



CALL NO. 403

CONTRACT ID. 192104

GRAYSON - BUTLER COUNTIES

FED/STATE PROJECT NUMBER 121GR19P023-FE01

DESCRIPTION WESTERN KENTUCKY PARKWAY (WK 9001)

WORK TYPE ASPHALT REHAB WITH GRADE & DRAIN

PRIMARY COMPLETION DATE 11/30/2019

LETTING DATE: June 21,2019

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME June 21,2019. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT 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 - 04

CONTRACT ID - 192104

121GR19P023-FE01

COUNTY - BUTLER

PCN - MP01690011902

FE01 016 9001 087-089

WESTERN KENTUCKY PARKWAY (WK 9001) (MP 87.544) FROM OHIO COUNTY LINE EXTENDING EAST TO GRAYSON COUNTY LINE (MP 88.433), A DISTANCE OF 0.89 MILES.GRADE & DRAIN SYP NO. 04-02004.00.
GEOGRAPHIC COORDINATES LATITUDE 37:24:44.00 LONGITUDE 86:31:30.00

COUNTY - GRAYSON

PCN - MP04390011902

FE01 043 9001 088-092

WESTERN KENTUCKY PARKWAY (WK 9001) (MP 88.433) FROM BUTLER COUNTY LINE EXTENDING EAST TO PAVEMENT JOINT 0.198 MILES EAST OF DOG CREEK CULVERT (MP 91.200), A DISTANCE OF 02.77 MILES.GRADE & DRAIN SYP NO. 04-02004.00.
GEOGRAPHIC COORDINATES LATITUDE 37:24:44.00 LONGITUDE 86:31:30.00

COMPLETION DATE(S):

COMPLETED BY 11/30/2019

APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

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

JOINT VENTURE BIDDING

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

UNDERGROUND FACILITY DAMAGE PROTECTION

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

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

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

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

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

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

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

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

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

HARDWOOD REMOVAL RESTRICTIONS

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

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

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

ACCESS TO RECORDS

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

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

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

April 30, 2018

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

NATIONAL HIGHWAY

Be advised this project is on the NATIONAL HIGHWAY SYSTEM.

PROJECT TRAFFIC COORDINATOR (PTC)

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

SPECIAL NOTE FOR CULVERT PIPE REHABILITATION WITH HDPE PIPE

1. **Description.** Perform all work in accordance with the Department's Standard Specifications, Supplemental Specifications, current edition, and any applicable Special Provisions, and applicable Standard and Sepia Drawings, except as hereafter specified. Furnish all materials, labor, equipment, and incidentals for installing and grouting necessary to rehabilitate existing culvert pipe by slip lining an existing culvert pipe with high density polyethylene (HDPE) pipe. The pipes shall be sizes, types, design and dimensions shown on the summary and shall include all connections, joints and other appurtenances as required to complete the work. The slip lining process will require the contractor to completely grout the annular void between the host and liner pipe. The grout and grouting process shall be considered incidental to this item.
2. **Materials.** Unless otherwise specified on the plans or herein, culvert pipe renewal shall conform to the following:
 - A. **Liner Material - High Density Polyethylene (HDPE) Pipe**
 1. High density polyethylene pipe and fittings shall meet the requirements in the AASHTO M326-08 and ASTM F894 Specifications. Contractors must furnish a certificate of compliance at bid time from the pipe manufacturer that the liner pipe to be installed has been tested by a certified 3rd party laboratory and meets all AASHTO M326 requirements. The certification must list the laboratory and contact person with phone number.
 - B. **Designation of Type.**
 1. The HDPE pipes used for liners in gravity flow culverts shall be solid wall construction with mechanical end connectors, male and female.
 - C. Pipe joints shall comply with ASTM D3212 Standard Specification for Joint tightness.
 - D. Hydraulic flow characteristics for the liner pipe shall provide a Manning's coefficient of $n = 0.00914$.
 - E. **Grouting Material.** Contractor shall utilize material specifications for solidification of the annular void between host and the inserted liner with low density flowable fill or cellular grout. The grouting material shall have a density of not less than 40 lbs per cubic foot nor greater than 125 lbs per cubic foot.
3. **Cleaning.** The existing culvert pipe shall be cleaned by whatever means necessary to remove all obstructions which may be encountered that would prevent insertion of the pipe liner into the host pipe as approved by the engineer. This work will not be paid for directly, but shall be considered incidental to this item
4. **Construction.**
 - A. **Site Preparation.** Be responsible for all site preparation. This item will include, but is not limited to, incidental excavation and backfilling; removal of all obstructions or any other items; disposal of materials; sweeping and removal of debris; shoulder preparation and restoration, temporary and permanent erosion and pollution control; and all incidentals.

Site preparation will be only as approved or directed by the Engineer. Other than the bid items listed, no direct payment will be made for site preparation, but will be incidental to the other items of work.

- B. Liner Pipe.** Liner pipe shall be inserted and installed in accordance with manufacturer's recommendations. Slip liner pipe grade shall be maintained parallel to grade of host pipe.
- C. Grouting.** Upon completion or partial completion of the slip lining process grouting will be required to be placed in the annular void between the insertion pipe and the host pipe. Cellular grout with a density between 40 and 125 lbs per cubic foot shall be used.

A detailed plan on holding the liner pipe on the invert of the host pipe shall be submitted to the engineer for approval.

The annular void shall be completely grout filled without deflecting the insertion pipe greater than 1.5 percent.

The contractor shall provide bulkheads at the open points of each run of pipe to be grouted.

The annular void shall be grouted solid by injecting grout from one end of the pipe run and allowing it to flow toward the other end. Venting of the annular void shall be performed to assure uniform filling of the void space during the grouting process. An open ended, high point tap or equivalent vent must be provided and monitored at the bulkhead opposite to the point of grouting. Pressure on the annular void shall not exceed 2 PSI to avoid damage to the liner pipe. Regardless of the pressure, the contractor shall be solely responsible for any damage or distortion to the insertion pipe due to the grouting process.

- D. Pipe Stockpiling and Handling.** Pipe and fittings shall be stockpiled in a safe manner at each contractor staging area or pit location. The stockpiling shall be arranged to cause a minimum of interference to pedestrian and stored outside the safety clear zone of vehicular traffic. When handling slip lining pipe, the contractor shall take all precautions necessary to avoid damaging the pipe. No liner pipe shall be permitted to drag across the ground. All liner pipe must be fully supported or carried above the ground while being moved until inserted into the host culvert. Pipe with deep cuts, scratches, or gouges shall be rejected or replaced at the entire expense of the contractor. If pipe is found to have developed an irregular shape that will not allow pipe joining or insertion without the use of outside forces to bring pipe to round shape, it shall be rejected and replaced at the entire expense of the contractor. An irregularly shaped pipe that would necessitate the use of undue force that could cause damage to the pipe or the joints shall be rejected and replaced at the entire expense of the contractor.

- 5. Clean-up and Restoration.** Upon acceptance of the installation work and testing, the contractor shall clean-up and restore the project area affected by operations as approved by the Engineer.
- 6. Measurement.** This item shall be measured by the foot. Such measurement shall be made along the flow line of the liner pipe complete in place.

The accepted quantities of pipe liner will be paid for at the contract unit price per linear foot for the size of the existing pipe in which the liner is installed, complete in place.

7. **Payment.** The Department will pay for HDPE Pipe Liner at the linear foot price. Payment is full compensation for cleaning existing pipe; for furnishing, hauling, installing liner pipe and placing grout, all connections and for all labor, tools equipment, materials, clean-up and incidentals.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24583EC	HDPE PIPE LINER (XX INCH)	LF

SPECIAL NOTE FOR FOLD AND FORM PVC PIPE LINERS PIPE REHABILITATION BY THERMOFORMED (FOLD AND FORM) PIPE METHOD

DESCRIPTION OF WORK

The work specified under this section provides for the rehabilitation of an existing culvert pipe using PVC Fold and Form trenchless technology. The process consists of installing a thermoformed PVC pipe liner inside an existing culvert (Host Pipe) from inlet to outlet as described in the following sections. When installed the liner will be a seamless, joint-less, solid wall PVC pipe liner that tightly conformed to the interior contours of the original host pipe. The liner shall be continuous from inlet to outlet with no seams or joints. In most cases required service connections will be reconnected using closed circuit television and remotely controlled cutters.

REFERENCED DOCUMENTS

This specification references ASTM standards and other related standards, which are made a part hereof by reference and shall be the latest edition thereof.

ASTM-F1504

ASTM-E831: Coefficient of Linear Thermal Expansion

ASTM-D638: Tensile Strength and Tensile Modulus

ASTM-D790: Flexural Strength and Flexural Modulus

ASTM-D792: Specific Gravity

ASTM-D256: IZOD Impact

CONSTRUCTION

PRE-INSTALLATION

Host Pipe Preparation

The host pipe shall be inspected and cleaned prior to culvert lining. Any cleaning or clearing of pipes shall be included in the item "Ditching and Shouldering" or "Clean Pipe Structure".

Prior to inserting the PVC liner, each pipe should be inspected to verify any connecting pipes and also to determine if additional work will be needed to prepare the host pipe for the PVC liner. Any work necessary to prepare the host pipe shall be incidental to PVC pipe liners.

LINER INSTALLATION

Pre Heating

Prior to insertion of the liner into the host pipe the Contractor shall pre-heat the liner in the manner prescribed by the manufacturer's installation instructions. The heated liner must be pliable enough to be pulled into the host pipe with as little resistance as possible.

Pipe Liner Insertion

The liner pipe shall be inserted into the culvert through existing catch basins or culvert inlet or outlets. Insertion of the liner into the host pipe will be accomplished by pulling the liner into the host pipe according to the manufacturer's recommendations.

Stress Relief

After the liner has been inserted into the host pipe, the Contractor shall relieve any stress imparted to the liner during the insertion in a manner prescribed in the manufacturer's installation instructions.

Processing

The Contractor shall supply suitable heat source equipment. The equipment shall be capable of delivering steam through the lining section to uniformly raise the temperature of the PVC material to effect forming of the liner pipe.

Suitable monitors shall be installed to gauge steam temperatures and temperatures at the input and exhaust ends of the liner. Steam monitoring methods and forming period shall be recommended by the liner manufacturer.

After forming the liner shall be cooled using compressed air or a mixture of compressed air and water. Cooling shall be deemed complete when the temperature of the exhaust air or air water mixture has remained constantly below 110°F for a minimum of 20 minutes.

Pipe Liner Trimming

After installation the ends of the PVC liner shall be cut off and the ends folded over the host pipe or pressed flush against the headwall.

Connecting pipes

The exact number and location of pipe connections shall be determined from the pre-lining inspection. It shall be the Contractor's responsibility to accurately locate all existing pipe connections. The Contractor shall reconnect all pipe connections to the pipe liner.

All existing service connections shall be reinstated by remotely controlled robotic device or other methods approved by the Engineer.

Pipe reconnections shall be smooth and circular in nature. The opening shall be smooth and conform to the inside shape and size of the original connection. Trial cuts should be repaired per the pipe liner manufacturer's recommendations not be at no cost to the Department.

DEFECT REPAIR OR REPLACEMENT

Any defects, which in the judgment of the Department and the pipe liner manufacturer that will affect the integrity or strength of the liner, shall be repaired or the pipe liner replaced at the Contractor's expense per the pipe liner manufacturers recommendations. All repairs or replacement of defective work shall be completed to the full satisfaction of the Department.

PAYMENT

Payment for the work included in this section will be paid by the linear foot of pipe lined. Work incidental to the lining process such as, by-pass pumping, traffic control, pipe preparation, and other activities necessary to line the pipe shall not be paid for directly but shall be considered incidental.

SPECIAL PROVISION FOR WASTE AND BORROW SITES

Obtain U.S. Army Corps of Engineer's approval before utilizing a waste or borrow site that involves "Waters of the United States". The Corps of Engineers defines "Waters of the United States" as perennial or intermittent streams, ponds or wetlands. The Corps of Engineers also considers ephemeral streams, typically dry except during rainfall but having a defined drainage channel, to be jurisdictional waters. Direct questions concerning any potential impacts to "Waters of the United States" to the attention of the appropriate District Office for the Corps of Engineers for a determination prior to disturbance. Be responsible for any fees associated with obtaining approval for waste and borrow sites from the U.S. Army Corps of Engineer or other appropriate regulatory agencies.

1-296 Waste & Borrow Sites
01/02/2012

COORDINATION OF WORK WITH OTHER CONTRACTS

Be advised, there may be an active project(s) adjacent to or within this project. The Engineer will coordinate the work of the Contractors. See Section 105.06.

1-3193 Coordination Contracts
01/02/2012

**TRAFFIC CONTROL PLAN
WESTERN KENTUCKY PARKWAY (WK-9001)
REHABILITATION PROJECT GRAYSON/BUTLER COUNTY
ITEM NO. 4-20004**

**THIS PROJECT IS FOR A FULLY
CONTROLLED ACCESS HIGHWAY**

TRAFFIC CONTROL GENERAL

Except as provided herein, "Maintain and Control Traffic" shall be in accordance with the 2012 Standard Specifications and the 2016 Standard Drawings, current editions. Except for the roadway and traffic control bid items included in the project, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic". All lane closures used on the Project will be in compliance with the appropriate Standard Drawings and the Manual on Uniform Traffic Control Devices (MUTCD), current edition.

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

PROJECT PHASING & CONSTRUCTION PROCEDURES

This project has a fixed completion date. See the special note for Fixed Completion Date and Liquidated Damages.

The Engineer may specify days and hours when lane closures are not allowed.

Note that lane closures are required for the project. The minimum lane width shall be 11 ft. Stripe and/or taper according to the MUTCD and Standard Drawings, as directed by the Engineer.

Obtain the Engineer's approval on the method of lighting prior to performing any night work.

During the days and hours when a lane closure is allowed, implement the following procedures: Maintain traffic as specified in the phasing notes and typical sections.

The contractor must notify the Engineer at least fourteen (14) days prior to the beginning of each construction phase in either direction and at least seven (7) days prior to a ramp closure.

LANE AND SHOULDER CLOSURES

Limit the lengths of lane closures to only that needed for actual operations in accordance with the

phasing specified herein, or as directed by the Engineer. Only one lane closure in each direction at any time will be permitted. Lane closures shall be removed and the lanes reopened at the end of each workday. Contrary to section 112, lane and shoulder closures will **NOT** be measured for payment, but are considered incidental to "Maintain and Control Traffic". Protect partially completed guardrail installations with a shoulder closure during non-working hours.

SIGNS

Sign posts and splices shall be compliant with NCHRP 350 or MASH. Manufacturer's documentation validating this compliance shall be provided to the Engineer prior to installation. Signs, including any splices, shall be installed according to manufacturer's specifications and installation recommendations. Contrary to section 112.04.02, only long-term signs (signs intended to be continuously in place for more than 3 days) will be measured for payment. Short-term signs (signs intended to be left in place for 3 days or less) will not be measured for payment but will be incidental to Maintain and Control Traffic.

CHANGEABLE MESSAGE SIGNS

Provide changeable message signs in advance of and within the project at locations determined by the Engineer. If work is in progress concurrently in both directions or if more than one lane closure is in place in the same direction of travel, provide additional changeable message signs as directed by the Engineer. Place changeable message signs one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens, relocate or provide additional changeable message signs so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. The Engineer may vary the designated locations as the work progresses. The Engineer will determine the messages to be displayed. In the event of damage or mechanical/electrical failure, repair or replace the Changeable Message Sign within 24 hours. The Department will measure for payment the maximum number of Changeable Message Signs in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual Changeable Message Signs only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged Changeable Message Signs or for signs the Engineer directs be replaced due to poor condition or readability. Retain possession of the Changeable Message Signs upon completion of the work.

ARROW PANELS

Use arrow panels as shown on the Standard Drawings or as directed by the Engineer. The Department will measure for payment the maximum number of arrow panels in concurrent use at the same time on a single day on all sections of the contract. The Department will measure for payment the maximum number of Arrow Panels in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual Arrow Panels only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged Arrow Panels or for panels signs the Engineer directs be replaced due to poor condition or readability for payment. Retain possession of the Arrow Panels upon completion of the work.

BARRICADES

The Department will not measure barricades used in lieu of barrels and cones for channelization or delineation, but shall be incidental to Maintain and Control Traffic according to Section 112.04.01.

The Department will measure barricades used to protect pavement removal areas in individual units. Each. The Department will measure for payment the maximum number of barricades in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual barricades only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged barricades the Engineer directs to be replaced due to poor condition or reflectivity. Retain possession of the Barricades upon completion of the work.

PAVEMENT MARKINGS

If there is to be a deviation from the existing striping plan, the Engineer will furnish the Contractor a striping plan prior to placement of the final surface course. Install Temporary Striping according to Section 112 with the following exceptions:

1. Include edge lines in Temporary Striping; and
2. Place Temporary or Permanent Striping before opening a lane to traffic; and
3. If the Contractor's operations or phasing requires temporary markings that must subsequently be removed from the final surface course, use an approved removable lane tape; however, the Department will not measure removable lane tape for separate payment, but will measure and pay for removable lane tape as temporary striping.

PAVEMENT EDGE DROP-OFFS

Do not allow a pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation with an elevation difference greater than 1½". Place Warning signs (MUTCD W8-11 or W8-9A) in advance of and at 1500' intervals throughout the drop-off area. Dual post the signs on both sides of the traveled way. Wedge all transverse transitions between resurfaced and unresurfaced areas which traffic may cross with asphalt mixture for leveling and wedging. Remove the wedges prior to placement of the final surface course.

Protect pavement edges that traffic is not expected to cross, except accidentally, as follows:

Less than 2" - No protection required.

2" to 4" - Place plastic drums, vertical panels, or barricades every 50 feet. During daylight working hours only, the Engineer will allow the Contractor to use cones in lieu of plastic drums, panels, and barricades. Wedge the drop-off with DGA or asphalt mixture for leveling and wedging with a 1:1 or flatter slope in daylight hours, or 3:1 or flatter slope during nighttime hours, when work is not active in the drop-off area.

Greater than 4" - Protect drop-offs greater than 4 inches within 10 feet of traffic by placing drums, vertical panels, or barricades every 25 feet. The Engineer will not allow the use of cones in lieu of drums, vertical panels, or barricades for drop-offs greater than 4". Place Type III Barricades directly in front of the drop-off facing on coming traffic in both

directions of travel. Provide warning signs as shown on the Standard Drawings or as directed by the Engineer

Pedestrians & Bicycles - Protect pedestrian and bicycle traffic as directed by the engineer.

TRAFFIC COORDINATOR

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

Designate an employee to be traffic coordinator. The designated Traffic Coordinator must be certified in accordance with Department's Standard Specifications Sec. 112.03.12 (current edition). The Traffic Coordinator will inspect the project maintenance of traffic once daily, including weekends, during the Contractor's operations and at any time a lane closure is in place. The Traffic Coordinator will report all incidents throughout the work zone to the Engineer on the project. The Contractor will furnish the name and telephone number where the Traffic Coordinator can be contacted at all times.

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

COORDINATION OF WORK

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

CONTRACTOR'S AND CONTRACTOR'S EMPLOYEES' VEHICLES

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

USE AND PLACEMENT OF CHANGEABLE MESSAGE SIGNS

The following policy is based upon current Changeable Message Signs (CMS) standards and practice from many sources, including the Federal Highway Administration (FHWA), other State Departments of Transportation, and Traffic Safety Associations. It is understood that each CMS installation or use requires individual consideration due to the specific location or purpose. However, there will be elements that are constant in nearly all applications. Accordingly these recommended guidelines bring a level of uniformity, while still being open to regional experience and engineering judgment.

Application

The primary purpose of CMS is to advise the driver of unexpected traffic and routing situations. Examples of applications where CMS can be effective include:

- Closures (road, lane, bridge, ramp, shoulder, interstate)
- Changes in alignment or surface conditions
- Significant delays, congestion
- Construction/maintenance activities (delays, future activities)
- Detours/alternative routes
- Special events with traffic and safety implications
- Crash/incidents
- Vehicle restrictions (width, height, weight, flammable)
- Advance notice of new traffic control devices
- Real-time traffic conditions (must be kept up to date)
- Weather /driving conditions, environmental conditions, Roadway Weather Information Systems
- Emergency Situations
- Referral to Highway Advisory Radio (if available)
- Messages as approved by the County Engineer's Office

CMS should not be used for:

- Replacement of static signs (e.g. road work ahead), regulatory signage (e.g. speed limits), pavement markings, standard traffic control devices, conventional warning or guide signs.
- Replacement of lighted arrow board
- Advertising (Don't advertise the event unless clarifying "action" to be taken by driver – e.g. Speedway traffic next exit)
- Generic messages
- Test messages (portable signs only)
- Describe recurrent congestion (e.g. rush hour)
- Public service announcements (not traffic related)

Messages

Basic principles that are important to providing proper messages and insuring the proper operation of a CMS are:

- Visible for at least ½ mile under ideal daytime and nighttime conditions
- Legible from all lanes a minimum of 650 feet
- Entire message readable twice while traveling at the posted speed
- Not more than two message panels should be used (three panels may be used on roadways where vehicles are traveling less than 45 mph). A panel is the message that fits on the face of the sign without flipping or scrolling.
- Each panel should convey a single thought; short and concise
- Do not use two unrelated panels on a sign
- Do not use the sign for two unrelated messages
- Should not scroll text horizontally or vertically
- Should not contain both the words left and right
- Use standardized abbreviations and messages
- Should be accurate and timely
- Avoid filler/unnecessary words and periods (hazardous, a, an, the)
- Avoid use of speed limits
- Use words (not numbers) for dates

Placement

Placement of the CMS is important to insure that the signs is visible to the driver and provides ample time to take any necessary action. Some of the following principles may only be applicable to controlled access roadways. The basic principles of placement for a CMS are:

- When 2 signs are needed, place on same side of roadway and at least 1,000 feet apart
- Place behind semi-rigid/rigid protection (guardrail, barrier) or outside of the clear zone
- Place 1,000 feet in advance of work zone; at least one mile ahead of decision point
- Normally place on right side of roadway; but should be placed closest to the affected lane so that either side is acceptable
- Signs should not be dual mounted (one on each side of roadway facing same direction)
- Point trailer hitch downstream
- Secure to immovable object to prevent thief (if necessary)
- Do not place in sags or just beyond crest
- Check for reflection of sun to prevent the blinding of motorist
- Should be turned ~3 degrees outward from perpendicular to the edge of pavement
- Bottom of sign should be 7 feet above the elevation of edge of roadway
- Should be removed when not in use
-

Standard Abbreviations

The following is a list of standard abbreviations to be used on CMS.

<u>Word</u>	<u>Abbrev.</u>	<u>Example</u>
Access	ACCS	ACCIDENT AHEAD/USE ACCS RD NEXT RIGHT
Alternate	ALT	ACCIDENT AHEAD/USE ALT RTE NEXT RIGHT
Avenue	AVE	FIFTH AVE CLOSED/DETOUR NEXT LEFT
Blocked	BLKD	FIFTH AVE BLKD/MERGE LEFT
Boulevard	BLVD	MAIN BLVD CLOSED/USE ALT RTE
Bridge	BRDG	SMITH BRDG CLOSED/USE ALT RTE
Cardinal Directions	N, S, E, W	N I75 CLOSED/ DETOUR EXIT 30
Center	CNTR	CNTR LANE CLOSED/MERGE LEFT
Commercial	COMM	OVRSZ COMM VEH/USE I275
Condition	COND	ICY COND POSSIBLE
Congested	CONG	HVY CONG NEXT 3 MI
Construction	CONST	CONST WORK AHEAD/EXPECT DELAYS
Downtown	DWNTN	DWNTN TRAF USE EX 40
Eastbound	E-BND	E-BND I64 CLOSED/DETOUR EXIT 20
Emergency	EMER	EMER VEH AHEAD/PREPARE TO STOP
Entrance, Enter	EX, EXT	DWNTN TRAF USE EX 40
Expressway	EXPWY	WTRSN EXPWY CLOSED/DETOUR EXIT 10
Freeway	FRWY, FWY	GN SYNDR FWY CLOSED/DETOUR EXIT 15
Hazardous Materials	HAZMAT	HAZMAT IN ROADWAY/ALL TRAF EXIT 25
Highway	HWY	ACCIDENT ON AA HWY/EXPECT DELAYS
Hour	HR	ACCIDENT ON AA HWY/2 HR DELAY
Information	INFO	TRAF INFO TUNE TO 1240 AM
Interstate	I	E-BND I64 CLOSED/DETOUR EXIT 20
Lane	LN	LN CLOSED/MERGE LEFT
Left	LFT	LANE CLOSED/MERGE LFT
Local	LOC	LOC TRAF USE ALT RTE
Maintenance	MAINT	MAINT WRK ON BRDG/SLOW
Major	MAJ	MAJ DELWAYS I75/USE ALT RTE
Mile	MI	ACCIDENT 3 MI AHEAD/ USE ALT RTE
Minor	MNR	ACCIDENT 3 MI MNR DELAY

Minutes Northbound	MIN N-BND	ACCIDENT 3 MI/30 MIN DELAY N-BND I75 CLOSED/ DETOUR EXIT 50
Oversized	OVRSZ	OVRSZ COMM VEH/USE I275 NEXT RIGHT
Parking Parkway	PKING PKWY	EVENT PKING NEXT RGT CUM PKWAY TRAF/DETOUR EXIT 60
Prepare Right Road Roadwork	PREP RGT RD RDWK	ACCIDENT 3 MIL/PREP TO STOP EVENT PKING NEXT RGT HAZMAT IN RD/ALL TRAF EXIT 25 RDWK NEXT 4 MI/POSSIBLE DELAYS
Route Shoulder Slippery Southbound	RTE SHLDR SLIP S-BND	MAJ DELAYS I75/USE ALT RTE SHLDR CLOSED NEXT 5 MI SLIP COND POSSIBLE/ SLOW SPD S-BND I75 CLOSED/DETOUR EXIT 50
Speed Street Traffic	SPD ST TRAF	SLIP COND POSSIBLE/ SLOW SPD MAIN ST CLOSED/USE ALT RTE CUM PKWAY TRAF/DETOUR EXIT 60
Vehicle	VEH	OVRSZ COMM VEH/USE I275 NEXT RIGHT
Westbound	W-BND	W-BND I64 CLOSED/DETOUR EXIT 50
Work	WRK	CONST WRK 2MI/POSSIBLE DELAYS

Certain abbreviations are prone to inviting confusion because another word is abbreviated or could be abbreviated in the same way. DO NO USE THESE ABBREVIATIONS.

<u>Abbrev.</u>	<u>Intended Word</u>	<u>Word Erroneously Given</u>
ACC	Accident	Access (Road)
CLRS	Clears	Colors
DLY	Delay	Daily
FDR	Feeder	Federal
L	Left	Lane (merge)
LOC	Local	Location
LT	Light (traffic)	Left
PARK	Parking	Park
POLL	Pollution (index)	Poll
RED	Reduce	Red
STAD	Stadium	Standard
TEMP	Temporary	Temperature
WRNG	Warning	Wrong

TYPICAL MESSAGES

The following is a list of typical messages used on CMS. The list consists of the reason or problem that you want the driver to be aware of and the action that you want the driver to take.

<u>Reason/Problem</u>	Action
ACCIDENT	ALL TRAFFIC EXIT RT
ACCIDENT/XX MILES	AVOID DELAY USE XX
XX ROAD CLOSED	CONSIDER ALT ROUTE
XX EXIT CLOSED	DETOUR
BRIDGE CLOSED	DETOUR XX MILES
BRIDGE/(SLIPPERY, ICE, ETC.)	DO NOT PASS
CENTER/LANE/CLOSED	EXPECT DELAYS
DELAY(S), MAJOR/DELAYS	FOLLOW ALT ROUTE
DEBRIS AHEAD	KEEP LEFT
DENSE FOG	KEEP RIGHT
DISABLED/VEHICLE	MERGE XX MILES
EMER/VEHICLES/ONLY	MERGE LEFT
EVENT PARKING	MERGE RIGHT
EXIT XX CLOSED	ONE-WAY TRAFFIC
FLAGGER XX MILES	PASS TO LEFT
FOG XX MILES	PASS TO RIGHT
FREEWAY CLOSED	PREPARE TO STOP
FRESH OIL	REDUCE SPEED
HAZMAT SPILL	SLOW
ICE	SLOW DOWN
INCIDENT AHEAD	STAY IN LANE
LANES (NARROW, SHIFT, MERGE, ETC.)	STOP AHEAD
LEFT LANE CLOSED	STOP XX MILES
LEFT LANE NARROWS	TUNE RADIO 1610 AM
LEFT 2 LANES CLOSED	USE NN ROAD
LEFT SHOULDER CLOSED	USE CENTER LANE
LOOSE GRAVEL	USE DETOUR ROUTE
MEDIAN WORK XX MILES	USE LEFT TURN LANE
MOVING WORK ZONE, WORKERS IN ROADWAY	USE NEXT EXIT
NEXT EXIT CLOSED	USE RIGHT LANE
NO OVERSIZED LOADS	WATCH FOR FLAGGER
NO PASSING	
NO SHOULDER	
ONE LANE BRIDGE	
PEOPLE CROSSING	
RAMP CLOSED	
RAMP (SLIPPERY, ICE, ETC.)	
RIGHT LANE CLOSED	
RIGHT LANE NARROWS	
RIGHT SHOULDER CLOSED	
ROAD CLOSED	
ROAD CLOSED XX MILES	
ROAD (SLIPPERY, ICE, ETC.)	
ROAD WORK	
ROAD WORK (OR CONSTRUCTION) (TONIGHT, TODAY, TOMORROW, DATE)	

ROAD WORK XX MILES
SHOULDER (SLIPPERY, ICE, SOFT, BLOCKED, ETC.)
NEW SIGNAL XX MILES
SLOW 1 (OR 2) - WAY TRAFFIC
SOFT SHOULDER
STALLED VEHICLES AHEAD
TRAFFIC BACKUP
TRAFFIC SLOWS
TRUCK CROSSING
TRUCKS ENTERING
TOW TRUCK AHEAD
UNEVEN LANES
WATER ON ROAD
WET PAINT
WORK ZONE XX MILES
WORKERS AHEAD

SPECIAL NOTE FOR EROSION CONTROL

I. DESCRIPTION

Except as provided herein, perform all erosion and water pollution control work in accordance with the Department's Standard and Supplemental Specifications, and Standard and Sepia Drawings, current editions, and as directed by the Engineer. Section references are to the Standard Specifications. This work shall consist of:

(1) Developing and preparing a Best Management Practices Plan (BMP) tailored to suit the specific construction phasing for each site within the project; (2) Preparing the project site(s) for construction, including locating, furnishing, installing, and maintaining temporary and/or permanent erosion and water pollution control measures as required by the BMP prior to beginning any earth disturbing activity on the project site; (3) Clearing and grubbing and removal of all obstructions as required for construction; (4) Removing all erosion control devices when no longer needed; (5) Restoring all disturbed areas as nearly as possible to their original condition; (6) Preparing seedbeds and permanently seeding all disturbed areas; (7) Providing a Kentucky Erosion Prevention and Sediment Control Program (KEPSC) qualified inspector; and (8) Performing any other work to prevent erosion and/or water pollution as specified by this contract, required by the BMP, or as directed by the Engineer.

II. MATERIALS

Except as provided herein, furnish all materials for erosion and water pollution control work in accordance with the Department's Standard and Supplemental Specifications, and Standard and Sepia Drawings, current editions, and as directed by the Engineer.

Provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual. Unless directed otherwise by the Engineer, make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

III. CONSTRUCTION

Except as provided herein, construct all erosion and water pollution control work in accordance with the Department's Standard and Supplemental Specifications, and Standard and Sepia Drawings, current editions, and as directed by the Engineer.

Erosion Control Page 2 of 3

Be advised, these Erosion Control Plan Notes do not constitute a BMP plan for the project. Jointly with the Engineer, prepare a site specific BMP plan for each drainage area within the project in accordance with Section 213 and the supplemental specifications. Provide a unique BMP at each project site using good engineering practices taking into account existing site conditions, the type of work to be performed, and the construction phasing, methods and techniques to be utilized to complete the work. Be responsible for all erosion prevention, sediment control, and water pollution prevention measures required by the BMP for each site. Represent and warrant compliance with the Clean Water Act (33 USC Section 1251 et seq.), the 404 Permit, the 401 Water Quality Certification, and applicable state and local government agency laws, regulations, rules, specifications, and permits. Contrary to Section 105.05, in case of discrepancy between these notes, the Standard Specifications, interim Supplemental Specifications, Special and Special Notes, Standard and Sepia Drawings, and such state and local government agency requirements, adhere to the most restrictive requirement.

Conduct operations in such a manner as to minimize the amount of disturbed ground during each phase of the construction and limit the haul roads to the minimum required to perform the work. Preserve existing vegetation not required to be removed by the work or the contract. Seed and/or mulch disturbed areas at the earliest opportunity. Use silt fence, silt traps, temporary ditches, brush barriers, erosion control blankets, sodding, channel lining, and other erosion control measures in a timely manner as required by the BMP and as directed or approved by the Engineer. Prevent sediment laden water from leaving the project, entering an existing drainage structure, or entering a stream.

Provide for erosion control measures to be in place and functioning prior to any earth disturbance within a drainage area. Compute the volume and size of silt control devices necessary to control sediment during each phase of construction. Remove sediment from silt traps before they become a maximum of ½ full. Maintain silt fence by removing accumulated trappings and/or replacing the geotextile fabric when it becomes clogged, damaged, or deteriorated, or when directed by the Engineer. Properly dispose of all materials trapped by erosion control devices at approved sites off the right of way obtained by the Contractor at no additional cost to the Department (See Special Note for Waste and Borrow).

As work progresses, add or remove erosion control measures as required by the BMP applicable to the Contractor's project phasing and construction methods and techniques. Update the volume calculations and modify the BMP as necessary throughout the duration of the project. Ensure that an updated BMP is kept on site and available for public inspection throughout the life of the project.

After all construction is complete, restore all disturbed areas in accordance with Section 212. Completely remove all temporary erosion control devices not required as part of the permanent erosion control from the construction site. Prior to removal, obtain the Engineer's concurrence of items to be removed. Grade the remaining exposed earth (both on and off the Right of-Way) as nearly as possible to its original condition, or as directed by the Engineer. Prepare the seed bed areas and sow all exposed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

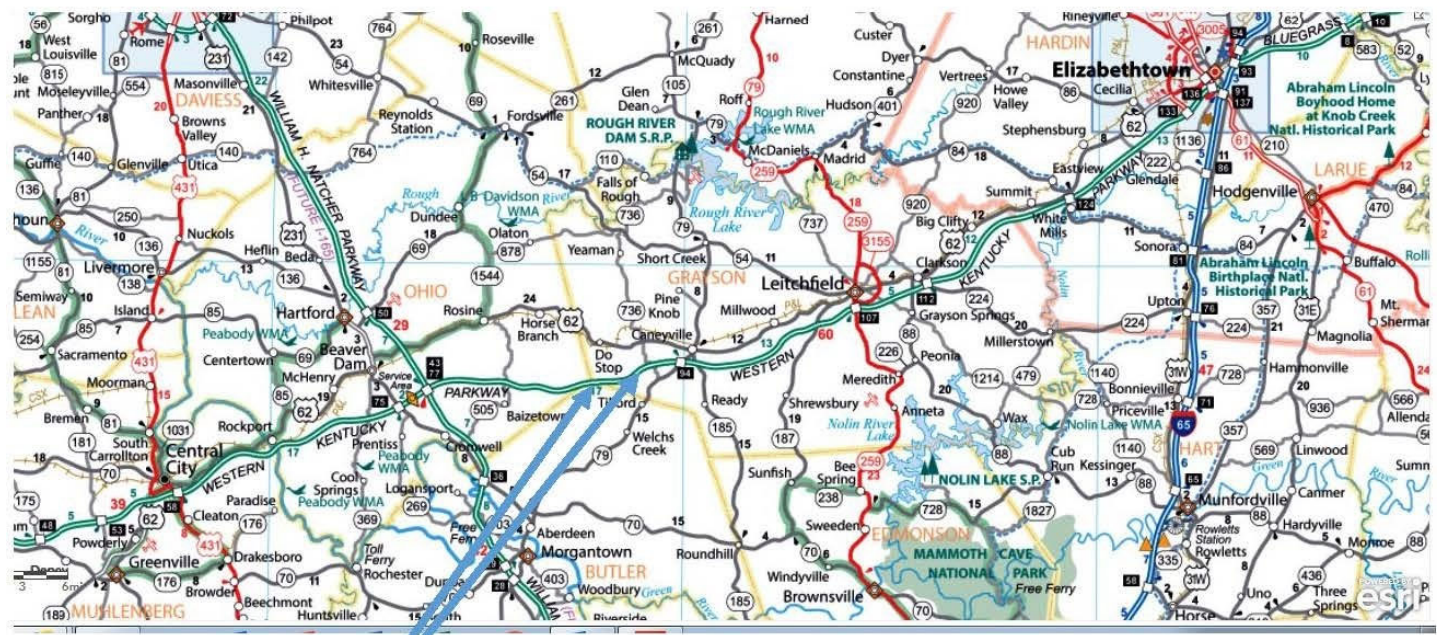
Erosion Control
Page 3 of 3

IV. MEASUREMENT

Contrary to Section 212.04 and 213.04, the Department will not measure Erosion Control items for separate payment, but shall be incidental to Pavement Removal, DGA, Leveling and Wedging, and Asphalt Pavement as applicable

Western Kentucky Parkway Rehabilitation Project

Grayson/Butler Counties
Mile point 87.544 - 91.200



121GR19P023 - FE01

MATERIAL SUMMARY

CONTRACT ID: 192104

121GR19P023-FE01

MP01690011902

WESTERN KENTUCKY PARKWAY (WK 9001) FROM OHIO COUNTY LINE EXTENDING EAST TO GRAYSON COUNTY LINE GRADE & DRAIN, A DISTANCE OF .89 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	02562	TEMPORARY SIGNS	150.00	SQFT
0010	02650	MAINTAIN & CONTROL TRAFFIC - (BUTLER)	1.00	LS
0015	02671	PORTABLE CHANGEABLE MESSAGE SIGN	1.00	EACH
0020	02775	ARROW PANEL	1.00	EACH
0025	00078	CRUSHED AGGREGATE SIZE NO 2	850.00	TON
0030	02483	CHANNEL LINING CLASS II	400.00	TON
0035	02575	DITCHING AND SHOULDERING	4,700.00	LF
0040	03262	CLEAN PIPE STRUCTURE	1.00	EACH
0045	24862EC	PVC FOLD AND FORM PIPE LINER-18 IN	124.00	LF
0050	24583EC	HDPE PIPE LINER - (30 INCH)	320.00	LF
0055	24865EC	PVC FOLD AND FORM PIPE LINER-36 IN	152.00	LF
0060	02569	DEMOBILIZATION	1.00	LS
0065	02383	REMOVE & RESET GUARDRAIL	4,625.00	LF

CONTRACT ID: 192104

121GR19P023-FE01

MP04390011902

WESTERN KENTUCKY PARKWAY (WK 9001) FROM BUTLER COUNTY LINE EXTENDING EAST TO PAVEMENT JOINT 0.198 MILES EAST OF DOG CREEK CULVERT GRADE & DRAIN, A DISTANCE OF 2.77 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0070	02562	TEMPORARY SIGNS	150.00	SQFT
0075	02650	MAINTAIN & CONTROL TRAFFIC - (GRAYSON)	1.00	LS
0080	02671	PORTABLE CHANGEABLE MESSAGE SIGN	1.00	EACH
0085	02775	ARROW PANEL	1.00	EACH
0090	02483	CHANNEL LINING CLASS II	9,000.00	TON
0095	02575	DITCHING AND SHOULDERING	14,610.00	LF
0100	03262	CLEAN PIPE STRUCTURE	4.00	EACH
0105	24861EC	PVC FOLD AND FORM PIPE LINER-15 IN	664.00	LF
0110	24862EC	PVC FOLD AND FORM PIPE LINER-18 IN	436.00	LF
0115	24583EC	HDPE PIPE LINER - (30 INCH)	352.00	LF
0120	24583EC	HDPE PIPE LINER - (42 INCH)	200.00	LF
0125	24583EC	HDPE PIPE LINER - (66 INCH)	360.00	LF
0130	24583EC	HDPE PIPE LINER - (72 INCH)	264.00	LF
0135	02569	DEMOBILIZATION	1.00	LS
0140	24583EC	HDPE PIPE LINER - (36 INCH)	212.00	LF
0145	00078	CRUSHED AGGREGATE SIZE NO 2	1,000.00	TON
0150	02383	REMOVE & RESET GUARDRAIL	15,175.00	LF

Culvert Lining Summary

Milepoint	15"	18"	30"	36"	42"	66"	72"	NOTES
87.570			200					HDPE LINER
87.922		124						PVC FOLD IN FORM LINER
88.040			120					HDPE LINER
88.279				152				PVC FOLD IN FORM LINER
88.450			168					HDPE LINER
88.570				212				HDPE LINER
89.465							264	HDPE LINER
89.700		120						PVC FOLD IN FORM LINER
89.800		136						PVC FOLD IN FORM LINER
89.885			184					HDPE LINER
90.448	84							PVC FOLD IN FORM LINER
90.468						360		HDPE LINER
90.500	120							PVC FOLD IN FORM LINER
90.550	84							PVC FOLD IN FORM LINER
90.600					200			HDPE LINER
90.620	56							PVC FOLD IN FORM LINER
90.685	64							PVC FOLD IN FORM LINER
90.692	64							PVC FOLD IN FORM LINER
90.730	64							PVC FOLD IN FORM LINER
90.860	64							PVC FOLD IN FORM LINER
90.878		116						PVC FOLD IN FORM LINER
90.980	64							PVC FOLD IN FORM LINER
91.080		64						PVC FOLD IN FORM LINER
Totals	664	560	672	364	200	360	264	

Clean Pipe Structure Summary

Milepoint	42"	54"	66"	72"
87.805	1			
89.465				1
90.330		1		
90.468			1	
90.600	1			

1. In accordance with Section 209.04.06 of the Standard Specifications, cleaning of culverts 36" and less in diameter shall be incidental to the item Ditching and Shouldering and should be performed prior to culvert lining.

2. Clean Pipe Structure shall be paid in accordance with Section 209.04.08 of the Standard Specifications.

Ditch Repair Locations

Channel Lining Class 2

Milepoint	Direction	Side	Tons	Notes
91.2 - 91.14	WB	Out	150.00	
90.82 - 90.71	WB	Out	300.00	
90.706 - 90.66	WB	Out	125.00	
90.64 - 90.55	WB	Out	150.00	
90.49 - 90.47	WB	Out	100.00	
90.02 - 89.805	WB	Out	500.00	
89.78 - 89.75	WB	Out	100.00	
88.95	WB	Out	3000.00	*1.
88.7 - 88.472	WB	Out	600.00	
87.9 - 87.77	WB	Out	350.00	
87.415 - 87.41	WB	Out	50.00	
88.72 - 88.81	EB	Out	225.00	
88.5 - 88.7	EB	Out	500.00	
89.27 - 89.39	EB	Out	300.00	
89.535 - 89.7	EB	Out	450.00	
89.71 - 89.79	EB	Out	200.00	
89.8 - 89.88	EB	Out	200.00	
89.89 - 90.21	EB	Out	850.00	
90.385 - 90.42	EB	Out	700.00	
90.73 - 90.74	EB	Out	50.00	
90.775 - 90.805	EB	Out	100.00	
90.85 - 90.985	EB	Out	400.00	

Total 9400.00

*1. Use Channel Lining to fill in erosion/scour around/behind existing wingwall.
 Use Type I Geotextile Fabric to cover soil prior to placement of Channel Lining.
 Fabric shall be incidental to the Channel Lining and will not be paid for.

Note: All locations are approximate. Final applications as directed by the Engineer.

Erosion repairs

**Crushed Aggregate
 Size No. 2**

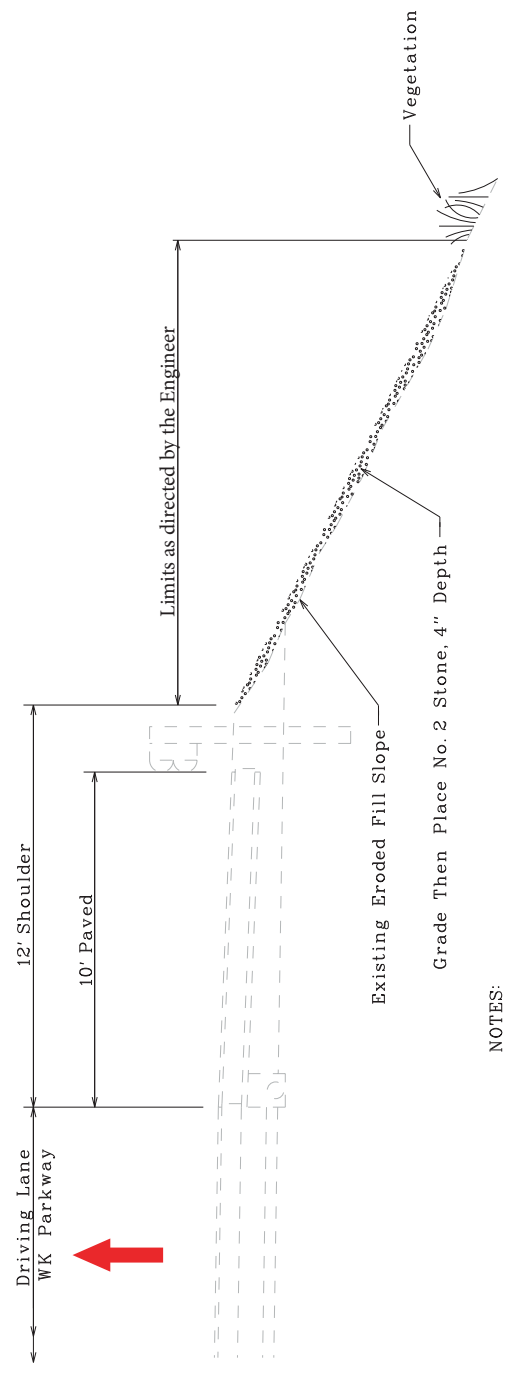
From	To	Direction	Tons
91.173	90.8	WB	200.00
90.56	90.54	WB	25.00
90.43	90.08	WB	175.00
89.77	89.7	WB	50.00
89.41	88.69	WB	350.00
88.16	88.12	WB	50.00
87.9	87.85	WB	50.00
87.75	87.62	WB	75.00
87.56	87.55	WB	25.00
87.544	87.84	EB	150.00
88.07	88.12	EB	25.00
88.23	88.45	EB	125.00
88.66	89.06	EB	200.00
89.18	89.36	EB	100.00
90.07	90.31	EB	120.00
90.4	90.45	EB	25.00
90.54	90.55	EB	5.00
90.8	91	EB	100.00

Total 1850.00

Note: All locations are approximate. Final applications as directed by the Engineer.

FILL SLOPE EROSION REPAIR AND DITCH REPAIR DETAILS

FILL SLOPE EROSION REPAIR

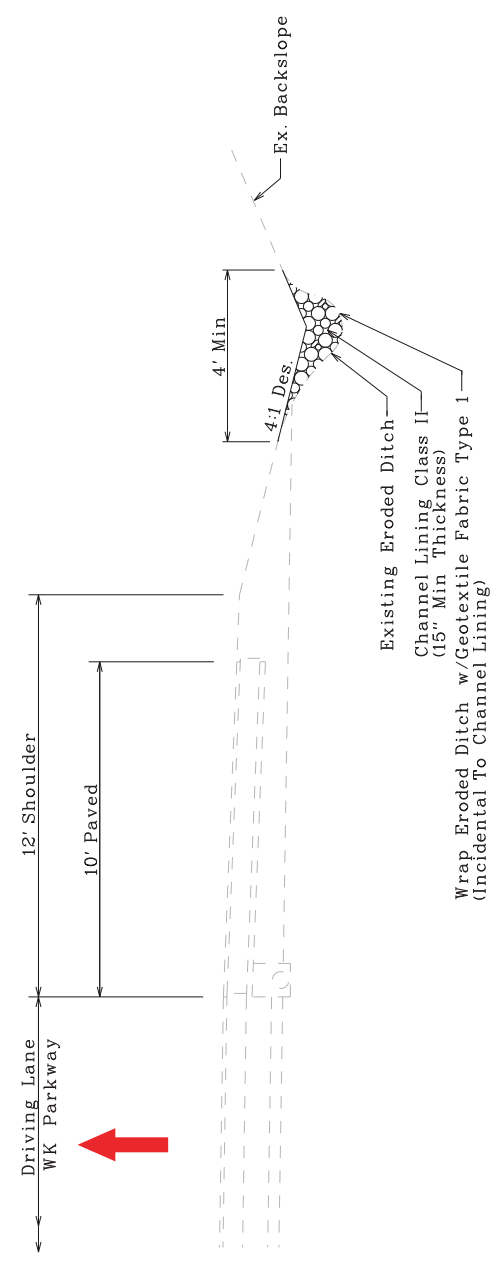


NOTES:
See The Fill Slope Erosion Repair Summary For Locations
And Quantity Of No. 2 Stone.
Grading The Slope Prior To Placement Of No. 2 Stone Will
Be Incidental To The Stone Bid Item.

DITCH REPAIR

NOTES:
See The Ditch Repair Summary For Locations
And Quantities Of Ditch Work.

ROADWAY DITCHES



Wrap Eroded Ditch w/ Geotextile Fabric Type 1
(Incidental To Channel Lining)

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 2016*.

SUPPLEMENTAL SPECIFICATIONS

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

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

SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

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

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

2.0 MATERIALS.

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

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

2.2 Sign and Controls. All signs must:

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

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

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

*Insert numerals as directed by the Engineer.
Add other messages during the project when required by the Engineer.

2.3 Power.

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

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

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

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

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

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

11

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

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

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

Effective June 15, 2012

2016 KENTUCKY STANDARD DRAWINGS SUPPLEMENTS TO STANDARD SPECIFICATIONS TABLE OF CONTENTS

CHANNEL LINING CLASS II AND III	RDD-040-05
FOR ALL PIPE AND BOX CULVERT HEADWALLS (RDH SERIES) SEE HEADWALL SUPPLEMENT	
PIPE BEDDING FOR CULVERTS, ENTRANCE AND STORM SEWER PIPE.....	RDI-020-09
PIPE BEDDING FOR CULVERTS, ENTRANCE AND STORM SEWER REINFORCED CONC.PIPE	RDI-021-01
PERFORATED PIPE TYPES AND COVER HEIGHTS	RDP-001-06
PERFORATED PIPE FOR SUBGRADE DRAINAGE ON TWO-LANE (CLASS 2) AND MULTI-LANE ROADS	
.....	RDP-005-05
PERFORATED PIPE UNDERDRAINS (LONGITUDINAL AND TRANSVERSE)	RDP-006-04
PERFORATED PIPE DETAILS (SOLID ROCK)	RDP-007-04
PERFORATED PIPE HEADWALLS	RDP-010-09
TEMPORARY SILT FENCE	RDX-210-03
TEMPORARY SILT FENCE WITH WOVEN WIRE FENCE FABRIC	RDX-215-01
SILT TRAP - TYPE A	RDX-220-05
SILT TRAP - TYPE B	RDX-225-01
SILT TRAP - TYPE C	RDX-230-01
CURVE WIDENING AND SUPERELEVATION TRANSITIONS	RGS-001-07
SUPERELEVATION FOR MULTILANE PAVEMENT	RGS-002-06
MISCELLANEOUS STANDARDS	RGX-001-06
LANE CLOSURE MULTI-LANE HIGHWAY CASE I	TTC-115-03
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DOUBLE FINES ZONES SIGNS	TTD-120-02
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MOBILE OPERATION FOR PAINT STRIPING CASE III.....	TTS-110-02
MOBILE OPERATION FOR PAINT STRIPING CASE IV	TTS-115-02

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** 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 1½ 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

INSURANCE

The Contractor shall procure and maintain the following insurance in addition to the insurance required by law:

- 1) Commercial General Liability-Occurrence form – not less than \$2,000,000 General aggregate, \$2,000,000 Products & Completed Aggregate, \$1,000,000 Personal & Advertising, \$1,000,000 each occurrence.
- 2) Automobile Liability- \$1,000,000 per accident
- 3) Employers Liability:
 - a) \$100,000 Each Accident Bodily Injury
 - b) \$500,000 Policy limit Bodily Injury by Disease
 - c) \$100,000 Each Employee Bodily Injury by Disease
- 4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
 - a) "policy contains no deductible clauses."
 - b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."
- 5) KENTUCKY WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

The cost of insurance is incidental to all contract items. All subcontractors must meet the same minimum insurance requirements.

PART V
BID ITEMS

PROPOSAL BID ITEMS

192104

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Report Date 5/29/19

Section: 0001 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00078		CRUSHED AGGREGATE SIZE NO 2	1,850.00	TON		\$	
0020	02383		REMOVE & RESET GUARDRAIL	19,800.00	LF		\$	
0030	02483		CHANNEL LINING CLASS II	9,400.00	TON		\$	
0040	02562		TEMPORARY SIGNS	300.00	SQFT		\$	
0050	02575		DITCHING AND SHOULDERING	19,310.00	LF		\$	
0060	02650		MAINTAIN & CONTROL TRAFFIC (BUTLER)	1.00	LS		\$	
0070	02650		MAINTAIN & CONTROL TRAFFIC (GRAYSON)	1.00	LS		\$	
0080	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		\$	
0090	02775		ARROW PANEL	2.00	EACH		\$	
0100	03262		CLEAN PIPE STRUCTURE	5.00	EACH		\$	
0110	24583EC		HDPE PIPE LINER (30 INCH)	672.00	LF		\$	
0120	24583EC		HDPE PIPE LINER (36 INCH)	212.00	LF		\$	
0130	24583EC		HDPE PIPE LINER (42 INCH)	200.00	LF		\$	
0140	24583EC		HDPE PIPE LINER (66 INCH)	360.00	LF		\$	
0150	24583EC		HDPE PIPE LINER (72 INCH)	264.00	LF		\$	
0160	24861EC		PVC FOLD AND FORM PIPE LINER-15 IN	664.00	LF		\$	
0170	24862EC		PVC FOLD AND FORM PIPE LINER-18 IN	560.00	LF		\$	
0180	24865EC		PVC FOLD AND FORM PIPE LINER-36 IN	152.00	LF		\$	

Section: 0002 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0190	02569		DEMOBILIZATION	1.00	LS		\$	