



**CALL NO. 362**

**CONTRACT ID. 222971**

**HARLAN COUNTY**

**FED/STATE PROJECT NUMBER FE02 048 0215 B00019N**

**DESCRIPTION EVARTS - DIZNEY ROAD (KY 215)**

**WORK TYPE BRIDGE SUPERSTRUCTURE REPLACEMENT**

**PRIMARY COMPLETION DATE 7/31/2022**

**LETTING DATE: January 27,2022**

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 am EASTERN STANDARD TIME January 27,2022. Bids will be publicly announced at 10:00 am EASTERN STANDARD TIME.

**NO PLANS ASSOCIATED WITH THIS PROJECT.**

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

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**PART I**

**SCOPE OF WORK**

**ADMINISTRATIVE DISTRICT - 11**

**CONTRACT ID - 222971**

**FE02 048 0215 B00019N 02.62**

**COUNTY - HARLAN**

**PCN - MB04802152201**

**FE02 048 0215 B00019N 02.62**

EVARTS - DIZNEY ROAD (KY 215) BRIDGE 048B00019N OVER YOCUM CREEK AT MP 02.62BRIDGE  
SUPERSTRUCTURE REPLACEMENT

GEOGRAPHIC COORDINATES LATITUDE 37:01:49.00 LONGITUDE 88:13:37.00

**COMPLETION DATE(S):**

COMPLETED BY 07/31/2022	APPLIES TO ENTIRE CONTRACT
30 CALENDAR Days	APPLIES TO 048B00019N

## **CONTRACT NOTES**

### **PROPOSAL ADDENDA**

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

### **BID SUBMITTAL**

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

### **JOINT VENTURE BIDDING**

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

### **UNDERGROUND FACILITY DAMAGE PROTECTION**

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

### **REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY**

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

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

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

### **SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT**

Questions about projects during the advertisement should be submitted in writing to the Division of Construction Procurement. This may be done by fax (502) 564-7299 or email to [kytc.projectquestions@ky.gov](mailto: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](http://www.transportation.ky.gov/contract)). The answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

### **HARDWOOD REMOVAL RESTRICTIONS**

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

### **INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES**

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

### **ACCESS TO RECORDS**

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

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

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

April 30, 2018

## **SPECIAL NOTE FOR RECIPROCAL PREFERENCE**

### **RECIPROCAL PREFERENCE TO BE GIVEN BY PUBLIC AGENCIES TO RESIDENT BIDDERS**

By reference, KRS 45A.490 to 45A.494 are incorporated herein and in compliance regarding the bidders residency. Bidders who want to claim resident bidder status should complete the Affidavit for Claiming Resident Bidder Status along with their bid in the electronic bidding software. Submittal of the Affidavit should be done along the bid in Bid Express.

April 30, 2018



**SPECIAL NOTES  
DISTRICT NO. 11  
SUPERSTRUCTURE REPLACEMENT  
HARLAN COUNTY  
CID 222971**

**FE02 048 0215 B00019N 02.62**

Harlan County ~ KY 15 over Yocum Creek

***Geographic Coordinates***

Latitude ~ 36° 51' 09.00''

Longitude ~ -83° 09' 16.00''

**Description**

2~50' PCBB Spans.

## **SPECIAL NOTES FOR SUPERSTURE REPLACEMENT**

SPECIAL NOTE FOR SUPERSTRUCTURE REPLACEMENT

SPECIAL NOTE FOR BRIDGE AND APPROACH ASPHALT PAVEMENT

SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND PENALTIES ON  
BRIDGE REPAIR CONTRACTS

SPECIAL NOTE FOR MAINTAINING AND CONTROLLING TRAFFIC

## **SPECIAL NOTE FOR SUPERSTRUCTURE REPLACEMENT**

**1. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings (current editions), this Note, and the Bridge Drawings. Section references are to the Standard Specifications. This work consists of the following: (1) Furnish all labor, materials, tools, and equipment, (2) Remove and Replace Superstructure (3) Complete asphalt approach pavement, (4) Remove existing and install new guardrail and (5) Any other work specified as part of this contract.

**2. MATERIALS.**

**A. Superstructure and Guardrail.** See Standard Drawings that Apply.

**3. CONSTRUCTION.**

**A. Remove Existing Superstructure.** Remove the entire superstructure including the asphalt overlay, existing beams, guardrail, approach guardrail, Etc. in accordance with Section 203. Care shall be taken to insure there is no damage to the existing abutment cap. Any damage to the existing abutment and pier caps shall be repaired at the Contractor's expense.

**B. Prepare Existing Abutment and Pier Caps.** After the superstructure is removed prepare the existing abutment and pier caps to provide a new smooth surface. All cost to prepare the existing abutment cap shall be considered incidental to Precast PC Box Beam B27-48.

**C. Install New Precast Box Beams, Structural Granular Backfill, Bridge and Roadway Guardrail.** Install new precast box beams, bridge and roadway guardrail in accordance with Standard Drawings BDP-001, BDP-002, BDP-003, BDP-004, BDP-009, RBR-001, RBR-015, RBR-050 and RBR-051 C.E. Contrary Standard Drawing BDP-009 the new precast box beam shall be 50'-0" long using the same strand pattern for the 52'-0" precast box beam specified. See the attached detailed drawings for all other details.

**D. Verifying Field Conditions.** The Contractor shall field verify all dimensions. New material that is unsuitable due to variation in existing structure shall be replaced at the Contractors expense.

**E. Damage to the Structure.** The Contractor shall bear all responsibility and expense for all damage to the structure during the repair work even to removal and replacement of a fallen span, should the fallen span result from the Contractor's actions.

4. **MEASUREMENT.** See Section 606 and the following:
  - A. **Remove Superstructure.** The Department will measure this as Lump Sum.
  - B. **PC Box Beam SB27-48, Guardrail Steel W Beam-S Face BR and Guardrail Steel W Beam-S Face A.** The Department will measure the quantity in lineal feet.
  - C. **Guardrail End Treatment Type 7.** The Department will measure the quantity as Each.
  - D. **Structural Granular Backfill.** The Department will measure the quantity in Cubic Yards.
  
5. **PAYMENT.** See Section 606 and the following:
  - A. **Remove Superstructure (08301).** Payment at the contract unit price for “Lump Sum” is full compensation to remove the superstructure as specified.
  - B. **PC Box Beam SB27-48 (08670), Guardrail Steel W Beam-S Face BR (08801), and Guardrail Steel W Beam-S Face A (02355).** Payment at the contract unit price per lineal feet is full compensation for furnishing and placing permanent striping as specified.
  - C. **Guardrail End Treatment Type 7 (02371).** Payment at the contract unit price each is full compensation for furnishing and placing items as specified.
  - D. **Structural Granular Backfill (02231).** Payment at the contract unit price cubic yards is full compensation for furnishing and placing items as specified.

## **SPECIAL NOTE FOR BRIDGE AND APPROACH ASPHALT PAVEMENT**

- 1. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings (current editions), this Note, and the attached detail drawings. Section references are to the Standard Specifications. This work consists of the following: (1) Furnish all labor, materials, tools, and equipment, (2) Install bridge deck waterproofing membrane, asphalt overlay and asphalt approach pavement. (3) Any other work specified as part of this contract.
- 2. MATERIALS.**
  - A. Bridge Deck Waterproofing Membrane.** See Section 808.05.
  - B. Surface Primer.** Use surface primer recommended by the manufacturer.
  - C. Bituminous Asphalt.** Use CL2 ASPH SURF 0.38D PG64-22.
- 3. CONSTRUCTION.**
  - A. Surface Preparation.** Thoroughly clean the entire surface area of the bridge deck prior to paving. Clean by either air or water blasting. If water blasting is used thoroughly dry area prior to placing the primer and membrane.
  - B. Primer Coating.** Apply material to the bridge deck according to the manufacturer's recommendations.
  - C. Waterproofing Membrane.** Apply the membrane to the entire surface of the bridge deck. Overlap the membrane a minimum of 1 foot onto the adjacent roadway approaches. Overlap the membrane as necessary to achieve 100% coverage of the bridge deck. Install as recommended by the manufacturer, straight and wrinkle free with no curled or uplifted edges.
  - D. Pave the Bridge with Asphalt.** Pave the bridge with asphalt overlay immediately after the one step membrane is in place. Match existing roadway crown. All cost to pave the bridge with asphalt shall be consider incidental to Waterproofing Membrane.
  - E. Bridge Overlay Approach Pavement.** Mill each existing asphalt approach to the distance indicated in the attached detailed drawings. Remove the bituminous material uniformly by making an edge key, so as to provide a smooth transition to the finished bridge when a new bituminous overlay of compacted depth of approximately 1 1/4" is added to the approaches. The grinding depth may vary depending the condition of the existing approach and final elevation of bridge end. Dispose of all removed material away from the site. The milled area of the approaches shall be paved monolithic with bridge deck using the same bituminous asphalt specified. Match existing roadway crown.
  - F. Pavement Markings.** Restore pavement markings to original patterns and/or as directed by the Engineer in accordance with Sections 713, 714 and 837. See Standard Drawing TPM-115 Current Edition.

**3. MEASUREMENT.**

**A. Waterproofing Membrane and Bridge Overlay Approach Pavement.** The Department will measure these quantities in square yards.

**B. Pave Striping-Perm 4 Inch.** The Department will measure the quantity in lineal feet.

**4. PAYMENT.**

**A. A. Waterproofing Membrane (03250) and Bridge Overlay Approach Pavement (03304).** Payment at the contract unit price in square yards is full compensation for removing existing materials, furnishing and placing all new materials as specified.

**B. Pave Striping-Perm 4 Inch (06514).** Payment at the contract unit price per lineal feet is full compensation for furnishing and placing permanent striping as specified.

**SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND  
PENALTIES ON BRIDGE REPAIR CONTRACTS**

- 1. COMPLETION DATE.** The Contractor has the option of selecting the starting date for this Contract. Once selected, the Department shall be notified in writing of the date selected 14 days prior to beginning work. **30** Calendar days will be allotted to complete work once the bridge is closed to traffic see Special Note for Maintain and Control Traffic. All work shall be completed by **July 31, 2022**.

Contrary to Section 108.07.03, the Engineer will begin charging calendar days the day the Contractor has the bridge closed. A **penalty of \$500.00 per day** will be assessed when the allotted number of calendar days is exceeded.

All construction must be completed in accordance with the weather limitations specified in Section 606 and/or Section 601 as applicable. No extension of Contract time will be granted due to inclement weather or temperature limitations that occur due to starting work on the Contract or a structure late in the construction season.

## **SPECIAL NOTE FOR TRAFFIC CONTROL ON BRIDGE REPAIR CONTRACTS**

### **1. TRAFFIC CONTROL GENERAL.**

Except as provided herein, traffic shall be maintained in accordance with the Standard Specifications (current edition), Section 112. Contrary to Section 106.01, traffic control devices used on this project may be new or used in new condition, at the beginning of the work and maintained in like new condition until completion of the work.

### **2. TRAFFIC COORDINATOR.**

Furnish a Traffic Coordinator as per Section 112. The Traffic Coordinator shall inspect the project maintenance of traffic, at least three times daily, or as directed by the Engineer, during the Contractor's operations and at any time a lane closure is in place. The personnel shall have access on the project to a radio or telephone to be used in case of emergencies or accidents. The Traffic Coordinator shall report all incidents throughout the work zone to the Engineer on the project. The Contractor shall furnish the name and telephone number where the Traffic Coordinator can be contacted at all times.

### **3. DIVERSIONS (BYPASS DETOURS).**

The Contractor shall close the bridge to traffic and construct an on-site diversion to maintain traffic. The diversion plan and project schedule shall be prepared by the contractor. Once work on the structure begins that impacts traffic, ensure work progresses to minimize the effected time to the public. All materials that must be made specific for the project should be ordered and made prior to closure of the bridge so that delivery does not delay progress of the work until all materials that must be made specific for the project are ordered and made so that use of the diversion is minimized. The diversion plan and project schedule shall be submitted 14 days prior to the pre-construction meeting. All cost to close the bridge and construct the on-site diversion shall be included in the bid item for Diversion (Bypass Detours).

The Department will assume responsibility for any utility involvement.

For addition information and details see the attached Detailed Drawings and Notes.

### **4. SIGNS.**

The contractor is responsible for all signage during construction. The contractor shall adhere to the standard drawings and manual on uniform traffic control devices (MUTCD) for guidance. If, at any time, the engineer requests a change in the maintenance of traffic signage, the contractor shall implement the change within 8 hours. Failure to implement these changes within the required eight hours will result in penalty of \$500 per day. The contractor shall provide all detour signing needed for the bridge closure, if allowed in the contract documents. All signing required will be incidental to the lump sum bid item "Maintain and Control Traffic". Closure signs, detour signs, and bi-directional lane closure signs should be placed no sooner than two weeks prior to the closing of the bridge (when applicable) or placing lane closures. Signs shall be covered or removed within 24 hours of opening the bridge to traffic. Road closed signs (when applicable) should be placed a minimum of 1500', 1000', and 500' in advance of the closure, in addition to signage required by the MUTCD and standard drawings.



## **5. VARIABLE MESSAGE BOARD.**

At the direction of the Engineer, the contractor is expected to provide up to 2 message boards for use at locations determined by the Engineer. These message boards are expected to be in place one week prior to the closure of the roadway and remain in place for the duration of the closure.

## **6. ADDITIONAL ITEMS.**

All other items needed to maintain traffic in accordance with these contract documents and the approved traffic control plan shall be considered incidental to Maintain and Control Traffic. These items include but are not limited to traffic signals, signs, barrier wall, crash cushions, temporary guardrail, temporary and permanent pavement striping, barricades, cones, barrels, flaggers, etc.

## **7. MEASUREMENT.**

### **A. Maintain and Control Traffic and Diversion (Bypass Detours):**

The Cabinet will measure these items by “Lump Sum”.

**B. Portable Changeable Message Sign:** The Department will measure the quantity for “Each”.

## **8. PAYMENT.**

Unless listed as a bid item in the contract documents, payment will only be made for the following items:

### **A. Maintain and Control Traffic (02650) and Diversions (Bypass Detours) (02671):**

Payment at the contract unit price for “Lump Sum” is full compensation for all items to complete this work as specified.

**B. Portable Changeable Message Sign (02671):** Payment at “each” shall be full compensation to furnish, install, maintain and remove all portable message signs as specified.



COMMONWEALTH OF KENTUCKY  
TRANSPORTATION CABINET  
transportation.ky.gov

Andy Beshear  
GOVERNOR

Jim Gray  
SECRETARY

## Asbestos Inspection Report

To: Tom Mathews

District: Central Office

Date: September 30, 2021

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

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### Project and Structure Identification

Project Number: Harlan County CID 212973

Structure ID: 048B00019N

Structure Location: KY-215 over Yocum Creek

Sample Description: Any suspect materials collected were negative for asbestos.

Inspection Date: September 21, 2021

### Results and Recommendations

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

It is recommended that this report accompany the 10-Day Notice of Intent for Demolition ([Notification Form DEP 7036](#)) which is to be submitted to the Kentucky Division of Air Quality prior to abatement, demolition, or renovation of any building or structure in the Commonwealth.

MRS, Inc. Analytical Laboratory Division

Fax: (502) 491-7111

## BULK SAMPLE ASBESTOS ANALYSIS

Analysis N#	# 3109232	Address:	Item # 048B00019N/ Harlan County
Client Name:	K Y T C		
Sampled By:	O'Dail Lawson		

[illegible]

Reviewed By: Wintgers Mercap  
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.

AJHA #1 02459

# Kentucky Transportation Cabinet

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

KYTC COC



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855.60.CERTIFY

Colorado State Approval No. 22651

1775 W. 55th Avenue  
Denver, Colorado 80221  
United States of America

# CERTIFICATE OF ACHIEVEMENT

This certificate is awarded to:

O'DAIL LAWSON

In recognition of satisfactory completion of the EPA-approved annual asbestos refresher training in accordance with the Model Accreditation Plan (MAP) (40 CFR Part 763, Subpart E, Appendix C), AHERA of the Toxic Substances Control Act (TSCA), and Colorado Regulation No. 8 entitled:

## BUILDING INSPECTOR

COURSE COMPLETION:

FEBRUARY 11, 2021

EXAMINATION DATE:

FEBRUARY 11, 2021

EXPIRATION DATE:

FEBRUARY 11, 2022

COURSE HOURS:

4.0

*Danaya N. Wilson*

CEO & Training Program Manager

*Matthew Valdez*

Instructor

Credential License ID:

28699399

CHC Training Certificate No.:

R21-0204-AI



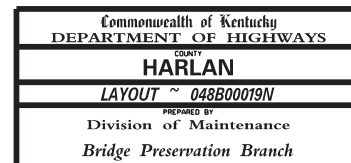
Verify this Certificate

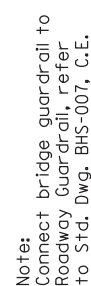


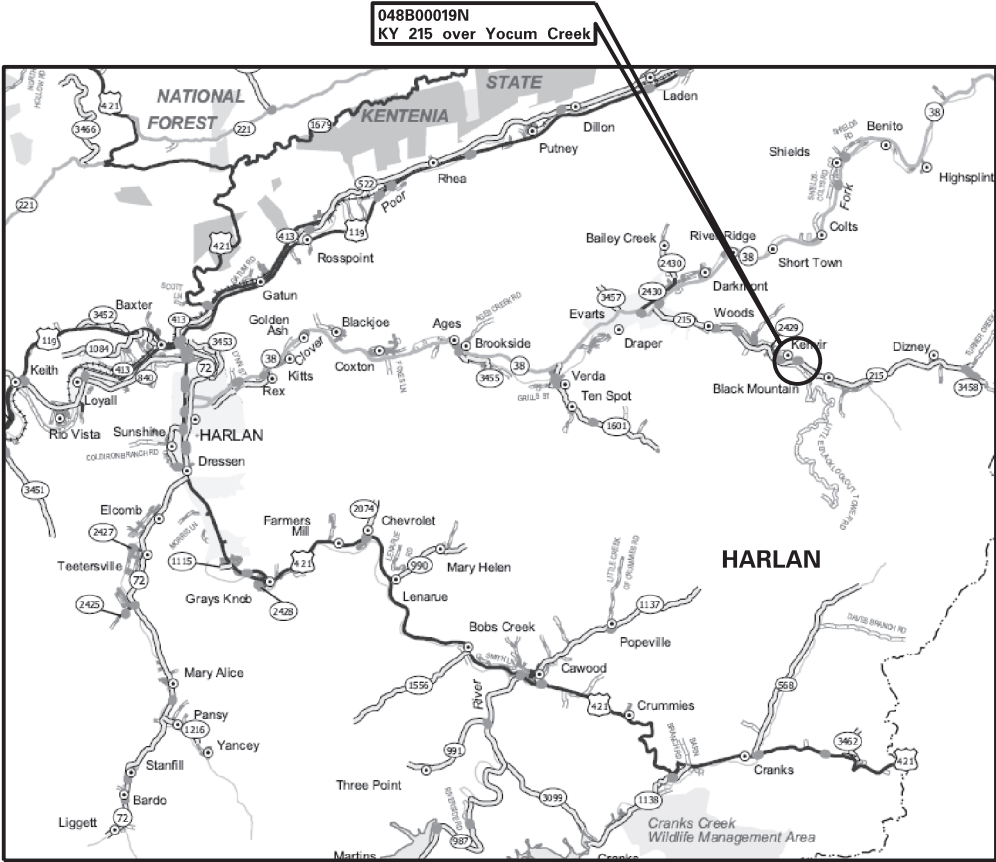
Renew this Certificate



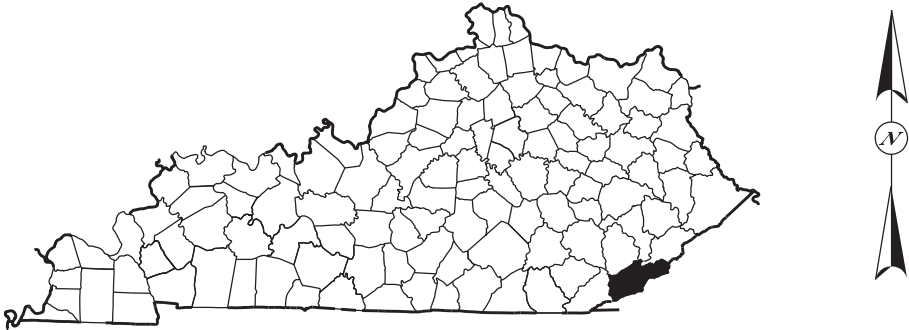








LOCATION MAP HARLAN COUNTY





HY-8 Analysis Results

Crossing Summary Table

Culvert Crossing: Diversion

Headwater Elevation (ft)	Discharge Names	Total Discharge (cfs)	Culvert 1 Discharge (cfs)	Roadway Discharge (cfs)	Iterations
1417.91	2-yr	1200.00	1200.00	0.00	1
1420.08	5-yr	2080.00	1633.26	446.42	5
1418.00	Overtopping	1218.13	0.00	1.00	





**KY 215**  
Temporary Diversion

Black Mountain Park

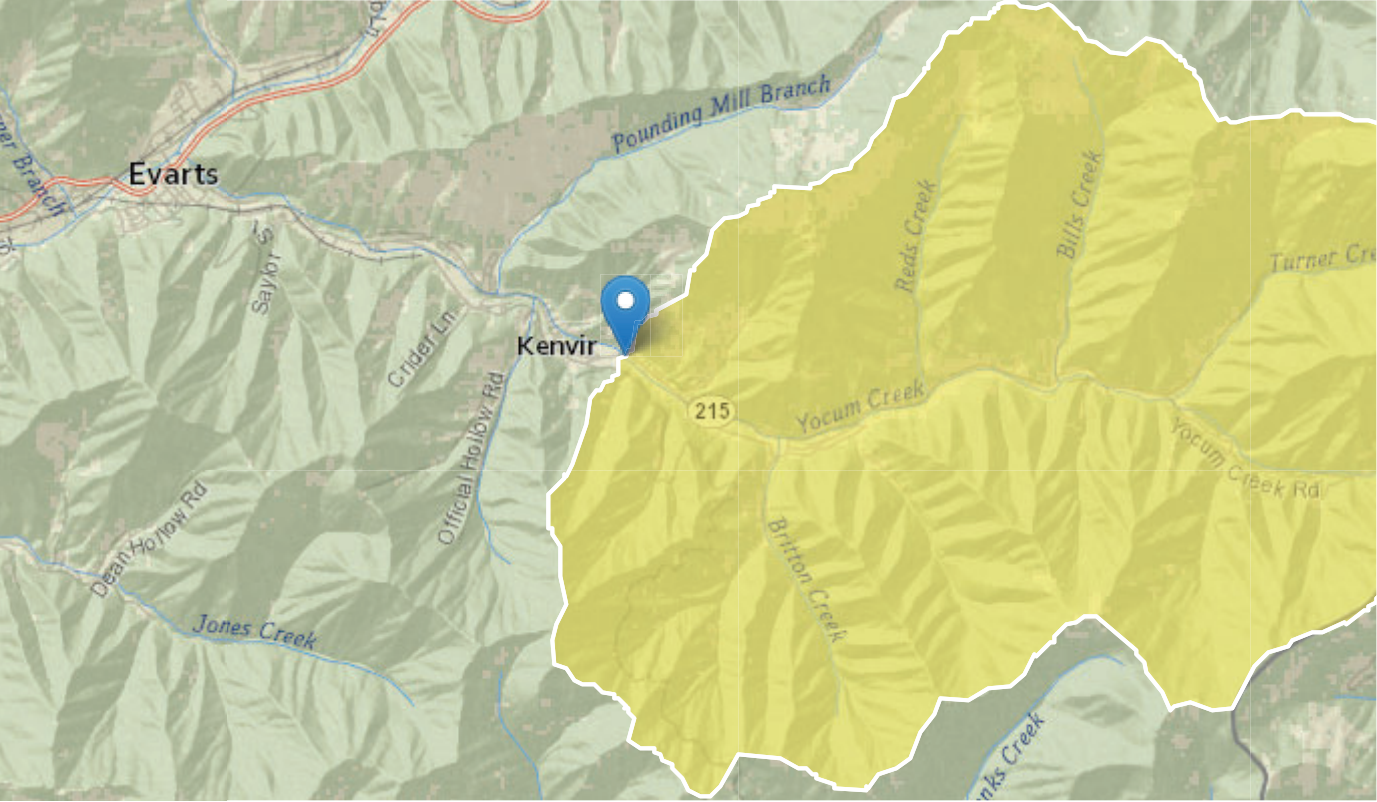
Yocum Creek

Google Earth



# KY 215 - Temporary Diversion

Region ID: KY  
Workspace ID: KY20211025150820405000  
Clicked Point (Latitude, Longitude): 36.85229, -83.15432  
Time: 2021-10-25 11:08:43 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	12	square miles
KYVARIND93	Mapped streamflow variability index as defined in WRIR 92-4173	0.55	dimensionless

Peak-Flow Statistics Parameters [99.8 Percent (12 square miles) Lower East Region 3]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
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Statistic	Value	Unit	ASEp	Equiv. Yrs.
50-percent AEP flood	1200	ft^3/s	23.3	5.9
20-percent AEP flood	2080	ft^3/s	21.5	9.8
10-percent AEP flood	2780	ft^3/s	20.3	15.1
4-percent AEP flood	3770	ft^3/s	19	24.6
2-percent AEP flood	4580	ft^3/s	18.7	32.4
1-percent AEP flood	5440	ft^3/s	18.7	39.4
0.5-percent AEP flood	6350	ft^3/s	19.3	44.5
0.2-percent AEP flood	7650	ft^3/s	20.6	47.9

**Hodgkins, G.A. and Martin, G.R.,2003, Estimating the Magnitude of Peak Flows for Streams in Kentucky for Selected Recurrence Intervals: U.S. Geological Survey Water-Resources Investigations Report 03-4180, 69 p. (<http://water.usgs.gov/pubs/wri/wri034180/>)**

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.6.2

StreamStats Services Version: 1.2.22

NSS Services Version: 2.1.2

DR-1101

<i>Drainage</i>	<i>Chapter</i>  Miscellaneous Topics
	<i>Subject</i>  Temporary Drainage Structures

DR 1101-1 INTRODUCTION

Culverts or bridges that are required for temporary public roads or detours should be hydraulically sized according to this policy. However, this policy may also be applied to temporary channels, culverts or bridges that are used for haul roads or any other purpose. These designs are to be included in the plans and drainage folders for the project.

Usually, the design storm return interval recommended for temporary hydraulic facilities is much lower than that used for permanent hydraulic facilities. The procedures used in determining the design storm return interval for temporary hydraulic facilities will be explained in detail in the following Section.

Temporary hydraulic facilities should be designed to accommodate floods larger than the design storm event in order to:

- avoid undue liability for damages from excessive backwater, and
- reduce the probability of losing the temporary hydraulic facility during a larger flood.

These problems can be avoided by providing a low roadway profile that allows overtopping without creating excessive velocities or backwaters. Therefore, it is highly recommended to design the structure to overtop for the next return interval above the design storm (2, 5, 10, 25, 50 or 100 year) determined via the procedures in this section. For example, if the design storm for a temporary structure was determined to be a 5 year storm, the structure and road profiles should be designed to overtop for the 10 year storm. Other measures that should be considered include:

- posting warnings that the road is expected to be under water during certain rainfall events for undetermined lengths of time; and
- anchoring the temporary hydraulic facility, if needed.

DR 1101-2 SELECTION FACTORS

The selection of a design flood frequency for temporary hydraulic facilities involves consideration of several factors shown in Table 1101-1. These factors are rated by the Impact Rating Values (IRV).

MISCELLANEOUS TOPICS

Temporary Drainage Structures

DR 1101

Table 1101-1 Rating Selection					
Factor			Impact Rating Values (IRV)		
Average Daily Traffic (ADT) (number of vehicles per day)	Urban	ADT	0–400	401–1500	> 1500
		IRV	1	2	3
	Suburban	ADT	0–750	751–1500	> 1500
		IRV	1	2	3
	Rural	ADT 1,991	0–1500	1501–3000	> 3000
		IRV	1	2	3
Loss of Life (cross-checked with roadway ADT)	Yes → IRV		15	30	45
	No → IRV		1	2	3
Property damage (cross-checked with roadway ADT)	IRV for residential, commercial, industrial areas, waste, and storm and water supply systems		10	20	30
	IRV for croplands, parking and recreational areas		5	10	15
	IRV for all others (pasture, meadow, bare soil, etc.)		1	2	3
Detour Length	Length (mi) NO DETOUR		< 5	5–9	> 9
	IRV		1	2	3
Height above streambed	Height (ft)		< 10	10–20	> 20
	IRV		1	2	3
Drainage Area	Area (mi2) 12 SQ. MI.		< 1	1–65	> 65
	IRV		1	2	3
Traffic Interruptions (see instructions)			IRV for ADT multiplied by IRV for detour length.		

## MISCELLANEOUS TOPICS

### Temporary Drainage Structures

## DR 1101

The major factors used to determine the Impact Rating Value (IRV) are:

#### **AVERAGE DAILY TRAFFIC (ADT)**

The ADT is the average number of vehicles traveling through the area in both directions in a 24-hour period. Table 1101-1 shows that the IRV is not only dependent on the ADT but also on the location of the highway (urban, suburban or rural).

#### **POTENTIAL LOSS OF LIFE**

If there is a potential loss of life caused by the destruction of the temporary drainage structure or by the roadway overtopping flood, the IRV due to this factor will be equal to the ADT IRV multiplied by 15.

If there is no potential loss of life caused by the destruction of the temporary drainage structure or by the roadway overtopping flood, the IRV due to this factor will be equal to the ADT IRV only.

#### **PROPERTY DAMAGE**

The property damage IRV caused by the destruction of the temporary drainage structure or by the roadway overtopping flood to private and public structures (houses, commercial or manufacturing); appurtenances such as sewage treatment and water supply systems; and utility structures either above or below ground is equal to the roadway ADT IRV multiplied by 10.

The property damage impact rating caused by the destruction of the temporary drainage structure or by the roadway overtopping flood to active cropland, parking lots and recreational areas is equal to the roadway ADT IRV multiplied by 5.

All other areas (pasture, meadow, bare land, etc.) shall have the same rating as the roadway ADT IRV.

#### **DETOUR LENGTH.**

The length in miles of an emergency detour by other roads should the temporary facility fail.

#### **HEIGHT ABOVE STREAMBED**

The difference in elevation in feet between the traveled way and the bed of the waterway.

#### **DRAINAGE AREA**

The drainage area is the total area contributing runoff to the temporary hydraulic facility, in mi<sup>2</sup>.



TRAFFIC INTERRUPTION

Traffic interruption includes consideration for emergency supplies and rescue, delays, alternative routes, busses, etc. Short-duration flooding of a low-volume roadway might be acceptable. If the duration of flooding is long (more than one day) and there is a nearby good quality alternative route, then the flooding of a higher volume highway might also be acceptable. The IRV of this factor is determined by the detour length IRV multiplied by the roadway ADT IRV.

DR 1101-3    DESIGN STORM RETURN INTERVAL

The IRV for each factor is determined and entered in the Impact Rating Table shown in Table 1101-2. Once the Total Impact Rating Value is determined, the designer then can find the Percent Design Risk from Figure 1101-1.

The designer must then estimate the anticipated time of use for the temporary structure. Using the Percent Design Risk and the anticipated time of use (months), the designer can then determine the recommended design frequency for the temporary hydraulic facility from Figure 1101-2. As previously mentioned, the structure should be designed to overtop for the next return interval above the design storm.

Table 1101-2 Impact Rating Table	
Factor	Impact Rating Value
Roadway ADT	1
Loss of Life	15
Property Damage	10
Detour Length	3
Height Above Streambed	1
Drainage Area	2
Traffic Interruptions	3
TOTAL IMPACT RATING VALUE	35

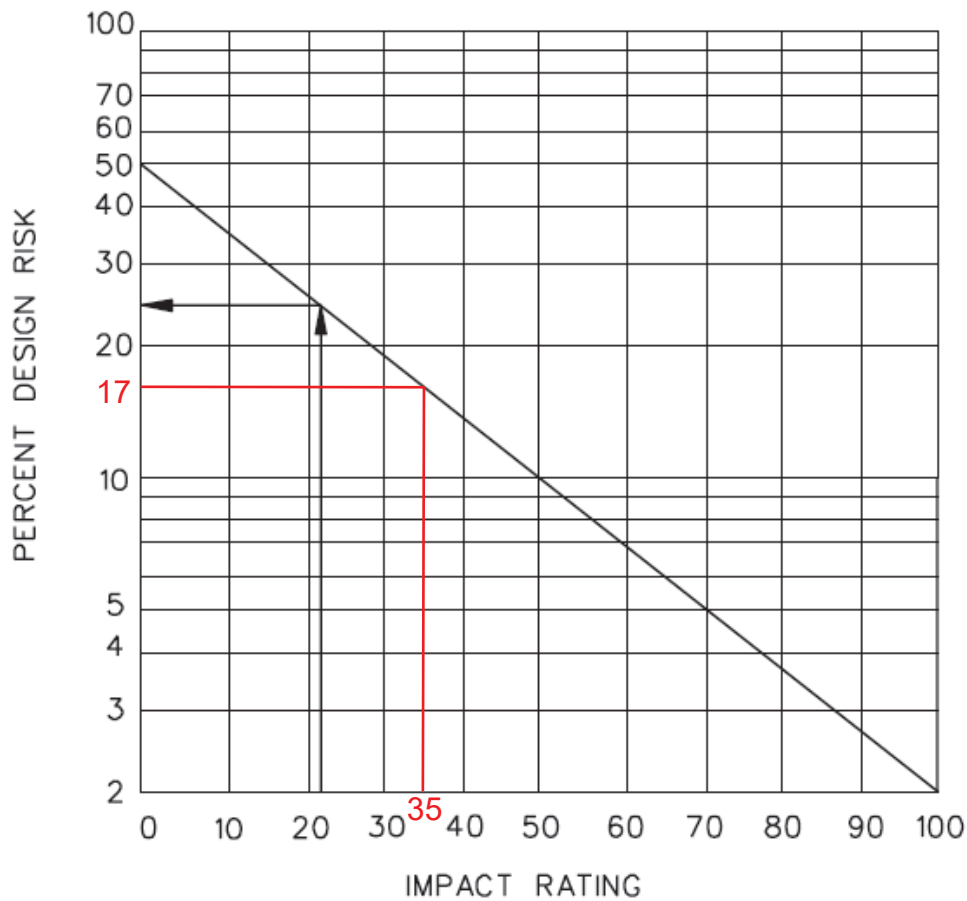


FIGURE 1101-1 DESIGN RISK VERSUS IMPACT RATING

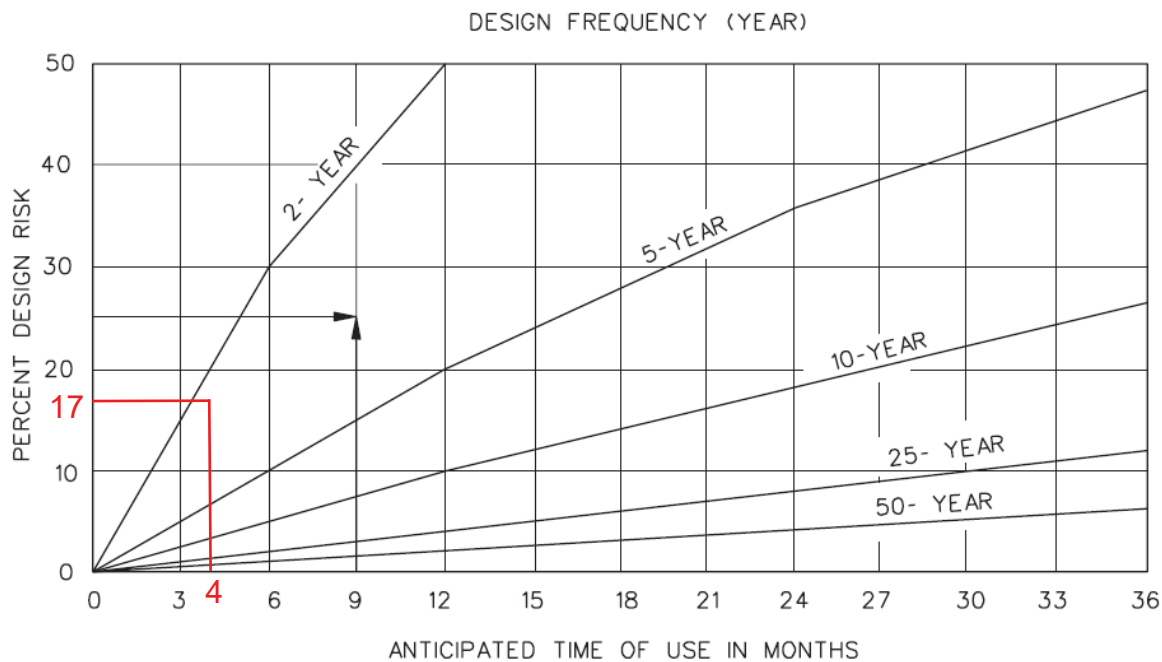


FIGURE 1101-2 RECOMMENDED DESIGN FREQUENCY

MISCELLANEOUS TOPICS  
Temporary Drainage Structures

**DR 1101**

**DR 1101-4 EXAMPLE APPLICATION**

The following example illustrates the procedure to determine the design frequency recommended for a temporary hydraulic facility.

Given:

A section of a rural roadway will be widened. There is an existing 8 ft × 4 ft × 40 ft box culvert with a drainage area of 320 acres that must be replaced. A detour will be provided on the downstream side of the existing box. The Average Daily Traffic (ADT) of the highway is 2,000 vehicles per day (VPD). The top of the detour lane is approximately 8 ft above the streambed. The land use on the upstream side of the proposed temporary hydraulic facility is predominantly croplands. The detour length is about 6 mi. The danger of loss of life due to the destruction of the temporary hydraulic facility is minimal. The anticipated use of the detour lanes is nine months.

Problem:

Find the design frequency for the temporary hydraulic facility.

Solution:

A. Compute the Impact Rating Value (IRV) based on Table 1101-1:

- For a rural roadway with ADT of 2000 vpd, the IRV is 2.
- The IRV for no loss of life with this type of highway is 2.
- The IRV for property damage is 10 (croplands).
- For detour length equal to 6 mi, the IRV is 2.
- For height above streambed of 2.4 m, the IRV is 1.
- For drainage area = 320 ac, the IRV is 1.
- The IRV for traffic interruption is the product of the Roadway ADT IRV (2) times the Detour Length IRV (2) equals 4.

B. Total Impact Rating Value (IRV) is shown in Table 1101-3.

C. Compute the Percent Design Risk Value: From Figure 1101-1, for a Total Impact Rating Value = 22, the value of the Percent Design Risk is 25 percent.

D. Compute the Design Frequency: From Figure 1101-2, for a Percent Design Risk of 25 percent and a construction time of nine months, the recommended design frequency for the temporary hydraulic facility is a five-year return period.

E. The structure should also be sized so that the 10 year storm overtops.

MISCELLANEOUS TOPICS  
Temporary Drainage Structures

DR 1101

Table 1101-3 Impact Rating Table (Example Problem)	
Factor	Impact Rating Value
Roadway ADT	2
Loss of Life	2
Property Damage	10
Detour Lengths	2
Height Above Streambed	1
Drainage Area	1
Traffic Interruptions	4
TOTAL IMPACT RATING VALUE	22



**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 2019* and *Standard Drawings, Edition of 2020*.

## **SUPPLEMENTAL SPECIFICATIONS**

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

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

**STANDARD DRAWINGS THAT APPLY  
DISTRICT NO. 11  
BRIDGE SUPERSTRUCTURE REPLACEMENT  
HARLAN COUNTY  
CID 212973**

**TRAFFIC  
~ *PERMANENT* ~  
PAVEMENT MARKINGS**

PAVEMENT MARKER ARRANGEMENTS TWO LANE, TWO WAY ROADWAYS	TPM-115 C.E.
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**BRIDGES  
STANDARDS**

BOX BEAM GENERAL NOTE AND REFERENCES	BDP-001 C.E.
BOX BEAM BEARING DETAILS	BDP-002 C.E.
BOX BEAM MISCELLANEOUS DETAILS	BDP-003 C.E.
BOX BEAM TENSION RODS	BDP-004 C.E.
BOX BEAM B27 & CB27 DETAILS	BDP-009 C.E.
RAILING SYSTEM TYPE II GUARDRAIL TREATMENT	BHS-007 C.E.

**ROADWAY  
STANDARDS**

STEEL BEAM GUARDRAIL	RBR-001 C.E.
STEEL GUARDRAIL POSTS	RBR-015 C.E.
GUARDRAIL TERMINAL SECTIONS	RBR-010 C.E.
GUARDRAIL END TREATMENT TYPE 7	RBR-050 C.E.
GUARDRAIL END TREATMENT TYPE 7	
ALTERNATE ANCHOR	RBR-051 C.E.



## **PART III**

### **EMPLOYMENT, WAGE AND RECORD REQUIREMENTS**

**TRANSPORTATION CABINET  
DEPARTMENT OF HIGHWAYS**

**LABOR AND WAGE REQUIREMENTS  
APPLICABLE TO OTHER THAN FEDERAL-AID SYSTEM PROJECTS**

- I. Application
- II. Nondiscrimination of Employees (KRS 344)

**I. APPLICATION**

1. These contract provisions shall apply to all work performed on the contract by the contractor with his own organization and with the assistance of workmen under his immediate superintendence and to all work performed on the contract by piecework, station work or by subcontract. The contractor's organization shall be construed to include only workmen employed and paid directly by the contractor and equipment owned or rented by him, with or without operators.

2. The contractor shall insert in each of his subcontracts all of the stipulations contained in these Required Provisions and such other stipulations as may be required.

3. A breach of any of the stipulations contained in these Required Provisions may be grounds for termination of the contract.

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

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

Revised: January 25, 2017

**II. NONDISCRIMINATION OF EMPLOYEES**

**AN ACT OF THE KENTUCKY  
GENERAL ASSEMBLY TO PREVENT  
DISCRIMINATION IN EMPLOYMENT  
KRS CHAPTER 344  
EFFECTIVE JUNE 16, 1972**

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

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

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

## EXECUTIVE BRANCH CODE OF ETHICS

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

KRS 11A.040 (7) provides:

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

KRS 11A.040 (9) states:

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

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

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

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

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

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

Revised: January 27, 2017

### **Kentucky Equal Employment Opportunity Act of 1978**

The requirements of the Kentucky Equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) shall apply to this Contract. The apparent low Bidder will be required to submit EEO forms to the Division of Construction Procurement, which will then forward to the Finance and Administration Cabinet for review and approval. No award will become effective until all forms are submitted and EEO/CC has certified compliance. The required EEO forms are as follows:

- EEO-1: Employer Information Report
- Affidavit of Intent to Comply
- Employee Data Sheet
- Subcontractor Report

These forms are available on the Finance and Administration's web page under ***Vendor Information, Standard Attachments and General Terms*** at the following address:  
**<https://www.eProcurement.ky.gov>**.

Bidders currently certified as being in compliance by the Finance and Administration Cabinet may submit a copy of their approval letter in lieu of the referenced EEO forms.

For questions or assistance please contact the Finance and Administration Cabinet by email at **[finance.contractcompliance@ky.gov](mailto:finance.contractcompliance@ky.gov)** or by phone at 502-564-2874.

# EMPLOYEE RIGHTS UNDER THE FAIR LABOR STANDARDS ACT

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

## FEDERAL MINIMUM WAGE

# \$7.25

 PER HOUR

BEGINNING JULY 24, 2009

### OVERTIME PAY

At least  $1\frac{1}{2}$  times your regular rate of pay for all hours worked over 40 in a workweek.

### CHILD LABOR

An employee must be at least **16** years old to work in most non-farm jobs and at least **18** to work in non-farm jobs declared hazardous by the Secretary of Labor.

Youths **14** and **15** years old may work outside school hours in various non-manufacturing, non-mining, non-hazardous jobs under the following conditions:

#### *No more than*

- **3** hours on a school day or **18** hours in a school week;
- **8** hours on a non-school day or **40** hours in a non-school week.

Also, work may not begin before **7 a.m.** or end after **7 p.m.**, except from June 1 through Labor Day, when evening hours are extended to **9 p.m.** Different rules apply in agricultural employment.

### TIP CREDIT

Employers of "tipped employees" must pay a cash wage of at least \$2.13 per hour if they claim a tip credit against their minimum wage obligation. If an employee's tips combined with the employer's cash wage of at least \$2.13 per hour do not equal the minimum hourly wage, the employer must make up the difference. Certain other conditions must also be met.

### ENFORCEMENT

The Department of Labor may recover back wages either administratively or through court action, for the employees that have been underpaid in violation of the law. Violations may result in civil or criminal action.

Employers may be assessed civil money penalties of up to \$1,100 for each willful or repeated violation of the minimum wage or overtime pay provisions of the law and up to \$11,000 for each employee who is the subject of a violation of the Act's child labor provisions. In addition, a civil money penalty of up to \$50,000 may be assessed for each child labor violation that causes the death or serious injury of any minor employee, and such assessments may be doubled, up to \$100,000, when the violations are determined to be willful or repeated. The law also prohibits discriminating against or discharging workers who file a complaint or participate in any proceeding under the Act.

### ADDITIONAL INFORMATION

- Certain occupations and establishments are exempt from the minimum wage and/or overtime pay provisions.
- Special provisions apply to workers in American Samoa and the Commonwealth of the Northern Mariana Islands.
- Some state laws provide greater employee protections; employers must comply with both.
- The law requires employers to display this poster where employees can readily see it.
- Employees under 20 years of age may be paid \$4.25 per hour during their first 90 consecutive calendar days of employment with an employer.
- Certain full-time students, student learners, apprentices, and workers with disabilities may be paid less than the minimum wage under special certificates issued by the Department of Labor.

For additional information:



# 1-866-4-USWAGE

(1-866-487-9243)

TTY: 1-877-889-5627



# WWW.WAGEHOUR.DOL.GOV

## **PART IV**

## **INSURANCE**

Refer to  
*Kentucky Standard Specifications for Road and Bridge Construction,*  
current edition

**PART V**

**BID ITEMS**

Section: 0001 - BRIDGES

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	02231		STRUCTURE GRANULAR BACKFILL	40.00	CUYD		\$	
0020	02355		GUARDRAIL-STEEL W BEAM-S FACE A	100.00	LF		\$	
0030	02371		GUARDRAIL END TREATMENT TYPE 7	3.00	EACH		\$	
0040	03250		WATERPROOFING MEMBRANE	267.00	SQYD		\$	
0050	03304		BRIDGE OVERLAY APPROACH PAVEMENT	267.00	SQYD		\$	
0060	06514		PAVE STRIPING-PERM PAINT-4 IN	400.00	LF		\$	
0070	08301		REMOVE SUPERSTRUCTURE	1.00	LS		\$	
0080	08670		PRECAST PC BOX BEAM SB27	600.00	LF		\$	
0090	08801		GUARDRAIL-STEEL W BEAM-S FACE BR - MODIFIED	200.00	LF		\$	

Section: 0002 - MAINTENANCE OF TRAFFIC

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0100	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0110	02651		DIVERSIONS (BY-PASS DETOURS)	1.00	LS		\$	
0120	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		\$	

Section: 0003 - DEMOB

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0130	02569		DEMOBILIZATION	1.00	LS		\$	