CALL NO. 312

CONTRACT ID. 224321

CRITTENDEN COUNTY

FED/STATE PROJECT NUMBER FD04 028 0060 004-009

DESCRIPTION US HIGHWAY 60 (US 60)

WORK TYPE ASPHALT SURFACE WITH GRADE & DRAIN

PRIMARY COMPLETION DATE 10/31/2023

LETTING DATE: July 21,2022

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME July 21,2022. 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 - 01

CONTRACT ID - 224321

FD04 028 0060 004-009

COUNTY - CRITTENDEN

PCN - 0102800602201
FD04 028 0060 004-009

US HIGHWAY 60 (US 60) (MP 4.90) FROM KY 297 EXTENDING EAST TO OLD SALEM ROAD (MP 8.40), A DISTANCE OF 03.50 MILES.ASPHALT SURFACE WITH GRADE & DRAIN SYP NO. 01-09023.00.

GEOGRAPHIC COORDINATES LATITUDE 37:19:33.63 LONGITUDE 88:07:41.15

ADT 4,702

COMPLETION DATE(S):

COMPLETED BY 10/31/2023 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

SURFACING AREAS

The Department estimates the mainline surfacing width to be 22 feet.

The Department estimates the total mainline area to be surfaced to be 9597 square yards.

The Department estimates the shoulder width to be 2 feet on each side.

The Department estimates the total shoulder area to be surfaced to be 1740 square yards.

ASPHALT MIXTURE

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

DGA BASE

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

OPTION B

Be advised that the Department will control and accept compaction of asphalt mixtures furnished on this project under OPTION B in accordance with Sections 402 and 403.

1-9023.00

Special Notes Applicable to Project
GENERAL NOTES and DESCRIPTION OF WORK

CAUTION

The information in this proposal and shown on the plans and the type of work listed herein are approximate only and are not to be taken as an accurate evaluation of the materials and conditions to be encountered during construction; the bidder must draw his/her own conclusions. The Department does not give any guarantee as to the accuracy of the data and no claim for money or time extension will be considered if the conditions encountered are not in accordance with the information shown. If a potential bidder has concerns with any bid items not used, a Question needs to be submitted during the Advertisement period.

STATIONING

The contractor is advised that the planned locations of work were established from a beginning station number which is STA 258+72 which is the intersection of US 60 and KY 297 in Crittenden County. Milepoints were established from a beginning Milepoint which is MP 4.9 which is the intersection of US 60 and KY 297. The existing mile marker signs may not correspond to the proposed work locations.

ON-SITE INSPECTION

Before submitting a bid for the work, make a thorough inspection of the site and determine existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid to be evidence of this inspection having been made. The Department will not honor any claims for money or time extension resulting from site conditions.

RIGHT OF WAY LIMITS

The Department has not established the exact limits of the Right-of-Way. Unless a consent and release is obtained from the adjoining property owner, limit work activities to the obvious Right-of-Way and staging areas secured and environmentally cleared by the Contractor at no additional cost to the Department. In the event that private improvements (i.e. fences, buildings, etc.) encroach upon the Right-of-Way, the contractor shall notify the Engineer and limit work activities in order to NOT disturb the improvements. If they become necessary, the Department will secure consent and releases from property owners through the Engineer. Be responsible for all encroachments onto private lands.

CONTROL

Perform all work under the absolute control of the Department of Highways. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department will not honor any claims for money or time extension created by the operations of such other parties.

Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and his/her decision shall be final and binding upon the Contractor.

1-9023.00

General Notes
Page **2** of **4**

DESCRIPTION OF WORK

Except as specified herein, perform all work in accordance with the Department's Standard Specifications, Supplemental Specifications, applicable Special Notes and Special Provisions, and applicable Standard and Sepia Drawings, current editions. Furnish all materials, labor, equipment, and incidentals for the following work:

Paved Shoulder Widening, Asphalt Overlay, and Rumble Strips. Trench existing shoulder and widen shoulder pavement from Station 263+00 to Station 299+80 and from Station 425+40 and Station 427+75 as shown in the plans and details. The existing roadway is to be overlaid from Station 263+00 to Station 299+80 and from Station 425+40 to Station 427+75. This work will include placement of an asphalt surface course, installation of centerline and edgeline rumble strips, and application of pavement markings. Refer to the Paved Shoulder Widening With Asphalt Overlay Detail and rumble strip Standard Drawings for further information. Stations listed are approximate and may need to be adjusted to remain within right-of-way or avoid a sensitive obstruction. The Engineer will make the final determination as to the locations and quantities required to complete the work based on the existing conditions encountered during construction.

Culvert Pipe Extension/Replacement. There are locations throughout the project where culvert pipes are being extended or replaced. Locations are noted in the Culvert Pipe Extension/Replacement Summary. Other items that may be included with the pipe extensions include culvert headwalls, safety box inlets, sloped & mitered concrete headwalls, shouldering, ditching, channel lining, etc. Refer to the Special Note for Pipe Replacements/Extensions for more information on this item of work. For each extension, the Contractor shall remove a minimum of 4' of pipe or the length of pipe to the first joint. Refer to the Culvert Pipe Extension/Replacement Summary for estimated quantities. The pipe extensions shall be in-like kind of the existing pipe.

The Sloped & Mitered Concrete Headwalls shall be constructed as shown on the Sloped & Mitered Concrete Headwall detail sheet. This headwall is intended to combine the benefits of a pipe headwall with the advantages of safety and adaptability by allowing the headwall to be custom fit with the surrounding embankment. The Pipe and Drainage Items Summary identifies which pipe ends are to receive the Sloped & Mitered Concrete Headwall. The identified pipes shall be mitered at an angle to match the final embankment slopes at each the pipe location. If the pipe is on a skew, miter the pipe so that when the new headwall and final grading is complete, there is no slope discontinuity or bulge that is common with traditional precast headwall installations. In other words the embankment slope should not be warped to fit the pipe and headwall; the pipe should be mitered and the headwall installed to match the embankment slope. When completed the edges of the Sloped & Mitered Concrete Headwall should be flush with the surround ground line. Payment at the Contract unit price Each shall be full compensation for furnishing all labor, materials, equipment, and incidentals necessary to miter the pipe and install the headwall.

NOTE: For pipes that receive the Sloped & Mitered Concrete Headwall, the pipe length will be measured to the furthest point along the mitered end of the pipe.

Guardrail. Several locations within the project are set up for guardrail replacement. The approximate locations and estimated quantities are noted on the Guardrail Summary. Refer to the Special Note for Guardrail, Typical Sections, and Plan Sheets for more detail and information on this item of work.

NOTE: When the plans call for a Type 1 or Type 4 End Treatment, a MASH eligibility letter from FHWA is required for these end terminals. When a MASH tested eligibility letter is not available for the end terminal being utilized, the most recent NCHRP 350 eligibility letter from FHWA for that terminal will apply. Acceptance of the terminal will be at the discretion of the engineer.

Entrance Pipe Replacement & Driveway Surfacing. Due to areas of paved shoulder widening and ditching and shouldering, there are locations where the existing entrance pipe will have to be removed and relocated to accommodate the improvements. Refer to the Entrance Detail for details on this work item. The Engineer will make the final determination as to the locations and quantities required to complete the work based on the existing conditions encountered during construction.

Ditching and Shouldering. Perform ditching and shouldering according to Section 209 and the applicable Standard and Sepia Drawings, Typical Sections, and Details provided. No Embankment-In-Place quantities will be paid for the work listed as "Ditching and Shouldering". Final front and back slopes less than a 3:1 will be determined by the Engineer. Immediately prior to completion, clean all existing pipes, new culvert and entrance pipes, and grade ditches to drain. Provide positive drainage of pavement, shoulders, slopes, and ditches at all times during and upon completion of construction. Use Erosion Control Blanket and/or Channel Lining Class II, as directed by the Engineer.

NOTE: The Department will measure the bid item "Ditching and Shouldering" as the length of the work measured in linear feet along the centerline of the roadway. Contrary to Section 209.04, this quantity will include only one side of the roadway. Therefore, for areas where ditching and shouldering occurs on both sides of the road, the Department will measure each side independently. The Department will include in the quantity all work required on the road approaches within the limits of right-of-way. No additional compensation will be allowed for excavation of rock encountered in the back slope while executing the bid item "Ditching and Shouldering."

Reinforced Concrete Box Culvert Extensions. There is one location within the project where the existing reinforced concrete box culvert is being extended. Location and estimated quantities are noted on the Box Culvert Extension Summary. Refer to the Structure Plans, Special Note for Box Culvert Extensions, and Traffic Control Plan for more details and information on this item of work. Paved shoulder widening with asphalt overlay, ditching and shouldering, and guardrail replacement are also associated with this box culvert extension.

Removal of Existing Signs and Installation of Proposed Signs. A quantity of "Remove Sign" has been included for removal of existing signs along the corridor as identified in the Remove Sign Summary. An estimated quantity of new signing and sign post is included on the Signing Summary. The Contractor and Engineer will work with the District Traffic Section to determine the final signing layout and sign types prior to installation of the proposed signing. Refer to the Special Note for Signing and the Special Note for Signage for more details concerning the procedures for determining and staking the final layout and installation of the signing.

Erosion Control Blanket. A quantity of 1000 square yards has been included for potential use along areas of regraded ditch line and/or fill slopes, inlets and outlets of pipes, and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of

Erosion Control Blanket throughout this project. The Engineer will make the final determination as to the placement of Erosion Control Blanket.

Channel Lining Class II. A quantity of 940 tons has been included on the Ditching and Shouldering Summary. An additional 100 tons has been included in the contract for potential use along areas of regraded ditch line and/or fill slopes, inlets and outlets of pipes, and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of Channel Lining Class II throughout this project. The Engineer will make the final determination as to the placement of Channel Lining Class II.

Geotextile Fabric. A quantity of 181 square yards has been included on the Ditching and Shouldering Summary. An additional 100 square yards has been included in the contract for potential use along areas of regraded ditch line and/or fill slopes and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of Geotextile Fabric Class 1 throughout the project. The Engineer will make the final determination as to the placement of Geotextile Fabric Class 1.

Temporary Pavement Striping. A quantity of 14,000 linear feet of Pave Striping – Temp Paint – 4 in has been included in the contract. The Contractor and Engineer should work together to determine any locations throughout the project requiring temporary pavement striping. The Engineer will make the final determination as to the placement of temporary pavement striping.

Remove-Store and Reinstall Signs. A quantity of 5 each of “Remove-Store and Reinstall Sign” has been included in the contract for existing sheet signs that may obstruct or interfere with proposed construction activities. Do not remove an existing sign until just prior to working in the vicinity of the sign. Reinstall the sign as soon as possible once the construction activities in the vicinity of the sign has reached a stage that the sign will no longer be an obstruction or interfere with the work. The intent is for the sign to be “down” the minimum length of time necessary.

Fence Replacement. Impacted fence lines from LT Sta. 287+25 to LT Sta. 289+25 will be removed for construction of fill slopes as directed by the Engineer and replaced once work is complete. Fence will be Woven Wire-Type 2.

1-9023.00

SPECIAL NOTE FOR STAKING

Perform Contractor Staking according to Section 201; except, in addition to the requirements of Section 201, perform the following:

1. Contrary to Section 201.03.01, perform items 1 & 2 usually performed by the Engineer.
2. Verify the dimensions, type, and quantities of the culvert pipes, entrance pipes, and/or box culverts as listed and detailed in the proposal, and determine flow line elevations and slopes necessary to provide positive drainage. Revise as necessary to accommodate the existing site conditions; to provide proper alignment of the drainage structures with existing and/or proposed ditches, stream channels, swales, and the roadway lines and grades; and to ensure positive drainage upon completion of the work.
3. Using stakes, paint marks on the pavement, mag nails, and/or any other means approved by the Engineer, the Contractor shall mark and/or stake the proposed sign locations in the field. NOTE: The proposed signs are listed in the proposal by approximate location and are NOT to be taken as the exact location for the signs. During staking operations the Contractor shall review the signing layout and existing field conditions and look for potential conflicts, including but not limited to utilities, driveways, visual obstructions, etc. When conflicts are found, adjust the staked location of signs to mitigate conflicts. Because the sign locations in the proposal are approximate and the location of some signs may need to be adjusted due to conflicts, during staking operations the Contractor shall refer to and utilize the information in the Manual on Uniform on Traffic Control Devices (MUTCD), current edition. The MUTCD cover items such as: appropriate sign location, advance placement distances, and spacing requirements for signing. The intent is for the proposed signs to be consistent with, and meet the requirements of, the MUTCD. Once the proposed sign locations have been staked, notify and coordinate with the District Traffic Engineer, and perform a review of the staked locations. Adjust the staked locations, as directed by the District Traffic Engineer and obtain approval of the final staked locations. This review will also be used to determine if there are any existing signs that require removal and/or relocation. Provide the District Traffic Engineer with 2 weeks of notice when a route will be ready for a review of the staked locations. NOTE: The District Traffic Engineer may determine that the proposed signing, including sign types and messages, needs to be adjusted and/or modified from what is shown in the proposal. Therefore, the Contractor shall not order any sign material for a route until the route has been staked and final sign location approval has been given by the District Traffic Engineer.
4. Produce and furnish to the Engineer "As Built" information for the drainage improvements. For the drainage improvements, as built information will consist of a final record of the actual types, sizes, and locations of the drainage structures (i.e. box inlets, headwalls, junction boxes, etc.), culvert pipes, and/or box culverts constructed. Final elevation data of the drainage improvements is not necessary.
5. Using paint marks on the pavement, and/or any other means approved by the Engineer, the Contractor shall layout and pre-mark the proposed striping, pavement markings, etc.

Adjust as necessary to accommodate the existing site conditions and to provide proper alignment of the proposed thru and turning lanes. Obtain approval of the pre-marked layout from the Engineer and/or District Traffic Engineer prior to installing the striping and/or pavement markings.

6. Prior to incorporating into the work, obtain the Engineers approval of all revisions determined by the Contractor.
7. Perform any and all other staking operations required to control and construct the work.

1-9023.00

Special Note for Erosion Control

I. DESCRIPTION

Perform all erosion and water pollution control work in accordance with any other notes in the Proposal, the Department's Standard and Interim Supplemental Specifications, the Special Provisions and Special Notes, and the Standard and Sepia Drawings, current editions, or 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 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

Furnish materials in accordance with these notes, the Standard Specifications and Interim Supplemental Specifications, applicable Special Provisions and Special Notes, and the Standard and Sepia Drawings, current editions. 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

Be advised, these Erosion Control 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. 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, the construction phasing, methods, and the 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 Provisions 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 steam.

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. All silt control devices shall be sized to retain a volume of 3,600 cubic feet per disturbed contributing acre. 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 the Special Provision for Waste and Borrow Sites.

As work progresses, add or remove erosion control measures as required by the BMP, applicable to the Contractor's project phasing, 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.

The required volume at each Silt Trap shall be computed based on the Up Gradient Contributing Areas that are disturbed and/or stabilized to the satisfaction of the Engineer. The required volume calculation for each Silt Trap shall be determined by the Contractor and verified by the Engineer. The required volume at each Silt Trap may be reduced by the following amounts:

- Up Gradient Areas not disturbed (acres)
- Up Gradient Areas that have been reclaimed and protected by Erosion Control Blanket or other ground protection material such as Temporary Mulch (acres)
- Up Gradient Areas that have been protected by Silt Fence (acres) – Areas protected by Silt Fence shall be computed at a maximum rate of 100 square feet per linear foot of Silt Fence
- Up Gradient Areas that have been protected by Silt Traps (acres)

The use of Temporary Mulch is encouraged.

Silt Trap Type B shall always be placed at the collection point prior to discharging into a Blue Line Stream or onto an adjacent Property Owner. Where overland flow exists, a Silt Fence or other filter devices may be used.

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.

1-9023.00

Erosion Control
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IV. MEASUREMENT

The Department will measure the various erosion control items according to Section 212.04 and Section 213.04, as applicable.

V. Basis of Payment

The Department will make payment for the various erosion control items according to Section 212.04 and Section 213.04, as applicable.

1-9023.00

Special Note for Ditching & Shouldering

I. DESCRIPTION

Except as provided herein, all work shall be performed in accordance with Department's Standard Specifications, Interim Supplemental Specifications, applicable Standard and Sepia Drawings, and applicable Special Provisions and Special Notes, current editions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

(1) Maintaining and Controlling Traffic; (2) Site Preparation; (3) Ditching; (4) Shouldering; (5) Constructing Embankments, Embankment Benching, and/or Excavation; (6) Erosion Control; and (7) Any other work as specified in this Contract.

II. MATERIALS

All materials shall be sampled and tested in accordance with the Department's Sampling Manual and the materials shall be available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

C. Channel Lining, Class II. When listed as a bid item, furnish Channel Lining, Class II as per Section 805.

D. Geotextile Fabric Class 1. When listed as a bid item, furnish Geotextile Fabric Class 1 as per Section 843.

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

C. Site Preparation. Be responsible for all site preparation including, but not limited to: staking; clearing, grubbing, and removal of all obstructions or any other items; excavation, embankment benching, compacting embankment in place; temporary pollution and erosion control; disposal of excess, waste, and debris; and final dressing, cleanup, and seeding and protection. Perform all site preparation as approved or directed by the Engineer.

D. Staking. See Special Note for Staking.

E. Ditching & Shouldering. Perform Ditching & Shouldering at the approximate locations listed on the Summary Sheets and/or Plan Sheets, or at locations as directed by the Engineer. All work shall be completed according to Section 209, or as specified in the DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS, the Typical Sections, the Plan Sheets, or as directed by the Engineer. Ditching & Shouldering shall consist of any necessary clearing, grubbing, grading, and/or reshaping of the existing shoulder, ditch, and/or roadside to achieve the proposed shoulder, ditch, and/or roadside dimensions detailed on the Typical Sections. Depending on the existing conditions encountered and to achieve the dimensions as detailed in the Typical Sections, Ditching & Shouldering may also include, but is not limited to: embankment benching, excavating and removing excess material, excavation of rock, providing additional earth material suitable for vegetation growth and grading, shaping, and compacting the earth material.

Provide positive drainage of ditches and slopes at all times during and upon completion of construction. When asphalt surfacing or resurfacing is included in the contract, perform all ditching and as much of the shouldering operations as is practical before beginning final surfacing operations.

F. Embankment Benching. Embankment Benching shall be required when the existing groundline has an incline greater than 15%. Any and all required embankment benching shall be incidental to the bid item DITCHING & SHOULDERING. For more information refer to the DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS.

G. Channel Lining. Install Class II Channel Lining along any sections of ditches, fill slopes, or ditch backslopes identified in the Proposal, or any other locations the Engineer directs for slope protection or erosion control. When Channel Lining is proposed to be installed along a steep fill slope in order to establish a width of shoulder (as shown in Figure 5 of the DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS), the Channel Lining is to be capped with Geotextile Fabric Class 1 and 4” of Crushed Stone Base. In lieu of 4” of Crushed Stone Base, 4” of DGA and a Double Asphalt Seal Coat may be specified in the Proposal. Install whichever aggregate capping material the Proposal specifies, or as directed by the Engineer.

H. Right-of-Way Limits. The Department has not established exact limits of the Right-of-Way. Unless a consent and release form is obtained from the adjoining property owner, limit work activities to the obvious Right-of-Way and staging areas secured by the Contractor at no additional cost to the Department. In the event that private improvements (i.e. fences, buildings, etc.) encroach upon the Right-of-Way, the contractor shall notify the Engineer and limit work activities in order to NOT disturb the improvements. If they become necessary, the Department will secure consent and releases from property owners through the Engineer. Be responsible for all encroachments onto private lands.

I. Property Damage. The Contractor shall be responsible for all damage to public and/or private property resulting from the Contractor’s activities. Repair or replace damaged roadway features in like kind materials and design as directed by the Engineer at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner and the Engineer at no additional cost to the Department.

J. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs due to the Contractor's operations at no additional cost to the Department. NOTIFY THE ENGINEER AND THE UTILITY OWNER(S) IMMEDIATELY WHEN IT IS DISCOVERED OR ANTICIPATED THAT ANY UTILITY CONFLICT COULD DELAY THE CONTRACTOR'S OPERATIONS. If the total delay exceeds ten working days, an extension of the specified completion date will be negotiated with the Contractor for delay to the Contractor's work; however, no extension will be granted for any delay caused by the Contractor's failure to notify the Engineer and/or the utility company as specified above when a conflict is discovered or anticipated as specified.

K. Caution. The information in this proposal and the type of work listed herein are approximate only and are not to be taken as an exact evaluation of the materials and conditions to be encountered during construction; the bidder must draw his/her own conclusions when developing the Unit Bid Prices for each bid item. As such, if the conditions encountered are not in accordance with the information shown, the Department does not guarantee any changes to the Unit Bid Prices nor extension of the contract will be considered. The Department will pay for bid item quantity overruns, but only if pre-approved by the Engineer.

L. Control. Perform all work under the absolute control of the Department. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces, and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department will not honor any claims for money or time extension created by the operations of such other parties.

Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and the Engineer's decision shall be final and binding upon the Contractor.

M. Clean Up, Disposal of Waste. Clean up the project area as work progresses. Dispose of all removed excess material, debris, and other waste at approved sites off the Right of Way obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

N. Final Dressing, Seeding and Protection. Grade all disturbed areas to blend with the adjacent roadways features and to provide a suitable seed bed. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

IV. METHOD OF MEASUREMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

C. Site Preparation. Other than the bid items listed, the Department will NOT measure Site Preparation for payment, but shall be incidental to the project bid items.

D. Staking. See Special Note for Staking.

E. Ditching & Shouldering. Contrary to Section 209.04 the Department will measure the bid item DITCHING & SHOULDERING in linear feet along the centerline of the roadway as the length of the actual ditching and/or shouldering work performed. Further, this measurement will only include one side of the roadway. Therefore, for areas where ditching and shouldering occurs on both sides of the road, the Department will measure each side independently. The Department will not measure cleaning pipe structures 36 inches or less in diameter or reshaping any deformed ends on metal entrance pipes that are to remain in place, as these operations are considered incidental to the bid item DITCHING & SHOULDERING.

F. Embankment Benching. The Department will not measure Embankment Benching for payment. Any and all required embankment benching shall be incidental to the bid item DITCHING & SHOULDERING.

G. Channel Lining, Class II. When listed as a bid item, Class II Channel Lining shall be measured according to Section 703.04.

H. Geotextile Fabric, Class 1. When listed as a bid item, Geotextile Fabric, Class 1 shall be measured according to Section 214.04.

I. Clean Up, Disposal of Waste, Final Dressing, Seeding and Protection. The Department will NOT measure for payment the following activities: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental to the project bid items. Seeding and Protection shall be measured according to Section 212.

V. BASIS OF PAYMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

C. Staking. See Special Note for Staking.

D. Ditching & Shouldering. The Department will make payment for the completed and accepted quantities under the bid item DITCHING & SHOULDERING. The Department will consider payment full compensation for furnishing all labor, materials, equipment, and incidentals necessary to preform Ditching & Shouldering as required by these notes, at the locations indicated on the summary sheets, plans, and/or as directed by the Engineer.

E. Channel Lining, Class II. When listed as a bid item, the Department will make payment for Class II Channel Lining according to Section 703.05.

F. Geotextile Fabric, Class 1. When listed as a bid item, the Department will make payment for Geotextile Fabric, Class 1 according to Section 214.05.

1-9023.00

SPECIAL NOTE FOR SHOULDER MILLING/TRENCHING

Trench shoulders as shown on the Typical Section. The Engineer may eliminate locations along the route from shoulder trenching (e.g. road approaches, turn lanes, entrances, etc.). For entrances and road approaches, the Engineer will determine whether to omit the trenching or continue the trenching across the entrance or approach. DO NOT trench across entrances or road approaches without the Engineer's approval. If trenching is achieved by means other than milling, saw cut the pavement 8 inches deep to create a smooth edge prior to excavating the shoulder trench. Excavate the material from the shoulder and maintain the proposed cross-slope as shown on the Typical Sections. The intent is to mill, or excavate, the entire trench so that the proposed shoulder slope is retained at the end of the paving operation. Reshape and compact excavated material from the trench on the outside edge of the newly paved shoulder as shown on the Typical Section.

Retain possession of excess materials and/or materials the Engineer deems unsuitable for reuse and waste the materials off the right-of-way at sites obtained by the Contractor at no additional cost to the Department. See Special Provision for Waste and Borrow.

Accept payment at the contract unit price per square yard for SHOULDER MILLING/TRENCHING as full compensation for all labor, materials, equipment, and incidentals for excavating the shoulder trench and reuse and/or disposal of the excavated material.

1-9023.00

Special Note for Box Culvert Extensions

I. DESCRIPTION

Except as provided herein, perform all work in accordance with the Department's Standard Specifications, interim Supplemental Specifications, Standard and Sepia Drawings, and Special Notes and Special Provisions, current editions. Section references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

(1) Contractor staking; (2) Site preparation; (3) Removing existing concrete masonry, as necessary; (4) Foundation preparation and construction of reinforced concrete box culvert extensions and headwalls; (4) Maintain and Control Traffic; and (5) all other work specified as part of this contract.

II. MATERIALS

Provide for sampling and testing of all materials in accordance with the Department's Sampling Manual. Make materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these notes.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

C. Foundation Preparation. Furnish materials according to Section 603, the drawings, and as directed by the Engineer.

D. Reinforced Concrete Box Culvert Extensions. Furnish Class A Concrete and deformed Steel Reinforcement according to Sections 601 and 602. Contrary to Section 602.03.03, field bending bars will be allowed; however, obtain the Engineers approval of proposed field bending methods prior to bending. Furnish additional reinforcement to provide adequate splice lengths with existing box culvert steel as determined by the Engineer.

E. Steel Reinforcement. See Section 811.

III. CONSTRUCTION

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

C. Site Preparation. Be responsible for all Site Preparation, including but not limited to Clearing and Grubbing; Removing pavement; Tree and Stump removal; Temporary Fencing; Roadway Excavation and Structure Excavation; Embankment and Embankment in Place; removal of obstructions or any other items; Grading, Reshaping, and Compacting; Ditching and Shouldering, obtaining borrow and

waste sites, and disposal of materials, waste, and debris; cleaning inlet and outlet ditches; and restoration, cleanup and final dressing. Clear and Grub only the minimum area required for construction and/or as directed by the Engineer. Limit clearing and grubbing to the absolute minimum required to construct the box culvert extensions. Obtain the Engineer's approval before removing trees and stumps from the cleared areas. Phase construction such that the potential for erosion is as minimal as possible. Excavate as needed to remove any portion of the existing structure necessary for construction of the box culvert extension. Perform any ditching or grading as directed by the Engineer. Stockpile suitable materials for incorporation into the work as approved by the Engineer. Be responsible for all excavation (common, roadway, structure, solid rock, and unclassified) required for foundation preparation, toe walls, and all other excavation required for the box culvert extensions. Excavate rock in channel as required to allow for construction of foundation and construction of box culvert extensions. Be responsible for all embankment, embankment in place, and borrow required for backfilling the box culvert extension, constructing widened roadway and shoulder transitions, and all other embankment required to complete the work. Provide positive drainage of slopes and ditches at all times during and upon completion of construction. Waste all removed materials not incorporated into the work at sites off the right of way obtained by the Contractor at no additional cost to the Department (see the Special Provision for Waste and Borrow Sites). Perform all excavation and removal of obstructions only as approved or directed by the Engineer.

Sheeting, shoring, cofferdams, and/or dewatering methods may be necessary for construction of the culvert. Include all costs in the unit price bid for Foundation Preparation.

D. Remove Headwall. Remove the existing headwall(s) and wingwalls at the existing box culvert end(s) to sound concrete masonry, or as directed by the Engineer. Before removing any concrete masonry saw around the perimeter of the removal area on the interior and exterior to a depth of 1 inch. When sawing, take care not to cut into the existing steel reinforcement. Do not kink or unnecessarily bend exposed existing steel reinforcement. Remove structure excavation to solid rock, or as directed by the Engineer, and prepare foundation. Existing steel reinforcement shall be thoroughly cleaned of concrete and straightened for use to bond the new concrete and reinforcement with a minimum overlap of 1'-9", unless otherwise shown in the drawings. Coat exposed ends of cut reinforcement with a bituminous produce to prevent corrosion of the ends of the exposed reinforcement. As an alternative, if the existing headwall is sound, the Engineer may approve leaving the existing headwall in place, in which case the existing parapet should be removed to 6" below proposed roadway elevation. If the Engineer approves leaving the existing headwall in place, center 3'-0" long, #6 dowel bars at 12" spacing into the existing slabs and walls, embedded 1'-6" deep into the existing box culvert concrete, and set with an adhesive anchorage system to provide a pullout strength of equal or greater capacity than the corresponding reinforcing steel.

E. Box Culvert Extensions. Construct the box culvert extension(s) according to the notes and details in the drawings, and Sections 601, 602, 603, 610, and/or any other applicable Standard Specifications. Class A Concrete shall be used throughout. Bond the proposed plastic concrete to the existing hardened concrete in all locations using a Type V Epoxy Resin or other approved structural adhesive, as prescribed in Section 826. Follow the manufacturer's application instructions. All exposed concrete edges shall be beveled ¾", unless otherwise noted. Reinforcement shall have a 2" clear distance to the proposed face of concrete, unless otherwise noted. Obtain the Engineer's approval

of the final centerline, flow line, length, skew, and revised dimensions and/or steel pattern, if any, of each box culvert extension prior to placing concrete.

The Contractor is required to complete the box culvert extension(s) in accordance with the plans and all applicable specifications. The cost of any and all labor, materials, equipment, and/or any other items necessary to construct the box culvert extension(s) shall be incidental to the most appropriate bid items. Incidental items may include, but are not limited to, cofferdams, shoring, excavation, backfilling, and phased construction.

F. Remove Concrete Masonry. If the Engineer approves leaving the existing headwall(s) in place, a portion of the existing parapet(s) may need to be removed in order to construct a shoulder of suitable depth from the edge of pavement to the proposed headwall. Any necessary removal of a portion of the existing parapet shall be considered Site Preparation and shall be incidental to the box culvert bid items. Also, if the existing headwall(s) are left in place, one or both of the existing wingwalls, or a portion of either wingwall may need to be removed in order to construct the proposed box culvert extension(s) and/or headwall(s). In this situation, any necessary removal of the existing wingwall(s), or any portion thereof, shall be considered Site Preparation and shall be incidental to the box culvert bid items.

G. Embankments. Backfill box culvert extensions and construct embankments, slopes, roadway shoulders, and ditches as shown on the drawings, or as directed by the Engineer. Warp and tie the embankment slopes into the adjacent existing roadway to match the existing slopes and ditches. Provide positive drainage of slopes and ditches at all times during and upon completion of construction.

H. Ditching, Shouldering. Construct ditches and shoulders to provide positive drainage. Transition the ditches and shoulders between the existing typical section and the reconstructed roadway at the box culvert extension site(s). Clean all new and existing cross drainage and entrance structures within the limits of the ditching areas according to Section 209.03.B.

I. Clean Culvert. Remove all deleterious material and objects not native to the box culvert barrel, such as, but not limited to debris and silt. The Contractor may choose to clean the box culvert prior to, or after, the proposed box culvert extension work. If the Contractor chooses to clean the box culvert prior to the proposed box culvert extension work, and additional debris, silt, etc. builds up during the box culvert extension operations, the Contractor shall remove the additional debris, silt, etc. at no additional cost to the Department, after the box culvert extension operations are complete.

NOTE: The proposal lists the existing box culverts that are to receive the Clean Culvert bid item. These identified box culverts are those that had existing debris, silt, etc. at the time the proposal was developed. The Engineer and the Contractor are encouraged to review the proposed box culvert extension site(s) prior to the Contractor beginning the box culvert extension work and determine if the Clean Culvert bid item applies. The Engineer shall determine the final approved quantities. If an existing box culvert location has a buildup of debris, silt, etc., but the Clean Culvert bid item is NOT listed in the proposal for that box culvert, the Contractor shall notify the Engineer prior to beginning box culvert extension operations, so that the Engineer can confirm that the existing box culvert has a buildup of debris, silt, etc. If the contactor does not notify the Engineer of this situation prior to

beginning the box culvert extension operations, the Engineer will assume the buildup was a result of the Contractor's operations, and the cost of cleaning the box culvert shall be at no additional cost to the Department.

J. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Restore damaged roadway features and private property at no additional cost to the Department.

K. On-Site Inspection. Before submitting a bid for the work, make a thorough inspection of the site and determine existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid to be evidence of this inspection having been made. The Department does not warrant or give any guarantee as to the accuracy of the data and information shown and no claims for money or time extensions will be considered if the conditions encountered, items used or omitted, and final quantities required are not in accordance with the information shown.

L. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require utilities to be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of the Contractor's operations at no additional cost to the Department.

M. Right of Way Limits. The Department has not established the exact limits of the Right-of-Way. Limit work activities to obvious Right-of-Way, permanent or temporary easements, and work areas secured by the Department through consent and release of the adjacent property owners. Be responsible for all encroachments onto private lands.

N. Control. Perform all work under the absolute control of the Department. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department will not honor any claims for money or time extension created by the operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and his decision shall be final and binding upon the Contractor.

O. Clean Up, Disposal of Waste. Dispose of all removed concrete, debris, and other waste and debris off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

P. Final Dressing, Seeding and Protection. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

IV. MEASUREMENT

Quantities shown on the summaries and drawings are approximate only. The Department will measure for payment only the listed bid items and the actual quantities incorporated in the work. All other items required to complete the construction shall be incidental to the listed bid items.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See the Special Note for Erosion Control.

C. Site Preparation. Other than the bid items listed, the Department will not measure Site Preparation for separate payment but shall be incidental to the applicable project bid items.

D. Remove Headwall. The Department will measure the removal of existing headwalls as Each. If the Engineer allows a proposed box culvert extension to be constructed without removing the existing headwall, the Remove Headwall bid item shall not be measured for payment.

E. Foundation Preparation. The Department will measure Foundation Preparation of box culvert extensions as Lump Sum. The Lump Sum unit price shall include all extensions at each identified box culvert and shall not be measured as individual units per inlet or outlet. Except for the Foundation Preparation bid items listed, the Department will NOT measure Foundation Preparation for any other items of work and shall consider it incidental to the other items of work, as applicable.

F. Box Culvert. The Department will measure box culvert in linear feet, from the face of the existing barrel, after headwall removal, to the face of the new culvert headwall.

G. Box Culvert Headwall. The Department will measure box culvert headwall as Each.

H. Clean Culvert. The Department will measure each box culvert cleaned as Lump Sum. The bid item Clean Culvert will not be measured when a box culvert must be cleaned due to buildup of debris, silt, etc. that occurs during the Contractor's construction operations.

V. PAYMENT

The Department will make payment only for the bid items listed. All other items required to complete the construction shall be incidental to the listed bid items.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See the Special Note for Erosion Control.

C. Foundation Preparation. Payment at the Lump Sum unit price shall be full compensation for furnishing all labor, materials, and equipment necessary for Foundation Preparation of all extensions at each identified box culvert.

D. Box Culvert. The Department will make payment for the completed and accepted quantities of linear foot of box culvert constructed, as approved by the Engineer. Payment at the unit price shall be full compensation for furnishing all labor, materials, and equipment necessary to clean each box culvert measured for payment.

E. Box Culvert Headwall. The Department will make payment for the completed and accepted quantities of each box culvert headwall constructed, as approved by the Engineer. Payment at the unit price shall be full compensation for furnishing all labor, materials, and equipment necessary to clean each box culvert measured for payment.

F. Clean Culvert. The Department will make payment for the completed and accepted quantities of each box culvert cleaned, as approved by the Engineer. Payment at the Lump Sum unit price shall be full compensation for furnishing all labor, materials, and equipment necessary to clean each box culvert measured for payment. Any box culverts that require cleaning but are not approved by the Engineer for measurement of payment, shall be incidental to the box culvert bid items.

1-9023.00

Special Note for Pipe Replacements and Extensions

I. DESCRIPTION

Except as provided herein, perform all work in accordance with the Department's Standard Specifications, interim Supplemental Specifications, Standard and Sepia Drawings, and Special Notes and Special Provisions, current editions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

(1) Maintaining and Controlling Traffic; (2) Constructing pipe replacements and/or pipe extensions; (3) Embankment and/or Excavation; (4) Erosion Control; and (6) Any other work as specified by this contract.

II. MATERIALS

Provide for sampling and testing of all materials in accordance with the Department's Sampling Manual. Make materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these notes.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Culvert Pipe. Furnish pipe meeting the requirements of Section 810. Select pipe for pH range Medium and minimum fill cover height according to the applicable Standard or Sepia Drawings, current editions. Verify maximum and minimum fill cover height required for new pipe prior to construction and obtain the Engineer’s approval of the class or gauge of pipe and type of coating prior to delivering pipe to project. Furnish approved connecting bands or pipe anchors and toe walls.

C. Flowable Fill. Furnish Flowable Fill for Pipe Backfill per Section 601.03.03(B).

D. Erosion Control. See Special Note for Erosion Control.

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

C. Site Preparation. Be responsible for all site preparation including, but not limited to, saw cutting and removing existing pavement; clearing and grubbing; staking; incidental excavation and backfilling; common and solid rock excavation; embankment in place; removal of obstructions, or any other items; restoration of pavements, slopes, and all disturbed areas; final dressing and cleanup; and disposal of materials. Limit clearing and grubbing to the absolute minimum required to construct the drainage features. Perform all site preparation only as approved or directed by the Engineer.

D. Removing Headwalls, Pipe, and Excavation. Remove existing headwalls and lengths of culvert

and/or entrance pipes at the approximate locations noted on the summary. The Engineer will determine the exact locations and lengths of pipe to be removed at the time of construction. When any portion of pipe under the roadway, saw cut the existing asphalt pavement and base to a neat edge prior to excavation and removal of the existing pipe. NOTE: Saw cutting the pavement shall be incidental. Obtain the Engineer's approval of trench width and/or saw cutting limits prior to saw cutting the pavement. Excavate the trench and remove the pipe as directed, or approved, by the Engineer without disturbing existing underground utilities.

E. Constructing Pipe, Headwalls, and Drainage Boxes. Construct culvert and/or entrance pipes, pipe extensions, headwalls, drainage boxes, and other drainage structures at the locations shown in the proposal or as designated by the Engineer. The Contractor will establish, with the approval of the Engineer, the final centerlines, flow lines, and skews to obtain the best fit with the existing and/or proposed ditches and other proposed improvements. (See the Special Note for Staking.) Construct pipe bedding according to Section 701 and the applicable Standard or Sepia Drawings, current editions. Use approved connecting bands or concrete anchors as required. Prior to backfilling pipe, obtain the Engineer's approval of the pipe installation. Provide positive drainage upon completion of pipe installation.

F. Pipe Backfill. Backfill entrance pipes according to Section 701.03.06. Contrary to Section 701.03.06, regardless of cover height, backfill culvert pipes with flowable fill as shown on the Culvert Pipe Replacement Detail from the outside edge of shoulder or back of curb to outside edge of shoulder or back of curb. Steel plates will likely be required to maintain traffic while the flowable fill cures. Once the flowable fill has sufficiently cured, place the Asphalt Base in lifts with thicknesses of 3-4 inches, up to the surface of the existing pavement. Seal with Leveling & Wedging. Allow the asphalt base and leveling & wedging to be exposed to traffic for a minimum of 14 days to allow for settlement. During the waiting period, level & wedge any settlement as directed by the Engineer. After the waiting period has been met for the last pipe replacement constructed, the final milling and/or surfacing operations can begin, unless directed otherwise by the Engineer. For culvert pipe beyond the outside edge of shoulder or back of curb, backfill according to Section 701.03.06.

G. Embankments. Backfill pipe and culvert extensions, and construct shoulder embankments as directed by the Engineer. The Contractor shall bench into the existing slope and apply proper compaction according to Section 206. For more information and details on benching, refer to Note 2 on the detail sheet titled: DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS, found elsewhere in the Proposal. Provide positive drainage of ditches, shoulders, and slopes at all times during and upon completion of construction.

H. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Repair or replace damaged roadway features in like kind materials and design, as directed by the Engineer at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner and the Engineer at no additional cost to the Department.

I. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or

underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of pipe replacement and pipe extension operations at no additional cost to the Department. NOTIFY THE ENGINEER AND THE UTILITY OWNER(S) IMMEDIATELY WHEN IT IS DISCOVERED OR ANTICIPATED THAT ANY UTILITY CONFLICT COULD DELAY THE CONTRACTOR'S OPERATIONS. If the total delay exceeds ten working days, an extension of the specified completion date will be negotiated with the Contractor for delay to the Contractor's work; however, no extension will be granted for any delay caused by the Contractor's failure to notify the Engineer and/or the utility company as specified above when a conflict is discovered or anticipated as specified.

J. Right-of-Way Limits. The Department has not established exact limits of the Right-of-Way. Unless a consent and release form is obtained from the adjoining property owner, limit work activities to the obvious Right-of-Way and staging areas secured by the Contractor at no additional cost to the Department. In the event that private improvements (i.e. fences, buildings, etc.) encroach upon the Right-of-Way, the Contractor shall notify the Engineer and limit work activities in order to NOT disturb the improvements. If they become necessary, the Department will secure consent and releases from property owners through the Engineer. Be responsible for all encroachments onto private lands.

K. Clean Up, Disposal of Waste. Clean up the project area as work progresses. Dispose of all removed concrete, pipe, pavement, debris, excess and unsuitable excavation, and all other waste at approved sites off the Right of Way obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

L. Final Dressing, Seeding and Protection. Grade all disturbed areas to blend with the adjacent roadways features and to provide a suitable seed bed. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

M. Erosion Control. See the Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

A. Maintain and Control Traffic. See the Traffic Control Plan.

B. Site Preparation. Other than the bid items listed, site preparation will NOT be measured for payment, but shall be incidental to culvert and/or entrance pipe bid items, as applicable.

C. Remove Headwall. The Department will measure the removal of existing headwalls as Each. Any excavation, including rock excavation, necessary to remove existing headwalls will NOT be measured for payment, but shall be incidental to the bid item "Remove Headwall".

D. Remove Pipe. Removal of existing culvert and entrance pipe shall be measured according to Section

701.04.14. Any excavation, including rock excavation, necessary to remove existing pipe will NOT be measured for payment, but shall be incidental to the bid item "Remove Pipe".

E. Culvert and Entrance Pipe. The Department will measure the quantities according to Section 701.04. Any excavation, including rock excavation, necessary to install culvert or entrance pipe shall be incidental to the corresponding pipe bid items.

F. Headwalls, Drainage Boxes. The Department will measure according to Section 710. Any excavation, including rock excavation, necessary to construct headwalls and/or drainage boxes will NOT be measured for payment, but shall be incidental to the applicable bid item.

G. Excavation, Pipe Backfill, Embankments. The Department will NOT measure for payment the following items: any excavation, including rock excavation, necessary to remove the existing pipe and/or install the proposed culvert or entrance pipe, pipe backfill material, geotextile fabric, flowable fill, and re-constructing shoulder embankments, but shall considered these items incidental to the bid items for culvert and entrance pipe.

H. Clean Up, Disposal of Waste, Final Dressing, Seeding and Protection. The Department will NOT measure for payment the following activities: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental to the project bid items. Seeding and Protection shall be measured according to Section 212.

I. Erosion Control. See the Special Note for Erosion Control.

V. BASIS OF PAYMENT

A. Maintain and Control Traffic. See the Traffic Control Plan.

B. Remove Headwall. The Department will make payment for the completed and accepted quantities of Each headwall removed. Payment at the Contract unit price per Each shall be full compensation for furnishing all labor, materials, equipment, and incidentals for removing the existing headwall.

C. Remove Pipe. The Department will make payment according to Section 701.05. Payment at the Contract unit price per linear foot shall be full compensation for furnishing all labor, materials, equipment, and incidentals for removing the existing pipe.

D. Culvert and Entrance Pipe. The Department will make payment according to Section 701.05. Payment at the Contract unit price per linear foot shall be full compensation for furnishing all labor, materials, equipment, and incidentals necessary for installing and backfilling new culvert and entrance pipe.

E. Headwalls, Drainage Boxes. The Department will make payment according to Section 710.

F. Erosion Control. See the Special Note for Erosion Control.

1-9023.00

Special Note for Signage

All sign sheeting shall be from the Cabinet's List of Approved Materials.

All permanent signs and sign components shall be fabricated using Type XI sheeting.

The following signs and sign components shall be fabricated using Type XI fluorescent yellow sheeting:

- Horizontal Alignment Signs and Plaques, including signs shown in Figure 2C-1 of the MUTCD
- All Advisory Speed (W13-1P) plaques

The following signs shall be fabricated using Type XI fluorescent yellow-green sheeting:

- School and school bus warning signs, including the fluorescent yellow-green signs shown in Figures 7B-1 and 7B-6 of the MUTCD and other school-related warning signs that are not included in the MUTCD.
- Bicycle Warning (W11-1) signs and SHARE THE ROAD (W16-1P) plaques or diagonal downward pointing arrow (W16-7P) plaques that supplement Bicycle Warning signs.
- Pedestrian Warning signs and diagonal downward pointing arrow plaques that supplement Pedestrian Warning signs.
- In-Street Pedestrian Crossing (R1-6) signs and Overhead pedestrian Crossing (R1-9) signs
- Supplemental plaques to any of the previously listed signs

1-9023.00

Special Note for Signing

I. DESCRIPTION

Except as provided herein, this work shall be performed in accordance with the current edition of the Manual on Uniform Traffic Control Devices (MUTCD), the Department's current Standard Specifications and Interim Supplemental Specifications, applicable Standard and Sepia Drawings, and applicable Special Provisions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

(1) Maintaining and Controlling Traffic; (2) Furnish, Fabricate, and Erect Signs; and (3) All other work specified in the Contract.

II. MATERIALS

All materials shall be sampled and tested in accordance with the Department's Sampling Manual and the materials shall be available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these Notes.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site Preparation. Be responsible for all site preparation including, but not limited to: clearing and grubbing, staking, excavation, backfill, and removal of obstructions or any other material not covered by other items. Perform all site preparation only as approved or directed by the Engineer.

C. Staking. See Special Note for Staking.

D. Signs and Posts. Before beginning installation, the Contractor shall furnish to the Engineer drawings, descriptions, manufacturer’s cuts, etc. covering all material to be used. Mill test reports for beams, steel panels, and each different gauge of aluminum or steel sheeting used must be submitted to the Division of Construction and approved prior to erection.

Fabricate sheet signs from .080 or .125 gauge aluminum alloy 5052-H38 or 6061-T6, in accordance with ASTM B-209, and to the size and shape specified. Prepare the side of the sheet to be used as the sign face to receive the retroreflective background material according to the recommendations of the sheeting and retroreflective material manufacturer(s). Sheeting used as background material for sign faces is to be the color specified and visually in accordance with the standard requirements of ASTM D-4956, and meet the requirements of Section 830 of the Standard Specifications. Contrary to Section 830.02.06, only the types and colors of sheeting as specified in the proposal will be

accepted. All retroreflective material shall be fabricated and assembled in accordance with the specifications and/or recommendations of the manufacturer(s).

All hardware for the erection of sheeting signs shall be rust resistant: stainless steel, zinc coated, aluminum, or an Engineer approved material. All beams and posts shall be of sufficient lengths to extend from the top of the sign to the required embedment in the anchor. Splicing of the sign post shall NOT be allowed. For installations in soil, Type I steel posts shall be mounted on either a standard anchor, with soil stabilizer plate, or on a Type D breakaway sign support. Refer to Sheeting Sign Detail Sheet 1 of 2 for installation details for a standard anchor with soil stabilizer plate. When installing a standard anchor with soil stabilizer plate, if solid rock is encountered, the Contractor shall drill a hole to the required depth into the rock, install the anchor into the hole, and backfill the anchor post with concrete, or other method approved by the Engineer. The cost shall be incidental to Type I steel post, and a soil stabilizer plate will not be required. Refer to Standard Drawing RGX-065, current edition, for installation details of Type D breakaway sign supports. Approved manufacturers for Type D breakaway sign supports have been placed on the list of approved materials. For installations on existing concrete, such as a sidewalk, concrete median, etc., or installations on existing asphalt, such as flush medians, Type I steel posts shall be mounted on a Type D Surface Mount. For Type D Surface Mounts use only Kleen Break Model 425 by Xcessories Squared of Auburn, IL. If the Surface Mount is to be installed on sufficiently cured concrete, use part number XKBSM42520-G. If the Surface Mount is to be installed on asphalt surface, use part numbers XKB42520-G and AXT225-36-G. Prior to installation, the Contractor shall submit to the Engineer shop drawings of the Type D Surface Mount(s). Install the Type D Surface Mount(s) according to all the applicable requirements of the manufacturer (see shop drawings). All steel post shall meet the requirements of Section 832. All hardware including, but not limited to, sign post anchors, soil stabilizer plates, nuts, bolts, washers, fasteners, fittings, and bracing, or any other incidentals necessary to erect the signs shall be furnished by the Contractor and will be incidental to the work.

New concrete bases, posts, support anchors, signs, etc. are to be installed prior to dismantling any existing sign(s). The removal of existing signs, posts, and support anchors is to be performed concurrently with the installation of new signs, posts, and support anchors, under the same lane closure during the same work shift. Completely remove existing sign support anchors or remove them to a minimum depth of six (6) inches below existing ground line and backfill the disturbed area to the existing ground line.

When listed in the summaries, Reflective Sign Post Panels shall be 2” wide x 60” tall (or 84” tall for urban installations) and shall have three 3/8” holes (one hole in the top 3”, one hole near the center, and one hole in the bottom 3”) that align with the holes on the Type I steel post. Sheeting for the Reflective Sign Post Panels shall be the same Type and color as the sign installed on the post. Examples include:

- Red, fluorescent yellow, and fluorescent yellow-green (Type XI Sheeting)
- White and yellow (Type XI Sheeting).

All manufactured sheeting signs shall be free of visual defects including, but not limited to: cracks, tears, ridges, humps, discoloration, etc., and defective signs shall be replaced at no additional cost to the Department.

All sign blanks shall be hole punched by the manufacturer for either horizontal or vertical installation. Attach all aluminum sheeting signs to square post with 3/8" all steel rivets and nylon washers.

Post will be attached to the anchor with 5/16" corner bolts and 5/16" flanged nuts, and all post and anchor cuts shall be treated with a Cold Galvanizing Compound spray.

Sign posts shall be erected vertically by using a bubble level. The tolerance shall be a two (2) degree angle in any direction. For locations where more than one sign is mounted beside each other, the posts shall be spaced to provide approximately six inches (6") of spacing between signs.

E. Property Damage. The Contractor shall be responsible for all damage to public and/or private property resulting from the Contractor's activities. Repair or replace damaged roadway features in like kind materials and design as directed by the Engineer at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner and the Engineer at no additional cost to the Department.

F. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs due to the Contractor's operations at no additional cost to the Department. NOTIFY THE ENGINEER AND THE UTILITY OWNER(S) IMMEDIATELY WHEN IT IS DISCOVERED OR ANTICIPATED THAT ANY UTILITY CONFLICT COULD DELAY THE CONTRACTOR'S OPERATIONS. If the total delay exceeds ten working days, an extension of the specified completion date will be negotiated with the Contractor for delay to the Contractor's work; however, no extension will be granted for any delay caused by the Contractor's failure to notify the Engineer and/or the utility company as specified above when a conflict is discovered or anticipated as specified.

G. Caution. The information in this proposal and the type of work listed herein are approximate only and are not to be taken as an exact evaluation of the materials and conditions to be encountered during construction; the bidder must draw his/her own conclusions when developing the Unit Bid Prices for each bid item. As such, if the conditions encountered are not in accordance with the information shown, the Department does not guarantee any changes to the Unit Bid Prices nor extension of the contract will be considered. The Department will pay for bid item quantity overruns, but only if pre-approved by the Engineer.

H. Control. Perform all work under the absolute control of the Department. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces, and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department

will not honor any claims for money or time extension created by the operations of such other parties.

Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and the Engineer's decision shall be final and binding upon the Contractor.

I. Clean Up, Disposal of Waste. Clean up the project area as work progresses. Dispose of all removed concrete, debris, and other waste as per Section 204.03.08. The Department will incur no cost to obtain the disposal sites. The Department will NOT make direct payment for disposal of waste and debris from the project. Existing anchors, signs, posts, and any other hardware or material removed from the site are to become the property of the Contractor. See Special Provision for Waste and Borrow Sites.

J. Final Dressing, Seeding and Protection. Grade all disturbed areas to blend with the adjacent roadways features and to provide a suitable seed bed. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

K. Erosion Control. See Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site Preparation. Other than the bid items listed, the Department will NOT measure Site Preparation for payment, but shall be incidental to the project bid items.

C. Signs. The Department will measure the finished in-place area of signs in Square Feet.

D. Sign Posts. The Department will measure the finished in-place length of sign posts in Linear Feet, from the top of the anchor, or top of the sign support, to the top of the sign post. Laps, cutoffs, excess, and waste will NOT be measured for payment.

E. Type D Breakaway Sign Supports. The Department will measure Type D sign supports as Each support installed.

F. Type D Surface Mounts. The Department will measure Type D Surface Mounts as Each surface mount installed.

G. Class A Concrete for Signs. The Department will measure the Class A Concrete used in conjunction with Type D breakaway sign support installations in Cubic Yards. Any concrete that is required as backfill due to hitting rock during a standard installation shall be incidental to the bid item STEEL POST TYPE I, and soil stabilizers will not be required.

H. Clean Up, Disposal of Waste, Final Dressing, Seeding and Protection. The Department will NOT measure for payment the following activities: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental. Seeding and Protection shall be measured according to Section 212.

I. Erosion Control. See Special Note for Erosion Control.

J. Remove Sign. The Department will consider all signs attached to one or more connected posts as a single sign. The Department will measure as Each sign assembly removed and NOT each individual sign removed.

K. Items Provided by KYTC. The Department will NOT measure for payment the installation of signs and/or surface mounts provided by KYTC. These activities shall be incidental to the bid item STEEL POST TYPE I.

V. BASIS OF PAYMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Signs. The Department will make payment for the completed and accepted quantities under the bid item SBM ALUM SHEET SIGNS .125 IN or .080 IN. The Department will consider payment full compensation for all work and incidentals necessary to install the signs, as required by these notes and the details found elsewhere in the proposal, at the locations indicated on the summary sheets, plans, and/or as directed by the Engineer.

C. Sign Posts. The Department will make payment for the completed and accepted quantities under the bid item STEEL POST TYPE I. The Department will consider payment full compensation for all work and incidentals necessary to install the sign posts as required by these notes and the details found elsewhere in the proposal.

D. Type D Breakaway Sign Supports. The Department will make payment for the completed and accepted quantities under the bid item GMSS TYPE D. The Department will consider payment full compensation for all work and incidentals necessary to install the Type D breakaway sign supports as required by Standard Drawing RGX-065, current edition.

E. Type D Surface Mounts. The Department will make payment for the completed and accepted quantities under the bid item GMSS TYPE D (SURFACE MOUNT). The Department will consider payment full compensation for all work and incidentals necessary to install the Type D surface mounts according to all applicable manufacturer requirements.
NOTE: The permissible Type D Surface Mount alternative is: Kleen Break Model 425 for Surface Mount Concrete Installations by Xcessories Squared of Auburn, IL

F. Class A Concrete for Signs. The Department will make payment for the completed and accepted quantities, used in conjunction with Type D breakaway sign support installations, under the bid item CLASS A CONCRETE FOR SIGNS. The Department will consider payment full compensation for all work

and incidentals necessary to install the concrete as required by Standard Drawing RGX-065, current edition.

G. Remove Sign. The Department will make payment for the completed and accepted quantities under the bid item REMOVE SIGN. The Department will consider payment full compensation for all work and incidentals necessary to remove the existing signs, posts, anchors, and any other sign material or hardware, from the locations indicated on the summary sheets, plans, and/or as directed by the Engineer.

H. Erosion Control. See Special Note for Erosion Control.

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

SPECIAL NOTE FOR NON-TRACKING TACK COAT

1. DESCRIPTION AND USEAGE. This specification covers the requirements and practices for applying a non-tracking tack asphalt coating. Place this material on the existing pavement course, prior to placement of a new asphalt pavement layer. Use when expedited paving is necessary or when asphalt tracking would negatively impact the surrounding area. This material is not suitable for other uses. Ensure material can "break" within 15 minutes under conditions listed in 3.2.

2. MATERIALS, EQUIPMENT, AND PERSONNEL.

2.1 Non-Tracking Tack. Provide material conforming to Subsection 2.1.1.

2.1.1 Provide a tack conforming to the following material requirements:

Property	Specification	Test Procedure
Viscosity, SFS, 77 ˚ F	20 – 100	AASHTO T 72
Sieve, %	0.3 max.	AASHTO T 59
Asphalt Residue[1], %	50 min.	AASHTO T 59
Oil Distillate, %	1.0 max.	AASHTO T 59
Residue Penetration, 77 ˚ F	0 - 30	AASHTO T 49
Original Dynamic Shear (G*/sin δ), 82 ˚ C	1.0 min.	AASHTO T 315
Softening Point, ˚ F	149 min.	AASHTO T 53
Solubility, %	97.5 min.	AASHTO T 44

[1] Bring sample to 212 ˚F over a 10-15 minute period. Maintain 212 ˚F for 15-20 minutes or until 30-40 mL of water has distilled. Continue distillation as specified in T59.

2.2. Equipment. Provide a distributor truck capable of heating, circulating, and spraying the tack between 170 ˚F and 180 ˚F. Do not exceed 180 ˚F. Circulate the material while heating. Provide the correct nozzles that is recommend by the producer to ensure proper coverage of tack is obtained. Ensure the bar can be raised to between 14" and 18" from the roadway.

2.3. Personnel. Ensure the tack supplier has provided training to the contractor on the installation procedures for this product. Make a technical representative from the supplier available at the request of the Engineer.

3. CONSTRUCTION.

3.1 Surface Preparation. Prior to the application of the non-tracking tack, ensure the pavement surface is thoroughly dry and free from dust or any other debris that would inhibit adhesion. Clean the surface by scraping, sweeping, and the use of compressed air. Ensure this preparation process occurs shortly before application to prevent the return of debris on to the pavement. If rain is expected within one hour after application, do not apply material. Apply material only when the surface is dry, and no precipitation is expected.

3.2 Non-tracking Tack Application. Placement of non-tracking tack is not permitted from October 1st to May 15th. When applying material, ensure the roadway temperature is a minimum of 40˚F and rising. Prior to application, demonstrate competence in applying the tack according to this note to the satisfaction of the Engineer. Heat the tack in the distributor to between 170 – 180 ˚F. After the initial heating, between 170 – 180 ˚F, the material may be sprayed between 165 ˚F and 180 ˚F. Do not apply outside this temperature range. Apply material at a minimum rate of 0.70 pounds (0.08 gallons) per square yard. Ensure full coverage of the material on the pavement surface. Full coverage of this material is critical. Increase material application rate if needed to achieve full coverage. Schedule the work so that, at the end of the day's production, all non-tracking tack is covered with the asphalt mixture. If for some reason the non-tracking tack cannot be covered by an asphalt mixture, ensure the non-tracking tack material is clean and reapply the non-tracking tack prior to placing the asphalt mixture. Do not heat material more than twice in one day.

3.3 Non-tracking Tack Certification. Furnish the tack certification to the Engineer stating the material conforms to all requirements herein prior to use.

3.4 Sampling and Testing. The Department will require a sample of non-tracking tack be taken from the distributor at a rate of one sample per 15,000 tons of mix. Take two 1 gallon samples of the heated material and forward the sample to the Division of Materials for testing within 7 days. Ensure the product temperature is between 170 and 180 °F at the time of sampling.

4. MEASUREMENT. The Department will measure the quantity of non-tracking tack in tons. The Department will not measure for payment any extra materials, labor, methods, equipment, or construction techniques used to satisfy the requirements of this note. The Department will not measure for payment any trial applications of non-tracking tack, the cleaning of the pavement surface, or furnishing and placing the non-tracking tack. The Department will consider all such items incidental to the non-tracking tack.

5. PAYMENT. The Department will pay for the non-tracking tack at the Contract unit bid price and apply an adjustment for each manufacturer's lot of material based on the degree of compliance as defined in the following schedule. Non-tracking tack will not be permitted for use from October 1st to May 15th. During this timeframe, the department will allow the use of an approved asphalt emulsion in lieu of a non-tracking tack product but will not adjust the unit bid price of the material. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

Non-Tracking Tack Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Viscosity, SFS, 77 ˚ F	20 – 100	19 - 102	17 - 18 103 - 105	15 - 16 106 - 107	14 108 - 109	≤13 ≥ 110
Sieve, %	0.30 max.	≤ 0.40	0.41 - 0.50	0.51 - 0.60	0.61 - 0.70	≥ 0.71
Asphalt Residue, %	50 min.	≥49.0	48.5 – 48.9	48.0 – 48.4	47.5-47.9	≤ 47.4
Oil Distillate, %	1.0 max.	≤1.0	1.1-1.5	1.6 - 1.7	1.8-1.9	>2.0
Residue Penetration, 77 ° F.	30 max.	≤ 31	32 - 33	34 - 35	36 - 37	≥ 38
Original Dynamic Shear (G*/sin δ), 82 ˚ C	1.0 min.	≥0.95	0.92 – 0.94	0.90 – 0.91	0.85 - 0.89	≤ 0.84
Softening Point, º F	149 min.	≥145	142 - 144	140 - 141	138 - 139	≤ 137
Solubility, %	97.5 min.	≥ 97.0	96.8 – 96.9	96.6 – 96.7	96.4 – 96.5	≤ 96.3

Code	Pay Item	Pay Unit
24970EC	Asphalt Material for Tack Non-Tracking	Ton

Revised: May 23, 2022

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

SPECIAL NOTE FOR DOUBLE ASPHALT SEAL COAT

Use RS-2 or RS-2C asphalt material that is compatible with the seal aggregate. Apply the first course of asphalt seal coat at the rate of 3.2 lbs/sy of asphalt and 30 lbs/sy of size #78 seal coat aggregate. Apply the second course at 2.8 lbs/sy of asphaltt and 20 lbs/sy of size #9M seal coat aggregate. The Engineer may adjust the rate of application as conditions warrant. Use caution in applying liquid asphalt material to avoid over spray getting on curbs, gutter, barrier walls, bridges, guardrail, and other roadway appurtenances.

The Department will not measure any surface preparation required prior to applying the asphalt seal coat, but shall be incidental to “Asphalt Material for Asphalt Seal Coat”.

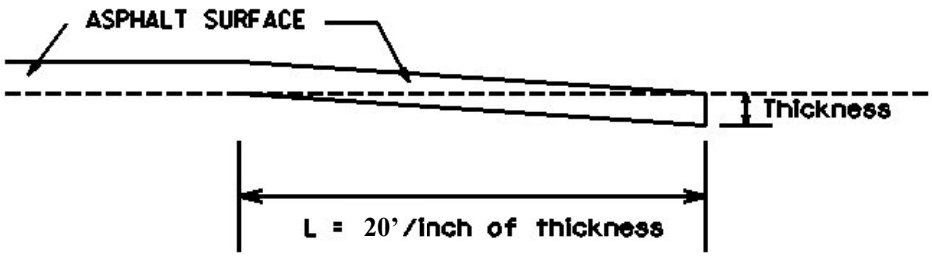
1-3215 Double Asphalt Seal Coat
01/02/2012

1-9023.00

SPECIAL NOTE FOR EDGE KEY

Construct Edge Keys at the beginning of project, end of project, at railroad crossings, and at intersections with ramps, as applicable. Unless specified in the Contract or directed by the Engineer, do not construct edge keys at intersecting streets, roads, alleys, or entrances. Cut out the existing asphalt surface to the required depth and width shown on the drawing and heel the new surface into the existing surface. The Department will measure the Edge Key at the joint as the width of the pavement perpendicular to the centerline in linear feet. The Department will pay for this work at the Contract unit price per linear foot, which shall be full compensation for all labor, materials, equipment, and incidentals for removal and disposal of the existing asphalt surface required to construct the edge key.

EDGE KEY



Thickness = 1 Inch

L = 20 LF

L = Length of Edge Key

Special Note for Guardrail

I. DESCRIPTION

Except as specified herein, perform all work in accordance with the Department's Standard and Supplemental Specifications, Special Notes and Special Provisions, and the Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications. Furnish all equipment, labor, materials, and incidentals for the following work items:

(1) Site preparation; (2) Remove existing guardrail systems; (3) Construct Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections, as applicable; (4) Delineators for guardrail; (5) Maintain and Control Traffic; and (6) all other work specified as part of this contract.

II. MATERIALS

Except as specified herein, provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual and 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.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Guardrail. Furnish guardrail system components according to Section 814 and the Standard and Sepia Drawings; except use steel posts only, no alternates.

C. Delineators for Guardrail. Furnish white and/or yellow Delineators for Guardrail according to Standard Drawing RBR-055 – Delineators for Guardrail, current edition.

D. DGA. Furnish Dense Graded Aggregate as per Section 805.

E. Erosion Control. See the Special Note for Erosion Control.

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site Preparation. Remove existing guardrail system, including the guardrail end treatments, Bridge End connectors and all other elements of the existing guardrail system as per Section 719, except that the Contractor will take possession of all concrete posts and all concrete associated with the existing bridge and/or guardrail end treatments. Locate all disposal areas off the Right of Way. Be responsible for all site preparation, including but not limited to, clearing and grubbing, excavation, embankment, and removal of all obstructions or any other items; regrading, reshaping, and adding and compacting suitable materials on the existing shoulders to provide proper template or foundation for the guardrail; filling voids left as the result of removing existing guardrail and guard

posts with dry sand; temporary pollution and erosion control; disposal of excess, waste materials, and debris; and final dressing, cleanup, and seeding and protection. Perform all site preparation as approved or directed by the engineer.

C. Guardrail. Except as specified herein, construct guardrail system according to Section 719 and the Standard and Sepia Drawings, current editions. Locations listed on the summary and/or shown on the drawings are approximate only. The Engineer will determine the exact termini for individual guardrail installations at the time of construction. Unless directed otherwise by the Engineer, provide a minimum two (2) foot shoulder width. Construct radii at entrances and road intersections as directed by the Engineer.

Erect guardrail to the lines and grades shown on the current Standard and Sepia Drawings, or as directed by the Engineer by any method approved by the Engineer which allows construction of the guardrail to the true grade without apparent sags.

When removing existing guardrail and installing new guardrail, do not leave the blunt end exposed where it would be hazardous to the public. When it is not practical to complete the construction of the guardrail and the permanent end treatments and terminal sections first, provide a temporary end by connecting at least 25 feet of rail to the last post, and by slightly flaring, and burying the end of the rail completely into the existing shoulder. If left overnight, place a drum with bridge panel in advance of the guardrail end and maintain during use.

D. DGA. Place and compact DGA along and under the guardrail as shown on the Typical Section(s) or as directed by the Engineer. Place a Double Asphalt Seal Coat over the entire width of the DGA along and under the guardrail. See the Special Note for Double Asphalt Seal Coat.

E. Delineators for Guardrail. Construct Delineators for Guardrail according to Standard Drawing RBR-055 – Delineators for Guardrail, current edition.

F. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Restore damaged roadway features and private property at no additional cost to the Department.

G. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require utilities to be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of guardrail operations at no additional cost to the Department.

H. Right of Way Limits. The Department has not established the exact limits of the Right-of-Way. Limit work activities to obvious Right-of-Way, permanent or temporary easements, and work areas secured by the Department through consent and release of the adjacent property owners. Be responsible for all encroachments onto private lands.

I. **Clean Up, Disposal of Waste.** Dispose of all removed concrete, debris, and other waste and debris off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

J. **Final Dressing, Seeding and Protection.** Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

K. **Erosion Control.** See the Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

A. **Maintain and Control Traffic.** See Traffic Control Plan.

B. **Site preparation.** Other than the bid items listed, the Department will not measure Site Preparation for separate payment but shall be incidental to the Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections, as applicable.

C. **Guardrail, End Treatments, Bridge End Connectors, Terminal Sections, and Remove Guardrail.** The Department will measure according to Section 719.04.

D. **DGA.** The Department will measure according to Section 302.04.

E. **Delineators for Guardrail.** See Standard Drawing RBR-055 – Delineators for Guardrail.

F. **Clean Up, Disposal of Waste, Final Dressing, and Seeding and Protection.** The Department will NOT measure for payment the operations of: Clean Up, Disposal of Waste, and Final Dressing. These activities shall be incidental. Seeding and Protection will be measured according to Section 212.

G. **Erosion Control.** See the Special Note for Erosion Control.

V. BASIS OF PAYMENT

A. **Maintain and Control Traffic.** See Traffic Control Plan.

B. **Guardrail, End Treatments, Bridge End Connectors, Terminal Sections, and Remove Guardrail.** The Department will make payment according to Section 719.05.

C. **DGA.** The Department will make payment according to Section 302.05.

D. **Delineators for Guardrail.** See Standard Drawing RBR-055 – Delineators for Guardrail.

E. **Erosion Control.** See the Special Note for Erosion Control.

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

Consider the dimensions shown on the typical sections for pavement and shoulder widths and thickness' to be nominal or typical dimensions. The Engineer may direct or approve varying the actual dimensions to be constructed to fit existing conditions. Do not widen existing pavement or shoulders unless specified elsewhere in this proposal or directed by the engineer.

1-3725 Typical Section Dimensions
01/02/2012

TRAFFIC CONTROL PLAN

TRAFFIC CONTROL GENERAL

Except as provided herein, traffic shall be maintained in accordance with the current editions of the Manual on Uniform Traffic Control Devices (MUTCD), Standard Specifications, and the Standard and Sepia Drawings. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic".

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. Any temporary traffic control items, devices, materials, and incidentals shall remain the property of the contractor unless otherwise addressed, when no longer needed.

PROJECT PHASING & CONSTRUCTION PROCEDURES

Maintain alternating one-way traffic during construction. Provide a minimum clear lane width of 10 feet; however, provide for passage of vehicles of up to 16 feet in width. If traffic should be stopped due to construction operations, and a school bus or emergency vehicle on an official run arrives on the scene, make provisions for the passage of the school bus or emergency vehicle as quickly as possible.

Unless otherwise approved by the Engineer, no lane closures will be allowed on the following dates:

Independence Day	3 pm Friday, July 1, 2022 – 11 pm Monday, July 4, 2022
Labor Day Weekend	3 pm Friday, September 2, 2022 – 8 pm Monday, September 5, 2022
Thanksgiving Holiday	3 pm Wednesday, November 23, 2022 – 8 pm Sunday, November 27, 2022
Christmas Holiday	3 pm Friday, December 23, 2022 – 8 pm Sunday, December 25, 2022
New Year's Day Holiday	7 am Saturday, December 31, 2022 – 8 pm Sunday, January 1, 2023
Easter Weekend	3 pm Friday, April 7, 2023 – 8 pm Sunday, April 9, 2023
Memorial Day Weekend	3 pm Friday, May 26, 2023 – 8 pm Monday, May 29, 2023
Independence Day	7 am Saturday, July 1, 2023 – 11 pm Tuesday, July 4, 2023
Labor Day Weekend	3 pm Friday, September 1, 2023 – 8 pm Monday, September 4, 2023

No lane closures will be allowed when school is in session.

At the discretion of the Engineer, additional days and hours may be specified when lane closures will not be allowed.

LANE CLOSURES

Long term lane closures shall not be allowed; therefore, lane closures will not be measured for payment. Do not leave lane closures in place during non-working hours and prohibited periods

TEMPORARY SIGNS

Temporary signposts 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. Temporary signs, including any splices, shall be installed according to manufacturer's specifications and installation recommendations. Contrary to section 112.04.02, only long-term temporary signs (temporary signs intended to be continuously in place for more than 3 days) will be measured for payment. Short-term temporary signs (temporary 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 at locations determined by the Engineer. 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 8 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 for payment any replacements for damaged Changeable Message Signs or any changeable message signs the Engineer directs to be replaced due to poor condition or readability. Retain possession of the Changeable Message Signs 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.

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 exception:

> 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 un-resurfaced 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 oncoming 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.

TEMPORARY ENTRANCES

The Engineer will not require the Contractor to provide continuous access to farms, single family, duplex, or triplex residential properties during working hours; however, provide reasonable egress and ingress to each such property when actual operations are not in progress at that location. Limit the time during which a farm or residential entrance is blocked to the minimum length of time required for actual operations, not extended for the Contractor's convenience, and in no case exceeding six (6) hours. Notify all residents twenty-four hours in advance of any driveway or entrance closings and make any accommodations necessary to meet the access needs of disabled residents.

Except as allowed by the Phasing as specified above, maintain direct access to all side streets and roads, schools, churches, commercial properties, and apartments or apartment complexes of four or more units at all times. Access to fire hydrants must also be maintained at all times.

The Department will measure asphalt materials required to construct and maintain any temporary entrances which may be necessary to provide temporary access; however, the Department will not measure aggregates, excavation, and/or embankment, but shall be incidental to Maintain and Control Traffic. The Engineer will determine the type of surfacing material, asphalt or aggregate, to be used at each entrance.

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
- No 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 sign 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 theft (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

Traffic Control Plan
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Standard Abbreviations

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

Word	Abbrev	Example
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 DELAYS I75/ USE ALT RTE
Mile	MI	ACCIDENT 3 MI AHEAD/ USE ALT RTE
Minor	MNR	ACCIDENT 3 MI MNR DELAY
Minutes	MIN	ACCIDENT 3 MI/ 30 MIN DELAY
Northbound	N-BND	N-BND I75 CLOSED/ DETOUR EXIT 50
Oversized	OVRSZ	OVRSZ COMM VEH/ USE I275 NEXT RIGHT
Parking	PKING	EVENT PKING NEXT RGT
Parkway	PKWY	CUM PKWAY TRAF/ DETOUR EXIT 60
Prepare	PREP	ACCIDENT 3 MI/ PREP TO STOP
Right	RGT	EVENT PKING NEXT RGT
Road	RD	HAZMAT IN RD/ ALL TRAF EXIT 25
Roadwork	RDWK	RDWK NEXT 4 MI/ POSSIBLE DELAYS
Route	RTE	MAJ DELAYS I75/ USE ALT RTE
Shoulder	SHLDR	SHLDR CLOSED NEXT 5 MI
Slippery	SLIP	SLIP COND POSSIBLE/ SLOW SPD
Southbound	S-BND	S-BND I75 CLOSED/ DETOUR EXIT 50
Speed	SPD	SLIP COND POSSIBLE/ SLOW SPD

Traffic Control Plan
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Standard Abbreviations (cont)

Word	Abbrev	Example
Street	ST	MAIN ST CLOSED/ USE ALT RTE
Traffic	TRAF	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:

Abbrev	Intended Word	Word Erroneously Given
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.

Reason/Problem	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

Traffic Control Plan
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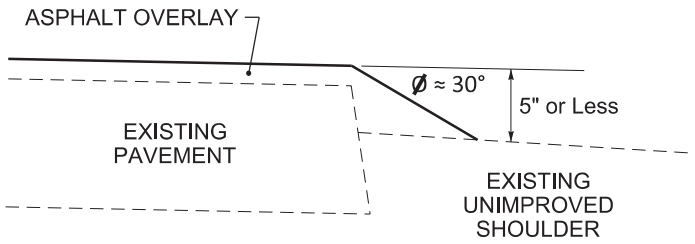
Typical Messages (cont)

Reason/Problem	**Action**
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	

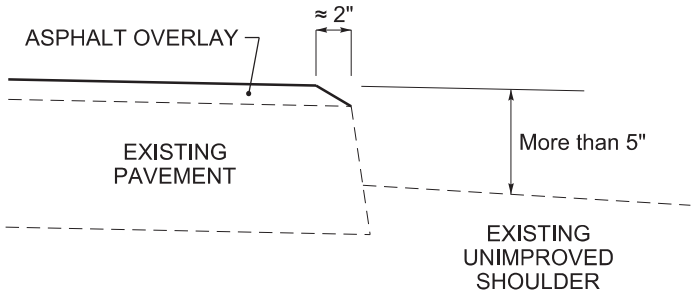
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to low shoulder with dropoff of 5 inches or less)



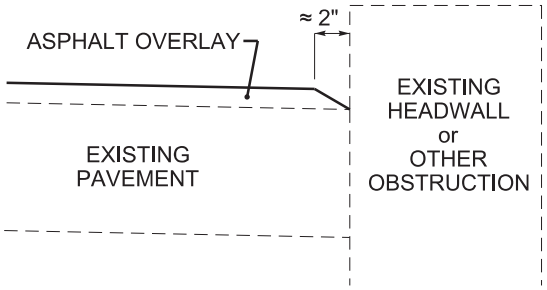
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to low shoulder with dropoff of more than 5 inches)



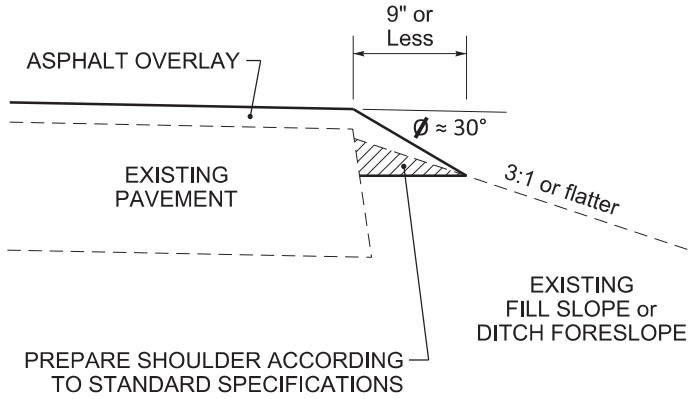
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to an obstruction, such as an existing headwall)



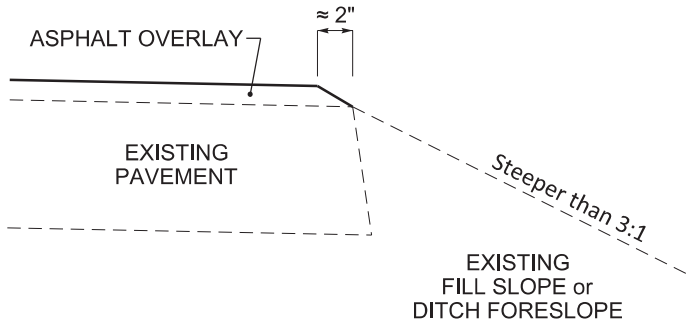
DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to fill slope or ditch foreslope that is 3:1 or less)



DURABLE PAVEMENT EDGE DETAIL

(Resurfacing adjacent to fill slope or ditch foreslope that is steeper than 3:1)



NOTES

1. DETAILS DO NOT APPLY TO OVERLAYS LESS THAN 1 INCH THICK.
2. THE DURABLE PAVEMENT EDGE DEVICE MAY BE DISENGAGED AT DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT, AS APROVED BY THE ENGINEER.

DRAWING NOT TO SCALE

DURABLE PAVEMENT EDGE DETAILS

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

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

RIGHT OF WAY CERTIFICATION

☒ Original	☐ Re-Certification	RIGHT OF WAY CERTIFICATION	
ITEM #	**COUNTY**	**PROJECT # (STATE)**	**PROJECT # (FEDERAL)**
1-9023.00	Crittenden	FD04 028 0060 004-009	N/A
PROJECT DESCRIPTION			
Roadway Departure - MP 4.9 to 8.4 near Crittenden County High School.			

☒ **No Additional Right of Way Required**

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

☐ **Condition # 1 (Additional Right of Way Required and Cleared)**

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

☐ **Condition # 2 (Additional Right of Way Required with Exception)**

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

☐ **Condition # 3 (Additional Right of Way Required with Exception)**

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

Total Number of Parcels on Project	0	**EXCEPTION (S) Parcel #**	**ANTICIPATED DATE OF POSSESSION WITH EXPLANATION**
Number of Parcels That Have Been Acquired			
Signed Deed			
Condemnation			
Signed ROE			

Notes/ Comments (Text is limited. Use additional sheet if necessary.)

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Greg L. Morgan
Signature		Signature	Greg L. Morgan Digitally signed by Greg L. Morgan Date: 2022.04.27 10:20:14 -05'00'
Date		Date	
Right of Way Director		**FHWA**	
Printed Name		Printed Name	
Signature	Kelly R. Divine Digitally signed by Kelly R. Divine Date: 2022.04.27 10:48:12 -05'00'	Signature	
Date		Date	

UTILITIES AND RAIL CERTIFICATION NOTE

Crittenden County
FD04 028 0060 004-009
Safety Improvements along US 60
Item No. 1-9023.00

GENERAL PROJECT NOTE ON UTILITY PROTECTION

Utility coordination efforts determined that no significant utility relocation work is required to complete the project. Any work pertaining to these utility facilities is defined in the bid package and is to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal.

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

- Waterlines left and right of US 60 along the project length
- Utility poles left and right of US 60 along the project length

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

THE FOLLOWING COMPANIES ARE RELOCATING/ADJUSTING THEIR UTILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

None

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE COMPANY OR THE COMPANY'S SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

None

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

None

THE FOLLOWING RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☒ **No Rail Involved** ☐ **Minimal Rail Involved (See Below)** ☐ **Rail Involved (See Below)**

UTILITIES AND RAIL CERTIFICATION NOTE

Crittenden County
FD04 028 0060 004-009
Safety Improvements along US 60
Item No. 1-9023.00

UNDERGROUND FACILITY DAMAGE PROTECTION – BEFORE YOU DIG

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. The contractor is instructed to contact KY 811 for the location of existing underground utilities. Contact shall be made a minimum of two (2) and no more than ten (10) business days prior to excavation.

The contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY 811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom are to be contacted through their individual Protection Notification Center. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. Non-compliance with these directives can result in the enforcement of penalties.

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs.

The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

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

UTILITIES AND RAIL CERTIFICATION NOTE

Crittenden County
FD04 028 0060 004-009
Safety Improvements along US 60
Item No. 1-9023.00

AREA UTILITIES CONTACT LIST

Utility Company/Agency	Contact Name	Contact Information
1. Atmos Energy	Kenny W. Nash	270-316-1571
2. AT&T	Amanda Berkeley	270-444-5047
3. Kentucky Wired	Gary Lady	859-619-9166
4. KU	Caroline Justice	502-627-3708
5. Mediacom	Brien Ramey	270-703-4364
6. Paducah Power System	Chris Giurintano	370-575-4000
7. Crittenden-Livingston Water District	Tyler Pierson	270-988-2680

NOTE: The Utilities Contact List is provided as informational only, and may not be a complete list of all Utility Companies with facilities in the project area.

Kentucky Transportation Cabinet

Highway District 1

And

_____(2), Construction

Kentucky Pollutant Discharge Elimination System Permit KYR10 Best Management Practices (BMP) plan

Groundwater protection plan

For Highway Construction Activities

For

Highway Safety Improvement Project on US 60 in Crittenden County

Item No.: 1-9023

Revised 3/4/2016

KYTC BMP Plan for Item No. 1-9023

Project information

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

1. Owner – Kentucky Transportation Cabinet, District 1
2. Resident Engineer: (2)
3. Contractor name: (2)
   Address: (2)

   Phone number: (2)
   Contact: (2)
   Contractors agent responsible for compliance with the KPDES permit requirements (3):
4. Project Control Number: (2)
5. Route (Address): US 60
6. Latitude/Longitude (project mid-point): 37° 19’ 34”, -88° 07’ 41”
7. County (project mid-point): Crittenden
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

KYTC BMP Plan for Item No. 1-9023

A. Site description:

1. Nature of Construction Activity (from letting project description): Safety improvements to US 60 from MP 4.9 to MP 8.4 in Crittenden County

2. Order of major soil disturbing activities: (2) and (3)

3. Projected volume of material to be moved: 5200 LF Ditching & Shouldering

4. Estimate of total project area (acres): 25.8

5. Estimate of area to be disturbed (acres): 6.5

6. Post construction runoff coefficient will be included in the project drainage folder. Persons needing information pertaining to the runoff coefficient will contact the resident engineer to request this information.

7. Data describing existing soil condition: (1) & (2)

8. Data describing existing discharge water quality (if any): (1) & (2)

9. Receiving water name: Coefield Creek, Crooked Creek

10. TMDLs and Pollutants of Concern in Receiving Waters: *No TDML's were involved on this project.*

11. Site map – Project layout sheet plus the erosion control sheets in the project plans that depict Disturbed Drainage Areas (DDAs) and related information. These sheets depict the existing project conditions with areas delineated by DDA (drainage area bounded by watershed breaks and right of way limits), the storm water discharge locations (either as a point discharge or as overland flow) and the areas that drain to each discharge point. These plans define the limits of areas to be disturbed and the location of control measures. Controls will be either site specific as designated by the designer or will be annotated by the contractor and resident engineer before disturbance commences. The project layout sheet shows the surface waters and wetlands.

12. Potential sources of pollutants:
    The primary source of pollutants is solids that are mobilized during storm events. Other sources of pollutants include oil/fuel/grease from servicing and operating construction equipment, concrete washout water, sanitary wastes and trash/debris. (3)

B. Sediment and Erosion Control Measures:

1. Plans for highway construction projects will include erosion control sheets that depict Disturbed Drainage Areas (DDAs) and related information. These plan sheets will show the existing project conditions with areas delineated by DDA within the right of way limits, the discharge points and the areas that drain to each discharge point. Project managers and designers will analyze the DDAs and identify Best Management Practices (BMPs) that are site specific. The balance of the BMPs for the project will be listed in the bid documents for selection and use by the contractor on the project with approval by the resident engineer.

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

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

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

   - Construction Access – This is the first land-disturbing activity. As soon as construction begins, bare areas will be stabilized with gravel and temporary mulch and/or vegetation.
   - At the beginning of the project, all DDAs for the project will be inspected for areas that are a source of storm water pollutants. Areas that are a source of pollutants will receive appropriate cover or BMPs to arrest the introduction of pollutants into storm water. Areas that have not been opened by the contractor will be inspected periodically (once per month) to determine if there is a need to employ BMPs to keep pollutants from entering storm water.
   - Clearing and Grubbing – The following BMP’s will be considered and used where appropriate.

KYTC BMP Plan for Item No. 1-9023

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

➢ Cut & Fill and placement of drainage structures - The BMP Plan will be modified to show additional BMP's such as:
  - Silt Traps Type B in ditches and/or drainways as they are completed
  - Silt Traps Type C in front of pipes and drop inlets after they are placed
  - Channel Lining
  - Erosion Control Blanket
  - Temporary mulch and/or seeding for areas where construction activities will be ceased for 21 days or more.
  - Non-standard or innovative methods

➢ Profile and X-Section in place – The BMP Plan will be modified to show elimination of BMP's which had to be removed and the addition of new BMP's as the roadway was shaped. Probably changes include:
  - Silt Trap Type A, Brush and/or other barriers, Temporary Mulch, and any other BMP which had to be removed for final grading to take place.
  - Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
  - Additional Channel Lining and/or Erosion Control Blanket.
  - Temporary Mulch for areas where Permanent Seeding and Protection cannot be done within 21 days.
  - Special BMP's such as Karst Policy

➢ Finish Work (Paving, Seeding, Protect, etc.) – A final BMP Plan will result from modifications during this phase of construction. Probable changes include:
  - Removal of Silt Traps Type B from ditches and drainways if they are protected with other BMP's which are sufficient to control erosion, i.e. Erosion Control Blanket or Permanent Seeding and Protection on moderate grades.
  - Permanent Seeding and Protection

- Placing Sod
- Planting trees and/or shrubs where they are included in the project

➢ BMP's including Storm Water Management Devices such as velocity dissipation devices and Karst policy BMP's to be installed during construction to control the pollutants in storm water discharges that will occur after construction has been completed are: *This project does not include storm water BMPs or flow controls for post-construction use.*

C. Other Control Measures

1. No solid materials, including building materials, shall be discharged to waters of the commonwealth, except as authorized by a Section 404 permit.

2. Waste Materials

All waste materials that may leach pollutants (paint and paint containers, caulk tubes, oil/grease containers, liquids of any kind, soluble materials, etc.) will be collected and stored in appropriate covered waste containers. Waste containers shall be removed from the project site on a sufficiently frequent basis as to not allow wastes to become a source of pollution. All personnel will be instructed regarding the correct procedure for waste disposal. Wastes will be disposed in accordance with appropriate regulations. Notices stating these practices will be posted in the office.

3. Hazardous Waste

All hazardous waste materials will be managed and disposed of in the manner specified by local or state regulation. The contractor shall notify the Section Engineer if there any hazardous wastes being generated at the project site and how these wastes are being managed. Site personnel will be instructed with regard to proper storage and handling of hazardous wastes when required. The Transportation Cabinet will file for generator, registration when appropriate, with the Division of Waste Management and advise the contractor regarding waste management requirements.

4. Spill Prevention

The following material management practices will be used to reduce the risk of spills or other exposure of materials and substances to the weather and/or runoff.

➢ **Good Housekeeping:**

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

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

➢ **Hazardous Products:**

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

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

The following product-specific practices will be followed onsite:

➢ **Petroleum Products:**

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

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

KYTC BMP Plan for Item No. 1-9023

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

- **Fertilizers:**

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

- **Paints:**

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

- **Concrete Truck Washout:**

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

- **Spill Control Practices**

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup**:**

- Manufacturers' recommended methods for spill cleanup will be clearly posted. All personnel will be made aware of procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area. Equipment and materials will include as appropriate, brooms, dust pans, mops, rags, gloves, oil absorbents, sand, sawdust, and plastic and metal trash containers.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contract with a hazardous substance.

- Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.
- The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
- Spills of products will be cleaned up promptly. Wastes from spill cleanup will be disposed in accordance with appropriate regulations.

D. Other State and Local Plans

This BMP plan shall include any requirements specified in sediment and erosion control plans, storm water management plans or permits that have been approved by other state or local officials. Upon submittal of the NOI, other requirements for surface water protection are incorporated by reference into and are enforceable under this permit (even if they are not specifically included in this BMP plan). This provision does not apply to master or comprehensive plans, non-enforceable guidelines or technical guidance documents that are not identified in a specific plan or permit issued for the construction site by state or local officials. *There are no other local (MS4) requirements that are expected to be necessary for this project.*

E. Maintenance

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

- Maintenance of BMPs during construction shall be a result of weekly and post rain event inspections with action being taken by the contractor to correct deficiencies.

- Post Construction maintenance will be a function of normal highway maintenance operations. Following final project acceptance by the cabinet, district highway crews will be responsible for identification and correction of deficiencies regarding ground cover and cleaning of storm water BMPs. The project manager shall identify any BMPs that will be for the purpose of post construction storm water management with specific guidance for any non-routine maintenance. *There are no such BMP's for this project.*

F. Inspections

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

- All erosion prevention and sediment control measures will be inspected at least once each week and following any rain of one-half inch or more.
- Inspections will be conducted by individuals that have successfully completed the KEPSC-RI course as required by Section 213.02.02 of the Standard Specifications for Road and Bridge Construction, current edition.
- Inspection reports will be written, signed, dated, and kept on file.
- Areas at final grade will be seeded and mulched within 14 days.
- Areas that are not at final grade where construction has ceased for a period of 21 days or longer and soil stock piles shall receive temporary mulch no later than 14 days from the last construction activity in that area.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of being reported.
- Built-up sediment will be removed from behind the silt fence before it has reached halfway up the height of the fence.
- Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
- Sediment basins will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 50 percent of the design capacity and at the end of the job.
- Diversion dikes and berms will be inspected and any breaches promptly repaired. Areas that are eroding or scouring will be repaired and re-seeded / mulched as needed.
- Temporary and permanent seeding and mulching will be inspected for bare spots, washouts, and healthy growth. Bare or eroded areas will be repaired as needed.
- All material storage and equipment servicing areas that involve the management of bulk liquids, fuels, and bulk solids will be inspected weekly for conditions that represent a release or possible release of pollutants to the environment.

G. Non – Storm Water discharges

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

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

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

H. Groundwater Protection Plan (3)

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

- Contractors statement: (3)

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

_____ 2. (e) land treatment or land disposal of a pollutant;

_____ 2. (f) Storing, …, or related handling of hazardous waste, solid waste or special waste, …, in tanks, drums, or other containers, or in piles, (This does not include wastes managed in a container placed for collection and removal of municipal solid waste for disposal off site);

_____ 2. (g) …. Handling of materials in bulk quantities (equal or greater than 55 gallons or 100 pounds net dry weight transported held in an individual container) that, if released to the environment, would be a pollutant;

_____ 2. (j) Storing or related handling of road oils, dust suppressants, …., at a central location;

_____ 2. (k) Application or related handling of road oils, dust suppressants or deicing materials, (does not include use of chloride-based deicing materials applied to roads or parking lots);

_____ 2. (m) Installation, construction, operation, or abandonment of wells, bore holes, or core holes, (this does not include bore holes for the purpose of explosive demolition);

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

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

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

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

KYTC BMP Plan for Item No. 1-9023

Contractor and Resident Engineer Plan certification

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

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

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

Resident Engineer and Contractor Certification:

(2) Resident Engineer signature

Signed _____title_____, _____
Typed or printed name[2] signature

(3) Signed _____title_____, _____
Typed or printed name[1] signature

1. Contractors Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.

2. KyTC note: to be signed by the Chief District Engineer or a person designated to have the authority to sign reports by such a person (usually the resident engineer) in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601 Reference the Project Control Number (PCN) and KPDES number when one has been issued.

Sub-Contractor Certification

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

Subcontractor

Name:
Address:
Address:

Phone:

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

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

Signed _____title_____, _____
Typed or printed name[1] signature

1. Sub Contractor Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601. Reference the Project Control Number (PCN) and KPDES number when one has been issued.

Crittenden County
Highway Safety Improvement Project along US-60
from MP 4.900 – 8.400
Item No.: 1-9023.00

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

eForm Submittal ID: 274518

KENTUCKY POLLUTION DISCHARGE ELIMINATION SYSTEM (KPDES)

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

Click here for Instructions (Controls/KPDES_FormKYR10_Instructions.htm)

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

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

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

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

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

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

SECTION I -- FACILITY OPERATOR INFORMATION (PERMITTEE)

Company Name:(✓)	First Name:(✓)	M.I.:	Last Name:(✓)
Kentucky Transportation Cabinet, District 1	Kyle	MI	Poat

Mailing Address:(*)	City:(*)	State:(*)	Zip:(*)
5501 Kentucky Dam Rd.	Paducah	Kentucky	42003

eMail Address:(*)	Business Phone:(*)	Alternate Phone:
Kyle.Poat@ky.gov	270-898-7457	Phone

SECTION II -- GENERAL SITE LOCATION INFORMATION

Project Name:(*)	Status of Owner/Operator(*)	SIC Code(*)
KYTC Item No. 1-9023	State Government	1611 Highway and Street Cons

Company Name:(✓)	First Name:(✓)	M.I.:	Last Name:(✓)
Company Name	First Name	MI	Last Name

Site Physical Address:(*)
US 60

City:(*)	State:(*)	Zip:(*)
Marion	Kentucky	42064

County:(*)	Latitude(decimal degrees)(*)DMS to DD Converter (https://www.fcc.gov/media/radio/dms-decimal)	Longitude(decimal degrees)(*)
Crittenden	37.326009	-88.128097

SECTION III -- SPECIFIC SITE ACTIVITY INFORMATION

Project Description:(*)
Highway Safety Improvement Program consisting of various improvements such as Trenching, Asphalt Paving, Pipe Replacement & Extension, Guardrail, Box Culvert Ext

a. For single projects provide the following information

Total Number of Acres in Project:(✓)	Total Number of Acres Disturbed:(✓)
25.8	6.5
Anticipated Start Date:(✓)	Anticipated Completion Date:(✓)

b. For common plans of development provide the following information

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

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

	Company Name	
+		

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

Discharge Point(s):

	Unnamed Tributary?	Latitude	Longitude	Receiving Water Name	
1	No	37.328850	-88.102910	Coefield Creek	Delete
2	No	37.328975	-88.103007	Coefield Creek	Delete
3	Yes	37.317819	-88.142744	Coefield Creek	Delete
4	Yes	37.317927	-88.142833	Coefield Creek	Delete
5	Yes	37.317062	-88.144611	Coefield Creek	Delete
6	Yes	37.317192	-88.144677	Coefield Creek	Delete
7	Yes	37.316759	-88.145663	Coefield Creek	Delete
8	Yes	37.316893	-88.145773	Coefield Creek	Delete
9	Yes	37.316482	-88.146683	Coefield Creek	Delete

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

Name of MS4:

Date of application/notification to the MS4 for construction site permit coverage:	Discharge Point(s):(*)
Date	

	Latitude	Longitude	
+			

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

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

Is a Clean Water Act 401 Water Quality Certification required?:(*)	No

SECTION VII -- NOI PREPARER INFORMATION

First Name:(*)	M.I.:	Last Name:(*)	Company Name:(*)
First Name	MI	Last Name	Company Name

Mailing Address:(*)	City:(*)	State:(*)	Zip:(*)
Mailing Address	City		Zip

eMail Address:(*)	Business Phone:(*)	Alternate Phone:
eMail Address	Phone	Phone

SECTION VIII -- ATTACHMENTS

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

SECTION IX -- CERTIFICATION

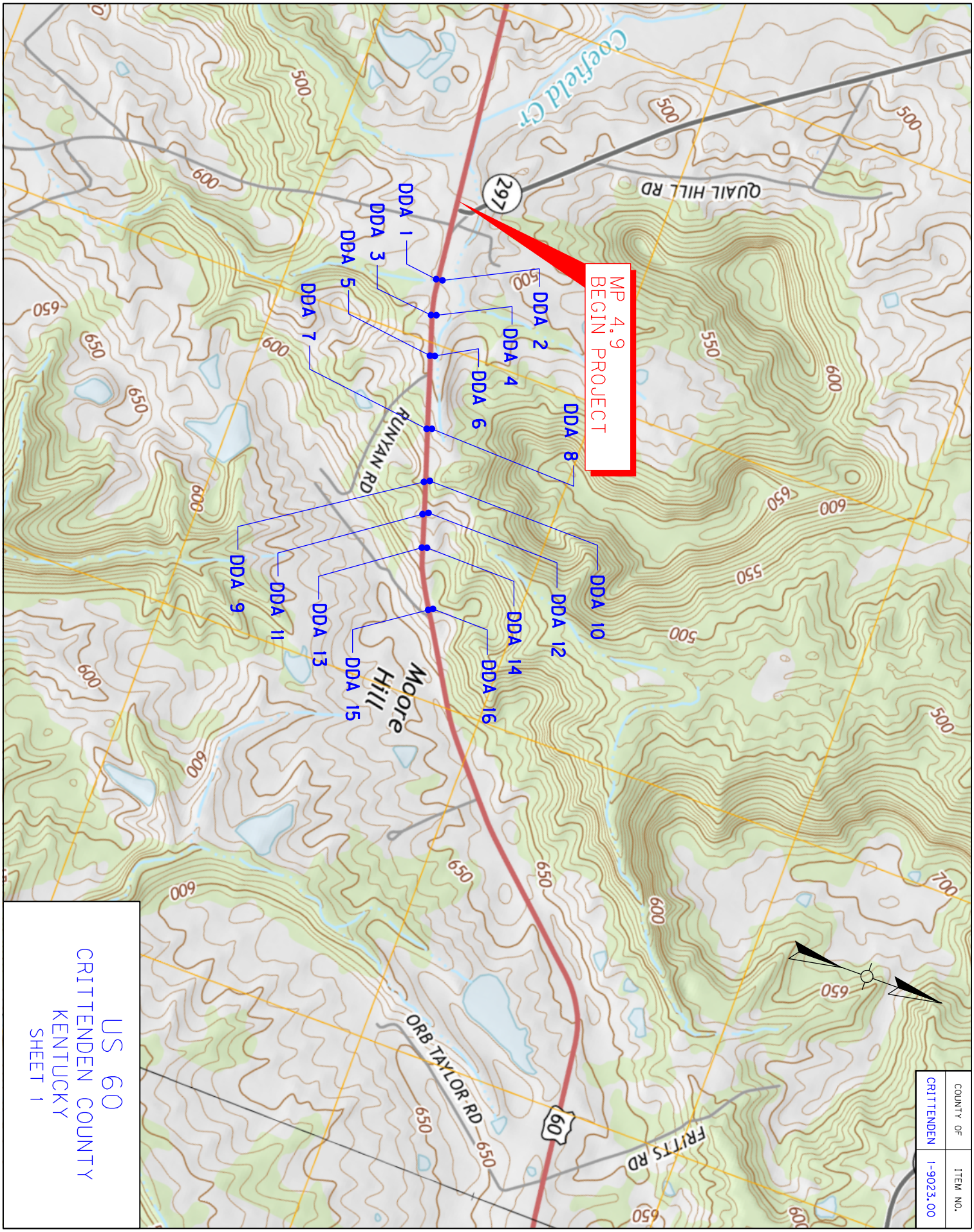
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage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

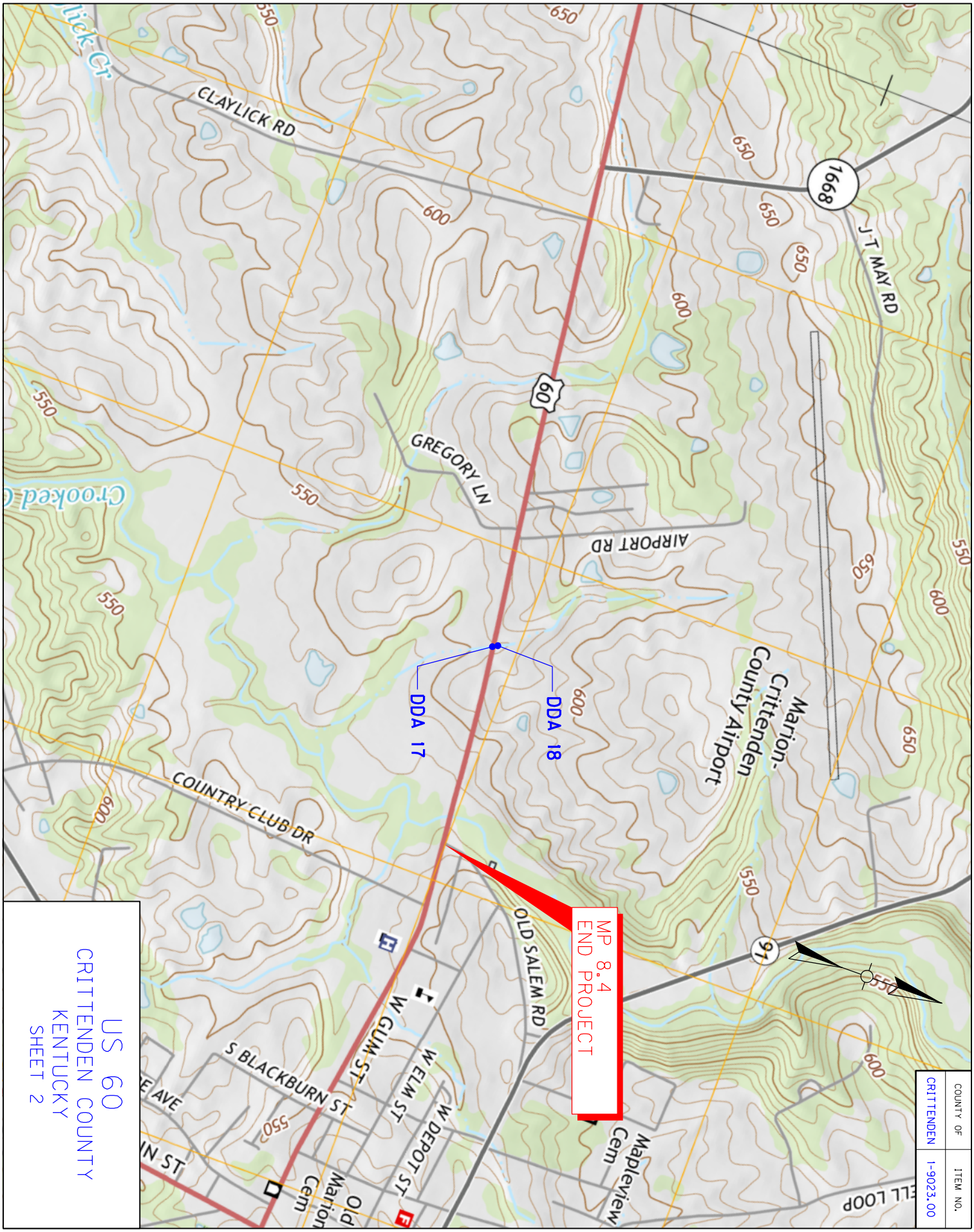
Signature:(*)	Title:(*)
Signature	Title

First Name:(*)	M.I.:	Last Name:(*)
First Name	MI	Last Name

eMail Address:(*)	Business Phone:(*)	Alternate Phone:	Signature Date:(*)
eMail Address	Phone	Phone	Date

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

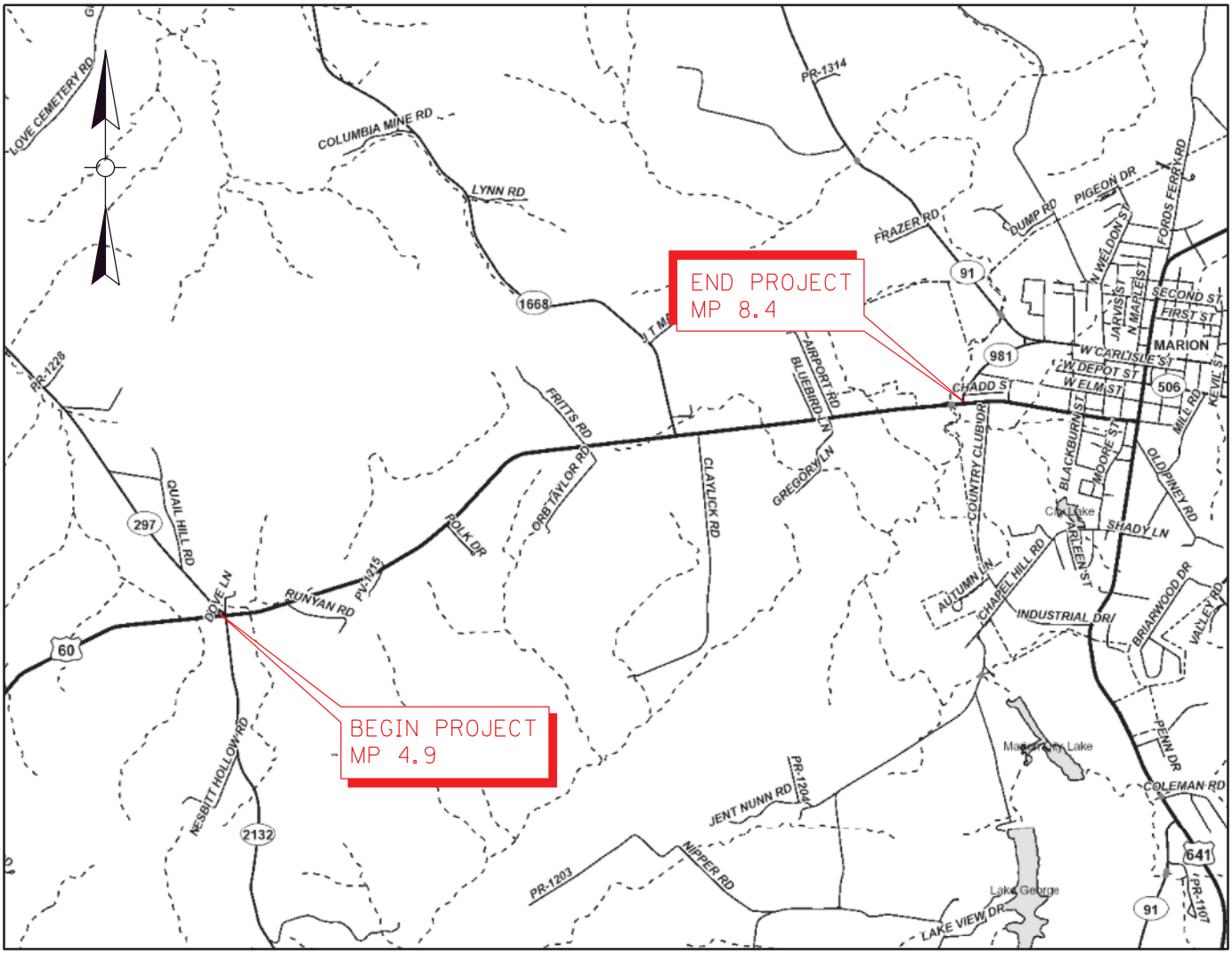

MP 4.9
BEGIN PROJECT
DDA 1
DDA 2
DDA 3
DDA 4
DDA 5
DDA 6
DDA 7
DDA 8
DDA 9
DDA 10
DDA 11
DDA 12
DDA 13
DDA 14
DDA 15
DDA 16
Moore Hill
Runyan Rd
Quail Hill Rd
Coefield Cr
Orb Taylor Rd
Fritts Rd
297
60
US 60
CRITTENDEN COUNTY
KENTUCKY
SHEET 1
COUNTY OF
CRITTENDEN
ITEM NO.
1-9023.00


CLAYLICK RD
1668
J T MAY RD
60
GREGORY LN
AIRPORT RD
Marion-Crittenden County Airport
DDA 17
DDA 18
COUNTRY CLUB DR
MP 8.4
END PROJECT
OLD SALEM RD
W GUM ST
W ELM ST
W DEPOT ST
S BLACKBURN ST
91
Mapleview Cem
US 60
CRITTENDEN COUNTY
KENTUCKY
SHEET 2
COUNTY OF
CRITTENDEN
ITEM NO.
1-9023.00

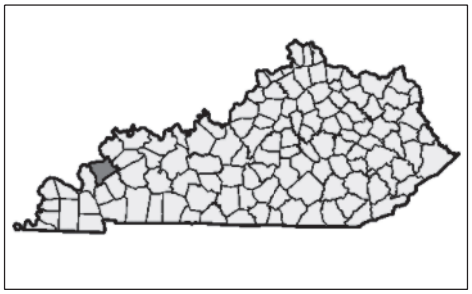
COUNTY OF	ITEM NO.
CRITTENDEN	I-9023.00

CRITTENDEN COUNTY

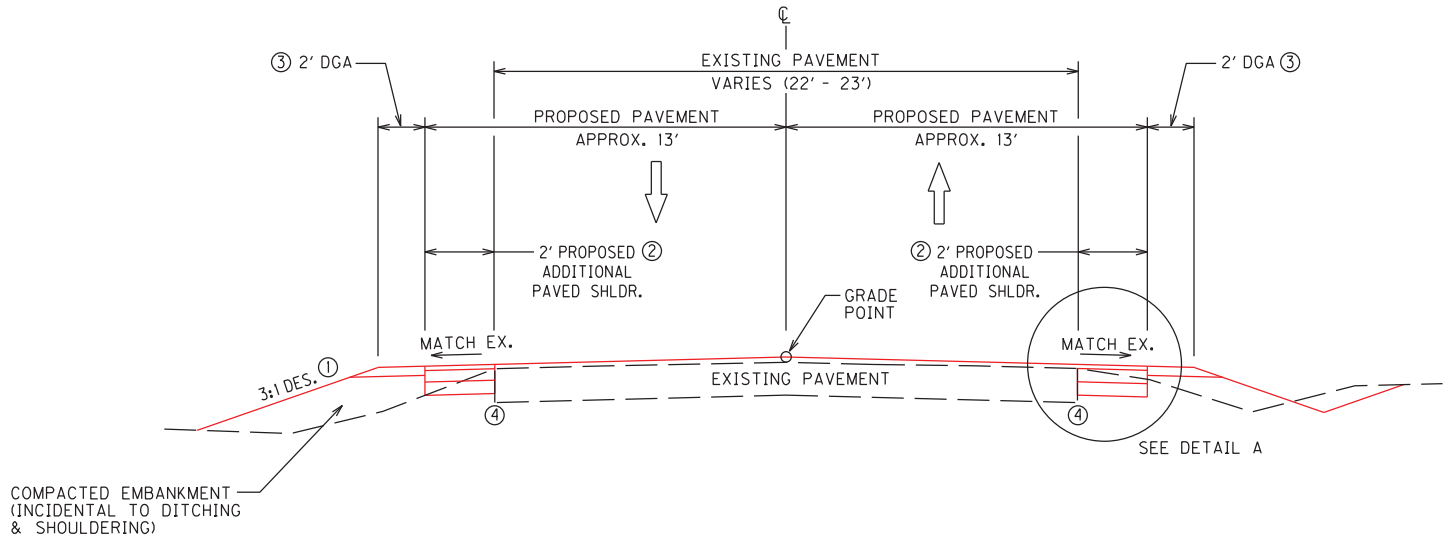
US 60



KENTUCKY TRANSPORTATION CABINET

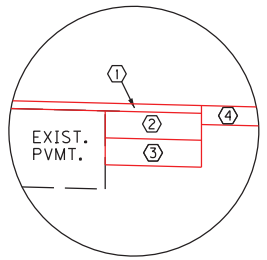


COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00



US 60 – PAVED SHOULDER WIDENING WITH ASPHALT OVERLAY

STA. 263+00 TO STA. 299+80
STA. 425+40 TO STA. 427+75



DETAIL A

NTS

① 1.00" CL2 ASPH SURFACE 0.38D PG64-22
② 4.00" CL2 ASPH BASE 1.00D PG64-22
③ 4.00" DGA
④ 2.00" DGA

① 3:1 OR FLATTER IS DESIRABLE. LOCATIONS THAT ARE LIMITED DUE TO RIGHT-OF-WAY, UTILITY POLES, TREES, FENCES, OR OTHER SENSITIVE OBSTRUCTIONS MAY REQUIRE EMBANKMENT BUT ONLY OUT TO THE EDGE OF THE RIGHT-OF-WAY OR SENSITIVE OBSTRUCTION(S). (SLOPE MAY BE STEEPER THAN 3:1)

② 2' OF ADDITIONAL PAVEMENT WIDTH IS DESIRABLE. WIDTH MAY NEED TO BE MODIFIED IN ORDER TO REMAIN WITHIN RIGHT-OF-WAY OR AVOID A SENSITIVE OBSTRUCTION.

③ 2' DGA WEDGE IS DESIRABLE. WIDTH MAY NEED TO BE MODIFIED IN ORDER TO REMAIN WITHIN RIGHT-OF-WAY OR AVOID A SENSITIVE OBSTRUCTION.

④ SAWCUT OR MILL DAMAGED PAVEMENT EDGE AS DIRECTED BY ENGINEER.

N.T.S.

US 60
PAVEMENT WIDENING TYPICAL SECTION

US 60 - CRITTENDEN COUNTY
ITEM NO. 1-9023.00
GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
1	DGA BASE (9) (1)	TON	783
100	ASPHALT SEAL AGGREGATE (1)	TON	83
103	ASPHALT SEAL COAT (1)	TON	10
190	LEVELING & WEDGING PG64-22 (2) (1)	TON	67
212	CL2 ASPH BASE 1.00D PG64-22 (9) (2) (1)	TON	410
301	CL2 ASPH SURF 0.38D PG64-22 (9) (1)	TON	630
441	ENTRANCE PIPE-18 IN (9)	LF	86
462	CULVERT PIPE-18 IN (2)	LF	93
464	CULVERT PIPE-24 IN (2)	LF	46
470	CULVERT PIPE-48 IN (2)	LF	16
1204	PIPE CULVERT HEADWALL-18 IN (2)	EACH	1
1208	PIPE CULVERT HEADWALL-24 IN (2)	EACH	1
1310	REMOVE PIPE (9) (2)	LF	208
1726	SAFETY BOX INLET-18 IN SDB-1 (2)	EACH	1
1987	DELINEATOR FOR GUARDRAIL B/W (4)	EACH	20
2159	TEMP DITCH	LF	9364
2160	CLEAN TEMP DITCH	LF	4682
2203	STRUCTURE EXCAVATION UNCLASSIFIED (10)	CUYD	9
2263	FENCE-WOVEN WIRE TYPE 2 (12)	LF	200
2265	REMOVE FENCE (12)	LF	200
2355	GUARDRAIL -STEEL W BEAM-S FACE A (4)	LF	100
2360	GUARDRAIL TERMINAL SECTION NO 1 (4)	EACH	1
2367	GUARDRAIL END TREATMENT TYPE 1 (4)	EACH	5
2381	REMOVE GUARDRAIL (4)	LF	963
2483	CHANNEL LINING CLASS II (2) (3) (11)	TON	1040
2555	CONCRETE-CLASS B (12)	CUYD	1.5
2562	TEMPORARY SIGNS	SQFT	288
2569	DEMOBILIZATION	LS	1
2575	DITCHING AND SHOULDERING (3)	LF	5200
2585	EDGE KEY (1)	LF	104
2602	GEOTEXTILE FABRIC CLASS 1 (3) (11)	SQYD	281
2610	RETAINING WALL - GABION (10)	CUYD	18
2625	REMOVE HEADWALL (CULVERT PIPES) (2)	EACH	5
2650	MAINTAIN & CONTROL TRAFFIC	LS	1
2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2
2697	EDGELINE RUMBLE STRIPS (5)	LF	7830
2701	TEMP SILT FENCE	LF	9364
2703	SILT TRAP TYPE A	EACH	6
2704	SILT TRAP TYPE B	EACH	6
2705	SILT TRAP TYPE C	EACH	6
2706	CLEAN SILT TRAP TYPE A	EACH	6
2707	CLEAN SILT TRAP TYPE B	EACH	6
2708	CLEAN SILT TRAP TYPE C	EACH	6
2726	STAKING	LS	1
5950	EROSION CONTROL BLANKET (11)	SQYD	1000
5952	TEMP MULCH	SQYD	18676
5953	TEMP SEEDING AND PROTECTION	SQYD	14000

(1) QUANTITY CARRIED OVER FROM PAVING SUMMARY
(2) QUANTITY CARRIED OVER FROM CULVERT PIPE EXTENSION SUMMARY
(3) QUANTITY CARRIED OVER FROM DITCHING AND SHOULDERING SUMMARY
(4) QUANTITY CARRIED OVER FROM GUARDRAIL SUMMARY
(5) QUANTITY CARRIED OVER FROM RUMBLE STRIP SUMMARY
(6) QUANTITY CARRIED OVER FROM STRIPING SUMMARY
(7) QUANTITY CARRIED OVER FROM SIGNING SUMMARY
(8) QUANTITY CARRIED OVER FROM REMOVE SIGN SUMMARY
(9) QUANTITY CARRIED OVER FROM ENTRANCE SUMMARY
(10) QUANTITY CARRIED OVER FROM GABION BASKET SUMMARY
(11) FOR USE AS DIRECTED BY ENGINEER
(12) FOR FENCE LT. STA. 287+25 TO STA. 289+25

US 60 - CRITTENDEN COUNTY
ITEM NO. 1-9023.00
GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT	QUANTITY
5963	INITIAL FERTILIZER	TON	0.8
5964	MAINTENANCE FERTILIZER	TON	0.5
5985	SEEDING AND PROTECTION	SQYD	15635
5992	AGRICULTURAL LIMESTONE	TON	10.0
6406	SBM ALUM SHEET SIGNS .080 IN (8)	SQFT	78.06
6407	SBM ALUM SHEET SIGNS .125 IN (8)	SQFT	26.68
6410	STEEL POST TYPE 1 (8)	LF	185
6510	PAVE STRIPING-TEMP PAINT-4 IN (11)	LF	14000
6542	PAVE STRIPING-THERMO-6 IN W (6)	LF	7830
6543	PAVE STRIPING-THERMO-6 IN Y (6)	LF	4629
8002	STRUCTURE EXCAV-SOLID ROCK (RCBC STA. 426+65)	CUYD	16
8003	FOUNDATION PREPARATION (RCBC STA. 426+65)	EACH	1
8100	CONCRETE-CLASS A (RCBC STA. 426+65)	CUYD	31.60
8100	CONCRETE-CLASS A (2)	CUYD	0.86
8150	STEEL REINFORCEMENT (RCBC STA. 426+65)	LB	3777
8801	GUARDRAIL-STEEL W BEAM-S FACE BR (4)	LF	19
20191ED	OBJECT MARKER TYPE 3 (4)	EACH	5
20458ES403	CENTERLINE RUMBLE STRIPS (5)	LF	3915
20748ED	SHOULDER MILLING/TRENCHING (1)	SQYD	1742
21134ND	REMOVE-STORE AND REINSTALL SIGN (11)	EACH	5
21373ND	REMOVE SIGN (8)	EACH	11
21802EN	G/R STEEL B BEAM-S FACE (7 FT POST) (4)	LF	710
24361EC	BARCODE SIGN INVENTORY (7)	EACH	24
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING (1)	TON	4.8
26131ED	SLOPED AND MITERED HEADWALL-18 IN (2)	EACH	1
26132ED	SLOPED AND MITERED HEADWALL-24 IN (2)	EACH	1

(1) QUANTITY CARRIED OVER FROM PAVING SUMMARY
(2) QUANTITY CARRIED OVER FROM CULVERT PIPE EXTENSION SUMMARY
(3) QUANTITY CARRIED OVER FROM DITCHING AND SHOULDERING SUMMARY
(4) QUANTITY CARRIED OVER FROM GUARDRAIL SUMMARY
(5) QUANTITY CARRIED OVER FROM RUMBLE STRIP SUMMARY
(6) QUANTITY CARRIED OVER FROM STRIPING SUMMARY
(7) QUANTITY CARRIED OVER FROM SIGNING SUMMARY
(8) QUANTITY CARRIED OVER FROM REMOVE SIGN SUMMARY
(9) QUANTITY CARRIED OVER FROM ENTRANCE SUMMARY
(10) QUANTITY CARRIED OVER FROM GABION BASKET SUMMARY
(11) FOR USE AS DIRECTED BY ENGINEER

US 60 - CRITTENDEN COUNTY ITEM NO. 1-9023.00 PAVING SUMMARY			
SHOULDER PAVEMENT WIDENING WITH ASPHALT OVERLAY STA. 263+00 - 299+80			
PAVING AREAS		**PAVING QUANTITIES**	
ITEM	**TOTAL**	**ITEM**	**TOTAL**
	SQYD		**TON**
1.00" CL2 ASPH SURF 0.38D PG64-22	10632	1.00" CL2 ASPH SURF 0.38D PG64-22*	585
4.00" CL2 ASPH BASE 1.00D PG64-22	1636	4.00" CL2 ASPH BASE 1.00D PG64-22*	360
4.00" DGA	1636	4.00" DGA**	377
DGA WEDGE	--	DGA WEDGE**	329
LEVELING & WEDGING PG64-22 (DEPTH VARIES)	--	LEVELING & WEDGING PG64-22*	60
ASPHALT SEAL AGGREGATE	--	ASPHALT SEAL AGGREGATE	78
ASPHALT SEAL COAT	--	ASPHALT SEAL COAT	9.4
ASPHALT MATERIAL FOR TACK NON-TRACKING	10632	ASPHALT MATERIAL FOR TACK NON-TRACKING	4.5
	SQYD		**SQYD**
SHOULDER MILLING/TRENCHING	1636	SHOULDER MILLING/TRENCHING	1636
	LF		**LF**
EDGE KEY	52	EDGE KY	52
SHOULDER PAVEMENT WIDENING WITH ASPHALT OVERLAY STA. 425+40 - 427+75			
PAVING AREAS		**PAVING QUANTITIES**	
ITEM	**TOTAL**	**ITEM**	**TOTAL**
	SQYD		**TON**
1.00" CL2 ASPH SURF 0.38D PG64-22	705	1.00" CL2 ASPH SURF 0.38D PG64-22*	39
4.00" CL2 ASPH BASE 1.00D PG64-22	106	4.00" CL2 ASPH BASE 1.00D PG64-22*	24
4.00" DGA	106	4.00" DGA**	25
DGA WEDGE	--	DGA WEDGE**	21
LEVELING & WEDGING PG64-22 (DEPTH VARIES)	--	LEVELING & WEDGING PG64-22*	4
ASPHALT SEAL AGGREGATE	--	ASPHALT SEAL AGGREGATE	5
ASPHALT SEAL COAT	--	ASPHALT SEAL COAT	0.6
ASPHALT MATERIAL FOR TACK NON-TRACKING	705	ASPHALT MATERIAL FOR TACK NON-TRACKING	0.3
	SQYD		**SQYD**
SHOULDER MILLING/TRENCHING	106	SHOULDER MILLING/TRENCHING	106
	LF		**LF**
EDGE KEY	52	EDGE KY	52

BID ITEM	DESCRIPTION	UNIT	QUANTITY
1	DGA BASE	TON	752
100	APSHALT SEAL AGGREGATE	TON	83
103	ASPHALT SEAL COAT	TON	10
190	LEVELING & WEDGING PG64-22	TON	64
212	CL2 ASPH BASE 1.00D PG64-22	TON	384
301	CL2 ASPH SURF 0.38D PG64-22	TON	624
2585	EDGE KEY	LF	104
20748ED	SHOULDER MILLING/TRENCHING	SQYD	1742
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	TON	4.8

* Estimated at 110 lbs. per SQ. YD. per inch of depth

** Estimated at 115 lbs. per SQ. YD. per inch of depth

These numbers are for estimate purposes only. Final locations and quantities will be determined by the Engineer in the field.

US 60 - CRITTENDEN COUNTY
ITEM NO. 1-9023.00
CULVERT PIPE EXTENSION SUMMARY

Station	Mile Point	Existing Culvert Pipe	Skew	Remove Pipe (LF)	Remove Headwall (EA)	Proposed Pipe Length (LF)			Concrete for End Anchor (CUYD)	Channel Lining Class II (Tons)	Left Headwall - Proposed	Right Headwall - Proposed
						18"	24"	48"				
270+06	5.115	48" CMP	0°	8	0			16	0.86			
281+12	5.324	18" RCP	0°	36	2	44					18" Sloped & Mitered HW	18" Safety Box Inlet
292+67	5.543	18" RCP	0°	4	1	7					18" Standard Headwall	
298+75	5.658	24" RCP	0°	38	2		46			25	24" Sloped & Mitered HW	24" Standard Headwall
Runyan Rd	--	18" RCP	--	42	0	42						
			TOTALS:	**128**	**5**	**93**	**46**	**16**	**0.86**	**25**		

BID ITEM	DESCRIPTION	UNIT	QUANTITY
00190	LEVELING & WEDGING PG64-22	TON	3
212	CL2 ASPH BASE 1.00D PG64-22	TON	18
462	CULVERT PIPE-18 IN	LF	93
464	CULVERT PIPE-24 IN	LF	46
470	CULVERT PIPE-48 IN	LF	16
1204	PIPE CULVERT HEADWALL-18 IN	EACH	1
1208	PIPE CULVERT HEADWALL-24 IN	EACH	1
1310	REMOVE PIPE	LF	128
1726	SAFETY BOX INLET-18 IN SDB-1	EACH	1
2483	CHANNEL LINING CLASS II	TON	25
2625	REMOVE HEADWALL	EACH	5
8100	CONCRETE-CLASS A	CUYD	0.86
26131ED	SLOPED AND MITERED HEADWALL-18 IN	EACH	1
26132ED	SLOPED AND MITERED HEADWALL-24 IN	EACH	1

These numbers are for estimate purposes only. Final locations and quantities will be determined by the Engineer in the field.
The Contractor shall field verify types and dimensions prior to ordering.

1-9023.00

Ditching & Shouldering Summary — Crittenden County — US 60

Notes:
* The "Figure References" noted below refer to the Figure number within the Ditching & Shouldering Detail Sheet that is the closest representation of the intended Ditching & Shouldering.
** The Estimated Volumes of Excavation and Embankment are provided for informational purposes ONLY. The Department gives no guarantee to the accuracy of the estimated volumes. The Bidder must draw his/her own conclusion. Payment will be based on the Linear Footage of Ditching & Shouldering performed, regardless of the accuracy of the Estimated Volumes of Excavation and Embankment.

LOCATION					Length (LF)	Estimated Excavation Volume** (CU YD)	Estimated Embankment Volume** (CU YD)	Ditching & Shouldering Detail Sheet Figure Ref.*	Include DGA Wedge? (Yes/No)	DGA (TONS)	Asphalt Seal Coat (TON)	Asphalt Seal Aggregate (TON)	Channel Line Ditch, Fill Slope or Cut Slope? (Yes/No)	Channel Lining Class II (TONS)	Geotex. Fabric Type IV (SQ YD)	Remarks
Side of Road	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint												
RT	264+75	5.014	268+25	5.080	350	0	58	Figure 3	Yes				No			
RT	270+00	5.114	273+00	5.170	300	28	72	Figure 10	Yes				Yes - Ditch	100		
RT	273+00	5.170	275+80	5.223	280	0	12	Figure 1	Yes				No			
RT	276+00	5.227	280+00	5.303	400	53	58	Figure 11	Yes				Yes - Cut Slope	134		
RT	281+20	5.326	286+80	5.432	560	66	39	Figure 11	Yes				Yes - Cut Slope	168		
RT	288+00	5.455	292+60	5.542	460	0	128	Figure 5	Yes				Yes - Fill Slope	200	103	
RT	292+60	5.542	298+25	5.649	565	105	73	Figure 11	Yes				Yes - Cut Slope	151		
RT	425+80	8.064	427+50	8.097	170	0	41	Figure 4	Yes				No			
LT	271+50	5.142	274+00	5.189	250	0	14	Figure 1	Yes				No			
LT	279+50	5.294	283+00	5.360	350	0	143	Figure 3	Yes				No			
LT	285+25	5.402	287+50	5.445	225	0	67	Figure 4	Yes				No			
LT	287+50	5.445	291+00	5.511	350	0	389	Figure 5	Yes				Yes - Fill Slope	234	78	
LT	291+00	5.511	294+00	5.568	300	0	278	Figure 4	Yes				No			
LT	295+00	5.587	299+80	5.678	480	71	89	Figure 8	Yes				No			
LT	425+90	8.066	427+50	8.097	160	18	25	Figure 10	Yes				Yes - Cut Slope	75		

BID ITEM	DESCRIPTION	UNIT	QUANTITY
2483	CHANNEL LINING CLASS II	TON	962
2575	DITCHING AND SHOULDERING	LF	5,200
2602	GEOTEXTILE FABRIC CLASS 1	SQYD	181

All quantities for DGA wedge included in Paving Summary.

These numbers are for estimate purposes only. Final locations and quantities will be determined by the Engineer in the field.

1-9023.00

Guardrail Summary — Crittenden County — US 60

Notes: Begin/End Milepoints are estimated to include the entire length of the Rail AND the End Treatments. The Engineer may adjust the proposed guardrail termini to ensure proper installation of the guardrail system.

Proposed Guardrail to be Constructed										Existing Guardrail to be Removed					
Side of Road	Proposed BEGINNING Treatment	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint	Proposed ENDING Treatment	Proposed Length (LF)	Number of Radius Rail	Remarks	Side of Road	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint	Existing Length (LF)
LT	Type 1	287+34	5.442	293+34	5.556	Type 1	500.00	0		LT	287+34	5.442	293+34	5.556	600.00
RT	Type 1	425+81	8.065	426+26	8.073		0.00	0	Connect to Single Face A at end	RT	425+81	8.065	427+60	8.098	187.50
RT		426+26	8.073	426+51	8.078		25.00	0	Single Face A						
RT		426+51	8.078	426+63	8.080		9.50	0	Bridge Rail						
RT		426+63	8.080	426+88	8.085		25.00	0	Single Face A						
RT		426+88	8.085	427+54	8.097	Type 1	25.00	0	Connect to Single Face A at end						
LT	Terminal Section 1	425+90	8.066	426+39	8.076		53.75	1	Connect to Single Face A at end	LT	425+90	8.066	427+54	8.097	175.00
LT		426+39	8.076	426+64	8.080		25.00	0	Single Face A						
LT		426+64	8.080	426+74	8.082		9.50	0	Bridge Rail						
LT		426+74	8.082	426+99	8.087		25.00	0	Single Face A						
LT		426+99	8.087	427+54	8.097	Type 1	12.50	0	Connect to Single Face A at beginning						

ITEM	DESCRIPTION	UNIT	QTY
1987	DELIN. FOR GUARDRAIL BI DIR. WHITE	EACH	20
2355	GUARDRAIL-STEEL W BEAM-S FACE A	LF	100
2360	GUARDRAIL TERMINAL SECTION NO 1	EACH	1
2367	GUARDRAIL END TREATMENT TYPE 1	EACH	5
2381	REMOVE GUARDRAIL	LF	963
8801	GUARDRAIL-STEEL W BEAM-S FACE BR	LF	19
20191ED	OBJECT MARKER TYPE 3	EACH	5
21802EN	G/R STEEL W BEAM-S FACE (7 FT POST)	LF	710

US 60 - CRITTENDEN COUNTY ITEM NO. 1-9023.00 RUMBLE STRIP SUMMARY						
Begin Station	**Begin Milepoint**	**Offset**	**End Station**	**End Milepoint**	**Offset**	**Length (LF)**
Edgeline Rumble Strips						
263+00	4.981	11' LT	299+80	5.678	11' LT	3680
263+00	4.981	11' RT	299+80	5.678	11' RT	3680
425+40	8.057	11' LT	427+75	8.101	11' LT	235
425+40	8.057	11' RT	427+75	8.101	11' RT	235
Centerline Rumble Strips						
263+00	4.981	0'	299+80	5.678	0'	3680
425+40	8.057	0'	427+75	8.101	0'	235

BID ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**
2697	EDGELINE RUMBLE STRIPS	LF	7830
20458ES403	CENTERLINE RUMBLE STRIPS	LF	3915

These numbers are for estimate purposes only. Final locations and quantities will be determined by the Engineer in the field.
All quantities carried over to the General Summary.

US 60 - CRITTENDEN COUNTY
ITEM NO. 1-9023.00
PAVEMENT STRIPING SUMMARY

Begin Station	Begin Milepoint	Offset	End Station	End Milepoint	Offset	Description	Length (LF)
Thermo Striping - 6" White							
263+00	4.981	11' LT	299+80	5.678	11' LT	Edgeline	3680
263+00	4.981	11' RT	299+80	5.678	11' RT	Edgeline	3680
425+40	8.057	11' LT	427+75	8.101	11' LT	Edgeline	235
425+40	8.057	11' RT	427+75	8.101	11' RT	Edgeline	235
Thermo Striping - 6" Yellow							
263+00	4.981	0'	269+25	5.099	0'	Double Solid Yellow	1250
269+25	5.099	0'	276+60	5.239	0'	Solid/Dashed (passing EB)	919
276+60	5.239	0'	287+55	5.446	0'	Dashed	274
287+55	5.446	0'	295+00	5.587	0'	Solid/Dashed (passing WB)	932
295+00	5.587	0'	299+80	5.678	0'	Double Solid Yellow	960
425+40	8.057	0'	427+75	8.101	0'	Solid/Dashed (passing WB)	294

BID ITEM	DESCRIPTION	UNIT	QUANTITY
6542	PAVE STRIPING-THERMO-6 IN W	LF	7830
6543	PAVE STRIPING-THERMO-6 IN Y	LF	4629

These numbers are for estimate purposes only. Final locations and quantities will be determined by the Engineer in the field.
All quantities carried over to the General Summary.

1-9023.00

Sign Summary — CRITTENDEN County — US 60

SIGN LOCATION						MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)			SHEETING			SBM Alum Sheet Signs 0.080 IN (SQ FT)	SBM Alum Sheet Signs 0.125 IN (SQ FT)	Installation Type	Bracing Req'd	# of Sign Posts	Estimated Length of 2" Post (ft)	Estimated Length of 2-1/2" Post (ft)	2-1/4" Stiffener Req'd (incdntl to post)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
Assembly ID	Side of Road	Approx Offset (ft)	Approx Station	Approx. Mile Point	Facing Traffic Traveling							Text/ Symbol Color	Background Color	Sheeting Type										
1	LT	18	268+90	5.0928	WB	M2-1	Junction		21	x	15	Black	White	XI	2.1875		Stnd w/ Soil Plate						14	1
						M1-5a	State Route Sign (3 or 4 digit)	297	30	x	24	Black	White	XI	5									1
2	LT	15	268+90	5.0928	WB	M2-1	Junction		21	x	15	Black	White	XI	2.1875		Stnd w/ Soil Plate						14	1
						M1-5a	State Route Sign (3 or 4 digit)	2132	30	x	24	Black	White	XI	5									1
3	RT	15	292+50	5.53977	EB	W1-2L	Left Curve		30	x	30	Black	FL Yellow	XI	6.25		Stnd w/ Soil Plate						15	1
						W13-1P	XX MPH (Advisory Speed)	45	18	x	18	Black	FL Yellow	XI	2.25									1
4	LT	15	297+80	5.64015	WB	W1-2R	Right Curve		30	x	30	Black	FL Yellow	XI	6.25		Stnd w/ Soil Plate						15	1
						W13-1P	XX MPH (Advisory Speed)	45	18	x	18	Black	FL Yellow	XI	2.25									1
5	RT	15	329+70	6.24432	WB	W14-3	No Passing Zone		48 x	48	x 36	Black	Yellow	XI		5.56	Stnd w/ Soil Plate						13	1
6	LT	15	330+60	6.26136	EB	W14-3	No Passing Zone		48 x	48	x 36	Black	Yellow	XI		5.56	Stnd w/ Soil Plate						13	1
7	RT	15	336+25	6.36837	EB	W1-2R	Right Curve		30	x	30	Black	FL Yellow	XI	6.25		Stnd w/ Soil Plate						15	1
						W13-1P	XX MPH (Advisory Speed)	45	18	x	18	Black	FL Yellow	XI	2.25									1
8	LT	EX.	343+90	6.51326	EB	W1-8R	Right Chevron	Replace on ex. Post	18	x	24	Black	FL Yellow	XI	3		Stnd w/ Soil Plate						0	1
9	LT	15	345+05	6.53504	WB	W1-2L	Left Curve		30	x	30	Black	FL Yellow	XI	6.25		Stnd w/ Soil Plate						15	1
						W13-1P	XX MPH (Advisory Speed)	50	18	x	18	Black	FL Yellow	XI	2.25									1
10	RT	15	354+15	6.70739	EB	W2-1	Cross Road		30	x	30	Black	Yellow	XI	6.25		Stnd w/ Soil Plate						15	1
						W16-8aP	Advance Street Name (2-line)	Fritts/Orb Taylor Rd	48	x	15	Black	Yellow	XI		5								1
11	LT	15	361+00	6.83712	WB	W2-1	Cross Road		30	x	30	Black	Yellow	XI	6.25		Stnd w/ Soil Plate						15	1
						W16-8aP	Advance Street Name (2-line)	Fritts/Orb Taylor Rd	48	x	15	Black	Yellow	XI		5								1
12	RT	15	371+60	7.03788	EB	M2-1	Junction		21	x	15	Black	White	XI	2.1875		Stnd w/ Soil Plate						14	1
						M1-5a	State Route Sign (3 or 4 digit)	1668	30	x	24	Black	White	XI	5									1
13	LT	18	379+00	7.17803	WB	M1-5a	State Route Sign (3 or 4 digit)	1668	30	x	24	Black	White	XI	5		Stnd w/ Soil Plate						14	1
						M6-1R	Right Arrow		24	x	12	Black	White	XI	2									1
14	RT	15	397+00	7.51894	WB	W14-3	No Passing Zone		48 x	48	x 36	Black	Yellow	XI		5.56	Stnd w/ Soil Plate						13	1

BID ITEM	DESCRIPTION	UNIT	QUANTITY
6406	SBM ALUM SHEET SIGNS .080 IN	SQFT	78.06
6407	SBM ALUM SHEET SIGNS .125 IN	SQFT	26.68
6410	STEEL POST TYPE 1	LF	185
24631EC	BARCODE SIGN INVENTORY	EACH	24

US 60 - CRITTENDEN COUNTY ITEM NO. 1-9023.00 REMOVE SIGN SUMMARY				
Station	**Milepoint**	**Offset**	**Description**	**Quantity (EA)**
268+90	5.093	LT	KY 297 & KY 2132 Guide Sign Assemblies	2
288+15	5.457	RT	Advance Curve Warning	1
302+50	5.729	LT	Advance Curve Warning	1
330+40	6.258	RT	Advance Curve Warning	1
331+00	6.269	LT	No Passing Zone	1
331+10	6.271	RT	No Passing Zone	1
349+15	6.613	LT	Advance Curve Warning	1
371+60	7.038	RT	KY 1668 Guide Sign Assembly	1
379+00	7.178	LT	KY 1668 Guide Sign Assembly	1
397+00	7.519	RT	No Passing Zone	1

BID ITEM	**DESCRIPTION**	**UNIT**	**QUANTITY**
21373ND	REMOVE SIGN	EACH	11

These numbers are for estimate purposes only. Final locations and quantities will be determined by the Engineer in the field.
All quantities carried over to the General Summary.

US 60 - CRITTENDEN COUNTY
ITEM NO. 1-9023.00
ENTRANCE SUMMARY

Station	Milepoint	Offset	DGA (Tons)	Asphalt Base (Tons)	Asphalt Surface (Tons)	18" Entrance Pipe (LF)	Remove Pipe (LF)
281+97	5.340	RT	14	--	--	36	30
299+30	5.669	RT	17	8	6	50	50
		TOTALS:	**31**	**8**	**6**	**86**	**80**

BID ITEM	DESCRIPTION	UNIT	QUANTITY
1	DGA BASE	TON	31
212	CL2 ASPH BASE 1.00D PG64-22	TON	8
301	CL2 ASPH SURF 0.38D PG64-22	TON	6
441	ENTRANCE PIPE-18 IN	LF	86
1310	REMOVE PIPE	LF	80

These numbers are for estimate purposes only. Final locations and quantities will be determined by the Engineer in the field.
All quantities carried over to the General Summary.

US 60 - CRITTENDEN COUNTY ITEM NO. 1-9023.00 GABION BASKET SUMMARY								
Offset	**Begin Station**	**Begin Milepoint**	**End Station**	**End Milepoint**	**Length**	**Height**	**Retaining Wall - Gabion (CUYD)**	**Structure Excavation (CUYD)**
LT	307+65	5.827	307+83	5.830	18	6	18	9

BID ITEM	DESCRIPTION	UNIT	QUANTITY
2203	STRUCTURE EXCAVATION UNCLASSIFIED	CUYD	9
2610	RETAINING WALL-GABION	CUYD	18

1-9023.00

Consent & Release Summary

Parcel	Begin MP	End MP	Side	Owner(s)	Consent & Release Description	Status	Additional Notes
1	5.400		LT	Melody F. Tabor	Encroach on property owner to expand shoulder on edge of highway	Signed	4165 US Highway 60W


COUNTY OF
CRITTENDEN
ITEM NO.
I-9023.00
DITCHING AND SHOULDERING
OFFSET
STA. TO STA.
LENGTH (LF)
RT
264+75 - 265+00
25
US 60
PLAN SHEET 1
BEGIN CONSTRUCTION TO STA. 265+00
SCALE: 1" = 100
MATCHLINE STA. 265+00
265+00
℄ US 60
STA. 263+00
BEGIN PAVED SHOULDER WIDENING
BEGIN OVERLAY
CONSTRUCT 26 L.F. EDGE KEY
260+00
BEGIN PROJECT
STA. 258+72 ℄ US 60
MP 4.9
258+72
POB 258+72.00
NOTE: LOCATION OF EXISTING UTILITIES IS APPROXIMATE AND NOT ALL UTILITIES MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS WHEN PERFORMING WORK IN THESE AREAS.


COUNTY OF
CRITTENDEN
ITEM NO.
I-9023.00
PROPOSED SIGNS
ID
OFFSET
STA. (MP)
DESCRIPTION
1
LT (WB)
268+90 (5.093)
JUNCTION
1
LT (WB)
268+90 (5.093)
STATE ROUTE SIGN
2
LT (WB)
268+90 (5.093)
JUNCTION
2
LT (WB)
268+90 (5.093)
STATE ROUTE SIGN
DITCHING AND SHOULDERING
OFFSET
STA. TO STA.
LENGTH (LF)
RT
265+00 - 268+25
325
RT
270+00 - 274+00
300
LT
271+50 - 274+00
300
STA. 270+06 - EXTEND PIPE
LEFT:
REMOVE 4 L.F. EXISTING 48" PIPE
INSTALL 8 L.F. 48" CULVERT PIPE
INSTALL END ANCHOR
RIGHT:
REMOVE 4 L.F. EXISTING 48" PIPE
INSTALL 8 L.F. 48" CULVERT PIPE
INSTALL END ANCHOR
US 60
PLAN SHEET 2
STA. 265+00 TO STA. 274+00
SCALE: 1" = 100'
MATCHLINE STA. 274+00
MATCHLINE STA. 265+00
℄ US 60
PC 267+12.39
PI 268+68.20
PT 270+22.90
265+00
270+00
JCT
297
M2-1
21" x 15"
M1-5a
30" x 24"
JCT
2132
M2-1
21" x 15"
M1-5a
30" x 24"

COUNTY OF	ITEM NO.
CRITTENDEN	I-9023.00

DITCHING AND SHOULDERING		
OFFSET	STA. TO STA.	LENGTH (LF)
RT	274+00 - 275+80	180
RT	276+00 - 280+00	400
RT	281+20 - 283+00	180
LT	279+50 - 283+00	350

SCALE: 1" = 100'

US 60
PLAN SHEET 3
STA. 274+00 TO STA. 283+00

COUNTY OF	ITEM NO.
CRITTENDEN	I-9023.00

INSTALL GUARDRAIL				
OFFSET	STA. TO STA.	LENGTH	BEGIN E.T.	END E.T.
LT	287+34 - 292+00	416	TYPE 1	--

REMOVE GUARDRAIL		
OFFSET	STA. TO STA.	LENGTH
LT	287+34 - 292+00	466

LT. STA. 287+25 TO STA. 289+25
REMOVE 200 L.F. EXISTING FENCE TO CONSTRUCT FILL SLOPES BEHIND GUARDRAIL. INSTALL 200 L.F. WOVEN WIRE FENCE-TYPE 2.

285+00

290+00

MATCHLINE STA. 283+00

MATCHLINE STA. 292+00

PI 283+76.76

℄ US 60

PC 283+37.20

PT 284+16.32

DITCHING AND SHOULDERING		
OFFSET	STA. TO STA.	LENGTH (LF)
RT	283+00 - 286+80	380
RT	288+00 - 292+00	400
LT	285+25 - 292+00	600

SCALE: 1" = 100'

US 60
PLAN SHEET 4
STA. 283+00 TO STA. 292+00

COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00

INSTALL GUARDRAIL				
OFFSET	STA. TO STA.	LENGTH	BEGIN E.T.	END E.T.
LT	292+00 - 293+34	84	--	TYPE 1

REMOVE GUARDRAIL		
OFFSET	STA. TO STA.	LENGTH
LT	292+00 - 293+34	134

STA. 292+67 - EXTEND PIPE
LEFT:
REMOVE EXISTING HEADWALL
REMOVE 4 L.F. EXISTING 18" PIPE
INSTALL 7 L.F. 18" CULVERT PIPE
INSTALL STANDARD HEADWALL

PC 293+74.48

PT 296+54.20

MATCHLINE STA. 292+00

MATCHLINE STA. 301+00

℄ US 60

W1-2R
30" x 30"

45 M.P.H.

W13-1P
18" x 18"

W1-2L
30" x 30"

45 M.P.H.

W13-1P
18" x 18"

STA. 298+75 - REPLACE PIPE
REMOVE 38 L.F. EXISTING 24" PIPE
INSTALL 46 L.F. 24" CULVERT PIPE
LEFT:
REMOVE EXISTING HEADWALL
INSTALL SLOPED & MITERED HEADWALL
RIGHT:
REMOVE EXISTING HEADWALL
INSTALL STANDARD HEADWALL
INSTALL 25 TONS CL II CHANNEL LINING

STA. 299+30
REPLACE ENTRANCE PIPE

STA. 299+80
END PAVED SHOULDER WIDENING
END OVERLAY
CONSTRUCT 26 L.F. EDGE KEY

PROPOSED SIGNS			
ID	OFFSET	STA. (MP)	DESCRIPTION
3	RT (EB)	292+50 (5.540)	LEFT CURVE
3	RT (EB)	292+50 (5.540)	ADV. SPEED (45 MPH)
4	LT (WB)	297+80 (5.640)	RIGHT CURVE
4	LT (WB)	297+80 (5.640)	ADV. SPEED (45 MPH)

DITCHING AND SHOULDERING		
OFFSET	STA. TO STA.	LENGTH (LF)
RT	292+00 - 298+25	625
LT	292+00 - 294+00	150
LT	295+00 - 299+80	400

SCALE: 1" = 100'

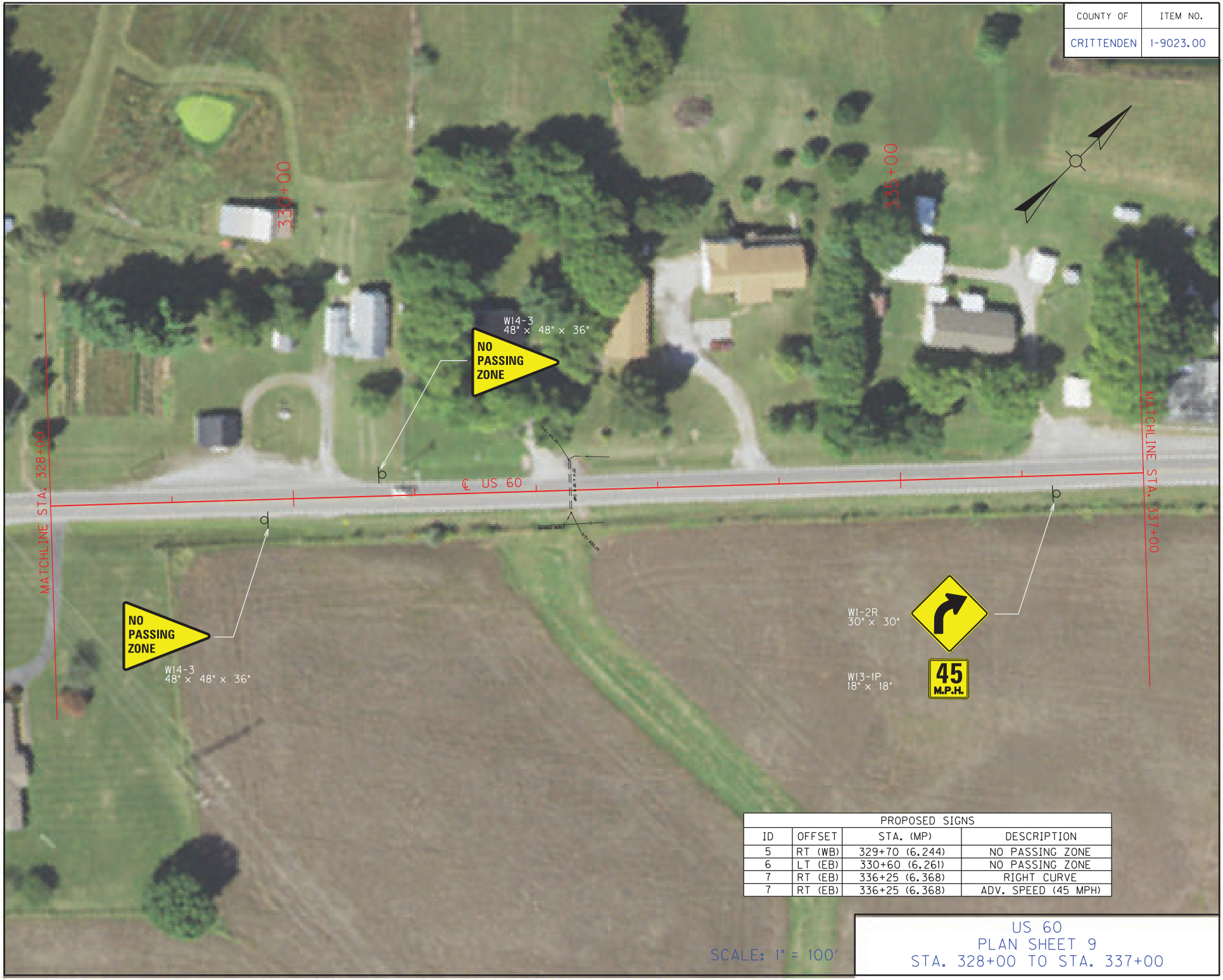
US 60
PLAN SHEET 5
STA. 292+00 TO STA. 301+00


COUNTY OF
CRITTENDEN
ITEM NO.
I-9023.00
GABION BASKET WALL
OFFSET
LT
STA. TO STA.
307+65 - 307+83
LENGTH (LF)
18
MATCHLINE STA. 310+00
310+00
PC 309+16.81
305+00
℄ US 60
MATCHLINE STA. 301+00
US 60
PLAN SHEET 6
STA. 301+00 TO STA. 310+00
SCALE: 1" = 100'


COUNTY OF
CRITTENDEN
ITEM NO.
1-9023.00
MATCHLINE STA. 319+00
℄ US 60
315+00
PT 311+91.27
PI 310+54.38
310+00
MATCHLINE STA. 310+00
US 60
PLAN SHEET 7
STA. 310+00 TO STA. 319+00
SCALE: 1" = 100'


ITEM NO.
I-9023.00
COUNTY OF
CRITTENDEN
MATCHLINE STA. 328+00
US 60
PLAN SHEET 8
STA. 319+00 TO STA. 328+00
SCALE: 1" = 100'
325+00
℄ US 60
PT 321+71.28
PI 320+87.39
320+00
PC 320+03.33
MATCHLINE STA. 319+00

COUNTY OF	ITEM NO.
CRITTENDEN	I-9023.00

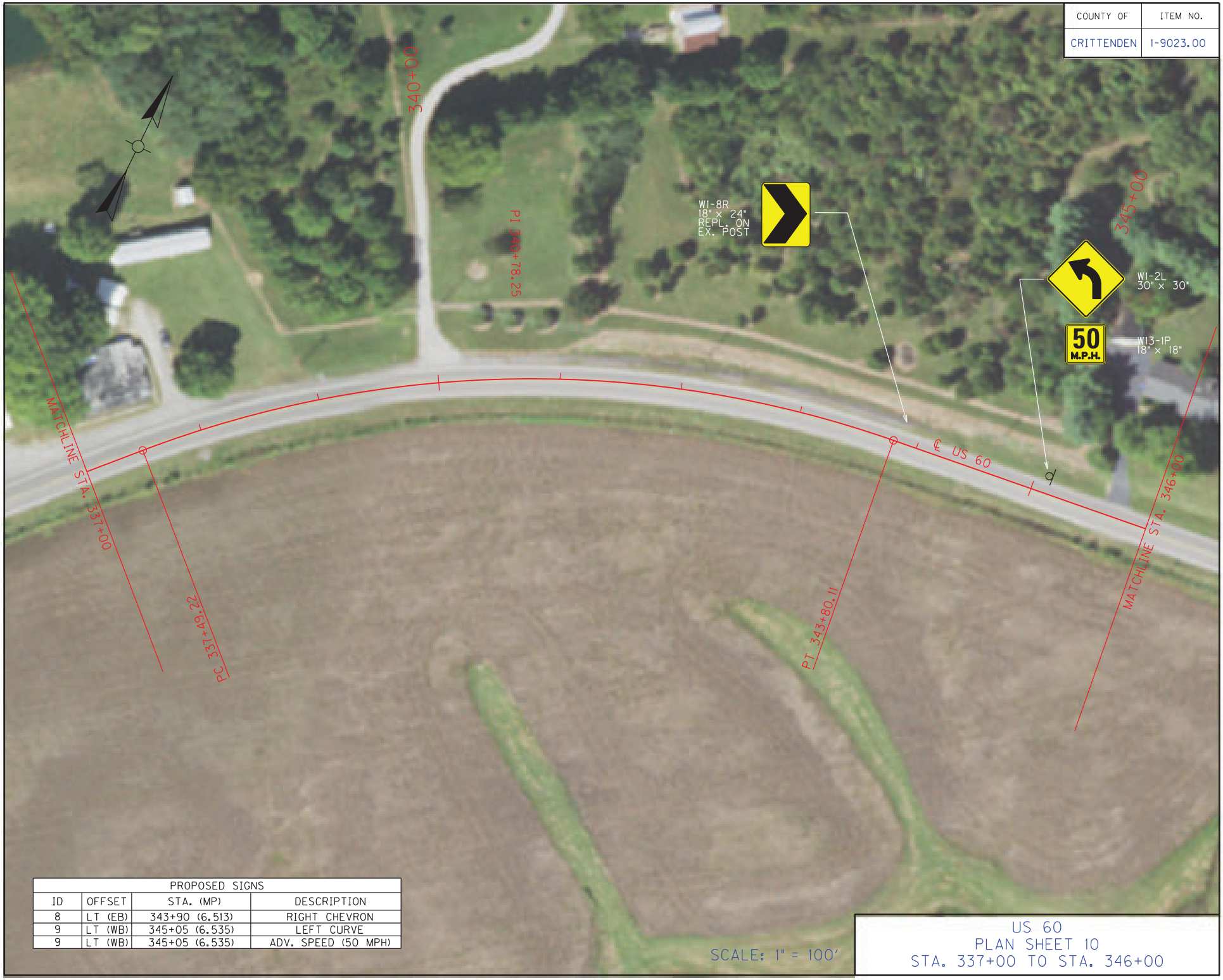


PROPOSED SIGNS			
ID	OFFSET	STA. (MP)	DESCRIPTION
5	RT (WB)	329+70 (6.244)	NO PASSING ZONE
6	LT (EB)	330+60 (6.261)	NO PASSING ZONE
7	RT (EB)	336+25 (6.368)	RIGHT CURVE
7	RT (EB)	336+25 (6.368)	ADV. SPEED (45 MPH)

SCALE: 1" = 100'

US 60
PLAN SHEET 9
STA. 328+00 TO STA. 337+00

COUNTY OF	ITEM NO.
CRITTENDEN	I-9023.00



PROPOSED SIGNS			
ID	OFFSET	STA. (MP)	DESCRIPTION
8	LT (EB)	343+90 (6.513)	RIGHT CHEVRON
9	LT (WB)	345+05 (6.535)	LEFT CURVE
9	LT (WB)	345+05 (6.535)	ADV. SPEED (50 MPH)

SCALE: 1" = 100'

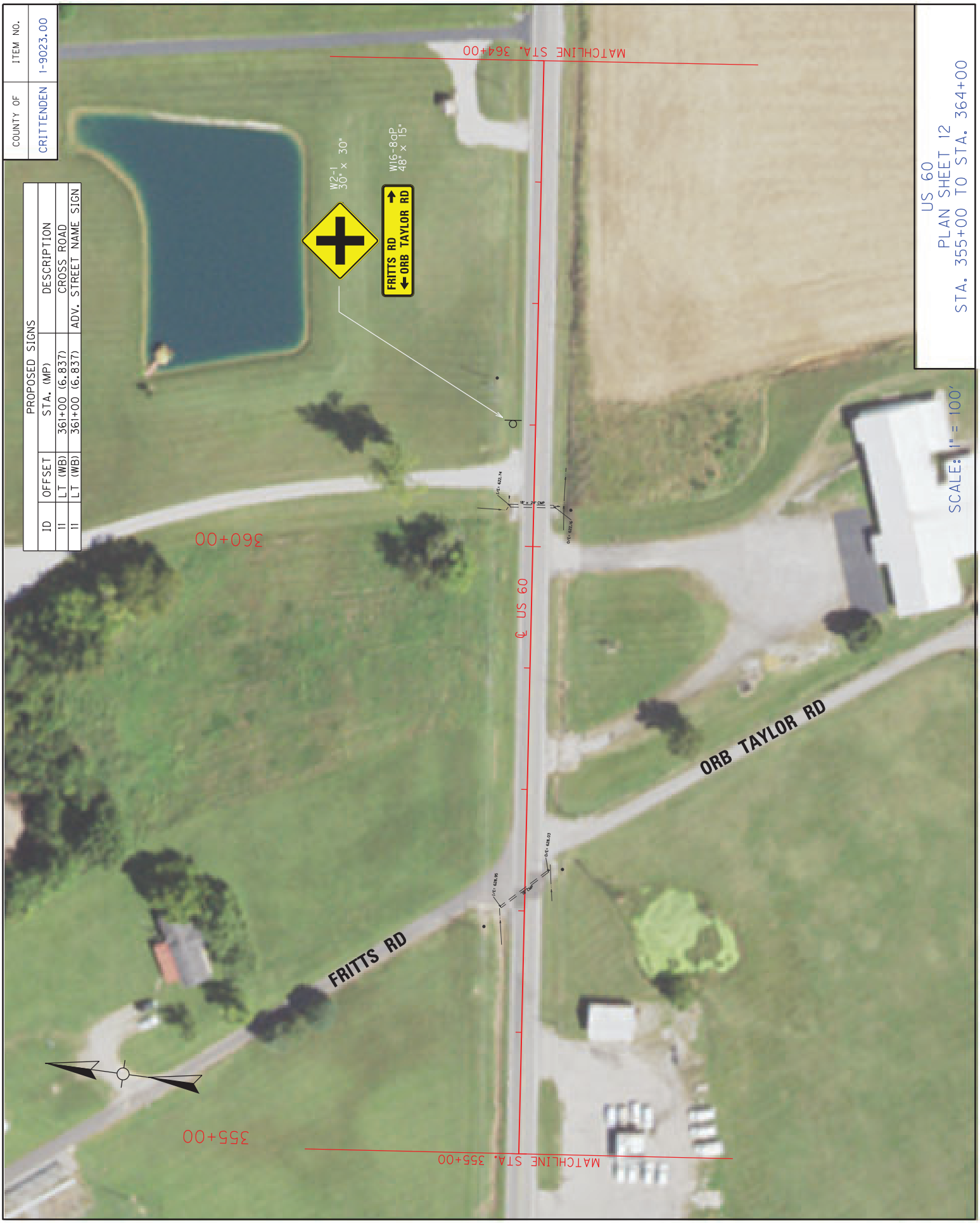
US 60
PLAN SHEET 10
STA. 337+00 TO STA. 346+00

COUNTY OF	ITEM NO.
CRITTENDEN	I-9023.00

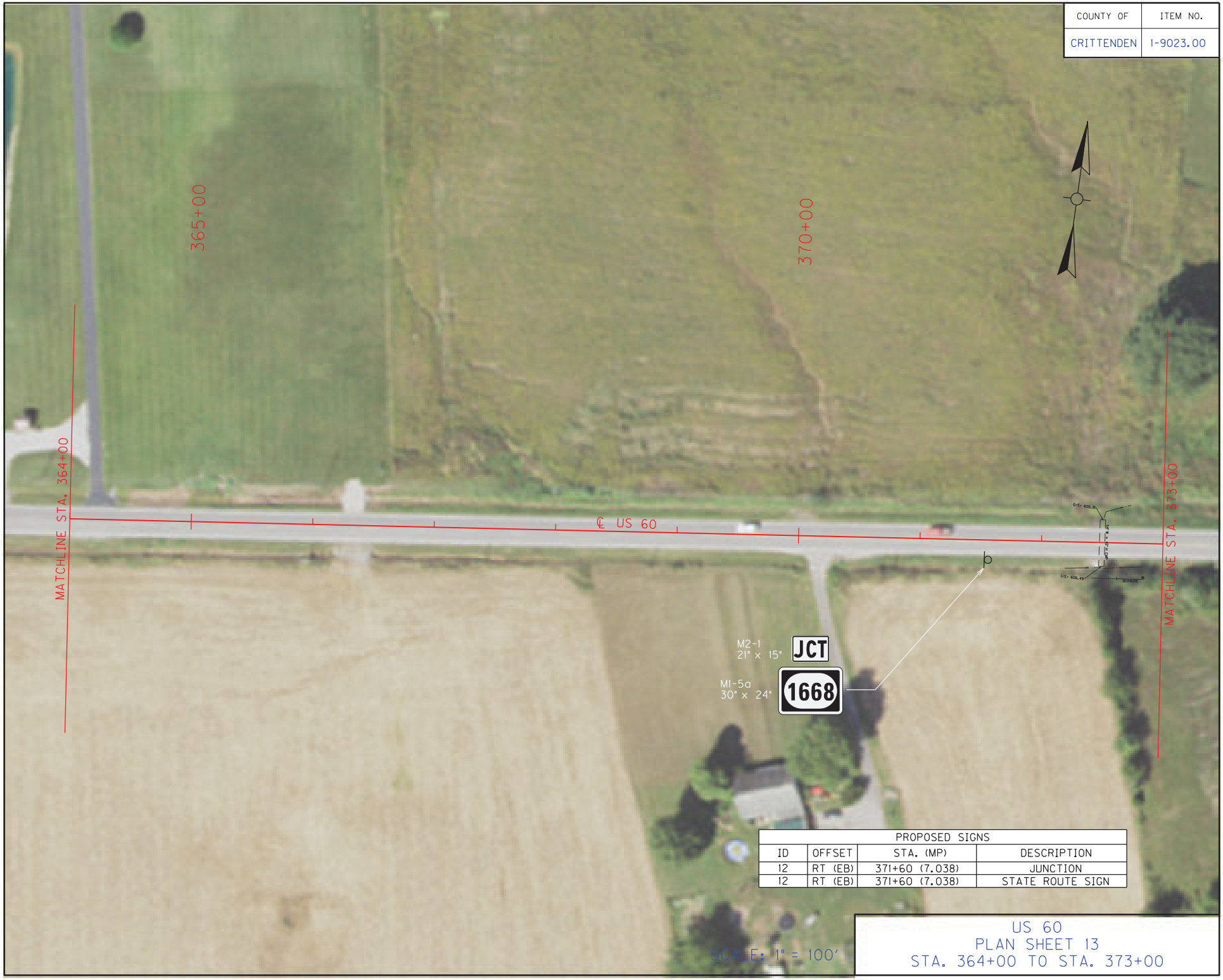
PROPOSED SIGNS			
ID	OFFSET	STA. (MP)	DESCRIPTION
10	RT (EB)	354+15 (6.707)	CROSS ROAD
10	RT (EB)	354+15 (6.707)	ADV. STREET NAME SIGN

SCALE: 1" = 100'

US 60
PLAN SHEET 11
STA. 346+00 TO STA. 355+00


COUNTY OF
CRITTENDEN
ITEM NO.
I-9023.00
PROPOSED SIGNS
ID
OFFSET
STA. (MP)
DESCRIPTION
II
LT (WB)
361+00 (6.837)
CROSS ROAD
II
LT (WB)
361+00 (6.837)
ADV. STREET NAME SIGN
W2-1
30" x 30"
W16-8aP
48" x 15"
FRITTS RD
ORB TAYLOR RD
MATCHLINE STA. 364+00
MATCHLINE STA. 355+00
360+00
355+00
℄ US 60
ORB TAYLOR RD
FRITTS RD
US 60
PLAN SHEET 12
STA. 355+00 TO STA. 364+00
SCALE: 1" = 100'

COUNTY OF	ITEM NO.
CRITTENDEN	I-9023.00



PROPOSED SIGNS			
ID	OFFSET	STA. (MP)	DESCRIPTION
12	RT (EB)	371+60 (7.038)	JUNCTION
12	RT (EB)	371+60 (7.038)	STATE ROUTE SIGN

SCALE: 1" = 100'

US 60
PLAN SHEET 13
STA. 364+00 TO STA. 373+00

COUNTY OF	ITEM NO.
CRITTENDEN	I-9023.00

PROPOSED SIGNS			
ID	OFFSET	STA. (MP)	DESCRIPTION
13	LT (WB)	379+00 (7.178)	STATE ROUTE SIGN
13	LT (WB)	379+00 (7.178)	RIGHT ARROW

SCALE: 1" = 100'

US 60
PLAN SHEET 14
STA. 373+00 TO STA. 382+00

COUNTY OF
CRITTENDEN
ITEM NO.
I-9023.00
US 60
PLAN SHEET 15
STA. 382+00 TO STA. 391+00
SCALE: 1" = 100'
MATCHLINE STA. 391+00
390+00
385+00
℄ US 60
CLAYLICK RD
MATCHLINE STA. 382+00

COUNTY OF	ITEM NO.
CRITTENDEN	I-9023.00

PROPOSED SIGNS			
ID	OFFSET	STA. (MP)	DESCRIPTION
14	RT (WB)	397+00 (7.519)	NO PASSING ZONE

SCALE: 1" = 100'

US 60
PLAN SHEET 16
STA. 391+00 TO STA. 400+00


COUNTY OF
CRITTENDEN
ITEM NO.
I-9023.00
US 60
PLAN SHEET 17
STA. 400+00 TO STA. 409+00
SCALE: 1" = 100'
MATCHLINE STA. 409+00
405+00
PT 403+24.30
℄ US 60
PI 401+98.87
PC 400+73.43
400+00
MATCHLINE STA. 400+00


ITEM NO.
I-9023.00
COUNTY OF
CRITTENDEN
US 60
PLAN SHEET 18
STA. 409+00 TO STA. 418+00
SCALE: 1" = 100'
MATCHLINE STA. 418+00
415+00
AIRPORT RD
GREGORY LN
℄ US 60
BLUEBIRD LN
410+00
MATCHLINE STA. 409+00

COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00

REMOVE GUARDRAIL		
OFFSET	STA. TO STA.	LENGTH
LT	425+90 - 427+00	121
RT	425+81 - 427+60	187.5

INSTALL GUARDRAIL					
OFFSET	STA. TO STA.	LENGTH	TYPE	BEGIN E.T.	END E.T.
LT	425+90 - 426+39	53.75	W-BEAM S-FACE	TS 1	--
LT	426+39 - 426+64	25	W-BEAM S-FACE A	--	--
LT	426+64 - 426+74	9.5	W-BEAM S-FACE BR	--	--
LT	426+74 - 426+99	25	W-BEAM S-FACE A	--	--
LT	426+99 - 427+54	12.5	W-BEAM S-FACE	--	TYPE 1
RT	425+81 - 426+26	--	--	TYPE 1	--
RT	426+26 - 246+51	25	W-BEAM S-FACE A	--	--
RT	426+51 - 426+63	9.5	W-BEAM S-FACE BR	--	--
RT	426+63 - 426+88	25	W-BEAM S-FACE A	--	--
RT	426+88 - 427+54	12.5	W-BEAM S-FACE	--	TYPE 1

420+00

425+00

MATCHLINE STA. 418+00

℄ US 60

MATCHLINE STA. 427+00

STA. 426+65
EXTEND RCBC
SEE STRUCTURAL PLANS
FOR DETAILS

STA. 425+40
BEGIN PAVED SHOULDER WIDENING
BEGIN OVERLAY
CONSTRUCT 26 L.F. EDGE KEY

DITCHING AND SHOULDERING		
OFFSET	STA. TO STA.	LENGTH (LF)
RT	425+80 - 427+00	120
LT	425+90 - 427+00	350

SCALE: 1" = 100'

US 60
PLAN SHEET 19
STA. 418+00 TO STA. 427+00

COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00

DITCHING AND SHOULDERING		
OFFSET	STA. TO STA.	LENGTH (LF)
RT	427+00 - 427+50	50
LT	427+00 - 427+50	50

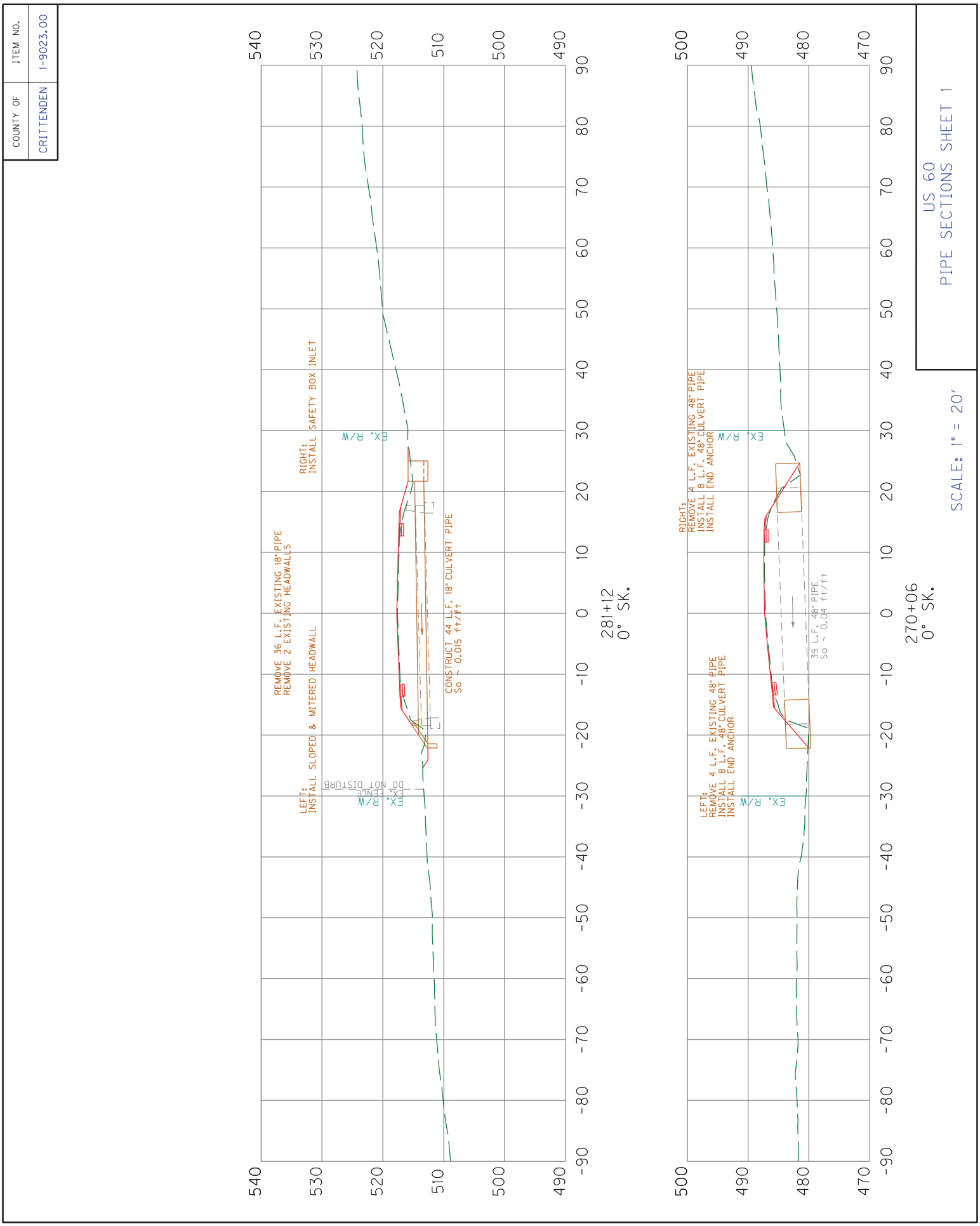
SCALE: 1" = 100'

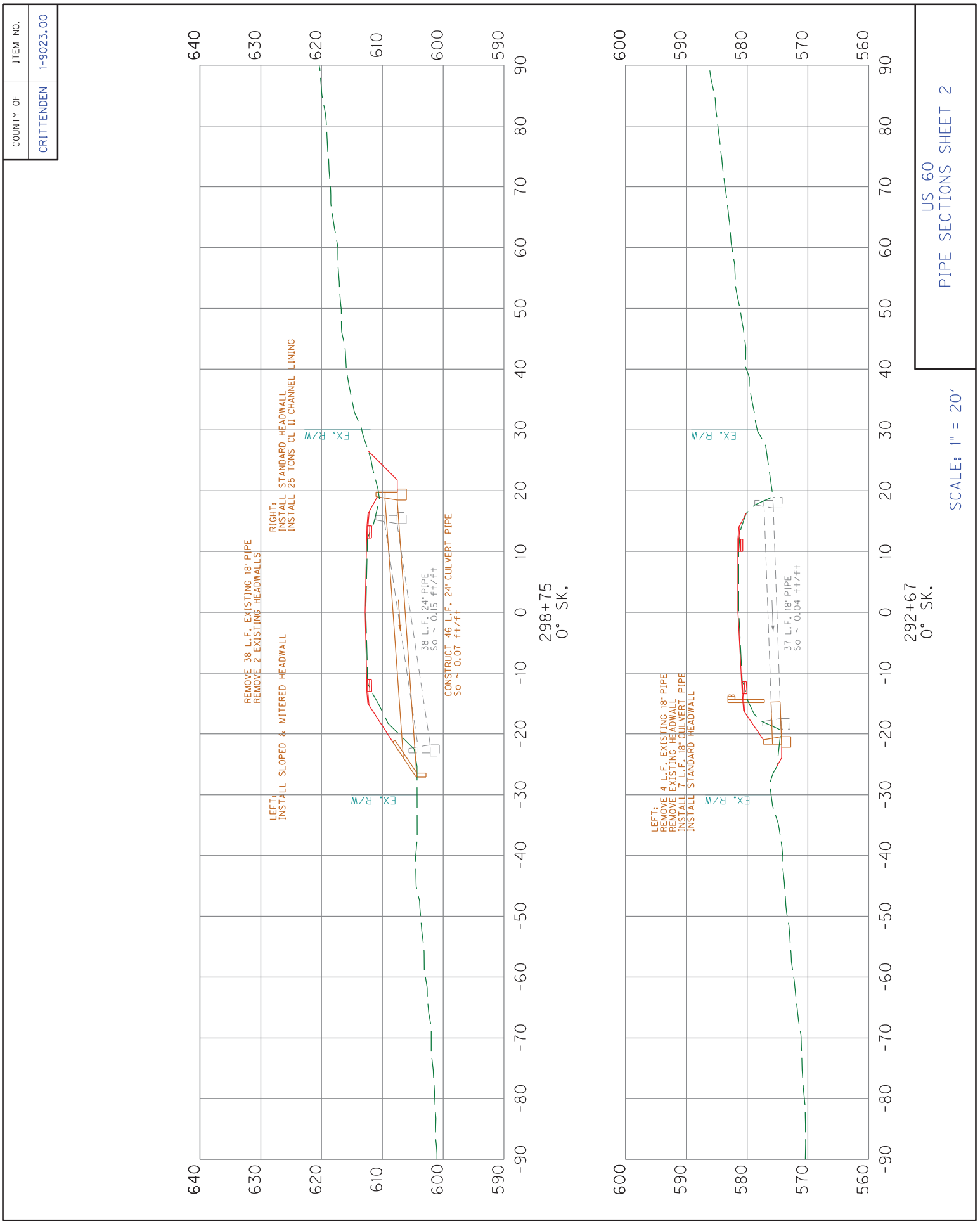
US 60
PLAN SHEET 20
STA. 427+00 TO STA. 436+00


ITEM NO.
I-9023.00
COUNTY OF
CRITTENDEN
US 60
PLAN SHEET 21
STA. 436+00 TO STA. 445+00
SCALE: 1" = 100'
445+00
MATCHLINE STA. 445+00
℄ US 60
440+00
PI 438+95.19
PT 439+27.37
PC 438+63.01
MATCHLINE STA. 436+00

COUNTY OF	ITEM NO.
CRITTENDEN	I-9023.00

US 60
PLAN SHEET 22
STA. 445+00 TO END CONSTRUCTION


COUNTY OF
CRITTENDEN
ITEM NO.
1-9023.00
US 60
PIPE SECTIONS SHEET 1
SCALE: 1" = 20'
281+12
0° SK.
270+06
0° SK.
REMOVE 36 L.F. EXISTING 18" PIPE
REMOVE 2 EXISTING HEADWALLS
LEFT:
INSTALL SLOPED & MITERED HEADWALL
RIGHT:
INSTALL SAFETY BOX INLET
CONSTRUCT 44 L.F. 18" CULVERT PIPE
So ~ 0.015 ft/ft
EX. R/W
EX. FENCE
DO NOT DISTURB
RIGHT:
REMOVE 4 L.F. EXISTING 48" PIPE
INSTALL 8 L.F. 48" CULVERT PIPE
INSTALL END ANCHOR
LEFT:
REMOVE 4 L.F. EXISTING 48" PIPE
INSTALL 8 L.F. 48" CULVERT PIPE
INSTALL END ANCHOR
39 L.F. 48" PIPE
So ~ 0.04 ft/ft


COUNTY OF
CRITTENDEN
ITEM NO.
1-9023.00
US 60
PIPE SECTIONS SHEET 2
SCALE: 1" = 20'
298+75
0° SK.
292+67
0° SK.
EX. R/W
REMOVE 38 L.F. EXISTING 18" PIPE
REMOVE 2 EXISTING HEADWALLS
LEFT:
INSTALL SLOPED & MITERED HEADWALL
RIGHT:
INSTALL STANDARD HEADWALL
INSTALL 25 TONS CL II CHANNEL LINING
38 L.F. 24" PIPE
So ~ 0.15 ft/ft
CONSTRUCT 46 L.F. 24" CULVERT PIPE
So ~ 0.07 ft/ft
LEFT:
REMOVE 4 L.F. EXISTING 18" PIPE
REMOVE EXISTING HEADWALL
INSTALL 37 L.F. 18" CULVERT PIPE
INSTALL STANDARD HEADWALL
37 L.F. 18" PIPE
So ~ 0.04 ft/ft

COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00

GENERAL NOTES

SPECIFICATIONS: ALL REFERENCES TO THE STANDARD SPECIFICATIONS ARE TO THE CURRENT EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION WITH CURRENT SUPPLEMENTAL SPECIFICATIONS. ALL REFERENCES TO THE AASHTO SPECIFICATIONS ARE TO THE CURRENT EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

DESIGN LOAD: THIS STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE CURRENT AASHTO SPECIFICATIONS. THE EFFECTIVE WEIGHT OF FILL MATERIAL IS 120 LBS/CF & THE LIVE LOAD IS THE KYHL-93 TRUCK OR TANDEM. THE LIVE LOADS ARE CALCULATED BY INCREASING THE HL-93 DESIGN TRUCK OR TANDEM BY 25%.

DESIGN METHOD: ALL REINFORCED CONCRETE MEMBERS ARE DESIGNED BY THE LOAD RESISTANCE FACTOR METHOD AS SPECIFIED IN THE AASHTO SPECIFICATIONS.

DESIGN STRESSES: FOR CLASS "A" CONCRETE, $f'c$ = 3,500 P.S.I.
FOR STEEL REINFORCEMENT, Fy = 60,000 P.S.I., n = 9.

CONCRETE: CLASS "A" SHALL BE USED THROUGHOUT.

BEVELED EDGES: ALL EXPOSED EDGES SHALL BE BEVELED ¾" UNLESS OTHERWISE NOTED.

REINFORCEMENT: DIMENSIONS SHOWN FROM THE FACE OF CONCRETE TO BARS ARE TO CENTER OF BARS UNLESS OTHERWISE SHOWN. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS. CLEAR DISTANCE TO FACE OF CONCRETE IS 2" UNLESS OTHERWISE NOTED. BARS DESIGNATED BY SUFFIX (E) SHALL BE EPOXY COATED IN ACCORDANCE WITH SECTION 811.10 OF THE SPECIFICATIONS. BARS DESIGNATED BY SUFFIX (S) SHALL BE CONSIDERED STIRRUPS FOR THE PURPOSE OF BEND DIAMETERS.

BONDING TO EXISTING CONCRETE USING STRUCTURAL ADHESIVES: BOND PROPOSED PLASTIC CONCRETE TO EXISTING HARDENED CONCRETE IN ALL LOCATIONS USING A TYPE V EPOXY RESIN OR OTHER APPROVED STRUCTURAL ADHESIVE AS PRESCRIBED IN SECTION 826 OF THE SPECIFICATIONS. EPOXY GROUT REINFORCING STEEL IN DETAILED LOCATIONS USING A TYPE IV EPOXY MEETING THE REQUIREMENTS OF SECTION 826. FOLLOW THE MANUFACTURER'S APPLICATION INSTRUCTIONS. THE WORK & MATERIAL IS INCIDENTAL TO THE UNIT PRICE FOR CLASS "A" CONCRETE.

CONSTRUCTION NOTE: REMOVE PORTIONS OF THE EXISTING CULVERT TO THE LIMITS SHOWN HEREIN. CENTER 3'-0" LONG, #6 DOWEL BARS @ 12" SPACING INTO THE EXISTING SLAB AND WALLS, EMBEDDED 1'-6" INTO EXISTING CULVERT CONCRETE AND SET WITH AN ADHESIVE ANCHORAGE SYSTEM TO PROVIDE A PULLOUT STRENGTH OF EQUAL OR GREATER CAPACITY THAN THE CORRESPONDING REINFORCING STEEL. THE COST OF THE ALTERNATE SHALL BE INCIDENTAL TO THE UNIT PRICE FOR CLASS "A" CONCRETE.

TEMPORARY SHEETING, SHORING, COFFERDAMS, AND/OR A DEWATERING METHOD MAY BE REQUIRED FOR CONSTRUCTION OF THE CULVERT AND FOOTINGS. INCLUDE ALL COSTS IN THE PRICE BID FOR FOUNDATION PREPARATION.

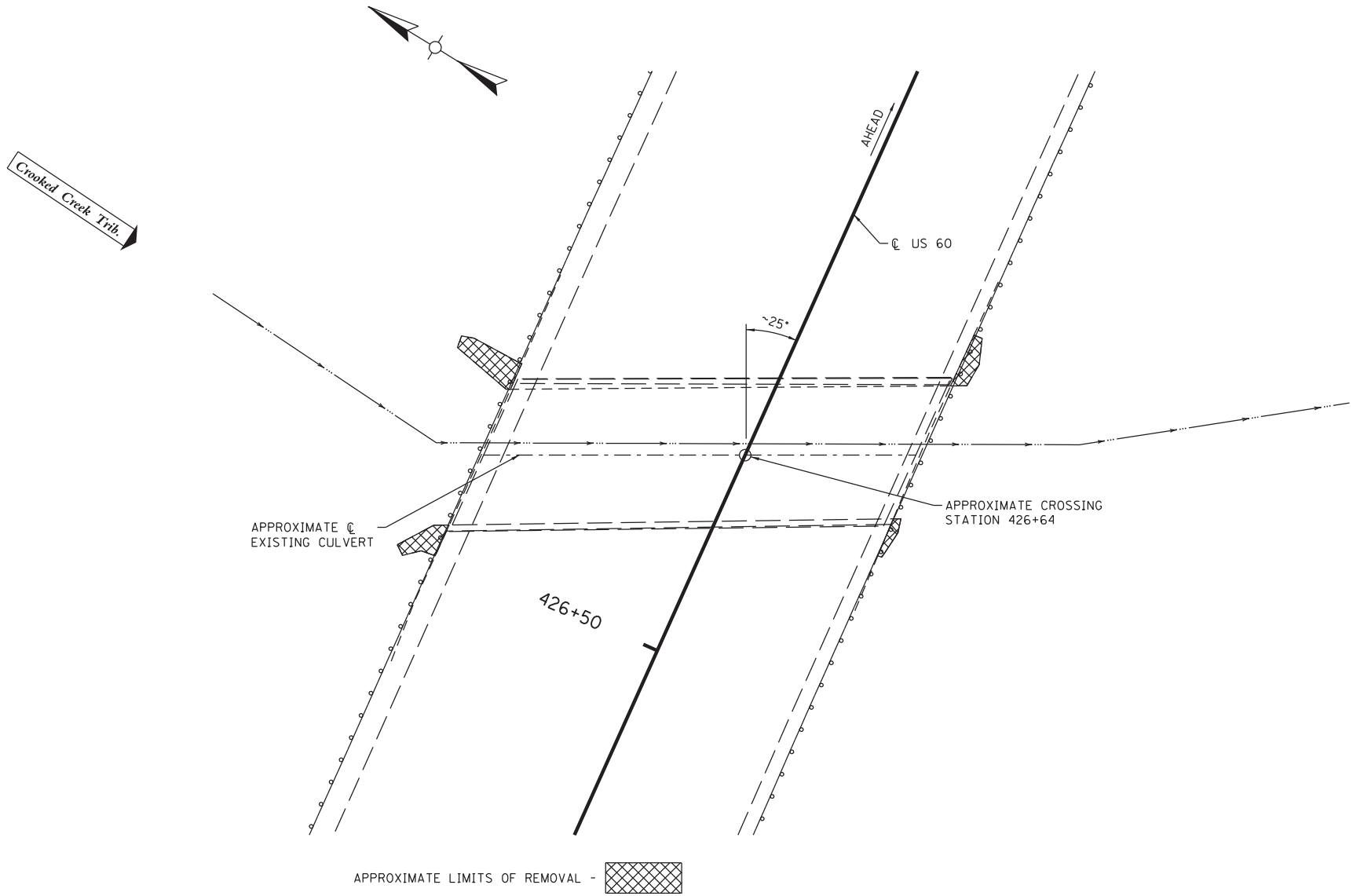
COMPLETION OF STRUCTURE: THE CONTRACTOR IS REQUIRED TO COMPLETE THE STRUCTURE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. MATERIAL, LABOR, OR CONSTRUCTION OPERATIONS, NOT OTHERWISE SPECIFIED, ARE TO BE INCLUDED IN THE BID ITEM MOST APPROPRIATE TO THE WORK INVOLVED. THIS MAY INCLUDE COFFERDAMS, SHORING, EXCAVATIONS, BACKFILLING, REMOVAL OF ALL OR PART OF EXISTING STRUCTURES, PHASED CONSTRUCTION, INCIDENTAL MATERIALS, LABOR OR ANY OTHER ITEMS REQUIRED TO COMPLETE THE STRUCTURE.

CULVERTS WITH UNYIELDING FOUNDATIONS: FOOTINGS MUST BE EXTENDED TO ROCK. THE USE OF GRANULAR REPLACEMENT IS PROHIBITED. CONCRETE QUANTITIES FOR FOOTINGS ARE BASED ON A 1 FT THICKNESS. FOOTINGS SHALL BE EMBEDDED A MINIMUM OF 6 INCHES INTO SOLID BEDROCK. ADDITIONAL CONCRETE REQUIRED ABOVE 1 FT THICKNESS SHALL BE INCIDENTAL TO CLASS "A" CONCRETE.

SOLID ROCK EXCAVATION WILL BE REQUIRED TO REACH FOOTING ELEVATIONS.

US 60 CULVERT EXTENSION
GENERAL NOTES
SHEET 1 OF 10

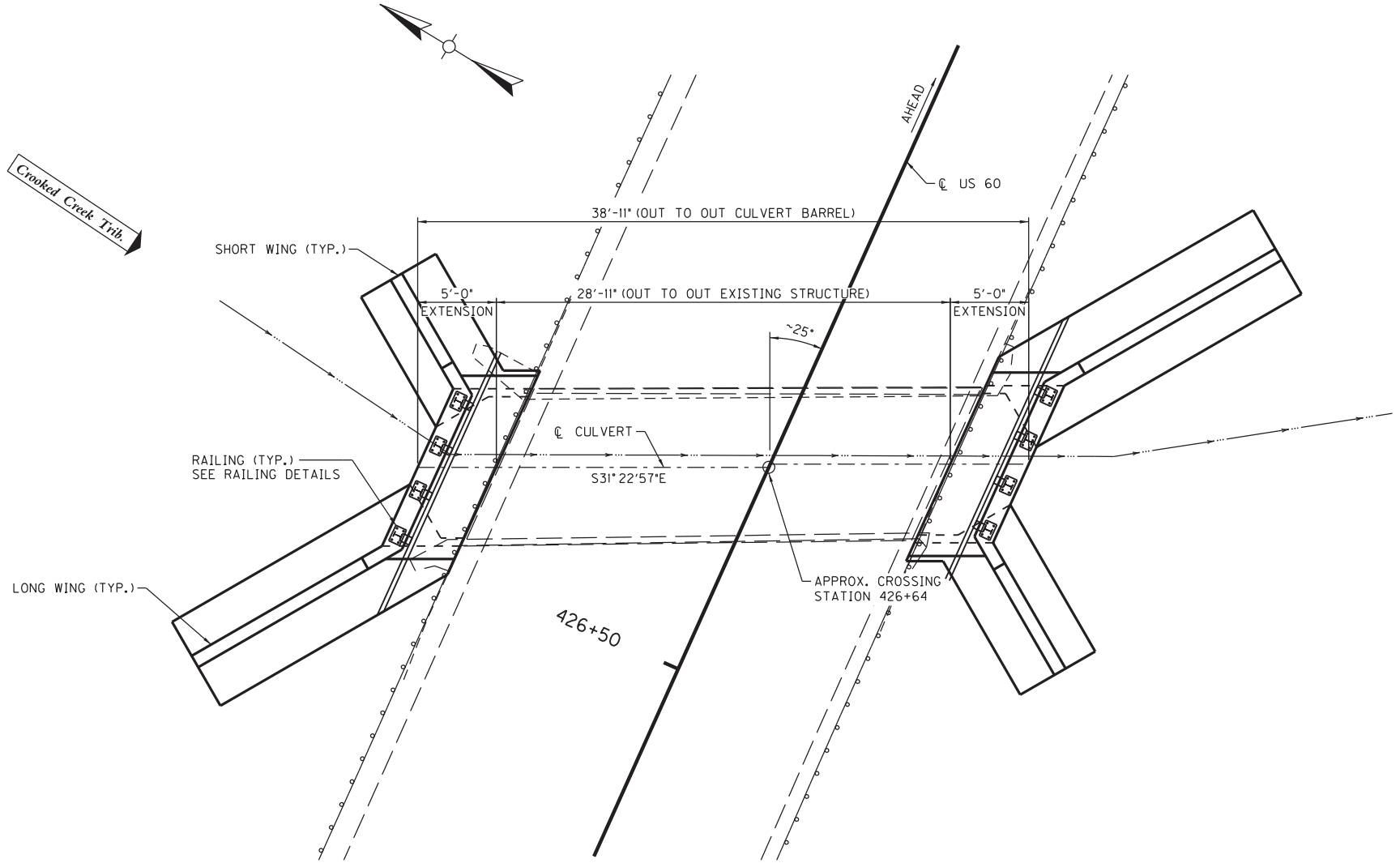
COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00



DEMOLITION OF EXISTING CULVERT

US 60 CULVERT EXTENSION
DEMOLITION LIMITS
SHEET 2 OF 10

COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00



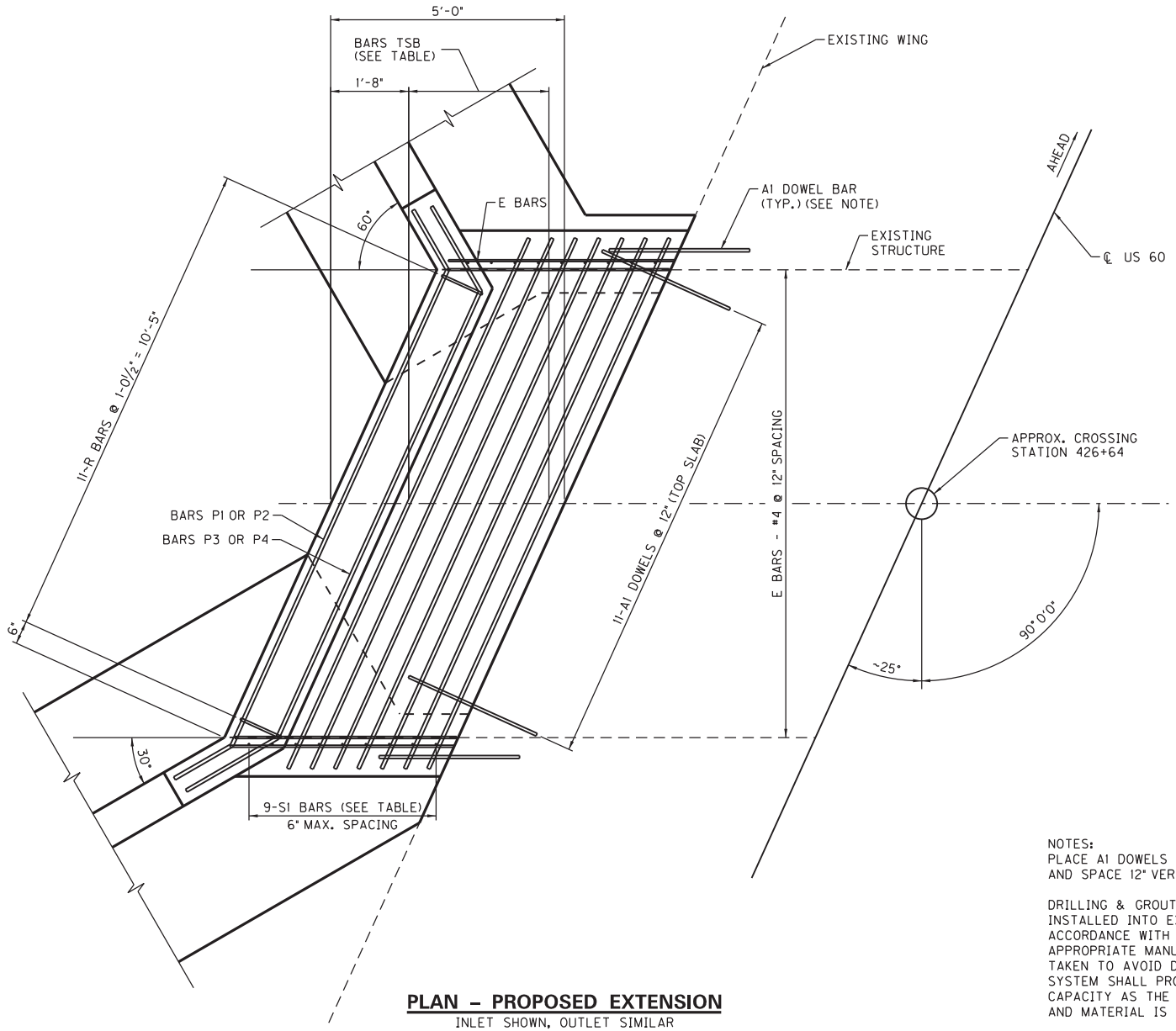
PLAN

NOTES:

1. EXISTING DIMENSIONS ARE FIELD MEASURED. ACTUAL DIMENSIONS, ELEVATIONS, STATIONS, AND SKEW MAY VARY AT TIME OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS, ELEVATIONS, AND SKEW, ADJUSTING AS NEEDED IN CONJUNCTION WITH THE PLANS HEREIN AND AS DIRECTED BY THE ENGINEER.
2. WIDTH OF CULVERT BARREL VARIES ACROSS THE LENGTH. CONTRACTOR TO VERIFY THE WIDTH AND HEIGHT OF BARREL AT INLET AND OUTLET AND MATCH THE EXTREME OUTSIDE BARREL DIMENSIONS.
3. ROADWAY GUARDRAIL IS ATTACHED TO STRUCTURE GUARDRAIL TO FORM A CONTINUOUS UNIT. SEE STD. DWG. BHS-007-08.

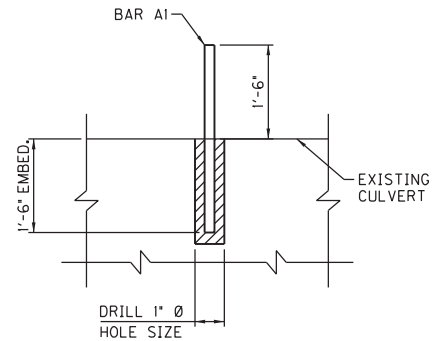
US 60 CULVERT EXTENSION
LAYOUT
SHEET 3 OF 10

COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00



PLAN – PROPOSED EXTENSION

INLET SHOWN, OUTLET SIMILAR



DOWEL DETAIL

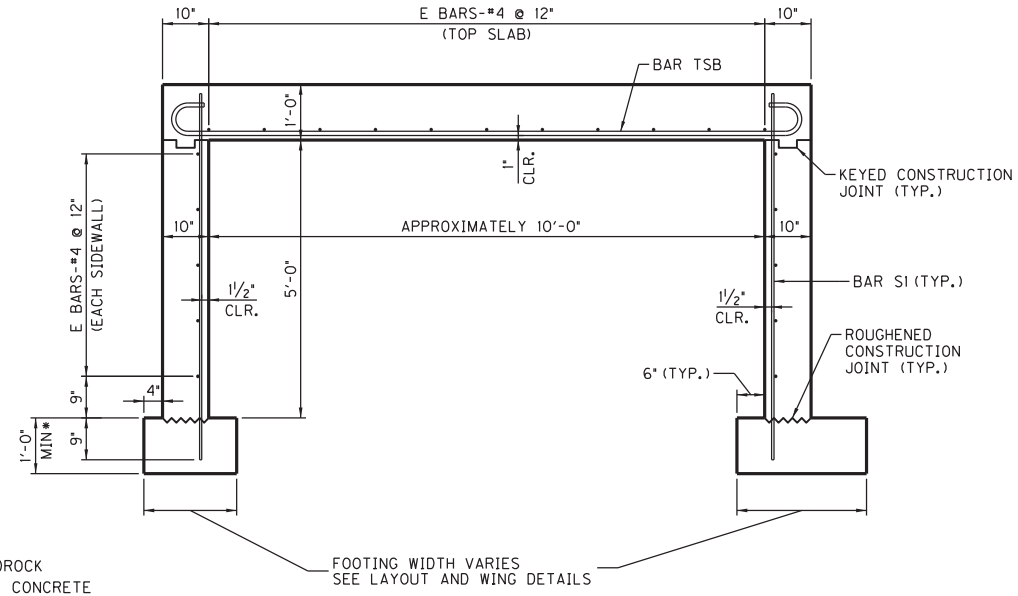
NOTES:
PLACE A1 DOWELS 6" ABOVE FLOWLINE
AND SPACE 12" VERTICALLY (TYP. EACH SIDEWALL)

DRILLING & GROUTING (A1): REINFORCING, DOWELS, AND ANCHORS INSTALLED INTO EXISTING CONCRETE SHALL BE PLACED IN ACCORDANCE WITH SECTION 511 OF THE SPECIFICATIONS AND ANY APPROPRIATE MANUFACTURER'S RECOMMENDATIONS. CARE SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING REINFORCING. THE ANCHORAGE SYSTEM SHALL PROVIDE A PULLOUT STRENGTH OF EQUAL OR GREATER CAPACITY AS THE CORRESPONDING REINFORCING STEEL. THIS WORK AND MATERIAL IS INCIDENTAL TO THE UNIT PRICE OF CONCRETE.

APPLY A COMMERCIAL GRADE CAULKING COMPOUND TO THE EXISTING & NEW TOP SLAB AND SIDEWALL INTERFACES PRIOR TO BACKFILLING. THIS WORK AND MATERIAL IS INCIDENTAL TO THE UNIT PRICE OF CONCRETE.

US 60 CULVERT EXTENSION
BARREL EXTENSION DETAILS
SHEET 4 OF 10

COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00



*KEY FOOTINGS A MINIMUM OF 6" INTO SOLID BEDROCK WITH A MINIMUM THICKNESS OF 1'-0". ANY EXTRA CONCRETE REQUIRED SHALL BE INCIDENTAL TO CLASS "A" CONCRETE.

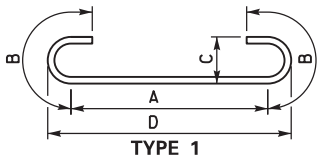
TYPICAL BARREL SECTION
(PERPENDICULAR TO EXISTING ℄ OF CULVERT)

BARREL EXTENSION TABLE

EXIST. DATA		DIMENSIONS		"TSB" – TYPE 1								"S1"			"E"–#4		"A1"–#6	
WIDTH	HEIGHT	EXT. LENGTH	EXT. END	NO.	SIZE	SPA.	LENGTH	A	B	C	D	NO.	SIZE	LENGTH	NO.	LENGTH	NO.	LENGTH
10'-0"	5'-0"	5'-0"	BOTH	14	#7	6"	14'-1"	11'-9"	1'-2"	0'-7"	12'-4"	36	#4	6'-7"	42	4'-10"	42	3'-0"

TABLE NOTE:
EXISTING DATA SHOWN IS APPROXIMATE ONLY. DIMENSIONS SHOWN ARE BASED OFF A PERPENDICULAR BARREL WIDTH OF 10'-0". CONTRACTOR TO CONFIRM EXISTING CONDITIONS AND MAKE ADJUSTMENTS BEFORE ORDERING REINFORCING.

REBAR NOTES:
BARS "A1", "S1", & "E" ARE STRAIGHT BARS. THE TOTAL BAR NUMBER LISTED IN THE TABLE IS THE TOTAL NUMBER REQUIRED FOR STRUCTURE.



TYPE 1

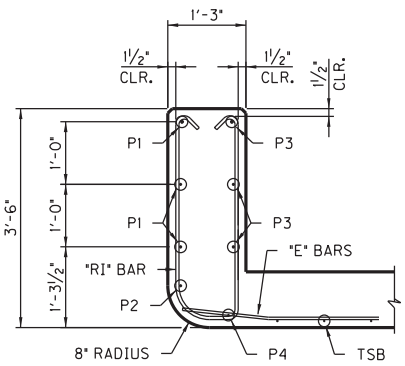
US 60 CULVERT EXTENSION
BARREL EXTENSION DETAILS
SHEET 5 OF 10

COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00

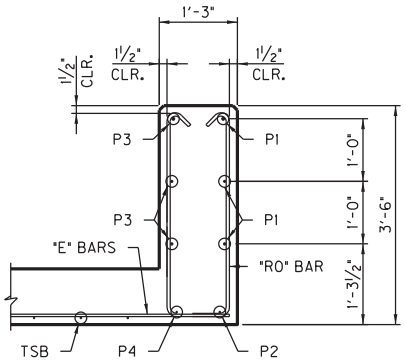
REINFORCED CONCRETE BOX CULVERT PARAPET TABULATION

EXTENSION END	"P1"–#6 & "P2"–#7 (TYPE 7)										"P3"–#6 & "P4"–#7 (TYPE 7)										"RI"	"RO"
	NUMBER		LENGTH	A	B	C	D	E	F	G	NUMBER		LENGTH	A	B	C	D	E	F	G	NO.	NO.
	P1	P2									P3	P4										
BOTH	6	2	14'-1"	11'-2"	1'-6"	1'-5"	1'-2 5/8"	0'-10 1/2"	0'-9 7/8"	1'-1 7/8"	6	2	14'-10"	10'-6"	2'-1"	2'-3"	1'-8 1/2"	1'-2 5/8"	1'-3 3/4"	1'-10 1/8"	11	11

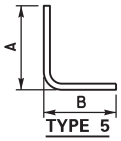
TABLE NOTE:
REINFORCEMENT DIMENSIONS SHOWN ARE APPROXIMATE ONLY. DIMENSIONS SHOWN ARE BASED OFF A PERPENDICULAR BARREL WIDTH OF 10'-0". CONTRACTOR TO CONFIRM EXISTING CONDITIONS AND MAKE ADJUSTMENTS BEFORE ORDERING REINFORCING.



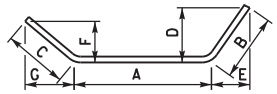
INLET PARAPET DETAIL



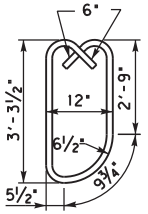
OUTLET PARAPET DETAIL



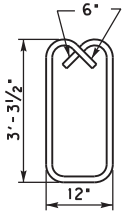
TYPE 5



TYPE 7



TYPE 11
SIZE = #5
LENGTH = 8'-2"

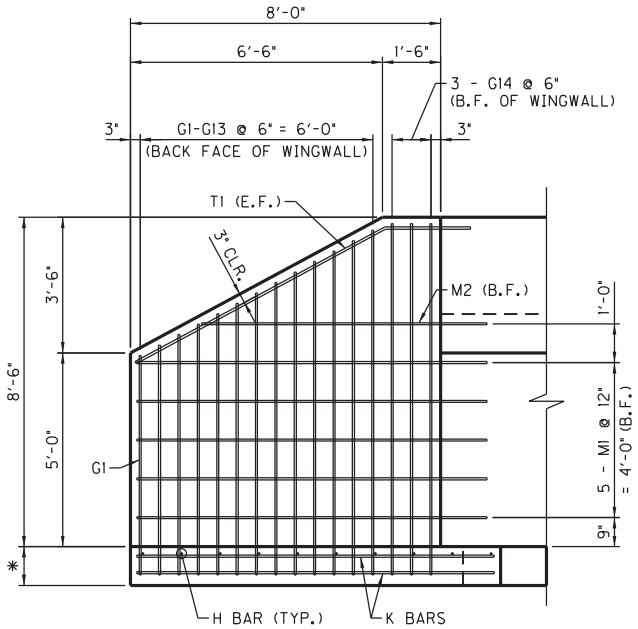


TYPE 12
SIZE = #5
LENGTH = 8'-3"

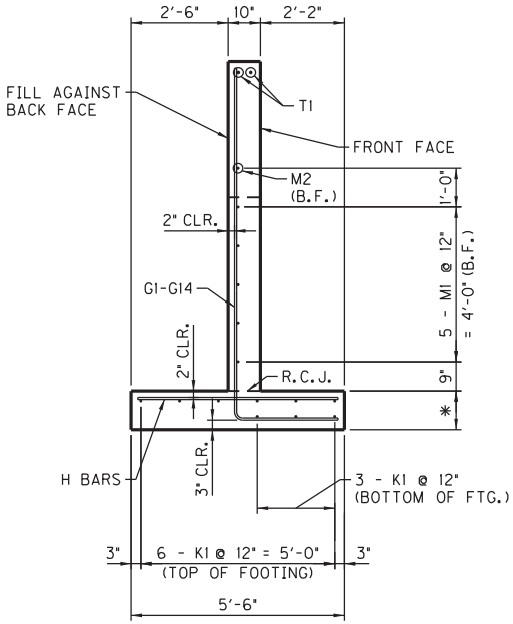
US 60 CULVERT EXTENSION
PARAPET DETAILS
SHEET 6 OF 10

COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00

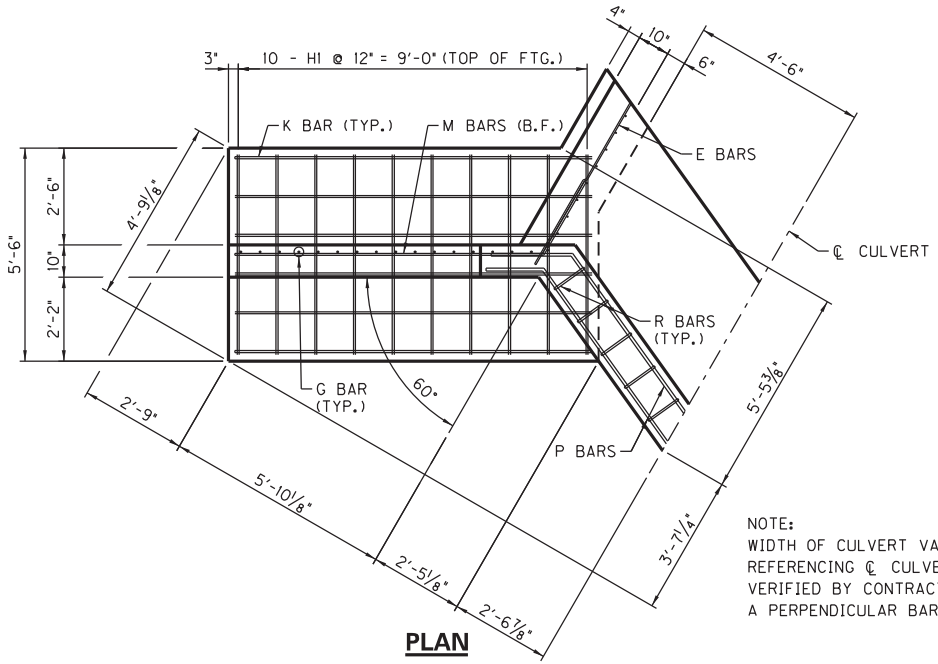
R.C.J. = ROUGHENED CONSTRUCTION JOINT
B.F. = BACK FACE
F.F. = FRONT FACE
E.F. = EACH FACE
DIA. = DIAMETER
FTG. = FOOTING
BOTT. = BOTTOM
TYP. = TYPICAL



ELEVATION



SECTION



PLAN

NOTE :
PLACE 4" DIAMETER WEEPHOLES IN WINGWALLS, 6" ABOVE GROUND LINE AT 8'-0" CENTERS.

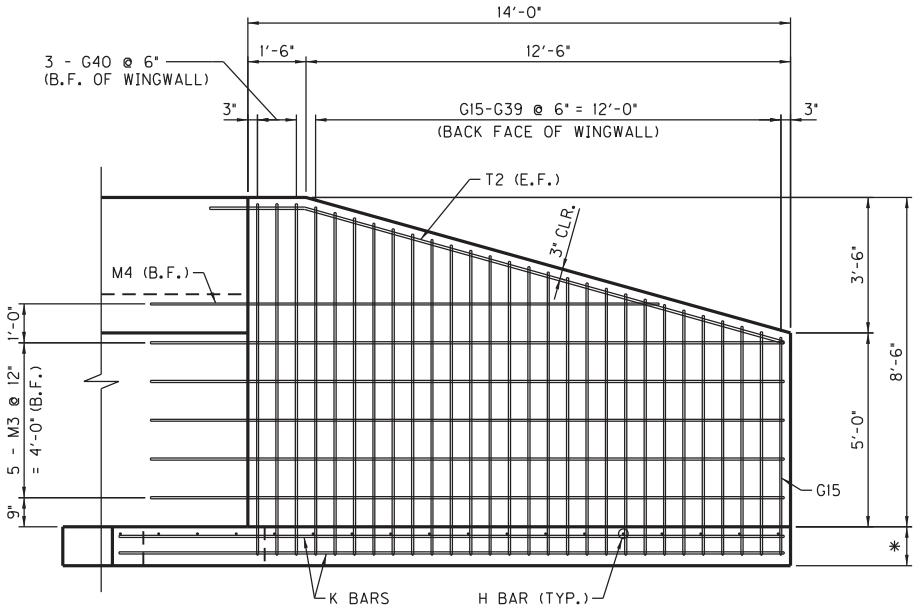
* KEY FOOTINGS A MINIMUM OF 6" INTO SOLID BEDROCK WITH A MINIMUM THICKNESS OF 1'-0". ANY EXTRA CONCRETE REQUIRED SHALL BE INCIDENTAL TO CLASS "A" CONCRETE.

NOTE:
WIDTH OF CULVERT VARIES AT INLET AND OUTLET. DIMENSIONS REFERENCING ℄ CULVERT ARE APPROXIMATE AND SHOULD BE VERIFIED BY CONTRACTOR. DIMENSIONS SHOWN ARE BASED OFF A PERPENDICULAR BARREL WIDTH OF 10'-0".

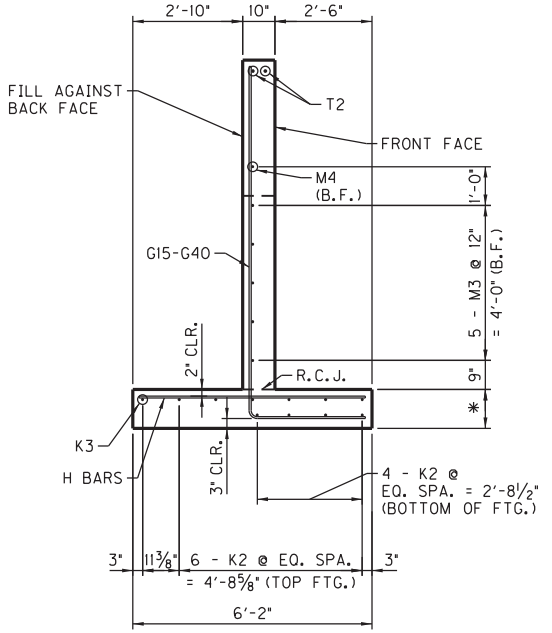
US 60 CULVERT EXTENSION
SHORT WINGWALL DETAILS
SHEET 7 OF 10

COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00

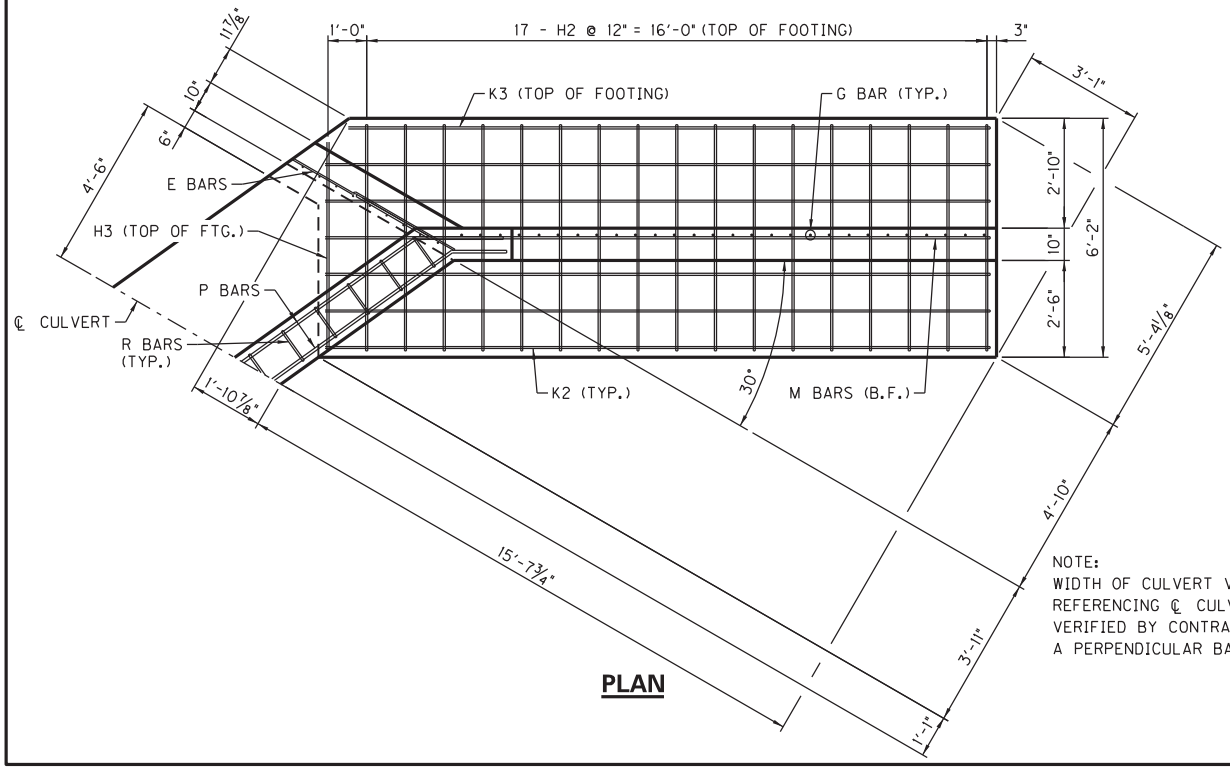
R.C.J. = ROUGHENED CONSTRUCTION JOINT
B.F. = BACK FACE
F.F. = FRONT FACE
E.F. = EACH FACE
DIA. = DIAMETER
FTG. = FOOTING
BOTT. = BOTTOM
EQ. SPA. = EQUAL SPACES
TYP. = TYPICAL



ELEVATION



SECTION



PLAN

NOTE :
PLACE 4" DIAMETER WEEPHOLES IN WINGWALLS, 6" ABOVE GROUND LINE AT 8'-0" CENTERS.

* KEY FOOTINGS A MINIMUM OF 6" INTO SOLID BEDROCK WITH A MINIMUM THICKNESS OF 1'-0". ANY EXTRA CONCRETE REQUIRED SHALL BE INCIDENTAL TO CLASS "A" CONCRETE.

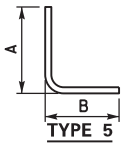
NOTE:
WIDTH OF CULVERT VARIES AT INLET AND OUTLET. DIMENSIONS REFERENCING ℄ CULVERT ARE APPROXIMATE AND SHOULD BE VERIFIED BY CONTRACTOR. DIMENSIONS SHOWN ARE BASED OFF A PERPENDICULAR BARREL WIDTH OF 10'-0".

US 60 CULVERT EXTENSION
LONG WINGWALL DETAILS
SHEET 8 OF 10

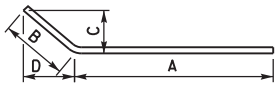
COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00

BILL OF REINFORCEMENT – WINGWALLS

MARK	TYPE	NUMBER	SIZE	LENGTH	LOCATION	A	B	C	D
G1	5	2	#5	8'-3"	B.F. OF WINGWALL-SHORT	5'-8"	2'-8"		
G2	5	2	#5	8'-6"	B.F. OF WINGWALL-SHORT	5'-11 1/4"	2'-8"		
G3	5	2	#5	8'-9"	B.F. OF WINGWALL-SHORT	6'-2 1/2"	2'-8"		
G4	5	2	#5	9'-1"	B.F. OF WINGWALL-SHORT	6'-5 3/4"	2'-8"		
G5	5	2	#5	9'-4"	B.F. OF WINGWALL-SHORT	6'-9"	2'-8"		
G6	5	2	#5	9'-7"	B.F. OF WINGWALL-SHORT	7'-0 1/4"	2'-8"		
G7	5	2	#5	9'-10"	B.F. OF WINGWALL-SHORT	7'-3 1/2"	2'-8"		
G8	5	2	#5	10'-2"	B.F. OF WINGWALL-SHORT	7'-6 3/4"	2'-8"		
G9	5	2	#5	10'-5"	B.F. OF WINGWALL-SHORT	7'-10"	2'-8"		
G10	5	2	#5	10'-8"	B.F. OF WINGWALL-SHORT	8'-1 1/4"	2'-8"		
G11	5	2	#5	10'-11"	B.F. OF WINGWALL-SHORT	8'-4 1/2"	2'-8"		
G12	5	2	#5	11'-3"	B.F. OF WINGWALL-SHORT	8'-7 3/4"	2'-8"		
G13	5	2	#5	11'-6"	B.F. OF WINGWALL-SHORT	8'-11"	2'-8"		
G14	5	6	#5	11'-8"	B.F. OF WINGWALL-SHORT	9'-1"	2'-8"		
G15	5	2	#5	8'-7"	B.F. OF WINGWALL-LONG	5'-7 5/8"	3'-0"		
G16	5	2	#5	8'-9"	B.F. OF WINGWALL-LONG	5'-9 3/8"	3'-0"		
G17	5	2	#5	8'-10"	B.F. OF WINGWALL-LONG	5'-11"	3'-0"		
G18	5	2	#5	9'-0"	B.F. OF WINGWALL-LONG	6'-0 3/4"	3'-0"		
G19	5	2	#5	9'-2"	B.F. OF WINGWALL-LONG	6'-2 3/8"	3'-0"		
G20	5	2	#5	9'-4"	B.F. OF WINGWALL-LONG	6'-4 1/8"	3'-0"		
G21	5	2	#5	9'-5"	B.F. OF WINGWALL-LONG	6'-5 3/4"	3'-0"		
G22	5	2	#5	9'-7"	B.F. OF WINGWALL-LONG	6'-7 1/2"	3'-0"		
G23	5	2	#5	9'-8"	B.F. OF WINGWALL-LONG	6'-9"	3'-0"		
G24	5	2	#5	9'-10"	B.F. OF WINGWALL-LONG	6'-10 3/4"	3'-0"		
G25	5	2	#5	10'-0"	B.F. OF WINGWALL-LONG	7'-0 1/2"	3'-0"		
G26	5	2	#5	10'-2"	B.F. OF WINGWALL-LONG	7'-2 1/8"	3'-0"		
G27	5	2	#5	10'-3"	B.F. OF WINGWALL-LONG	7'-3 7/8"	3'-0"		
G28	5	2	#5	10'-5"	B.F. OF WINGWALL-LONG	7'-5 1/2"	3'-0"		
G29	5	2	#5	10'-7"	B.F. OF WINGWALL-LONG	7'-7 1/4"	3'-0"		
G30	5	2	#5	10'-8"	B.F. OF WINGWALL-LONG	7'-8 7/8"	3'-0"		
G31	5	2	#5	10'-10"	B.F. OF WINGWALL-LONG	7'-10 1/2"	3'-0"		
G32	5	2	#5	11'-0"	B.F. OF WINGWALL-LONG	8'-0 1/4"	3'-0"		
G33	5	2	#5	11'-1"	B.F. OF WINGWALL-LONG	8'-1 7/8"	3'-0"		
G34	5	2	#5	11'-3"	B.F. OF WINGWALL-LONG	8'-3 5/8"	3'-0"		
G35	5	2	#5	11'-5"	B.F. OF WINGWALL-LONG	8'-5 1/4"	3'-0"		
G36	5	2	#5	11'-6"	B.F. OF WINGWALL-LONG	8'-7"	3'-0"		
G37	5	2	#5	11'-8"	B.F. OF WINGWALL-LONG	8'-8 5/8"	3'-0"		
G38	5	2	#5	11'-10"	B.F. OF WINGWALL-LONG	8'-10 3/8"	3'-0"		
G39	5	2	#5	11'-11"	B.F. OF WINGWALL-LONG	9'-0"	3'-0"		
G40	5	6	#5	12'-0"	B.F. OF WINGWALL-LONG	9'-1"	3'-0"		
H1	STR	20	#5	5'-2"	WINGWALL FOOTING-SHORT				
H2	STR	34	#5	5'-10"	WINGWALL FOOTING-LONG				
H3	STR	2	#5	5'-4"	WINGWALL FOOTING-LONG				
K1	STR	18	#5	9'-3"	WINGWALL FOOTING-SHORT				
K2	STR	20	#5	17'-2"	WINGWALL FOOTING-LONG				
K3	STR	2	#5	16'-7"	WINGWALL FOOTING-LONG				
M1	8	10	#5	10'-9"	B.F. OF WINGWALL-SHORT	7'-11 1/2"	2'-9"	2'-4 1/2"	1'-4 1/2"
M2	8	2	#5	9'-1	B.F. OF WINGWALL-SHORT	6'-3 1/2"	2'-9"	2'-4 1/2"	1'-4 1/2"
M3	8	10	#5	17'-3"	B.F. OF WINGWALL-LONG	14'-5 1/2"	2'-9"	2'-4 1/2"	1'-4 1/2"
M4	8	2	#5	14'-0"	B.F. OF WINGWALL-LONG	11'-3"	2'-9"	2'-4 1/2"	1'-4 1/2"
T1	8	4	#6	8'-10"	TOP OF WINGWALL-SHORT	7'-3 3/4"	1'-6"	0'-8 1/2"	1'-4"
T2	8	4	#6	14'-4"	TOP OF WINGWALL-LONG	12'-10"	1'-6"	0'-8 1/2"	1'-4"



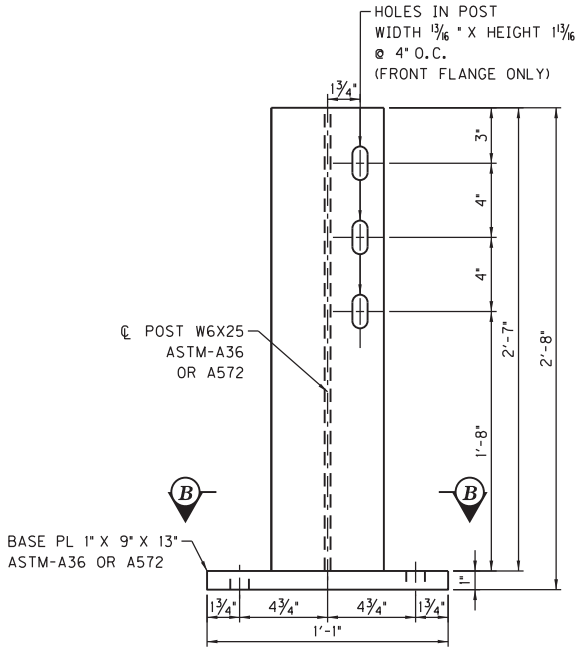
TYPE 5



TYPE 8

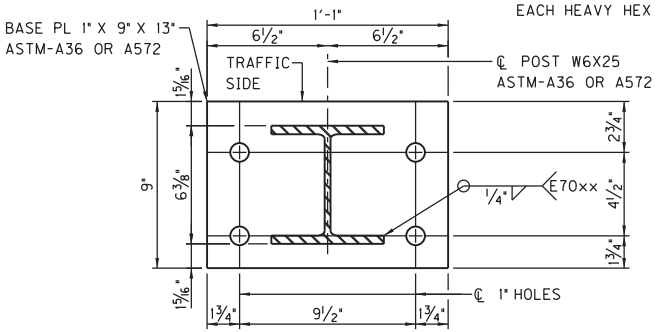
US 60 CULVERT EXTENSION
WINGWALL REINFORCEMENT
SHEET 9 OF 10

COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00



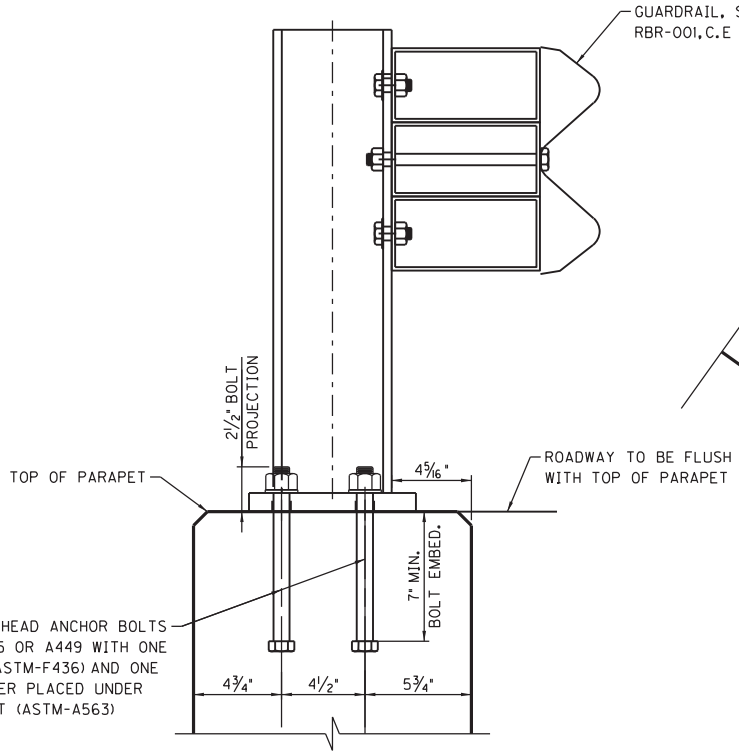
POST ELEVATION

(ONLY POST AND BASE PLATE SHOWN FOR CLARITY)

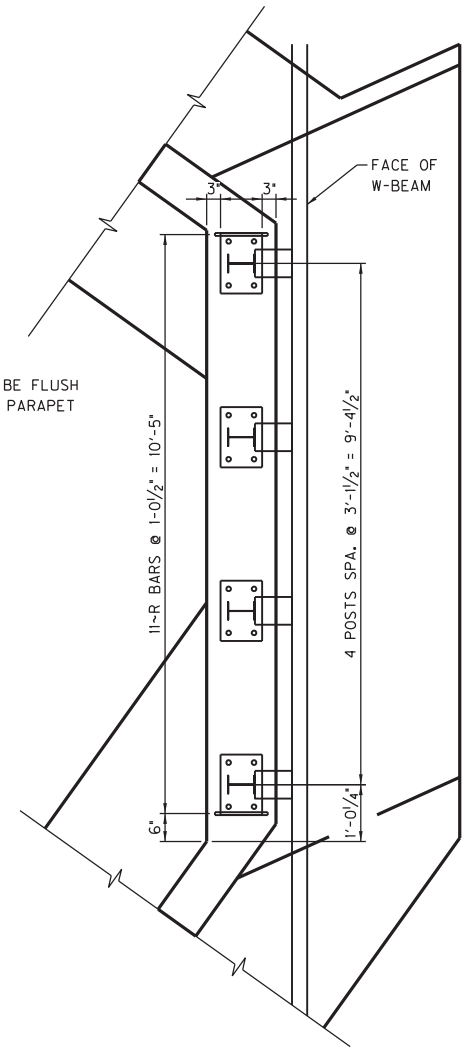


SECTION B–B

(BASE PLATE)



SECTION A–A



PLAN

(INLET SHOWN, OUTLET SIMILAR BUT OPPOSITE HAND)

GENERAL NOTES:

1. SEE BDP-005-06 FOR ALL DETAILS PERTAINING TO PARAPET MOUNTED GUARDRAIL COMPONENTS NOT DETAILED ON THIS SHEET.

CONSTRUCTION NOTES:

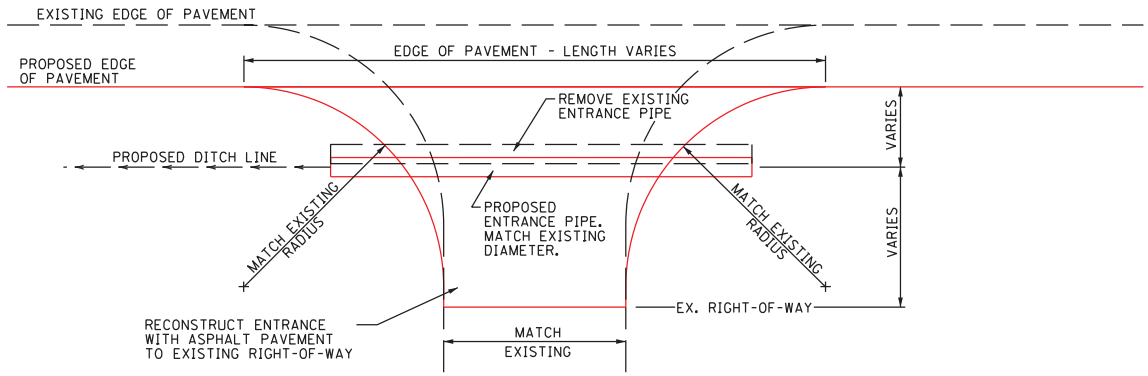
2. FACE OF RAIL POST MUST BE PLUMB UNLESS OTHERWISE APPROVED BY THE ENGINEER. POST MUST BE PERPENDICULAR TO ADJACENT ROADWAY GRADE.
3. USE EPOXY MORTAR WITH TYPE III BINDER CONFORMING TO SECTION 826 AND ASTM C881 UNDER POST BASE PLATES IF GAPS LARGER THAN 1/16" EXIST.
4. ROUND OR CHAMFER EXPOSED EDGES OF RAIL POSTS AND BACKER PLATE TO APPROXIMATELY 1/16" BY GRINDING.
5. SHOP DRAWINGS ARE NOT REQUIRED.

MATERIAL NOTES:

6. GALVANIZE ALL STEEL COMPONENTS.
7. ANCHOR BOLTS FOR BASE PLATE MUST BE 7/8"Ø ASTM-F3125 GR. A325 OR A449 BOLTS WITH ONE HARDENED WASHER (ASTM-F436) AND ONE REGULAR LOCK WASHER PLACED UNDER EACH HEAVY HEX NUT. NUTS MUST CONFORM TO ASTM-A563 REQUIREMENTS.
8. W-BEAM MUST MEET THE REQUIREMENTS OF STD. DWG. RBR-001, C.E. EXCEPT AS MODIFIED IN STD. DWG. BHS-012,C.E.

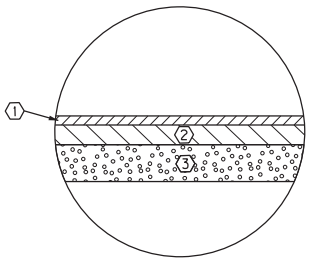
US 60 CULVERT EXTENSION
RAILING DETAILS
SHEET 10 OF 10

COUNTY OF	ITEM NO.
CRITTENDEN	1-9023.00



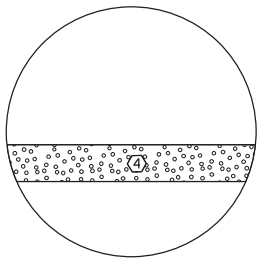
ENTRANCE DETAIL

RT. STA. 281+97 (GRAVEL)
RT. STA. 299+30 (ASPHALT)



ASPHALT ENTRANCE
NTS

1. 1.50" CL2 ASPH SURFACE 0.38B PG64-22
2. 2.00" CL2 ASPH BASE 1.00D PG64-22
3. 4.00" DGA



GRAVEL ENTRANCE
NTS

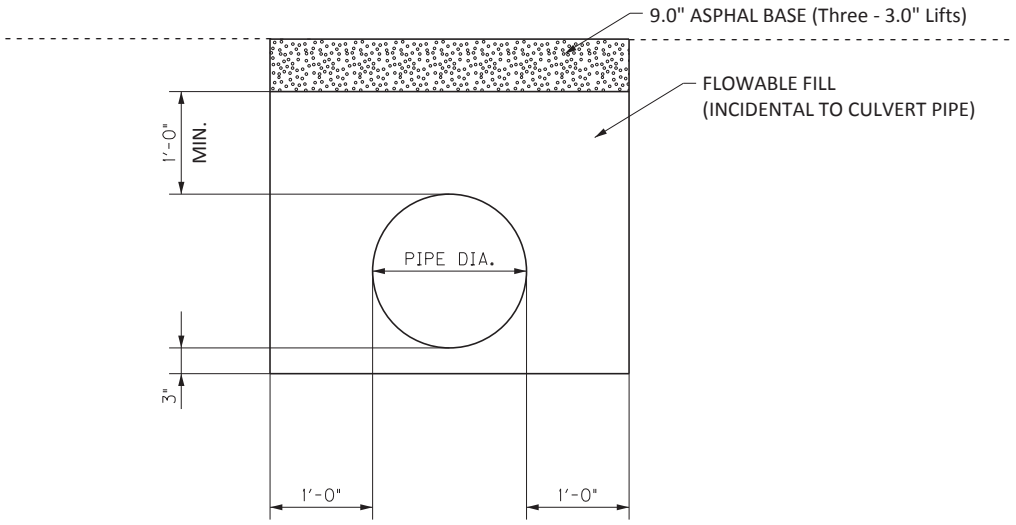
4. 6.00" DGA

N.T.S.

US 62
ENTRANCE DETAIL SHEET

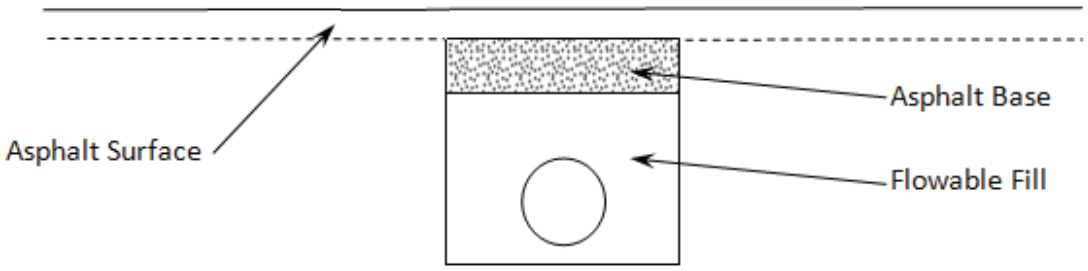
1-9023.00

CULVERT PIPE REPLACEMENT DETAIL

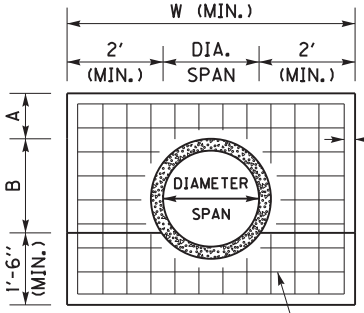


CULVERT PIPE REPLACEMENTS - INITAL BACKFILL

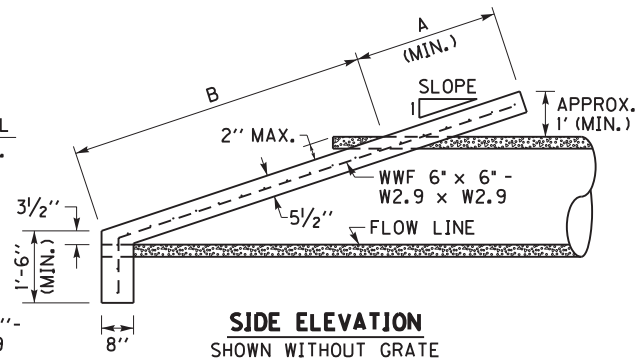
Culvert Pipe Replacements shall be constructed according to the Inital Backfill Detail shown above, or as directed by the Engineer. Allow the asphalt base to be exposed to traffic a minimum of 14 days to allow for settlement before placing asphalt surface.



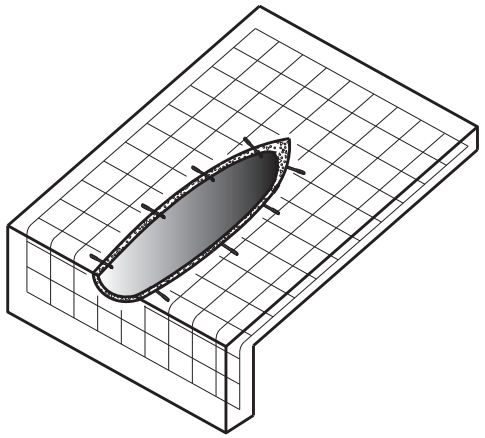
COUNTY OF	ITEM NO.	SHEET NO.



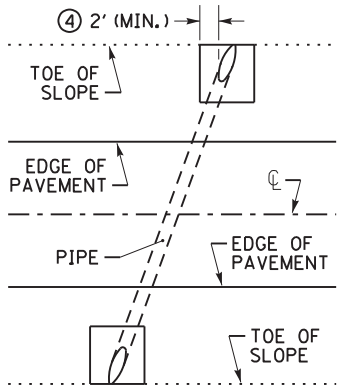
END ELEVATION
SHOWN WITH WOVEN WIRE REINFORCEMENT



SIDE ELEVATION
SHOWN WITHOUT GRATE



ISOMETRIC VIEW
SHOWN WITH WOVEN WIRE REINFORCEMENT AND WEDGE ANCHORS



PLAN VIEW
SHOWN WHEN THE PIPE IS ON A SKEW ④

~ NOTES ~

1. FOR PIPES THAT RECEIVE THE SLOPED & MITERED CONCRETE HEADWALL, THE PIPE LENGTH SHALL BE MEASURED TO THE FURTHEST POINT ALONG THE MITERED END OF THE PIPE.
2. THE EMBANKMENT FILL MATERIAL IS TO BE PLACED, COMPACTED, AND GRADED AROUND THE PIPE BEFORE THE CONCRETE SLOPE PAVING IS PLACED. THE INTENT IS FOR THE SLOPED & MITERED HEADWALL TO MATCH THE FINAL EMBANKMENT SLOPE.
3. THE PIPE SHALL BE MITERED AFTER THE CONCRETE SLOPE PAVING HAS BEEN PLACED AND SUFFICIENTLY CURED. THE PIPE SHOULD BE MITERED AS CLOSE TO FLUSH WITH THE SLOPE PAVING AS POSSIBLE, AND NO HIGHER THAN 2" ABOVE THE SLOPE PAVING. HAND FINISHING AND/OR CUTTING MAY BE NECESSARY.
④ WHEN THE PIPE IS ON A SKEW, INSTALL THE HEADWALL AND MITER THE PIPE SO THAT THE CONCRETE SLOPE PAVING IS PERPENDICULAR TO THE ROADWAY. FOR HEADWALLS ON SKEWED PIPES, THE HEADWALL WIDTH, W, SHALL BE WIDENED, AS NEEDED, SO THAT THE OUTSIDE EDGE OF THE CONCRETE SLOPE PAVING IS A MINIMUM OF 2' FROM THE OUTER MOST EDGE OF THE PIPE.
5. THE DIMENSION 'A' IS BASED ON THE FINAL GRADED SLOPE. THE DIMENSION 'B' IS BASED ON CIRCULAR REINFORCED CONCRETE PIPE AT 0° SKEW FOR THE LISTED SLOPE. THE DIMENSION 'W' IS BASED ON THE DIAMETER, OR SPAN, OF THE PIPE. THE FINAL HEADWALL DIMENSIONS AND CONCRETE QUANTITIES MAY VARY BASED ON THE FINAL GRADED SLOPE, PIPE SKEW, AND/OR TYPE OF PIPE.
6. WOVEN WIRE REINFORCEMENT (WWF 6"x6" - W2.9xW2.9) IS REQUIRED FOR THE SLOPE PAVING AND TOE WALL. UTILIZE 2" CLEARANCE FROM ALL EDGES.
7. DIMENSIONS AND CONCRETE QUANTITIES SHOWN ARE FOR ONE (1) HEADWALL, INSTALLED ON A PIPE WITH SKEW = 0°.
8. AFTER THE PIPE HAS BEEN MITERED, ANCHOR THE PIPE TO THE CONCRETE SLOPE PAVING BY CORE DRILLING AND INSTALLING 1/2" DIAMETER x 7" LENGTH STEEL WEDGE ANCHORS (3" MINIMUM EMBEDMENT) ON 18" CENTERS ALONG THE SIDES OF THE PIPE. HOLE SIZE & DEPTH, TORQUE, & INSTALLATION PROCEDURES PER RECOMMENDATION OF ANCHOR MANUFACTURE. NOTE: STEEL WEDGE ANCHORS ARE NOT REQUIRED FOR REINFORCED CONCRETE PIPE.
⑨ THE FOLLOWING SITUATIONS REQUIRE A HEADWALL WITH A GRATE:
-24" DIAMETER PIPE ON GREATER THAN 30° SKEW
-30" DIAMETER PIPE ON GREATER THAN 15° SKEW
-PIPE WITH GREATER THAN 30" DIAMETER.
-ELLIPTICAL PIPE GREATER THAN 24" EQUIVALENT DIAMETER
SEE SHEET 2 FOR GRATE DETAILS
10. ALL BOLTS AND HARDWARE SHALL BE RUST RESISTANT: ZINC PLATED, STAINLESS STEEL, OR STEEL THAT HAS BEEN GALVANIZED IN ACCORDANCE WITH AASHTO M 232.

DIMENSIONS AND CONCRETE QUANTITIES (FOR PIPE WITH SKEW = 0°) ④

PIPE SIZE	3:1 SLOPE				4:1 SLOPE				6:1 SLOPE				GRATE REQUIRED
	A	B	W	CU. YDS. CONCRETE	A	B	W	CU. YDS. CONCRETE	A	B	W	CU. YDS. CONCRETE	
15"	3'	3'-7½"	5'-3"	0.74	4'	4'-8¾"	5'-3"	0.93	6'	6'-11¾"	5'-3"	1.29	NO
18"	3'	4'-5¾"	5'-6"	0.85	4'	5'-10"	5'-6"	1.05	6'	8'-7¼"	5'-6"	1.48	NO
24"	3'	6'-2½"	6'-0"	1.05	4'	8'-1"	6'-0"	1.32	6'	11'-11"	6'-0"	1.87	SEE ⑨
30"	3'	7'-10¾"	6'-6"	1.43	4'	10'-3¾"	6'-6"	1.80	6'	15'-2½"	6'-6"	2.28	SEE ⑨

DIMENSIONS AND CONCRETE QUANTITIES ARE APPROXIMATE AND LISTED FOR INFORMATIONAL PURPOSES ONLY

BID ITEM AND UNIT TO BID: 24575ES610 HEADWALL (SLOPED & MITERED CONCRETE-FOR _ INCH PIPE) - EACH

SEE SHEET 2 FOR DIMENSIONS OF HEADWALLS FOR PIPE OVER 30" DIAMETER

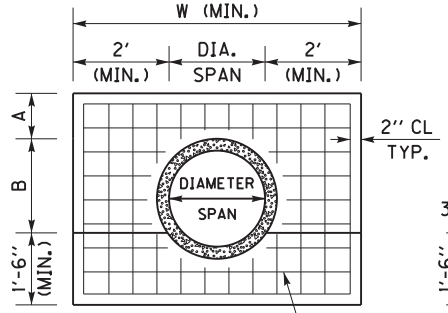
NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS

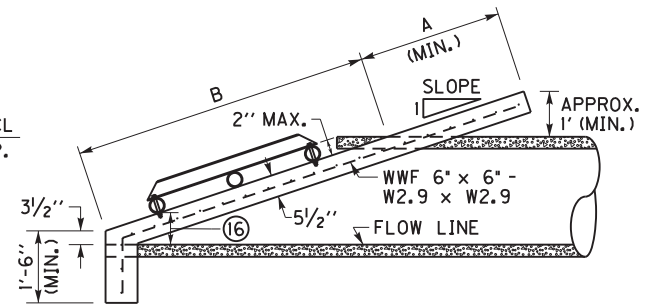
SLOPED & MITERED CONCRETE HEADWALL (SHEET 1 OF 2)

1-9023.00

COUNTY OF	ITEM NO.	SHEET NO.



END ELEVATION
SHOWN WITH WOVEN WIRE REINFORCEMENT

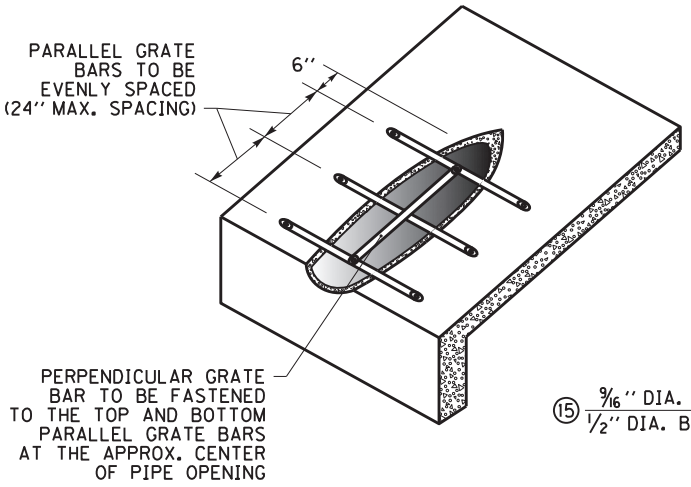


SIDE ELEVATION
SHOWN WITH GRATE

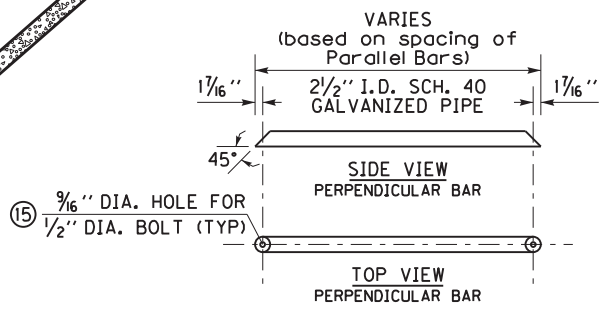
~ NOTES ~

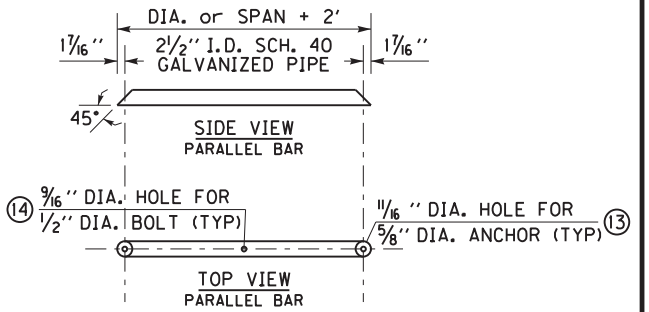
SEE SHEET 1 FOR NOTES 1 THRU 8

9. THE FOLLOWING SITUATIONS REQUIRE A HEADWALL WITH A GRATE:
-24" DIAMETER PIPE ON GREATER THAN 30° SKEW
-30" DIAMETER PIPE ON GREATER THAN 15° SKEW
-PIPE WITH GREATER THAN 30" DIAMETER.
-ELLIPTICAL PIPE GREATER THAN 24" EQUIVALENT DIAMETER
10. ALL BOLTS AND HARDWARE SHALL BE RUST RESISTANT: ZINC PLATED, STAINLESS STEEL, OR STEEL THAT HAS BEEN GALVANIZED IN ACCORDANCE WITH AASHTO M 232.
11. THE PIPE USED TO CONSTRUCT THE GRATE SHALL BE STEEL, SCHEDULE 40, CONFORMING TO ASTM A53, AND GALVANIZED IN ACCORDANCE WITH AASHTO M 111 AFTER FABRICATION.
12. ANY RAW METAL EXPOSED BY FIELD CUTTING AND/OR DRILLING SHALL BE TREATED WITH A COLD GALVANIZING COMPOUND.
13. FASTEN PARALLEL BARS TO HEADWALL WITH 5/8" DIA. x 4½" LENGTH STEEL WEDGE ANCHORS, MINIMUM EMBEDMENT = 2¾" HOLE SIZE AND DEPTH, TORQUE, & INSTALLATION PROCEDURES PER RECOMMENDATION OF ANCHOR MANUFACTURE.
14. CENTER BOLT HOLE SHALL ONLY BE DRILLED IN THE TOP AND BOTTOM PARALLEL BARS.
15. FASTEN THE PERPENDICULAR BAR TO THE TOP AND BOTTOM PARALLEL BARS WITH ½" DIA. x 4" LENGTH HEX HEAD BOLTS, HEX HEAD NUTS, & FLAT WASHERS.
16. THE BOTTOM PARALLEL BAR IS TO BE PLACED SO THAT IT IS APPROX. 6" ABOVE THE FLOWLINE OF THE PIPE.



ISOMETRIC VIEW
SHOWING HEADWALL WITH GRATE





PIPE FOR GRATE DETAILS
SEE NOTE 9 TO DETERMINE IF GRATE IS REQUIRED

DIMENSIONS AND CONCRETE QUANTITIES (FOR PIPE WITH SKEW = 0°) ④													
PIPE SIZE	3:1 SLOPE				4:1 SLOPE				6:1 SLOPE				GRATE REQUIRED
	A	B	W	CU. YDS. CONCRETE	A	B	W	CU. YDS. CONCRETE	A	B	W	CU. YDS. CONCRETE	
36"	3'	9'-7½"	7'-0"	1.51	4'	12'-6½"	7'-0"	1.91	6'	18'-6"	7'-0"	2.42	YES
42"	3'	11'-4"	7'-6"	1.76	4'	14'-9¼"	7'-6"	2.23	6'	21'-9½"	7'-6"	3.19	YES

DIMENSIONS AND CONCRETE QUANTITIES ARE APPROXIMATE AND LISTED FOR INFORMATIONAL PURPOSES ONLY

BID ITEM AND UNIT TO BID: 24575ES610 HEADWALL (SLOPED & MITERED CONCRETE-FOR _ INCH PIPE) - EACH

SEE SHEET 1 FOR DIMENSIONS OF HEADWALLS FOR PIPE 30" DIAMETER & LESS

NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS

SLOPED & MITERED CONCRETE HEADWALL (SHEET 2 OF 2)

1-9023.00

1-9023.00

FIGURE 1

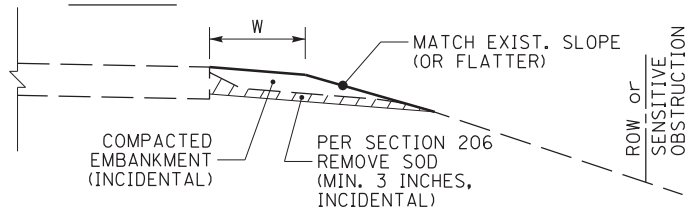


FIGURE 2

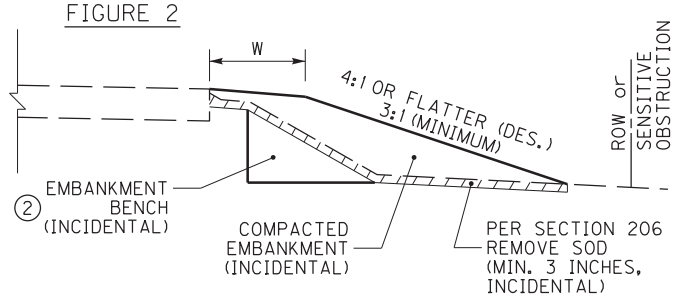


FIGURE 3

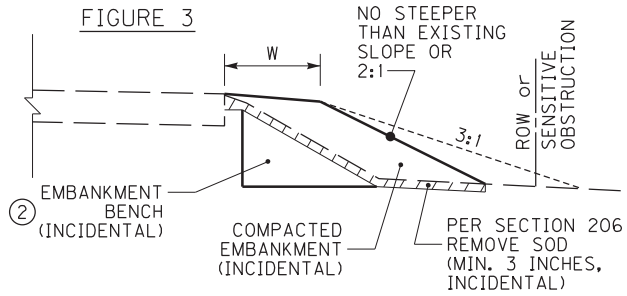


FIGURE 4

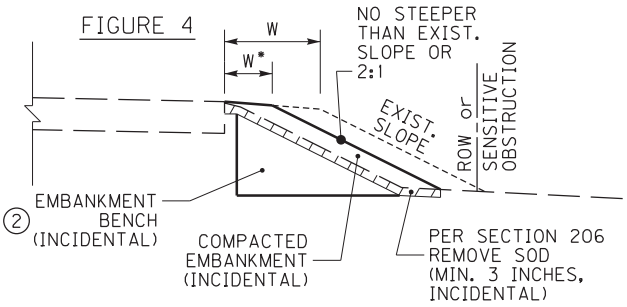


FIGURE 5

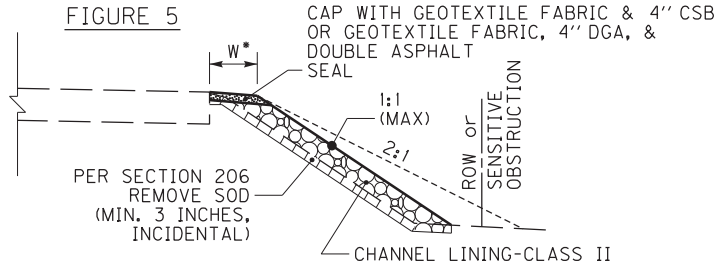
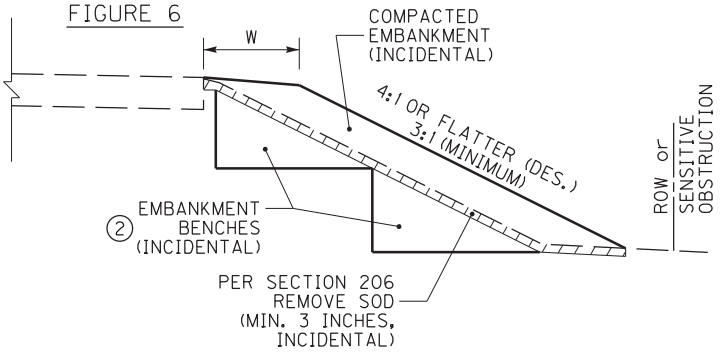


FIGURE 6



~ NOTES ~

BID ITEM AND UNIT TO BID:
2575 - DITCHING & SHOULDERING - LF

1. THE BID ITEM 'DITCHING & SHOULDERING' SHALL CONSIST OF ANY AND ALL NECESSARY CLEARING & GRUBBING, GRADING, AND/OR RESHAPING OF THE EXISTING SHOULDER, DITCH, AND/OR ROADSIDE TO ACHIEVE THE PROPOSED SHOULDER, DITCH, AND/OR ROADSIDE DIMENSIONS, AS DETAILED ON THE TYPICAL SECTIONS. FINAL PAYMENT WILL BE BASED ON THE ACTUAL LINEAR FEET OF DITCHING AND SHOULDERING PERFORMED, AND WILL INCLUDE ALL WORK AND INCIDENTALS NECESSARY TO PERFORM THE DITCHING AND SHOULDERING ACCORDING TO THESE DETAILS, NOTES, AND ANY OTHER INFORMATION FOUND ELSEWHERE IN THE PROPOSAL OR STANDARD SPECIFICATIONS. IN THE CASE OF A DISCREPANCY, REFER TO SECTION 105.05 OF THE STANDARD SPECIFICATIONS. DEPENDING ON THE EXISTING CONDITIONS ENCOUNTERED, DITCHING AND SHOULDERING MAY ALSO INCLUDE, BUT IS NOT LIMITED TO:
   - PROVIDING ADDITIONAL EARTH MATERIAL AND GRADING, SHAPING, AND COMPACTING THE EARTH MATERIAL TO ACHIEVE THE DIMENSIONS SHOWN ON THE TYPICAL SECTIONS. COMPACT MATERIAL ACCORDING TO SECTION 206 OF THE STANDARD SPECIFICATIONS.
     NOTE: ADDITIONAL EARTH MATERIAL PROVIDED SHALL BE SUITABLE FOR VEGETATION GROWTH.
   - EXCAVATING AND REMOVING EXCESS MATERIAL TO ACHIEVE THE DIMENSIONS SHOWN ON THE TYPICAL SECTIONS
   - EMBANKMENT BENCHING

② EMBANKMENT BENCHING WILL BE REQUIRED WHEN THE EXISTING GROUNDLINE HAS AN INCLINE GREATER THAN 15% (APPROX. 6:1). ANY AND ALL REQUIRED EMBANKMENT BENCHING SHALL BE INCIDENTAL TO THE BID ITEM 'DITCHING AND SHOULDERING'. THE FOLLOWING ARE GUIDELINES FOR EMBANKMENT BENCHING USED IN CONJUNCTION WITH THE BID ITEM 'DITCHING AND SHOULDERING':
   - THE TYPICAL HEIGHT (OR RISE) IS 1' TO 6'
   - THE TYPICAL WIDTH (OR RUN) WILL VARY BASED ON THE HEIGHT OF THE BENCH
   - MULTIPLE SMALL BENCHES MAY BE USED, AND MAY BE MORE ADVANTAGEOUS AS THIS WILL REQUIRE PROCESSING LESS EARTHWORK.

3. AS SHOWN IN FIGURE 1, IN SOME SITUATIONS, MINOR SHOULDERING, WITH MINIMAL ADDITIONAL EARTH MATERIAL, MAY BE ALL THAT IS REQUIRED TO RESHAPE THE EARTH SHOULDER TO THE PROPOSED WIDTH AND BRING IT FLUSH WITH THE EDGE OF PAVEMENT.
4. AS SHOWN IN FIGURE 2, MOST SITUATIONS WILL REQUIRE ADDITIONAL EARTH MATERIAL TO ACHIEVE THE PROPOSED EARTH SHOULDER WIDTH. IT IS DESIRED THAT THE RESULTING FILL SLOPE BE INSTALLED AS FLAT AS POSSIBLE AND REMAIN WITHIN THE RIGHT-OF-WAY AND/OR AVOID SENSITIVE OBSTRUCTIONS.
5. AS SHOWN IN FIGURE 3, IF A 3:1 FILL SLOPE WILL RESULT IN THE TOE OF SLOPE EXTENDING BEYOND THE RIGHT-OF-WAY OR IMPACT A SENSITIVE OBSTRUCTION, THEN THE FILL SLOPE MAY BE INSTALLED STEEPER THAN 3:1, BUT NO STEEPER THAN THE EXISTING FILL SLOPE, OR A 2:1, WHICHEVER IS FLATTER.
6. AS SHOWN IN FIGURE 4, IF MATCHING THE EXISTING FILL SLOPE OR INSTALLING A 2:1 FILL SLOPE (WHICHEVER IS FLATTER) STILL RESULTS IN THE TOE OF SLOPE EXTENDING BEYOND THE RIGHT-OF-WAY OR STILL IMPACTS A SENSITIVE OBSTRUCTION, THEN THE PROPOSED EARTH SHOULDER WIDTH MAY BE REDUCED SO THAT THE RESULTING TOE OF SLOPE WILL REMAIN WITHIN THE RIGHT-OF-WAY AND/OR NOT IMPACT THE SENSITIVE OBSTRUCTION.
7. AS SHOWN IN FIGURE 5, IF THE EXISTING FILL SLOPE IS STEEPER THAN 2:1 AND THERE IS NOT ENOUGH SPACE TO INSTALL A 2:1 FILL SLOPE WITHOUT EXTENDING BEYOND THE RIGHT-OF-WAY AND/OR IMPACTING A SENSITIVE OBSTRUCTION, THEN CLASS II CHANNEL LINING MAY BE INSTALLED ALONG THE STEEP EXISTING SLOPE IN ORDER TO ESTABLISH A WIDTH OF AGGREGATE SHOULDER. THESE LOCATIONS WILL BE NOTED ELSEWHERE IN THE PROPOSAL AS SLOPE PROTECTION. THE CHANNEL LINING IS TO BE CAPPED WITH GEOTEXTILE FABRIC TYPE IV AND 4" OF CRUSHED STONE BASE, OR 4" OF DGA WITH DOUBLE ASPHALT SEAL COAT.
8. AS SHOWN IN FIGURE 6, AS THE HEIGHT OF THE FILL INCREASES, MULTIPLE EMBANKMENT BENCHES MAY BE REQUIRED.

SEE SHEET 2 FOR
NOTES 9 THRU 13

NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS

DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS (SHEET 1 OF 2)

FIGURE 7

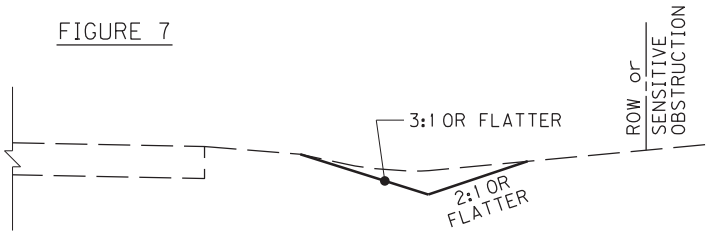


FIGURE 8

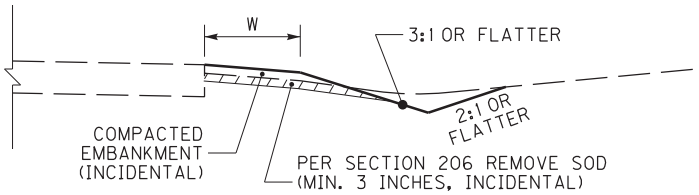


FIGURE 9

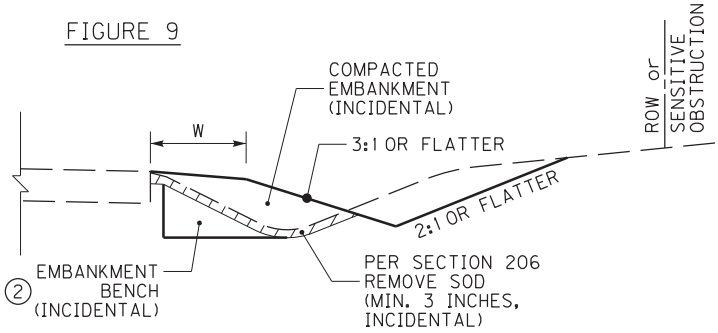


FIGURE 10

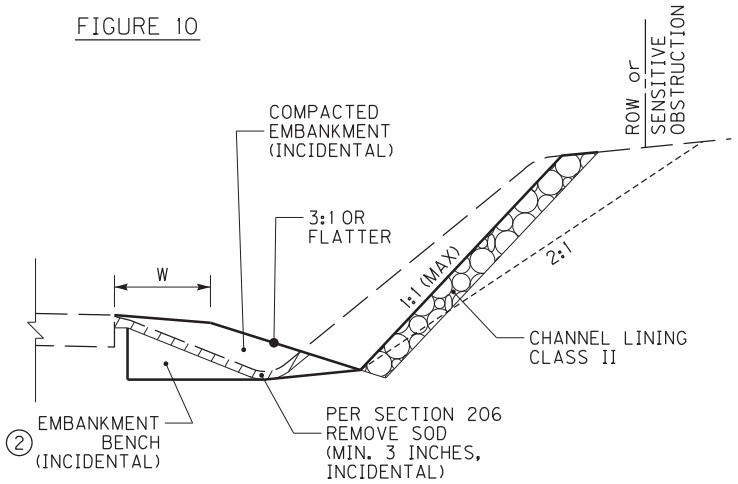
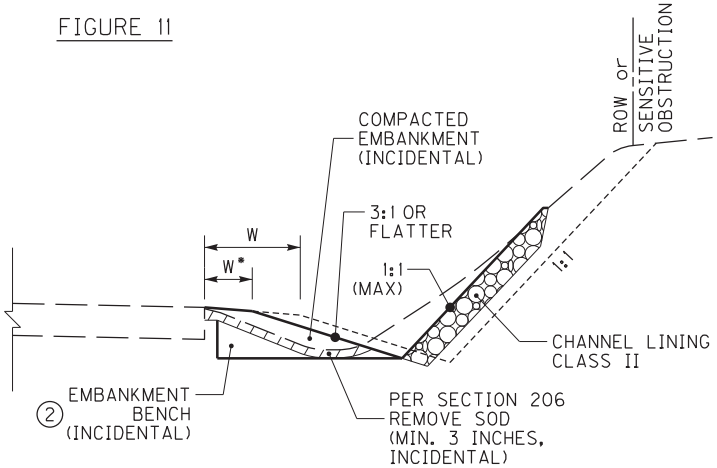


FIGURE 11



~ NOTES ~

BID ITEM AND UNIT TO BID:
2575 - DITCHING & SHOULDERING - LF

1. THE BID ITEM 'DITCHING & SHOULDERING' SHALL CONSIST OF ANY AND ALL NECESSARY CLEARING & GRUBBING, GRADING, AND/OR RESHAPING OF THE EXISTING SHOULDER, DITCH, AND/OR ROADSIDE TO ACHIEVE THE PROPOSED SHOULDER, DITCH, AND/OR ROADSIDE DIMENSIONS, AS DETAILED ON THE TYPICAL SECTIONS. FINAL PAYMENT WILL BE BASED ON THE ACTUAL LINEAR FEET OF DITCHING AND SHOULDERING PERFORMED, AND WILL INCLUDE ALL WORK AND INCIDENTALS NECESSARY TO PERFORM THE DITCHING AND SHOULDERING ACCORDING TO THESE DETAILS, NOTES, AND ANY OTHER INFORMATION FOUND ELSEWHERE IN THE PROPOSAL OR STANDARD SPECIFICATIONS. IN THE CASE OF A DISCREPANCY, REFER TO SECTION 105.05 OF THE STANDARD SPECIFICATIONS. DEPENDING ON THE EXISTING CONDITIONS ENCOUNTERED, DITCHING AND SHOULDERING MAY ALSO INCLUDE, BUT IS NOT LIMITED TO:
   - PROVIDING ADDITIONAL EARTH MATERIAL AND GRADING, SHAPING, AND COMPACTING THE EARTH MATERIAL TO ACHIEVE THE DIMENSIONS SHOWN ON THE TYPICAL SECTIONS. COMPACT MATERIAL ACCORDING TO SECTION 206 OF THE STANDARD SPECIFICATIONS.
     NOTE: ADDITIONAL EARTH MATERIAL PROVIDED SHALL BE SUITABLE FOR VEGETATION GROWTH.
   - EXCAVATING AND REMOVING EXCESS MATERIAL TO ACHIEVE THE DIMENSIONS SHOWN ON THE TYPICAL SECTIONS
   - EMBANKMENT BENCHING

② EMBANKMENT BENCHING WILL BE REQUIRED WHEN THE EXISTING GROUNDLINE HAS AN INCLINE GREATER THAN 15% (APPROX. 6:1). ANY AND ALL REQUIRED EMBANKMENT BENCHING SHALL BE INCIDENTAL TO THE BID ITEM 'DITCHING AND SHOULDERING'. THE FOLLOWING ARE GUIDELINES FOR EMBANKMENT BENCHING USED IN CONJUNCTION WITH THE BID ITEM 'DITCHING AND SHOULDERING':
   - THE TYPICAL HEIGHT (OR RISE) IS 1' TO 6'
   - THE TYPICAL WIDTH (OR RUN) WILL VARY BASED ON THE HEIGHT OF THE BENCH
   - MULTIPLE SMALL BENCHES MAY BE USED, AND MAY BE MORE ADVANTAGEOUS AS THIS WILL REQUIRE PROCESSING LESS EARTHWORK.

SEE SHEET 1 FOR NOTES 3. THRU 8.

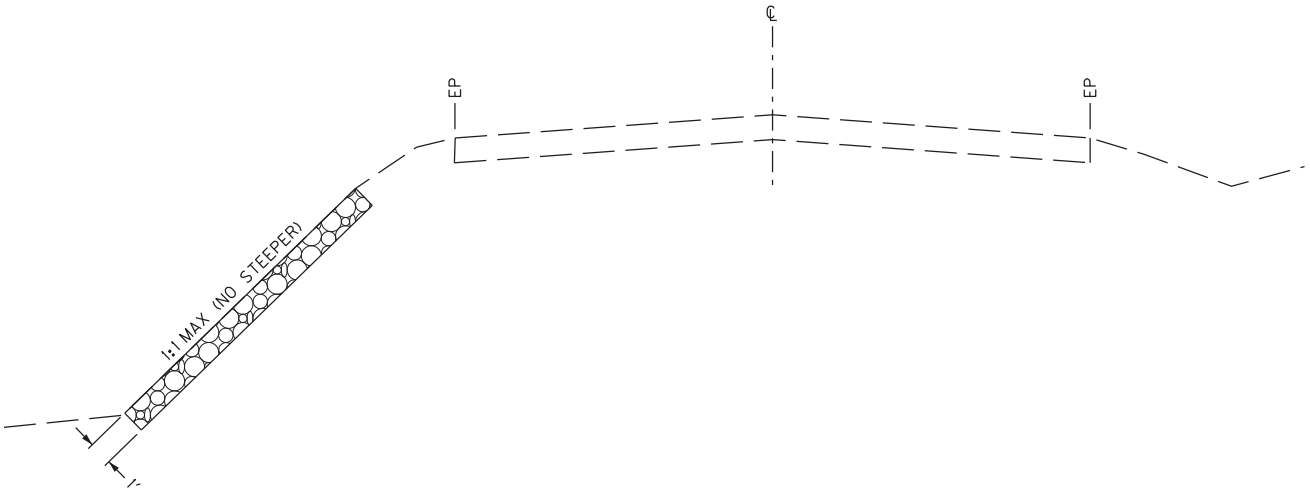
9. AS SHOWN IN FIGURE 7, IN SOME SITUATIONS, ALL THAT MAY BE REQUIRED IS TO CLEAN OUT THE EXISTING DITCH AND RESHAPE IT TO THE PROPOSED DIMENIONS. THE MATERIAL EXCAVATED FROM THE DITCH MAY BE RE-USED ELSEWHERE ON THE PROJECT, PROVIDED THE ENGINEER DETERMINES THE MATERIAL REMOVED FROM THE DITCH IS SUITABLE FOR THE INTENDED RE-USE.
10. AS SHOWN IN FIGURE 8, IN SOME SITUATIONS, THE DITCH AND SHOULDER MAY ONLY NEED MINOR REGRADING AND/OR RESHAPING. THE MATERIAL EXCAVATED FROM THE DITCH MAY BE USED TO RESHAPE THE EARTH SHOULDER, PROVIDED THE ENGINEER DETERMINES THE MATERIAL REMOVED FROM THE DITCH IS SUITABLE FOR SHOULDERING. IF THE MATERIAL IS NOT SUITABLE, ADDITIONAL EARTH MATERIAL MAY BE REQUIRED.
11. AS SHOWN IN FIGURE 9, IN MOST SITUATIONS, REGRADING AND RESHAPING THE ROADSIDE TO ACHIEVE THE PROPOSED SHOULDER, DITCH, AND/OR ROADSIDE DIMENSIONS WILL RESULT IN MOVING THE DITCH FURTHER AWAY FROM THE ROADWAY. IT IS DESIRED THAT DITCH FORESLOPES BE 3:1 OR FLATTER AND DITCH BACKSLOPES BE 2:1 OR FLATTER.
12. AS SHOWN IN FIGURE 10, IF INSTALLING A 2:1 DITCH BACKSLOPE WILL RESULT IN THE TOP OF CUT EXTENDING BEYOND THE RIGHT-OF-WAY OR IMPACTING A SENSITIVE OBSTRUCTION, THEN THE DITCH BACK SLOPE MAY BE INSTALLED STEEPER THAN 2:1, UP TO 1:1 MAXIMUM. IN THIS SITUATION, THE DITCH BACKSLOPE SHALL HAVE CLASS II CHANNEL LINING INSTALLED FOR SLOPE PROTECTION.
13. AS SHOWN IN FIGURE 11, IF USING A 1:1 DITCH BACKSLOPE STILL RESULTS IN THE TOP OF CUT EXTENDING BEYOND THE RIGHT-OF-WAY OR STILL IMPACTS A SENSITIVE OBSTRUCTION, THEN THE PROPOSED EARTH SHOULDER WIDTH MAY BE REDUCED SO THAT THE STEEP DITCH BACKSLOPE CAN BE INSTALLED WITHIN THE RIGHT-OF-WAY AND/OR TO AVOID A SENSITIVE OBSTRUCTION.

NOT TO SCALE

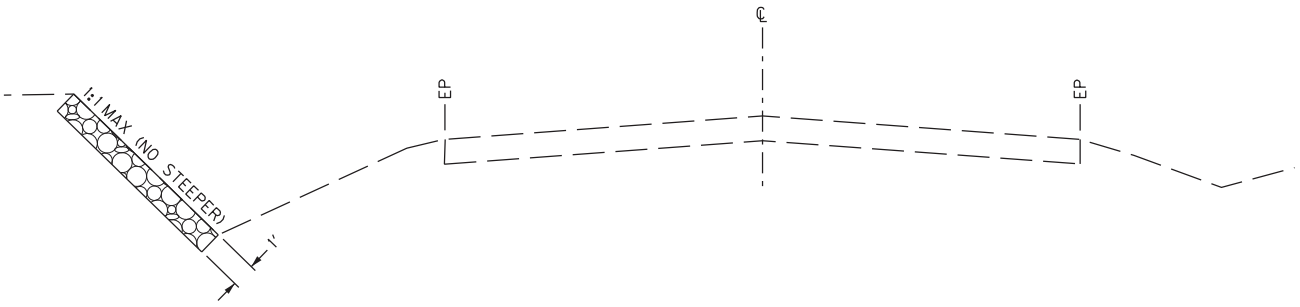
KENTUCKY DEPARTMENT OF HIGHWAYS

DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS (SHEET 2 OF 2)

COUNTY OF	ITEM NO.	SHEET NO.
	1-9023.00	



PROTECTION DETAIL FOR EMBANKMENT FILL SLOPE



PROTECTION DETAIL FOR DITCH BACKSLOPE

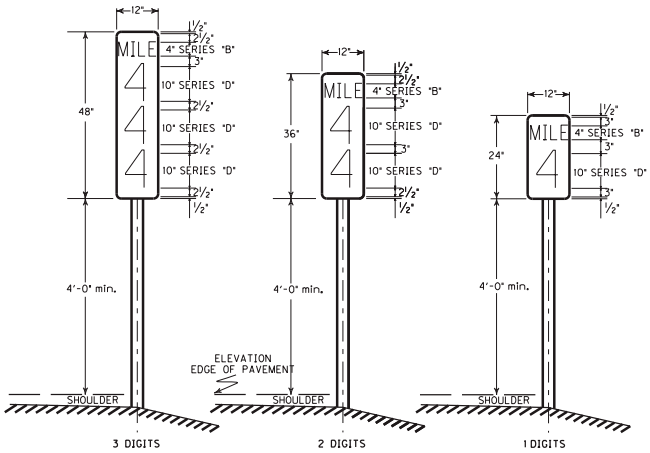
NOTES:

1. SEE CHANNEL LINING SUMMARY FOR APPROXIMATE LOCATIONS OF SLOPE PROTECTION.
2. FINAL LOCATIONS TO BE DETERMINED BY THE ENGINEER.
3. EXCAVATION IS INCIDENTAL TO THE PLACEMENT OF THE CHANNEL LINING.

SLOPE PROTECTION DETAILS

COUNTY OF	ITEM NO.	SHEET NO.
	1-9023.00	

MILEPOST MARKERS



TYPICAL SIGN PANEL DIMENSIONS AND MILEPOST LOCATIONS

MILE POST NUMBER	STATION NUMBER * ____ BOUND LANE (S)

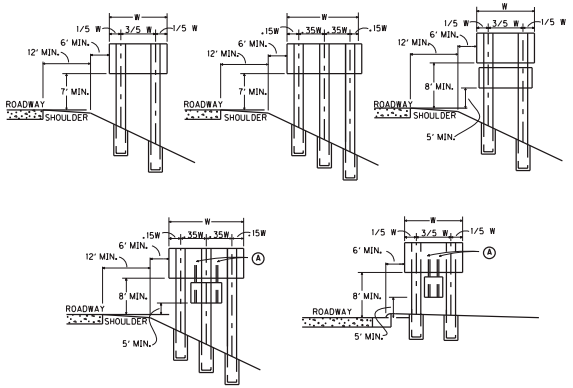
MILE POST NUMBER	STATION NUMBER * ____ BOUND LANE (S)

NOTE: STATION NUMBERS ARE GIVEN FOR NOTED DIRECTION OF TRAVEL ONLY. CORRESPONDING MILEPOST MARKERS FOR OTHER DIRECTION SHOULD BE PLACED DIRECTLY OPPOSITE THOSE FOR WHICH STATION NUMBERS ARE GIVEN.

IN JEFFERSON COUNTY, FINAL LOCATION OF MILEPOST MARKERS SHALL BE VERIFIED BY TRIMARC. NOTIFY TRIMARC AT LEAST TWO WEEKS PRIOR TO BEGINNING WORK ON THIS ITEM:

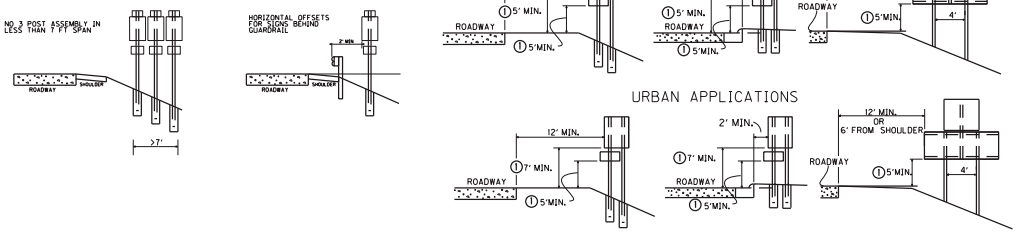
901 WEST MAIN STREET
LOUISVILLE, KY 40202
502-587-6624
270-307-7456

PANEL SIGNS



Ⓐ ATTACHMENT OF SECONDARY SIGN TO MAJOR SIGN IS TO BE MADE WITH TWO (2) 3" X 3" X 3/16" ANGLES OF SUFFICIENT LENGTH TO EXTEND FROM THE LOWER EDGE OF THE SECONDARY SIGN TO AT LEAST THREE FEET UP THE BACK OF THE MAJOR SIGN. A MINIMUM OF ONE POST CLIP PER FOOT SHALL BE USED IN ATTACHING EXTRUSIONS TO EACH ANGLE.

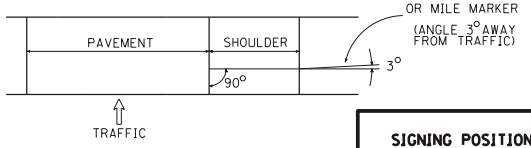
SHEETING SIGNS



NOTE: SHOULD A SIGN BE LOCATED AT A POINT WHERE GUARDRAIL IS CALLED FOR OR EXISTING, ALL SIGN SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL AND LATERAL OFFSET SHALL BE MEASURED FROM THE GUARDRAIL.

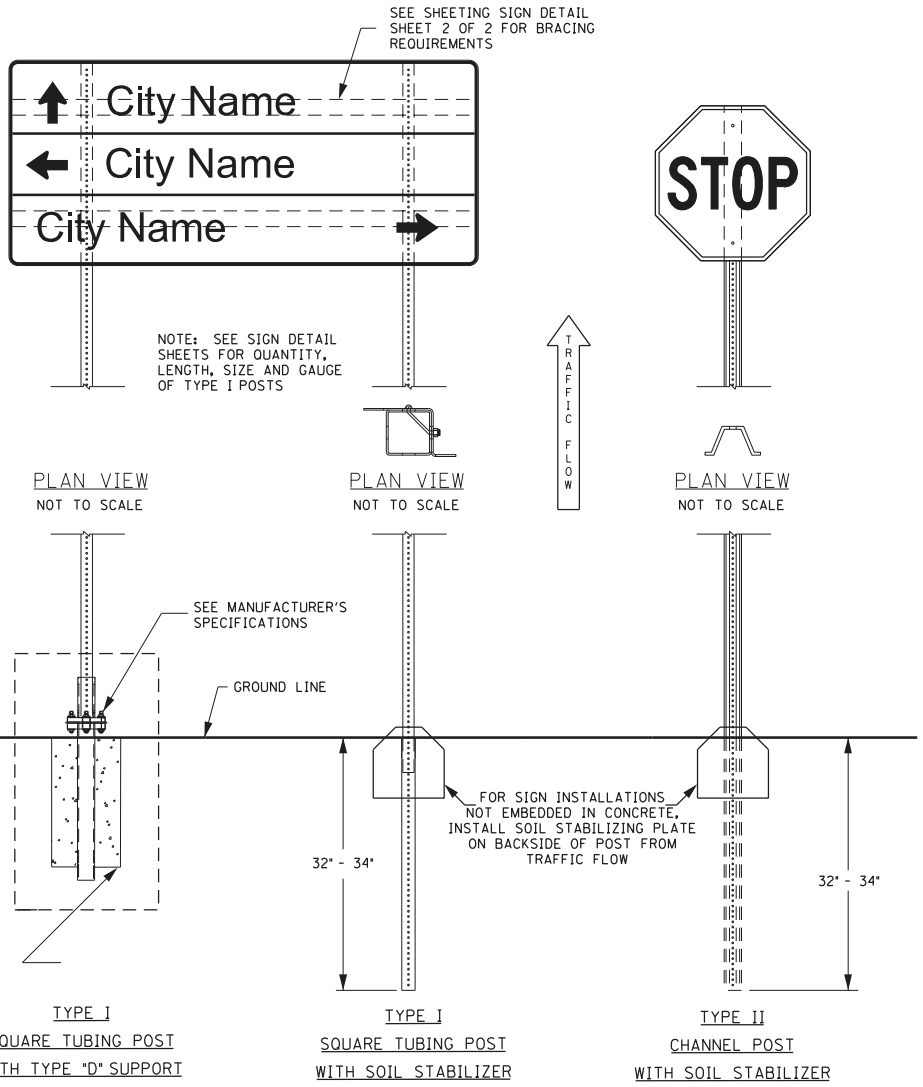
① NOT TO EXCEED 8' IN URBAN AREAS AND 6' IN RURAL AREAS UNLESS SPECIFIED BY THE ENGINEER

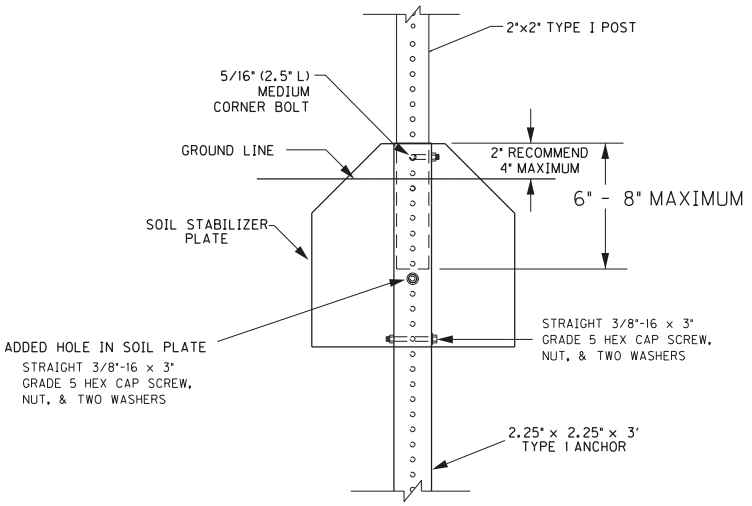
ORIENTATION ANGLE



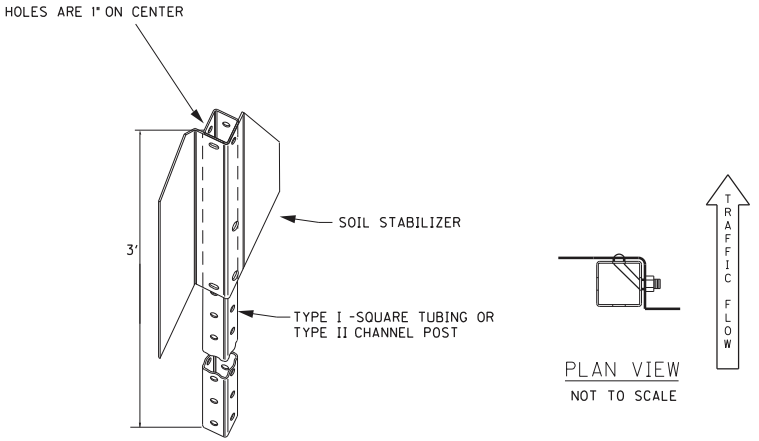
SIGNING POSITIONING DETAIL SHEET

COUNTY OF	ITEM NO.	SHEET NO.
	1-9023.00	





SOIL STABILIZER DETAIL
FOR TYPE I POST



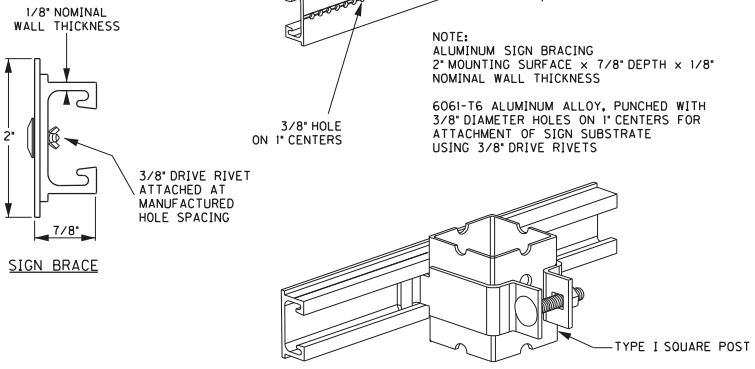
SOIL STABILIZER DETAIL

NOT TO SCALE

SHEETING SIGN DETAIL
SHEET 1 OF 2

COUNTY OF	ITEM NO.	SHEET NO.
	1-9023.00	

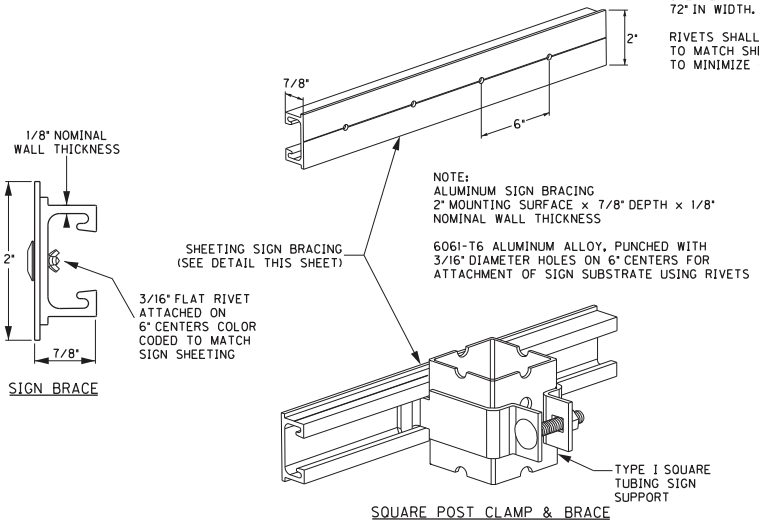
FOR ATTACHMENT OF SIGNS LESS THAN 72" IN WIDTH USING MANUFACTURED 3/8" HOLES ACCORDING TO 2004 STANDARD HIGHWAY SIGNS BLANK STANDARDS PGS 7-1 THRU 7-6



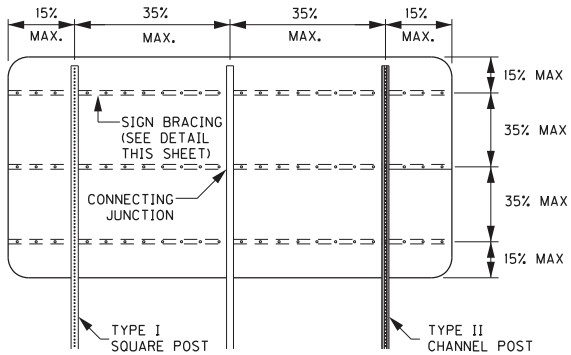
SQUARE POST CLAMP & BRACE

FOR ATTACHMENT OF SIGNS GREATER THAN, OR EQUAL TO, 72" IN WIDTH.

RIVETS SHALL BE COLOR CODED TO MATCH SHEETING IN ORDER TO MINIMIZE GLARE FROM RIVETS



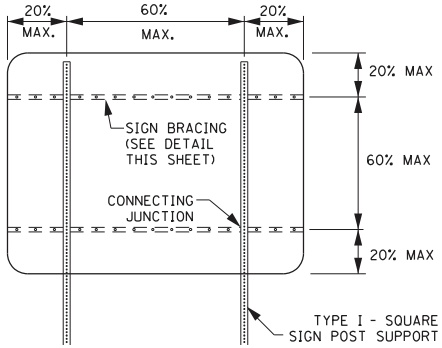
SQUARE POST CLAMP & BRACE



3 POST - BRACING DIAGRAM

NOTE:
1. MAXIMUM AREA PER CONNECTING JUNCTION = 16 SQ. FT.

2. BRACING SHOULD NOT BE SPLICED WITHIN 6" OF A BRACE TO POST JUNCTION.



2 POST - BRACING DIAGRAM

NOTE:
USE OF SIGN BRACING NOT SHOWN ON THIS SHEET MAY BE PERMITTED BY PROJECT ENGINEER AND/OR DISTRICT TRAFFIC ENGINEER.

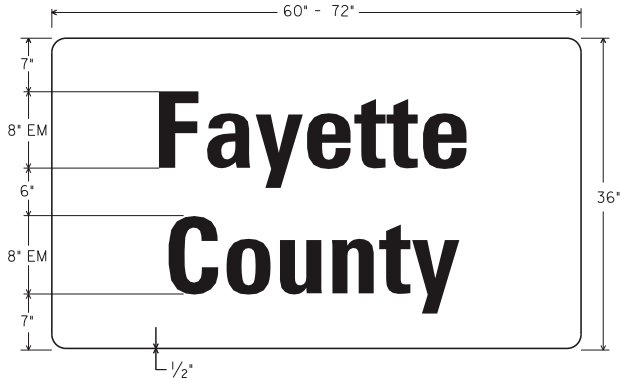
NOT TO SCALE

SHEETING SIGN DETAIL

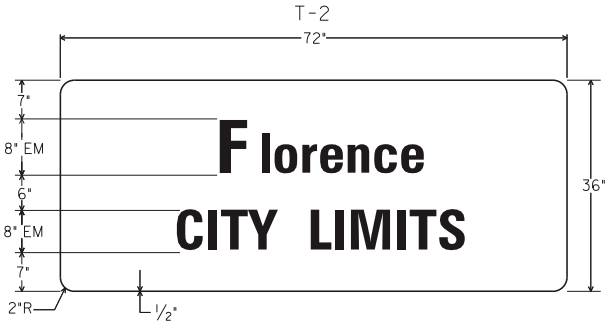
SHEET 2 OF 2

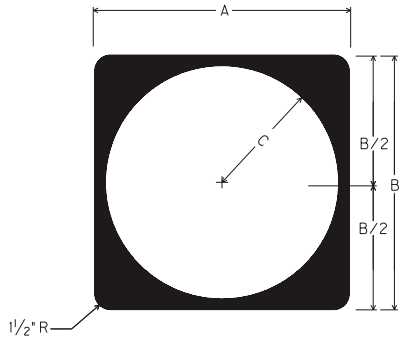
COUNTY OF	ITEM NO.	SHEET NO.
	1-9023.00	

T-1



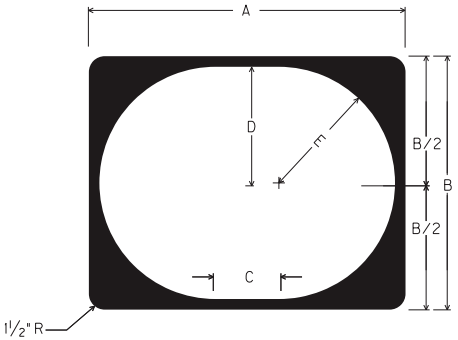
T-2





M1-5 (1 OR 2 DIGIT)

	A	B	C	FONT
CONVENTIONAL	24"	24"	11"	12D
EXPRESSWAY/ FREEWAY	36"	36"	17"	18D



M1-5 (3 OR 4 DIGIT)

	A	B	C	D	E	FONT	
						3 DIGIT	4 DIGIT
CONVENTIONAL	30"	24"	6"	11"	11"	12D	12B
EXPRESSWAY/ FREEWAY	45"	36"	9"	16.5"	16.5"	18D	18B

S-1

NOTE: FOR ROUTE MARKERS, IF NECESSARY, ADJUSTMENTS TO THE DIGIT LAYOUT AND/OR FONT TYPE MAY BE MADE TO ENSURE VISUAL ACUITY

NOTE: EXPRESSWAY/FREEWAY DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL OR FULL CONTROL OF ACCESS

NOT TO SCALE

TYPICAL SIGNS

GUARDRAIL DELIVERY VERIFICATION SHEET

Contract Id: _____ **Contractor: _____**

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

DESCRIPTION	UNIT	QTY LEAVING PROJECT	QTY RECEIVED@BB YARD
GUARDRAIL (Includes End treatments & crash cushions)	LF	_____	_____
STEEL POSTS	EACH	_____	_____
STEEL BLOCKS	EACH	_____	_____
WOOD OFFSET BLOCKS	EACH	_____	_____
BACK UP PLATES	EACH	_____	_____
CRASH CUSHION	EACH	_____	_____
NUTS, BOLTS, WASHERS	BAG/BCKT	_____	_____
DAMAGED RAIL TO MAINT. FACILITY	LF	_____	_____
DAMAGED POSTS TO MAINT. FACILITY	EACH	_____	_____

****Required Signatures before Leaving Project Site***

Printed Section Engineer's Representative_____ & Date_____

Signature Section Engineer's Representative_____& Date_____

Printed Contractor's Representative_____& Date_____

Signature Contractor's Representative_____& Date_____

****Required Signatures after Arrival at Bailey Bridge Yard (All material on truck must be counted & the quantity received column completed before signatures)***

Printed Bailey Bridge Yard Representative_____ & Date_____

Signature Bailey Bridge Yard Representative_____& Date_____

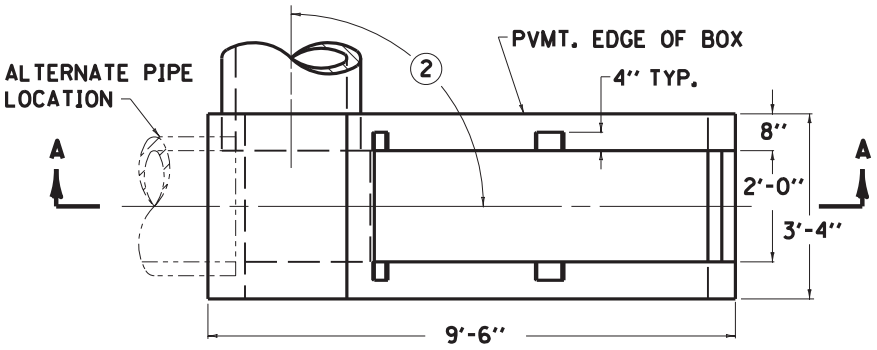
Printed Contractor's Representative_____& Date_____

Signature Contractor's Representative_____& Date_____

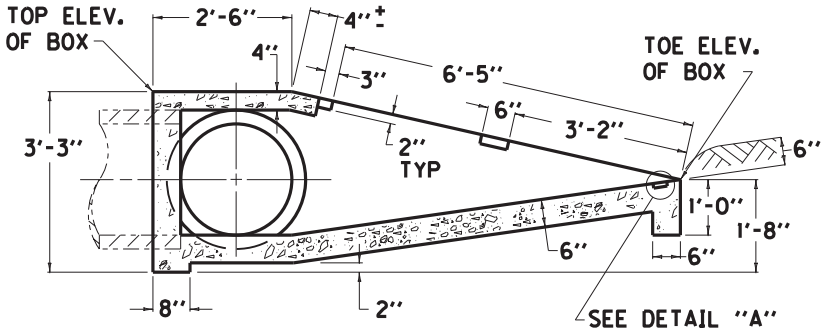
**Payment for the bid item remove guardrail will be based upon the quantities shown in the Bailey Bridge Yard received column. Payment will not be made for guardrail removal until the guardrail verification sheets are electronically submitted to the Section Engineer by the Bailey Bridge Yard Representative.

Completed Form Submitted to Section Engineer Date: _____ By: _____

COUNTY OF	ITEM NO.	SHEET NO.



PLAN VIEW



SECTION A-A

NOTES

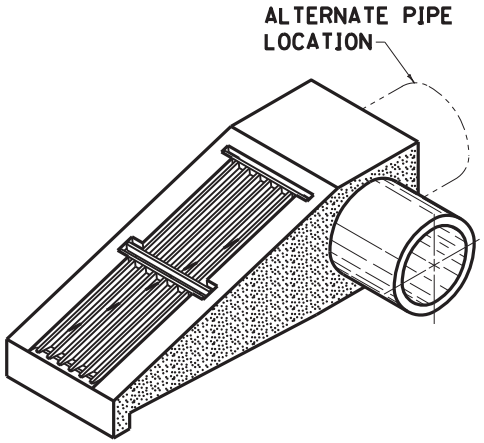
ITEM CODE	BID ITEM	UNIT
1726	SAFETY BOX INLET-18 INCH SDB-1	EACH
1727	SAFETY BOX INLET-24 INCH SDB-1	EACH

THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.

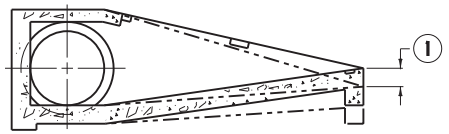
(1) TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.

(2) SKEW OF BOX SHALL VARY TO FIT EXISTING FIELD CONDITIONS.

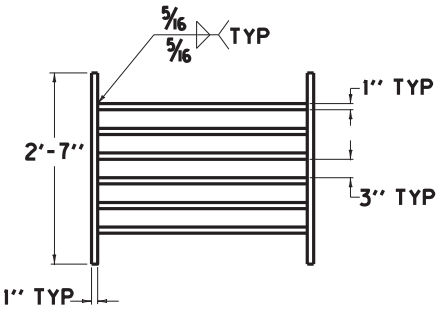
APPROXIMATE QUANTITIES			
CLASS "A" CONC.	GRATE	LBS. STRUCTURAL STEEL	
CUBIC YARDS	NUMBER	EACH GRATE	TOTAL POUNDS
1.44	1	145	298
	2	153	



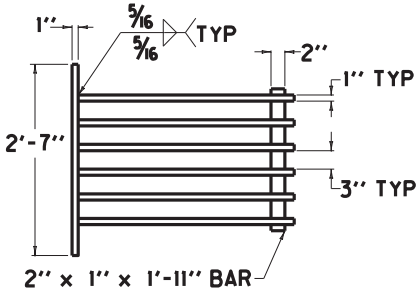
ISOMETRIC VIEW



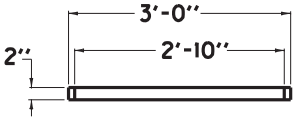
SECTIONAL VIEW



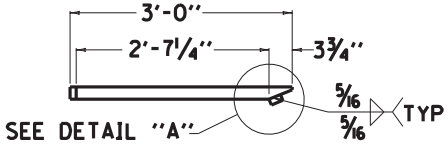
GRATE NO. 1
PLAN VIEW



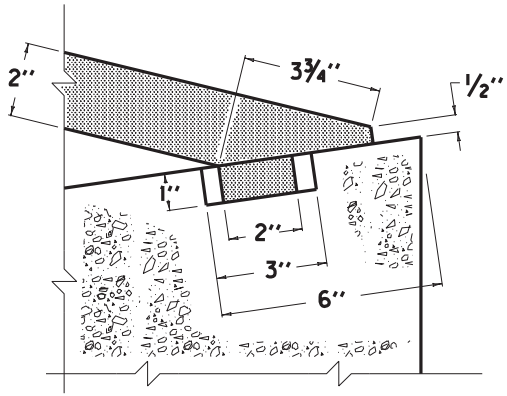
GRATE NO. 2
PLAN VIEW



GRATE NO. 1
SIDE ELEVATION



GRATE NO. 2
SIDE ELEVATION



DETAIL "A"

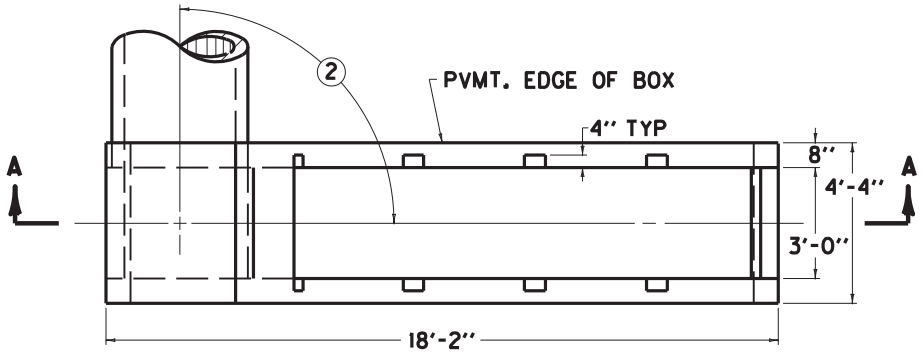
KENTUCKY
DEPARTMENT OF HIGHWAYS

SAFETY TYPE BOX INLET (18" OR 24")

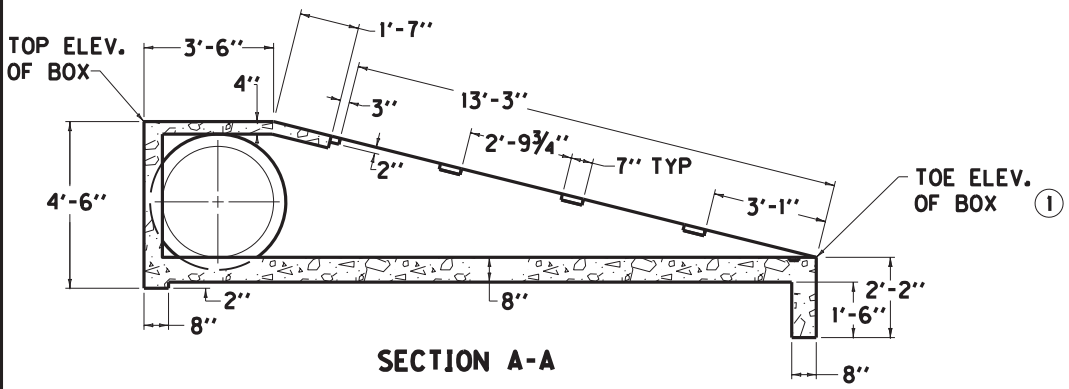
APPROVED _____ PROJECT ENGINEER

06-04-2008 DATE

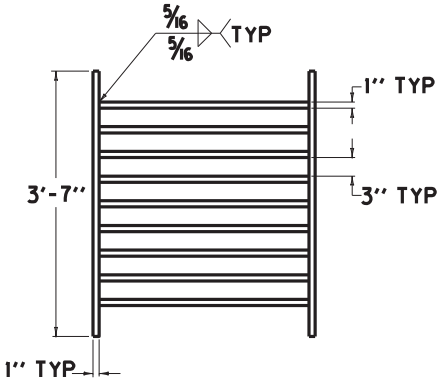
COUNTY OF	ITEM NO.	SHEET NO.



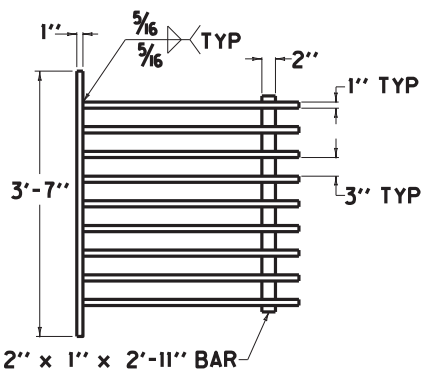
PLAN VIEW



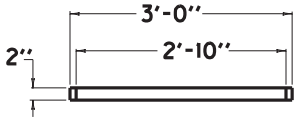
SECTION A-A



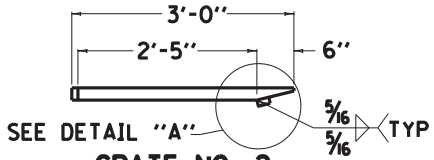
GRATE NO. 1
PLAN VIEW



GRATE NO. 2
PLAN VIEW



GRATE NO. 1
SIDE ELEVATION



GRATE NO. 2
SIDE ELEVATION

NOTES

ITEM CODE	BID ITEM	UNIT
23044NS710	SAFETY BOX INLET-36 INCH SDB-1	EACH

THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.

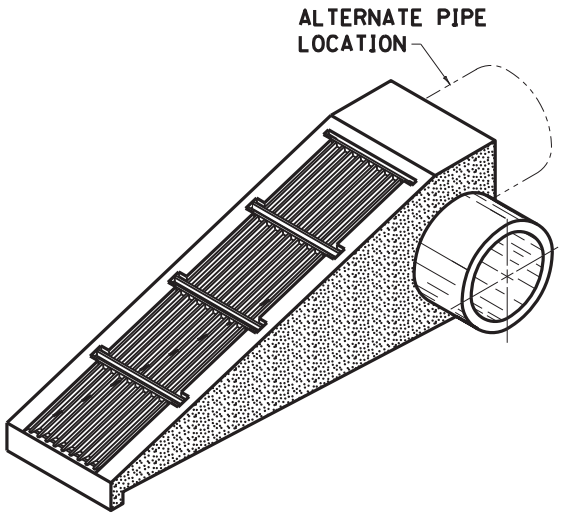
(1) TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.

(2) SKEW OF BOX SHALL VARY TO FIT EXISTING FIELD CONDITIONS.

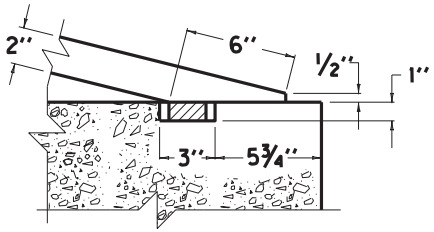
3. ALL QUANTITIES ARE FOR ONE HEADWALL.

APPROXIMATE QUANTITIES

CLASS "A" CONC.	GRATE	NO. OF GRATES REQ'D.	LBS.		
			STRUCTURAL STEEL		REINF. STEEL
CUBIC YARDS	NUMBER		EACH GRATE		
4.51	1	3	222	896	261
	2	1	230		



ISOMETRIC VIEW



DETAIL "A"

SHEET 1 OF 2

KENTUCKY
DEPARTMENT OF HIGHWAYS

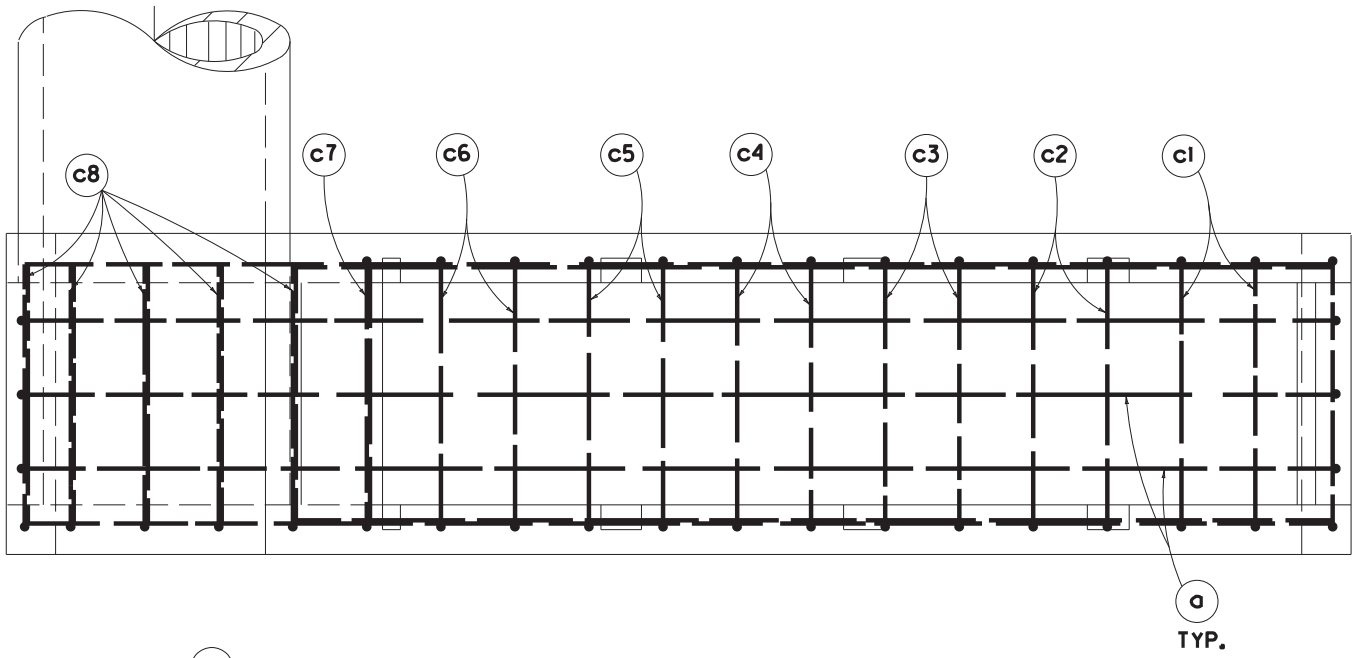
SAFETY TYPE BOX INLET (36")

APPROVED _____ PROJECT ENGINEER _____ DATE 06-04-2008

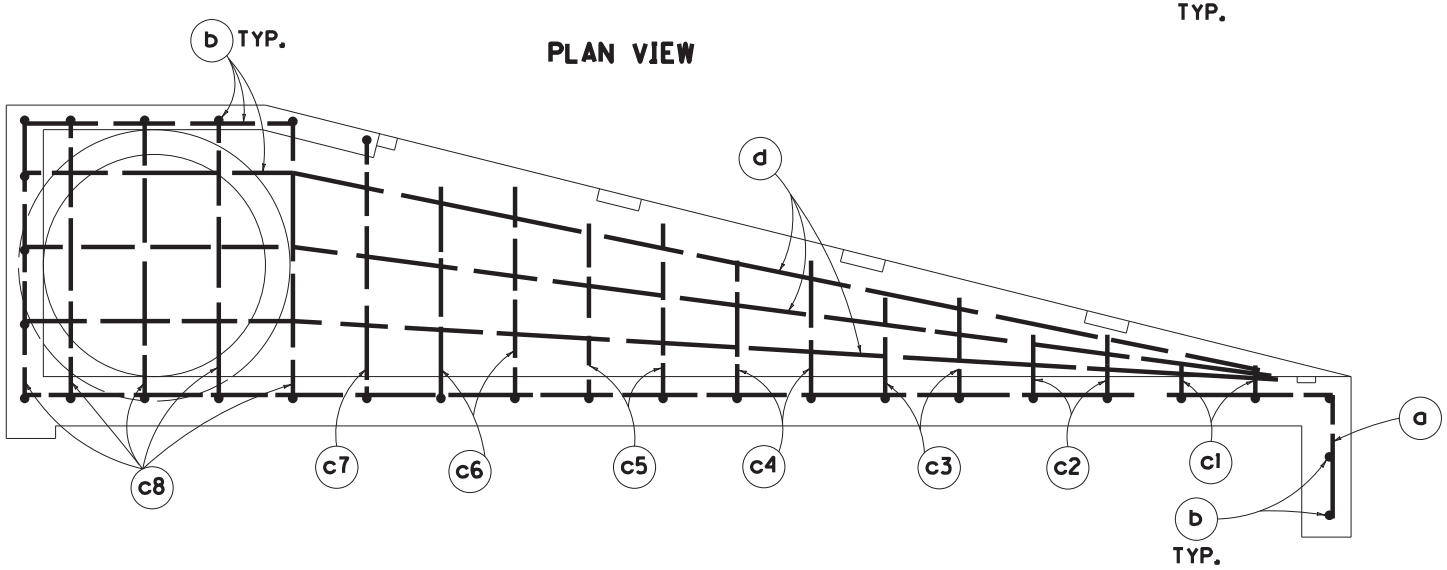
CRITTENDEN COUNTY
FED 04 028 0060 004-009

Contract ID: 224321
Page 149 of 172

COUNTY OF	ITEM NO.	SHEET NO.



PLAN VIEW



ELEVATION VIEW

NOTES

1. NUMBER OF BARS IN ONE HEADWALL.
2. DIMENSIONS ARE O. TO O. OF BARS.
3. ALL BARS ARE STRAIGHT EXCEPT THOSE SHOWN BELOW.

BENT BAR SHAPES

K=3'-6"

BARS (c)

K=1'-8"

BARS (a)

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
36"						
a	4	5	19	6	1	8
b	4	16	3	6		
c1	4	2	5	0	3	6
c2	4	2	5	10	3	6
c3	4	2	6	10	3	6
c4	4	2	7	10	3	6
c5	4	2	8	10	3	6
c6	4	2	9	10	3	6
c7	4	1	11	0	3	6
c8	4	5	11	6	3	6
d	4	6	13	4		

SHEET 2 OF 2

KENTUCKY
DEPARTMENT OF HIGHWAYS

BILL OF REINFORCEMENT SAFETY TYPE BOX INLET (36")

APPROVED _____ PROJECT ENGINEER

06-04-2008 DATE

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

SPECIAL NOTE FOR BARCODE LABEL ON PERMANENT SIGNS

1.0 DESCRIPTION. Install barcode label on sheeting signs. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction, current edition.

2.0 MATERIALS. The Department will provide the Contractor with a 2 inch x 1 inch foil barcode label for each permanent sheeting sign. A unique number will be assigned to each barcode label.

The Contractor shall contact the Operations and Pavement Management Branch in the Division of Maintenance at (502) 564-4556 to obtain the barcode labels.

3.0 CONSTRUCTION. Apply foil barcode label in the lower right quadrant of the sign back. Signs where the bottom edge is not parallel to the ground, the lowest corner of the sign shall serve as the location to place the barcode label. The barcode label shall be placed no less than one-inch and no more than three inches from any edge of the sign. The barcode must be placed so that the sign post does not cover the barcode label.

Barcodes shall be applied in an indoor setting with a minimum air temperature of 50°F or higher. Prior to application of the barcode label, the back of the sign must be clean and free of dust, oil, etc. If the sign is not clean, an alcohol swab shall be used to clean the area. The area must be allowed to dry prior to placement of the barcode label.

Data for each sign shall include the barcode number, MUTCD reference number, sheeting manufacturer, sheeting type, manufacture date, color of primary reflective surface, installation date, latitude and longitude using the North American Datum of 1983 (NAD83) or the State Plane Coordinates using an x and y ordinate of the installed location.

Data should be provided electronically on the TC 71-229 Sign Details Information and TC 71-230 Sign Assembly Information forms. The Contractor may choose to present the data in a different format provided that the information submitted to the Department is equivalent to the information required on the Department TC forms. The forms must be submitted in electronic format regardless of which type of form is used. The Department will not accept PDF or handwritten forms. These completed forms must be submitted to the Department prior to final inspection of the signs. The Department will not issue formal acceptance for the project until the TC 71-229 and TC-230 electronic forms are completed for all signs and sign assemblies on the project.

4.0 MEASUREMENT. The Department will measure all work required for the installation of the barcode label and all work associated with completion and submission of the sign inventory data (TC 71-229 and TC 71-230).

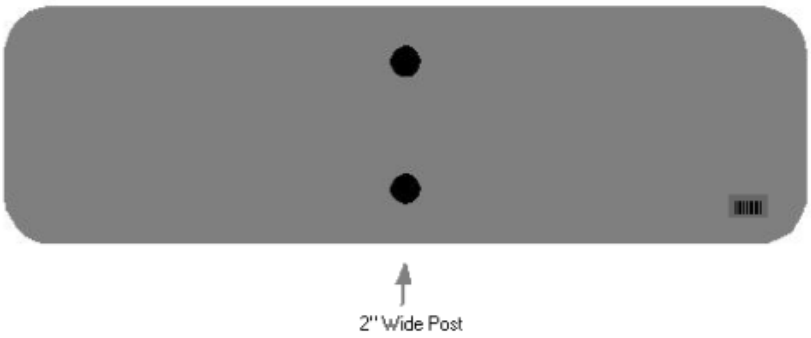
The installation of the permanent sign will be measured in accordance to Section 715.

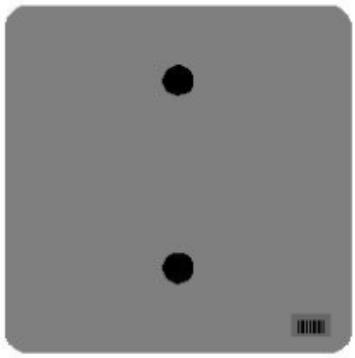
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24631EC	Barcode Sign Inventory	Each

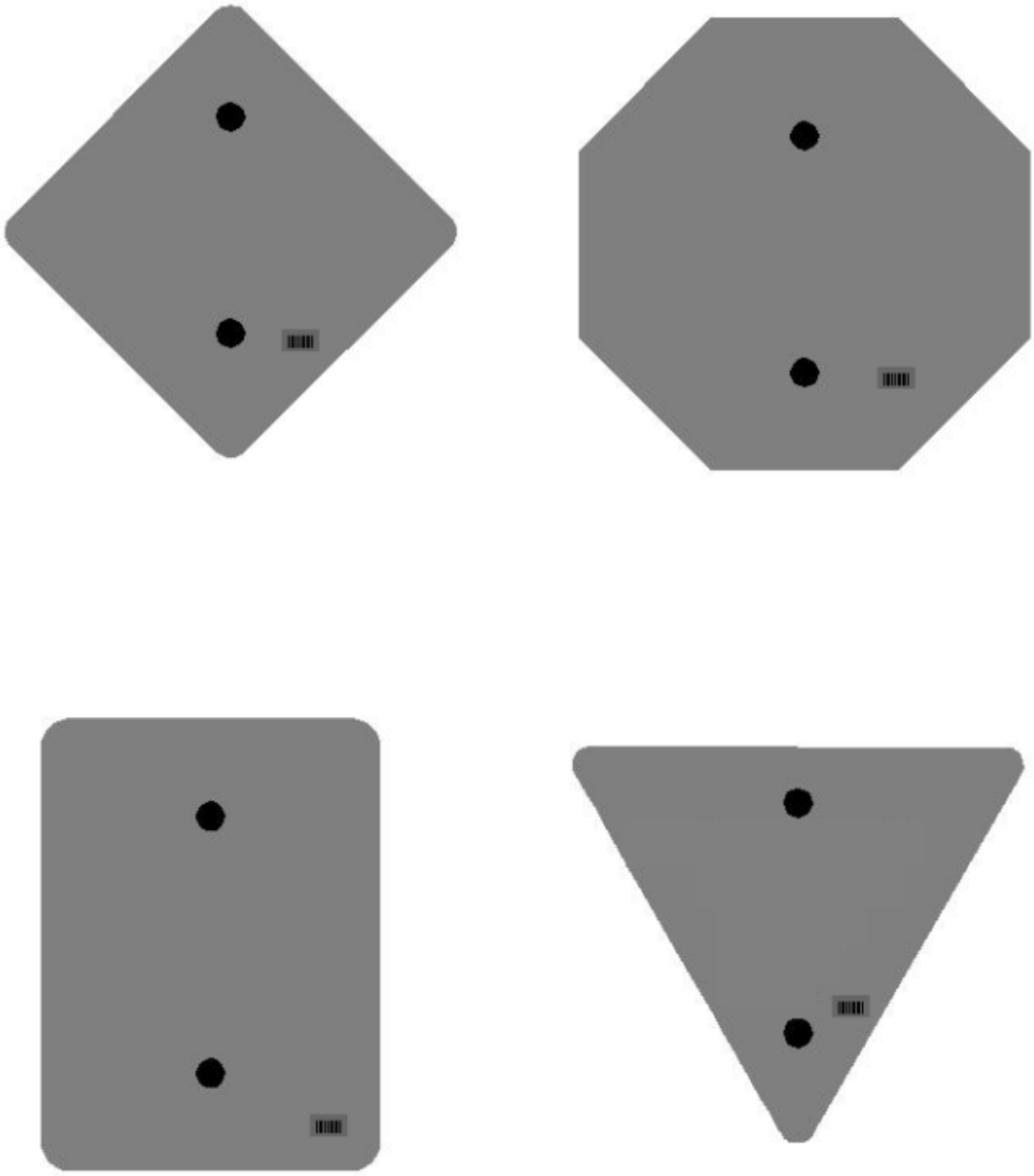
The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment as full compensation for all work required under this special note.

One Sign Post

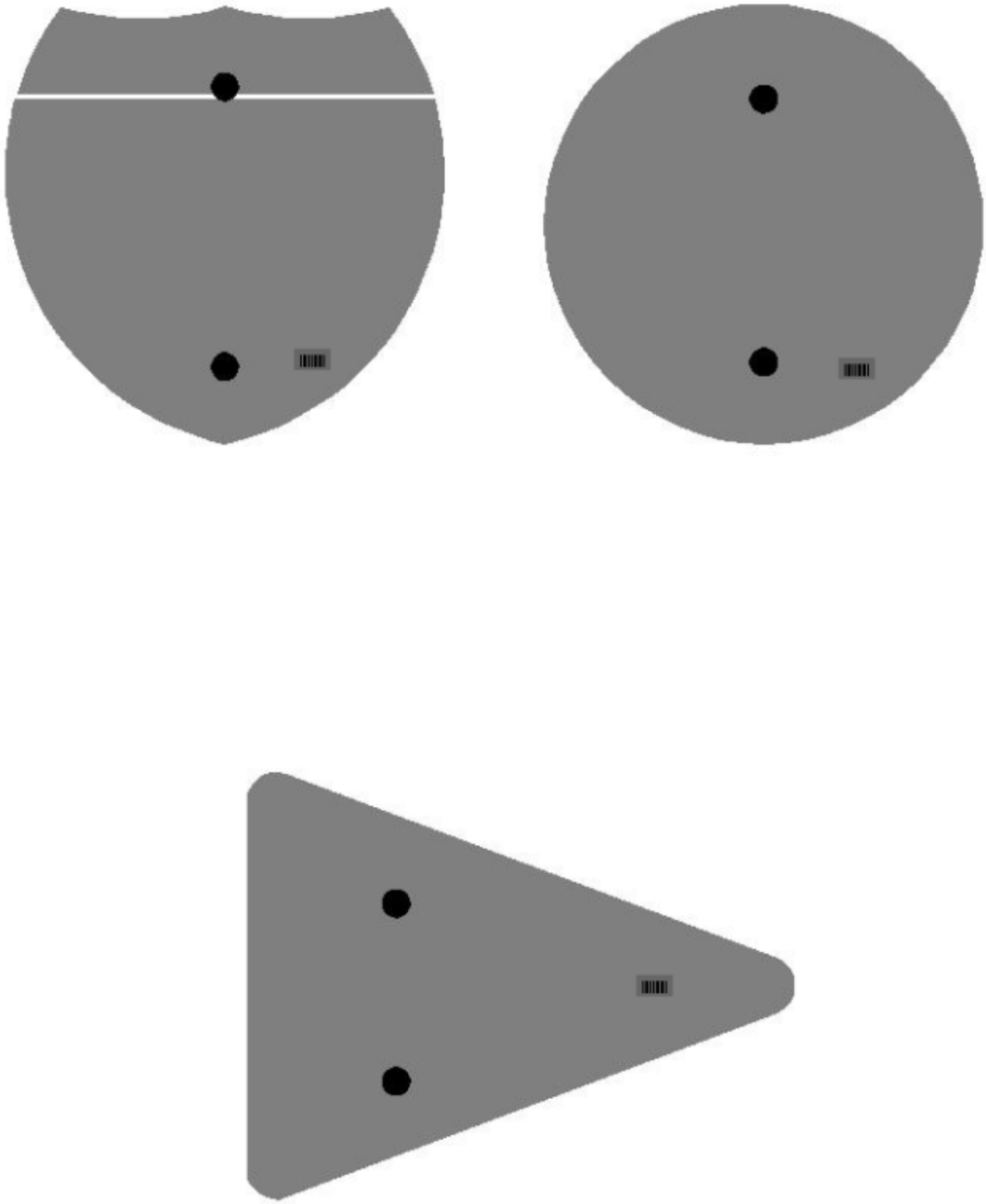




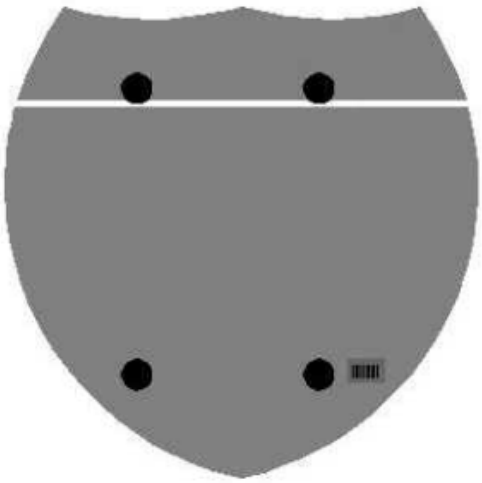
One Sign Post



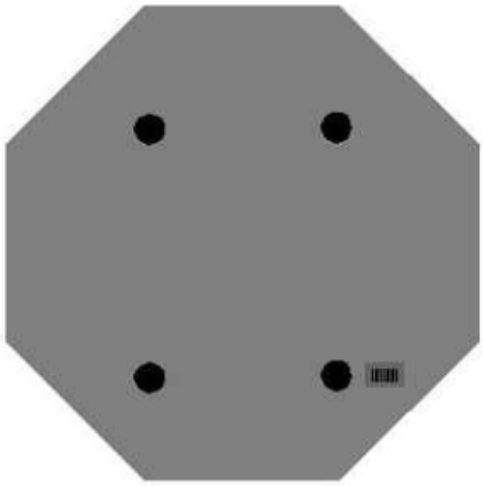
One Sign Post



Double Sign Post

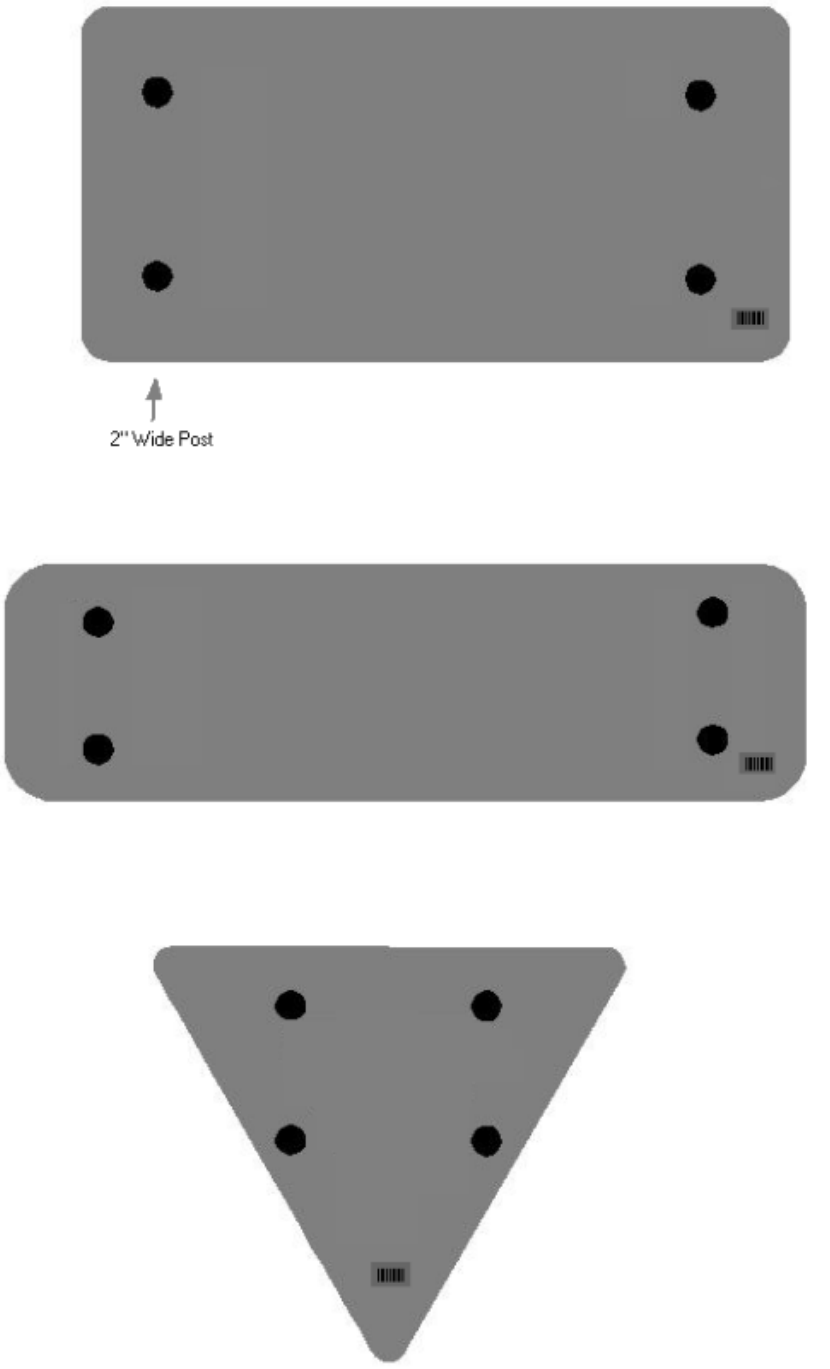


Interstate
Shield



48" Stop

2 Post Signs



1-9023.00

2020 STANDARD DRAWINGS THAT APPLY

ROADWAY

~ BARRIERS ~

GUARDRAIL HARDWARE

STEEL BEAM GUARDRAIL (W-BEAM) RBR-001-13
GUARDRAIL COMPONENTS RBR-005-11
GUARDRAIL TERMINAL SECTIONS RBR-010-06
STEEL GUARDRAIL POSTS RBR-015-06
GUARDRAIL END TREATMENT TYPE 1 ..... RBR-020-07
DELINEATORS FOR GUARDRAIL RBR-005-01

~ DRAINAGE ~

PAVED DITCHES, FLUME INLETS AND CHANNEL LININGS

CHANNEL LINING CLASS II AND III RDD-040-05

PIPE AND BOX CULVERT HEADWALLS

12" – 27" - SINGLE LINE PIPE
CONCRETE HEADWALLS FOR 12" - 27" CIRCULAR PIPE CULVERTS RDH-005-02

TYPICAL DRAINAGE INSTALLATIONS

CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (12" – 24" PIPE) RDI-001-10
CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (27" – 42" PIPE) RDI-002-05
CULVERT & STORM SEWER PIPE TYPES & COVER HEIGHTS (48" – 54" PIPE) RDI-003-05
PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER PIPE RDI-020-10
PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER, REINFORCED CONC. PIPE RDI-021-01
EROSION CONTROL BLANKET SLOPE INSTALLATION RDI-040-01
EROSION CONTROL BLANKET CHANNEL INSTALLATION RDI-041-01

MISCELLANEOUS DRAINAGE

INTERMEDIATE AND END ANCHORS FOR CIRCULAR PIPE RDX-060-04
TEMPORARY SILT FENCE RDX-210-03
SILT TRAP - TYPE A RDX-220-05
SILT TRAP - TYPE B RDX-225-01
SILT TRAP - TYPE C RDX-230-01

~ FENCES AND GATES ~

WOVEN WIRE FENCE

FENCING DETAILS RFW-001-06
WOVEN WIRE FENCE TYPE 2 ..... RFW-006-07

~ GENERAL ~

MISCELLANEOUS STANDARDS

MISCELLANEOUS STANDARDS RGX-001-06
GABION RETAINING WALLS RGX-050-02

1-9023.00
Standard Drawings That Apply
Page 2 of 2

~ PAVEMENT ~

MEDIANS, CURBS, APPROACHES, ENTRANCES, ETC.

APPROACHES, ENTRANCES, AND MAIL BOX TURNOUT RPM-110-07

TRAFFIC

~ PERMANENT ~

MARKERS

PAVEMENT STRIPING DETAILS FOR TWO LANE TWO WAY ROADWAYS TPM-175

RUMBLE STRIPS

CENTERLINE RUMBLE STRIPS TPR-100
CENTERLINE RUMBLE STRIPS 6 INCH STRIPING TPR-110
SHOULDER & EDGELINE RUMBLE STRIPS PLACEMENT DETAILS TPR-115
EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS TPR-120

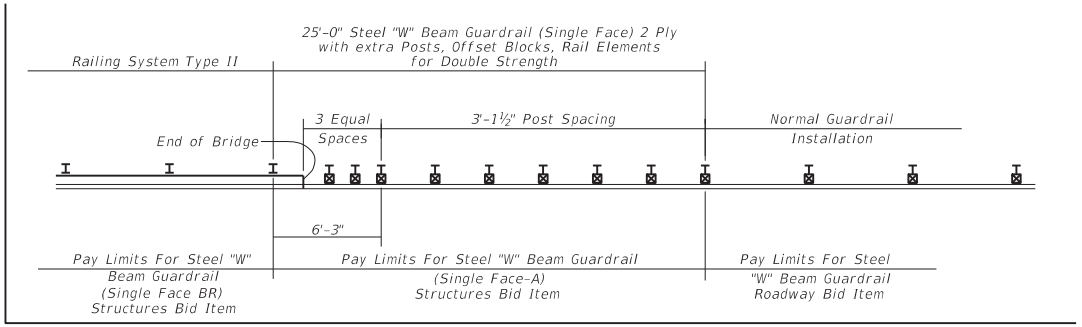
~ TEMPORARY ~

TRAFFIC CONTROL

LANE CLOSURE TWO-LANE HIGHWAY TTC-100-05
SHOULDER CLOSURE TTC-135-03

DEVICES

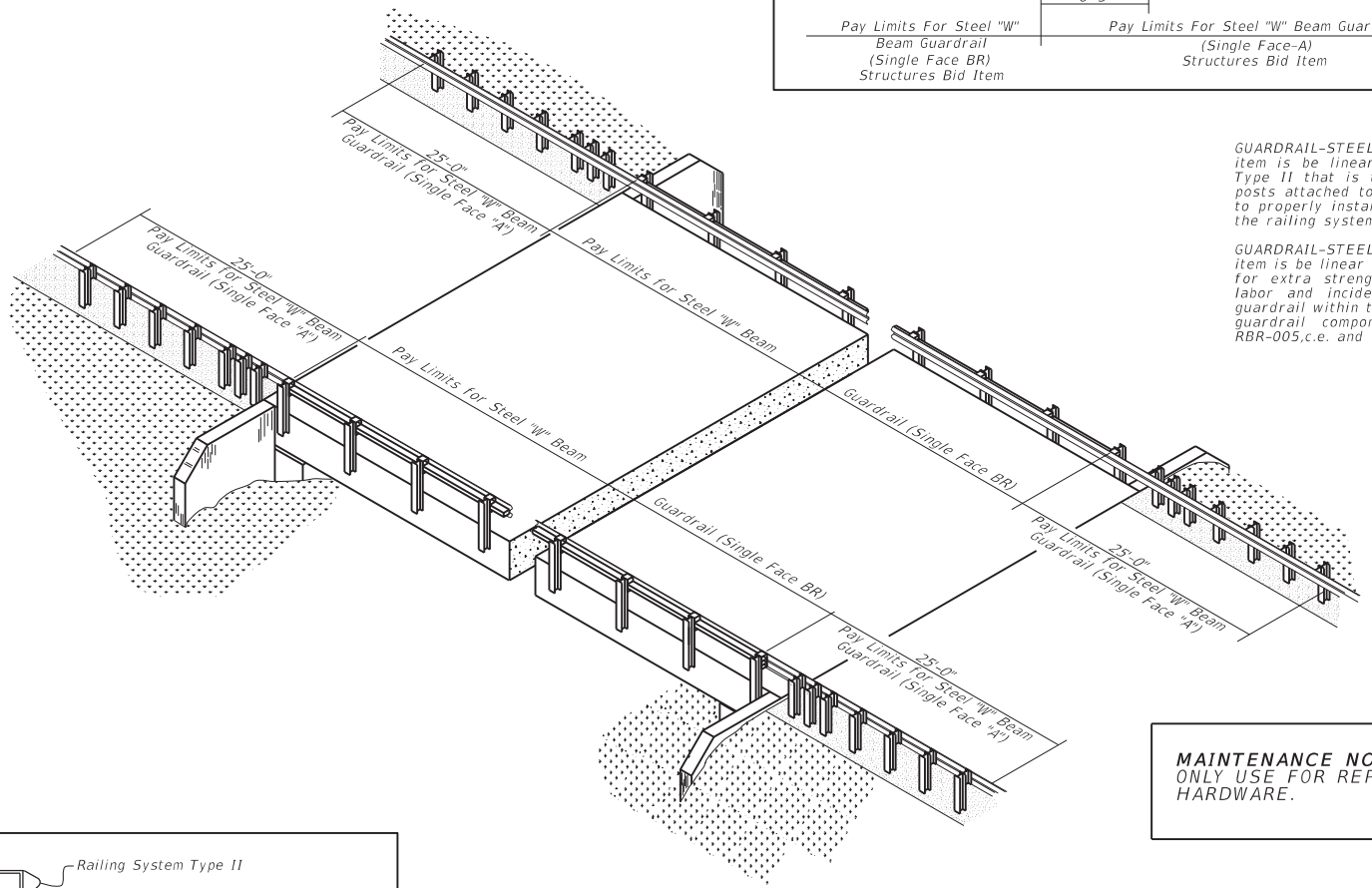
DOUBLE FINES ZONE SIGNS TTD-120-03
PAVEMENT CONDITION WARNING SIGNS TTD-125-03
SPEED ZONE SIGNING FOR WORK ZONES TTD-130



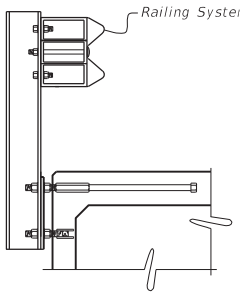
BID ITEM NOTES

GUARDRAIL-STEEL W BEAM (SINGLE FACE BR): The bid unit for this item is be linear feet. This item shall include the Railing System Type II that is to be installed on the bridge between the endmost posts attached to the bridge and all labor and incidentals necessary to properly install the railing system. For non-composite box beams, the railing system is attached to the beam prior to shipment.

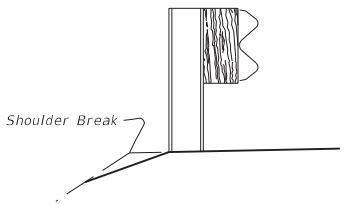
GUARDRAIL-STEEL W BEAM (SINGLE FACE A): The bid unit for this item is be linear feet. This item includes the W-Beam guardrail (2 ply for extra strength), guardrail posts, offset blocks, hardware, and labor and incidentals necessary to properly install the approach guardrail within the 25'-0" limits at each corner of the structure. For guardrail components, refer to Standard Drawings RBR-001,c.e., RBR-005,c.e. and RBR-015,c.e.



MAINTENANCE NOTES: NOT FOR NEW CONSTRUCTION. ONLY USE FOR REPAIRING OR RESTORING EXISTING HARDWARE.



BRIDGE GUARDRAIL INSTALLATION



ROADWAY SHOULDER
G.R. INSTALLATION

KENTUCKY
DEPARTMENT OF HIGHWAYS

RAILING SYSTEM
TYPE II
GUARDRAIL TREATMENT

SUBMITTED Bart Asher 06-23-20
DIVISION DIRECTOR DATE

001

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

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.

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.

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

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

Revised: January 25, 2017

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, 1025 Capital Center Drive, Suite 104, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: May 23, 2022

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

WHD U.S. Wage and Hour Division

WWW.WAGEHOUR.DOL.GOV

U.S. Department of Labor | Wage and Hour Division

WHD Publication 1088 (Revised July 2009)

PART IV

INSURANCE

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

PART V

BID ITEMS

224321

PROPOSAL BID ITEMS

Report Date 6/16/22

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	783.00	TON		$	
0020	00100		ASPHALT SEAL AGGREGATE	83.00	TON		$	
0030	00103		ASPHALT SEAL COAT	10.00	TON		$	
0040	00190		LEVELING & WEDGING PG64-22	67.00	TON		$	
0050	00212		CL2 ASPH BASE 1.00D PG64-22	410.00	TON		$	
0060	00301		CL2 ASPH SURF 0.38D PG64-22	630.00	TON		$	
0070	24970EC		ASPHALT MATERIAL FOR TACK NON-TRACKING	4.80	TON		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0080	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	20.00	EACH		$	
0090	02159		TEMP DITCH	9,364.00	LF		$	
0100	02160		CLEAN TEMP DITCH	4,682.00	LF		$	
0110	02203		STRUCTURE EXCAV-UNCLASSIFIED	9.00	CUYD		$	
0120	02263		FENCE-WOVEN WIRE TYPE 2	200.00	LF		$	
0130	02265		REMOVE FENCE	200.00	LF		$	
0140	02355		GUARDRAIL-STEEL W BEAM-S FACE A	100.00	LF		$	
0150	02360		GUARDRAIL TERMINAL SECTION NO 1	1.00	EACH		$	
0160	02367		GUARDRAIL END TREATMENT TYPE 1	5.00	EACH		$	
0170	02381		REMOVE GUARDRAIL	963.00	LF		$	
0180	02483		CHANNEL LINING CLASS II	1,040.00	TON		$	
0190	02555		CONCRETE-CLASS B	1.50	CUYD		$	
0200	02562		TEMPORARY SIGNS	288.00	SQFT		$	
0210	02575		DITCHING AND SHOULDERING	5,200.00	LF		$	
0220	02585		EDGE KEY	104.00	LF		$	
0230	02602		FABRIC-GEOTEXTILE CLASS 1	281.00	SQYD		$	
0240	02610		RETAINING WALL-GABION	18.00	CUYD		$	
0250	02650		MAINTAIN & CONTROL TRAFFIC (CRITTENDEN US 60 ITEM 1-9023)	1.00	LS		$	
0260	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		$	
0270	02697		EDGELINE RUMBLE STRIPS	7,830.00	LF		$	
0280	02701		TEMP SILT FENCE	9,364.00	LF		$	
0290	02703		SILT TRAP TYPE A	6.00	EACH		$	
0300	02704		SILT TRAP TYPE B	6.00	EACH		$	
0310	02705		SILT TRAP TYPE C	6.00	EACH		$	
0320	02706		CLEAN SILT TRAP TYPE A	6.00	EACH		$	
0330	02707		CLEAN SILT TRAP TYPE B	6.00	EACH		$	
0340	02708		CLEAN SILT TRAP TYPE C	6.00	EACH		$	
0350	02726		STAKING (CRITTENDEN US 60 ITEM 1-9023)	1.00	LS		$	
0360	05950		EROSION CONTROL BLANKET	1,000.00	SQYD		$	
0370	05952		TEMP MULCH	18,676.00	SQYD		$	
0380	05953		TEMP SEEDING AND PROTECTION	14,000.00	SQYD		$	
0390	05963		INITIAL FERTILIZER	.80	TON		$	

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PROPOSAL BID ITEMS

Report Date 6/16/22

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0400	05964		MAINTENANCE FERTILIZER	.50	TON		$	
0410	05985		SEEDING AND PROTECTION	15,635.00	SQYD		$	
0420	05992		AGRICULTURAL LIMESTONE	10.00	TON		$	
0430	06510		PAVE STRIPING-TEMP PAINT-4 IN	14,000.00	LF		$	
0440	06542		PAVE STRIPING-THERMO-6 IN W	7,830.00	LF		$	
0450	06543		PAVE STRIPING-THERMO-6 IN Y	4,629.00	LF		$	
0460	08801		GUARDRAIL-STEEL W BEAM-S FACE BR	19.00	LF		$	
0470	20191ED		OBJECT MARKER TY 3	5.00	EACH		$	
0480	20458ES403		CENTERLINE RUMBLE STRIPS	3,915.00	LF		$	
0490	20748ED		SHOULDER MILLING/TRENCHING	1,742.00	SQYD		$	
0500	21802EN		G/R STEEL W BEAM-S FACE (7 FT POST)	710.00	LF		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0510	00441		ENTRANCE PIPE-18 IN	86.00	LF		$	
0520	00462		CULVERT PIPE-18 IN	93.00	LF		$	
0530	00464		CULVERT PIPE-24 IN	46.00	LF		$	
0540	00470		CULVERT PIPE-48 IN	16.00	LF		$	
0550	01204		PIPE CULVERT HEADWALL-18 IN	1.00	EACH		$	
0560	01208		PIPE CULVERT HEADWALL-24 IN	1.00	EACH		$	
0570	01310		REMOVE PIPE	208.00	LF		$	
0580	01726		SAFETY BOX INLET-18 IN SDB-1	1.00	EACH		$	
0590	02625		REMOVE HEADWALL	5.00	EACH		$	
0600	08002		STRUCTURE EXCAV-SOLID ROCK	16.00	CUYD		$	
0610	08003		FOUNDATION PREPARATION (RCBC STA. 426+65)	1.00	LS		$	
0620	08100		CONCRETE-CLASS A (FOR END ANCHOR)	.86	CUYD		$	
0630	08100		CONCRETE-CLASS A (RCBC STA. 426+65)	31.60	CUYD		$	
0640	08150		STEEL REINFORCEMENT (RCBC STA. 426+65)	3,777.00	LB		$	
0650	26131ED		SLOPED AND MITERED HEADWALL-18 IN	1.00	EACH		$	
0660	26132ED		SLOPED AND MITERED HEADWALL-24 IN	1.00	EACH		$	

Section: 0004 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0670	06406		SBM ALUM SHEET SIGNS .080 IN	78.06	SQFT		$	
0680	06407		SBM ALUM SHEET SIGNS .125 IN	26.68	SQFT		$	
0690	06410		STEEL POST TYPE 1	185.00	LF		$	
0700	21134ND		REMOVE-STORE AND REINSTALL SIGN	5.00	EACH		$	
0710	21373ND		REMOVE SIGN	11.00	EACH		$	
0720	24631EC		BARCODE SIGN INVENTORY	24.00	EACH		$	

Section: 0005 - DEMOBILIZATION

PROPOSAL BID ITEMS

224321

Report Date 6/16/22

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0730	02569		DEMOBILIZATION	1.00	LS		$	