



**COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET**

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

Matthew G. Bevin
Governor

Greg Thomas
Secretary

January 9, 2018

CALL NO. 100
CONTRACT ID NO. 181003
ADDENDUM # 1

Subject: Perry County, NHPP 0151(086)
Letting January 26, 2018

- (1) Revised - Special Note - Page 361 of 522
- (2) Revised - Right of Way Certification - Page 375 of 522
- (3) Revised - Special Note - Pages 447-448 of 522
- (4) Revised - CAP Note - Pages 452-454 of 522
- (5) Added - Special Notes - Pages 1-26 of 26

Proposal revisions are available at <http://transportation.ky.gov/Construction-Procurement/>.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

A handwritten signature in black ink that reads "Rachel Mills".

Rachel Mills, P.E.
Director
Division of Construction Procurement

RM:ws
Enclosures



An Equal Opportunity Employer M/F/D

SPECIAL NOTE

Excavation South of the North Fork of Kentucky River

To minimize impacts to traffic on KY 15, a limit of 225 calendar days has been set for the completion of all earthwork operations south of the river. The time period shall begin at the initiation of earthwork or excavation activities. *Calendar days will not be counted on days in which excavation activities are not occurring.* Any work extending past the 225 calendar days limit will be assessed damages at the rate of \$4,750 per day.



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

Rev. 01/2016
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RIGHT OF WAY CERTIFICATION

Original Re-Certification

ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
10-158.00	Perry	12FO FD52 097 8658101R	NHPP 0151 (076)

PROJECT DESCRIPTION
Improve Safety, Upgrade Geometrics, & Address Capacity Issues / KY 15 / Perry Co. / Morton Boulevard to KY 15 Bypass

No Additional Right of Way Required
Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project.

Condition # 1 (Additional Right of Way Required and Cleared)
All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.

Condition # 2 (Additional Right of Way Required with Exception)
The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract

Condition # 3 (Additional Right of Way Required with Exception)
The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.

Total Number of Parcels on Project	32	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired			
Signed Deed	27		
Condemnation	5		
Signed ROE	5		All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. All properties are now vacated.

Notes/ Comments (Use Additional Sheet if necessary)
IOJ obtained on P101, P106, P120, and P136. P102 has been settled.

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Aric Skaggs
Signature		Signature	
Date		Date	01/09/2018
Right of Way Director		FHWA	
Printed Name	D. M. Loy	Printed Name	No Signature Required as per FHWA-KYTC
Signature		Signature	Current Stewardship Agreement
Date	09 JAN 18	Date	

SPECIAL NOTE FOR EXCESS MATERIAL SITES

PERRY COUNTY RECONSTRUCT KY 15 ITEM 10-158.00

The construction activities of this project may result in a considerable amount of excess material. It is the contractor's responsibility to dispose of any material in compliance with the United States Army Corps of Engineers (USACE) and Kentucky Division of Water (DOW) rules and regulations pertaining to discharges into Waters of the U.S. The contractor is also responsible to ensure material disposal actions are also in compliance with the US Fish and Wildlife Service (USFWS) rules and regulations pertaining to the Endangered Species Act, Section 106 of the National Historic Preservation Act, Floodplains, as well as any other pertinent regulations.

The Kentucky Transportation Cabinet (KYTC) has acquired Section 404 (USACE) & 401 (DOW) permits for three (3) excess material sites (A, B, and C) that the contractor can use for this KYTC project. It is the contractor's responsibility to review the Clean Water Act 404 & 401 permits and maintain compliance with the 401 & 404 permits throughout the duration of the project.

Mitigation requirements resulting from the use of these excess material sites will be in the form of in-lieu fees and will be paid by the KYTC prior to stream/wetland impacts occurring in the excess material sites.

~~**The KYTC has not acquired fee simple ownership or purchased an easement to Excess Material Sites B and C.** The contractor is responsible for negotiations/agreements with the property owner(s) of the sites. The KYTC has not secured access rights to these proposed excess material sites. The contractor must secure any haul roads or accesses through other properties by agreements with property owners or other governmental agencies (i.e. County roads, private roads, etc.).~~

The KYTC has purchased an easement to Excess Material Site A. The only access rights that KYTC has secured is within the temporary easement boundaries. The contractor must secure any haul roads or accesses through other properties by agreements with property owners or other governmental agencies (i.e. County roads, private roads, etc.).

The KYTC has purchased easements to Excess Material Site B & C. The only access rights that KYTC has secured is within the temporary easement boundaries. The contractor must secure any haul roads or accesses through other properties by agreements with property owners or other governmental agencies (i.e. County roads, private roads, etc.).

The KYTC is not responsible for damages or repairs to sites or accesses to sites located outside of state right of way. The contractor must notify the KYTC prior to tree clearing in the excess material sites. The location of the excess material sites are identified in the attached map.

Any work associated with the excess material site will be incidental to the excavation cost including but not limited to the following items: Erosion Control Devices, Clearing and Grubbing, Seeding and Protection, Temporary and Permanent Drainage Ditches, and Structures (including pipes, culverts, etc.). Please refer to the CAP Report for agreements made with each respective excess material site owners.

The contractor shall abide by Section 205.04 in the Standard Specifications for Road and Bridge Construction Manual for excess material disposal.

Property Owner Information for Excess Material Sites listed below:

Excess Material Sites B & C:

Gene & Margaret Rice
(606)439-1066 (Home)

Excess Material Site A:

Combs Heirs
Robert Combs 420 Avondale Drive, Sterling, VA
Nancy Combs 1330 Bedford Road, Grosse Pointe Perk, MI
Mindy Barfield and Mark Barfield 917 Albany Circle, Lexington, KY
Francis Gute and Sara Gute Crest Street, Ashland, KY
Rebecca Lyon and James Lyon 778 Glendover Road, Lexington, KY
Molly Toler and Don Toler 333 Kentucky Boulevard, Hazard, KY
Donald Combs and Leslie Combs P.O. Drawer 31, Pikeville, KY
Steven Combs and Terese Combs 114 East Cedar Drive, Pikeville, KY
Robert Combs and Afif Allown-Combs 29 Baynard Park Road, Hilton Head, SC

If the contractor chooses to use other excess material site(s) (rather than or in addition to) the KYTC's identified excess material sites, or modify the identified excess material sites, it will be the responsibility of the contractor to acquire the necessary permits and certifications. The contractor will be responsible for any fees associated with these sites including but not limited to: USFWS fees for tree cutting, in-lieu fees additional to what KYTC has previously agreed to pay .When applying for new or modified permits the Contractor must coordinate with KYTC Central Office Department of Environmental Analysis prior to beginning permitting work. No additional contract time will be allowed for this process.

Questions concerning any potential impacts to "Waters of the United States" should be brought to the attention of the appropriate District Office for the Corps of Engineers for determination, prior to disturbance. Any fees associated with obtaining new or modified permit approvals for the disposal of excess material from the USFWS, USACE or other appropriate regulatory agencies are the responsibility of the contractor.

Revised 12-1-17

~~Removed Language~~
New Language

KENTUCKY TRANSPORTATION CABINET COMMUNICATION ALL PROMISES (CAP)

Item Number <i>10-0158.00</i>	County PERRY	Route KY 15	Project Manager kytc\Darren.Back
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CAP #	Date of Promise	Requestor	Location of Promise:	CAP Description
1	8/4/14	CO DEA	Throughout Project	<p>The following is a list of environmental commitments and mitigation measures that are to be completed prior to letting:</p> <ul style="list-style-type: none"> * Complete a Biological Assessment for gray bat * Obtain all necessary USACE and KDOW permits * Perform Phase II UST/Hazmat Study for the Exxon station to be acquired * Perform asbestos sampling on bridge over North Fork of the Kentucky River
2	10/15/17	Property Owner of P126	P126	AFTER CONSTRUCTION IS COMPLETED, KYTC WILL ENSURE THAT THE TEMPORARY EASEMENT AREA IS SEEDED AND BLENDED WITH THE EXISTING AREA AND WILL RETURN THE DISTURBED AREAS TO THE CONDITION PRIOR TO CONSTRUCTION.
3	10/15/17	Property Owner of P127	P127	AFTER CONSTRUCTION IS COMPLETED, KYTC WILL ENSURE THAT THE TEMPORARY EASEMENT AREA IS SEEDED AND BLENDED WITH THE EXISTING AREA AND WILL RETURN THE DISTURBED AREAS TO THE CONDITION PRIOR TO CONSTRUCTION.
4	8/17/17	K-VA-T Food Stores	Parcel 121	<ul style="list-style-type: none"> * The Section Engineer, or other authorized designee of the KYTC, shall meet with the owner (K-VA-T Food Stores) to review the traffic control staging plan. In the staging plan, the contractor will be instructed that any disruption to the entrance of the owner's shopping center shall be limited during business hours to no more than 15 minutes and the owner shall be notified at least 48 hours in advance of any overnight closings projected to be longer than 1 hour. * In addition to the above, it is understood that 48 hours prior to and throughout the following holidays, ingress/egress to the owner's shopping center shall not be disturbed in any way by construction activities. The holidays are: New Years, Easter, Memorial Day, Fourth of July, Labor Day, the day before Thanksgiving, Thanksgiving, Christmas Eve, and Christmas. * The owner's sign will not be disturbed. Any damage to the sign will become the liability of the contractor to repair.
5	9/1/16	Vires Enterprises	Parcel 115	The contractor will construct the embankment shown in the excess material site from Sta. 358+40 to Sta. 361+20 as is depicted on the cross sections. The disturb limits for this area is outside of KYTC right of way. Permission to enter property to do this work as shown in the plans was granted by the owner.
6	10/18/17	AEP Distribution	Approximate LT Sta. 345+00 to LT Sta. 365+50	KYTC has agreed to allow AEP to locate their facilities on the low bench of this excess material site. The contractor shall construct the fill up to the first bench as depicted on the cross sections. An access will be provided to the low bench for AEP for relocation work and maintenance.
7	10/18/17	KYTC	Approximate LT Sta. 346+75 to LT Sta. 365+00	Red Bud Trees shall be planted on the excess material site at this location. They will be placed on the top 2:1 slope, spaced at 35' on center and in a zigzag pattern. Bid items for this work have been included in the summary sheet.

**KENTUCKY TRANSPORTATION CABINET
COMMUNICATION ALL PROMISES (CAP)**

CAP #	Date of Promise	Requestor	Location of Promise:	CAP Description
8	10/18/17	AEP Transmission	Near AEP Transmission Facilities	<p>* The contractor will maintain an undisturbed area extending 30 feet in all directions from the center of poles, supported structures, or towers on said electric power line and will also maintain an undisturbed area of 30 feet in all directions from all anchor guys.</p> <p>* Any blasting required in the area of AEP Transmission is to be conducted by certified individual meeting requirements as established by local, state, and federal government agencies. AEP's facilities (guys, structures, and conductors) shall not be subjected to seismic vibrations caused by blasting in excess of a maximum total peak particle velocity of 2.0 inches per second in any one of three mutually perpendicular directions identified as transverse, vertical, and longitudinal. A properly calibrated seismograph shall be used to record vibration levels. The geophone of the seismograph shall be located within 10 feet of the structure between the blast and the structure. The geophone shall be properly coupled to provide accurate vibration readings. Blasting shall also be controlled so as to prevent any debris from being blown into the conductors or structures of AEP's facilities. The contractor may elect to use blast blankets and this would be incidental to the Roadway Excavation bid item. Air blast shall be controlled to prevent arcing of conductors to one another or to any structure. Air blast shall also be controlled to a limit of 150 dBI at AEP's facilities. A copy of the blasting log shall be provided to J. Kelly Bledsoe of AEP Transmission within 30 days following the blast.</p>
9	10/18/17	AEP Transmission	Near AEP Transmission Facilities	<p>* The contractor shall not increase the present ground elevation in the right of way area so as to reduce the clearance between the conductors and the ground to be less than prescribed by the National Electrical Safety Code.</p> <p>* The contractor shall provide reasonable access, in AEP's opinion, at all times for the operation, maintenance, repair, alteration, reconstruction and removal, from time to time, of any or all AEP's facilities.</p> <p>* The construction, use, and maintenance of construction access roads on the right of way will not materially change the surface elevation from that existing prior to the granting of said consent.</p> <p>* The contractor is responsible for any repairs and damages to AEP's facilities resulting from construction activities.</p> <p>* The contractor will exercise extreme care when working under or adjacent to AEP's facilities.</p>
10	10/18/17	Hometown Convenience	Parcel 101	<p>Both entrances to the property will be kept open between the hours of 6:00am and 9:00pm. Any work affecting traffic flow into, out of, or within the property is to be done during nighttime hours between 9:00pm and 6:00am. Coordination is to be made with the business for the access and mobility of fuel delivery trucks. If either entrance is closed or obstructed between the hours of 6:00am and 9:00pm, then damages will be assessed at the rate of \$4,750 per entrance per day or any portion of a day until the entrance(s) is reopened.</p>

**KENTUCKY TRANSPORTATION CABINET
COMMUNICATION ALL PROMISES (CAP)**

CAP #	Date of Promise	Requestor	Location of Promise:	CAP Description
11	10/13/17	Combs Heirs	Parcel 146	<p>The following stipulations were agreed upon concerning the placement of excess material on the parcel.</p> <ul style="list-style-type: none"> * All excess material placed on the site shall conform to Section 206 of the Current Standards for Road and Bridge Construction concerning compaction and thickness requirements. * A design engineer shall be consulted prior to beginning the placement of said materials upon the site. * Any and all sediment control structures will be constructed prior to the placement of spoil on the site. * The fill area(s) shall be grubbed of timber and vegetation prior to the placement of the fill. All material resulting from clearing and grubbing shall be disposed of by burning or removal from the site. * To the extent practicable, top soil shall be removed prior to the placement of the spoil and temporarily stored at designated areas until graded areas are available for redistribution. Said top soil shall be redistributed to the graded areas when they are available. * The slopes of the fill shall not exceed a 2:1 slope. * The top of the fill shall be graded to drain to the perimeter ditches. Perimeter ditches shall be constructed and left in place upon the completion of the fill. * Upon completion of final grading, all outslopes shall be re-vegetated.
12	8/17/17	K-VA-T Food Stores	Parcel 121	<ul style="list-style-type: none"> * The contractor shall contact the representatives of the K-VA-T (Food City) property on a bi-weekly basis to inform them of upcoming construction activities that would affect traffic into or out of their property. Those contacts are listed below, or any others as designated by the Engineer. <p>Stephen Spangler (spanglers@foodcity.com) (276) 608-1711 Tim Kuykendall (timkuykendall@foodcity.com) (423) 323-8017</p> <ul style="list-style-type: none"> * Any impediment, obstruction or halting of traffic into and out of the K-VA-T Food Stores property (Food City Shopping Center) may occur a maximum of 15 minutes per hour. Stoppages will not be allowed on weekdays between the hours of 6:00am and 9:00am or 3:00pm and 6:00pm local time. Stoppages will also not be allowed during the holidays and special events listed in the plans and proposal documents. If any impediments, obstructions, or halting of traffic into and out of the K-VA-T Food Stores property exceed 15 minutes or occur during days and times when they are not allowed, then damages will be assessed at the rate of \$4,750 per day or any portion of a day until the entrance is reopened.
13	11/6/17	Neighborhood Hospitality Inc. / Savannah Hotel Corporation	Parcel 126 / Parcel 127	<p>The contractor will not disturb any trees on the property. If a tree must be removed, the contractor will get a Certified Arborist to remove and relocate the tree. The contractor must coordinate with the property owner on new location of the tree. All costs associated with removing and relocating tree shall be the responsibility of the contractor.</p>

10-158.00
SPECIAL NOTE FOR PRE-BID CONFERENCE

The Department will conduct a Pre-Bid Conference of the subject project on **Wednesday, January 17th, 2018 at 10:00 AM** prevailing time at:

Kentucky Department of Highways
District 10
473 Highway 15 South
Jackson, KY 41339
Phone: (606) 666-8841

Any company that is interested in bidding on the subject project or being part of a joint venture must be represented at the Pre-Bid Conference by at least **one person of sufficient authority to bind the company**. No individual can represent more than one company. At the conference a roster will be taken of the representatives present.

ONLY COMPANIES REPRESENTED AT THE CONFERENCE WILL BE ELIGIBLE TO HAVE THEIR BIDS OPENED AT THE DATE OF THE LETTING.

The purpose of the conference is to familiarize prospective bidders with the project and requirements of the contract. There will be representatives from the Department of Highways present at the conference to answer specific questions concerning the project.

SPECIAL NOTE
Contractor Coordination Required

Work on the KY 15 project at the northern end of this project will be ongoing at the time of letting, and may extend well into the lifetime of this project. No work at or near that end for any individual phase may begin until the Engineer is satisfied it will not compound traffic problems or create unacceptable delays. No excavation north of Station 360+00 may begin until the contractor on the northern segment has completed excavation from Morton Boulevard to the Hal Rogers Parkway. All work near the overlapping areas of the two projects is to be coordinated between the contractors to the satisfaction of the Engineer. No claims which result from a failure to coordinate with the adjacent contractor will be accepted.

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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

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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

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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

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properly clean the completed shaft excavation; to construct excavations in open water areas when required by the plans; to establish methods for boring 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.

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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

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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 1/2 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,

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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

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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.

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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 $\pm 3/8$ 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

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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:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
----	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



Kentucky Transportation Cabinet
Division of Highway Design
TRAFFIC MANAGEMENT PLAN

County: Perry Item No.: 10-158.00

Federal Project No.: NHPP 0151 (086)

Project Description:

Improve safety, upgrade geometrics, and address capacity issues for KY 15 in Perry County from KY 15 Bypass to North of Morton Boulevard.

Roadway Classification: Urban Rural
 Local Collector Arterial Interstate

ADT (current) 30,100 AM Peak Current 3,220 PM Peak Current 3,220 % Trucks 2.7

Project Designation: Significant Other: _____

Traffic Control Plan Design:

Taper and Diversion Design Speeds 35 mph

Minimum Lane Width 10 ft. Minimum Shoulder Width 2 ft.

Minimum Bridge Width 60 ft. existing with 4 ft. wide raised median.

Minimum Radius 964 ft. Maximum Grade 7.55%

Minimum Taper Length _____ Minimum Intersection Level of Service _____

Existing Traffic Queue Lengths _____ Projected Traffic Queue Lengths _____

Comments:

This project is broken into five phases.



Kentucky Transportation Cabinet
Division of Highway Design
TRAFFIC MANAGEMENT PLAN

Item No. 10-158.00

Discussion:

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

Stakeholders

- Utility Companies
 - Hazard Utilities: 606-436-3171
 - Kentucky AEP: 606-436-1322
 - Martin Gas: 1-800-771-0761
 - Windstream Communications: 606-436-2289
 - Windstream Communications: 606-439-4330
 - AT&T: 502-867-8240
 - Cut Through Hydrocarbon, LLC: 606-835-9912
- Government Agencies
 - Perry County Judge Executive: 606-439-1816
 - Perry County Board of Education: 606-439-1685
 - Perry County Sheriff: 606-439-4523
 - Perry County Ambulance Service: 606-439-4776
 - Perry County Emergency Management: 606-439-1816
 - Hazard Mayor: 606-436-3171
 - Hazard Police Department: 606-436-2222
 - Hazard Fire Department: 606-436-2345
 - Hazard Post Office: 606-436-3188
 - Hazard Community and Technical College: 606-436-5721
 - Kentucky State Police, Post 13, Hazard: 606-435-6069
- Local Businesses
 - Hometown Convenience (Double Kwik Exxon Station): 606-633-2525
 - K-VA-T (Food City): 276-608-1711 & 423-323-8017
 - Handy Dan's Convenience Store (Shell Gas Station): 606-439-1442



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- Adams Construction Company / Mountain Enterprises: 606-436-3173
- East Kentucky Rental & Supply (Rental Pro): 606-439-4887
- East Kentucky Hose & Mine Supply: 606-439-3139
- Kentucky Sleep Clinic: 606-435-1889
- Joe's Starter and Alternator Shop: 606-439-2886
- Hazard Auto & Truck Parts (NAPA Auto Parts): 606-435-2345
- JT's Gun and Pawn: 606-439-4347
- Neighborhood Hospitality, Inc. (Applebee's): 606-435-2737
- Savannah Hotel Corporation (Hampton Inn & Suites Hazard): 606-439-0902
- St. Pauls Lutheran Church: 606-436-3197
- Appalachian Animal Hospital: 606-436-1197
- Nvu Salon: 606-487-0494
- Shanna Couch Holliday, DMD: 606-439-1079
- Leslie, Knott, Letcher, Perry Victims of Crime Assistance (LKLP VOCA): 606-439-3961
- Appalachian Regional Healthcare: 606-439-6600
- Top of the Hill Liquor: 606-436-3336
- Daniel Boone Motor Inn: 606-439-5896

Local Media Outlets

- The Hazard Herald: 606-436-5771
- The Hazard Times:
- Perry County News:
- Radio Station WEKH 90.9: 800-621-8890
- Radio Station W224CV (WMKY) 92.7: 606-783-2368
- Radio Station W245CP (WZQQ-AM) 96.9: 606-436-2121
- Radio Station WZQQ 1390: 606-436-2121
- Radio Station WKIC 97.9: 606-436-2121
- Radio Station WSGS 101.1: 606-436-2121
- Radio Station WJMD 104.7: 606-439-1020
- Radio Station WLZD (LPFM) 106.1: 606-438-7758
- Radio Station W299AS (WKCB) 107.7: 606-785-3120
- Radio Station WKCB 107.1: 606-785-3120
- Radio Station WMMT 88.7: 606-633-0108
- News Station WYMT-TV 12: 606-436-5757
- News Station WKHA-TV (KET): 859-258-7244

Prior to Construction

- KYTC will issue press releases and social media updates announcing the advertisement for bids and when the project is awarded.
- The contractor will prepare and submit a detailed traffic management plan to the engineer for review and approval at least one month prior to any construction activity beginning. This plan will include, but not be limited to: a public information plan to be implemented before and during construction; maintenance of traffic procedures and signage; flagging and traffic control personnel and equipment; debris clean-up crews and equipment;



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TRAFFIC MANAGEMENT PLAN

construction equipment to be used on and around road work; passage or restriction of wide loads; and safety of traffic and construction personnel.

- Contact will be made to all stakeholders to inform them of the time the construction will begin, the expected times and dates of roadway and lane closures, and any other anticipated impacts to travel and access. This contact is to be made sufficiently ahead of time to allow each stakeholder time to adjust to the changes.
- A public information campaign, communicating by way of local radio, newspaper, TV stations, portable changeable message boards, and the District 10 social media presence on Facebook and Twitter will be made to inform the traveling public at large of the impending construction. The information should include: anticipated lane closures, roadway closures, and the dates and times they are expected.
- Anticipated times of lane restrictions and total closures should be adjusted, if necessary, to accommodate special needs of the stakeholders or public at large.

During Construction

- The public information campaign will continue, using the same methods as prior to construction. Updates to travel impacts will be made, including those times which no closures are anticipated (such as periods of construction inactivity and holidays).
- A contact name and number will be provided to all identified stakeholders to allow for individual updates and information during regular business hours. A 24-hour, 7-days a week name and number will also be made available for contact in emergency situations.
- The Engineer and contractor will regularly review both the public information campaign and maintenance of traffic plan to ensure the needs and safety of the public are being met. This would include both method and timing of traffic management procedures.
- In addition to the normal placement of signs, variable message boards should be placed well in advance of the project to forewarn long-distance travelers who may not have had advance warning through local media.



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TRAFFIC MANAGEMENT PLAN

Item No. 10-158.00

2) Temporary Traffic Control Plan (For Each Phase of Construction)	
Phase 1	
Exposure Control Measures	Positive Protection Measures
a) Is Road Closure Allowed Type: Referenced	a) Address Drop Off Protection Criteria Referenced
b) Detour Conditions Referenced	b) Temporary Barrier Requirements Referenced
c) Working Hour Restrictions Referenced	c) Evaluation of Existing Guardrail Conditions Referenced
d) Holiday or Special Event Work Restrictions Referenced	d) Address Temporary Drainage Referenced
e) Evaluation of Intersection LOS N/A	Uniformed Law Enforcement Officers Referenced
f) Evaluation of Queue Lengths N/A	Payment for Traffic Control*
g) Evaluation of User Costs and Incentives/Disincentives Referenced	a) Method of Project Bidding Referenced
h) Address Pedestrians, Bikes, Mass Transit N/A	b) Special Notes Referenced
Work Vehicles and Equipment Referenced	*Payment for traffic control items shall be in accordance with the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction
Comments:	
<p>Phase 1 Maintain traffic on existing KY 15, Bypass, KY 550 and ramps, Cherokee Hills road, Perry Park Road, Willies Way, and Morton Blvd. Note that the contractor from the adjoining project on KY 15 north of this project may still be working in the area north of Morton Blvd. and west of KY 15 and may have the traffic on KY 15 shifted to the east side of existing KY 15. Coordinate with the other contractor and do not shift KY 15 traffic back to the west side of KY 15 or begin work in the area until directed by the engineer.</p> <p>Construct as much of the earthwork, drainage, and the KY 15 bridge over the North Fork Kentucky River as can be accomplished while maintaining traffic on existing roadways. The following items must be completed before advancing to Phase 2:</p>	



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KY 15

Construct the entrances to the service station at the Bypass intersection. Construct the portion of the traffic count station (see signal plans) outside of existing pavement. Construct the 72" pipe (Sta. 341+78) and 42" pipe (Sta. 354+13) by bore and jack or other method. Shift traffic away from the southbound shoulder Sta. 330+00 to 367+00 and begin cut and fill slopes along that side. After completion of the adjacent cut slope, construct temporary pavement widening on the west side of KY 15 from Sta. 332+50 to Sta. 341+00. After completion of the adjacent roadway embankment, construct the proposed pavement on the west side of KY 15 from Sta. 341+00 to Sta. 346+00 using a full depth paved shoulder from Sta. 341+00 to Sta. 342+50. Remove the existing raised median and replace with temporary flush pavement from left Sta. 325+77 to Sta. 334+19.

Perry Park Road

Construct Perry Park Road from Sta. 69+90 to Sta. 75+25 and pave to the top base course. Construct and pave temporary tie-in for Perry Park Road from existing KY 15 to Perry Park Road Sta. 69+90. Install but do not activate a temporary signal at the intersection of the Perry Park Road tie-in at KY 15.

KY 550 Interchange

Construct the RCBC extension then Ramp A and Ramp B to Sta. 2005+50, and KY 550 from Sta. 410+50 to Sta. 419+55 through the top base course.

Willies Way

Construct the guardrail above the retaining wall then construct the retaining wall.

Morton Boulevard Interchange

Construct Morton Boulevard from Sta. 5001+75 to the tie in at KY 15.

Phase 1B

Place variable message boards for the Perry Park Road closure one week in advance. Close Perry Park Road at KY 15 and detour Perry Park Road traffic over the park avenue connector bridge to KY 550. Within 5 calendar days, construct and pave (to top base course) Perry Park from the beginning Sta. 58+44.33 to Sta. 62+45 and from new Perry Park Road Sta. 75+25 to 76+25 tying in to existing Perry Park Road. Open the new portions of Perry Park Road to traffic when complete. If the closure exceeds 5 calendar days, then liquidated damages will be charged as specified in the contract. Activate the temporary signal.

Phase 1C

Shift KY 15 traffic over to the temporary pavement widening on the west side from Sta. 329+70 to Sta. 345+70. Complete construction of KY 550 Ramp B and the outside northbound lane of proposed KY 15 from Sta. 2005+50 to Sta. 345+00. Pave through the top base course. Construct a temporary off-ramp from Sta. 329+70 of KY 15 and tie to the constructed portion of Ramp A at Sta. 1001+45. Shift the northbound on and off traffic to the newly constructed Ramps And close the existing ramps to traffic.

Phase 1 Temporary Signals at Perry Park Road and Cherokee Hills

The existing signal at Cherokee Hills road will stay in place and active once the new temporary signal at Perry Park Road is activated. Its timing and phasing shall be modified so that the two shall be coordinated to control and maintain traffic at the intersections. A minimum of three lanes (or more if directed by the engineer) on KY 15 shall be provided: one through lane in each direction and one left turn lane into both side roads. Signal phasing shall be done so that left turns into the side roads are protected. They will also be coordinated in a way that KY 15 traffic which is stopped will not block the side road traffic during its movement cycle. The new signal installation shall be pole and cable mounted, actuated by loops or video cameras, and coordinated with the Bypass signal in such a way as to move traffic in the most efficient manner. Signal plans must be submitted to the engineer for review and approval by the district traffic coordinator a minimum of 30 days prior to installation, and approved before its placement.



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2) Temporary Traffic Control Plan (For Each Phase of Construction)	
Phase 2	
Exposure Control Measures	Positive Protection Measures
a) Is Road Closure Allowed Type: Referenced	a) Address Drop Off Protection Criteria Referenced
b) Detour Conditions N/A	b) Temporary Barrier Requirements Referenced
c) Working Hour Restrictions Referenced	c) Evaluation of Existing Guardrail Conditions Referenced
d) Holiday or Special Event Work Restrictions Referenced	d) Address Temporary Drainage Referenced
e) Evaluation of Intersection LOS N/A	Uniformed Law Enforcement Officers Referenced
f) Evaluation of Queue Lengths N/A	Payment for Traffic Control*
g) Evaluation of User Costs and Incentives/Disincentives Referenced	a) Method of Project Bidding Referenced
h) Address Pedestrians, Bikes, Mass Transit N/A	b) Special Notes Referenced
Work Vehicles and Equipment Referenced	*Payment for traffic control items shall be in accordance with the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction
Comments:	
<p>Phase 2 Maintain traffic on existing KY 15 (with widening), Bypass, KY 550, Cherokee Hills road, Willies Way, Morton Blvd., new portions of Perry Park Road, new KY 550 Ramps A and B (with temporary connections), and existing Ramps C and D. The following items must be completed before advancing to Phase 3:</p> <p>KY 15, Perry Park Road, and KY 550 Interchange Complete the construction of the KY 15 bridge over the North Fork Kentucky River and the portion of Perry Park Road underneath it. Complete the construction of the east side of proposed KY 15 from the existing pavement near the Bypass to Sta. 341+00. Install, but do not activate, a temporary signal at the proposed Perry Park intersection. Construct temporary ramps from the east side to existing Ramp C. Construct KY 550 under traffic. Shift traffic from old KY 15 to the newly constructed east side from the Bypass to Sta. 341+00. Activate the temporary signal at the Perry Park intersection, and remove the temporary signals on old KY 15. KY 550 Ramps A and B to use the proposed ramps, and Ramps C and D to share existing Ramp C with the new access points. Old Ramp D to be</p>	



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closed to traffic. Begin demolition of the old KY 15 bridge over the North Fork Kentucky River.

Phase 2 and 3 Temporary Signal at Perry Park Road

A minimum of three lanes (or more if directed by the engineer) on KY 15 shall be provided: one through lane in each direction and one left turn lane into the side road. Signal phasing shall be done so that left turns into the side road are protected. The signal installation shall be pole and cable mounted, actuated by loops or video cameras, and coordinated with the Bypass signal in such a way as to move traffic in the most efficient manner. Signal plans must be submitted to the engineer for review and approval by the district traffic coordinator a minimum of 30 days prior to installation, and approved before its placement.

KY 15, Willies Way, and Morton Boulevard

Construct the north end of Willies Way and connect to the new portion of Morton Boulevard on the east side of KY 15. Construct Morton Approach, with a temporary intersection at existing KY 15. Install, but do not activate, a temporary signal at the intersection. Construct Morton Boulevard (from the beginning to Sta. 4996+75) and the shopping center entrance under traffic, and connect to Morton Approach. Activate the temporary signal and remove the signal at the old Morton Boulevard intersection and close that portion to traffic. Construct the east abutment of the Morton Boulevard bridge.

Phase 2 Temporary Signal at Morton Boulevard

A minimum of three lanes (or more if directed by the engineer) south of the intersection shall be provided: one through lane in each direction and one left turn lane into the side road. An additional right turn lane (into Morton Boulevard) shall be provided north of the intersection. Signal phasing shall be done so that left turns into the side road are protected. The signal installation shall be pole and cable mounted and actuated by loops or video cameras. Signal timing, phasing, and signing should also be done so that traffic into and out of Willies Way (either at its north or south end) will have gaps to access northbound and southbound KY 15. The signal (or a companion signal head) must also be visible at all times, including during the period of bridge construction. Signal plans must be submitted to the engineer for review and approval by the district traffic coordinator a minimum of 30 days prior to installation, and approved before its placement.



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2) Temporary Traffic Control Plan (For Each Phase of Construction)	
Phase 3	
Exposure Control Measures	Positive Protection Measures
a) Is Road Closure Allowed Type: Referenced	a) Address Drop Off Protection Criteria Referenced
b) Detour Conditions N/A	b) Temporary Barrier Requirements Referenced
c) Working Hour Restrictions Referenced	c) Evaluation of Existing Guardrail Conditions Referenced
d) Holiday or Special Event Work Restrictions Referenced	d) Address Temporary Drainage Referenced
e) Evaluation of Intersection LOS N/A	Uniformed Law Enforcement Officers Referenced
f) Evaluation of Queue Lengths N/A	Payment for Traffic Control*
g) Evaluation of User Costs and Incentives/Disincentives Referenced	a) Method of Project Bidding Referenced
h) Address Pedestrians, Bikes, Mass Transit N/A	b) Special Notes Referenced
Work Vehicles and Equipment Referenced	*Payment for traffic control items shall be in accordance with the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction
Comments:	
<p>Phase 3 Maintain traffic on existing KY 15 at the Bypass intersection, the east side of new KY 15 from the intersection to Sta. 341+00, existing KY 15 to the north end of the project, Cherokee Hills Road, old KY 15 left Sta. 313+00 to Cherokee Hills Road (acting as a frontage road), new portion of Perry Park Road, shared KY 550 Ramps C and d, new KY 550 Ramps A and b, reconstructed KY 550, new portion of Willies Way and Morton Blvd. East of KY 15, and Morton Approach with Morton Blvd. West of KY 15.</p> <p>The following items must be completed before advancing to Phase 4:</p> <p>KY 15 and Morton Boulevard Interchange Complete the remaining portion of the traffic count station. Complete construction of the Morton Blvd. Bridge and adjacent slip ramp. Any temporary merge movement from the ramp to KY 15 should include sufficient sight distance so that ramp traffic can safely transition into KY 15 traffic. Insure that the signal at Morton Approach and KY 15 is</p>	



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visible at all times, during and after the placement of the superstructure. If necessary, an additional ground-mounted signal on the south KY 15 approach to the bridge may be used. Install the signal at the intersection of Morton Blvd. And Morton Approach. Shift traffic onto the new construction, activate the new signal, and remove the temporary signal at Morton Approach and KY 15.

KY 550 Interchange

Construct Ramp D with a widened, full-depth right shoulder and temporary on-ramp tie-in to southbound KY 15 traffic. Shift both on and off traffic from the shared existing Ramp C to the new shared ramp.



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2) Temporary Traffic Control Plan (For Each Phase of Construction)	
Phase 4	
Exposure Control Measures	Positive Protection Measures
a) Is Road Closure Allowed Type: Referenced	a) Address Drop Off Protection Criteria Referenced
b) Detour Conditions N/A	b) Temporary Barrier Requirements Referenced
c) Working Hour Restrictions Referenced	c) Evaluation of Existing Guardrail Conditions Referenced
d) Holiday or Special Event Work Restrictions Referenced	d) Address Temporary Drainage Referenced
e) Evaluation of Intersection LOS N/A	Uniformed Law Enforcement Officers Referenced
f) Evaluation of Queue Lengths N/A	Payment for Traffic Control*
g) Evaluation of User Costs and Incentives/Disincentives Referenced	a) Method of Project Bidding Referenced
h) Address Pedestrians, Bikes, Mass Transit N/A	b) Special Notes Referenced
Work Vehicles and Equipment Referenced	*Payment for traffic control items shall be in accordance with the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction
Comments:	
<p>Phase 4 Maintain traffic on existing KY 15 at the Bypass intersection, the east side of new KY 15 from the intersection to Sta. 341+00, existing KY 15 to the north end of the project, Cherokee Hills road, old KY 15 left Sta. 313+00 to Cherokee Hills road (acting as a frontage road), new portion of Perry Park Road, shared KY 550 Ramps C and d on the newly constructed Ramp D, new KY 550 Ramps A and b, reconstructed KY 550, new portion of Willies Way and Morton Blvd. East of KY 15, Morton Approach, and the newly constructed bridge and slip ramp.</p> <p>The following items must be completed before advancing to Phase 5:</p> <p>Bypass intersection Construct the Bypass intersection under traffic. Construct the west side of KY 15 from the intersection to Sta. 314+00 (end of the portion constructed in Phase 2).</p>	



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Frontage road, Perry Park, and Cherokee Hills

Construct the frontage road, Cherokee Hills, and remainder of Perry Park under traffic. Open all of Perry Park to traffic. Remove the temporary signal at the Perry Park KY 15 intersection.

KY 550 Interchange

Construct KY 550 Ramp C and the west side of KY 15 from the interchange to Sta. 341+00 (end of portion constructed in Phase 1).

Willies Way

Complete construction of Willies Way under traffic.

KY 15

Construct the west side of KY 15 from Morton Approach to the end of project, raising the Morton Approach intersection under traffic. Shift southbound traffic onto the new construction.



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2) Temporary Traffic Control Plan (For Each Phase of Construction)	
Phase 5	
Exposure Control Measures	Positive Protection Measures
a) Is Road Closure Allowed Type: Referenced	a) Address Drop Off Protection Criteria Referenced
b) Detour Conditions N/A	b) Temporary Barrier Requirements Referenced
c) Working Hour Restrictions Referenced	c) Evaluation of Existing Guardrail Conditions Referenced
d) Holiday or Special Event Work Restrictions Referenced	d) Address Temporary Drainage Referenced
e) Evaluation of Intersection LOS N/A	Uniformed Law Enforcement Officers Referenced
f) Evaluation of Queue Lengths N/A	Payment for Traffic Control*
g) Evaluation of User Costs and Incentives/Disincentives Referenced	a) Method of Project Bidding Referenced
h) Address Pedestrians, Bikes, Mass Transit N/A	b) Special Notes Referenced
Work Vehicles and Equipment Referenced	*Payment for traffic control items shall be in accordance with the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction
Comments:	
<p>Phase 5 Maintain two-way traffic on new ky15, and all newly constructed Ramps And approaches.</p> <p>KY 15 Construct the overlay of the northbound (east side) of KY 15 from Sta. 341+00 to the end of project. Traffic may be temporarily reduced to one-lane or shifted to portions of the southbound side at the direction of the engineer. However access to all side roads and ramps must be kept open at all times. Complete any unconstructed portions of the median barrier, barrier drainage system, barrier median, and islands.</p> <p>Project-wide Complete the surfacing, signing, and pavement markings for all roads. Insure all traffic signals are set to the final, designed timing and phasing. Complete all lighting fixtures.</p>	



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APPROVAL:

Mark Cowie, PE *Darren Beck* *10/3/17*
Project Manager Date

Steven Dummell *10/11/17*
Project Delivery and Preservation Manager Date

Jerry [Signature] *10/9/17*
Engineering Support Manager Date

Dana Robbins *10/17/2017*
FHWA Representative Date

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