
1390	02203		STRUCTURE EXCAV-UNCLASSIFIED	575.00	CUYD		$	
1400	02223		GRANULAR EMBANKMENT	3,736.00	CUYD		$	
1410	02235		BACKFILLING UNDERCUT	200.00	CUYD		$	
1420	02242		WATER	1,957.00	MGAL		$	
1430	02242		WATER (FOR DUST CONTROL)	500.00	MGAL		$	
1440	02262		FENCE-WOVEN WIRE TYPE 1	2,694.00	LF		$	
1450	02274		FENCE-6 FT CHAIN LINK	585.00	LF		$	
1460	02351		GUARDRAIL-STEEL W BEAM-S FACE	9,456.00	LF		$	
1470	02352		GUARDRAIL-STEEL W BEAM-D FACE	50.00	LF		$	
1480	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	14.00	EACH		$	
1490	02364		GUARDRAIL TERMINAL SECTION NO 2	5.00	EACH		$	
1500	02367		GUARDRAIL END TREATMENT TYPE 1	16.00	EACH		$	
1510	02369		GUARDRAIL END TREATMENT TYPE 2A	22.00	EACH		$	
1520	02381		REMOVE GUARDRAIL	16,304.70	LF		$	
1530	02387		GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	7.00	EACH		$	
1540	02391		GUARDRAIL END TREATMENT TYPE 4A	7.00	EACH		$	
1550	02429		RIGHT-OF-WAY MONUMENT TYPE 1	10.00	EACH		$	
1560	02432		WITNESS POST	10.00	EACH		$	
1570	02478		CAP INLET	1.00	SQYD		$	
1580	02483		CHANNEL LINING CLASS II	3,177.90	TON		$	
1590	02484		CHANNEL LINING CLASS III	2,348.00	TON		$	
1600	02545		CLEARING AND GRUBBING (APPROXIMATELY 83.3 ACRES, 7-113.01)	1.00	LS		$	
1610	02545		CLEARING AND GRUBBING (APPROXIMATELY 30 ACRES, 7-279)	1.00	LS		$	
1620	02555		CONCRETE-CLASS B	456.70	CUYD		$	
1630	02562		TEMPORARY SIGNS	2,712.60	SQFT		$	
1640	02567		DELINEATOR POSTS	40.00	EACH		$	
1650	02585		EDGE KEY	64.00	LF		$	
1660	02596		FABRIC-GEOTEXTILE TYPE I	727.70	SQYD		$	
1670	02599		FABRIC-GEOTEXTILE TYPE IV	46,700.00	SQYD		$	
1680	02600		FABRIC GEOTEXTILE TY IV FOR PIPE	45,152.00	SQYD	$2.00	$	$90,304.00

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1690	02625		REMOVE HEADWALL	41.00	EACH		$	
1700	02650		MAINTAIN & CONTROL TRAFFIC (7-113.01)	1.00	LS		$	
1710	02650		MAINTAIN & CONTROL TRAFFIC (7-279)	1.00	LS		$	
1720	02651		DIVERSIONS (BY-PASS DETOURS) (#1, 7-279)	1.00	LS		$	
1730	02651		DIVERSIONS (BY-PASS DETOURS) (#2, 7-279)	1.00	LS		$	
1740	02651		DIVERSIONS (BY-PASS DETOURS) (#3, 7-279)	1.00	LS		$	
1750	02651		DIVERSIONS (BY-PASS DETOURS) (#4, 7-279)	1.00	LS		$	
1760	02671		PORTABLE CHANGEABLE MESSAGE SIGN	12.00	EACH		$	
1770	02676		MOBILIZATION FOR MILL & TEXT (7-113.01)	1.00	LS		$	
1780	02676		MOBILIZATION FOR MILL & TEXT (7-279)	1.00	LS		$	
1790	02690		SAFELOADING	160.80	CUYD		$	
1800	02696		SHOULDER RUMBLE STRIPS-SAWED	48,700.00	LF		$	
1810	02701		TEMP SILT FENCE	59,020.00	LF		$	
1820	02703		SILT TRAP TYPE A	134.00	EACH		$	
1830	02704		SILT TRAP TYPE B	134.00	EACH		$	
1840	02705		SILT TRAP TYPE C	134.00	EACH		$	
1850	02706		CLEAN SILT TRAP TYPE A	402.00	EACH		$	
1860	02707		CLEAN SILT TRAP TYPE B	402.00	EACH		$	
1870	02708		CLEAN SILT TRAP TYPE C	402.00	EACH		$	
1880	02709		CLEAN TEMP SILT FENCE	177,060.00	LF		$	
1890	02726		STAKING (7-113.01)	1.00	LS		$	
1900	02726		STAKING (7-279)	1.00	LS		$	
1910	02731		REMOVE STRUCTURE (TWIN BRIDGES OVER ALEXANDRIA DRIVE, STA. 249+65.73)	1.00	LS		$	
1920	02731		REMOVE STRUCTURE (TWIN BRIDGES OVER RJ CORMAN RAILROAD, STA. 276+91.5)	1.00	LS		$	
1930	02731		REMOVE STRUCTURE (SINGLE BRIDGE OVER NEW CIRCLE ROAD, STA. 293+54.79)	1.00	LS		$	
1940	02731		REMOVE STRUCTURE (TWIN BRIDGES OVER RJ CORMAN RAILROAD, STA. 317+31.29)	1.00	LS		$	
1950	02775		ARROW PANEL	6.00	EACH		$	
1960	03171		CONCRETE BARRIER WALL TYPE 9T	26,240.00	LF		$	
1970	03225		TUBULAR MARKERS	120.00	EACH		$	
1980	03260		CLEAN ROADWAY DRAINS	11.00	EACH		$	
1990	04793		CONDUIT-1 1/4 IN	160.00	LF		$	
2000	04795		CONDUIT-2 IN	40.00	LF		$	
2010	04810		ELECTRICAL JUNCTION BOX	40.00	EACH		$	
2020	04820		TRENCHING AND BACKFILLING	180.00	LF		$	
2030	04829		PIEZOELECTRIC SENSOR	12.00	EACH		$	
2040	04830		LOOP WIRE	5,900.00	LF		$	

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2050	04895		LOOP SAW SLOT AND FILL	1,130.00	LF		$	
2060	05950		EROSION CONTROL BLANKET	14,478.00	SQYD		$	
2070	05952		TEMP MULCH	691,757.00	SQYD		$	
2080	05953		TEMP SEEDING AND PROTECTION	95,163.00	SQYD		$	
2090	05963		INITIAL FERTILIZER	13.40	TON		$	
2100	05964		20-10-10 FERTILIZER	21.70	TON		$	
2110	05985		SEEDING AND PROTECTION	409,445.00	SQYD		$	
2120	05989		SPECIAL SEEDING CROWN VETCH	53,600.00	SQYD		$	
2130	05992		AGRICULTURAL LIMESTONE	253.80	TON		$	
2140	06401		FLEXIBLE DELINEATOR POST-M/W	187.00	EACH		$	
2150	06404		FLEXIBLE DELINEATOR POST-M/Y	88.00	EACH		$	
2160	06510		PAVE STRIPING-TEMP PAINT-4 IN	16,600.00	LF		$	
2170	06511		PAVE STRIPING-TEMP PAINT-6 IN	332,884.00	LF		$	
2180	06514		PAVE STRIPING-PERM PAINT-4 IN	8,458.00	LF		$	
2190	06514		PAVE STRIPING-PERM PAINT-4 IN (WHITE)	14,162.00	LF		$	
2200	06514		PAVE STRIPING-PERM PAINT-4 IN (YELLOW)	13,157.00	LF		$	
2210	06515		PAVE STRIPING-PERM PAINT-6 IN	79,252.00	LF		$	
2220	06516		PAVE STRIPING-PERM PAINT-8 IN (WHITE)	1,430.00	LF		$	
2230	06517		PAVE STRIPING-PERM PAINT-12 IN	4,018.00	LF		$	
2240	06531		PAVE STRIPING REMOVAL-6 IN	14,100.00	LF		$	
2250	06565		PAVE MARKING-THERMO X-WALK-6 IN	1,097.00	LF		$	
2260	06568		PAVE MARKING-THERMO STOP BAR-24IN	326.00	LF		$	
2270	06569		PAVE MARKING-THERMO CROSS-HATCH	2,647.00	SQFT		$	
2280	06574		PAVE MARKING-THERMO CURV ARROW	52.00	EACH		$	
2290	06576		PAVE MARKING-THERMO ONLY	7.00	EACH		$	
2300	06589		PAVEMENT MARKER TYPE V-MW	321.00	EACH		$	
2310	06591		PAVEMENT MARKER TYPE V-BY	141.00	EACH		$	
2320	06592		PAVEMENT MARKER TYPE V-B W/R	972.00	EACH		$	
2330	06593		PAVEMENT MARKER TYPE V-B Y/R	335.00	EACH		$	
2340	06600		REMOVE PAVEMENT MARKER TYPE V	160.00	EACH		$	
2350	08100		CONCRETE-CLASS A	50.40	CUYD		$	
2360	08900		CRASH CUSHION TY VI CLASS B TL2	1.00	EACH		$	
2370	08901		CRASH CUSHION TY VI CLASS BT TL2	37.00	EACH		$	
2380	08904		CRASH CUSHION TY VI CLASS C	6.00	EACH		$	
2390	10020NS		FUEL ADJUSTMENT	369,469.00	DOLL	$1.00	$	$369,469.00
2400	10030NS		ASPHALT ADJUSTMENT	652,648.00	DOLL	$1.00	$	$652,648.00
2410	20099ES842		PAVE MARK TEMP PAINT STOP BAR	142.00	LF		$	
2420	20100ES842		PAVE MARK TEMP PAINT LINE ARROW	14.00	EACH		$	
2430	20209EP69		GRANULAR PILE CORE	328.00	CUYD		$	
2440	20210EP69		COHESIVE PILE CORE	46.00	CUYD		$	
2450	20259ED		TEMPORARY MEDIAN CROSSOVER	2.00	EACH		$	
2460	20359NN		GALVANIZED STEEL CABINET	4.00	EACH		$	
2470	20360ES818		WOOD POST	8.00	EACH		$	
2480	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	4.00	EACH		$	
2490	20394ES835		PVC CONDUIT-3 IN- IN MEDIAN BARRIER WALL	8,953.00	LF		$	
2500	20411ED		LAW ENFORCEMENT OFFICER	3,200.00	HOUR		$	
2510	20430ED		SAW CUT	47,444.00	LF		$	

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2520	20432ES112		REMOVE CRASH CUSHION	2.00	EACH		$	
2530	21342ED		FORM LINER	2,514.00	SQFT		$	
2540	21370ED		LONGITUDINAL SAW CUT- 6 IN	9,861.00	LF		$	
2550	21802EN		G/R STEEL W BEAM-S FACE (7 FT POST)	3,850.00	LF		$	
2560	22664EN		WATER BLASTING EXISTING STRIPE	105,272.00	LF		$	
2570	23131ER701		PIPELINE VIDEO INSPECTION	9,427.00	LF		$	
2580	23148EN		END ANCHORS	1.00	EACH		$	
2590	23274EN11F		TURF REINFORCEMENT MAT 1	15,916.00	SQYD		$	
2600	24035EC		CONC MED BAR END FOR CRASH CUSHION TY IX	1.00	EACH		$	
2610	24189ER		DURABLE WATERBORNE MARKING-6 IN W	12,953.00	LF		$	
2620	24190ER		DURABLE WATERBORNE MARKING-6 IN Y	9,069.00	LF		$	
2630	24191ER		DURABLE WATERBORNE MARKING-12 IN W	4,162.00	LF		$	
2640	24255EC		REMOVE CABLE GUARDRAIL BARRIER SYSTEM	9,318.00	LF		$	
2650	24654ED		SINGLE SLOPE MEDIAN BARRIER	10,188.00	LF		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3420	00445		ENTRANCE PIPE-30 IN	48.00	LF		$	
3430	00461		CULVERT PIPE-15 IN	11.00	LF		$	
3440	00461		CULVERT PIPE-15 IN (REINFORCED CONCRETE PIPE)	34.00	LF		$	
3450	00462		CULVERT PIPE-18 IN	239.00	LF		$	
3460	00464		CULVERT PIPE-24 IN	544.00	LF		$	
3470	00464		CULVERT PIPE-24 IN (REINFORCED CONCRETE PIPE)	24.00	LF		$	
3480	00466		CULVERT PIPE-30 IN	82.00	LF		$	
3490	00469		CULVERT PIPE-42 IN	24.00	LF		$	
3500	00494		CULVERT PIPE-30 IN EQUIV	48.00	LF		$	
3510	00521		STORM SEWER PIPE-15 IN	3,967.00	LF		$	
3520	00522		STORM SEWER PIPE-18 IN	2,583.00	LF		$	
3530	00522		STORM SEWER PIPE-18 IN (REINFORCED CONCRETE PIPE)	31.00	LF		$	
3540	00524		STORM SEWER PIPE-24 IN	1,986.00	LF		$	
3550	01000		PERFORATED PIPE-4 IN	12,265.00	LF		$	
3560	01001		PERFORATED PIPE-6 IN	9,761.00	LF		$	
3570	01010		NON-PERFORATED PIPE-4 IN	1,017.00	LF		$	
3580	01011		NON-PERFORATED PIPE-6 IN	312.00	LF		$	
3590	01015		INSPECT & CERTIFY EDGE DRAIN SYSTEM (7-113.01)	1.00	LS		$	
3600	01020		PERF PIPE HEADWALL TY 1-4 IN	50.00	EACH		$	
3610	01024		PERF PIPE HEADWALL TY 2-4 IN	2.00	EACH		$	
3620	01028		PERF PIPE HEADWALL TY 3-4 IN	11.00	EACH		$	
3630	01032		PERF PIPE HEADWALL TY 4-4 IN	19.00	EACH		$	
3640	01202		PIPE CULVERT HEADWALL-15 IN	4.00	EACH		$	
3650	01202		PIPE CULVERT HEADWALL-15 IN	3.00	EACH		$	
3660	01204		PIPE CULVERT HEADWALL-18 IN	5.00	EACH		$	
3670	01208		PIPE CULVERT HEADWALL-24 IN	5.00	EACH		$	

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3680	01208		PIPE CULVERT HEADWALL-24 IN	2.00	EACH		$	
3690	01210		PIPE CULVERT HEADWALL-30 IN	1.00	EACH		$	
3700	01210		PIPE CULVERT HEADWALL-30 IN	1.00	EACH		$	
3710	01214		PIPE CULVERT HEADWALL-42 IN	1.00	EACH		$	
3720	01373		METAL END SECTION TY 1-24 IN	1.00	EACH		$	
3730	01432		SLOPED BOX OUTLET TYPE 1-15 IN	2.00	EACH		$	
3740	01433		SLOPED BOX OUTLET TYPE 1-18 IN	3.00	EACH		$	
3750	01434		SLOPED BOX OUTLET TYPE 1-24 IN EQUIVALENT	1.00	EACH		$	
3760	01440		SLOPED BOX INLET-OUTLET TYPE 1	4.00	EACH		$	
3770	01450		S & F BOX INLET-OUTLET-18 IN	2.00	EACH		$	
3780	01451		S & F BOX INLET-OUTLET-24 IN	1.00	EACH		$	
3790	01456		CURB BOX INLET TYPE A	3.00	EACH		$	
3800	01480		CURB BOX INLET TYPE B	7.00	EACH		$	
3810	01490		DROP BOX INLET TYPE 1	5.00	EACH		$	
3820	01496		DROP BOX INLET TYPE 3	5.00	EACH		$	
3830	01517		DROP BOX INLET TYPE 5F	1.00	EACH		$	
3840	01544		DROP BOX INLET TYPE 11	4.00	EACH		$	
3850	01559		DROP BOX INLET TYPE 13G	5.00	EACH		$	
3860	01568		DROP BOX INLET TYPE 13S	1.00	EACH		$	
3870	01584		CAP DROP BOX INLET	2.00	EACH		$	
3880	01585		REMOVE DROP BOX INLET	1.00	EACH		$	
3890	01614		CONC MED BARR BOX INLET TY 14A2	3.00	EACH		$	
3900	01615		CONC MED BARR BOX INLET TY 14B2	36.00	EACH		$	
3910	01641		JUNCTION BOX-15 IN	2.00	EACH		$	
3920	01642		JUNCTION BOX-18 IN	3.00	EACH		$	
3930	01643		JUNCTION BOX-24 IN	3.00	EACH		$	
3940	01650		JUNCTION BOX	1.00	EACH		$	
3950	01651		JUNCTION BOX-MOD	1.00	EACH		$	
3960	01719		ADJUST INLET	3.00	EACH		$	
3970	01720		RECONSTRUCT INLET	2.00	EACH		$	
3980	08100		CONCRETE-CLASS A	1.67	CUYD		$	
3990	21799EN		BORE AND JACK PIPE-24 IN	537.00	LF		$	
4000	21800EN		BORE AND JACK PIPE-30 IN	79.00	LF		$	
4010	22628NN		DROP BOX INLET-MOD	1.00	EACH		$	
4020	23126EN		BORE AND JACK PIPE-18 IN	577.00	LF		$	
4030	24377EC		PREFAB BEND CONNECTION 25 DEG-15 IN	4.00	EACH		$	
4040	24575ES610		HEADWALL (DOUBLE 24 IN PIPE CULVERT)	1.00	EACH		$	
4050	24575ES610		HEADWALL (DOUBLE STANDARD, 24")	1.00	EACH		$	
4060	24634EC		BEND (PREFAB CONNECTION 25 DEG-18 IN)	2.00	EACH		$	
4070	24634EC		BEND (PREFAB CONNECTION 25 DE-24 IN)	2.00	EACH		$	

Section: 0004 - BRIDGE - RAMP G OVER US 60 (VERSAILLES ROAD) DWG. 27087

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4080	02231		STRUCTURE GRANULAR BACKFILL	187.00	CUYD		$	

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4090	02998		MASONRY COATING	632.00	SQYD		$	
4100	03299		ARMORED EDGE FOR CONCRETE	64.90	LF		$	
4110	08020		CRUSHED AGGREGATE SLOPE PROT	152.00	TON		$	
4120	08033		TEST PILES	63.00	LF		$	
4130	08046		PILES-STEEL HP12X53	344.00	LF		$	
4140	08094		PILE POINTS-12 IN	15.00	EACH		$	
4150	08100		CONCRETE-CLASS A	183.10	CUYD		$	
4160	08104		CONCRETE-CLASS AA	272.80	CUYD		$	
4170	08150		STEEL REINFORCEMENT	50,860.00	LB		$	
4180	08151		STEEL REINFORCEMENT-EPOXY COATED	71,167.00	LB		$	
4190	08160		STRUCTURAL STEEL (APPROXIMATELY 304,369 LBS.)	1.00	LS		$	
4200	08170		SHEAR CONNECTORS (APPROXIMATELY 5,442 LBS)	1.00	LS		$	
4210	08434		CLEAN & PAINT STRUCTURAL STEEL	1.00	LS		$	
4220	20745ED		ROCK SOUNDINGS	78.00	LF		$	
4230	20746ED		ROCK CORINGS	90.00	LF		$	
4240	21342ED		FORM LINER	724.00	SQFT		$	
4250	21420ED		DRILLED SHAFT-66 IN (COMMON)	78.00	LF		$	
4260	21421ED		DRILLED SHAFT-60 IN (SOLID ROCK)	60.00	LF		$	
4270	21532ED		RAIL SYSTEM TYPE III	615.00	LF		$	

Section: 0005 - BRIDGE - ALEXANDRIA DRIVE - DWG. 27028

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4280	02231		STRUCTURE GRANULAR BACKFILL	375.00	CUYD		$	
4290	02998		MASONRY COATING	1,286.00	SQYD		$	
4300	03299		ARMORED EDGE FOR CONCRETE	233.00	LF		$	
4310	04797		CONDUIT-3 IN	539.00	LF		$	
4320	08001		STRUCTURE EXCAVATION-COMMON	46.00	CUYD		$	
4330	08020		CRUSHED AGGREGATE SLOPE PROT	829.00	TON		$	
4340	08033		TEST PILES	155.00	LF		$	
4350	08046		PILES-STEEL HP12X53	505.00	LF		$	
4360	08094		PILE POINTS-12 IN	30.00	EACH		$	
4370	08100		CONCRETE-CLASS A	273.60	CUYD		$	
4380	08104		CONCRETE-CLASS AA	623.00	CUYD		$	
4390	08130		MECHANICAL REINF COUPLER #5	24.00	EACH		$	
4400	08133		MECHANICAL REINF COUPLER #8	32.00	EACH		$	
4410	08140		MECHANICAL REINF COUPLER #5 EPOXY COATED	12.00	EACH		$	
4420	08150		STEEL REINFORCEMENT	59,187.00	LB		$	
4430	08151		STEEL REINFORCEMENT-EPOXY COATED	166,178.00	LB		$	
4440	08671		PRECAST PC BOX BEAM SB33	2,090.70	LF		$	
4450	20392NS835		ELECTRICAL JUNCTION BOX TYPE C	4.00	EACH		$	
4460	20637ED		DRILLED SHAFT-ROCK 48 IN	22.70	LF		$	
4470	20745ED		ROCK SOUNDINGS	172.20	LF		$	
4480	20746ED		ROCK CORINGS	286.70	LF		$	
4490	21532ED		RAIL SYSTEM TYPE III	306.00	LF		$	
4500	23583EC		DRILLED SHAFT-48 IN-COMMON	148.30	LF		$	
4510	23584EC		DRILLED SHAFT-42 IN-ROCK	96.00	LF		$	

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4520	24654ED		SINGLE SLOPE MEDIAN BARRIER	153.00	LF		$	

Section: 0006 - BRIDGE - REPAIRS TO KY 4 OVER US 60 STA.535+32.56

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4530	02403		REMOVE CONCRETE MASONRY	31.00	CUYD		$	
4540	02998		MASONRY COATING	489.00	SQYD		$	
4550	03298		EXPAN JOINT REPLACE 4 IN	161.00	LF		$	
4560	03299		ARMORED EDGE FOR CONCRETE	161.00	LF		$	
4570	08100		CONCRETE-CLASS A	124.20	CUYD		$	
4580	08104		CONCRETE-CLASS AA	50.30	CUYD		$	
4590	08150		STEEL REINFORCEMENT	5,078.00	LB		$	
4600	08151		STEEL REINFORCEMENT-EPOXY COATED	3,130.00	LB		$	
4610	08434		CLEAN & PAINT STRUCTURAL STEEL	1.00	LS		$	
4620	08435		JACK & SUPPORT BRIDGE SPAN	1.00	LS		$	
4630	21969NN		BEARING REPLACEMENT	22.00	EACH		$	

Section: 0007 - BRIDGE - RJ CORMAN RAILROAD - (VERSAILLES LINE) DWG. 27029

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4640	02223		GRANULAR EMBANKMENT	30.00	CUYD		$	
4650	02231		STRUCTURE GRANULAR BACKFILL	1,177.00	CUYD		$	
4660	02998		MASONRY COATING	1,167.00	SQYD		$	
4670	03299		ARMORED EDGE FOR CONCRETE	297.30	LF		$	
4680	04797		CONDUIT-3 IN	600.00	LF		$	
4690	08001		STRUCTURE EXCAVATION-COMMON	282.00	CUYD		$	
4700	08020		CRUSHED AGGREGATE SLOPE PROT	984.00	TON		$	
4710	08033		TEST PILES	245.00	LF		$	
4720	08051		PILES-STEEL HP14X89	1,122.00	LF		$	
4730	08095		PILE POINTS-14 IN	37.00	EACH		$	
4740	08100		CONCRETE-CLASS A	633.80	CUYD		$	
4750	08104		CONCRETE-CLASS AA	834.30	CUYD		$	
4760	08130		MECHANICAL REINF COUPLER #5	88.00	EACH		$	
4770	08133		MECHANICAL REINF COUPLER #8	32.00	EACH		$	
4780	08140		MECHANICAL REINF COUPLER #5 EPOXY COATED	28.00	EACH		$	
4790	08150		STEEL REINFORCEMENT	126,832.00	LB		$	
4800	08151		STEEL REINFORCEMENT-EPOXY COATED	243,815.00	LB		$	
4810	08711		BRIDGE CHAIN LINK FENCE-6 FT	333.50	LF		$	
4820	20392NS835		ELECTRICAL JUNCTION BOX TYPE C	4.00	EACH		$	
4830	20637ED		DRILLED SHAFT-ROCK 48 IN	112.00	LF		$	
4840	20743ED		DRILLED SHAFT 54 IN-SOLID ROCK	27.40	LF		$	
4850	20745ED		ROCK SOUNDINGS	292.50	LF		$	
4860	20746ED		ROCK CORINGS	331.40	LF		$	
4870	21532ED		RAIL SYSTEM TYPE III	359.00	LF		$	
4880	21777EN		DRILLED SHAFT COMMON-54 IN	253.60	LF		$	
4890	23963EC		PPC I-BEAM TYPE HN36-49	2,365.90	LF		$	
4900	24654ED		SINGLE SLOPE MEDIAN BARRIER	173.40	LF		$	

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

Section: 0008 - BRIDGE - RAMP A RETAINING WALL - DWG. 27199

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4910	08003		FOUNDATION PREPARATION	1.00	LS		$	
4920	08100		CONCRETE-CLASS A	94.30	CUYD		$	
4930	08150		STEEL REINFORCEMENT	8,659.00	LB		$	
4940	24596EN		GRANULAR BACKFILL	428.00	CUYD		$	

Section: 0009 - BRIDGE - RJ CORMAN RR (LOUISVILLE TO WINCHESTER, CENTRAL LIN

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
4950	02231		STRUCTURE GRANULAR BACKFILL	564.00	CUYD		$	
4960	02998		MASONRY COATING	940.00	SQYD		$	
4970	03299		ARMORED EDGE FOR CONCRETE	267.30	LF		$	
4980	04797		CONDUIT-3 IN	620.00	LF		$	
4990	08001		STRUCTURE EXCAVATION-COMMON	58.40	CUYD		$	
5000	08020		CRUSHED AGGREGATE SLOPE PROT	1,086.00	TON		$	
5010	08033		TEST PILES	240.00	LF		$	
5020	08039		PRE-DRILLING FOR PILES	760.00	LF		$	
5030	08046		PILES-STEEL HP12X53	1,216.00	LF		$	
5040	08094		PILE POINTS-12 IN	40.00	EACH		$	
5050	08100		CONCRETE-CLASS A	399.60	CUYD		$	
5060	08104		CONCRETE-CLASS AA	827.80	CUYD		$	
5070	08130		MECHANICAL REINF COUPLER #5	40.00	EACH		$	
5080	08133		MECHANICAL REINF COUPLER #8	32.00	EACH		$	
5090	08140		MECHANICAL REINF COUPLER #5 EPOXY COATED	16.00	EACH		$	
5100	08141		MECHANICAL REINF COUPLER #6 EPOXY COATED	1,432.00	EACH		$	
5110	08150		STEEL REINFORCEMENT	104,587.00	LB		$	
5120	08151		STEEL REINFORCEMENT-EPOXY COATED	282,552.00	LB		$	
5130	08711		BRIDGE CHAIN LINK FENCE-6 FT	348.00	LF		$	
5140	20392NS835		ELECTRICAL JUNCTION BOX TYPE C	4.00	EACH		$	
5150	20637ED		DRILLED SHAFT-ROCK 48 IN	98.00	LF		$	
5160	20743ED		DRILLED SHAFT 54 IN-SOLID ROCK	14.00	LF		$	
5170	20745ED		ROCK SOUNDINGS	203.00	LF		$	
5180	20746ED		ROCK CORINGS	266.00	LF		$	
5190	21532ED		RAIL SYSTEM TYPE III	360.20	LF		$	
5200	21777EN		DRILLED SHAFT COMMON-54 IN	125.20	LF		$	
5210	23963EC		PPC I-BEAM TYPE HN36-49	2,292.30	LF		$	
5220	24405EC		MECHANICAL REINF COUPLER-#8 EPOXY COATED	4.00	EACH		$	
5230	24654ED		SINGLE SLOPE MEDIAN BARRIER	180.10	LF		$	

Section: 0010 - BRIDGE - RAMP C RETAINING WALL - DWG. 27200

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0250	08003		FOUNDATION PREPARATION	1.00	LS		$	

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0260	08100		CONCRETE-CLASS A	245.00	CUYD		$	
0270	08150		STEEL REINFORCEMENT	23,500.00	LB		$	
0280	24596EN		GRANULAR BACKFILL	1,101.00	CUYD		$	

Section: 0011 - BRIDGE - OLD FRANKFORT PIKE (KY 1861) - DWG. 27031

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0290	02231		STRUCTURE GRANULAR BACKFILL	505.00	CUYD		$	
0300	02998		MASONRY COATING	2,158.00	SQYD		$	
0310	03299		ARMORED EDGE FOR CONCRETE	167.10	LF		$	
0320	04797		CONDUIT-3 IN	720.00	LF		$	
0330	04810		ELECTRICAL JUNCTION BOX	2.00	EACH		$	
0340	08001		STRUCTURE EXCAVATION-COMMON	135.00	CUYD		$	
0350	08002		STRUCTURE EXCAV-SOLID ROCK	591.00	CUYD		$	
0360	08020		CRUSHED AGGREGATE SLOPE PROT	473.00	TON		$	
0370	08033		TEST PILES	46.00	LF		$	
0380	08039		PRE-DRILLING FOR PILES	290.00	LF		$	
0390	08046		PILES-STEEL HP12X53	331.00	LF		$	
0400	08094		PILE POINTS-12 IN	29.00	EACH		$	
0410	08100		CONCRETE-CLASS A	581.90	CUYD		$	
0420	08104		CONCRETE-CLASS AA	759.80	CUYD		$	
0430	08150		STEEL REINFORCEMENT	130,405.00	LB		$	
0440	08151		STEEL REINFORCEMENT-EPOXY COATED	195,643.00	LB		$	
0450	08634		PRECAST PC I BEAM TYPE 4	2,516.20	LF		$	
0460	20392NS835		ELECTRICAL JUNCTION BOX TYPE C	4.00	EACH		$	
0470	21532ED		RAIL SYSTEM TYPE III	639.80	LF		$	

Section: 0012 - BRIDGE - RAMP D RETAINING WALL -DWG. 27201

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0480	08003		FOUNDATION PREPARATION	1.00	LS		$	
0490	08100		CONCRETE-CLASS A	161.00	CUYD		$	
0500	08150		STEEL REINFORCEMENT	14,600.00	LB		$	
0510	24596EN		GRANULAR BACKFILL	542.00	CUYD		$	

Section: 0013 - BRIDGE - WOLFE RUN CREEK DBL. CULVERT, 14' X 10', DWG. 27030

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0520	02403		REMOVE CONCRETE MASONRY	30.20	CUYD		$	
0530	08002		STRUCTURE EXCAV-SOLID ROCK	43.00	CUYD		$	
0540	08003		FOUNDATION PREPARATION	1.00	LS		$	
0550	08100		CONCRETE-CLASS A	119.40	CUYD		$	
0560	08150		STEEL REINFORCEMENT	11,014.00	LB		$	
0570	23930EC		LIGHTWEIGHT CELLULAR CONCRETE FILL	1,909.00	CUYD		$	

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

Section: 0014 - BRIDGE - RAMP E SOIL NAIL RETAINING WALL - DWG. 27202

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0580	02572		QUALITY CONTROL	1.00	LS		$	
0590	08003		FOUNDATION PREPARATION	1.00	LS		$	
0600	20603ED		SOIL NAIL WALL	3,372.00	SQFT		$	

Section: 0015 - BRIDGE - TOWN BRANCH CREEK DBL. CULVERT, 14' X 10', DWG. 27058

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0610	02403		REMOVE CONCRETE MASONRY	77.00	CUYD		$	
0620	08002		STRUCTURE EXCAV-SOLID ROCK	24.00	CUYD		$	
0630	08003		FOUNDATION PREPARATION	1.00	LS		$	
0640	08100		CONCRETE-CLASS A	229.20	CUYD		$	
0650	08150		STEEL REINFORCEMENT	25,865.00	LB		$	
0660	23930EC		LIGHTWEIGHT CELLULAR CONCRETE FILL	1,167.70	CUYD		$	

Section: 0016 - BRIDGE - RAMP G RETAINING WALL - DWG. 27136

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0670	08003		FOUNDATION PREPARATION	1.00	LS		$	
0680	08100		CONCRETE-CLASS A	942.00	CUYD		$	
0690	08150		STEEL REINFORCEMENT	127,000.00	LB		$	
0700	24596EN		GRANULAR BACKFILL	6,122.00	CUYD		$	

Section: 0017 - BRIDGE - MSE RETAINING WALL - KY 1681- DWG 27158

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0710	02203		STRUCTURE EXCAV-UNCLASSIFIED	3,549.00	CUYD		$	
0720	02223		GRANULAR EMBANKMENT	760.00	CUYD		$	
0730	08018		RETAINING WALL	7,275.00	SQFT		$	

Section: 0018 - BRIDGE - SOLDIER PILE RETAINING WALLS - KY 4 - DWG. 27159

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0740	02155		PAVED DITCH TYPE 1 MOD	774.00	SQYD		$	
0750	02203		STRUCTURE EXCAV-UNCLASSIFIED	1,904.00	CUYD		$	
0760	02231		STRUCTURE GRANULAR BACKFILL	314.00	CUYD		$	
0770	02998		MASONRY COATING	459.00	SQYD		$	
0780	08018		RETAINING WALL	30,660.00	SQFT		$	
0790	08033		TEST PILES	730.00	LF		$	
0800	08039		PRE-DRILLING FOR PILES	8,206.00	LF		$	
0810	08170		SHEAR CONNECTORS (APPROXIMATELY 7,196, 7-113.01)	1.00	LS		$	
0820	21432NC		CONCRETE FORMLINER	25,900.00	SQFT		$	
0830	24718EC		PILES-STEEL W21 X 166	3,631.00	LF		$	
0840	24719EC		PILES-STEEL W21 X 122	3,060.00	LF		$	

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0850	24720EC		PILES-STEEL W21 X 93	553.00	LF		$	

Section: 0019 - SEWER

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0860	01065		STEEL ENCASEMENT PIPE-8 IN	256.00	LF		$	
0870	01067		STEEL ENCASEMENT PIPE-10 IN	150.00	LF		$	
0880	03537		BEND 11.25 DEG 4 IN	4.00	EACH		$	
0890	03538		BEND 11.25 DEG 6 IN	2.00	EACH		$	
0900	03544		BEND 22.50 DEG 4 IN	3.00	EACH		$	
0910	03545		BEND 22.50 DEG 6 IN	3.00	EACH		$	
0920	03553		BEND 45 DEG 4 IN	1.00	EACH		$	
0930	03554		BEND 45 DEG 6 IN	1.00	EACH		$	
0940	03559		BEND 90 DEG 4 IN	1.00	EACH		$	
0950	03560		BEND 90 DEG 6 IN	2.00	EACH		$	
0960	20154ND		DRAIN ASSEMBLY (4")	3.00	EACH		$	
0970	20154ND		DRAIN ASSEMBLY (6")	3.00	EACH		$	
0980	21353ND		TIE-IN TO FORCE MAIN	4.00	EACH		$	
0990	22082NN		AIR RELEASE VALVE ASSEMBLY (4")	2.00	EACH		$	
1000	22082NN		AIR RELEASE VALVE ASSEMBLY (6")	2.00	EACH		$	
1010	22960ED		BORE & JACK ENCASEMENT PIPE-INSTALL (8")	256.00	LF		$	
1020	22984EN		PVC FORCE MAIN-6 IN	3,291.00	LF		$	
1030	23528EC		PVC FORCE MAIN-4 IN-INSTALL	2,823.00	LF		$	
1040	24149EC		BORE AND JACK PIPE-10 IN	150.00	LF		$	
1050	24544EC		REMOVE (6" FORCE MAIN)	180.00	LF		$	

Section: 0020 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2660	06400		GMSS GALV STEEL TYPE A	13,241.00	LB		$	
2670	06401		FLEXIBLE DELINEATOR POST-M/W	70.00	EACH		$	
2680	06404		FLEXIBLE DELINEATOR POST-M/Y	70.00	EACH		$	
2690	06405		SBM ALUMINUM PANEL SIGNS	6,615.00	SQFT		$	
2700	06406		SBM ALUM SHEET SIGNS .080 IN	498.00	SQFT		$	
2710	06407		SBM ALUM SHEET SIGNS .125 IN	1,241.00	SQFT		$	
2720	06410		STEEL POST TYPE 1	2,759.00	LF		$	
2730	06412		STEEL POST MILE MARKERS	6.00	EACH		$	
2740	06415		OSS GALV STEEL CANTILEVER	2.00	EACH		$	
2750	06438		OSS ALUMINUM 80 FT TRUSS	1.00	EACH		$	
2760	06441		GMSS GALV STEEL TYPE C	11,856.00	LB		$	
2770	06449		REM OVERHEAD SIGN SUPPORT STR	1.00	EACH		$	
2780	06450		REM OVERHEAD STRUC CONC BASE	1.00	EACH		$	
2790	06451		REMOVE SIGN SUPPORT BEAM	45.00	EACH		$	

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2800	06490		CLASS A CONCRETE FOR SIGNS	82.00	CUYD		$	
2810	06491		STEEL REINFORCEMENT FOR SIGNS	4,432.00	LB		$	
2820	20418ED		REMOVE & RELOCATE SIGNS	6.00	EACH		$	
2830	20419ND		ROADWAY CROSS SECTION	20.00	EACH		$	
2840	20912ND		BARRIER WALL POST	10.00	EACH		$	
2850	21373ND		REMOVE SIGN	36.00	EACH		$	
2860	21596ND		GMSS TYPE D	26.00	EACH		$	
2870	24631EC		BARCODE SIGN INVENTORY	253.00	EACH		$	

Section: 0021 - SIGNALIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2880	04793		CONDUIT-1 1/4 IN	80.00	LF		$	
2890	04795		CONDUIT-2 IN	20.00	LF		$	
2900	04811		ELECTRICAL JUNCTION BOX TYPE B	5.00	EACH		$	
2910	04820		TRENCHING AND BACKFILLING	170.00	LF		$	
2920	04829		PIEZOELECTRIC SENSOR	6.00	EACH		$	
2930	04830		LOOP WIRE	7,278.00	LF		$	
2940	04850		CABLE-NO. 14/1 PAIR	2,250.00	LF		$	
2950	04895		LOOP SAW SLOT AND FILL	2,280.00	LF		$	
2960	20359NN		GALVANIZED STEEL CABINET	2.00	EACH		$	
2970	20360ES818		WOOD POST	4.00	EACH		$	
2980	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	2.00	EACH		$	

Section: 0022 - LIGHTING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
2990	04700		POLE 30 FT MTG HT	49.00	EACH		$	
3000	04701		POLE 40 FT MTG HT	44.00	EACH		$	
3010	04710		POLE 80 FT MTG HT HIGH MAST	9.00	EACH		$	
3020	04720		BRACKET 4 FT	9.00	EACH		$	
3030	04721		BRACKET 6 FT	53.00	EACH		$	
3040	04723		BRACKET 10 FT	18.00	EACH		$	
3050	04725		BRACKET 15 FT	14.00	EACH		$	
3060	04740		POLE BASE	92.00	EACH		$	
3070	04741		POLE BASE IN MEDIAN WALL	40.00	EACH		$	
3080	04750		TRANSFORMER BASE	92.00	EACH		$	
3090	04761		LIGHTING CONTROL EQUIPMENT	4.00	EACH		$	
3100	04780		FUSED CONNECTOR KIT	270.00	EACH		$	
3110	04797		CONDUIT-3 IN	2,433.00	LF		$	
3120	04800		MARKER	13.00	EACH		$	
3130	04820		TRENCHING AND BACKFILLING	22,630.00	LF		$	
3140	04832		WIRE-NO. 12	18,835.00	LF		$	
3150	04833		WIRE-NO. 8	7,800.00	LF		$	
3160	04834		WIRE-NO. 6	21,000.00	LF		$	
3170	04860		CABLE-NO. 8/3C DUCTED	26,390.00	LF		$	
3180	04861		CABLE-NO. 6/3C DUCTED	1,200.00	LF		$	
3190	04862		CABLE-NO. 4/3C DUCTED	2,500.00	LF		$	

141291

PROPOSAL BID ITEMS

Report Date 10/30/14

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3200	04940		REMOVE LIGHTING (7-113.01)	1.00	LS		$	
3210	04940		REMOVE LIGHTING (7-279)	1.00	LS		$	
3220	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	32.00	EACH		$	
3230	20392NS835		ELECTRICAL JUNCTION BOX TYPE C	2.00	EACH		$	
3240	20410ED		MAINTAIN LIGHTING (7-113.01)	1.00	LS		$	
3250	21543EN		BORE AND JACK CONDUIT	2,295.00	LF		$	
3260	23161EN		POLE BASE-HIGH MAST	95.00	CUYD		$	
3270	24589ED		LED LUMINAIRE	134.00	EACH		$	
3280	24739EC		POLE 40 FT MTG HT W/12 IN ARM	40.00	EACH		$	
3290	24749EC		HIGH MAST LED LUMINAIRE	48.00	EACH		$	

Section: 0023 - LANDSCAPING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3300	20000ES724		TREE (EUROPEAN CRANBERRY VIBURNUM)	251.00	EACH		$	
3310	20511NS724		PIN OAK	44.00	EACH		$	
3320	21426NS724		NORWAY SPRUCE	42.00	EACH		$	
3330	21429NS724		GREY OWL JUNIPER	506.00	EACH		$	
3340	22000ED		WOOD PLANK FENCE	435.00	LF		$	
3350	24394ES724		HAWTHORN (WINTER KING)	133.00	EACH		$	

Section: 0024 - TRAINEES

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3360	02742		TRAINEE PAYMENT REIMBURSEMENT GROUP 1 OPERATOR	1,600.00	HOUR		$	
3370	02742		TRAINEE PAYMENT REIMBURSEMENT CEMENT MASON	1,200.00	HOUR		$	
3380	02742		TRAINEE PAYMENT REIMBURSEMENT GROUP 2, 3 OR 4 OPERATOR	1,400.00	HOUR		$	
3390	02742		TRAINEE PAYMENT REIMBURSEMENT GROUP 2, 3 OR 4 OPERATOR	1,400.00	HOUR		$	

Section: 0025 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
3400	02568		MOBILIZATION	1.00	LS		$	
3410	02569		DEMOBILIZATION	1.00	LS		$	