CALL NO. 401

CONTRACT ID. 224455

BRACKEN COUNTY

FED/STATE PROJECT NUMBER 012GR22T034-FD04 & FD05

DESCRIPTION MARY INGLES HIGHWAY (KY 8)

WORK TYPE ASPHALT PAVEMENT & ROADWAY REHAB

PRIMARY COMPLETION DATE 10/31/2023

LETTING DATE: December 08,2022

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN STANDARD TIME December 08,2022. Bids will be publicly announced at 10:00 AM EASTERN STANDARD TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

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

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PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 06

CONTRACT ID - 224455

012GR22T034-FD04 & FD05

COUNTY - BRACKEN

PCN - 0601200082201
FD04 012 0008 003-014

MARY INGLES HIGHWAY (KY 8) (MP 3.597) FROM THE INTERSECTION OF KY 8 AT WILLOW ROAD EXTENDING EAST TO 0.013 MILE EAST OF AUGUSTA MINEVA ROAD (MP 13.953), A DISTANCE OF 010.36 MILES.ASPHALT PAVEMENT & ROADWAY REHAB SYP NO. 06-09026.00.

GEOGRAPHIC COORDINATES LATITUDE 38:45:59.30 LONGITUDE 84:03:26.23

ADT 1,061

PCN - MP01200082101
FD05 012 0008 003-014

MARY INGLES HIGHWAY (KY 8) (MP 3.597) BEGIN AT WILLOW CREEK ROAD EXTENDING EAST TO BIG BRACKEN CREEK BRIDGE (MP 13.946), A DISTANCE OF 010.34 MILES.ASPHALT RESURFACING

GEOGRAPHIC COORDINATES LATITUDE 38:46:00.00 LONGITUDE 84:02:26.00

ADT 2,188

COMPLETION DATE(S):

COMPLETED BY 10/31/2023 APPLIES TO ENTIRE PROJECT

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.

BUILD AMERICA, BUY AMERICA ACT (BABA)

On November 15, 2021, President Biden signed into law the Infrastructure Investment and Jobs Act (IIJA), Pub. L. No. 117-58, includes the Build America, Buy America Act ("the Act"). Pub. L. No. 117-58, §§70901-52. The Act strengthens the Buy America preference to include "construction materials." The current temporary waiver for **"construction materials"** will expire on November 10, 2022.

The Act will apply to construction materials as outlined in the guidance issued in OMB M-22-11.

Construction Materials – Includes an article, material, or supply – other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives – that is or consists primarily of:

- Non-ferrous metals
- Plastic/polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- Glass (including optic glass);
- Lumber; or
- Drywall.

Construction Materials only applies to items, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project.

Construction Materials does not apply to tools, equipment or supplies brought to the jobsite and removed before completion.

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 varied 22 to 36 feet.

The Department estimates the total mainline area to be surfaced to be 139,850 square yards.

The Department estimates the shoulder width to be varied 1 to 6 feet on each side.

The Department estimates the total shoulder area to be surfaced to be 11,386 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.

INCIDENTAL SURFACING

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

FUEL AND ASPHALT PAY ADJUSTMENT

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

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.

Special Notes Applicable to Project – General Notes & Description of Work

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.

BUY AMERICA REQUIREMENT

Federal Funds were used for the design of Item No. 6-9026 FD04 project; therefore, the Contractor shall follow the "Buy America" provisions as required by Title 23 Code of Federal Regulations 635.410.

STATIONING

The Contractor is advised that the planned locations of work were established from a beginning station number, which is STA 189+92.16 at the intersection of KY 8 and Willow Creek Road, and corresponds to Milepoint 3.597 along KY 8.

NOTE: The existing mile marker signs may not correspond to the proposed work locations.

LIDAR

All survey information was obtained from available KYTC Aerial LIDAR data and should be field verified as appropriate during construction and prior to incorporating the various project work items. Refer to the Special Note for Staking concerning staking operations required to control and construct the work.

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. 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.

There are numerous historic, and potentially historic, resources in the Area of Potential Effect (APE) along the project corridor. The Contractor shall confine their construction activities on Item Number 6-9026, CID 224445, Bracken County, KY 8, to within the existing Right of Way limits to avoid any impact to any historic resources. No modifications to the contract plans may occur without additional concurrences from the State Historic Preservation Office (SHPO).

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.

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:

Pavement Resurfacing. The existing roadway is to be resurfaced from Station 189+92.16 to Station 736+34.88 using **FD05** funds, which will also include the construction of edge keys and installation of rumble strips. Refer to the rumble strip Standard Drawings for recommended placement of rumble strips. Other items that may be associated with the pavement resurfacing but are included in this contract are: removal of existing pavement by milling and texturing and application of pavement markings.

Roadside Regrading. Several areas throughout the project are set up for Roadside Regrading. Perform Roadside Regrading at the locations identified on the Roadside Regrading Summary, or the locations as directed by the Engineer. The Contractor and Engineer should work together to determine the proposed shoulder, ditch, and/or roadside dimensions. Perform Roadside Regrading according to the Special Note for Roadside Regrading. For details of the conditions and situations commonly encountered when performing Roadside Regrading, refer to the detail sheets titled: ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS.

Pipe Extensions. There are locations throughout the project where culvert pipes are being extended. Locations and estimated quantities are noted on the Culvert Pipe Replacement & Extension Summary but final determination of the item quantities for each location to be determined by the Contractor and approved by the Engineer based on the conditions discovered at the time of construction. For pipe extensions where the existing pipe is RCP, remove the existing headwall and first section of existing RCP attached to the headwall (approx. 3-4' ft). Other items that may be included with the pipe extensions/replacements include safety box inlets, sloped & mitered concrete headwalls, intermediate anchor/collar, ditching & shouldering, channel lining, erosion control blanket, asphalt pavement quantities, etc. Refer to the Special Note for Pipe Replacements/Extensions for more information on this item of work.

Sloped & Mitered Concrete Headwalls. Sloped & Mitered Concrete Headwalls shall be constructed as shown on the detail sheets titled: SLOPED & MITERED CONCRETE HEADWALL DETAILS. 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 to the surrounding embankment. The Culvert Pipe Replacement & Extension Summary identifies which pipe ends are to receive the Sloped & Mitered Concrete Headwalls.

The identified pipe ends shall have the headwall installed and the pipe mitered at a slope that matches the final embankment slopes at each location. If the pipe is on a skew, install the headwall and miter the pipe so that the concrete slope paving of the new headwall is perpendicular to the roadway. In other words the embankment slope should not be warped to fit the skew of the pipe; the headwall should be installed and the pipe should be mitered to match the final embankment slope, so that the roadside fill slope is fairly consistent prior to the pipe, at the pipe, and beyond the pipe, and does not create an excessive bulge in the embankment. When completed the edges of the Sloped & Mitered Concrete Headwall should be flush with the surrounding ground line. Payment at the Contract unit price Each shall be full compensation for furnishing all labor, materials, equipment, and incidentals necessary to install the headwall and miter the pipe.

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.

Intermediate Anchor/Collar. There are quantities of Class A Concrete included in the contract to construct an intermediate anchor, or collar, around the pipes at the pipe extension locations. This is so the new pipe can be securely connected to the existing pipe. The intermediate anchors shall be constructed as shown on Standard Drawing RDX-060, current edition.

Erosion Control Blanket. A quantity of Erosion Control Blanket has been included in the contract for potential use along areas of regraded shoulders, ditch lines, fills slopes and/or back 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 quantities and placement of Erosion Control Blanket.

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.

Drilled Railroad Rails and Cribbing. There are locations within the project where embankment slide repairs using drilled railroad rails and cribbing is proposed. Locations are noted on the Cribbing Summary. Refer to the Special Note for Embankment Slide Repair and the associated detail sheets for more information.

Removal of Existing Curve Signing and Installation of Proposed Curve Signing. 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 in the Sign 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.

General Notes & Description of Work
Page 4 of 4

Removal of Existing Signs. Estimated quantities of "Remove Sign" are included within the Remove Sign Summary. This bid item is for the removal of ALL the existing horizontal alignment warning signs along the identified routes. Further, the District Traffic Engineer may determine that there are other sheet signs, in addition to the existing horizontal alignment signs, that also need to be removed. These signs will be determined during construction.

NOTE: There are some curves along the routes within this contract that have existing horizontal alignment signs that will not receive proposed horizontal alignment signs. For these curves the existing horizontal alignment signs are to be removed during the same time period as the installation of the proposed horizontal alignment signs for the route. The reason these horizontal alignment signs are being removed and NOT replaced with proposed horizontal alignment signs, is because those particular curves did not "ball bank" below the posted speed limit, and therefore, do not require horizontal alignment signs. The Engineer may consult with the District Traffic Engineer and/or the HSIP staff within the Division of Traffic Operations for more information, if necessary.

Perforated Pipe. A quantity of Perforated Pipe – 4 in, Non-perforated Pipe – 4 in, and Perforated Pipe Headwall Type 1 – 4 in, has been included in the contract for potential use in locations of Base Failure Repair as well as any additional areas as directed by the Engineer. The Contractor and Engineer should work together to determine any locations throughout the project requiring perforated pipe. The Engineer will make the final determination as to the quantities and placement of Perforated Pipe and associated bid items.

Temporary Striping. A quantity of Pave Striping – Temp Paint – 4 in has been included in the contract for potential use during the Pavement Resurfacing as well as in the areas of Base Failure Repair, Pavement Repair, Pipe Extensions, and any other areas as directed by the Engineer. 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 quantities and placement of temporary pavement striping.

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, perform items 1-3 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. 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.

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.

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.

Special Note for Roadside Regrading

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) Roadside Regrading; (4) Constructing Embankments, Embankment Benching, and/or Excavation; (5) Erosion Control; and (6) 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. Roadside Regrading. Perform Roadside Regrading 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 as specified in the ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS, the Typical Sections, the Plan Sheets, or as directed by the Engineer. Roadside Regrading 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, Roadside Regrading 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 Roadside Regrading 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 ROADSIDE REGRADING. For more information refer to the ROADSIDE REGRADING 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 ROADSIDE REGRADING 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. Roadside Regrading. The Department will measure the bid item ROADSIDE REGRADING in linear feet along the centerline of the roadway as the length of the actual Roadside Regrading work performed. Further, this measurement will only include one side of the roadway. Therefore, for areas where roadside regrading 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 ROADSIDE REGRADING.

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 ROADSIDE REGRADING.

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. Roadside Regrading. The Department will make payment for the completed and accepted quantities under the bid item ROADSIDE REGRADING. The Department will consider payment full compensation for furnishing all labor, materials, equipment, and incidentals necessary to perform Roadside Regrading 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.

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.

March 29, 2017

SPECIAL NOTE FOR PIPE CLEANING

PART 1 -- GENERAL

1.01 SCOPE OF WORK

A. Furnish all labor, materials, equipment, and incidentals required to clean all pipes, as specified herein.

B. Cleaning shall include the proper high pressure water jetting, rodding, snaking, bucketing, brushing, and flushing of pipes prior to inspection by closed circuit television, pipeline rehabilitation, and testing operations.

C. Cleaning shall dislodge, transport, and remove all sludge, mud, sand, gravel, rocks, bricks, grease, roots, sticks, and all other debris from the interior of the sewer pipe and structures as required for pipeline rehabilitation.

PART 2 -- PRODUCTS

2.01 MATERIALS

A. Hydraulically propelled Sewer Cleaning Equipment

1. Hydraulically propelled sewer cleaning equipment shall be the movable dam type constructed such that a portion of the dam may be collapsed during cleaning to prevent flooding of the sewer.

2. The movable dam shall be the same diameter as the pipe being cleaned and shall provide a flexible scraper around the outer periphery to ensure total removal of grease.

3. Contractor shall take precautions against flooding prior to using sewer cleaning balls or other such equipment that cannot be collapsed instantly.

B. High Velocity Hydro-Cleaning Equipment shall have the following:

1. A minimum of 500-ft of high-pressure hose.

2. Two or more high velocity nozzles capable of producing a scouring action from 15 to 45 degrees in all size lines to be cleaned.

3. A high velocity gun for washing and scouring manhole walls and floor.

4. Capability of producing flows from a fine spray to a long-distance solid stream.

5. A water tank, auxiliary engines and pumps and a hydraulically driven hose reel.

6. Equipment operating controls located above ground.

C. Mechanical cleaning equipment for sewer mains shall be either power buckets or power rodders.

1. Bucket machines
   a. To be furnished with buckets in pairs
   b. Use V-belts for power transmission or have an overload device. No direct drive machines will be permitted.
   c. To be equipped with a take up drum and a minimum of 500-ft of cable.
   d. Have sufficient dragging power to perform the work efficiently.

2. Power rodding machine
   a. Either sectional or continuous.
   b. Hold a minimum of 750-ft of rod.
   c. The machine shall have a positive rod drive to produce 2000 pounds of rod pull.

PART 3 -- EXECUTION

3.01 PERFORMANCE

A. Selection of cleaning equipment shall be based on the conditions of the structures and lines at the time the work commences based on the pre-construction CCTV inspection to be conducted by the Contractor under this Contract.

B. Use properly selected equipment to remove all dirt, grease, rock and other deleterious materials, and obstructions.

C. Protect existing lines from damage caused by improper use of cleaning equipment.

D. Take precautions to avoid damage or flooding to public or private property being served by the line being cleaned.

F. Removal of Materials

1. Remove all solids and semi-solids at the downstream opening of the section being cleaned.

2. Passing material from one section of a line to another will not be permitted, unless access to any one section of line cannot be achieved.

G. Remove from the site and properly dispose of all solids or semi-solids recovered during the cleaning operation.

H. No cleaning shall take place in a particular segment until all upstream pipe segments have been cleaned. If cleaning is done in a downstream pipe segment in order to facilitate overall cleaning

operations, the segment shall be re-cleaned at no additional cost, after all pipes upstream of that segment have been cleaned.

3.02 FIELD QUALITY CONTROL

A. Acceptance of this portion of the work shall be dependent upon the results of the television inspection. Lines not acceptably clean as to permit television inspection and rehabilitation shall be re-cleaned and re-inspected at no additional cost to the Owner

B. Following cleaning, the Contractor shall inspect each section in accordance with the Special Note for Pipe Liner Acceptance Testing.

C. Upon the Engineer's final structure to structure inspection of the system, if any foreign matter is still present in the system, clean the sections and portions of the lines as required.

PART 4 – MEASUREMENT & PAYMENT

Payment for cleaning of the pipes as detailed in the Pipe Drainage Summary will be made per linear foot as the price bid for CLEAN PIPE. The CLEAN PIPE bid item will be paid for the cleaning of all pipe sizes. Payment for CLEAN PIPE shall be considered full compensation for all work, equipment, and incidentals necessary to clean the pipe in accordance with this note.

June 1, 2017

SPECIAL NOTE FOR PVC FOLD-AND-FORM PIPE LINER

I. GENERAL

A. SUMMARY

1. Section Includes: Definition of the approved methods and materials to rehabilitate gravity pipelines by the insertion of a continuously extruded, folded, PVC Fold-and-Form Pipe Liner into a conduit (host pipe), and the "blow-molding" (thermoforming) of the pipe liner to conform to the shape of the existing pipe. The pipe liner shall:
   a) Extend continuously from one access point to the next access point with no joints.
   b) Provide a tightly conforming fit against the inner wall of the host pipe.
   c) Definitions:
      (1) PVC Fold-and-Form Pipe Liner: A continuously extruded (joint-less), polyvinyl chloride (PVC) Pipe Liner that is shaped into a reduced form to facilitate insertion into existing pipelines or conduits. The Pipe Liner shall return to its extruded, round memory upon application of heat and pressure and form tightly against the host pipe by "blow molding" (thermoforming) techniques.
      (2) Host Pipe: An existing gravity pipeline or conduit to be internally rehabilitated by installation of the PVC Fold-and-Form Pipe Liner.

B. REFERENCES

1. Codes and standards referred to in this Special Note are:
   a) ASTM D 256: Standard Test Methods for Determining the Pendulum Impact Resistance of Notched Specimens of Plastics.
   b) ASTM D 638: Standard Test Method for Tensile Properties of Plastics
   c) ASTM D 790: Standard Test Method for Flexural Properties of Unreinforced and Reinforced Plastics
   d) ASTM D 1784: Standard Specification for Rigid Polyvinyl Chloride (PVC) Compounds and Chlorinated Polyvinyl Chloride (CPVC) Compounds
   e) ASTM D 2122: Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
   f) ASTM D 2152: Standard Test Method for Extrusion Quality using Acetone Immersion
   g) ASTM D 2444: Standard Test Method for Impact Strength
   h) ASTM F 1057: Standard Test Method for Extrusion Quality using Heat Reversion
   i) ASTM F 1504: Standard Specification for Folded/Formed Poly (Vinyl Chloride) Pipe for Existing Sewer and Conduit rehabilitation

C. PIPE DESIGN AND DIMENSION

1. Submittals: The Contractor shall furnish engineering data covering materials and installation procedures.
2. Unless otherwise specified, the Contractor shall determine the minimum and maximum length of liner to effectively span the distance from the inlet to the outlet of the respective pipelines.
3. The pipe liner shall have a nominal outside diameter and minimum wall thickness based upon project parameters and the condition of the host pipe.

D. SAFETY

1. The CONTRACTOR shall conform to all safety requirements of pertinent regulatory agencies and

shall secure the site for the working conditions in compliance with the same. The CONTRACTOR shall erect signs and devices as are necessary for the safety of the work site.

2. The CONTRACTOR shall also provide all of the WORK in accordance with applicable OSHA standards. Emphasis shall be placed upon the requirements for entering confined spaces and working with steam.

II. PRODUCTS

A. MATERIAL SPECIFICATIONS:

1. PHYSICAL PROPERTIES: The PVC Fold-and-Form Pipe Liner will be manufactured from virgin PVC Fold-and-Form Pipe Liner compound, containing no fillers, and meet or exceed the following minimum physical properties:
   a) COMBUSTIBILITY: Self-Extinguishing
   b) FLEXURAL MODULUS: ASTM D 790 280,000 PSI @73F
   c) FLEXURAL STRENGTH: ASTM D 790 5,000 PSI @73F
   d) IZOD IMPACT: ASTM D 256 1.5 FT-LB/IN
   e) CHEMICAL RESISTANCE: suitable under general sanitary sewer conditions
2. CHARACTERISTICS: The PVC Fold-and-Form Pipe Liner shall be designed to meet the following installation performance requirements:
   a) The Pipe Liner shall be capable of expanding a full pipe size larger than the nominal diameter (ex: 8” to 10”) without splitting, or rupturing with the understanding that the pipe liner dimension ratio will increase when so expanded.
   b) After being expanded by “blow-molding”, the installed Pipe Liner will match the configuration of the host pipe.
   c) The Pipe Liner shall be capable of negotiating pipe line bends in the host pipe without splitting, rupturing, or wrinkling of the pipe liner material.
   d) The pipe liner shall be dimensionally stable after cool-down.
   e) Processing of the pipe liner shall cause no degradation of the pipe liner physical properties.
3. MARKINGS: The pipe liner shall be marked at maximum five (5) foot intervals indicating ASTM D 1784 cell classification, manufacturer, and size (diameter and SDR). Each production lot will be uniquely coded.
4. DIMENSIONS:
   a) The Pipe Liner outside diameter will be manufactured substantially smaller than the inside diameter of the host pipe. The pipe liner shall be manufactured with sufficient excess wall thickness to allow the pipe liner to meet or exceed the DR requirements after being expanded by “blow-molding” within the host pipe.
   b) Unless otherwise specified, the Standard Dimension Ration (SDR) of 4” to 15” diameter Pipe Liner will be SDR 35. 18” to 36” Pipe Liner will be specified by wall thickness. The Pipe Liner will be continuously extruded (no joints) at the factory to the minimum length required to effectively span the distance between access points, in accordance with actual distances which shall be field verified by the Contractor prior to manufacturing.

B. TESTING: Each production lot of Pipe Liner will be inspected and tested at the time of manufacture for defects is accordance with ASTM D 2444, and ASTM D 2152. All pipe liners shall conform to the specified dimensions. Material design properties shall be confirmed in accordance with ASTM D 790.

III. EXECUTION

A. HOST PIPE PREPARATION
1. The existing pipeline shall be cleaned of any obstructions and televised using CCTV immediately prior to installation of the pipe liner. The host pipe condition shall be acceptable to the ENGINEER as appropriate for lining prior to the insertion of the pipe Liner.
2. Prior to beginning the insertion of the pipe liner, the CONTRACTOR shall confirm that the host pipe is adequately cleaned.

B. INSTALLATION PROCEDURES:
1. The pipe liner manufacturer's installation instructions and procedures shall be followed during installation.
2. Point Repairs
   a) Point repairs and obstruction removals shall be completed, as necessary, to enable lining.
3. Liner Insertion
   a) The entrance to the host pipe shall be covered so as to provide a smooth surface to prevent damage to the Pipe Liner.
   b) The Pipe Liner shall be positioned to enable it to naturally curve into the access point and the host pipe.
   c) The insertion end of the Pipe Liner shall be sealed to inhibit fluids and solids form entering the lumen of the Pipe Liner.
   d) Insert the Pipe Liner into the entry access point. Slowly feed the Pipe Liner from the supply reel, while simultaneously pulling the Pipe Liner at the exit access point, to minimize tension on the Pipe Liner. Maintain two-way communication between personnel at entry and exit access points to coordinate the rate of Pipe Liner supply and pulling operations.
   e) Use a power winch and a steel cable connected to the pulling head as recommended by the manufacturer to advance the Pipe Liner.
4. Pipe Liner Processing and "Blow-Molding":
   a) Process and "blow-mold" the PVC Fold and-Form Pipe Liner in accordance with the manufacturer's instructions for heating and expanding the Pipe Liner. Upon completion of processing and "blow-molding", the Pipe Liner shall fit tightly against the inside wall of the host pipe and be locked into the joints of the host pipe, if possible.
   b) Temperature and pressure gauges shall be used at the insertion and termination access points to monitor internal conditions during Pipe Liner processing and "blow-molding".
   c) Introduce pressurized steam to heat and relax the Pipe Liner in strict accordance with the recommendations of the Pipe Liner manufacturer.
   d) Continue the application of steam while introducing compressed air to increase internal pressure on the Pipe Liner as recommended by the manufacturer. DO NOT ALLOW PRESSURE TO EXCEED 12 PSI, AS DAMAGE MAY OCCUR TO HOST PIPE.
   e) Discontinue the use of steam while continuing the use of compressed air to maintain the internal pressure. Allow the Pipe Liner to cool below 100 F before releasing pressure.
5. Liner Termination:
   a) During the pulling in place and "blow-molding" process, the PVC liner shall form a bell shape at each end effectively locking the liner in place.

IV. PAYMENT

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

Code	Pay Item	Pay Unit
24860EC	PVC Fold and Form Pipe Liner – 12 Inch	LF
24861EC	PVC Fold and Form Pipe Liner – 15 Inch	LF
24862EC	PVC Fold and Form Pipe Liner – 18 Inch	LF
24863EC	PVC Fold and Form Pipe Liner – 24 Inch	LF
24864EC	PVC Fold and Form Pipe Liner – 30 Inch	LF
24865EC	PVC Fold and Form Pipe Liner – 36 Inch	LF

The Department will consider payment as full compensation for all work, equipment, and incidentals necessary to install the pipe liners in accordance with this note.

June 1, 2017

SPECIAL NOTE FOR PIPE LINER ACCEPTANCE TESTING

PART 1 -- GENERAL

1.01 SCOPE OF WORK

A. Furnish all necessary labor, materials, equipment, services, and incidentals required to visually inspect by means of closed-circuit television (CCTV) designated pipe sections including, but not limited to, recording and playback equipment, materials, and supplies.

B. The inspection shall be performed on one section (i.e. curb box inlet to curb box inlet) at a time. The section being inspected shall be suitably isolated from the remainder of the system.

C. Video recordings shall be made of the television inspections and copies of both the recordings and printed inspection logs shall be supplied to the Engineer.

D. Contractor may have to perform point repairs, remove obstructions, or remove protruding service connections to complete pre-rehabilitation TV inspection.

PART 2 -- PRODUCTS

2.01 EQUIPMENT

A. The television camera used for inspection shall be one specifically designed and constructed for such inspection. Lighting for the camera shall be suitable to allow a clear picture for the entire periphery of the pipe. The camera shall be operative in 100 percent humidity conditions. The camera, television monitor and other components of the video system shall be capable of producing a minimum 500-line resolution color video picture. Picture quality and definition shall be to the satisfaction of the Engineer and if unsatisfactory, inspection shall be performed again with the appropriate changes made as designated by the Engineer at no additional cost to the Engineer. The television inspection equipment shall have an accurate footage counter that shall display on the monitor, the exact distance of the camera from the centerline of the starting manhole.

PART 3 -- EXECUTION

3.01 PROCEDURE

A. The camera shall be moved through the pipe in either direction at a uniform rate, stopping when necessary to ensure proper documentation of the pipe's condition but in no case will the television camera be pulled at a speed greater than 30 fpm. Manual winches, power winches, TV cable and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the pipe conditions shall be used to move the camera through the line. If, during the inspection operation, the television camera will not pass through the entire section, the equipment shall be removed and repositioned in a manner so that the inspection can be

performed from the opposite opening. All set-up costs for the inspection shall be included in the unit prices bid. If the camera fails to pass through the entire section, the Contractor shall perform point repairs as required or approved by the Engineer. Point repairs will be paid as each at the bid price for "PIPE REPAIR". The Contractor shall re-clean or further remove blockage after the point repairs at no additional cost to the Engineer.

B. Whenever non-remote powered and controlled winches are used to pull the television camera through the line, telephones, radios, or other suitable means of communication shall be set up between the two openings of the line being inspected to ensure that good communications exist between members of the crew.

The camera height shall be adjusted such that the camera lens is always centered in the pipe being televised. Flow shall be controlled such that depth of flow shall not exceed 20% of pipe's diameter.

Lighting system shall be adequate for quality pictures.

3.02 RECORDING OF FIELD OBSERVATIONS

A. Television Inspection logs

1. Printed location records shall be kept which shall clearly show the location. In addition, other data of significance including joints, unusual conditions, roots, collapsed sections, or presence of scale and corrosion that the camera failed to pass through and reasons for the failure and other discernible features shall be recorded and annotated using the PACP system and a copy of such records shall be supplied to the Engineer.

B. Digital Recordings

1. The purpose of digital recording shall be to supply a visual and audio record of areas of interests of the pipe segments that may be replayed by the Engineer. Digital recording playback shall be at the same speed that it was recorded and shall be made in color. The Contractor shall be required to have all digital media and necessary playback equipment readily accessible for review by the Engineer during the project.

2. The Contractor shall perform CCTV inspection of each newly installed or rehabilitated pipe segment after testing and before re-introducing any flow into the pipe. Each test shall be witnessed by the Engineer.

3. The Contractor shall record each CCTV inspection on a DVD and submit such recordings to the Engineer as a prerequisite for Partial Utilization/Substantial Completion.

4. CCTV inspections shall be performed by a PACP certified and trained person.

5. Inspections shall include narration that notes the location and type of defects, if any.

6. At the completion of the project, the Contractor shall furnish all of the original digital recordings to the Engineer. Each disc shall be labeled as to its contents. Labels shall include the disc number, date televised, sewer segment reach designation, street location, and structure numbers on the disc. The Contractor shall keep a copy of the discs for 30 days after the final payment for the project, at which time the discs may be erased at the Contractor's option.

PART 4 – MEASUREMENT & PAYMENT

Payment for both the video inspection prior to and after the Pipe Liners have been installed will be made as one lump sum payment as PIPE LINER ACCEPTANCE TESTING. Payment for PIPE LINER ACCEPTANCE TESTING will be considered full compensation for all work, equipment, and incidentals necessary to perform the video inspection in accordance with this note.

Payment for pipe point repairs will be made as each at the bid price for PIPE REPAIR. Payment for PIPE REPAIR will be considered full compensation for all work, equipment, and incidentals necessary to make point repairs as required and approved by the Engineer.

Special Note for Embankment Slide Repair

I. DESCRIPTION

Except as specified herein, perform all work in accordance with the Department's Standard and Supplemental Specifications and 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) Furnish and install railroad rails; (3) Install cribbing**;** (4) Excavate, place geotextile material, and backfill the area around the railroad rails and on the fill slope; (5) Reconstruct shoulder area; (6) Install guardrail; (7) Maintain and Control Traffic; and (8) any other work as specified by this contract.

Repairs using drilled railroad steel and guardrail cribbing are to occur at locations indicated on the Plan Sheets and/or Summary Sheets. Begin and End limits at each area are to be field verified with approval from the Engineer.

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. Railroad Rails. Use recycled (used) railroad rails classified with a nominal weight of 130 lb/yd (pounds per yard) size or greater. Use only visibly straight recycled railroad rails with no splices. The Engineer will verify rail nominal weights (Manufacturer's Stamp with lb/yd, date, etc.) Provide Certification for nominal weight if the Manufacturer's Stamp is unidentifiable.

B. Wall Cribbing. Use recycled (used) steel "W" beam guardrail. Cribbing material will be furnished by the Department of Highways. Wall cribbing will be located at the ***Bailey Bridge Yard in Frankfort, KY*****.** The Contractor will be responsible for picking up the cribbing material and delivering it to the project site as an incidental item.

C. Backfill Material for Drilled Sockets. Use the following for backfill material for Drilled sockets: concrete, free flowing sand, pea gravel, crushed limestone, or crushed sandstone. Use backfill material with one hundred percent (100%) passing a one-half (1/2) inch sieve. Do not use auger tailings. Engineer will use visual inspection and/or material testing, as applicable to determine acceptability.

D. Fill Material for Cribbing. Use one of the following backfill materials: Kentucky Aggregate Gradation No. 2's or larger. Backfill material shall meet requirements of Section 805. The Engineer will use visual inspection and/or material testing, as applicable, to determine acceptability.

E. DGA. Furnish DGA as per Section 805. Do not use Crushed Stone Base.

F. Final Dressing, Seed and Protection. Use seed mixture(s) according to Section 212.

G. Geotextile Fabric. Furnish Geotextile Fabric Class 2 as per Section 843.

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

III. CONSTRUCTION METHODS

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

B. Staking. Establish proper slope elevations and ratios, shoulder widths, existing ditch profile and final ditch profile to insure positive drainage. Be responsible for field layout. Positive drainage is required upon completion of the project and is the responsibility of the Contractor.

C. Site Preparation. Prepare repair sites. This includes clearing and grubbing, if necessary. Remove all obstructions. Sweep and remove debris, if necessary. The area to be cleared has not been measured by the Department and the bidder must draw his own conclusions. Construct silt checks, temporary silt fence, or other erosion control devices, as necessary to satisfy the BMP, at locations directed by the engineer. The engineer shall approve all site preparation. The Department will not make direct payment for site preparation.

D. Installation of Railroad Rails. See attached summary for site locations and estimated quantities of materials required. The depth to rock shown on the summary is approximate. No geotechnical borings were advanced, and, as such, rock depths may differ from those estimated. Therefore, the contractor is responsible for determining actual depth to rock and providing to the Department to be approved by the Engineer. The embankment failures at these sites are caused by erosion from steep slopes and poor drainage.

NOTE TO ENGINEER AND CONTRACTOR: ABSOLUTELY NO CHANGE IN SCOPE OF WORK OR INCREASE IN QUANTITIES WILL BE ALLOWED ON THIS PROJECT WITHOUT PRIOR WRITTEN APPROVAL FROM THE TEBM (Transportation Engineering Branch Manager) OR HIS REPRESENTATIVE IN THE DISTRICT OFFICE.

THE DEPARTMENT SHALL NOT BE LIABLE FOR PAYMENTS DUE TO ADDITIONAL WORK THAT HAS NOT BEEN AUTHORIZED BY THE AFOREMENTIONED PERSONS.

Install used railroad rail piling in drilled sockets in rock or stable material under the landslides (see Figure 1) or the eroded areas (see Figure 2) as project location dictates or as directed by the Engineer.

Drill the socket, furnish, and install the railroad rails into holes at slide locations. If the Engineer determines from sounding obtained at a drilled socket that railroad rail piling cannot be used in that socket, the depth of the socket shall be measured and 50% of the depth shall be paid as “Railroad Rail-Drilled”. Drill sockets into solid rock, if possible. The Department will monitor each hole, which will serve as a sounding for the rail to be installed in it. Embed the railroad rail into

solid rock no less than one-half the free end length of the rail. (See Figure 1 and Figure 2). If solid rock cannot be obtained, the Engineer will determine the length of embedment required in other stable foundation. Allow adequate size of the drilled socket to allow free insertion of the railroad rail, but the maximum socket size is 1 foot in diameter.

After each hole is drilled, install railroad rail immediately with the flanges positioned perpendicular to the direction of the landslide or break (see Figure 3). Determine the height of rail that is needed to reestablish pavement and shoulder typical section. Cut off excess rail flush with the proposed ground line that is not needed. Use cutoffs elsewhere in the project if possible; unusable cutoffs remain the property of the Contractor.

After railroad rail is installed, immediately backfill the drilled hole with the approved materials. Shovel the backfill material into the hole in small amounts. Avoid bridging between the rail and the sides of the hole. Do not us Auger tailings as backfill material.

When double or triple rows are required, stagger the rows to obtain the required spacing. Keep the spacing between the rows of rails as close as is practical; do not space between the rows of more than 2 feet, if possible. See Figure 3 (Case II and Case III) for the diagrams showing two (2) or three (3) rows of rails. Select the spacing as per Table 1 for all 130 pound per yard rail or greater. The Department shall approve the selection prior to work being performed.

Crib any exposed portion of railroad rail before placing backfill.

E. Excavation and Backfill. Excavate each repair area to provide a platform for drilling the used railroad rails, if necessary. Excavate for roadway ditches as necessary for slope, shoulder, and pavement drainage. Place geotextile fabric, then construct embankment behind railroad rails, cribbing, and on slope, as per Section 206. Construct embankment up to the approximate existing pavement elevation.

Reconstruct the shoulder area with DGA up to the approximate existing elevation and width of the surrounding typical section or to a minimum width of 2 Feet at each slide location. Do not pond water on the shoulder area or at the shoulder edge. Reconstruct the shoulder before installing guardrail.

DO NOT USE EXCAVATED MATERIAL FROM THE SITE AS FILL MATERIAL. Excess excavation may be wasted at sites on the Right-of-Way, ONLY if approved by the Engineer. Material may NOT be wasted in flood prone areas or in streams.

If the Engineer deems no suitable sites are available within the right-of-way, the Contractor will be required to waste excess material off the right-of-way at sites obtained by the Contractor at no cost to the Department.

F. Installation of Wall Cribbing. Install Cribbing as shown on Figure 1 or Figure 2 as slide location dictates or as directed by the Engineer. Extend wall cribbing 2 feet below the existing ground line. If bedded rock is encountered, install the cribbing to the bedded rock only. If necessary, the Engineer will direct changes to this procedure. Furnish all labor and equipment to deliver and

install wall cribbing on the recycled (used) railroad rail piling. Wall cribbing shall be lapped, bolted, and attached solid to the drilled railroad rails.

G. Final Dressing, Seeding and Protection. Apply Final Dressing, Class A to all disturbed areas, both on and off the right-of-way. Sow with Seed Mixture No. 1. The Department will NOT make direct payment for final dressing, or seeding and protection, but shall be incidental to Erosion Control.

H. On-Site Inspection. Each Contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his bid and shall thoroughly familiarize themselves with the existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made.

I. Right-of-Way Limits. The Department has not established exact limits of the Right-of-Way. The Contractor shall make every effort to limit his activities to obvious right-of-way and permanent or temporary easements and shall be responsible for encroachments onto private lands.

J. Property Damage. The Contractor will be responsible for all damage to public and/or private property resulting from his work.

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

IV. METHOD OF MEASUREMENT

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

B. Staking. See Special Note for Staking.

C. Site Preparation. Other than the bid items listed, site preparation will NOT be measured for payment, but shall be incidental to the bid item Excavation and Backfill.

D. Railroad Rail-Drilled. The Department will measure the finished in-place length of this item in Linear Feet. Laps, cutoffs, excess, and waste will NOT be measured for payment. If the Engineer determines from the sounding obtained at a drilled socket that railroad rail piling cannot be used in that socket, the depth of the socket shall be measured and 50% of the depth shall be paid as Railroad Rail-Drilled.

E. Excavation and Backfill. The Department will measure this item in cubic yards. The Department will measure the quantity in the field as per Section 204 (Roadway Excavation) or other accepted methods of measurement as directed by the Engineer.

F. Wall Cribbing. The Department will measure this item in square feet finished in placed area. Laps, cutoffs, excess and waste will not be measured for payment.

G. Geotextile Fabric. The Department will measure Geotextile Fabric Class 2 according to Section 214.

H. DGA. The Department will measure according to Section 302.

I. Clean Up, Disposal of Waste. The Department will NOT measure for payment the operation of Clean Up and Disposal of Waste. These activities shall be incidental to project bid items.

J. Final Dressing, Seeding and Protection. The Department will NOT measure for payment the operation of Final Dressing. This shall be incidental. The Department will measure Seeding and Protection according to Section 212.

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

V. BASIS OF PAYMENT

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

B. Staking. See Special Note for Staking.

C. Railroad Rail-Drilled. The Department will make payment for the completed and accepted quantities under the bid item: Railroad Rail-Drilled. The Department will consider payment full compensation for all work required in these notes and elsewhere in the Contract.

D. Excavation and Backfill. The Department will make payment for the completed and accepted quantities under the bid item: Excavation and Backfill. Payment will be based on quantity measured in the field. The Department will consider payment full compensation for all work and incidentals necessary to excavate and backfill the areas indicated on the plans or as directed by the Engineer.

E. Wall Cribbing. The Department will make payment for the completed and accepted quantities under the bid item: Cribbing. Payment will be based on the quantity installed in the field. The Department will not make separate payment for the hauling of the wall cribbing to the project site(s). The Department will consider payment full compensation for all work required on the project.

F. Geotextile Fabric. The Department will make payment of Geotextile Fabric Class 2 according to Section 214.

G. DGA. The Department will make payment according to Section 302.

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

Special Note for Signage

The final advisory speeds and some sign types will have to be determined after the curve superelevation improvements and final surfacing operations have been completed. The Contractor shall notify the Engineer and District Traffic Engineer when all of the superelevation improvements and surfacing operations have been completed. Once notified, the District Traffic Engineer will ball-bank the newly surfaced curves to determine the appropriate advisory speeds and work with the Contractor to determine the final Signing Plan. The Engineer and/or District Traffic Engineer will provide the Contractor with the final advisory speeds, any changes to proposed sign types, and the final quantities within three (3) weeks of being notified by the Contractor that final surfacing operations are complete. After the Contractor has received this information from the Engineer and/or the District Traffic Engineer, the Contractor shall then proceed to layout and stake the signing according to the Special Note for Staking, included elsewhere in this Proposal.

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

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 NOTES FOR COMPLETION DATES & LIQUIDATED DAMAGES

The ultimate fixed completion date for this project will be **October 31, 2023**. Liquidated Damages for failure to complete the project on time will be assessed following Section 108.09.

In addition to the requirements of Section 108.09, the Department will assess Liquidated Damages in the amount of **$1,000** per hour for each hour, or fraction of an hour, for any and all road closures that are in place beyond the time frame(s) noted in the Traffic Control Plan and approved by the Engineer.

Contrary to Section 108.09, Liquidated Damages will be assessed for the months of December through March.

Contrary to Section 108.09, Liquidated Damages will be assessed regardless of whether seasonal limitations prohibit the Contractor from performing work on the controlling operation.

All liquidated damages will be applied accumulatively.

All other applicable portions of Section 108 apply.

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

SPECIAL NOTE FOR EXPERIMENTAL KYCT AND HAMBURG TESTING

1.0 General

1.1 Description. The KYCT (Kentucky Method for Cracking Test) and the Hamburg test results will help determine if the mixture is susceptible to cracking and rutting. During the experimental phase, data will be gathered and analyzed by the Department to determine the durability of the bituminous mixes. Additionally, the data will help the Department to create future performance-based specifications which will include the KYCT and Hamburg test methods.

2.0 Equipment

2.1 KYCT Testing Equipment. The Department will require a Marshall Test Press with digital recordation capabilities. Other CT testing equipment may be used for testing with prior approval by the Department.

2.2 Water Baths. One or more water baths will be required that can maintain a temperature of 77^{o} +/- 1.8^{o} F with a digital thermometer showing the water bath temperature. Also, one water bath shall have the ability to suspend gyratory specimen fully submerged in water in accordance with AASHTO T-166, current edition.

2.3 Hamburg Wheel Track Testing. The department encourages the use of the PTI APA/Hamburg Jr. test equipment to perform the loaded wheel testing. The Department will allow different equipment for the Hamburg testing, but the testing device must be approved by the Department prior to testing.

2.4 Gyratory Molds. Gyratory molds will be required to assist in the production of gyratory specimens in accordance with AASHTO T-312, current edition.

2.5 Ovens. Adequate (minimum of two ovens) will be required to accommodate the additional molds and asphalt mixture necessary to perform the acceptance testing as outlined in Section 402 of the Kentucky Standard Specifications for Road and Bridge Construction, current edition.

2.6 Department Equipment. The Department will provide gyratory molds, PINE 850 Test Press with digital recordation, and CT testing equipment to assist during this experimental phase so data can be gathered. Hamburg test specimens will be submitted to the Division of Materials for testing on the PTI APA/Hamburg Jr if the asphalt contractor or district materials office does not have an approved Hamburg testing device.

3.0 Testing Requirements

3.1 Acceptance Testing. Perform all acceptance testing and aggregate gradation as according with Section 402 and Section 403 of the Kentucky Standard Specifications for Road and Bridge Construction, current edition.

3.2 KYCT Testing. Perform crack resistance analysis (KYCT) in accordance with the current Kentucky Method for KYCT Index Testing during the mix design phase and during the plant production of all surface mixtures. For mix design approvals, submit KYCT results on the Department MixPack. For Class 4 mixtures, submit ingredient materials to the Division of Materials for verification.

3.2.1 KYCT Frequency. Obtain an adequate sample of hot mix asphalt to ensure the acceptance testing, gradation, and KYCT gyratory samples can be fabricated and is representative of the bituminous mixture. Acceptance specimens shall be fabricated first, then immediately after, fabricate the KYCT samples with the gyratory compactor in accordance with Section 2.4 of this Special Note. Analysis of the KYCT specimens and gradation will be required one per sublot produced from the same asphalt material and at the same time as the acceptance specimen is sampled and tested.

3.2.2 Number of Specimens and Conditioning. Fabricate specimens in accordance with the Kentucky Method for KYCT Index Testing. Contrary to the method, for field specimens, fabricate a minimum of 3 and up to 6 test specimens. The specimens shall be compacted at the temperature in accordance with KM 64-411. KYCT mix design specimens shall be short-term conditioned uncovered for four hours at compaction temperature in accordance with KM 64-411. Contrary to the Kentucky Method, plant produced bituminous material shall be short-term conditioned immediately after sampling for two hours uncovered in the oven at compaction temperature in accordance with KM 64-411. Additionally, fabricated specimens shall be allowed to cool in air (fan is permissible) for 30 minutes +/- 5 minutes and conditioned in a 77 °F water bath for 30 minutes +/- 5 minutes. To ensure confidence and reliability of the test results provided by KYCT testing and Hamburg testing, reheating of the asphalt mixture is prohibited.

3.2.3 Record Times. For each sublot, record the time required between drying aggregates in the plant to KYCT specimen fabrication. The production time may vary due to the time that the bituminous material is held in the silo. Record the preconditioning time when the time exceeds the one-hour specimen cool down time as required in accordance with The Kentucky Method for KYCT Index Testing. The preconditioning time may exceed an hour if the technician is unable to complete the test on the same day or within the specified times as outlined in The Kentucky Method for KYCT Index Testing. The production time and the preconditioning time shall be recorded on the AMAW.

3.2.4 File Name. As according to section 7.12 of The Kentucky Method for KYCT Index Testing, save the filename with the following format: “CID_Approved Mix Number_Lot Number_Sublot Number_ Date”

3.3 Hamburg Testing. Perform the rut resistance analysis (Hamburg) in accordance with AASTHO T-324, not to exceed 20,000 passes for all bituminous mixtures during the mix design phase and production. For mix design approvals, submit Hamburg results on the Department MixPack. For Class 4 mixtures, submit ingredient materials to the Division of Materials for informational verification.

3.3.1 Hamburg Testing Frequency. Perform testing and analysis per lot of material. The plant produced bituminous material sampled for the Hamburg test does not have to be obtained at the same time as the acceptance and KYCT sample. If the Hamburg test sample is not obtained at the same time as the KYCT sample, determine the Maximum Specific Gravity of the KYCT sample in accordance with AASHTO T-209 coinciding with the Hamburg specimens.

3.3.2 Record Times. Record the production time as according to section 3.2.3 in this special note. Also record the time that the specimens were fabricated and the time the Hamburg testing was started. All times shall be recorded on the AMAW.

3.3.3 File Name. Save the Excel spreadsheet with the following file name; "Hamburg_CID_Approved Mix Number_Lot Number_Sublot Number_Date" and upload the file into the AMAW.

4.0 Data

Submit the AMAW and all test data that was obtained for acceptance, gradation, KYCT, and Hamburg testing within five working days once all testing has been completed for a lot to Central Materials Lab and the District Materials Engineer. Also, any data and or comments that the asphalt contractor or district personnel deem informational during this experimental phase, shall also be submitted to the Central Materials Lab and the District Materials Engineer. Any questions or comments regarding any item in this Special Note can be directed to the Central Office, Division of Materials, Asphalt Branch.

5.0 Payment

Any additional labor and testing equipment that is required to fabricate and test the KYCT and Hamburg specimens shall be considered incidental to the asphalt surface line item. The Department will perform the testing for the KYCT and Hamburg specimens if a producer does not possess the proper equipment.

June 15th, 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 PAVEMENT WEDGE AND SHOULDER MONOLITHIC OPERATION

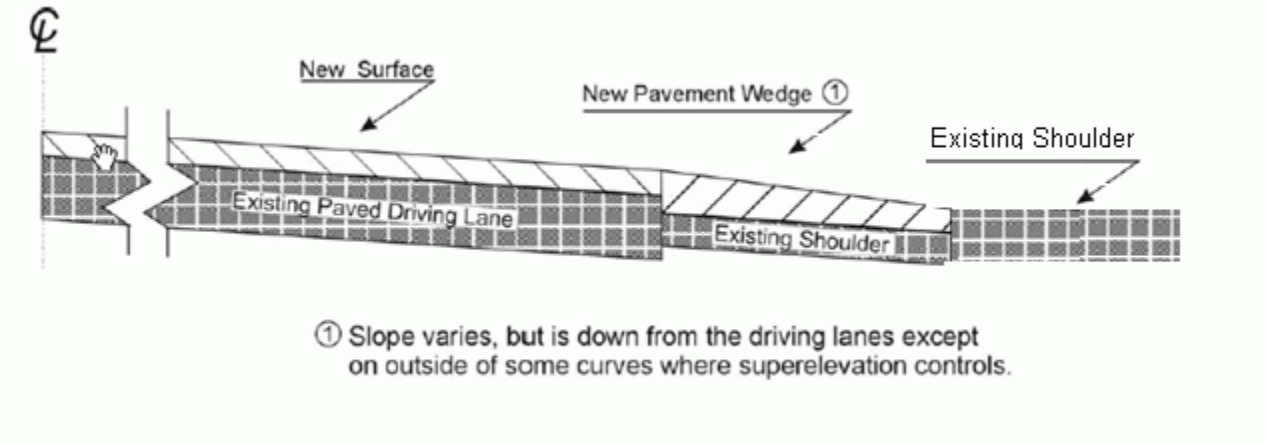
1.0 MATERIALS. Provide an Asphalt Surface Mixture conforming to Section 403 of the Standard Specifications, as applicable to the project, for the pavement wedge.

2.0 CONSTRUCTION. Place the specified Asphalt Surface Mixture on shoulders monolithically with the driving lane. Prime the existing shoulder with tack material as the Engineer directs before placing the wedge. Construct according to Section 403.03 of the Standard Specifications.

Equip the paver with a modified screed that extends the full width of the wedge being placed and is tapered to produce a wedge. Obtain the Engineer's approval of the modified screed before placing shoulder wedge monolithically with the driving lane.

The wedge may vary in thickness at the edge of the milled area in the shoulder. If the area to receive the shoulder wedge is milled prior to placement, during rolling operations pinch the outside edge of the new inlay wedge to match the existing shoulder elevation not being resurfaced. Unless required otherwise by the Contract, construct rolled or sawed rumble strips according to Section 403.03.08, as applicable.

The following sketch is primarily for the computation of quantities; however, the wedge will result in a similar cross-section where sufficient width exists. Do not construct a shoulder for placing the wedge unless specified elsewhere in the Contract.



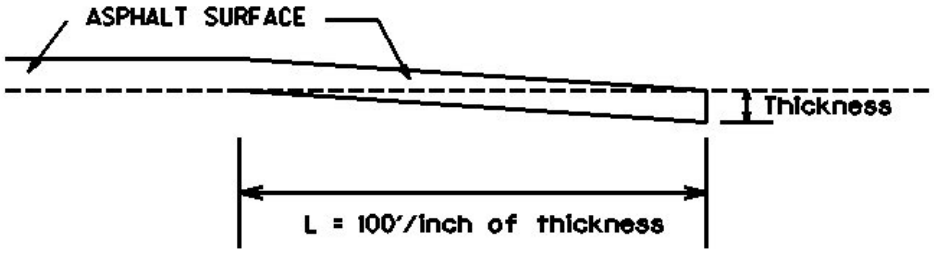
3.0 MEASUREMENT. The Department will measure Asphalt Surface Mixture placed as the pavement wedge according to Section 403.

4.0 PAYMENT. The Department will make payment for the completed and accepted quantities of Asphalt Surface Mixtures on pavement wedges according to Section 403.

SPECIAL NOTE FOR EDGE KEY

Construct Edge Keys at the beginning of project, end of project, at railroad crossings, and at 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 make payment for this work at the Contract unit price per ton for Asphalt Pavement Milling and Texturing, 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 = <u>1.00</u> Inches

L = <u>100</u> 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. 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, adding and compacting of 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. Delineators for Guardrail. Construct Delineators for Guardrail according to Standard Drawing RBR-055 – Delineators for Guardrail, current edition.

E. 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.

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 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.

G. 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.

H. 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.

I. 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.

J. 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. Delineators for Guardrail. See Standard Drawing RBR-055 – Delineators for Guardrail.

E. 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.

F. 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. Delineators for Guardrail. See Standard Drawing RBR-055 – Delineators for Guardrail.

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

SPECIAL NOTE FOR
ASPHALT MILLING AND TEXTURING

Begin paving operations within **48 hours** of commencement of the milling operation. Continue paving operations continuously until completed. If paving operations are not begun within this time period, the Department will assess liquidated damages at the rate prescribed by Section 108.09 until such time as paving operations are begun.

Take possession of the millings and recycle the millings or dispose of the millings off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department.

1-3520 48 hours Contractor keeps millings
01/2/2012

SPECIAL NOTE FOR BASE FAILURE REPAIR

Repair locations listed on the summary are approximate only. The Engineer will determine actual repair locations and dimensions at the time of construction. Prior to milling and/or resurfacing, saw cut the existing pavement, asphalt surface, base, DGA, and PCC pavement (if present). Excavate to an approximate depth of 21 inches below the existing pavement surface level. Use all possible care to avoid damaging existing culvert pipes and any existing underground utilities. Repair or restore any damaged items at no additional cost to the Department. Waste all removed materials 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.

On the same day trench is excavated, backfill the excavated area with 12 inches of Crushed Limestone Size No. 23, wrapped on the bottom and sides in Class 2 Geotextile Fabric, and 9 inches of Class 2 Asphalt Base 1.50D PG64-22, in 4.5 inch maximum courses, up to the existing pavement surface. Compact the asphalt base to the proper compaction as required by Section 403. Seal the asphalt base with leveling and wedging. Perform all base failure repairs in such a manner that removal and replacement are completed on the same day. Do this work as one of the Contractor's first operations in order to allow further compaction by traffic. Do not mill or place new asphalt surface over repaired base failure areas until a minimum of 14 calendar days have elapsed after placement of the final course of asphalt base. After the 14 calendar day waiting period, and/or when the Engineer determines the base failure repair areas have sufficiently stabilized, begin milling and/or resurfacing operations. Prior to milling and/or constructing the new asphalt surface, level and wedge any settlement of the repair areas.

The bidder must draw his or her own conclusions as to the conditions to be encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation of the materials encountered that are not in accord with the classification shown.

Accept payment at the Contract unit prices per ton for Crushed Limestone, Asphalt Base, and Leveling and Wedging as full compensation for all labor, materials, equipment, and incidentals for saw cutting pavement and excavating and disposing of all materials; furnishing and placing crushed limestone stone wrapped in geotextile fabric; furnishing and placing asphalt base up to the existing pavement boundary; leveling and wedging until the repair areas stabilize; and all other items necessary to complete the work according to these notes to the satisfaction of the Engineer. The Department will not measure pavement removal, excavation, and geotextile fabric, but shall be incidental to Crushed Limestone and Asphalt Base as applicable.

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

SPECIAL NOTE FOR SIDEWALK RAMPS & DETECTABLE WARNINGS

GENERAL

Unless otherwise stated in the contract, or as directed by or with prior approval from the Engineer, construct Sidewalk Ramps and Detectable Warnings in accordance with Sections 505 and 720; Supplemental Specifications; Standard Drawings RGX-040-03, RPM-150-08, RPM-152-08, RPM-170-09, and RPM-172-07; current editions, as applicable. In lieu of the Detectable Warnings shown on Standard Drawing RGX-040-03, the Department will also allow the use of any Detectable Warnings listed as Phase XI on the Kentucky Product Evaluation List (http://www.ktc.uky.edu/kytc/kypel/allevaluations.php). For Detectable Warnings as shown on Standard Drawing RGX-040-03, saw cut existing sidewalks, curb and gutter, and pavement, if present, as shown on the detail and reconstruct sidewalk ramps with detectable warnings as directed or approved by the Engineer. For Detectable Warnings from the Kentucky Product Evaluation List, install according to the manufacturer's recommendations. Unless specified otherwise in the Contract, construct sidewalk with 4" nominal minimum required thickness; however, if the existing sidewalk thickness is found to be greater or less than the thickness specified, transition the thickness as directed by the Engineer.

Except as required by the work, do not disturb drainage pipe, catch basins, and other roadway features, appurtenances and installations. Restore any roadway features, appurtenances, and installations damaged by the work in like kind materials and design at no additional cost to the Department. Dispose of all waste off the right of way at sites obtained by the Contractor at no additional cost to the Department (see Special Note for Waste and Borrow).

MEASUREMENT & PAYMENT

SIDEWALK RAMPS – The Department will measure Sidewalk Ramps in accordance with Section 505.04.01 and Standard Drawing RPM-170-09, current editions; however, contrary to Sections 505.04.05 and 505.04.06, the Department will not measure Roadway Excavation or Embankment in Place, but shall be incidental to the Sidewalk. Accept payment at the Contract unit price per square yard as full compensation for all labor, materials, equipment, and incidentals required for removal and disposal of existing sidewalk and curb and gutter, excavation and embankment, construction of the sidewalk ramps, reconstruction of the adjacent curb and/or sidewalk as necessary to install the sidewalk ramps, and restoration of disturbed features in accordance with these notes or as directed by the Engineer.

DETECTABLE WARNINGS – The Department will measure Detectable Warnings in accordance with Section 505.04.04 and Standard Drawings RGX-040-03 and RPM-170-09, current editions. The Department will make payment according to Section 505.05.

HANDRAIL – The Department will measure and make payment for Handrail in accordance with Section 720.05 and Standard Drawing RPM-172-07, current editions.

TRAFFIC CONTROL PLAN
BRACKEN COUNTY
KY 8
HSIP and FD05

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.

Maintain access to all entrances, side streets and roads, churches and commercial properties at all times during construction. Access to fire hydrants must also be maintained at all times. The Contractor will be responsible to notify adjacent property owners when work affecting the entrances will be performed.

PROJECT PHASING & CONSTRUCTION PROCEDURES

The KY 8 improvements begin near Willow Creek Road and end near Augusta – Minerva Road; the approximate length of the project is 10.356 miles. The proposed improvements include the following:

- Roadway side slope and ditch reconstruction and maintenance
- Base failure pavement repair and pavement repair
- Cribbing (railroad rail)
- Removal and replacement of guardrail
- Removal and replacement of existing signs and placement of new signs

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.

The Contractor shall submit proposed days of lane closures to the Engineer at least 14 calendar days in advance for approval. Do not leave lane closures in place during non-working hours or prohibited periods, unless otherwise approved by the Engineer. For maintenance of traffic purposes during dual lane pavement repair, the top base layer shall be constructed before moving to another section to perform milling/trenching operations.

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

Labor Day Weekend	3 pm Friday, September 2, 2022 – 8 pm Monday, September 5, 2022
Thanksgiving Holiday	3 pm Wednesday, Nov. 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
Thanksgiving Holiday	3 pm Wednesday, Nov. 22, 2023 – 8 pm Sunday, November 26, 2023
Christmas Holiday	3 pm Friday, December 22, 2023 – 8 pm Monday, December 25, 2023
New Year's Day Holiday	7 am Saturday, December 30, 2023 – 8 pm Monday, January 1, 2024

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

Liquidated Damages will be assessed for any and all lane closures that exceed the approval time limits in accordance with the Special Note for Completion Dates & Liquidated Damages.

The Contractor shall perform the milling and resurfacing operations involved in the Dual-Lane Pavement Repair in a manner that adheres to the restrictions on lane closures and the requirements on pavement edge drop-offs.

The Contractor shall completely cover any signs, existing, permanent, or temporary, which do not properly apply to the current traffic phasing, and shall maintain the covering until signs are applicable or are removed.

In general, all traffic control devices shall be placed starting and proceeding in the direction of the flow of traffic, and removed starting and proceeding in the direction opposite the flow of traffic.

LANE CLOSURES

No long-term lane closures (more than 3 days) will be allowed; therefore, lane closures will not be measured for payment.

SIGNS

The Engineer and the Contractor, or their authorized representative, shall review the signing before traffic is allowed to use any lane closures, crossovers, or detours. All signing shall be approved by the Engineer before work can be started by the Contractor.

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

CHANGEABLE MESSAGE SIGNS

Provide changeable message signs 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.

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.

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.

THERMOPLASTIC INTERSECTION MARKINGS

Consider the locations listed on the summary as approximate only. Prior to milling and/or resurfacing, locate and document the locations of the existing markings. After resurfacing, replace the markings at their approximate existing locations or as directed by Engineer. Place markings not existing prior to resurfacing as directed by the Engineer.

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 inadvertently, 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. Spacing of devices on tapered sections shall be in accordance with MUTCD, current edition. When work is not active in the drop-off area, 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.

Greater than 4" - Protect drop-offs greater than 4" by placing drums, vertical panels, or barricades between the edge of pavement and drop-off. The Engineer will not allow the use of cones in lieu of drums, vertical panels, or barricades. If concrete barriers are used, special reflective devices or steady burn lights should be used for overnight installations.

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

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

Standard Abbreviations (cont)

Word	Abbrev	Example
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

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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
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

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DISABLED/VEHICLE
EMER/VEHICLES/ONLY
EVENT PARKING
EXIT XX CLOSED
FLAGGER XX MILES
FOG XX MILES
MERGE XX MILES
MERGE LEFT
MERGE RIGHT
ONE-WAY TRAFFIC
PASS TO LEFT
PASS TO RIGHT

Typical Messages (cont)

Reason/Problem	**Action**
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.)	

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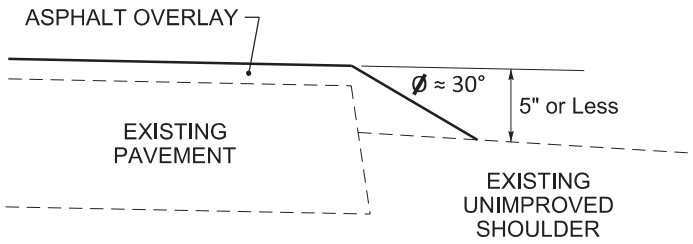
NEW SIGNAL XX MILES
SLOW 1 (OR 2) - WAY TRAFFIC
SOFT SHOULDER
STALLED VEHICLES AHEAD
TRAFFIC BACKUP
TRAFFIC SLOWS
TRUCK CROSSING
TRUCKS ENTERING
TOW TRUCK AHEAD
UNEVEN LANES
WATER ON ROAD
WET PAINT
WORK ZONE XX MILES
WORKERS AHEAD

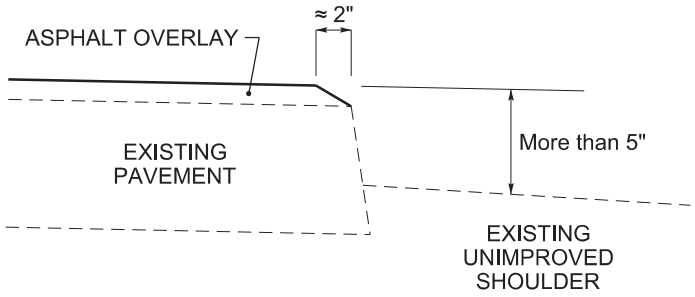
DURABLE PAVEMENT EDGE DETAIL

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



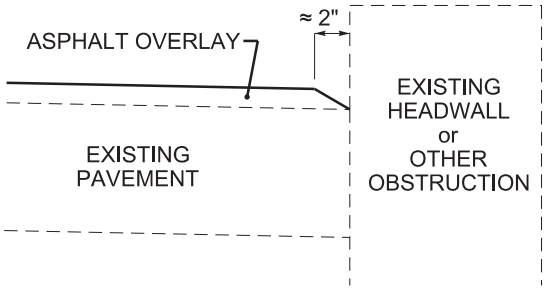
DURABLE PAVEMENT EDGE DETAIL

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



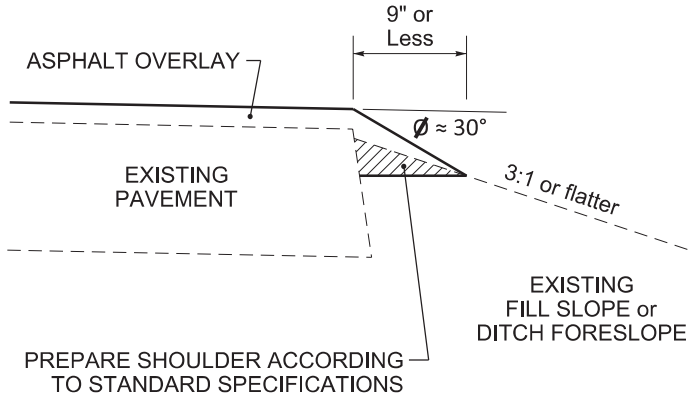
DURABLE PAVEMENT EDGE DETAIL

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



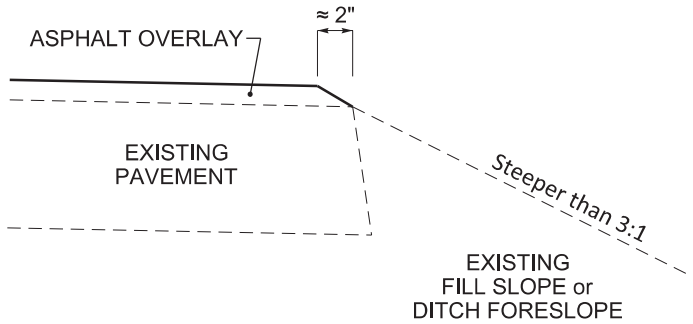
DURABLE PAVEMENT EDGE DETAIL

(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
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RIGHT OF WAY CERTIFICATION

☒ Original	☐ Re-Certification	RIGHT OF WAY CERTIFICATION	
ITEM #	**COUNTY**	**PROJECT # (STATE)**	**PROJECT # (FEDERAL)**
6-9026.00	Bracken	FD52 012 0008 003-014	HSIP 5390 (013)

PROJECT DESCRIPTION

Safety improvements on KY 8 from MP 3.597 to MP 13.950 in Bracken County, KY

☒ **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 (Use Additional Sheet if necessary)

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	
Signature		Signature	Lynn Whalen Date: 2022.05.31 09:31:22 -04'00'
Date		Date	

Right of Way Director		FHWA	
Printed Name		Printed Name	
Signature	Kelly Divine Digitally signed by Kelly Divine Date: 2022.06.01 08:01:13 -05'00'	Signature	No Signature Required as per FHWA-KYTC Current Stewardship Agreement
Date		Date	

UTILITIES AND RAIL CERTIFICATION NOTE

Bracken County

FD04 012 0008 003 014
Safety Improvements on KY 8 from MP 3.597 – 13.953
Item No. 6-9026.00

GENERAL PROJECT NOTE ON UTILITY PROTECTION

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

Water

- A 4" PVC waterline runs along the south side of KY 8 from Snag Creek to Bradford Road.
- A 4" PVC waterline crosses KY 8 just west of KY 1159 near Sta. 410+00. Contractor is to work with Bracken County Water to get this main field located to ensure proposed cribbing work does not impact the existing main.
- A 4" PVC waterline runs along the north side of KY 8 from Locust Creek to the west side of Wrangling Run Road then crosses KY 8 to the south and runs for another 500'.
- A 4" PVC waterline runs south along Wrangling Run Road.
- A 10" PVC waterline runs along the east side of Augusta-Berlin Road, crosses KY 8 to the north and runs east to the water treatment plant. From there, a 6" PVC waterline runs along West 4th Street in Augusta, turns into 6" ductile iron and then into an 8" ductile iron for the limits of the road.
- A 4" PVC waterline runs along the south side of KY 8 starting just east of the water treatment plant, turns into 4" ductile iron near Elizabeth Street and ends just east of the cemetery.

Sanitary

- An 8" gravity, clay tile sanitary sewer runs along the south side of KY 8 just east of the treatment plant up to Frankfort Street and along the south side of West 4th Street to Main Street, then along the east side of Main Street until KY 8 where it then turns east along the north side of KY 8 until just east of Frankfort Street.

Electric/Communications

- There are various electric and communication facilities within and near the project limits. Contractor is to work around these facilities and is Not to Impact any of them. Contractor is to notify company of any work to be performed near these facilities at least two week prior to start of work and coordinate if any coverups are required.

The Contractor is fully responsible for protection of all utilities listed above and is to use extreme caution when working near them

UTILITIES AND RAIL CERTIFICATION NOTE

Bracken County

FD04 012 0008 003 014
Safety Improvements on KY 8 from MP 3.597 – 13.953
Item No. 6-9026.00

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

The contractor is to re-establish the water services to the property on the south side of KY 8 near Sta. 392+80. Contractor is to match material and size of existing services and replace in-kind. The contractor must contact the property owner at least one month prior to work beginning in this area to coordinate the two long side water services construction. *Property Owner information will be provided at the preconstruction meeting.*

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)**

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.

UTILITIES AND RAIL CERTIFICATION NOTE

Bracken County

FD04 012 0008 003 014
Safety Improvements on KY 8 from MP 3.597 – 13.953
Item No. 6-9026.00

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

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

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

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

Bracken County

FD04 012 0008 003 014
Safety Improvements on KY 8 from MP 3.597 – 13.953
Item No. 6-9026.00

AREA UTILITIES CONTACT LIST

Utility Company/Agency	Contact Name	Contact Information

UTILITY CONTACTS WILL BE PROVIDED AT THE PRECONSTRUCTION MEETING

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.

GENERAL UTILITY NOTES AND INSTRUCTIONS APPLICABLE TO ALL UTILITY WORK MADE A PART OF THE ROAD CONSTRUCTION CONTRACT

The contractor should be aware the following utility notes and KYTC Utility Bid Item Descriptions shall supersede, replace and take precedence over any and all conflicting information that may be contained in utility owner supplied specifications contained in the contract, on plans supplied by the utility owner, or any utility owner specifications or information externally referenced in this contract.

Where information may have been omitted from these notes, bid item descriptions, utility owner supplied specifications or plans; the KYTC Standard Specifications for Road and Bridge Construction shall be referenced.

PROTECTION OF EXISTING UTILITIES

The existing utilities shown on the plans are shown as best known at the time the plans were developed and are to be used as a guide only by the Contractor. The Contractor shall use all means at his disposal to accurately locate all existing utilities, whether shown on the plans or not, prior to excavation. The contractor shall protect these utilities during construction. Any damage to existing utilities during construction that are shown or not shown on the plans shall be repaired at the Contractor's expense.

PREQUALIFIED UTILITY CONTRACTORS

Some utility owners may require contractors that perform relocation work on their respective facilities as a part of the road contract be prequalified or preapproved by the utility owner. Those utility owners with a prequalification or preapproval requirement are as follows:

> **No contractors are required to be prequalified or preapproved by the utility owner(s) to perform utility relocation work under this contract**.

The bidding contractor needs to review the above list and choose from the list of approved subcontractors at the end of these general notes as identified above before bidding. When the list of approved subcontractors is provided, only subcontractors shown on the following list(s) will be allowed to work on that utility as a part of this contract.

When the list of approved subcontractors for the utility work is not provided in these general notes, the utility work must be completed by either the prime contractor or a subcontractor that is prequalified with the KYTC Division of Construction Procurement in the work type of "Utilities" (I33). Those who would

like to become prequalified may contact the Division of Construction Procurement at (502) 564-3500. Please note: it could take up to 30 calendar days for prequalification to be approved. The prequalification does not have to be approved prior to the bid, but must be approved before the subcontract will be approved by KYTC and the work can be performed.

CONTRACT ADMINISTRATION RELATIVE TO UTILITY WORK

All utility work is being performed as a part of a contract administered by KYTC; there is not a direct contract between the utility contractor and utility owner. The KYTC Section Engineer is ultimately responsible for the administration of the road contract and any utility work included in the contract.

SUBMITTALS AND CORRESPONDENCE

All submittals and correspondence of any kind relative to utility work included in the road contract shall be directed to the KYTC Section Engineer, a copy of which may also be supplied to the utility owner by the contractor to expedite handling of items like material approvals and shop drawings. All approvals and correspondence generated by the utility owner shall be directed to the KYTC Section Engineer. The KYTC Section Engineer will relay any approvals or correspondence to the utility contractor as appropriate. At no time shall any direct communication between the utility owner and utility contractor without the communication flowing through the KYTC Section Engineer be considered official and binding under the contract.

ENGINEER

Where the word “Engineer” appears in any utility owner specifications included in this proposal, utility owner specifications included as a part of this contract by reference or on the utility relocation plans, it shall be understood the “Engineer” is the Kentucky Transportation Cabinet (KYTC) Section Engineer or designated representative and the utility owner engineer or designated representative jointly. Both engineers must mutually agree upon all decisions made with regard to the utility construction. The Transportation Cabinet, Section Engineer shall make all final decisions in all disputes.

INSPECTOR OR RESIDENT PROJECT REPRESENTATIVE

Where the word “Inspector” or “Resident Project Representative” appears in the utility specifications included in this proposal, utility owner specifications included as a part of this contract by reference or on the utility relocation plans, it shall be understood the “Inspector” or “Resident Project Representative” is the utility owner inspector and KYTC inspector jointly. The Transportation Cabinet, Section Engineer shall make all final decisions in all disputes.

NOTICE TO UTILITY OWNERS OF THE START OF WORK

One month before construction is to start on a utility, the utility contractor shall make notice to the KYTC Section Engineer and the utility owner of when work on a utility is anticipated to start. The utility contractor shall again make confirmation notice to the KYTC Section Engineer and the utility owner one week before utility work is to actually start.

UTILITY SHUTDOWNS

The Contractor shall not shut down any active and in-service mains, utility lines or services for any reason unless specifically given permission to do so by the utility owner. The opening and closing of valves and operating of other active utility facilities for main, utility line or utility service shut downs are to be performed by the utility owner unless specific permission is given to the contractor by the owner to make shutdowns . If and when the utility owner gives the contractor permission to shutdown mains, utility lines or utility services, the contractor shall do so following the rules, procedures and regulations of the utility owner. Any permission given by the utility owner to the contractor to shutdown active and in-service mains, utility lines or services shall be communicated to the KYTC Section Engineer by the utility owner that such permission has been given.

Notice to customers of utility shut downs is sometimes required to be performed by the utility contractor. The contractor may be required; but, is not limited to, making notice to utility customers in a certain minimum amount of time in advance of the shut down and by whatever means of communication specified by the utility owner. The means of communication to the customer may be; but is not limited to, a door hanger, notice by newspaper ad, telephone contact, or any combination of communication methods deemed necessary, customary and appropriate by the utility owner. The contractor should refer to the utility owner specifications for requirements on customer notice.

Any procedure the utility owner may require the contractor to perform by specification or plan note and any expense the contractor may incur to comply with the utility owner's shut down procedure and notice to customers shall be considered an incidental expense to the utility construction.

CUSTOMER SERVICE AND LATERAL ABANDONMENTS When temporary or permanent abandonment of customer water, gas, or sewer services or laterals are necessary during relocation of utilities included in the contract, the utility contractor shall perform these abandonments as part of the contract as incidental work. No separate payment will be made for service line and lateral abandonments. The contractor shall provide all labor, equipment and materials to accomplish the temporary or permanent abandonment in accordance with the plans, specifications and/or as directed by the engineer. Abandonment may include, but is not limited to, digging down on a water or gas main at the tap to turn off the tap valve or corporation stop and/or capping or plugging the tap, digging down on a sewer tap at the main and plugging or capping the tap, digging down on a service line or lateral at a location shown on the plans or agreeable to the engineer and capping or plugging, or performing any other work necessary to abandon the service or lateral to satisfactorily accomplish the final utility relocation.

STATIONS AND DISTANCES

All stations and distances, when indicated for utility placement in utility relocation plans or specifications, are approximate; therefore, some minor adjustment may have to be made during construction to fit actual field conditions. Any changes in excess of 6 inches of plan location shall be reviewed and approved jointly by the KYTC Section Engineer or designated representative and utility owner engineer or designated representative. Changes in location without prior approval shall be remedied by the contractor at his own expense if the unauthorized change creates an unacceptable conflict or condition.

RESTORATION

Temporary and permanent restoration of paved or stone areas due to utility construction shall be considered incidental to the utility work. No separate payment will be made for this work. Temporary restoration shall be as directed by the KYTC Section Engineer. Permanent restoration shall be "in-kind" as existing.

Restoration of seed and sod areas will be measured and paid under the appropriate seeding and sodding bid items established in the contract for roadway work.

BELOW ARE NOTES FOR WHEN "INST" ITEMS ARE IN THE CONTRACT MEANING THE UTILITY COMPANY IS PROVIDING CERTAIN MATERIALS FOR UTILITY RELOCATION

MATERIAL

Contrary to Utility Bid Item Descriptions, those bid items that have the text **"Inst"** at the end of the bid item will have the major components of the bid item provided by the utility owner. No direct payment will be made for the major material component(s) supplied by the utility company. All remaining materials required to construct the bid item as detailed in utility bid item descriptions, in utility specifications and utility plans that are made a part of this contract will be supplied by the contractor. The contractor's bid price should reflect the difference in cost due to the provided materials.

The following utility owners have elected to provide the following materials for work under this contract:

> **No materials are being supplied by the utility owner(s). All materials are to be supplied by the contractor per bid item descriptions, utility specifications and utility plans.**

SECURITY OF SUPPLIED MATERIALS

If any utility materials are to be supplied by the utility owner, it will be the responsibility of the utility contractor to secure all utility owner supplied materials after delivery to the project site. The utility contractor shall coordinate directly with the utility owner and their suppliers for delivery and security of the supplied materials. Any materials supplied by the utility owner and delivered to the construction site that are subsequently stolen, damaged or vandalized and deemed unusable shall be replaced with like materials at the contractor's expense.

Kentucky Transportation Cabinet

Highway District 6

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 KY 8 in Bracken County

Project: CID 6 - 9026

Revised 3/4/2016

KYTC BMP Plan for Project CID **6-9026**

Project information

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

1. Owner – Kentucky Transportation Cabinet, District 6
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): KY 8
6. Latitude/Longitude (project mid-point): 38° 45’ 59”, -84° 3’ 26.”
7. County (project mid-point): BRACKEN
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

KYTC BMP Plan for Project CID **6-9026**

A. Site description:

1. Nature of Construction Activity (from letting project description): Asphalt Pavement & Roadway Rehab

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

3. Projected volume of material to be moved: 7,195 LF Ditching & Shouldering

4. Estimate of total project area (acres): 75.7 acres

5. Estimate of area to be disturbed (acres): 5.1 acres

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: Ohio River

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.

- 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.

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 BMPs 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.

KYTC BMP Plan for Project CID **6-9026**

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 Project CID **6-9026**

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

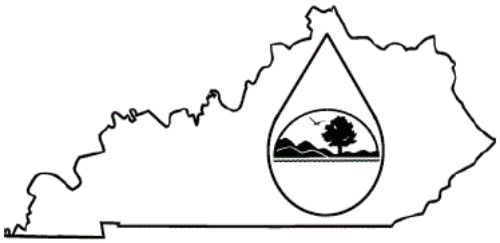
1. Sub Contractor Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, 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.

Item No.: 6-9026
Bracken County
Highway Safety Improvement Project along KY-8
from MP 3.597 – 13.953

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: 295468

eForm Transaction ID: 1d133b9e-ffc2-44db-ac6c-e9aa0c050bb1



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 6	Robert	MI	Yeager

Mailing Address:(*)	City:(*)	State:(*)	Zip:(*)
421 Buttermilk Pike	Covington	Kentucky	41017

eMail Address:(*)	Business Phone:(*)	Alternate Phone:
Robert.Yeager@ky.gov	859-341-3661	Phone

SECTION II -- GENERAL SITE LOCATION INFORMATION

Project Name:(*)	Status of Owner/Operator(*)	SIC Code(*)
KYTC Item No. 6-9026	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:(*)
KY 8

City:(*)	State:(*)	Zip:(*)
Augusta	Kentucky	41002

County:(*)	Latitude(decimal degrees)(*)DMS to DD Converter (https://www.fcc.gov/media/radio/dms-decimal)	Longitude(decimal degrees)(*)
Bracken	38.766473	-84.057287

SECTION III -- SPECIFIC SITE ACTIVITY INFORMATION

Project Description:(*)
Highway Safety Improvement Program consisting of various improvements such as Asphalt Paving, Pavement Repair, Base Failure Repair, Slope Repairs, Pipe Replacen

a. For single projects provide the following information

Total Number of Acres in Project:(✓)	Total Number of Acres Disturbed:(✓)
75.7	5.1
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	38.766744	-84.007589	Ohio River	Delete
2	Yes	38.767228	-84.026552	Ohio River	Delete
3	Yes	38.767290	-84.028052	Ohio River	Delete
4	Yes	38.767257	-84.029646	Ohio River	Delete
5	Yes	38.767770	-84.031111	Ohio River	Delete
6	Yes	38.767682	-84.031264	Ohio River	Delete
7	No	38.766895	-84.032780	Ohio River	Delete
8	Yes	38.767581	-84.032997	Ohio River	Delete
9	No	38.766098	-84.041100	Ohio River	Delete
10	No	38.766254	-84.042190	Ohio River	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?: (*)	No
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

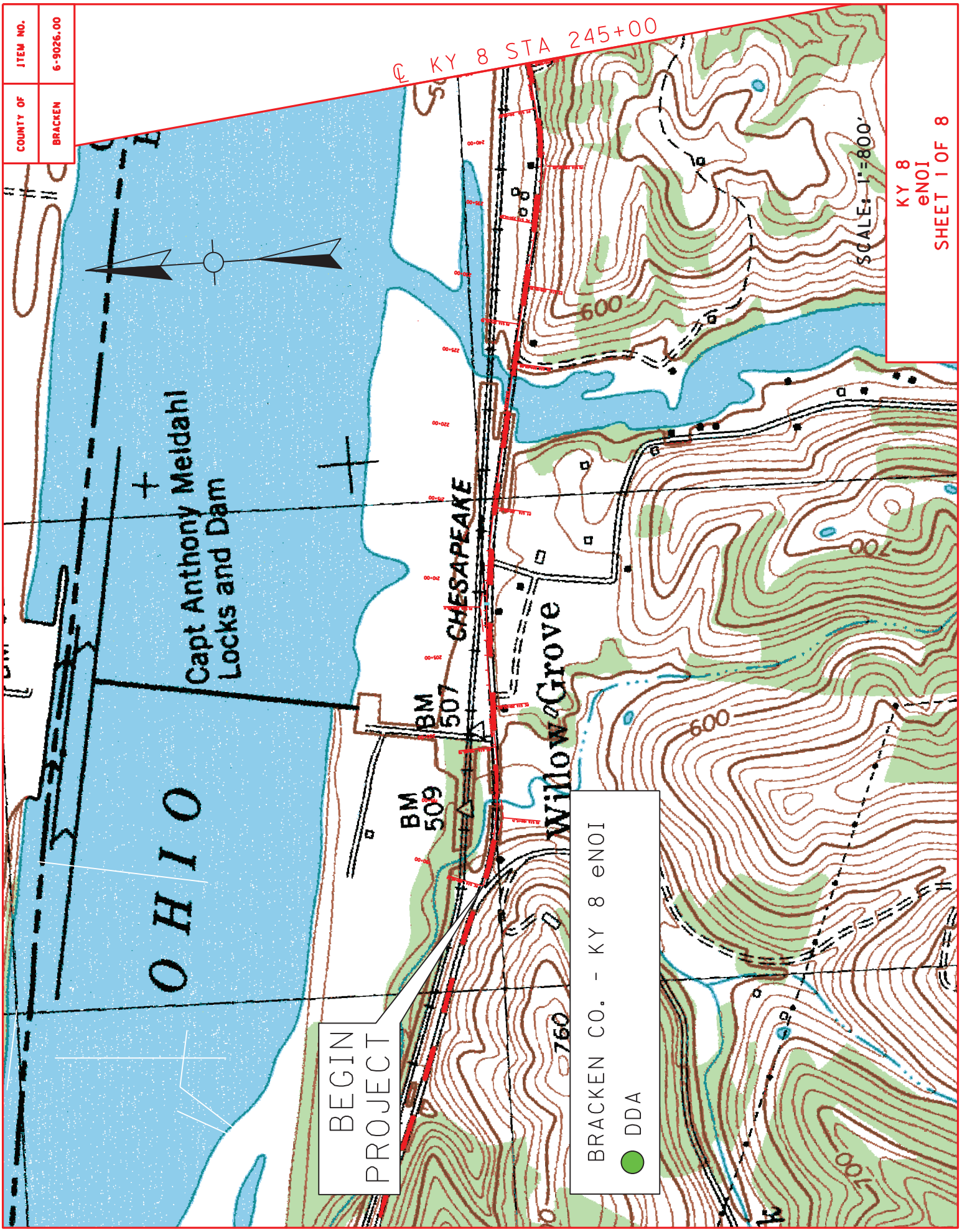
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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

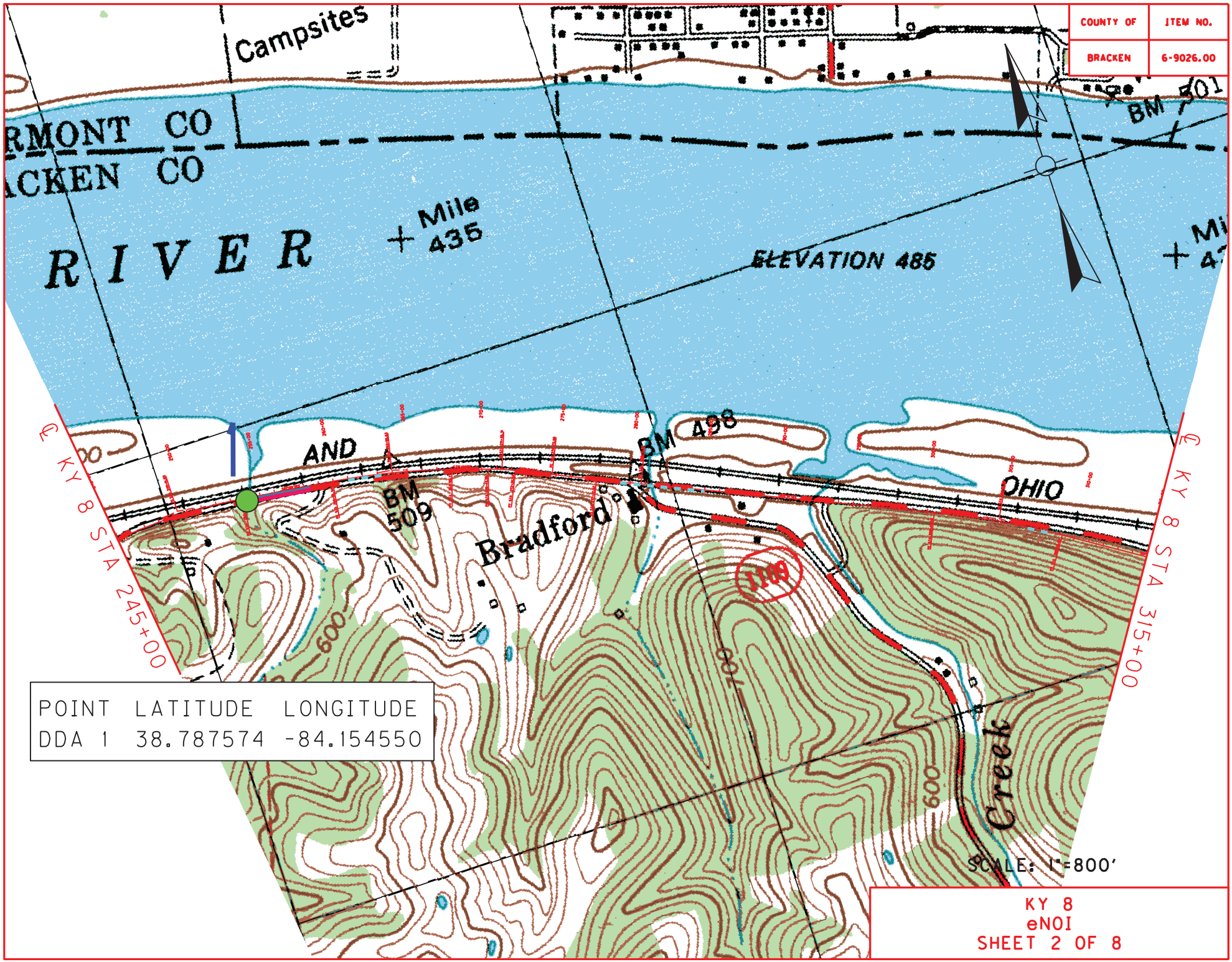
First Name:(*)	M.I.:	Last Name:(*)
First Name	MI	Last Name

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


COUNTY OF
BRACKEN
ITEM NO.
6-9026.00
℄ KY 8 STA 245+00
KY 8
eNOI
SHEET 1 OF 8
SCALE: 1"=800'
OHIO
Capt Anthony Meldahl
Locks and Dam
CHESAPEAKE
BM
507
BM
509
Willow Grove
600
700
760
BEGIN
PROJECT
BRACKEN CO. - KY 8 eNOI
DDA

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

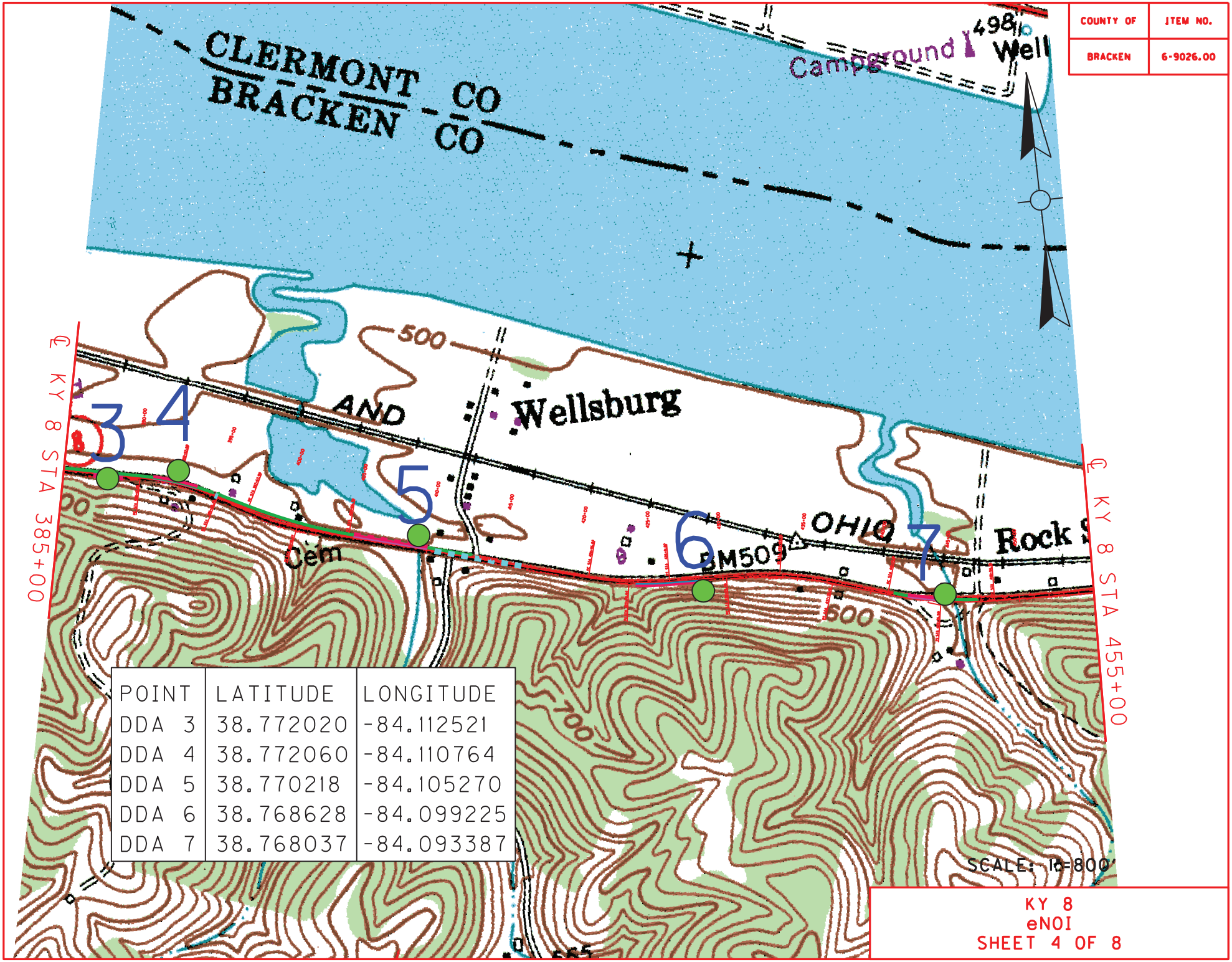


POINT	LATITUDE	LONGITUDE
DDA 1	38.787574	-84.154550

KY 8
eNOI
SHEET 2 OF 8


COUNTY OF
BRACKEN
ITEM NO.
6-9026.00
SCALE: 1"=800'
KY 8
eNOI
SHEET 3 OF 8
℄ KY 8 STA 385+00
℄ KY 8 STA 315+00
CHESAPEAKE
BM 508
BM 509
Mile 433
2
500
600
700
800
862
8
POINT LATITUDE LONGITUDE
DDA 2 38.773008 -84.116812

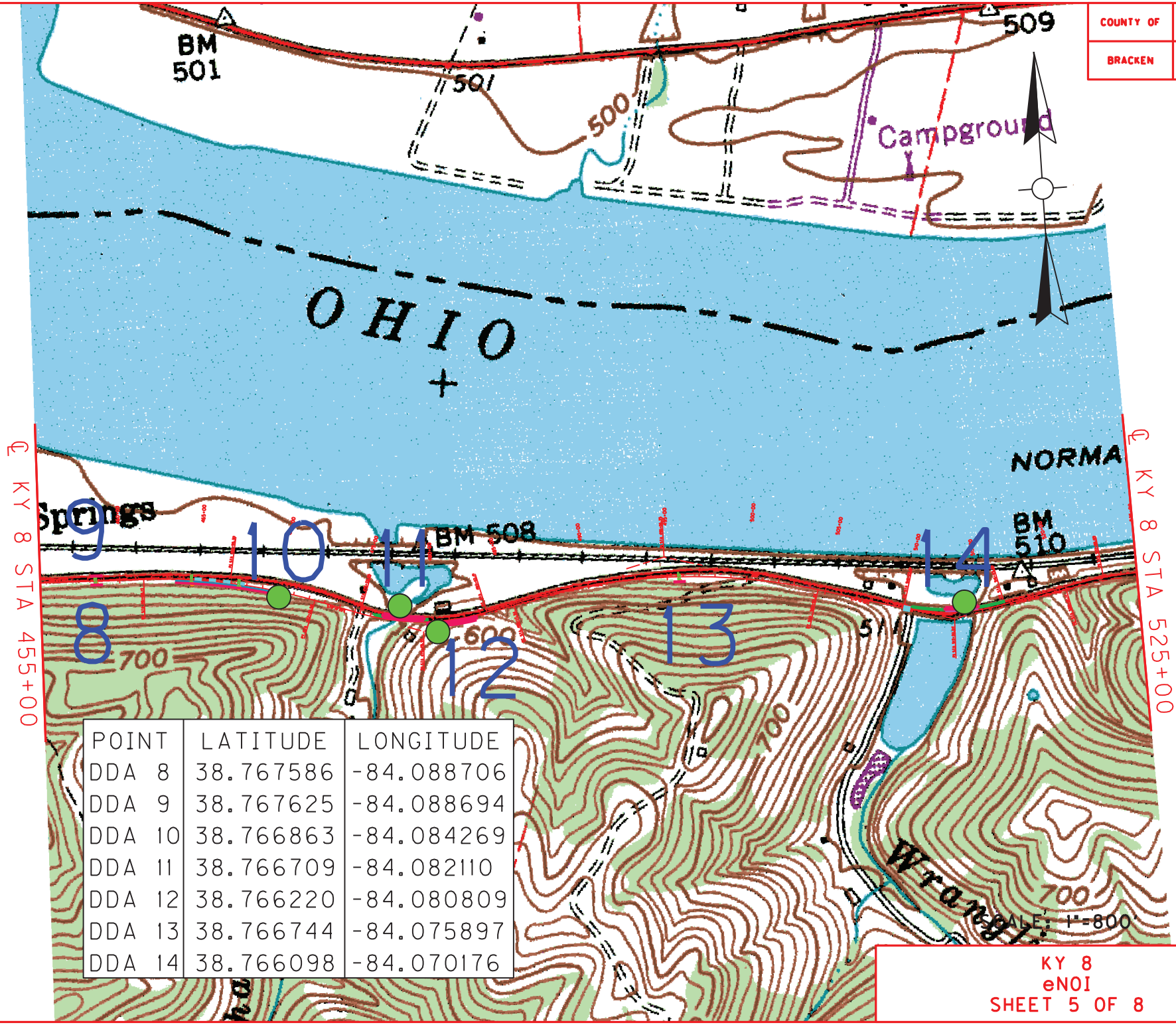
COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



POINT	LATITUDE	LONGITUDE
DDA 3	38.772020	-84.112521
DDA 4	38.772060	-84.110764
DDA 5	38.770218	-84.105270
DDA 6	38.768628	-84.099225
DDA 7	38.768037	-84.093387

KY 8
eNOI
SHEET 4 OF 8

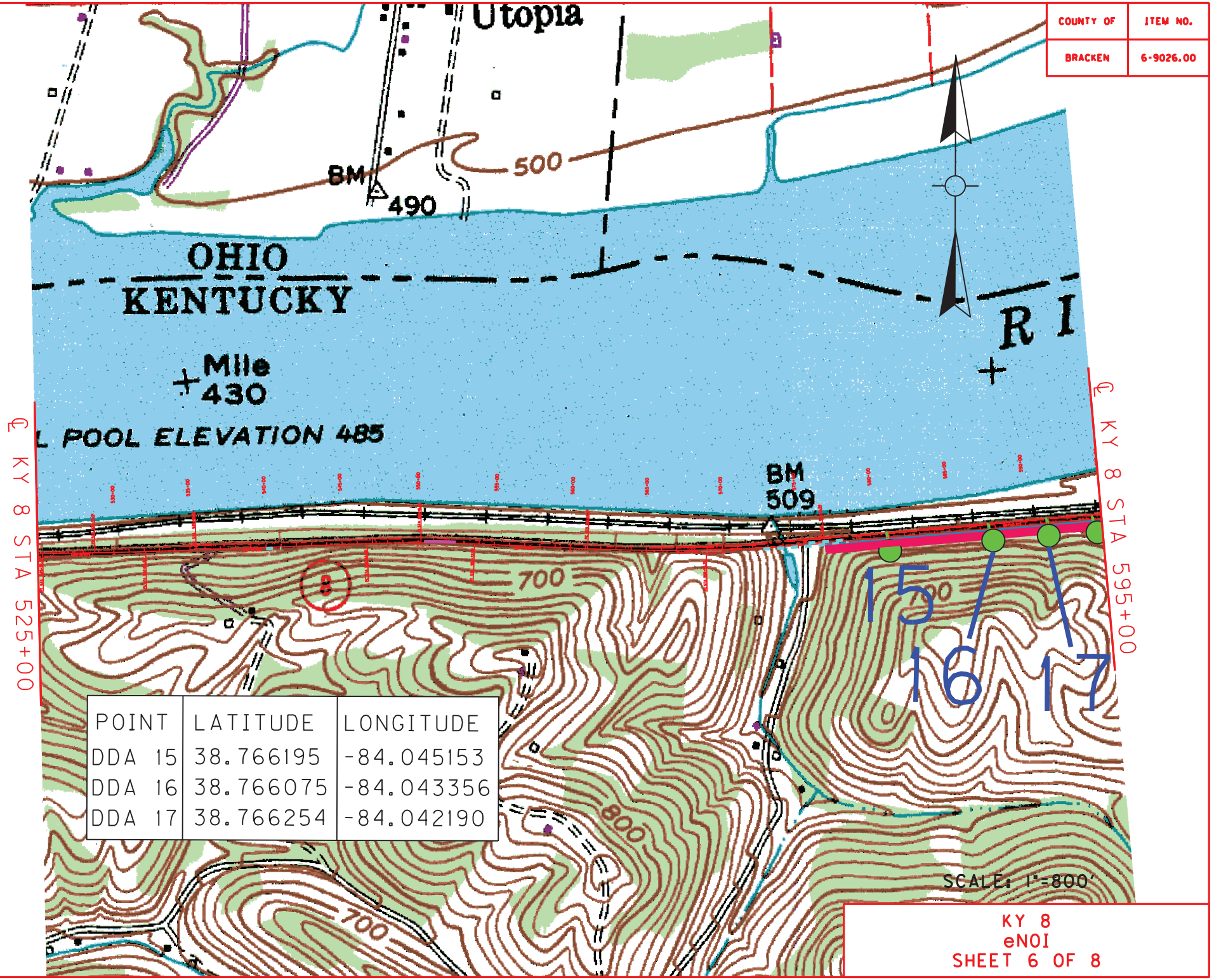
COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



POINT	LATITUDE	LONGITUDE
DDA 8	38.767586	-84.088706
DDA 9	38.767625	-84.088694
DDA 10	38.766863	-84.084269
DDA 11	38.766709	-84.082110
DDA 12	38.766220	-84.080809
DDA 13	38.766744	-84.075897
DDA 14	38.766098	-84.070176

KY 8
eNOI
SHEET 5 OF 8

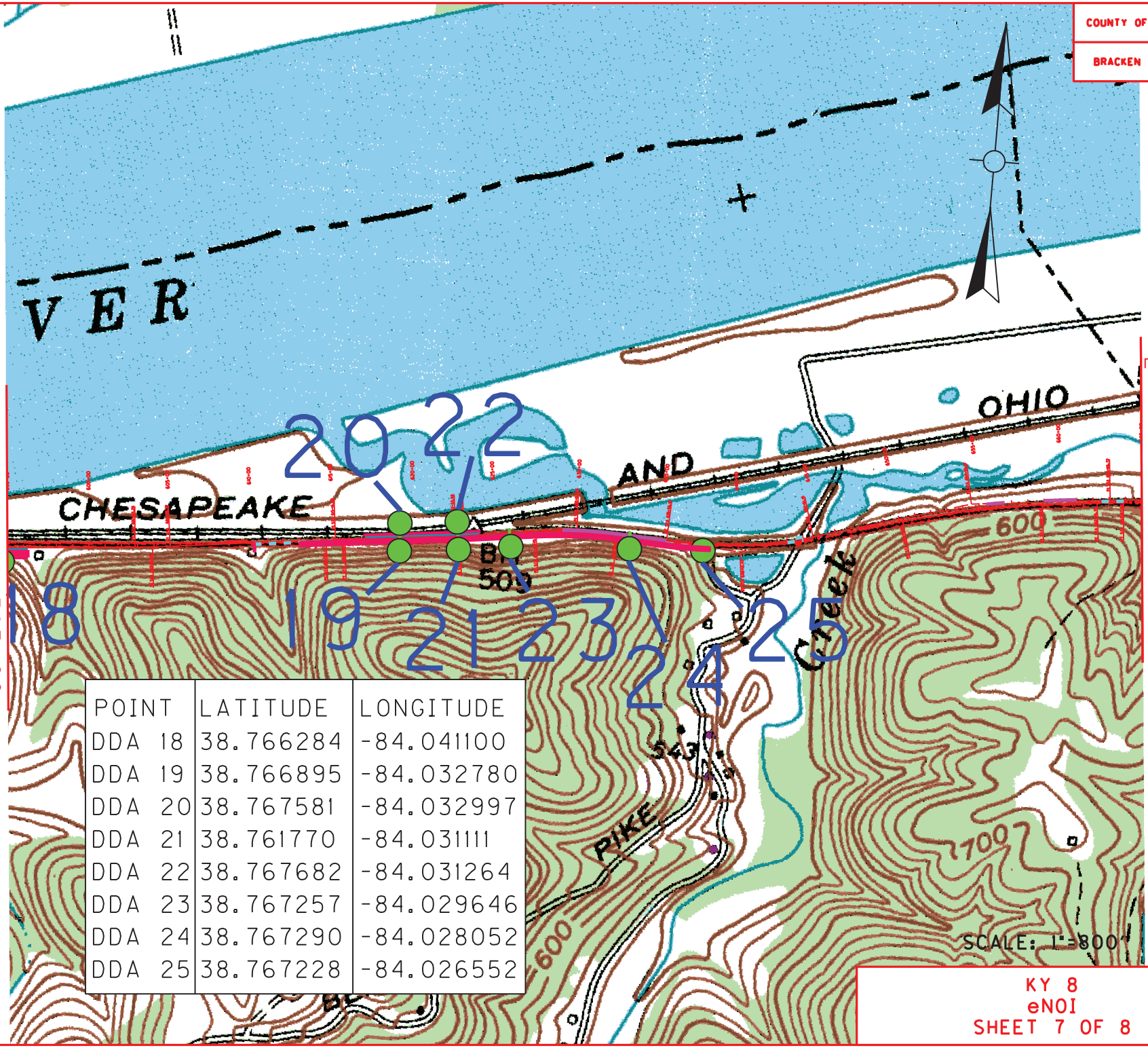
COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



POINT	LATITUDE	LONGITUDE
DDA 15	38.766195	-84.045153
DDA 16	38.766075	-84.043356
DDA 17	38.766254	-84.042190

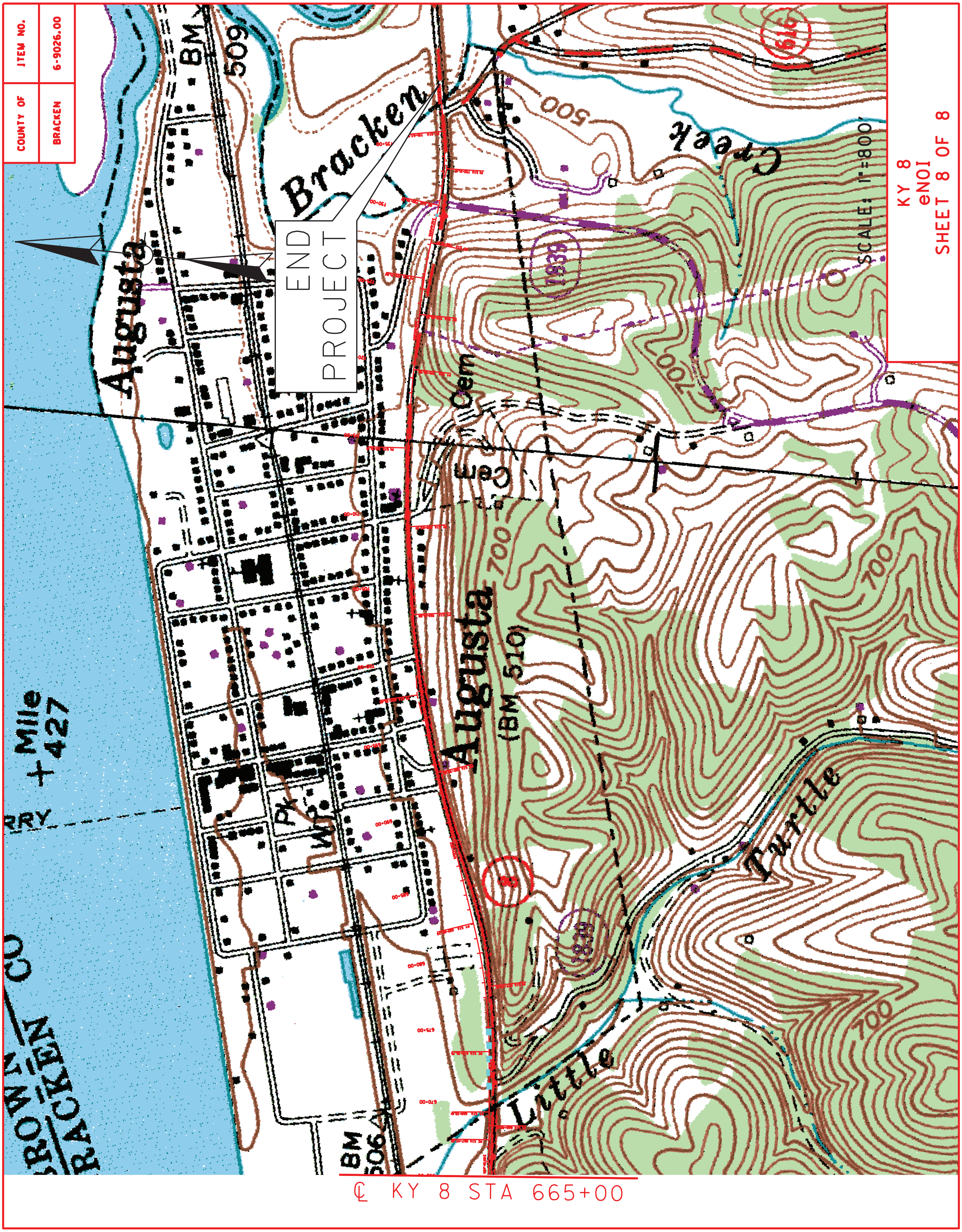
KY 8
eNOI
SHEET 6 OF 8

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



POINT	LATITUDE	LONGITUDE
DDA 18	38.766284	-84.041100
DDA 19	38.766895	-84.032780
DDA 20	38.767581	-84.032997
DDA 21	38.761770	-84.031111
DDA 22	38.767682	-84.031264
DDA 23	38.767257	-84.029646
DDA 24	38.767290	-84.028052
DDA 25	38.767228	-84.026552

KY 8
eNOI
SHEET 7 OF 8


COUNTY OF
BRACKEN
ITEM NO.
6-9026.00
END
PROJECT
KY 8
eNOI
SHEET 8 OF 8
SCALE: 1"=800'
Bracken
Creek
Augusta
Augusta
(BM 510)
Cem
Little
Turtle
Mile
427
BROWN CO
BRACKEN
RRY
BM
509
BM
506
500
700
1939
1839
℄ KY 8 STA 665+00

MATERIAL SUMMARY

CONTRACT ID: 224455 **012GR22T034-FD04 & FD05** **0601200082201**

MARY INGLES HIGHWAY (KY 8) FROM THE INTERSECTION OF KY 8 AT WILLOW ROAD EXTENDING EAST TO 0.013 MILE EAST OF AUGUSTA MINEVA ROAD ASPHALT PAVEMENT & ROADWAY REHAB, A DISTANCE OF 10.36 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0105	00080	CRUSHED AGGREGATE SIZE NO 23	4,060.00	TON
0110	00190	LEVELING & WEDGING PG64-22	689.00	TON
0115	00203	CL2 ASPH BASE 1.50D PG64-22	2,939.00	TON
0120	02677	ASPHALT PAVE MILLING & TEXTURING	464.00	TON
0125	24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	3.02	TON
0130	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	104.00	EACH
0135	02159	TEMP DITCH	27,354.00	LF
0140	02160	CLEAN TEMP DITCH	13,677.00	LF
0145	02351	GUARDRAIL-STEEL W BEAM-S FACE	4,988.65	LF
0150	02355	GUARDRAIL-STEEL W BEAM-S FACE A	50.00	LF
0155	02360	GUARDRAIL TERMINAL SECTION NO 1	7.00	EACH
0160	02367	GUARDRAIL END TREATMENT TYPE 1	2.00	EACH
0165	02371	GUARDRAIL END TREATMENT TYPE 7	1.00	EACH
0170	02378	GUARDRAIL CONNECTOR TO BRIDGE END TY D	2.00	EACH
0175	02381	REMOVE GUARDRAIL	4,900.00	LF
0180	02391	GUARDRAIL END TREATMENT TYPE 4A	2.00	EACH
0185	02562	TEMPORARY SIGNS	300.00	SQFT
0190	02603	FABRIC-GEOTEXTILE CLASS 2	3,922.00	SQYD
0195	02650	MAINTAIN & CONTROL TRAFFIC - (BRACKEN KY 8 FD04)	1.00	LS
0200	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH
0205	02676	MOBILIZATION FOR MILL & TEXT - (BRACKEN KY 8 FD04)	1.00	LS
0210	02701	TEMP SILT FENCE	27,354.00	LF
0215	02703	SILT TRAP TYPE A	5.00	EACH
0220	02704	SILT TRAP TYPE B	5.00	EACH
0225	02705	SILT TRAP TYPE C	5.00	EACH
0230	02706	CLEAN SILT TRAP TYPE A	5.00	EACH
0235	02707	CLEAN SILT TRAP TYPE B	5.00	EACH
0240	02708	CLEAN SILT TRAP TYPE C	5.00	EACH
0245	02726	STAKING - (BRACKEN KY 8 FD04)	1.00	LS
0250	02775	ARROW PANEL	2.00	EACH
0255	03234	RAILROAD RAILS-DRILLED	8,982.00	LF
0260	03235	EXCAVATION AND BACKFILL	6,113.00	CUYD
0265	03236	CRIBBING	23,580.00	SQFT
0270	05952	TEMP MULCH	16,456.00	SQYD
0275	05953	TEMP SEEDING AND PROTECTION	12,342.00	SQYD
0280	05963	INITIAL FERTILIZER	1.30	TON
0285	05964	MAINTENANCE FERTILIZER	.80	TON
0290	05985	SEEDING AND PROTECTION	24,684.00	SQYD
0295	05992	AGRICULTURAL LIMESTONE	15.30	TON
0300	26175EC	ROADSIDE REGRADING	7,195.00	LF
0305	00462	CULVERT PIPE-18 IN	222.00	LF
0310	00464	CULVERT PIPE-24 IN	57.00	LF

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0315	01000	PERFORATED PIPE-4 IN	156.00	LF
0320	01010	NON-PERFORATED PIPE-4 IN	96.00	LF
0325	01020	PERF PIPE HEADWALL TY 1-4 IN	12.00	EACH
0330	01310	REMOVE PIPE	228.00	LF
0335	01726	SAFETY BOX INLET-18 IN SDB-1	3.00	EACH
0340	01727	SAFETY BOX INLET-24 IN SDB-1	1.00	EACH
0345	01728	SAFETY BOX INLET-18 IN DBL SDB-5	4.00	EACH
0350	02625	REMOVE HEADWALL	18.00	EACH
0355	03262	CLEAN PIPE STRUCTURE	4.00	EACH
0360	08100	CONCRETE-CLASS A	12.98	CUYD
0365	23484EC	PIPE LINER ACCEPTANCE TESTING - (BRACKEN KY 8 FD04)	1.00	LS
0370	24862EC	PVC FOLD AND FORM PIPE LINER-18 IN	171.00	LF
0375	24863EC	PVC FOLD AND FORM PIPE LINER-24 IN	50.00	LF
0380	26131ED	SLOPED AND MITERED HEADWALL-18 IN	6.00	EACH
0385	26132ED	SLOPED AND MITERED HEADWALL-24 IN	1.00	EACH
0390	06406	SBM ALUM SHEET SIGNS .080 IN	465.00	SQFT
0395	06407	SBM ALUM SHEET SIGNS .125 IN	177.92	SQFT
0400	06410	STEEL POST TYPE 1	1,766.00	LF
0405	21134ND	REMOVE-STORE AND REINSTALL SIGN	2.00	EACH
0410	21373ND	REMOVE SIGN	78.00	EACH
0415	24631EC	BARCODE SIGN INVENTORY	156.00	EACH
0420	14077	W SERV PE/PLST LONG SIDE 1 IN	1.00	EACH
0425	14080	W SERV PE/PLST LONG SIDE 3/4 IN	1.00	EACH
0430	02569	DEMOBILIZATION	1.00	LS

MATERIAL SUMMARY

CONTRACT ID: 224455 **012GR22T034-FD04 & FD05** **MP01200082101**

MARY INGLES HIGHWAY (KY 8) BEGIN AT WILLOW CREEK ROAD EXTENDING EAST TO BIG BRACKEN CREEK BRIDGE ASPHALT RESURFACING, A DISTANCE OF 10.34 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	00001	DGA BASE	360.00	TON
0010	00190	LEVELING & WEDGING PG64-22	848.00	TON
0015	00301	CL2 ASPH SURF 0.38D PG64-22	8,320.00	TON
0020	00356	ASPHALT MATERIAL FOR TACK	72.00	TON
0025	02562	TEMPORARY SIGNS	430.00	SQFT
0030	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS
0035	02676	MOBILIZATION FOR MILL & TEXT	1.00	LS
0040	02677	ASPHALT PAVE MILLING & TEXTURING	1,015.00	TON
0045	02720	SIDEWALK-4 IN CONCRETE	12.00	SQYD
0050	06510	PAVE STRIPING-TEMP PAINT-4 IN	65,112.00	LF
0055	06515	PAVE STRIPING-PERM PAINT-6 IN	186,750.00	LF
0060	06517	PAVE STRIPING-PERM PAINT-12 IN	150.00	LF
0065	06565	PAVE MARKING-THERMO X-WALK-6 IN	72.00	LF
0070	06568	PAVE MARKING-THERMO STOP BAR-24IN	73.00	LF
0075	06569	PAVE MARKING-THERMO CROSS-HATCH	113.00	SQFT
0080	06574	PAVE MARKING-THERMO CURV ARROW	4.00	EACH
0085	10020NS	FUEL ADJUSTMENT	5,091.00	DOLL
0090	10030NS	ASPHALT ADJUSTMENT	12,460.00	DOLL
0095	23158ES505	DETECTABLE WARNINGS - (NEW)	16.00	SQFT
0100	02569	DEMOBILIZATION	1.00	LS

KENTUCKY TRANSPORTATION CABINET

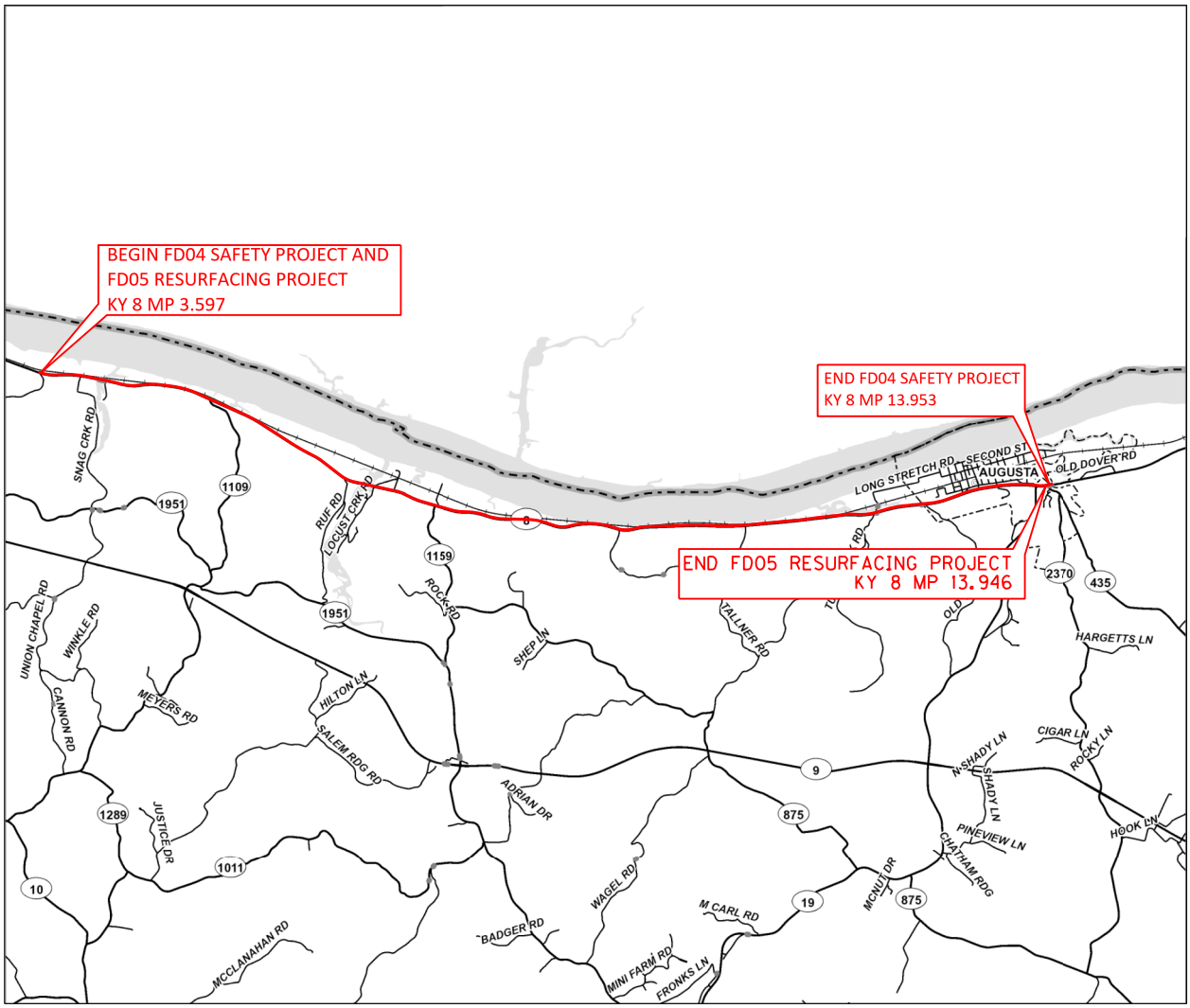
Gresham Smith

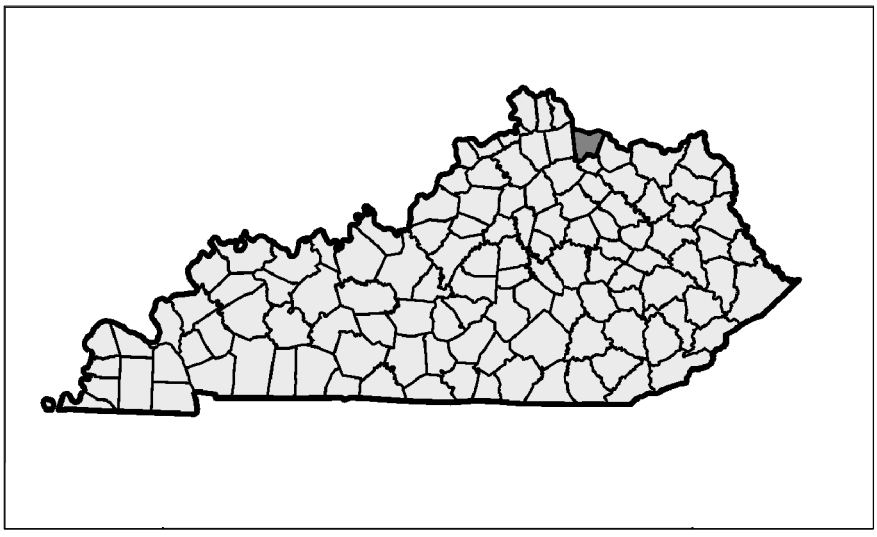
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

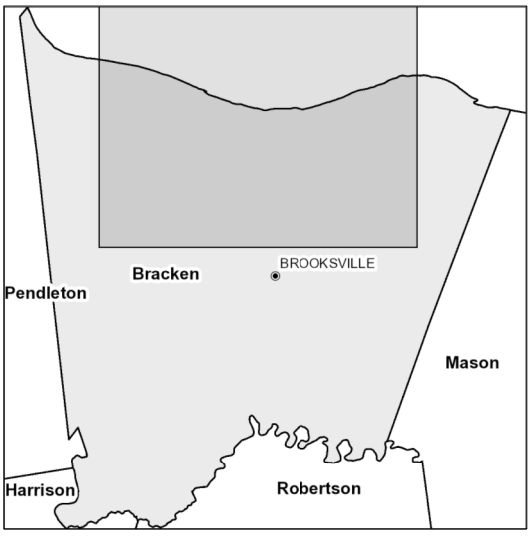
PLANS OF
PROPOSED PROJECT

COUNTY OF	ITEM NO.
BRACKEN	6-9026

CORRIDOR IMPROVEMENTS
BRACKEN COUNTY
KY 8

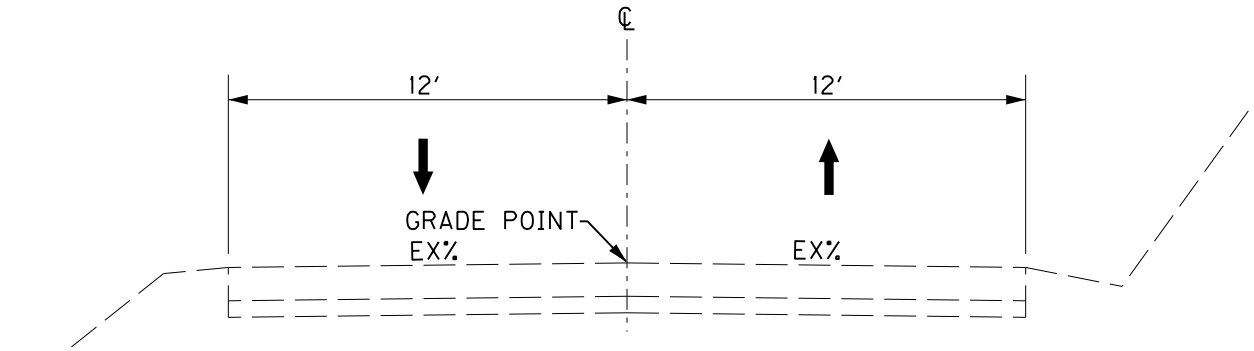




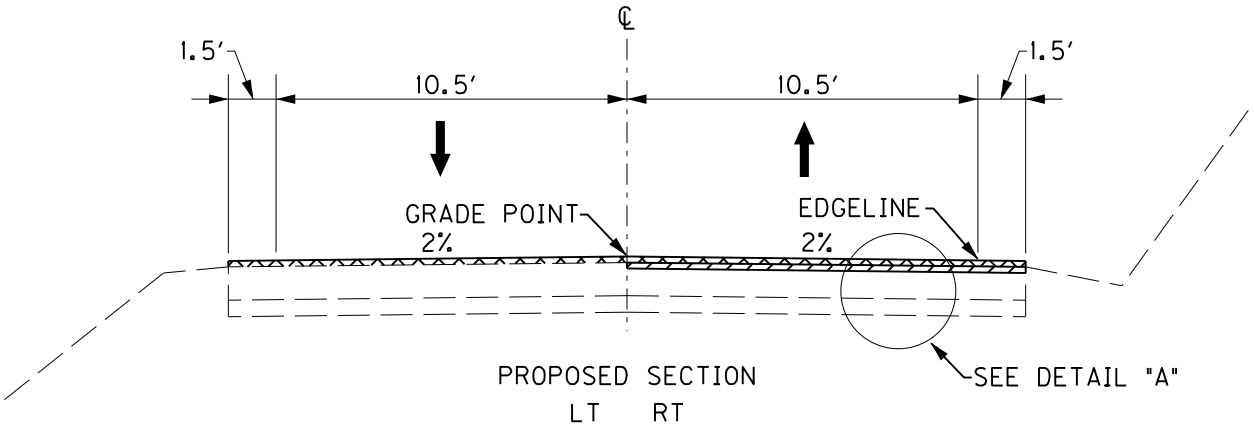


COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

PAVEMENT REPAIR DETAIL



EXISTING SECTION



PROPOSED SECTION

LT	RT
STA. 208+35 - STA. 208+55	STA. 208+35 - STA. 208+55
STA. 362+30 - STA. 363+50	STA. 261+00 - STA. 263+30
STA. 380+15 - STA. 381+85	STA. 279+30 - STA. 285+00
STA. 395+30 - STA. 395+50	STA. 306+80 - STA. 308+65
STA. 410+50 - STA. 416+50	STA. 362+30 - STA. 363+50
STA. 464+70 - STA. 468+00	STA. 380+15 - STA. 381+85
STA. 510+00 - STA. 510+50	STA. 395+30 - STA. 395+50
STA. 575+65 - STA. 578+30	STA. 410+50 - STA. 416+50
STA. 643+50 - STA. 644+50	STA. 510+00 - STA. 510+50
STA. 670+80 - STA. 675+20	STA. 540+00 - STA. 541+00
STA. 729+85 - STA. 730+10	STA. 572+70 - STA. 578+30
	STA. 610+15 - STA. 615+00
	STA. 635+55 - STA. 638+20
	STA. 643+00 - STA. 644+00
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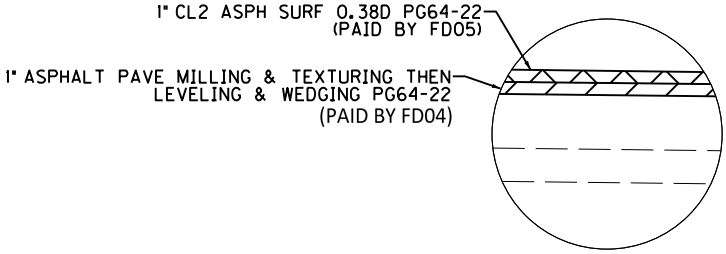
	STA. 670+80 - STA. 675+20



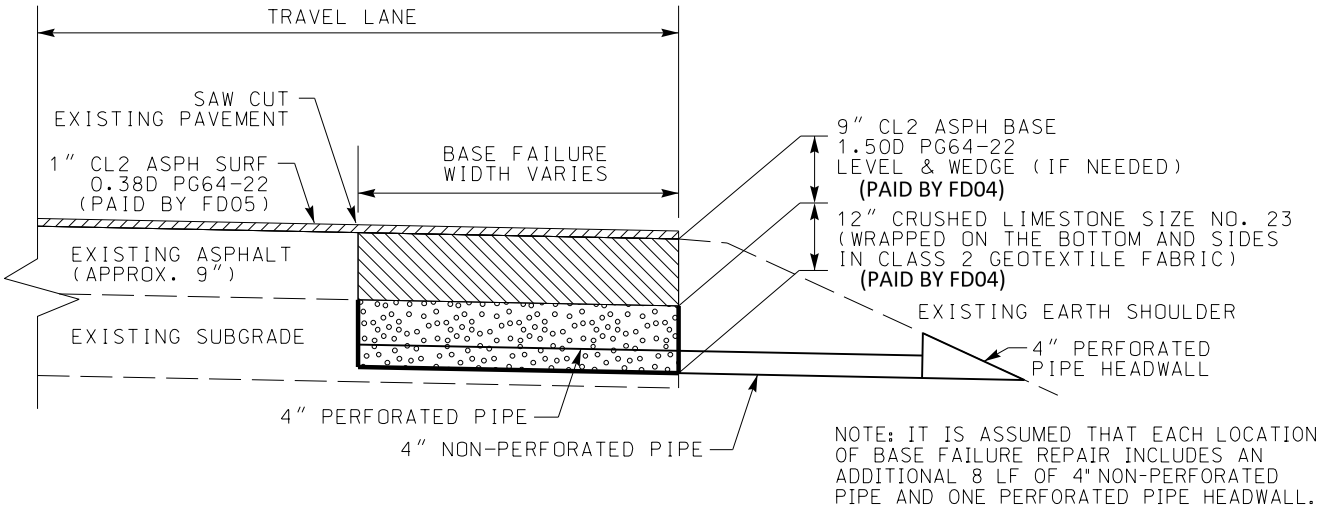
DETAIL A

KY 8
PAVEMENT REPAIR
DETAIL

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

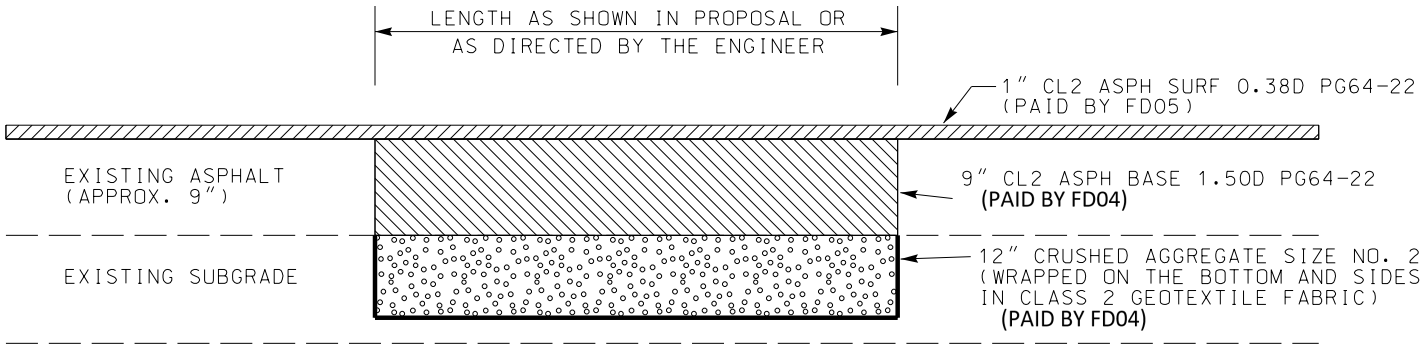
BASE FAILURE REPAIR DETAIL

BASE FAILURE CROSS SECTION DETAIL

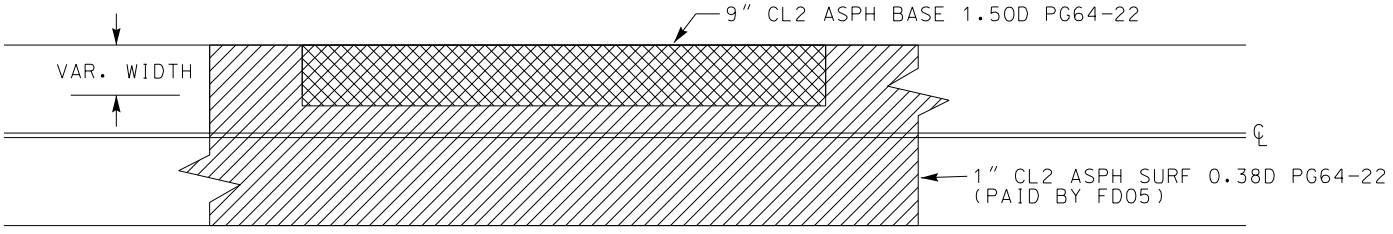


NOTE: IT IS ASSUMED THAT EACH LOCATION OF BASE FAILURE REPAIR INCLUDES AN ADDITIONAL 8 LF OF 4" NON-PERFORATED PIPE AND ONE PERFORATED PIPE HEADWALL.

BASE FAILURE PROFILE DETAIL



BASE FAILURE TOP VIEW DETAIL



NOTE:

FOR MORE INFORMATION ON THIS EFFORT, REFER TO THE "SPECIAL NOTE FOR BASE FAILURE REPAIR" AND PAVEMENT SUMMARY.

"BASE FAILURE REPAIR" LOCATIONS ARE LISTED IN THE PAVEMENT SUMMARY BUT THE ENGINEER SHALL MAKE THE FINAL DETERMINATION AS TO THE WIDTH, LENGTH, DEPTH, AND EXACT LOCATION OF EACH BASE FAILURE.

ONCE A REPAIR HAS BEGUN, THE CONTRACTOR WILL WORK CONTINUOUSLY UNTIL THE ASPHALT BASE IS COMPLETED.

REFER TO THE PAVEMENT SUMMARY TABLE FOR BID ITEMS AND QUANTITIES FOR THIS WORK.

KY 8
BASE FAILURE REPAIR DETAIL

KY 8 (FD04 SAFETY PROJECT)
GENERAL SUMMARY

COUNTY OF	ITEM NO.	FEDERAL NO.
BRACKEN	6-9026.00	

	ITEM	DESCRIPTION	UNIT	TOTAL PROJECT
	80	CRUSHED AGGREGATE NO. 23	TON	4,060
①	190	LEVELING & WEDGING PG64-22	TON	689
②	203	CL2 ASPH BASE 1.50D PG64-22	TON	2,939
③	462	CULVERT PIPE-18 IN	LF	222
③	464	CULVERT PIPE-24 IN	LF	57
	1000	PERFORATED PIPE-4 IN	LF	156
	1010	NON-PERFORATED PIPE-4 IN	LF	96
	1020	PERF PIPE HEADWALL TY 1-4 IN	EACH	12
	1310	REMOVE PIPE	LF	228
	1726	SAFETY BOX INLET-18 IN SDB-1	EACH	3
	1727	SAFETY BOX INLET-24 IN SDB-1	EACH	1
	1728	SAFETY BOX INLET-18 IN DBL SDB-5	EACH	4
	1987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	EACH	104
	2159	TEMPORARY DITCH	LF	27,354
	2160	CLEAN TEMPORARY DITCH	LF	13,677
	2351	GUARDRAIL-STEEL W BEAM-S FACE	LF	4,988.65
	2355	GUARDRAIL-STEEL W BEAM-S FACE A	LF	50.0
	2360	GUARDRAIL TERMINAL SECTION NO 1	EACH	7
	2367	GUARDRAIL END TREATMENT TYPE 1	EACH	2
	2371	GUARDRAIL END TREATMENT TYPE 7	EACH	1
	2378	GUARDRAIL CONNECTOR TO BRIDGE END TY D	EACH	2
	2381	REMOVE GUARDRAIL	LF	4,900
	2391	GUARDRAIL END TREATMENT TYPE 4A	EACH	2
	2562	TEMPORARY SIGNS	SQFT	300.00
	2569	DEMOBILIZATION	LS	1
	2603	FABRIC-GEOTEXTILE CLASS 2	SQYD	3,922
	2625	REMOVE HEADWALL	EACH	18
	2650	MAINTAIN & CONTROL TRAFFIC (BRACKEN KY 8 FD04)	LS	1
	2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2
	2676	MOBILIZATION FOR MILL & TEXT	LS	1
	2677	ASPHALT PAVE MILLING & TEXTURING	TON	464
	2701	TEMP SILT FENCE	LF	27,354
	2703	SILT TRAP TYPE A	EACH	5
	2704	SILT TRAP TYPE B	EACH	5
	2705	SILT TRAP TYPE C	EACH	5

① 519 TONS FROM PAVEMENT REPAIR SUMMARY, 170 TONS FROM BASE FAILURE REPAIR SUMMARY

② 2,914 TONS FROM BASE FAILURE REPAIR SUMMARY, 25 TONS FROM PIPE REPLACEMENT & EXTENSION SUMMARY

③ PIPE EXTENSION SHALL BE OF IN-KIND MATERIAL.

KY 8 (FD04 SAFETY PROJECT)
GENERAL SUMMARY

COUNTY OF	ITEM NO.	FEDERAL NO.
BRACKEN	6-9026.00	

	ITEM	DESCRIPTION	UNIT	TOTAL PROJECT
	2706	CLEAN SILT TRAP TYPE A	EACH	5
	2707	CLEAN SILT TRAP TYPE B	EACH	5
	2708	CLEAN SILT TRAP TYPE C	EACH	5
	2726	STAKING (BRACKEN KY 8 FD04)	LS	1
	2775	ARROW PANEL	EACH	2
	3234	RAILROAD RAILS - DRILLED	LF	8,982
	3235	EXCAVATION AND BACKFILL	CUYD	6,113
	3236	CRIBBING	SQYD	23,580
	3262	CLEAN PIPE STRUCTURE	EACH	4
	5952	TEMP MULCH	SQYD	16,456
	5953	TEMP SEEDING AND PROTECTION	SQYD	12,342
	5963	INITIAL FERTILIZER	TON	1.3
	5964	MAINTENANCE FERTILIZER	TON	0.8
	5985	SEEDING AND PROTECTION	SQYD	24,684
	5992	AGRICULTURAL LIMESTONE	TON	15.3
	6406	SBM ALUM SHEET SIGNS .080 IN	SQFT	465.00
	6407	SBM ALUM SHEET SIGNS .125 IN	SQFT	177.92
	6410	STEEL POST TYPE 1	LF	1,766
	8100	CONCRETE - CLASS A	CUYD	12.98
	21134ND	REMOVE-STORE AND REINSTALL SIGN	EACH	2
	21373ND	REMOVE SIGN	EACH	78
	23484EC	PIPE LINER ACCEPTANCE TESTING	LS	1
	26131ED	SLOPED AND MITERED HEADWALL-18 IN EACH	EACH	6
	26132ED	SLOPED AND MITERED HEADWALL-24 IN EACH	EACH	1
	24631EC	BARCODE SIGN INVENTORY	EACH	156
	24862EC	PVC FOLD AND FORM PIPE LINER-18 IN	LF	171
	24863EC	PVC FOLD AND FORM PIPE LINER-24 IN	LF	50
④	24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	TON	3.02
	26175EC	ROADSIDE REGRADING	LF	7,195
	14077	W SERV PE/PLST LONG SIDE 1 IN	EACH	1
	14080	W SERV PE/PLST LONG SIDE 3/4 IN	EACH	1

④ 2.9 TONS FROM PAVEMENT REPAIR SUMMARY, 0.12 TONS FROM PIPE REPLACEMENT & EXTENSION SUMMARY

BRACKEN COUNTY - KY 8
MP 3.597 TO MP 13.946
ITEM NO. 6-9026
(FD04 SAFETY PROJECT)

PAVEMENT REPAIR SUMMARY

Begin		End		Length (LF)	Width (FT)	Asphalt Pave Milling & Texturing (Tons)	Asph. Material for Tack Non-Tracking (Tons)	Leveling & Wedging PG64-22 (Tons)	Comments
Milepoint	Station	Milepoint	Station						
3.946	208+35	3.950	208+55	20	24	3	0.02	4	Both lanes
4.943	261+00	4.987	263+30	230	12	17	0.11	19	Eastbound lane
5.290	279+30	5.398	285+00	570	12	42	0.27	47	Eastbound lane
5.811	306+80	5.846	308+65	185	12	14	0.09	16	Eastbound lane
6.862	362+30	6.884	363+50	120	24	18	0.11	20	Both lanes
7.200	380+15	7.232	381+85	170	24	25	0.16	28	Both lanes
7.487	395+30	7.491	395+50	20	24	3	0.02	4	Both lanes
7.775	410+50	7.888	416+50	600	24	88	0.56	97	Both lanes
8.801	464+70	8.864	468+00	330	12	25	0.15	28	Westbound lane
9.659	510+00	9.669	510+50	50	24	8	0.05	9	Both lanes
10.227	540+00	10.246	541+00	100	12	8	0.05	9	Eastbound lane
10.847	572+70	10.953	578+30	560	12	42	0.26	47	Eastbound lane
10.902	575+65	10.953	578+30	265	12	20	0.12	22	Westbound lane
11.556	610+15	11.648	615+00	485	12	36	0.23	40	Eastbound lane
12.037	635+55	12.087	638+20	265	12	20	0.12	22	Eastbound lane
12.178	643+00	12.197	644+00	100	12	8	0.05	9	Eastbound lane
12.188	643+50	12.206	644+50	100	12	8	0.05	9	Westbound lane
12.547	662+50	12.576	664+00	150	12	11	0.07	13	Eastbound lane
12.705	670+80	12.788	675+20	440	24	65	0.41	72	Both lanes
13.823	729+85	13.828	730+10	25	14	3	0.01	4	Westbound Left-Turn lane
					TOTALS	**464 TONS**	**2.90 TONS**	**519 TONS**	

BASE FAILURE REPAIR SUMMARY

Note: Refer to the Special Note for Base Failure Repair and the Base Failure Detail for more information on the effort and the potential for final quantities to vary. It is assumed that each location of base failure repair includes an additional 8 LF of 4" Non-Perforated Pipe and one Perforated Pipe Headwall.

Begin		End		Width (LF)	Area (SY)	Crushed Aggregate Size No 23 (Tons)	CL2 Asph Base 1.50D PG64-22 (Tons)	Leveling & Wedging PG64-22 (Tons)	Perforated Pipe-4 IN (LF)	Comments
Milepoint	Station	Milepoint	Station							
7.109	375+35	7.157	377+90	12	340	259	186	11	12	EB Lane
7.111	375+45	7.161	378+10	12	353	269	193	11	12	WB Lane
7.330	387+00	7.367	389+00	12	267	203	146	9	12	EB Lane
7.405	391+00	7.462	394+00	12	400	304	218	13	12	WB Lane
7.670	405+00	7.765	410+00	12	667	506	363	21	12	WB Lane
8.381	442+50	8.419	444+50	12	267	203	146	9	12	WB Lane
9.030	476+80	9.080	479+40	12	347	264	189	11	12	WB Lane
9.709	512+65	9.749	514+75	12	280	213	153	9	12	WB Lane
10.424	550+40	10.464	552+50	12	280	213	153	9	12	WB Lane
11.915	629+10	12.037	635+55	24	1720	1306	937	53	24	Both Lanes
12.414	655+45	12.436	656+60	12	153	117	84	5	12	WB Lane
12.481	659+00	12.519	661+00	12	267	203	146	9	12	WB Lane
				TOTALS	**5,340 SY**	**4,060 TONS**	**2,914 TONS**	**170 TONS**	**156 LF**	

6-9026 Roadside Regrading Summary (FD04 Safety Project) Bracken County KY 8

Notes:
* The "Figure References" noted below refer to the Figure number within the Roadside Regrading Detail Sheet that is the closest representation of the intended Roadside Regrading.
** 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 Roadside Regrading 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)	Roadside Regrading 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	253+95	4.810	258+40	4.894	445	40	20	Figure 11	No				No			
RT	387+00	7.330	389+00	7.367	200	22	37	Figure 9	No				No			
RT	424+15	8.033	428+50	8.116	435	64	24	Figure 11	No				No			
RT	463+50	8.778	470+00	8.902	650	72	120	Figure 9	No				No			
RT	479+65	9.084	482+70	9.142	305	51	17	Figure 11	No				No			
RT	576+85	10.925	596+25	11.293	1,940	287	108	Figure 11	No				No			
RT	613+00	11.610	638+20	12.087	2,520	233	140	Figure 11	No				No			
LT	617+00	11.686	624+00	11.818	700	0	130	Figure 3	No				No			

Summary of Items

Roadside Regrading	7,195	LF		Asphalt Seal Coat	0	TONS		Channel Lining Class II	0	TONS
DGA	0	TONS		Asphalt Seal Aggregate	0	TONS		Geotextile Fabric Type IV	0	SQ YD

BRACKEN COUNTY - KY 8
MP 3.597 TO MP 13.946
ITEM NO. 6-9026.00
CRIBBING SUMMARY (FD04 Safety Project)

BEGIN MILEPOINT	BEGIN STATION	END MILEPOINT	END STATION	SIDE OF ROAD	PROPOSED CRIBBING (SF)	FABRIC GEOTEXTILE CLASS 2 (SY)	RAILROAD RAILS - DRILLED (LF)	EXCAVATION & BACKFILL (CY)	COMMENTS
7.109	375+35	7.152	377+65	RT.	2,760	459	1,062	716	QUANTITIES BASED ON ASSUMED DEPTH TO BEDROCK OF 12 FT.
7.112	375+50	7.162	378+15	LT.	3,180	529	1,206	824	QUANTITIES BASED ON ASSUMED DEPTH TO BEDROCK OF 12 FT.
7.405	391+00	7.462	394+00	LT.	3,600	599	1,368	933	QUANTITIES BASED ON ASSUMED DEPTH TO BEDROCK OF 12 FT.
7.670	405+00	7.765	410+00	LT.	6,000	998	2,268	1,556	QUANTITIES BASED ON ASSUMED DEPTH TO BEDROCK OF 12 FT.
8.381	442+50	8.419	444+50	LT.	2,400	399	918	622	QUANTITIES BASED ON ASSUMED DEPTH TO BEDROCK OF 12 FT.
9.030	476+80	9.080	479+40	LT.	3,120	519	1,188	809	QUANTITIES BASED ON ASSUMED DEPTH TO BEDROCK OF 12 FT.
9.710	512+70	9.750	514+80	LT.	2,520	419	972	653	QUANTITIES BASED ON ASSUMED DEPTH TO BEDROCK OF 12 FT.
				TOTALS	23,580 SF	3,922 SY	8,982 LF	6,113 CY	

ITEM	DESCRIPTION	UNIT	QUANTITY
2603	FABRIC - GEOTEXTILE CLASS 2	SY	3,922
3236	CRIBBING	SF	23,580
3234	RAILROAD RAILS - DRILLED	LF	8,982
3235	EXCAVATION AND BACKFILL	CY	6,113

NOTE: THESE NUMBERS ARE FOR ESTIMATE PURPOSES ONLY.
FINAL LOCATIONS AND QUANTITIES WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

6-9026 **Guardrail Summary (FD04 Safety Project)** **Bracken County** **KY 8**

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					
Priority	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)
Damaged	RT	Connector Type D Single Face A	375+30	7.108	378+00	7.159	Type 7	277.50	4		RT	375+30	7.108	377+80	7.155	250.00
Damaged	LT	Connector Type D Single Face A	375+45	7.111	378+65	7.171	Terminal Section 1	303.75	1		LT	375+45	7.111	378+50	7.169	312.50
Medium-High	LT	Type 4A	382+55	7.245	395+15	7.484	Terminal Section 1	1,217.45	1		LT	382+55	7.245	395+15	7.484	1,262.50
High	LT	Terminal Section 1	395+30	7.487	413+00	7.822	Terminal Section 1	1,790.00	4		LT	395+30	7.487	401+30	7.600	600.00
											LT	401+80	7.610	412+90	7.820	1,112.50
Medium-Low	LT	Type 4A	441+55	8.363	447+20	8.470	Terminal Section 1	529.95	1		LT	442+10	8.373	447+10	8.468	500.00
High	LT	Terminal Section 1	476+25	9.020	479+75	9.086	Type 1	303.75	1		LT	476+60	9.027	479+75	9.086	325.00
Medium-High	LT	Terminal Section 1	510+50	9.669	516+60	9.784	Type 1	566.25	1		LT	510+50	9.669	514+90	9.752	450.00
											LT	515+75	9.768	516+60	9.784	87.50

Summary of Items					
Guardrail-Steel W Beam-S Face	4,988.65	LF	Delineator for Guardrail B/W	104	EACH
Remove Guardrail	4,900.00	LF	GR Connector to Bridge End Type A	0	EACH
Remove Guardrail End Treatment	0	EACH	GR Connector to Bridge End Type A-1	0	EACH
End Treatment Type 1	2	EACH	GR Connector to Bridge End Type C	0	EACH
End Treatment Type 2A	0	EACH	GR Connector to Bridge End Type D	2	EACH
End Treatment Type 4A	2	EACH	DGA	0	TONS
End Treatment Type 7	1	EACH	Asphalt Seal Coat	0.00	TONS
Terminal Section No. 1	7	EACH	Asphalt Seal Aggregate	0.00	TONS
Guardrail-Steel W Beam-S Face A	50	LF	Guardrail-Bridge Case I-A	0	LF

6-9026 - Bracken Co. - KY 8
Culvert Pipe Replacement & Extension Summary (FD04 Safety Project)

Mile Point	Station	Existing					Proposed																				Comments
		Pipe Size, Type	Left Hdwl	Right Hdwl	Skew	Length (LF)	Remove Pipe (LF)		Pipe Extension Length (LF)		Class A Concrete for Intermediate Anchor/Collar (CU YD)[3]	Entrance Pipe 15" (LF)	Culvert Pipe 18" (LF)	Culvert Pipe 24" (LF)	Culvert Pipe 30" (LF)	Culvert Pipe 36" (LF)	Culvert Pipe 42" (LF)	Headwall or Drainage Box		PVC Fold and Form Liner (LF)		CL2 Asph Base 1.50D PG64-22 (TON)		Asph Material for Tack Non-Tracking (TON)		Channel Lining Cl II (TON)		
							Left	Right	Left	Right								Left	Right	18"	24"	Left	Right	Left	Right	Left	Right	
7.358	388+50	18" RCP	Std.	Std.	0°	55		4		9	1.13		9						Safety Box Inlet - Double	60			1.35		0.01			Clean Pipe
8.687	458+65	18" RCP	Std.	Std.	0°	46	29	17					58					Sloped & Mitered	Safety Box Inlet - Double				4.62		0.01			
8.801	464+70	18" RCP	Std.	Std.	0°	62		4		5	1.13		5						Safety Box Inlet - Double									
8.858	467+70	18" RCP	Std.	Std.	0°	55		4		5	1.13		5						Safety Box Inlet - Double				0.39		0.01			
9.393	495+95	18" RCP	Std.	Std.	0°	40	19	21					47					Sloped & Mitered	Safety Box Inlet - Double				4.62		0.01			
11.002	580+90	18" RCP	Std.	Std. L	0°	57		4		5	1.13		5						Safety Box Inlet - Single	58			0.77		0.01			Clean Pipe
11.129	587+60	18" RCP	Std.	Std. L	0°	52		4		5	1.13		5						Safety Box Inlet - Single	53			0.58		0.01			Clean Pipe
11.201	591+40	24" RCP	Std.	Std.	0°	49	32	17						54				Sloped & Mitered	Safety Box Inlet - Double				5.28		0.01			
11.259	594+50	18" RCP	None	Std.	0°	39	28	21					56					Sloped & Mitered	Safety Box Inlet - Double				4.62		0.01			
11.724	619+05	18" RCP	Std.	Std.	0°	36	4	4	10	5	2.26		15					Sloped & Mitered	Safety Box Inlet - Double				0.77		0.01			
11.794	622+70	18" RCP	Std.	Std.	0°	39	4	4	8	4	2.26		12					Sloped & Mitered	Safety Box Inlet - Double				0.77		0.01			
11.855	625+95	18" RCP	Std.	Std.	0°	43		4		5	1.13		5						Safety Box Inlet - Double				0.77		0.01			
11.997	633+45	24" CMP	None	None	2.7° LT	51		4		3	1.68			3					Safety Box Inlet - Double		50		0.88		0.01			Clean Pipe
					TOTALS:		228 LF				12.98 CU YD	0 LF	222 LF	57 LF	0 LF	0 LF	0 LF			171 LF	50 LF	25.00 TON		0.12 TON		0 TON		

Inlet & Outlet Structure Totals		
Safety Box Inlet 18 Inch - Single	3	Each
Safety Box Inlet 18 Inch - Double	4	Each
Safety Box Inlet 24 Inch - Single	1	Each
Sloped & Mitered Conc. Headwall - 18"	6	Each
Sloped & Mitered Conc. Headwall - 24"	1	Each
Remove Headwall	18	Each

NOTES:

1. These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.
2. Clearing and grubbing necessary to construct drainage items, as directed by the Engineer, will be considered part of Site Preparation, which is incidental to the Contract.
3. See Standard Drawing RDX-060-04 for Intermediate Anchor details.

6-9026 Remove Sign Summary (FD04 Safety Project) Bracken County - KY 8

Approx. Location		Sign Details
Station	LT / RT	
214+00	RT	No Passing Zone
226+50	RT	Left Reverse Curve
228+60	LT	No Passing Zone
260+80	RT	No Passing Zone
262+90	RT	Object Marker Type 3
263+00	RT	Object Marker Type 3
269+00	LT	Object Marker Type 3
269+00	RT	Object Marker Type 3
269+10	LT	Object Marker Type 3
269+10	RT	Object Marker Type 3
275+50	RT	JCT w/ KY 1109
275+60	LT	No Passing Zone w/ Left Curve
278+20	RT	Object Marker Type 3
278+50	LT	Object Marker Type 3
281+10	LT	KY 8 w/ Thru and KY 1109 w/ Right Arrow
281+50	RT	East w/ KY 8
284+70	RT	No Passing Zone
292+50	LT	No Passing Zone
299+10	RT	Object Marker Type 3
299+20	RT	Object Marker Type 3
304+80	RT	Object Marker Type 3
304+90	RT	Object Marker Type 3
309+20	RT	Object Marker Type 3
311+80	RT	Object Marker Type 3
311+90	RT	Object Marker Type 3
313+60	RT	Object Marker Type 3
313+70	RT	Object Marker Type 3
316+50	RT	Object Marker Type 3
337+40	LT	No Passing Zone
353+90	LT	No Passing Zone w/ Left Curve
375+50	RT	No Passing Zone
375+70	LT	Right Curve
383+60	RT	Side Road Right
384+30	LT	No Passing Zone
384+90	RT	School Bus Stop Ahead (Text)
404+90	RT	JCT w/ KY 1159
405+50	LT	School Bus Stop Ahead (Text)
406+70	LT	No Passing Zone w/ Side Road Left
409+50	RT	KY 1159 w/ Right Arrow
410+30	LT	West w/ KY 8
411+25	LT	KY 8 w/ Left-Right Arrow
411+30	LT	STOP
416+70	LT	JCT w/ KY 1159
417+80	LT	No Passing Zone
441+70	LT	Left Reverse Curve
457+30	LT	No Passing Zone
508+60	RT	No Passing Zone
531+60	RT	No Passing Zone
571+80	RT	No Passing Zone
576+30	LT	No Passing Zone
619+30	RT	Right Reverse Curve
628+70	RT	Rough Road w/ 35 MPH

Approx. Location		Sign Details
Station	LT / RT	
642+20	LT	Rough Road w/ 35 MPH
645+00	LT	Right Reverse Curve
646+80	LT	No Passing Zone
661+40	RT	No Passing Zone
662+90	LT	Break In Pavement w/ 35 MPH
664+30	LT	Left Curve
666+70	LT	No Passing Zone
673+00	LT	Low Shoulder
675+00	LT	Speed Limit 35 MPH Ahead
675+00	RT	Speed Limit 35 MPH Ahead
680+80	LT	Speed Limit 35 w/ End 35 Mile Speed *
680+80	RT	Speed Limit 35 w/ End 35 Mile Speed *
692+00	LT	West w/ KY 8
696+40	LT	Side Road Right
717+30	RT	JCT w/ KY 19
725+10	LT	West w/ KY 8
727+20	LT	Speed Limit 35
729+20	RT	KY 19 w/ Right Arrow
730+30	RT	STOP
730+40	LT	KY 19 w/ Left Arrow
732+10	RT	East
734+10	LT	JCT w/ KY 19
735+20	LT	Speed Limit 35
735+20	RT	KY 8 w/ Thru Arrow
735+20	RT	KY 435
735+80	LT	KY 8 w/ Thru Arrow w/ KY 435 w/ Left Arrow

* - Remove, store and reinstall "End 35 Mile Speed" signs on new signs LT/RT STA 681+30 using same post as "SPEED LIMIT 35" signs, with both signs facing in the westbound direction.

6-9026 **Sign Summary (FD04 Safety Project)** **Bracken County** **KY 8**

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	RT	24	206+00	3.902	EB	W2-2R	Side Road Right		30 x 30	Black	Yellow	XI	6.25				1	15.0			15.0	1
2	RT	24	213+70	4.047	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
3	LT	24	217+50	4.119	WB	W2-2L	Side Road Left		30 x 30	Black	Yellow	XI	6.25				1	15.0			15.0	1
4	LT	24	218+95	4.147	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
5	RT	24	226+40	4.288	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
6	LT	24	228+25	4.323	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
7	RT	24	244+00	4.621	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
8	RT	24	244+20	4.625	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
9	LT	24	258+05	4.887	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
10	RT	24	258+05	4.887	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
11	LT	24	269+40	5.102	EB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
12	LT	24	269+60	5.106	WB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
13	RT	24	272+50	5.161	EB	M2-1	Junction		21 x 15	Black	White	XI	2.19				1	13.0			13.0	1
						M1-5a	State Route Sign (3 or 4 digit)	1109	30 x 24	Black	White	XI	5.00									1
14	RT	24	278+40	5.273	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
15	RT	24	278+60	5.277	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
16	LT	24	278+80	5.280	WB	M3-4	West		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5	State Route Sign (1 or 2 digit)	8	24 x 24	Black	White	XI	4.00									1
17	RT	24	279+30	5.290	EB	M3-3	South		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5a	State Route Sign (3 or 4 digit)	1109	30 x 24	Black	White	XI	5.00									1
						M6-1R	Right Arrow		21 x 15	Black	White	XI	2.19									1
18	LT	24	281+00	5.322	WB	M3-3	South		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5a	State Route Sign (3 or 4 digit)	1109	30 x 24	Black	White	XI	5.00									1
						M6-1L	Left Arrow		21 x 15	Black	White	XI	2.19									1
19	RT	24	282+20	5.345	EB	M3-2	East		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5	State Route Sign (1 or 2 digit)	8	24 x 24	Black	White	XI	4.00									1
20	RT	24	286+75	5.431	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
21	LT	24	288+50	5.464	WB	M2-1	Junction		21 x 15	Black	White	XI	2.19				1	13.0			13.0	1
						M1-5a	State Route Sign (3 or 4 digit)	1109	30 x 24	Black	White	XI	5.00									1
22	LT	24	292+60	5.542	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
23	RT	24	316+80	6.000	EB	D10-2	Mile Marker (2 digit)	6	10 x 27	White	Green	XI	1.88				1	13.5			13.5	1
					WB	D10-2	Mile Marker (2 digit)	6	10 x 27	White	Green	XI	1.88									1
24	RT	24	319+00	6.042	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
25	LT	24	337+50	6.392	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
26	RT	24	337+50	6.392	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
27	RT	24	348+80	6.606	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
28	RT	24	349+00	6.610	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
29	LT	24	353+50	6.695	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
30	RT	24	353+50	6.695	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
31	LT	24	355+35	6.730	EB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
32	RT	24	355+35	6.730	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
33	LT	24	355+50	6.733	WB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
34	RT	24	355+50	6.733	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
35	RT	24	371+40	7.034	EB	W2-1	Cross Road		30 x 30	Black	Yellow	XI	6.25				1	15.0			15.0	1
36	RT	24	377+70	7.153	WB	W14-3	No Passing Zone	closest position available due to side road intersection	48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
37	RT	24	384+10	7.275	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
38	LT	24	384+15	7.276	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
39	RT	24	384+30	7.278	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
40	LT	24	384+80	7.288	WB	W2-1	Cross Road		30 x 30	Black	Yellow	XI	6.25				1	15.0			15.0	1
41	RT	24	384+90	7.290	EB	S3-1	School Bus Stop Ahead		36 x 36	Black	FL Yellow-Green	XI	9.00				1	15.5			15.5	1
42	RT	24	403+60	7.644	EB	M2-1	Junction		21 x 15	Black	White	XI	2.19				1	13.0			13.0	1
						M1-5a	State Route Sign (3 or 4 digit)	1159	30 x 24	Black	White	XI	5.00									1

6-9026 **Sign Summary (FD04 Safety Project)** **Bracken County** **KY 8**

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										
43	LT	24	405+50	7.680	WB	S3-1	School Bus Stop Ahead		36 x 36	Black	FL Yellow-Green	XI	9.00				1	15.5			15.5	1
44	LT	24	409+25	7.751	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
45	LT	24	410+20	7.769	WB	M3-4	West		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5	State Route Sign (1 or 2 digit)	8	24 x 24	Black	White	XI	4.00									1
46	RT	24	410+60	7.777	EB	M3-3	South		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5a	State Route Sign (3 or 4 digit)	1159	30 x 24	Black	White	XI	5.00									1
						M6-1R	Right Arrow		21 x 15	Black	White	XI	2.19									1
47	LT	24	411+55	7.795	NB KY 1159	M1-5	State Route Sign (1 or 2 digit)	8	24 x 24	Black	White	XI	4.00				1	13.0			13.0	1
						M6-4	Horizontal Double Arrow		21 x 15	Black	White	XI	2.19									1
48	RT	24	411+80	7.799	NB KY 1159	R1-1	Stop		36 x 36	White	Red	XI	9.00				1	14.0			14.0	1
49	LT	24	412+20	7.807	WB	M3-3	South		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5a	State Route Sign (3 or 4 digit)	1159	30 x 24	Black	White	XI	5.00									1
						M6-1L	Left Arrow		21 x 15	Black	White	XI	2.19									1
50	RT	24	412+80	7.818	EB	M3-2	East		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5	State Route Sign (1 or 2 digit)	8	24 x 24	Black	White	XI	4.00									1
51	RT	24	413+25	7.827	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
52	LT	24	417+30	7.903	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
53	LT	24	419+30	7.941	WB	M2-1	Junction		21 x 15	Black	White	XI	2.19				1	14.0			14.0	1
						M1-5a	State Route Sign (3 or 4 digit)	1159	30 x 24	Black	White	XI	5.00									1
54	LT	24	419+50	7.945	EB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
55	LT	24	419+70	7.949	WB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
56	LT	24	423+05	8.012	EB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
57	RT	24	423+20	8.015	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
58	LT	24	423+25	8.016	WB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
59	RT	24	423+40	8.019	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
60	RT	24	450+40	8.530	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
61	RT	24	450+60	8.534	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
62	RT	24	453+80	8.595	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
63	LT	24	457+75	8.670	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
64	RT	24	489+75	9.276	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
65	RT	24	489+95	9.279	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
66	RT	24	500+00	9.470	EB	S3-1	School Bus Stop Ahead		36 x 36	Black	FL Yellow-Green	XI	9.00				1	15.5			15.5	1
67	RT	24	504+20	9.549	EB	W2-2R	Side Road Right		30 x 30	Black	Yellow	XI	6.25				1	15.0			15.0	1
68	RT	24	508+60	9.633	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
69	LT	24	516+20	9.777	WB	W2-2L	Side Road Left		30 x 30	Black	Yellow	XI	6.25				1	15.0			15.0	1
70	RT	24	534+60	10.125	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
71	RT	24	534+80	10.129	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
72	RT	24	537+40	10.178	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
73	RT	24	537+60	10.182	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
74	RT	24	539+80	10.223	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
75	RT	24	540+40	10.235	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
76	RT	24	540+60	10.239	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
77	RT	24	543+75	10.298	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
78	RT	24	543+95	10.302	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
79	RT	24	546+40	10.348	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
80	RT	24	546+60	10.352	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
81	LT	24	552+15	10.457	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
82	RT	24	552+60	10.466	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
83	RT	24	552+80	10.470	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
84	RT	24	557+85	10.565	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
85	RT	24	558+05	10.569	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
86	RT	24	561+85	10.641	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
87	RT	24	562+05	10.645	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1

6-9026 **Sign Summary (FD04 Safety Project)** **Bracken County** **KY 8**

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										
88	RT	24	565+40	10.708	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
89	RT	24	565+60	10.712	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
90	LT	24	568+40	10.765	EB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
91	LT	24	568+60	10.769	WB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
92	RT	24	570+00	10.795	EB	W2-2R	Side Road Right		30 x 30	Black	Yellow	XI	6.25				1	15.0			15.0	1
93	RT	24	571+75	10.829	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
94	LT	24	576+15	10.912	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
95	LT	24	582+00	11.023	WB	W2-2L	Side Road Left		30 x 30	Black	Yellow	XI	6.25				1	15.0			15.0	1
96	RT	24	589+95	11.173	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
97	RT	24	610+85	11.569	EB	OM3-R	Object Marker Type 3 Right		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
98	RT	24	611+05	11.573	WB	OM3-L	Object Marker Type 3 Left		12 x 36	Black	Yellow	XI	3.00				1	14.0			14.0	1
99	LT	24	621+20	11.765	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
100	RT	24	637+60	12.076	EB	W2-2R	Side Road Right		30 x 30	Black	Yellow	XI	6.25				1	15.0			15.0	1
101	RT	24	638+25	12.088	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
102	LT	24	646+75	12.249	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
103	RT	24	648+95	12.291	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
104	LT	24	649+70	12.305	WB	W2-2L	Side Road Left		30 x 30	Black	Yellow	XI	6.25				1	15.0			15.0	1
105	RT	24	660+15	12.503	WB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
106	RT	24	665+20	12.598	EB	W2-2R	Side Road Right		30 x 30	Black	Yellow	XI	6.25				1	15.0			15.0	1
107	LT	24	666+30	12.619	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56			1	15.0			15.0	1
108	LT	24	675+25	12.789	EB	W3-5	Speed Limit XX Ahead	35	36 x 36	White & Black	Yellow	XI	9.00				1	15.5			15.5	1
109	RT	24	675+25	12.789	EB	W3-5	Speed Limit XX Ahead	35	36 x 36	White & Black	Yellow	XI	9.00				1	15.5			15.5	1
110	LT	24	676+95	12.821	WB	W2-2L	Side Road Left		30 x 30	Black	Yellow	XI	6.25				1	15.0			15.0	1
111	RT	24	681+30	12.903	EB	R2-1	Speed Limit XX	35	24 x 30	Black	White	XI	5.00				1	13.5			13.5	1
112	LT	24	681+30	12.903	EB	R2-1	Speed Limit XX	35	24 x 30	Black	White	XI	5.00				1	13.5			13.5	1
113	LT	24	700+50	13.267	WB	W11-2	Pedestrian		30 x 30	Black	Yellow	XI	6.25				1	15.0			15.0	1
						W16-7PL	Downward Diagonal Arrow (Left)	diagonal arrow down/left	24 x 12	Black	Yellow	XI	2.00									1
114	RT	24	721+50	13.665	EB	M2-1	Junction		21 x 15	Black	White	XI	2.19				1	13.0			13.0	1
						M1-5	State Route Sign (1 or 2 digit)	19	24 x 24	Black	White	XI	4.00									1
115	LT	24	724+90	13.729	WB	R2-1	Speed Limit XX	35	24 x 30	Black	White	XI	5.00				1	13.5			13.5	1
116	LT	24	727+65	13.781	WB	M3-4	West		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5	State Route Sign (1 or 2 digit)	8	24 x 24	Black	White	XI	4.00									1
117	RT	24	728+95	13.806	EB	M3-3	South		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5	State Route Sign (1 or 2 digit)	19	24 x 24	Black	White	XI	4.00									1
						M6-1R	Right Arrow		21 x 15	Black	White	XI	2.19									1
118	RT	24	730+05	13.827	NB KY 19	R1-1	Stop	inside island at intersection	36 x 36	White	Red	XI	9.00				1	14.0			14.0	1
119	LT	24	730+60	13.837	WB	M3-3	South		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5	State Route Sign (1 or 2 digit)	19	24 x 24	Black	White	XI	4.00									1
						M6-1L	Left Arrow		21 x 15	Black	White	XI	2.19									1
120	RT	24	731+50	13.854	EB	M2-1	Junction		21 x 15	Black	White	XI	2.19				1	13.0			13.0	1
						M1-5a	State Route Sign (3 or 4 digit)	435	30 x 24	Black	White	XI	5.00									1
121	LT	24	734+60	13.913	WB	M2-1	Junction		21 x 15	Black	White	XI	2.19				1	13.0			13.0	1
						M1-5	State Route Sign (1 or 2 digit)	19	24 x 24	Black	White	XI	4.00									1
122	RT	24	735+20	13.924	EB	M3-3	South		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5a	State Route Sign (3 or 4 digit)	435	30 x 24	Black	White	XI	5.00									1
						M6-1R	Right Arrow		21 x 15	Black	White	XI	2.19									1
123	LT	24	736+10	13.941	WB	M3-3	South		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5a	State Route Sign (3 or 4 digit)	435	30 x 24	Black	White	XI	5.00									1
						M6-1L	Left Arrow		21 x 15	Black	White	XI	2.19									1

6-9026 **Sign Summary (FD04 Safety Project)** **Bracken County** **KY 8**

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										
124	RT	24	738+50	13.987	EB	M3-2	East		24 x 12	Black	White	XI	2.00				1	13.0			13.0	1
						M1-5	State Route Sign (1 or 2 digit)	8	24 x 24	Black	White	XI	4.00									1

Summary of Items		
SBM Alum Sheet Signs 0.080 INCH	465.00	SQ FT
SBM Alum Sheet Signs 0.125 INCH	177.92	SQ FT
Barcode Sign Inventory	156	EACH

Summary of Items		
Steel Post - Type 1	1,766	LF
GMSS Type D	0	EACH
GMSS Type D (Surface Mount)	0	EACH
Class A Concrete for Signs	0	CU YD

6-9026 - BRACKEN CO. - KY 8
PAVEMENT STRIPING AND MARKINGS SUMMARY (FD05 FUNDED)

BEGIN		END		PAINT STRIPING				THERMO	THERMO	THERMO	THERMO	NOTES
				WHITE		YELLOW		X-WALK	STOP BAR	CURVE	CROSS-HATCH	
MILEPOINT	STATION	MILEPOINT	STATION	12 INCH	6 INCH	6 INCH	CONFIGURATION	6 INCH	24 INCH	ARROW	X=12", Y=10'	
				LF	LF	LF		LF	LF	EA	SQFT	
3.602	190+20	3.849	203+25		2,610	2,610	DOUBLE SOLID					
3.849	203+25	4.047	213+70		2,090	1,306.25	SOLID-DASH					
4.047	213+70	4.147	218+95		1,050	131.25	DASH					
4.147	218+95	4.188	221+15		440	440	DOUBLE SOLID					
4.188	221+15	4.252	224+50		670	670	DOUBLE SOLID					
4.252	224+50	4.288	226+40		380	380	DOUBLE SOLID					
4.288	226+40	4.323	228+25		370	46.25	DASH					
4.323	228+25	4.473	236+15		1,580	987.50	DASH-SOLID					
4.473	236+15	4.759	251+25		3,020	3,020	DOUBLE SOLID					
4.759	251+25	4.887	258+05		1,360	850	SOLID-DASH					
4.887	258+05	5.063	267+30		1,850	1,156.25	DASH-SOLID					
5.063	267+30	5.316	280+70		2,680	2,680	DOUBLE SOLID					
5.323	281+05	5.431	286+75		1,140	712.50	SOLID-DASH					
5.431	286+75	5.542	292+60		1,170	146.25	DASH					
5.542	292+60	5.690	300+45		1,570	981.25	DASH-SOLID					
5.690	300+45	5.880	310+45		2,000	2,000	DOUBLE SOLID					
5.880	310+45	6.042	319+00		1,710	1,068.75	SOLID-DASH					
6.042	319+00	6.298	332+55		2,710	338.75	DASH					
6.298	332+55	6.392	337+50		990	618.75	SOLID-DASH					
6.392	337+50	6.536	345+10		1,520	950	DASH-SOLID					
6.536	345+10	6.548	345+75		130	16.25	DASH					
6.548	345+75	6.695	353+50		1,550	968.75	SOLID-DASH					
6.695	353+50	6.859	362+15		1,730	1,081.25	DASH-SOLID					
6.866	362+50	7.041	371+75		1,850	1,850	DOUBLE SOLID					
7.041	371+75	7.110	375+40		730	730	DOUBLE SOLID					
7.110	375+40	7.160	378+05		530	530	DOUBLE SOLID					
7.167	378+40	7.276	384+15		1,150	143.75	DASH					
7.276	384+15	7.429	392+25		1,620	1,012.50	DASH-SOLID					
7.429	392+25	7.584	400+45		1,640	1,640	DOUBLE SOLID					
7.584	400+45	7.751	409+25		1,760	1,100	SOLID-DASH					
7.751	409+25	7.784	411+00		350	350	DOUBLE SOLID					
7.798	411+75	7.827	413+25		300	300	DOUBLE SOLID					
7.831	413+50	7.903	417+30		760	95	DASH					
7.903	417+30	8.074	426+30		1,800	1,125	DASH-SOLID					
8.074	426+30	8.451	446+20		3,980	3,980	DOUBLE SOLID					
8.451	446+20	8.595	453+80		1,520	950	SOLID-DASH					
8.595	453+80	8.670	457+75		790	98.75	DASH					
8.670	457+75	8.818	465+60		1,570	981.25	DASH-SOLID					
8.818	465+60	9.633	508+60		8,600	8,600	DOUBLE SOLID					
9.633	508+60	9.662	510+15		310	193.75	DASH-SOLID					
9.667	510+40	9.700	512+15		350	218.75	DASH-SOLID					
9.700	512+15	10.091	532+80		4,130	4,130	DOUBLE SOLID					
10.091	532+80	10.223	539+80		1,400	875	SOLID-DASH					
10.223	539+80	10.457	552+15		2,470	308.75	DASH					
10.457	552+15	10.600	559+70		1,510	943.75	DASH-SOLID					
10.600	559+70	10.653	562+50		560	560	DOUBLE SOLID					

6-9026 - BRACKEN CO. - KY 8
PAVEMENT STRIPING AND MARKINGS SUMMARY (FD05 FUNDED)

BEGIN		END		PAINT STRIPING				THERMO	THERMO	THERMO	THERMO	NOTES
				WHITE		YELLOW		X-WALK	STOP BAR	CURVE	CROSS-HATCH	
MILEPOINT	STATION	MILEPOINT	STATION	12 INCH	6 INCH	6 INCH	CONFIGURATION	6 INCH	24 INCH	ARROW	X=12", Y=10'	
				LF	LF	LF		LF	LF	EA	SQFT	
10.653	562+50	10.829	571+75		1,850	1,156.25	SOLID-DASH					
10.829	571+75	10.912	576+15		880	110	DASH					
10.912	576+15	11.031	582+45		1,260	787.50	DASH-SOLID					
11.031	582+45	11.045	583+15		140	17.50	DASH					
11.045	583+15	11.173	589+95		1,360	850	SOLID-DASH					
11.173	589+95	11.764	621+15		6,240	780	DASH					
11.764	621+15	11.938	630+30		1,830	1,143.75	DASH-SOLID					
11.938	630+30	12.088	638+25		1,590	1,590	DOUBLE SOLID					
12.088	638+25	12.121	640+00		350	218.75	DASH-SOLID					
12.121	640+00	12.146	641+30		260	260	DOUBLE SOLID					
12.146	641+30	12.191	643+70		480	300	SOLID-DASH					
12.202	644+25	12.249	646+75		500	312.50	SOLID-DASH					
12.249	646+75	12.291	648+95		440	440	DOUBLE SOLID					
12.291	648+95	12.364	652+80		770	481.25	DASH-SOLID					
12.364	652+80	12.397	654+55		350	43.75	DASH					
12.397	654+55	12.503	660+15		1,120	700	SOLID-DASH					
12.503	660+15	12.619	666+30		1,230	153.75	DASH					
12.619	666+30	12.711	671+15		970	606.25	DASH-SOLID					
12.721	671+65	12.753	673+35		340	212.50	DASH-SOLID					
12.753	673+35	13.258	700+00		5,330	5,330	DOUBLE SOLID					
13.264	700+36							36				
13.266	700+45							36				
13.266	700+45	13.441	709+70		1,850	1,850	DOUBLE SOLID					
13.448	710+05	13.808	729+05		3,895	4,450	DOUBLE SOLID					STRIPING QUANTITIES INCLUDE BOTH EDGES OF MEDIAN AND TURN LANE LINE
13.793	728+25									1		
13.805	728+90									1		
MINERVA RD.						70	DOUBLE SOLID		38			
KY 19				150	10	80	DOUBLE SOLID		15		113	12 INCH WHITE STRIPING FOR OUTLINE OF RIGHT-TURN CHANNELIZING ISLAND
13.829	730+15	13.928	735+40		1,215	1,770	DOUBLE SOLID					STRIPING QUANTITIES INCLUDE BOTH EDGES OF MEDIAN AND TURN LANE LINE
13.833	730+40									1		
13.850	731+30									1		
KY 435						100	DOUBLE SOLID		20			
13.940	736+05	13.949	736+50		90	90	DOUBLE SOLID					
13.949	736+50	13.978	738+05		310	310	DOUBLE SOLID					
			TOTALS	150 LF	108,660 LF	78,090 LF		72 LF	73 LF	4 EA	113 SQFT	

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 01
BEGIN TO STA. 201+00

PAVEMENT REPAIR (LT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
208+35	208+55	1.0	1.5 TONS	2 TONS

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
208+35	208+55	1.0	1.5 TONS	2 TONS

LEGEND

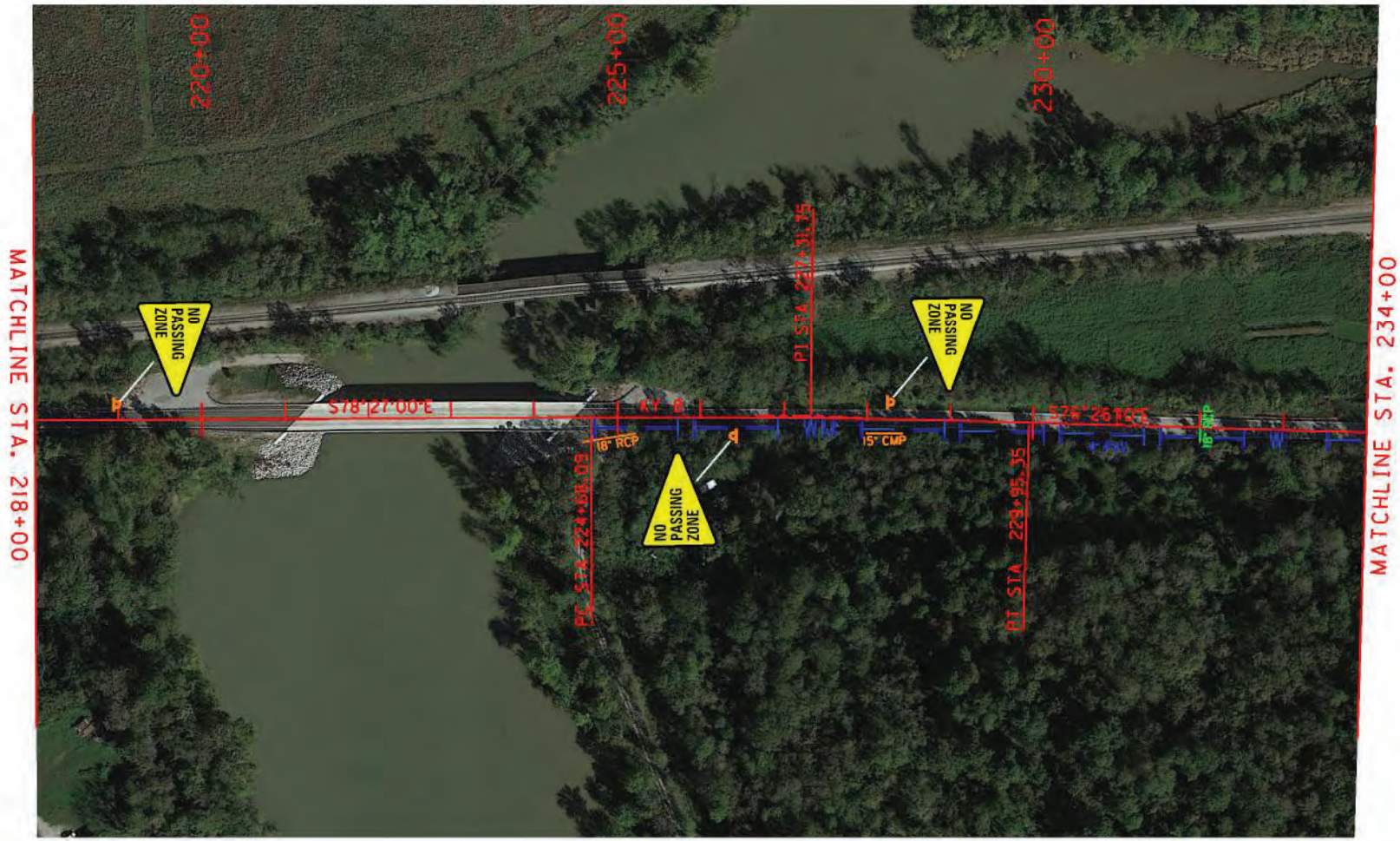
- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 02
STA. 201+00 TO STA. 218+00

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



LEGEND

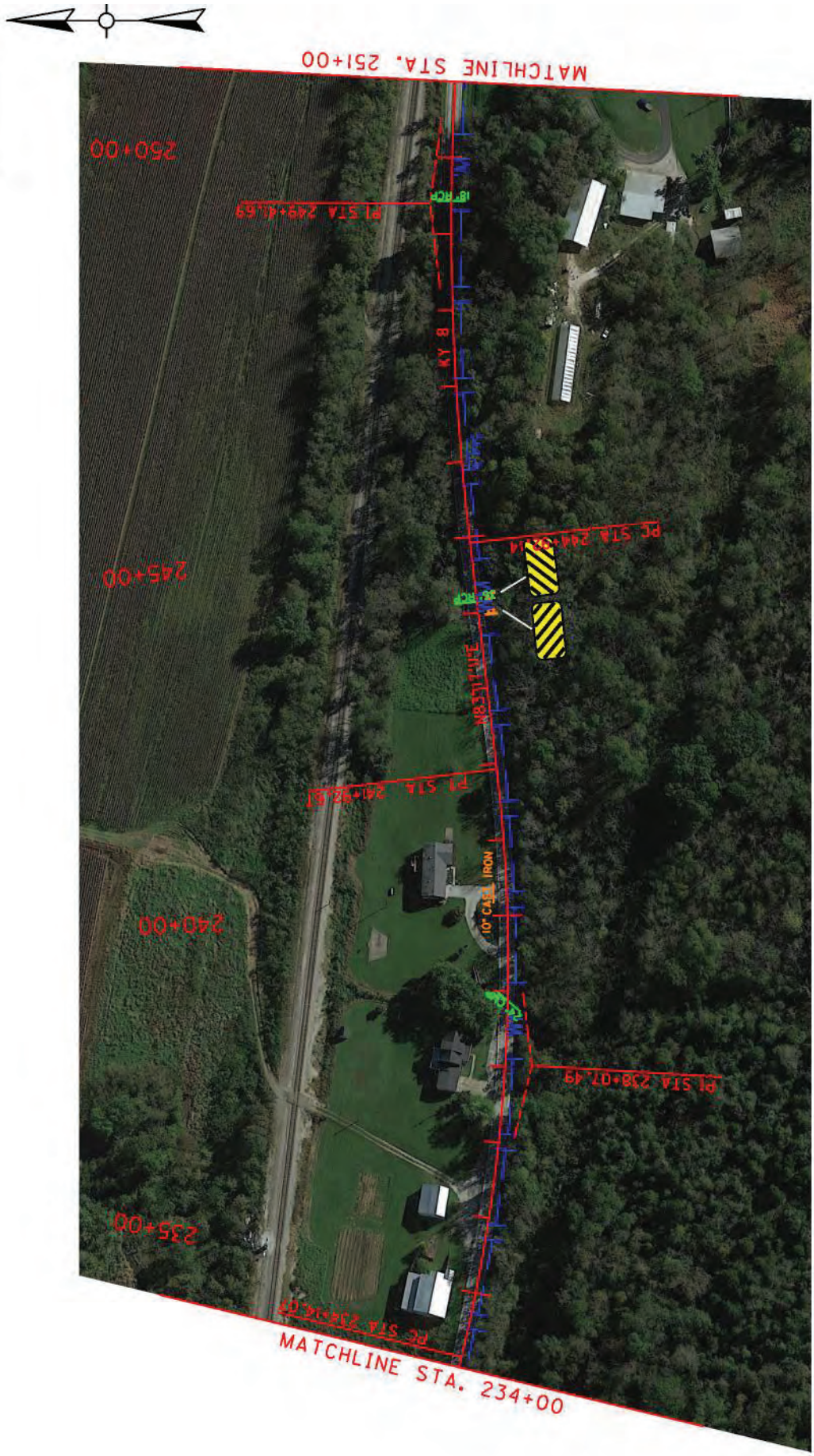
- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 03
STA. 218+00 TO STA. 234+00

ITEM NO.	6-9026.00
COUNTY OF	BRACKEN



CAUTION: OVERHEAD LINES

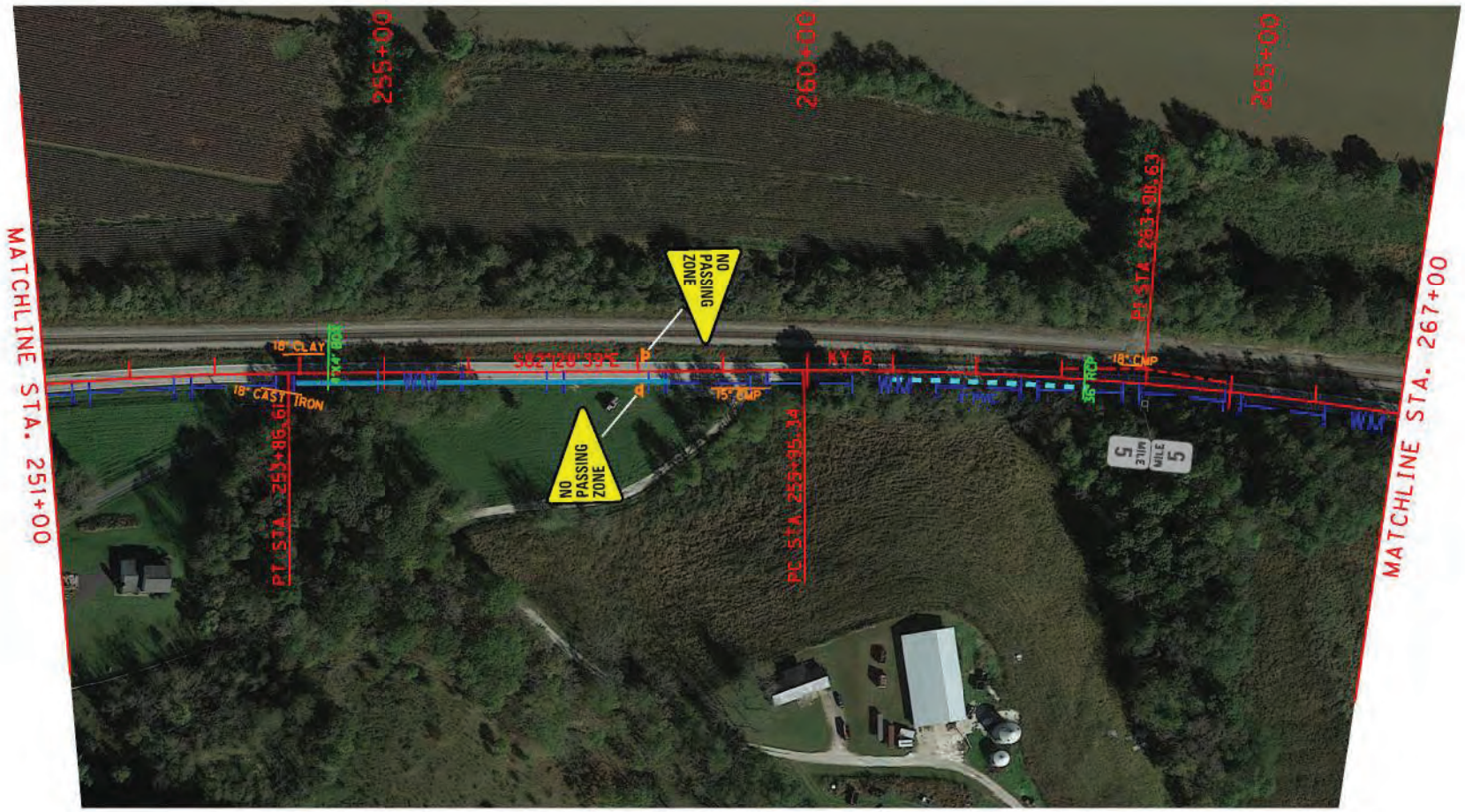
SCALE: 1"=200'

KY 8
PLAN SHEET - 04
STA. 234+00 TO STA. 251+00

LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

ROADSIDE REGRADING (RT.)
STA. 253+95 TO STA. 258+40

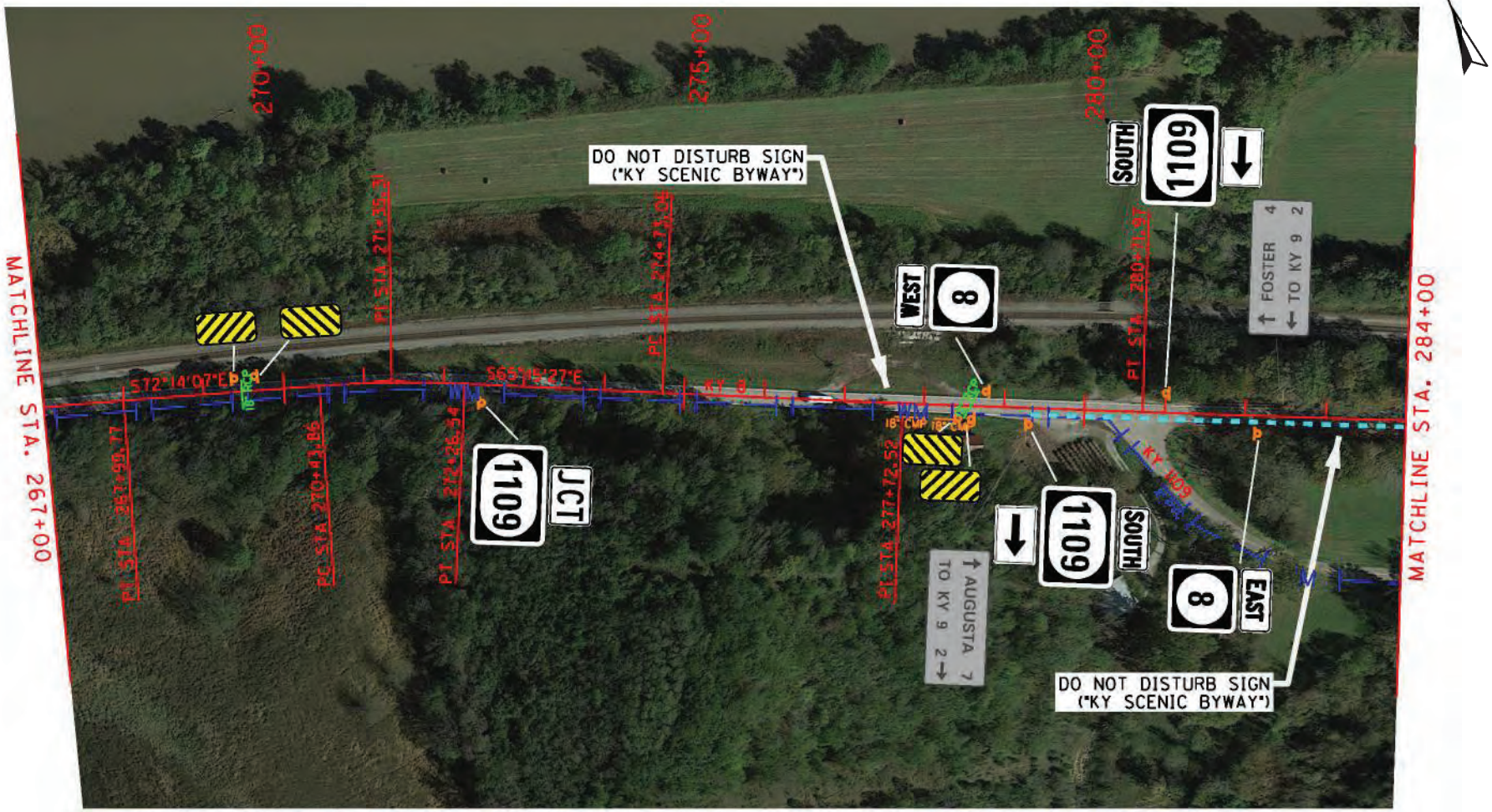
PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
261+00	263+30	1.0	17 TONS	19 TONS

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 05
STA. 251+00 TO STA. 267+00

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
279+30	284+00	1.0	35 TONS	39 TONS

LEGEND

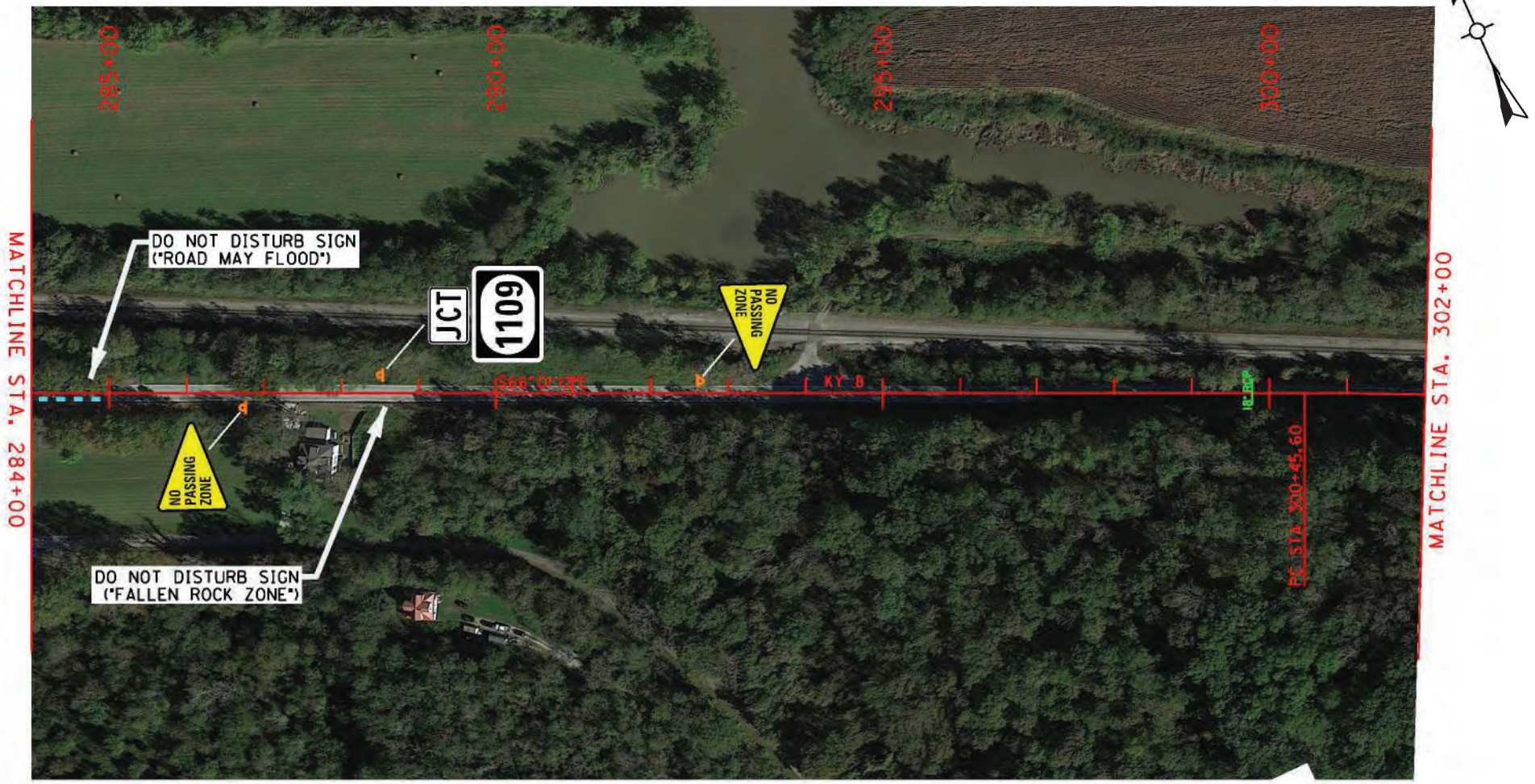
- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 06
STA. 267+00 TO STA. 284+00

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE. MILL. & TEXT.	LEVELING & WEDGING PG64-22
284+00	285+00	1.0	8 TONS	9 TONS

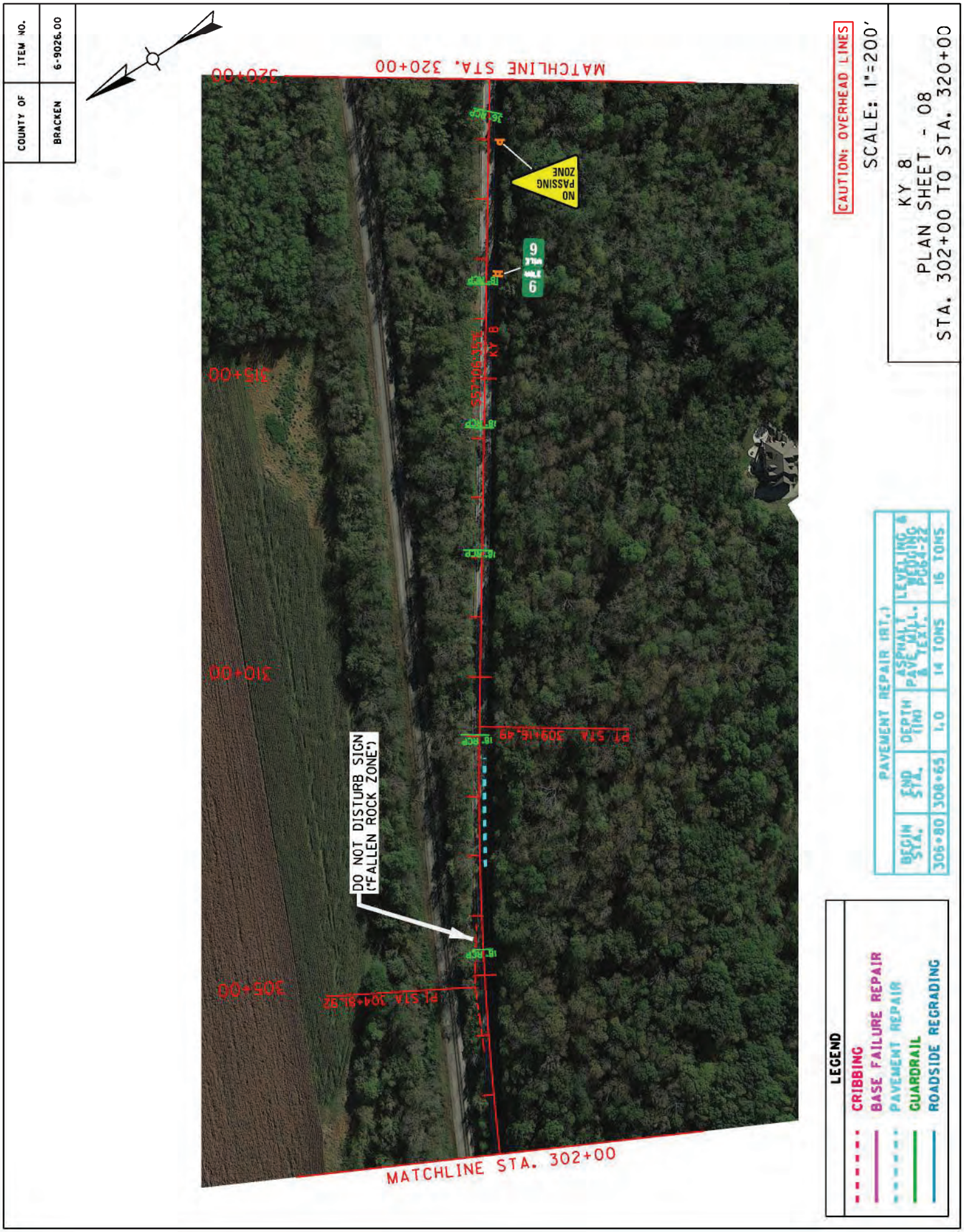
LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 07
STA. 284+00 TO STA. 302+00


ITEM NO. 6-9026.00
COUNTY OF BRACKEN
MATCHLINE STA. 320+00
320+00
315+00
310+00
305+00
MATCHLINE STA. 302+00
NO PASSING ZONE
KY 8
PT STA 309+16.49
PT STA 304+81.82
DO NOT DISTURB SIGN ("FALLEN ROCK ZONE")
CAUTION: OVERHEAD LINES
SCALE: 1"=200'
KY 8
PLAN SHEET - 08
STA. 302+00 TO STA. 320+00
PAVEMENT REPAIR (AT.)
BEGIN STA.
END STA.
DEPTH (IN)
ASPHALT PAVE MILL. & TEXT.
LEVELING & PEDDING PCC#1-22
306+80
308+65
1.0
14 TONS
16 TONS
LEGEND
CRIBBING
BASE FAILURE REPAIR
PAVEMENT REPAIR
GUARDRAIL
ROADSIDE REGRADING

ITEM NO.	6-9026.00
COUNTY OF	BRACKEN

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 09
STA. 320+00 TO STA. 338+00

LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

ITEM NO.	6-9026.00
COUNTY OF	BRACKEN

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

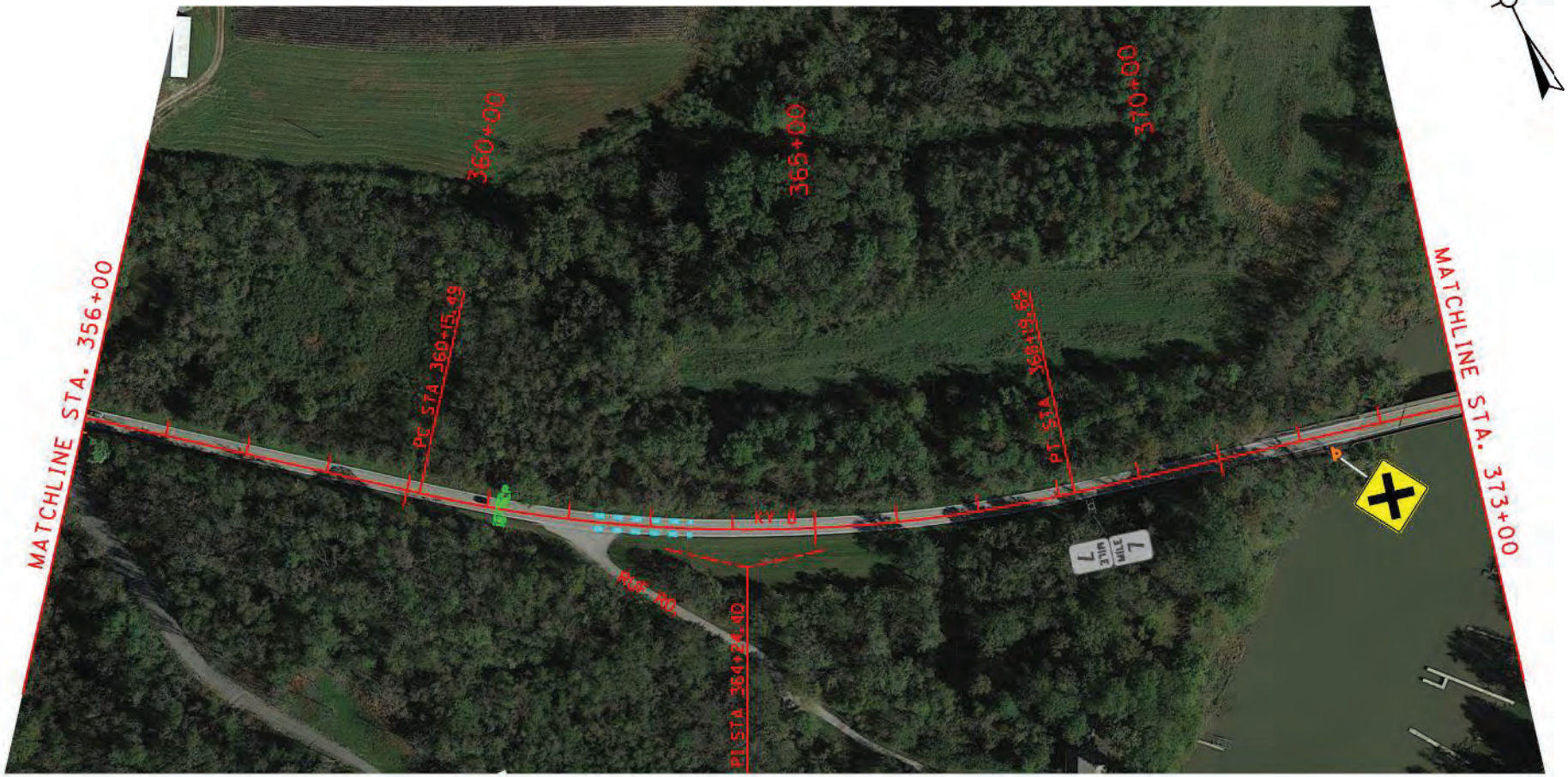
KY 8
PLAN SHEET - 10
STA. 338+00 TO STA. 356+00

LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

PAVEMENT REPAIR (LT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
362+30	363+50	1.0	9 TONS	10 TONS

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
362+30	363+50	1.0	9 TONS	10 TONS

LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

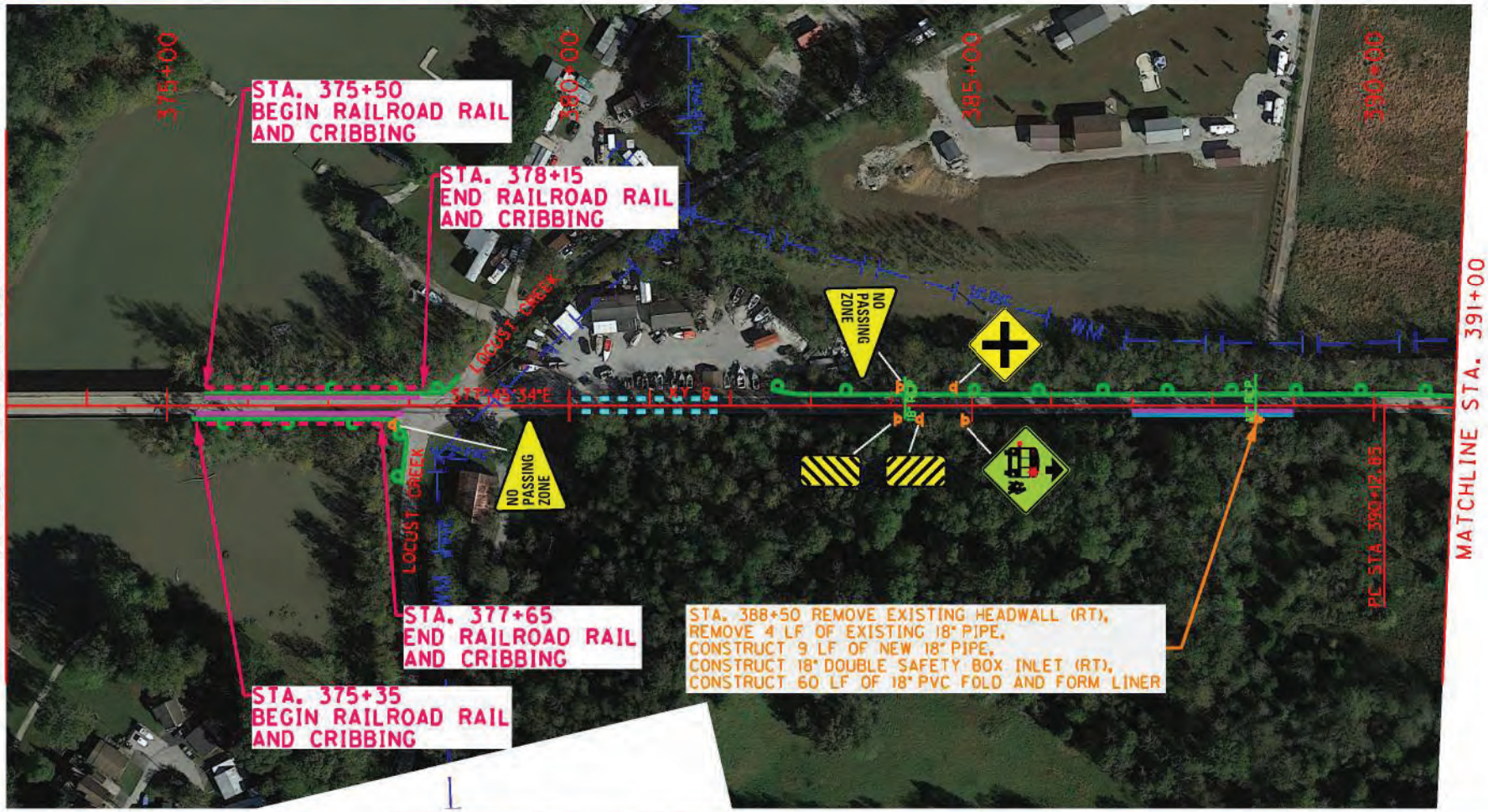
KY 8
PLAN SHEET - 11
STA. 356+00 TO STA. 373+00

PAVEMENT REPAIR (LT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
380+15	381+85	1.0	12.5 TONS	14 TONS

BASE FAILURE REPAIR (LT.)				
BEGIN STA.	END STA.	CRUSHED AGG. SIZE NO 23	CL2 ASPH BASE 1.50D PG64-22	LEVELING & WEDGING PG64-22
375+45	378+10	269 TONS	193 TONS	11 TONS

STEEL W-BEAM GUARDRAIL (LT.)							REMOVAL LENGTH
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	
375+45	CONN TY D		378+65	NO. 1	--	303.75 LF	312.5 LF
382+55	--	TY 4A	391+00	--	--	802.45 LF	845 LF

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



ROADSIDE REGRADING (RT.)
STA. 387+00 TO STA. 389+00

BASE FAILURE REPAIR (RT.)				
BEGIN STA.	END STA.	CRUSHED AGG. SIZE NO 23	CL2 ASPH BASE 1.50D PG64-22	LEVELING & WEDGING PG64-22
375+35	377+90	259 TONS	186 TONS	11 TONS
387+00	389+00	203 TONS	146 TONS	9 TONS

PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
380+15	381+85	1.0	12.5 TONS	14 TONS

STEEL W-BEAM GUARDRAIL (RT.)							REMOVAL LENGTH
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	
375+30	CONN TY D		378+00	--	TY 7	277.5 LF	250 LF

LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 12
STA. 373+00 TO STA. 391+00

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

PAVEMENT REPAIR (LT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
395+30	395+50	1.0	1.5 TONS	2 TONS

STEEL W-BEAM GUARDRAIL (LT.)							REMOVAL LENGTH
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	
391+00	--	--	395+15	NO. 1	--	415 LF	417.5 LF
395+30	NO. 1	--	409+00	--	--	1370 LF	1322.5 LF

BASE FAILURE REPAIR (LT.)				
BEGIN STA.	END STA.	CRUSHED AGG. SIZE NO 23	CL2 ASPH. BASE 1.50D PG64-22	LEVELING & WEDGING PG64-22
391+00	394+00	304 TONS	218 TONS	13 TONS
405+00	409+00	405 TONS	291 TONS	17 TONS

CONTRACTOR TO RE-ESTABLISH LONG SIDE WATER SERVICES TO PROPERTY. CONTRACTOR TO CONTACT PROPERTY OWNER AT LEAST ONE MONTH PRIOR TO WORK BEGINNING TO COORDINATE WATER SERVICES.

PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
395+30	395+50	1.0	1.5 TONS	2 TONS

LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

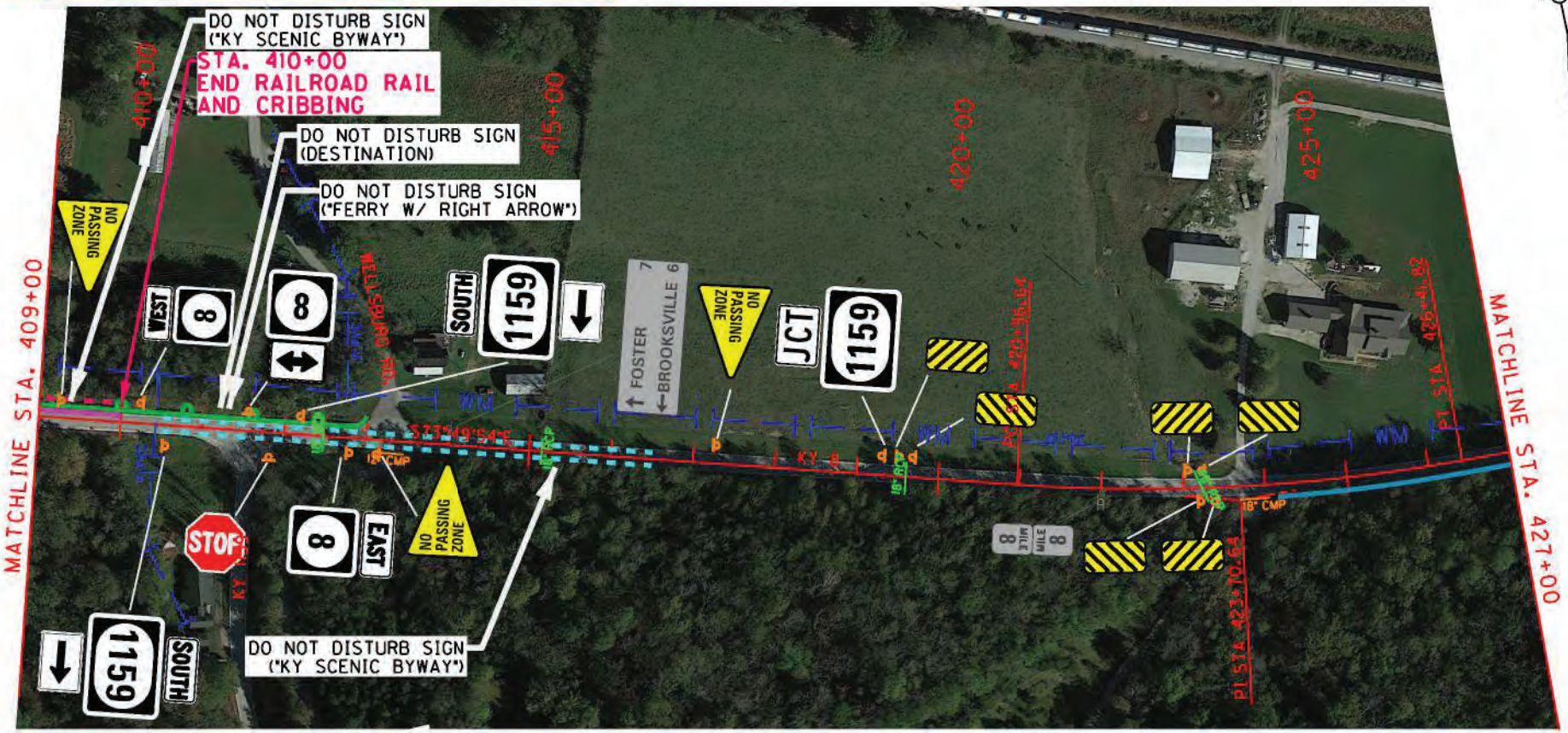
KY 8
PLAN SHEET - 13
STA. 391+00 TO STA. 409+00

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

PAVEMENT REPAIR (LT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE. MILL. & TEXT.	LEVELING & WEDGING PG64-22
410+50	416+50	1.0	44 TONS	48.5 TONS

STEEL W-BEAM GUARDRAIL (LT.)							REMOVAL LENGTH
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	
409+00	--	--	413+00	NO. 1	--	420 LF	390 LF

BASE FAILURE REPAIR (LT.)				
BEGIN STA.	END STA.	CRUSHED AGG. SIZE NO 23	CL2 ASPH BASE 1.50D PG64-22	LEVELING & WEDGING PG64-22
409+00	410+00	101 TONS	72 TONS	4 TONS



CONTRACTOR IS TO WORK WITH BRACKEN COUNTY WATER TO GET THE MAIN MARKED IN THE FIELD TO ENSURE PROPOSED CRIBBING WORK DOES NOT IMPACT THE EXISTING MAIN NEAR STA. 410+00.

PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE. MILL. & TEXT.	LEVELING & WEDGING PG64-22
410+50	416+50	1.0	44 TONS	48.5 TONS

ROADSIDE REGRADING (RT.)
STA. 424+15 TO STA. 427+00

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

KY 8
PLAN SHEET - 14
STA. 409+00 TO STA. 427+00

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

STEEL W-BEAM GUARDRAIL (LT.)							REMOVAL LENGTH
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	
441+55	--	TY 4A	445+00	--	--	295 LF	290 LF

BASE FAILURE REPAIR (LT.)				
BEGIN STA.	END STA.	CRUSHED AGG. SIZE NO 23	CL2 ASPH BASE 1.50D PG64-22	LEVELING & WEDGING PG64-22
442+50	444+50	203 TONS	146 TONS	9 TONS

LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

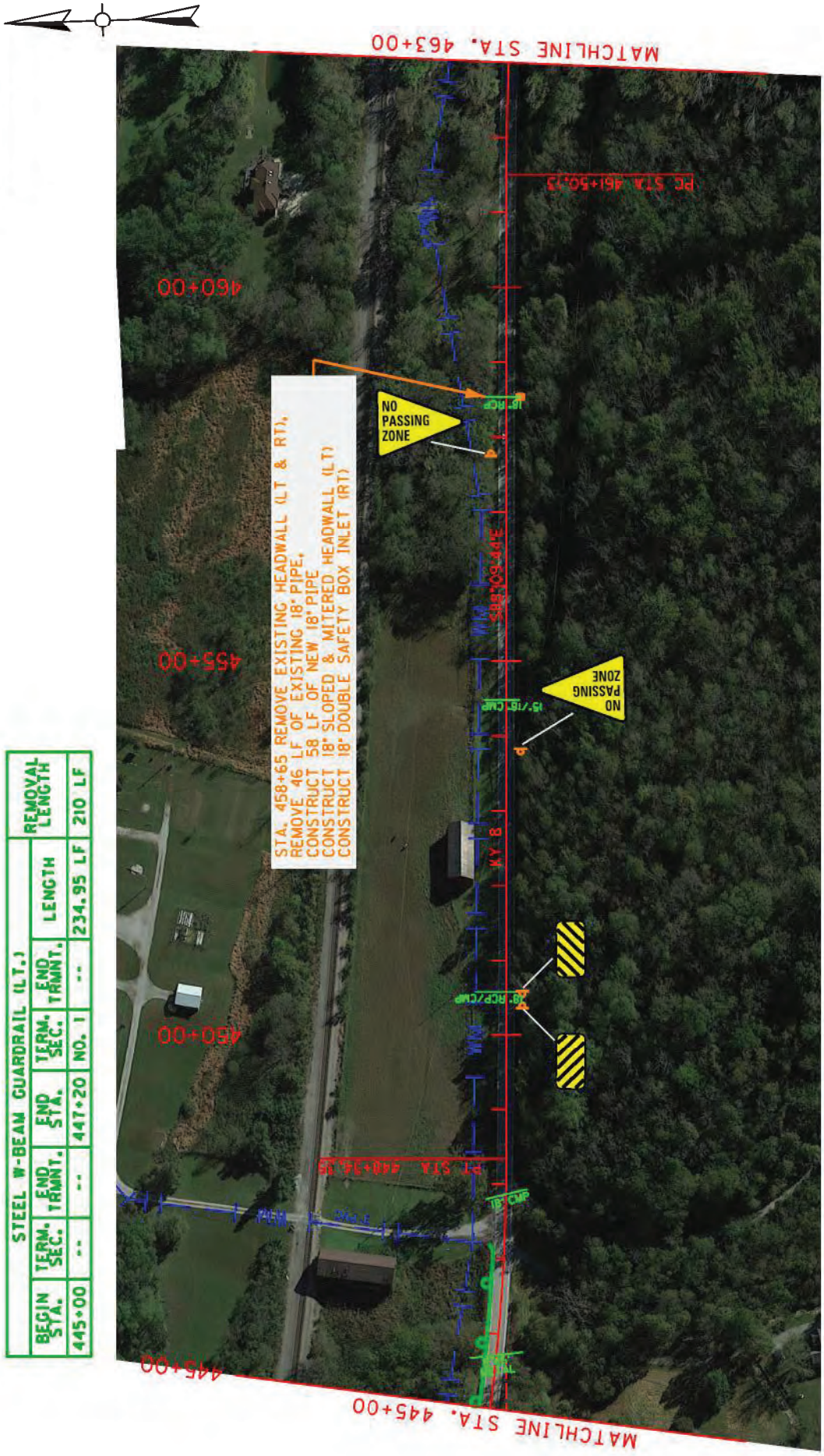
ROADSIDE REGRADING (RT.)
STA. 427+00 TO STA. 428+50

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 15
STA. 427+00 TO STA. 445+00

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



STEEL W-BEAM GUARDRAIL (LT.)							
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	REMOVAL LENGTH
445+00	--	--	447+20	NO. 1	--	234.95 LF	210 LF

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 16
STA. 445+00 TO STA. 463+00

LEGEND

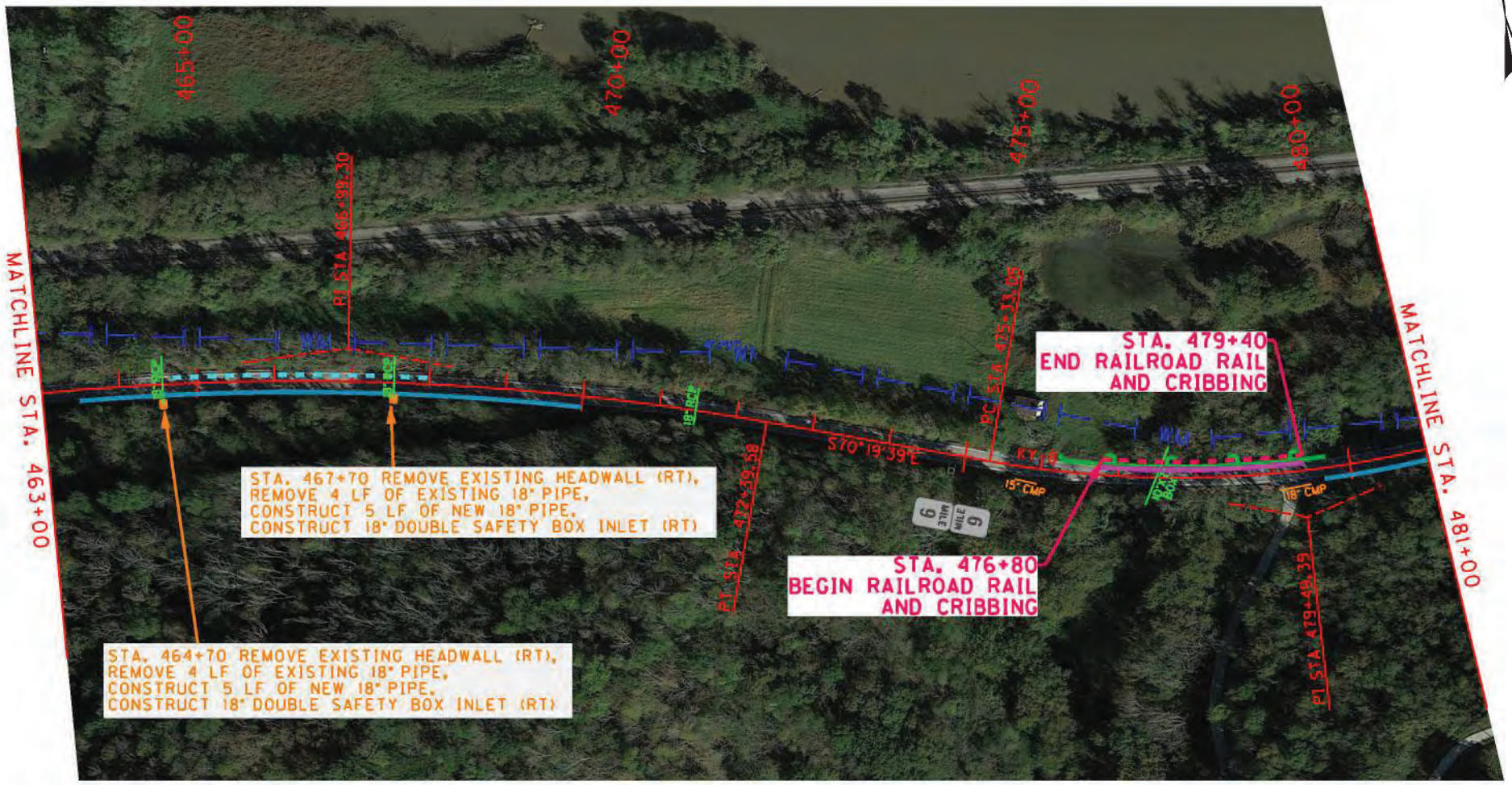
- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

PAVEMENT REPAIR (LT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
464+70	468+00	1.0	25 TONS	28 TONS

STEEL W-BEAM GUARDRAIL (LT.)							REMOVAL LENGTH
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	
476+25	NO. 1	--	479+75	--	TY 1	303.75 LF	325 LF

BASE FAILURE REPAIR (LT.)				
BEGIN STA.	END STA.	CRUSHED AGG. SIZE NO 23	CL2 ASPH BASE 1.50D PG64-22	LEVELING & WEDGING PG64-22
476+80	479+40	264 TONS	189 TONS	11 TONS



ROADSIDE REGRADING (RT.)
STA. 463+50 TO STA. 470+00
STA. 479+65 TO STA. 481+00

LEGEND

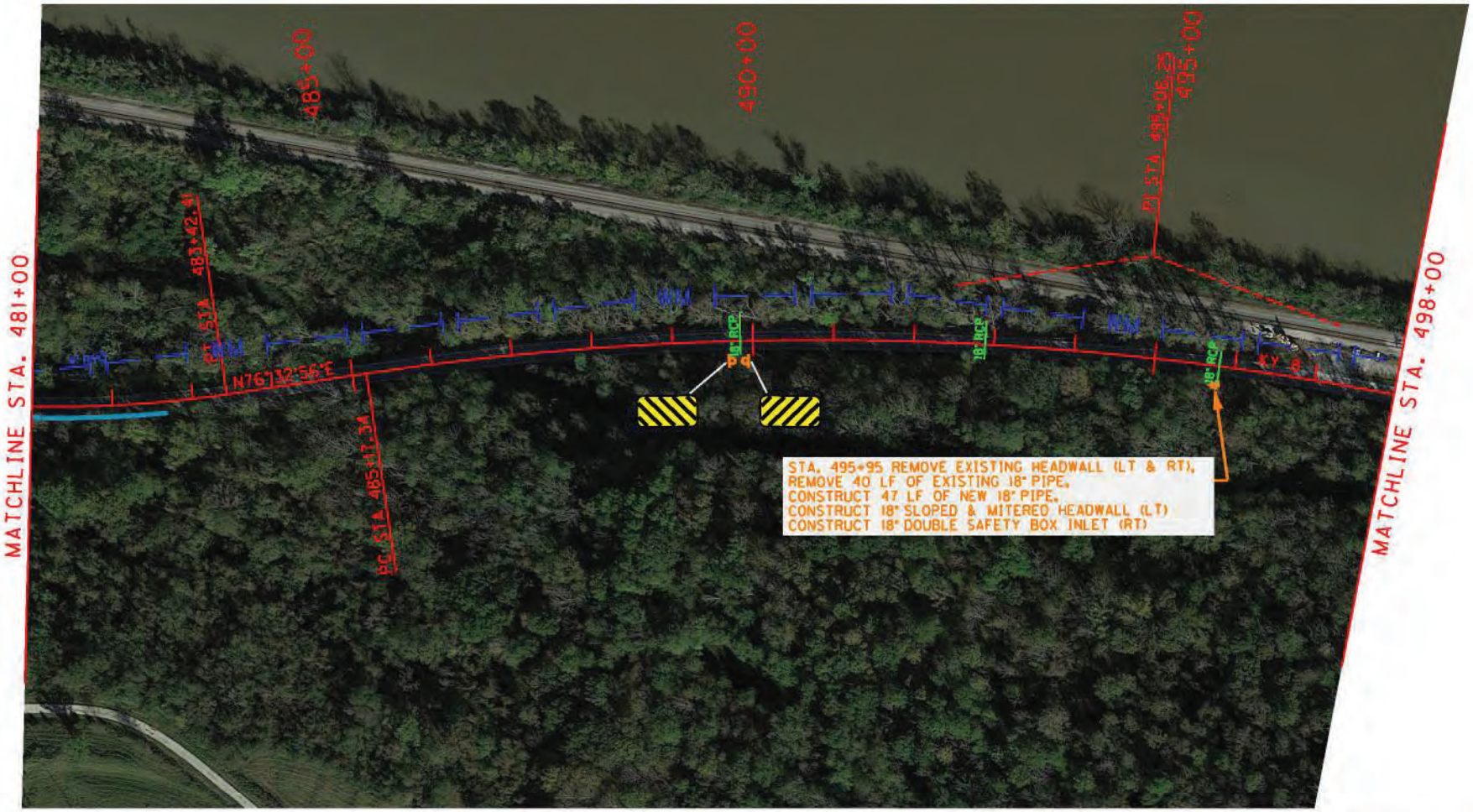
- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 17
STA. 463+00 TO STA. 481+00

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

ROADSIDE REGRADING (RT.)
STA. 481+00 TO STA. 482+70

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

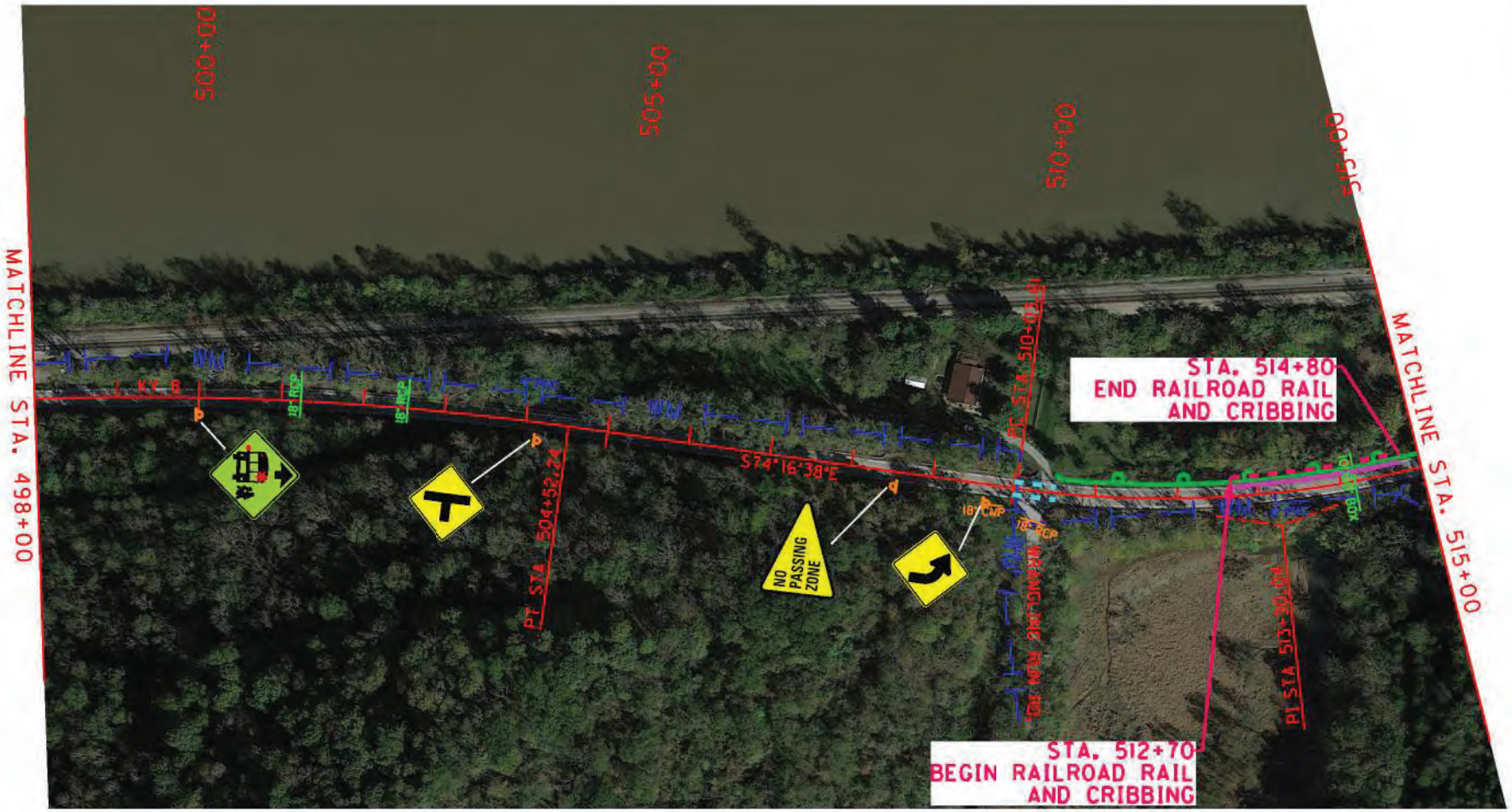
KY 8
PLAN SHEET - 18
STA. 481+00 TO STA. 498+00

BASE FAILURE REPAIR (LT.)				
BEGIN STA.	END STA.	CRUSHED AGG. SIZE NO 23	CL2 ASPH BASE 1.50D PG64-22	LEVELING & WEDGING PG64-22
512+65	514+75	213 TONS	153 TONS	9 TONS

PAVEMENT REPAIR (LT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
510+00	510+50	1.0	4 TONS	4.5 TONS

STEEL W-BEAM GUARDRAIL (LT.)							REMOVAL LENGTH
BEGIN STA.	TERM. SEC.	END TRMNT.	END STA.	TERM. SEC.	END TRMNT.	LENGTH	
510+50	NO. 1	--	515+00	--	--	456.25 LF	450 LF

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
510+00	510+50	1.0	4 TONS	4.5 TONS

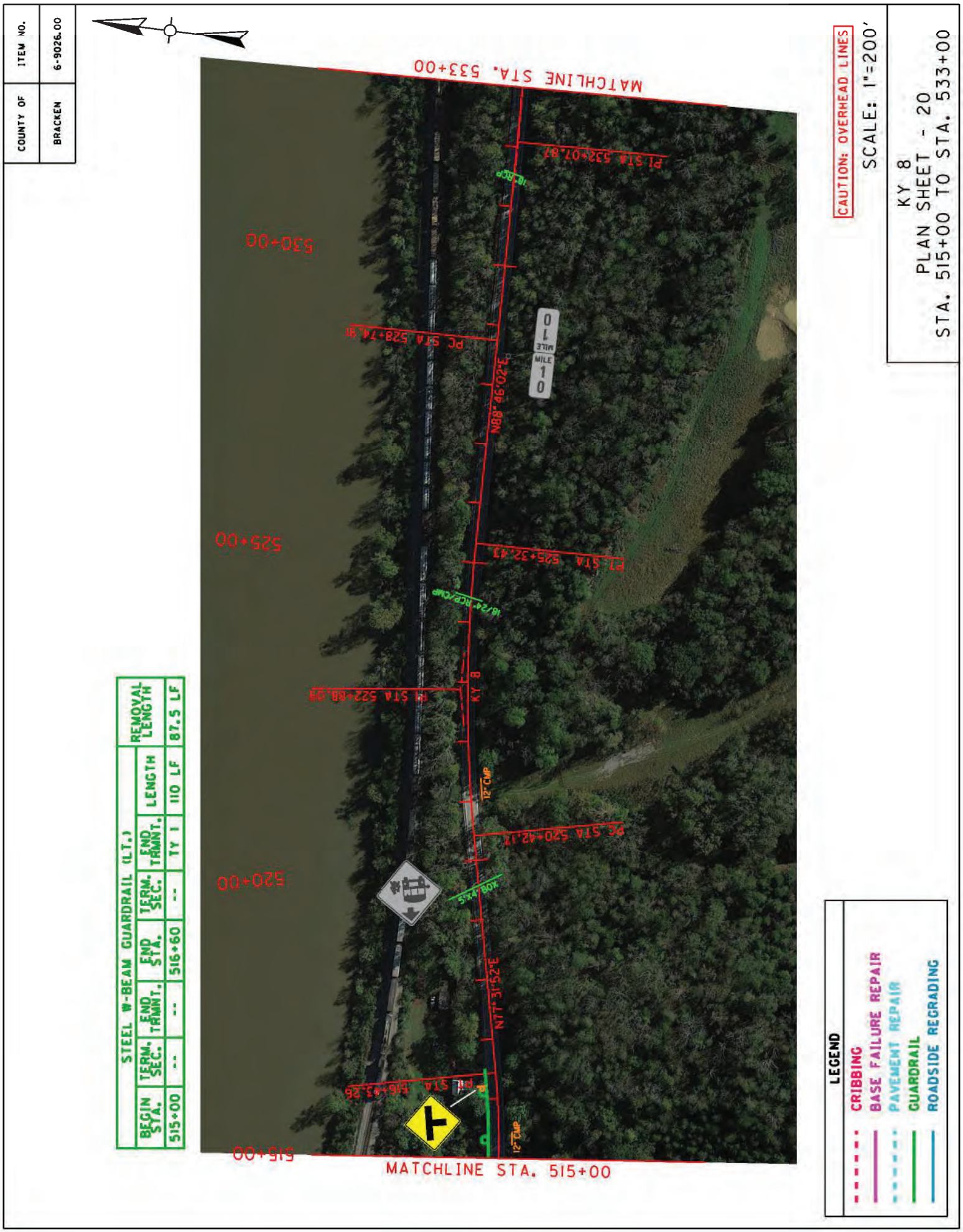
LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

CAUTION: OVERHEAD LINES

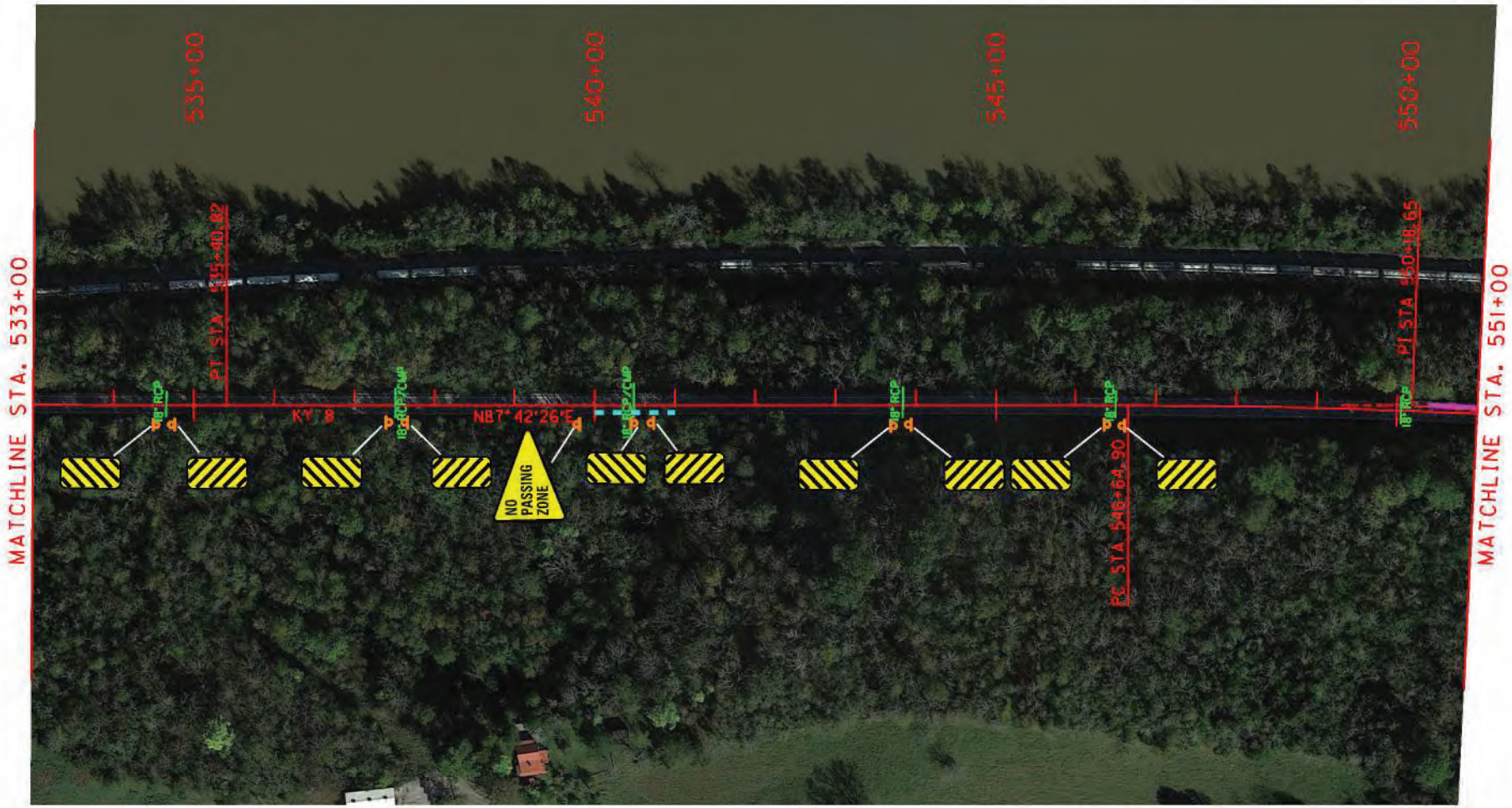
SCALE: 1"=200'

KY 8
PLAN SHEET - 19
STA. 498+00 TO STA. 515+00


COUNTY OF
BRACKEN
ITEM NO.
6-9026.00
KY 8
PLAN SHEET - 20
STA. 515+00 TO STA. 533+00
SCALE: 1"=200'
CAUTION: OVERHEAD LINES
MATCHLINE STA. 533+00
MATCHLINE STA. 515+00
PI STA 532+07.87
PC STA 528+74.91
PT STA 525+32.47
PI STA 522+88.09
PC STA 520+42.17
PI STA 516+43.26
530+00
525+00
520+00
515+00
N88°46'02"E
N17°31'52"E
KY 8
10" RCP
18/24" RCP/CMP
12" CMP
10' RCP
5'x4' BOX
STEEL W-BEAM GUARDRAIL (LT.)
BEGIN STA.
TERM. SEC.
END TRMNT.
END STA.
TERM. SEC.
END TRMNT.
LENGTH
REMOVAL LENGTH
515+00
--
--
516+60
--
TY 1
110 LF
87.5 LF
LEGEND
CRIBBING
BASE FAILURE REPAIR
PAVEMENT REPAIR
GUARDRAIL
ROADSIDE REGRADING

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

BASE FAILURE REPAIR (LT.)				
BEGIN STA.	END STA.	CRUSHED AGG. SIZE NO 23	CL2 ASPH BASE 1.50D PG64-22	LEVELING & WEDGING PG64-22
550+40	551+00	61 TONS	44 TONS	3 TONS



LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

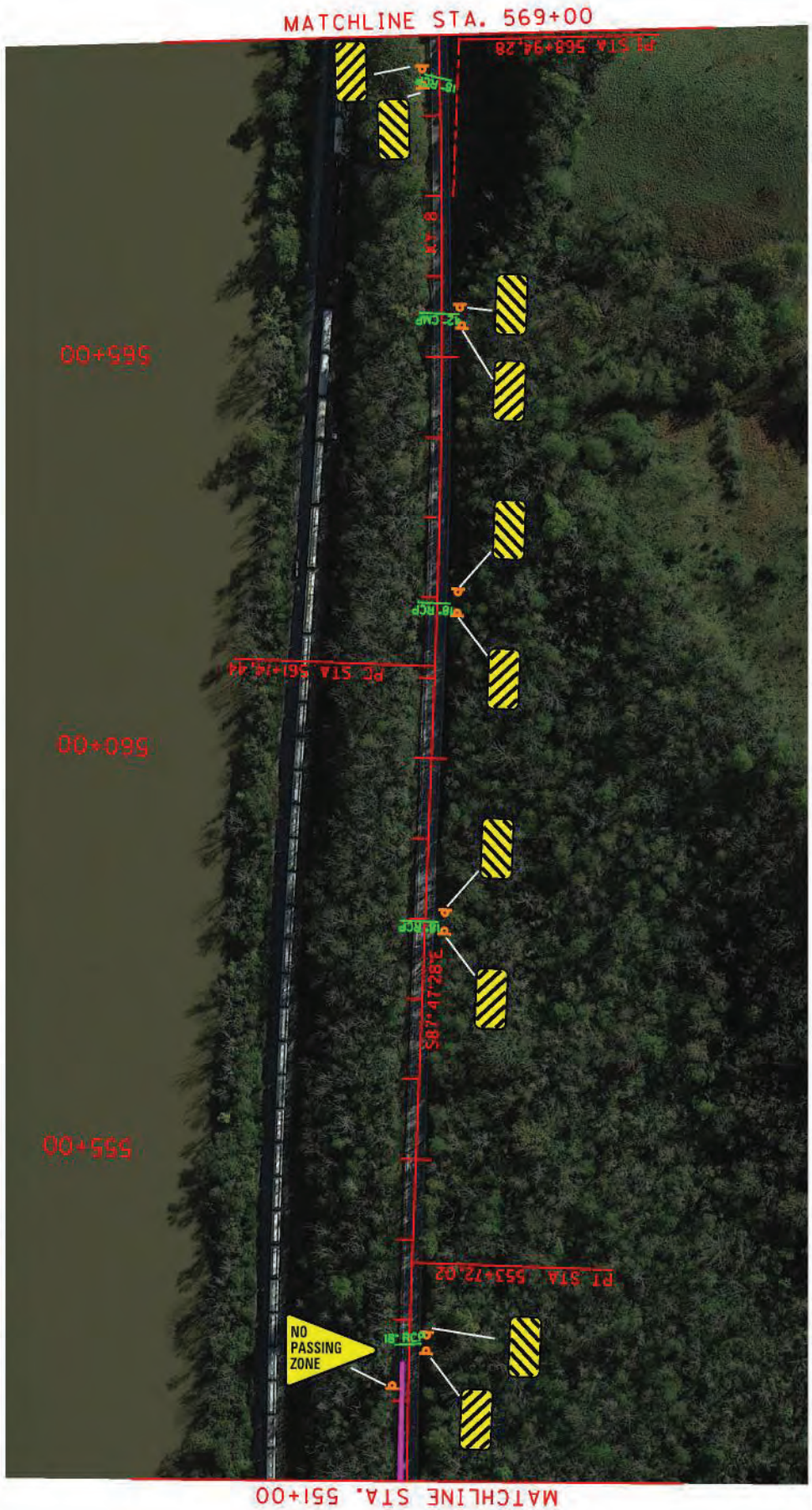
PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
540+00	541+00	1.0	8 TONS	9 TONS

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 21
STA. 533+00 TO STA. 551+00

ITEM NO.	6-9026.00
COUNTY OF	BRACKEN



CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 22
STA. 551+00 TO STA. 569+00

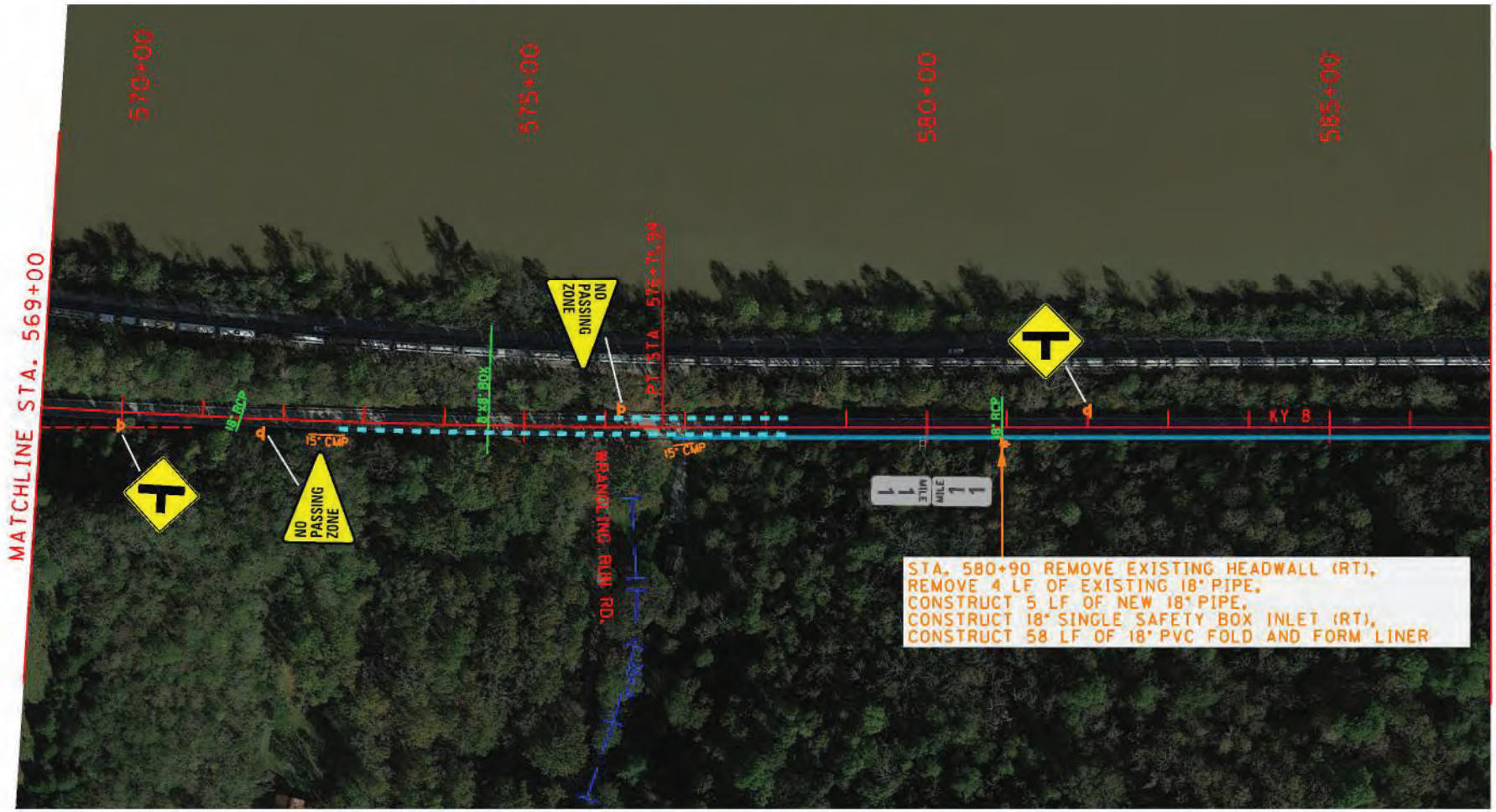
BASE FAILURE REPAIR (XX.)				
BEGIN STA.	END STA.	CRUSHED AGG. SIZE NO 23	CL3 ASPH BASE 1.50D PG64-22	LEVELING & WEDGING PG64-22
551+00	552+50	152 TONS	109 TONS	6 TONS

LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

PAVEMENT REPAIR (LT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
575+65	578+30	1.0	20 TONS	22 TONS



PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
572+70	578+30	1.0	42 TONS	47 TONS

ROADSIDE REGRADING (RT.)
STA. 576+85 TO STA. 587+00

CAUTION: OVERHEAD LINES

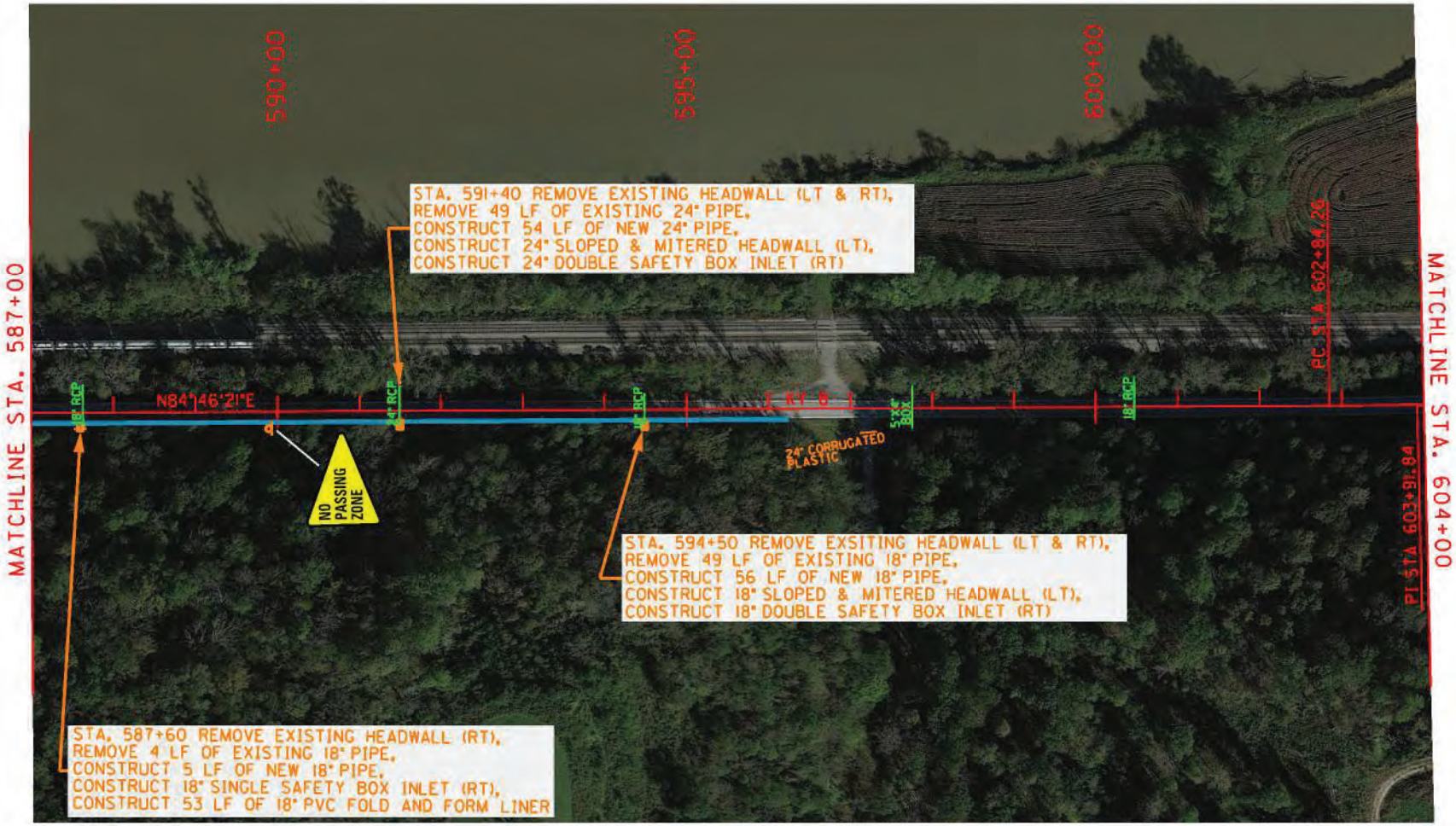
SCALE: 1"=200'

LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

KY 8
PLAN SHEET - 23
STA. 569+00 TO STA. 587+00

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

ROADSIDE REGRADING (RT.)
STA. 587+00 TO STA. 596+25

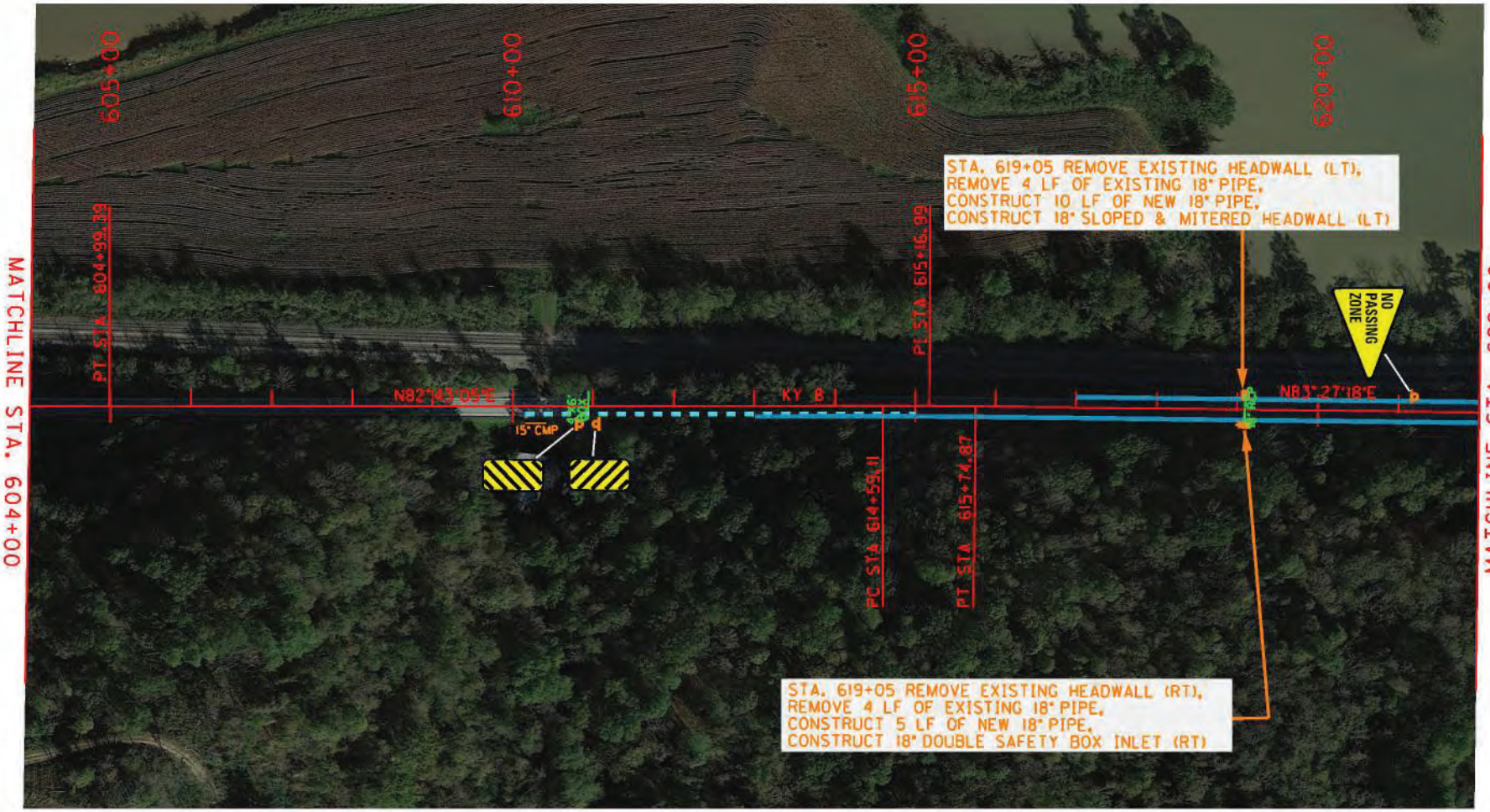
CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 24
STA. 587+00 TO STA. 604+00

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

ROADSIDE REGRADING (LT.)
STA. 617+00 TO STA. 622+00



LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

PAVEMENT REPAIR (RT.)

BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
610+15	615+00	1.0	36 TONS	40 TONS

ROADSIDE REGRADING (RT.)
STA. 613+00 TO STA. 622+00

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

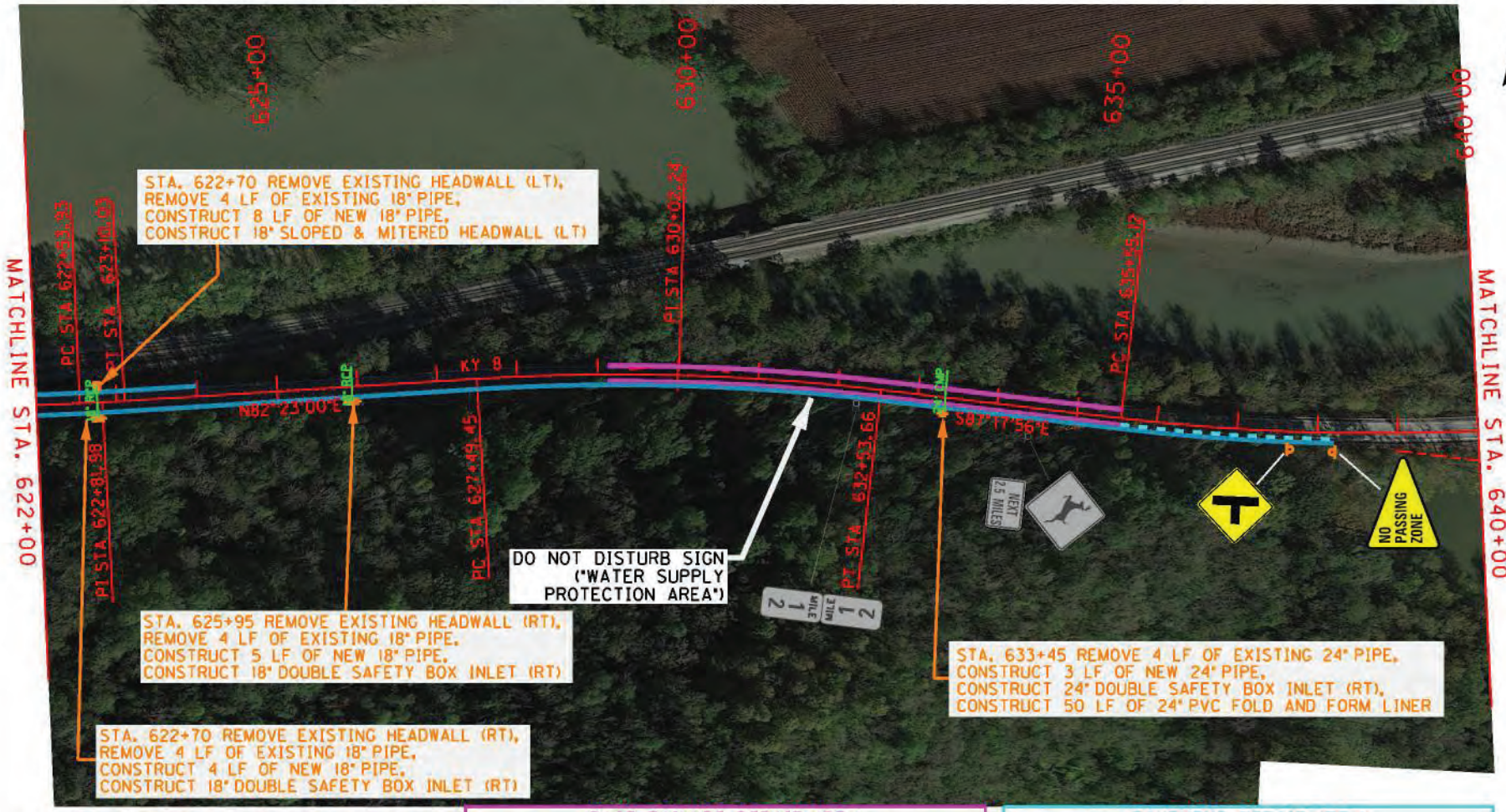
KY 8
PLAN SHEET - 25
STA. 604+00 TO STA. 622+00

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

ROADSIDE REGRADING (RT.)
STA. 622+00 TO STA. 624+00

BASE FAILURE REPAIR (LT.)

BEGIN STA.	END STA.	CRUSHED AGG. SIZE NO 23	CL3 ASPH BASE 1.50D PG64-22	LEVELING & WEDGING PG64-22
629+10	635+55	653 TONS	468.5 TONS	26.5 TONS



BASE FAILURE REPAIR (RT.)

BEGIN STA.	END STA.	CRUSHED AGG. SIZE NO 23	CL3 ASPH BASE 1.50D PG64-22	LEVELING & WEDGING PG64-22
629+10	635+55	653 TONS	468.5 TONS	26.5 TONS

PAVEMENT REPAIR (RT.)

BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
635+55	638+20	1.0	20 TONS	22 TONS

ROADSIDE REGRADING (RT.)
STA. 622+00 TO STA. 638+20

LEGEND
- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

CAUTION: OVERHEAD LINES

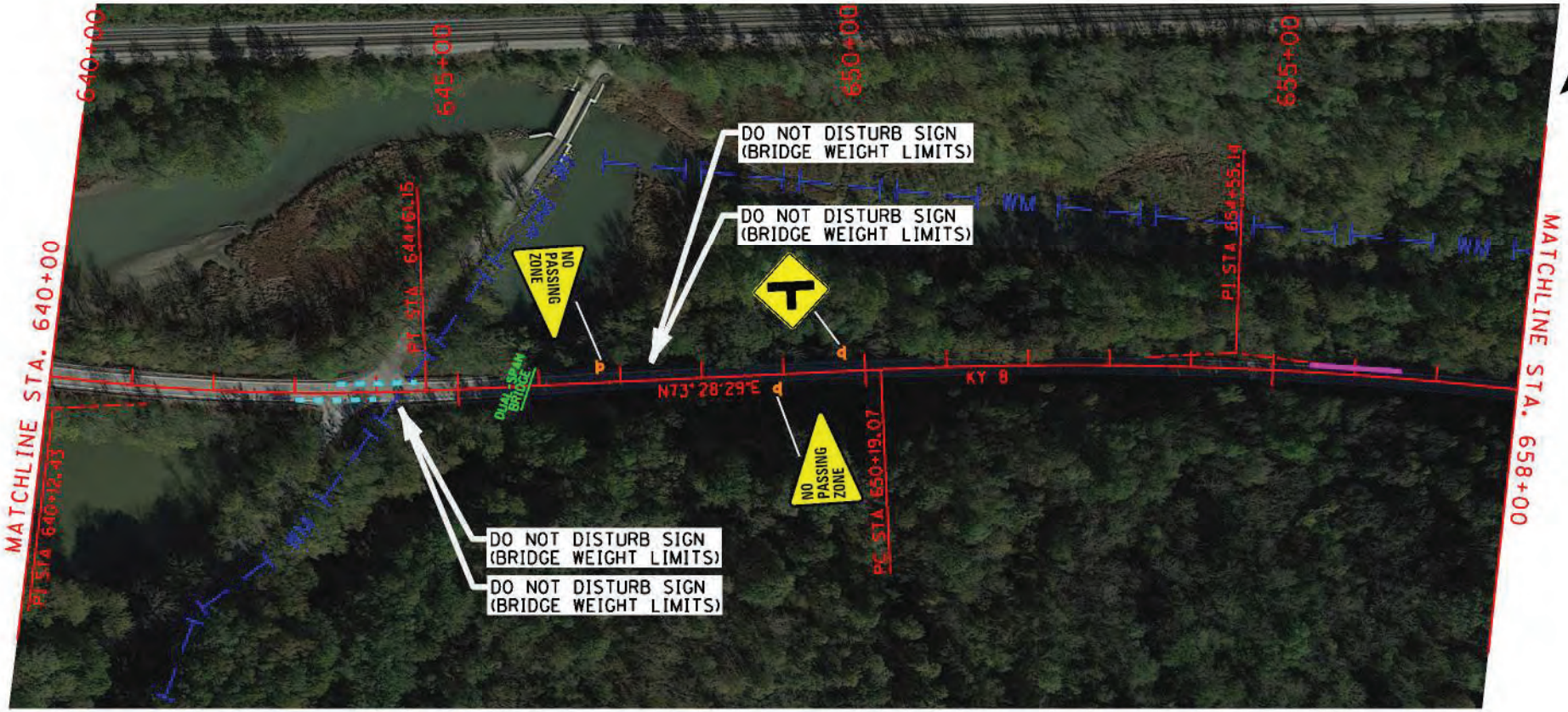
SCALE: 1"=200'

KY 8
PLAN SHEET - 26
STA. 622+00 TO STA. 640+00

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

PAVEMENT REPAIR (LT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
643+50	644+50	1.0	8 TONS	9 TONS

BASE FAILURE REPAIR (LT.)				
BEGIN STA.	END STA.	CRUSHED AGG. SIZE NO 23	CL3 ASPH BASE 1.50D PG64-22	LEVELING & WEDGING PG64-22
655+45	656+60	117 TONS	84 TONS	5 TONS



PAVEMENT REPAIR (RT.)				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
643+00	644+00	1.0	8 TONS	9 TONS

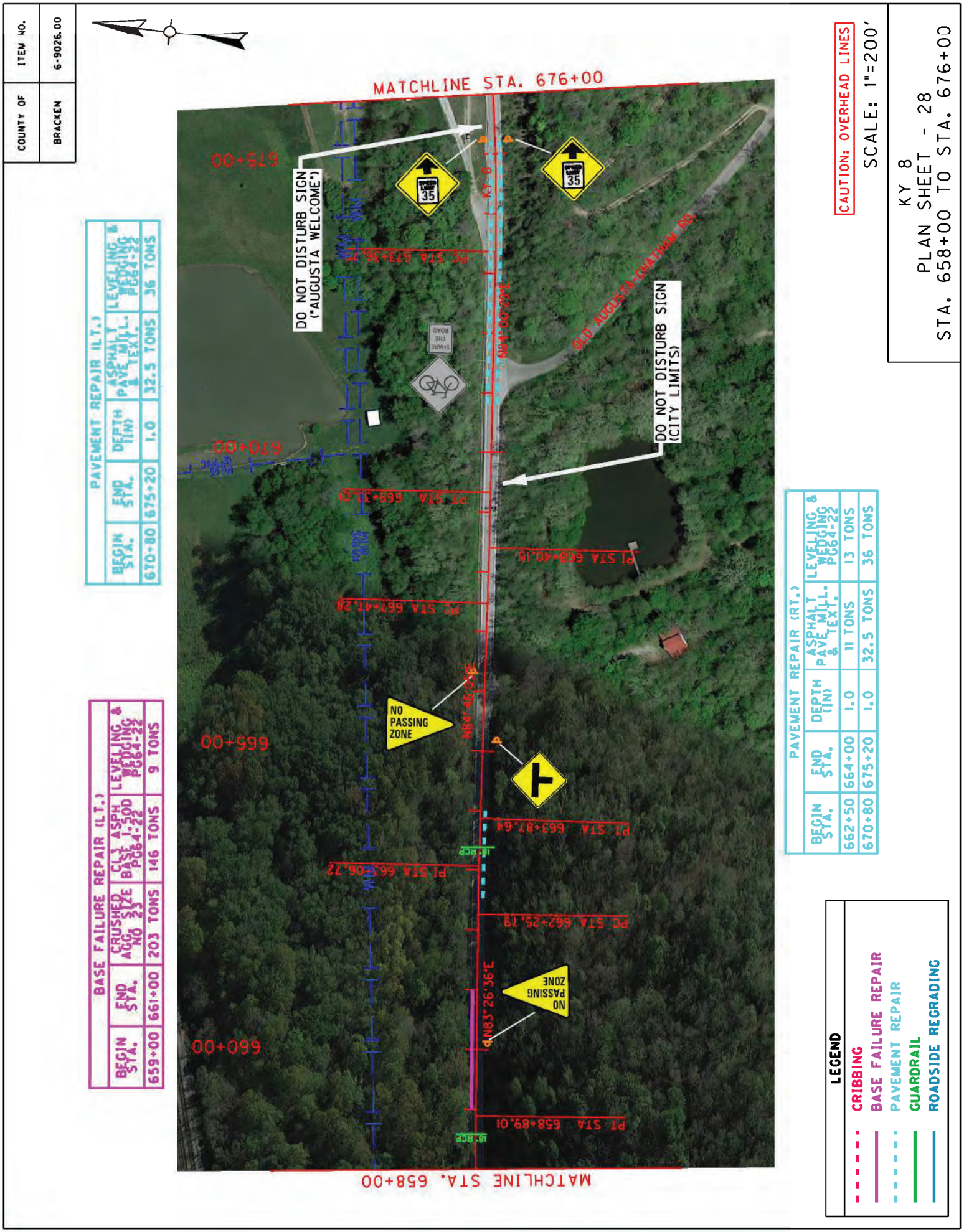
LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

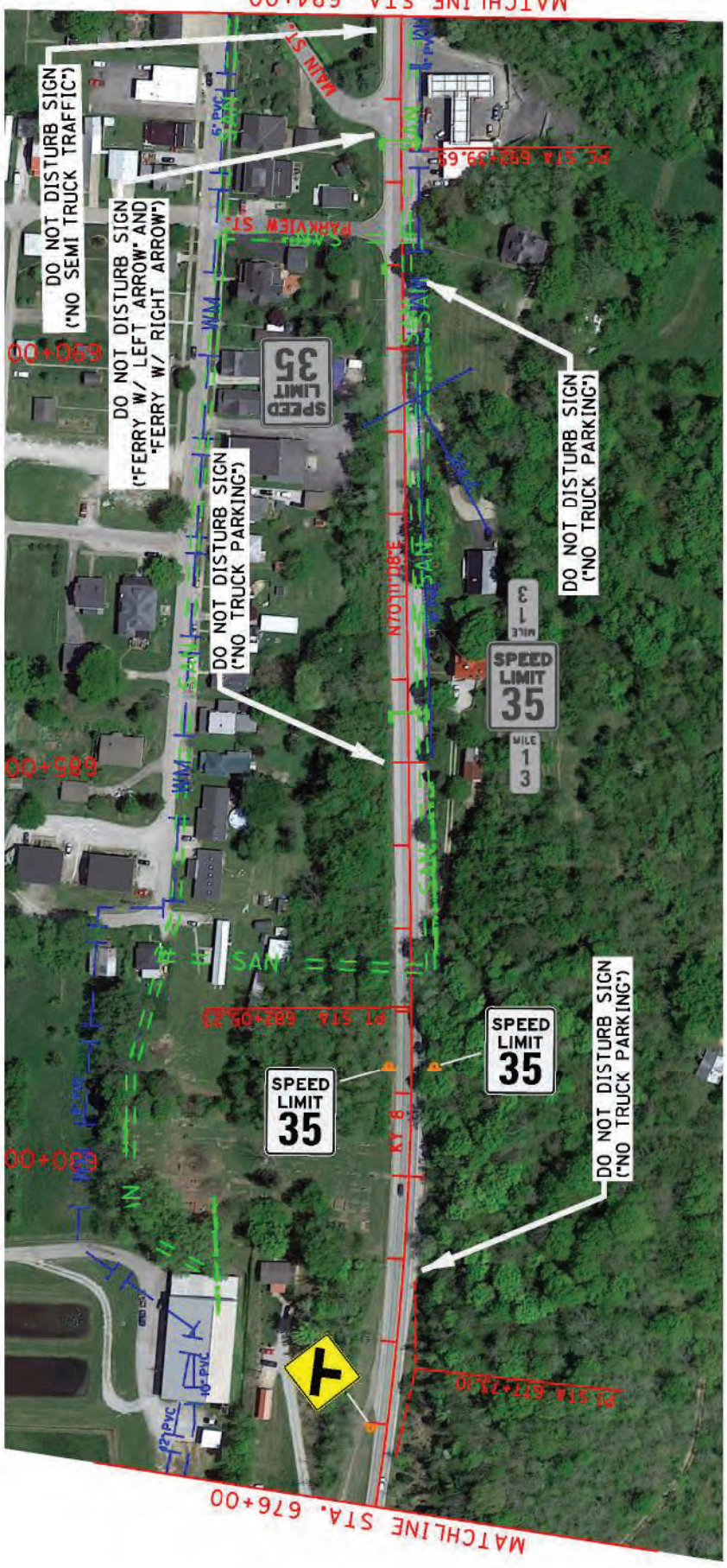
CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 27
STA. 640+00 TO STA. 658+00


COUNTY OF
BRACKEN
ITEM NO.
6-9026.00
MATCHLINE STA. 676+00
MATCHLINE STA. 658+00
DO NOT DISTURB SIGN ("AUGUSTA WELCOME")
DO NOT DISTURB SIGN (CITY LIMITS)
OLD AUGUSTA-CHATHAM RD.
NO PASSING ZONE
NO PASSING ZONE
CAUTION: OVERHEAD LINES
SCALE: 1"=200'
KY 8
PLAN SHEET - 28
STA. 658+00 TO STA. 676+00
PAVEMENT REPAIR (LT.)
BEGIN STA. | END STA. | DEPTH (IN) | ASPHALT PAVE MILL. & TEX. | LEVELING & WEDGING PCB64-22
670+80 | 675+20 | 1.0 | 32.5 TONS | 36 TONS
PAVEMENT REPAIR (RT.)
BEGIN STA. | END STA. | DEPTH (IN) | ASPHALT PAVE MILL. & TEX. | LEVELING & WEDGING PCB64-22
662+50 | 664+00 | 1.0 | 11 TONS | 13 TONS
670+80 | 675+20 | 1.0 | 32.5 TONS | 36 TONS
BASE FAILURE REPAIR (LT.)
BEGIN STA. | END STA. | CRUSHED AGG. SIZE NO 23 | CL3 ASPH BASE 1-50D PCB64-22 | LEVELING & WEDGING PCB64-22
659+00 | 661+00 | 203 TONS | 146 TONS | 9 TONS
LEGEND
CRIBBING
BASE FAILURE REPAIR
PAVEMENT REPAIR
GUARDRAIL
ROADSIDE REGRADING

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00



CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 29
STA. 676+00 TO STA. 694+00

LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

LEGEND

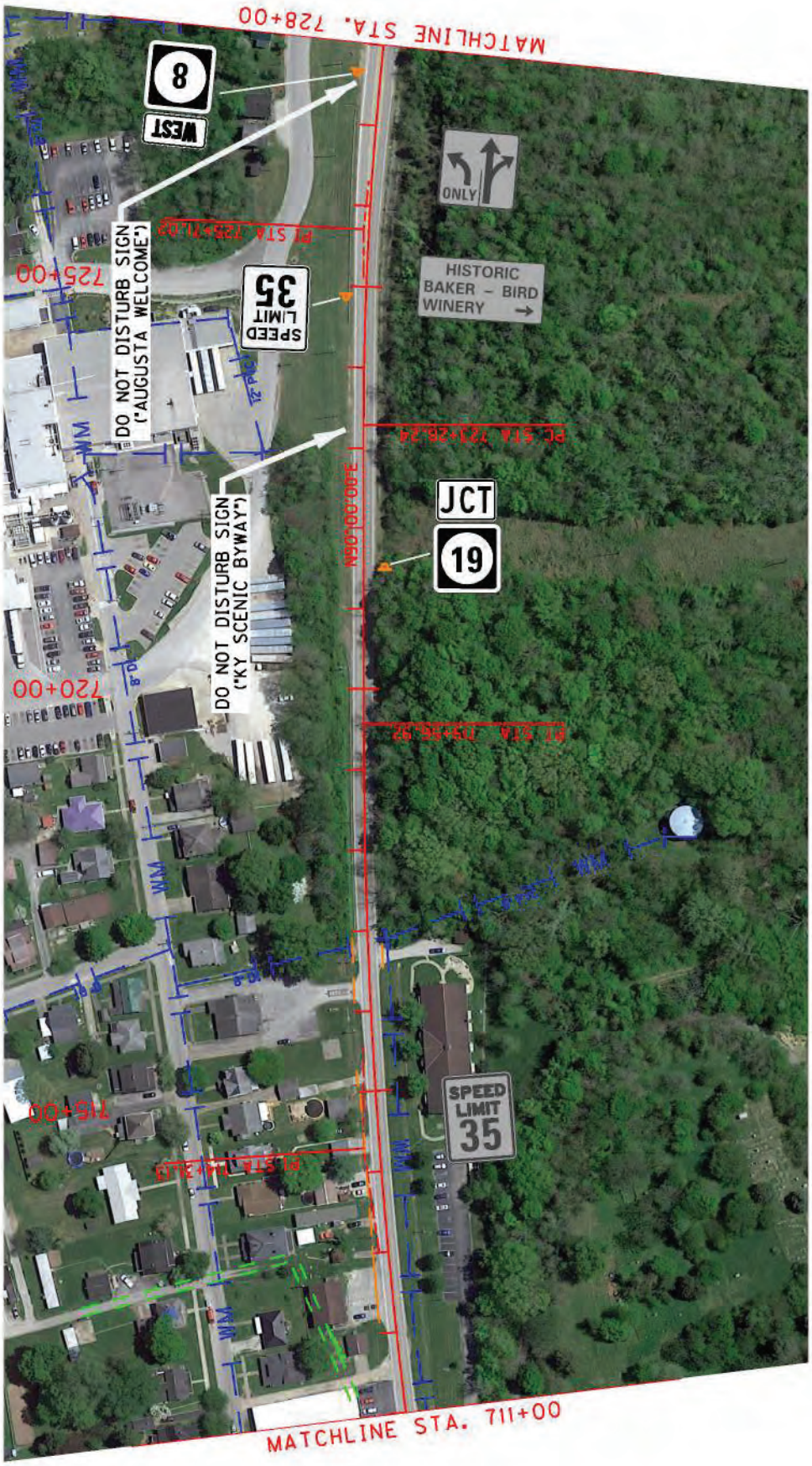
- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

CAUTION: OVERHEAD LINES

SCALE: 1"=200'

KY 8
PLAN SHEET - 30
STA. 694+00 TO STA. 711+00

ITEM NO.	6-9026.00
COUNTY OF	BRACKEN



CAUTION: OVERHEAD LINES

SCALE: 1"=200'

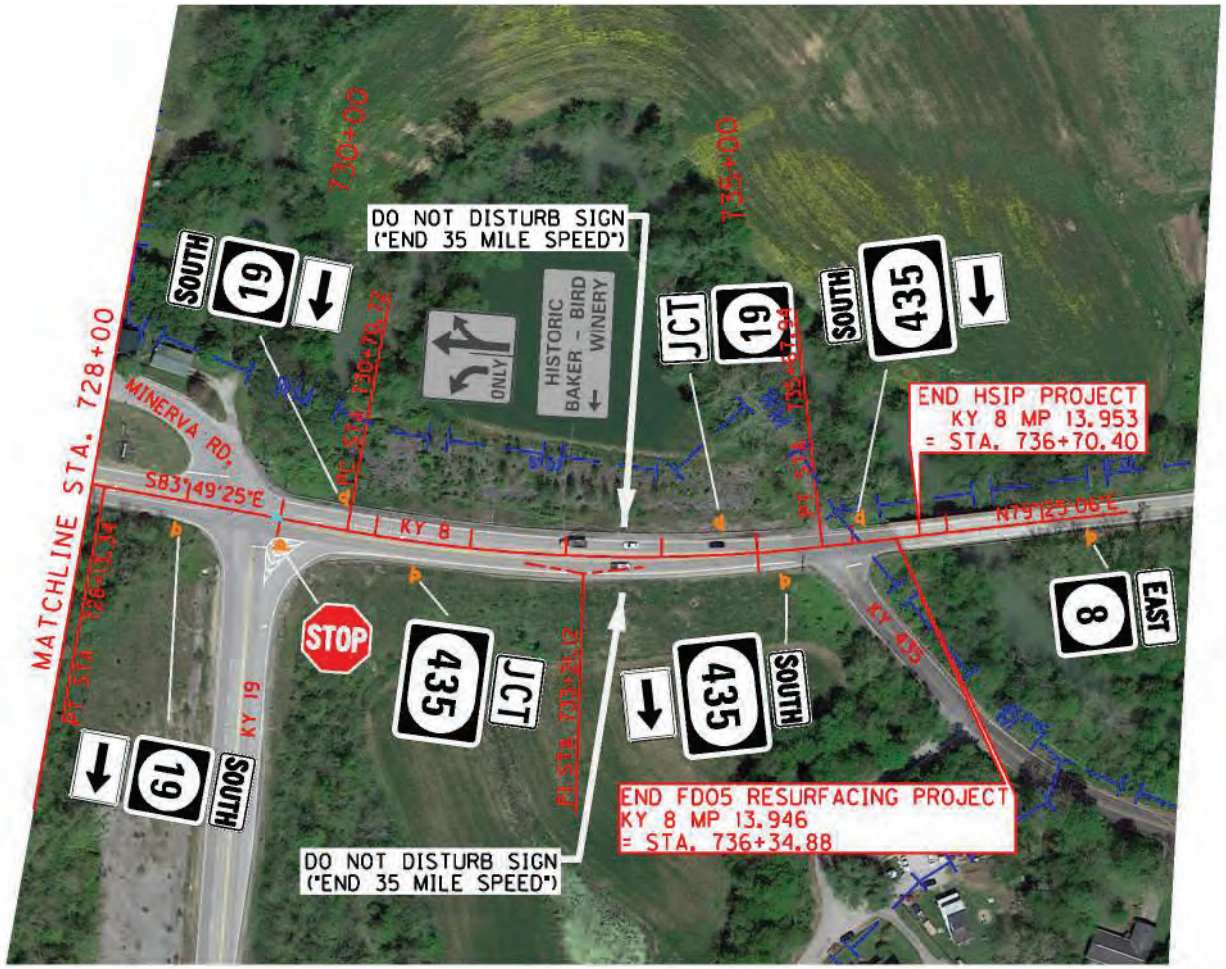
KY 8
PLAN SHEET - 31
STA. 711+00 TO STA. 728+00

LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

COUNTY OF	ITEM NO.
BRACKEN	6-9026.00

PAVEMENT REPAIR				
BEGIN STA.	END STA.	DEPTH (IN)	ASPHALT PAVE MILL. & TEXT.	LEVELING & WEDGING PG64-22
729+85	730+10	1.0	3 TONS	4 TONS



LEGEND

- CRIBBING
- BASE FAILURE REPAIR
- PAVEMENT REPAIR
- GUARDRAIL
- ROADSIDE REGRADING

CAUTION: OVERHEAD LINES

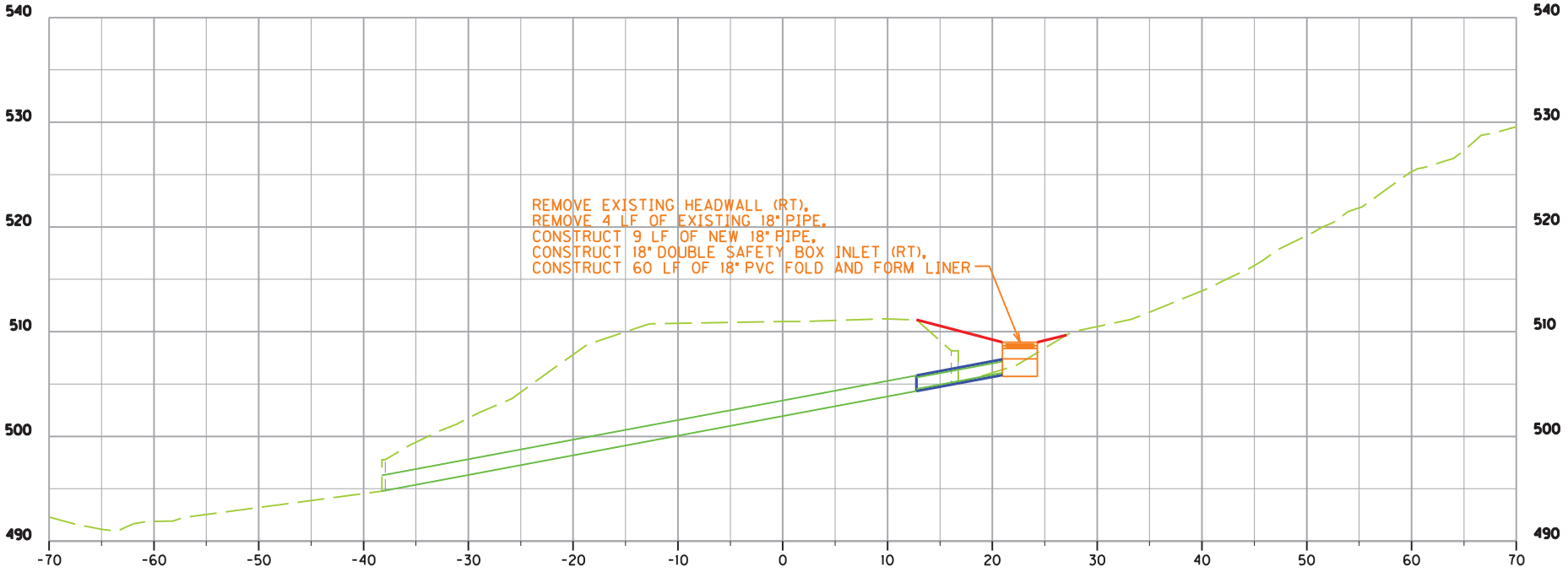
SCALE: 1"=200'

KY 8
PLAN SHEET - 32
STA. 728+00 TO END

COUNTY OF	ITEM NO.
BRACKEN	6-902.00

LEGEND
PROPOSED PIPE
PROPOSED DRAINAGE STRUCTURE
PROPOSED PVC FOLD AND FORM LINER
PROPOSED SURFACE

NOTE: These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.



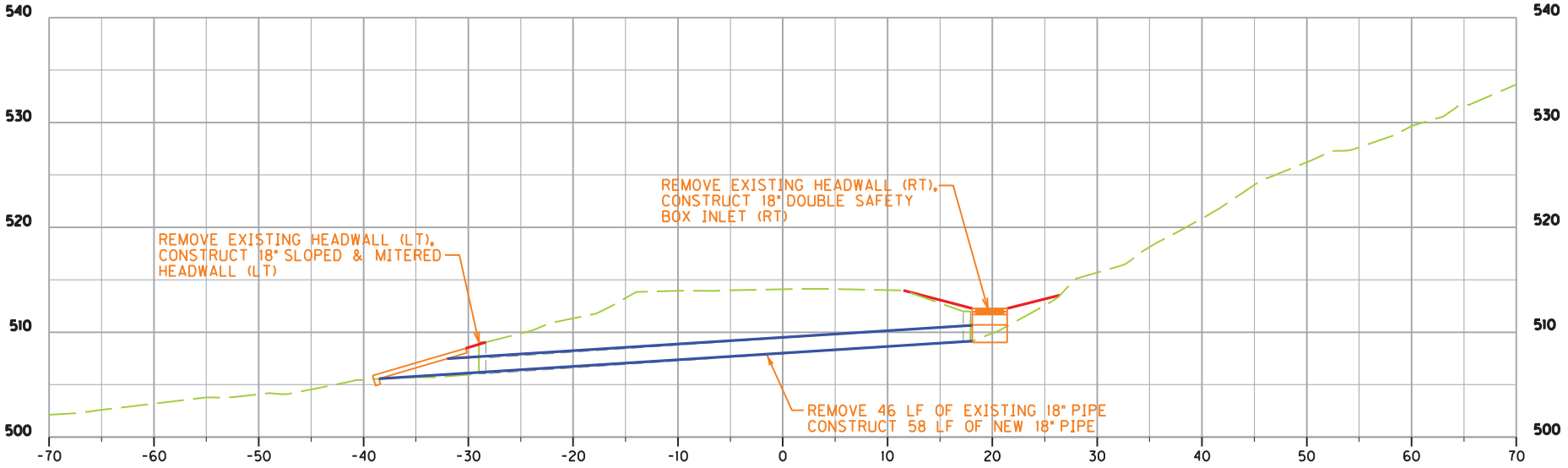
KY 8
PIPE SHEET
STA. 388+50

COUNTY OF	ITEM NO.
BRACKEN	6-902.00

LEGEND

- PROPOSED PIPE
- PROPOSED DRAINAGE STRUCTURE
- PROPOSED PVC FOLD AND FORM LINER
- PROPOSED SURFACE

NOTE: These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.



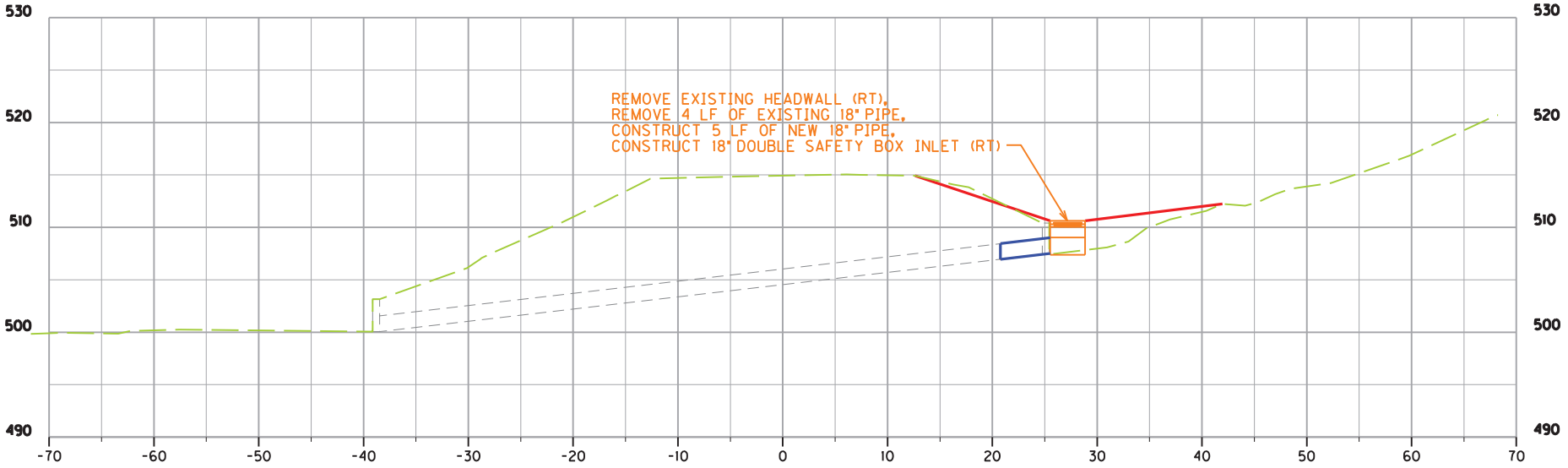
458+65

KY 8
PIPE SHEET
STA. 458+65

COUNTY OF	ITEM NO.
BRACKEN	6-902.00

LEGEND
PROPOSED PIPE
PROPOSED DRAINAGE STRUCTURE
PROPOSED PVC FOLD AND FORM LINER
PROPOSED SURFACE

NOTE: These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.



464+70

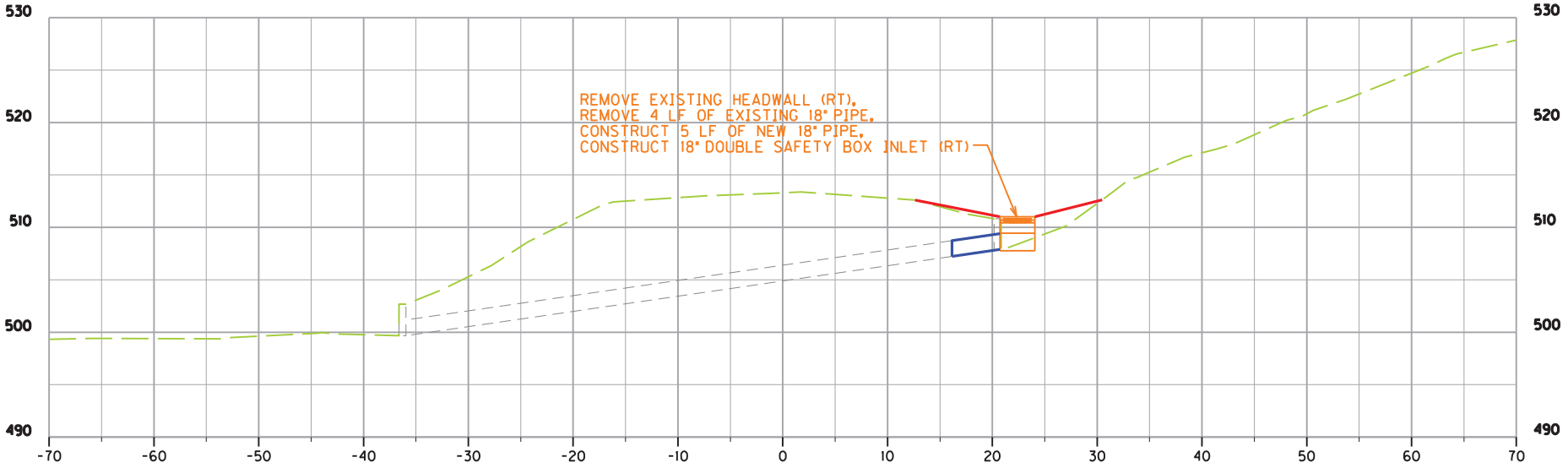
KY 8
PIPE SHEET
STA. 464+70

COUNTY OF	ITEM NO.
BRACKEN	6-902.0

LEGEND

- PROPOSED PIPE
- PROPOSED DRAINAGE STRUCTURE
- PROPOSED PVC FOLD AND FORM LINER
- PROPOSED SURFACE

NOTE: These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.



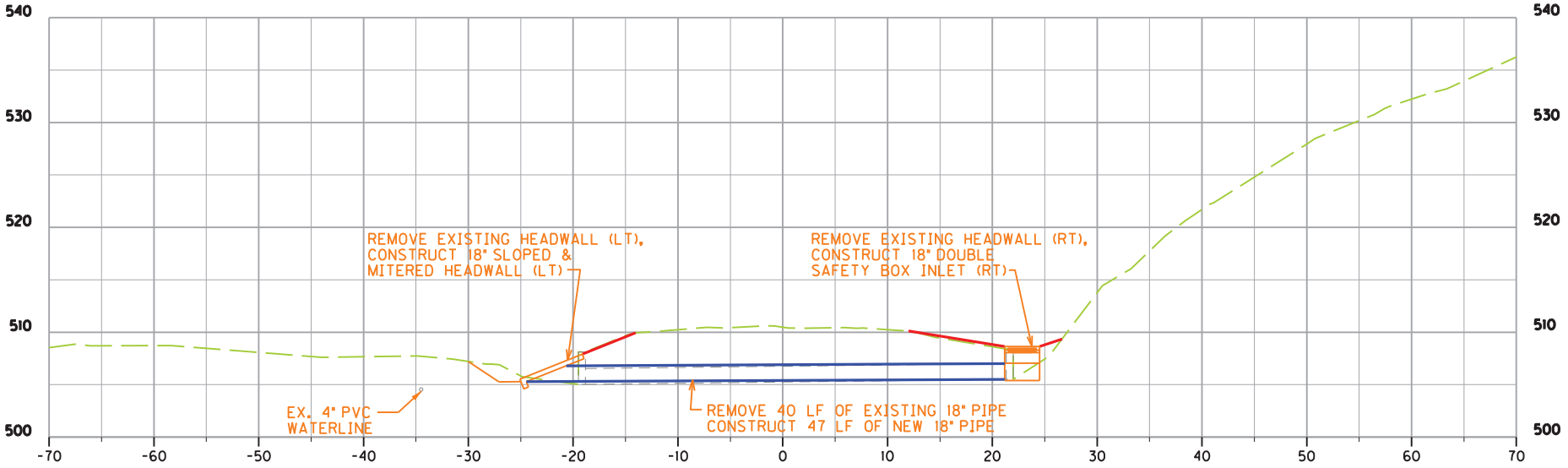
467+70

KY 8
PIPE SHEET
STA. 467+70

COUNTY OF	ITEM NO.
BRACKEN	6-9028.00

LEGEND
PROPOSED PIPE
PROPOSED DRAINAGE STRUCTURE
PROPOSED PVC FOLD AND FORM LINER
PROPOSED SURFACE

NOTE: These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.



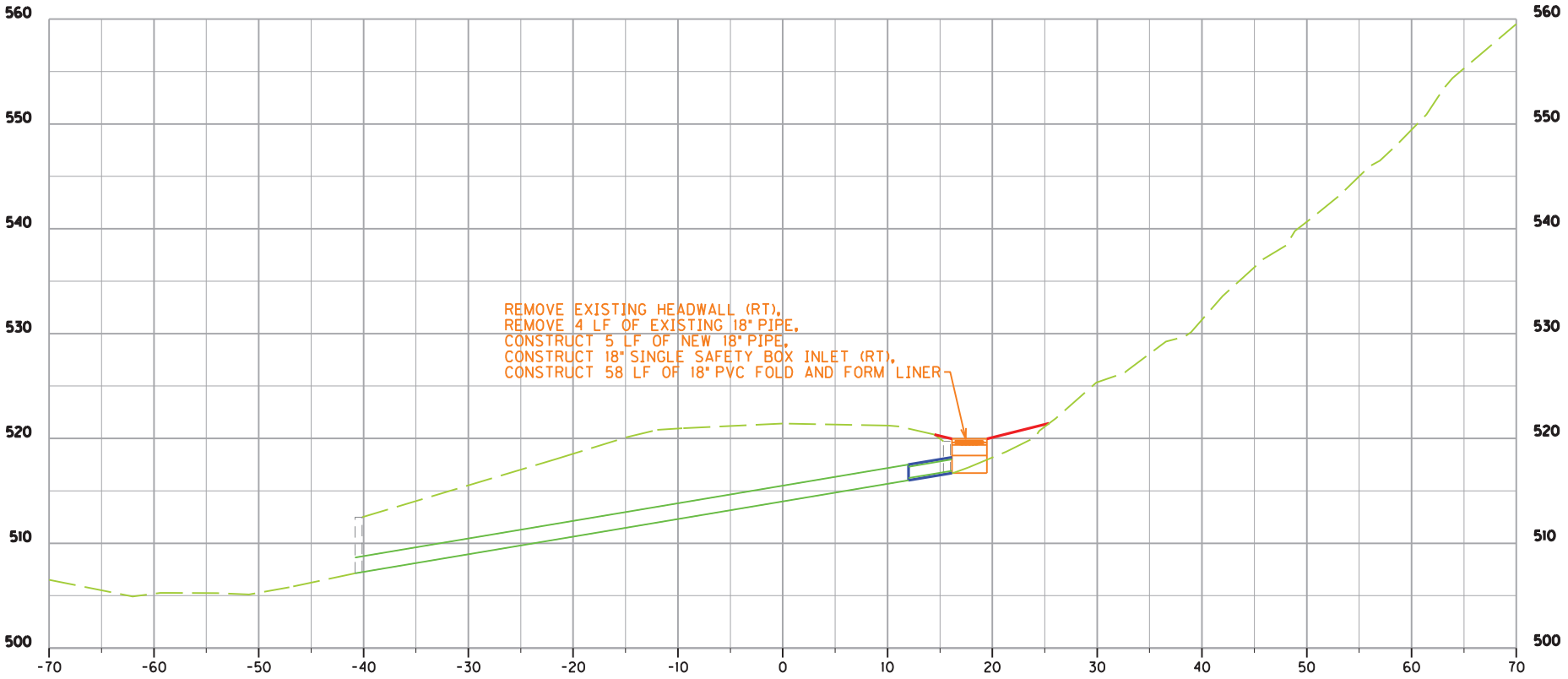
KY 8
PIPE SHEET
STA. 495+95

COUNTY OF	ITEM NO.
BRACKEN	6-902.00

LEGEND

- PROPOSED PIPE
- PROPOSED DRAINAGE STRUCTURE
- PROPOSED PVC FOLD AND FORM LINER
- PROPOSED SURFACE

NOTE: These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.

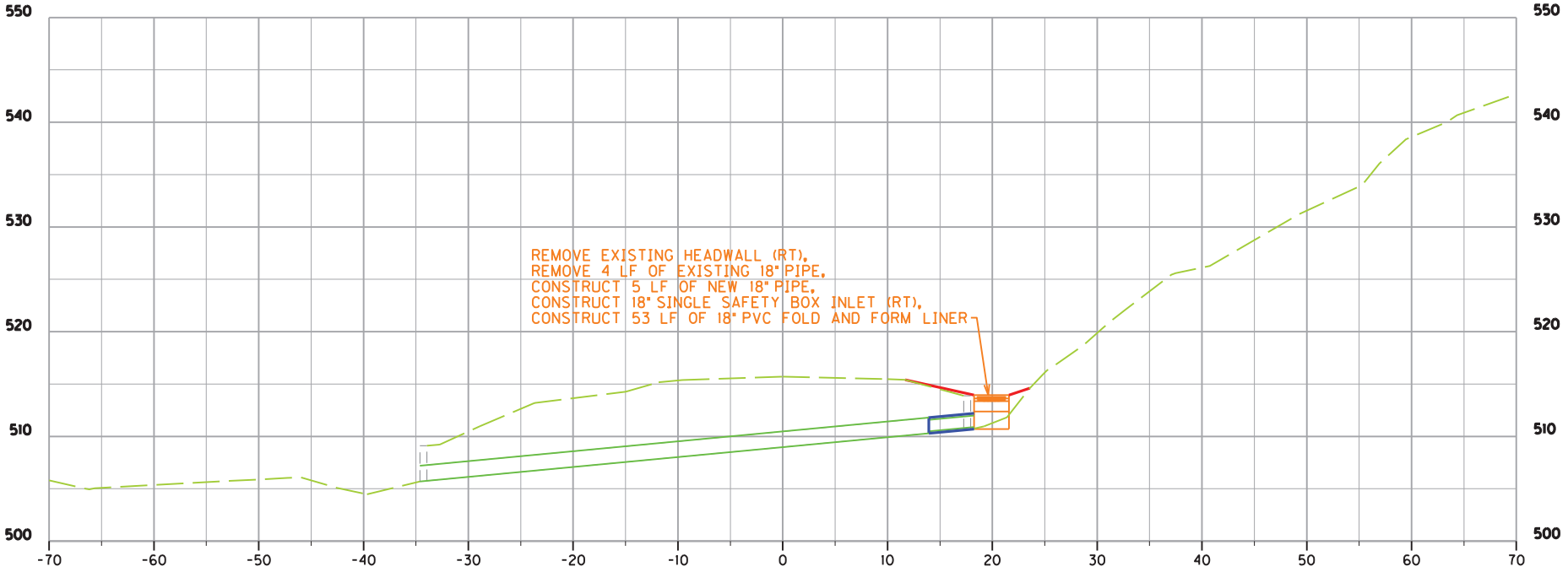


KY 8
PIPE SHEET
STA. 580+90

COUNTY OF	ITEM NO.
BRACKEN	6-902.00

LEGEND
PROPOSED PIPE
PROPOSED DRAINAGE STRUCTURE
PROPOSED PVC FOLD AND FORM LINER
PROPOSED SURFACE

NOTE: These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.



587+60

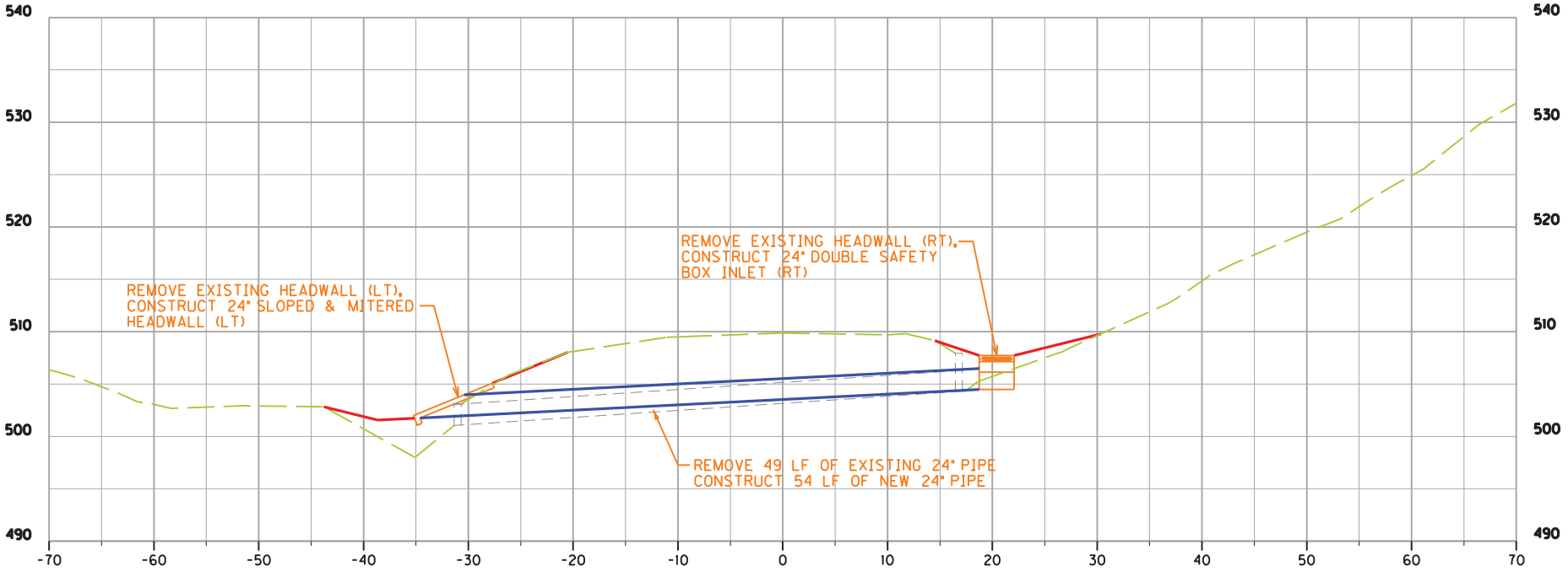
KY 8
PIPE SHEET
STA. 587+60

COUNTY OF	ITEM NO.
BRACKEN	6-902.00

LEGEND

- PROPOSED PIPE
- PROPOSED DRAINAGE STRUCTURE
- PROPOSED PVC FOLD AND FORM LINER
- PROPOSED SURFACE

NOTE: These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.

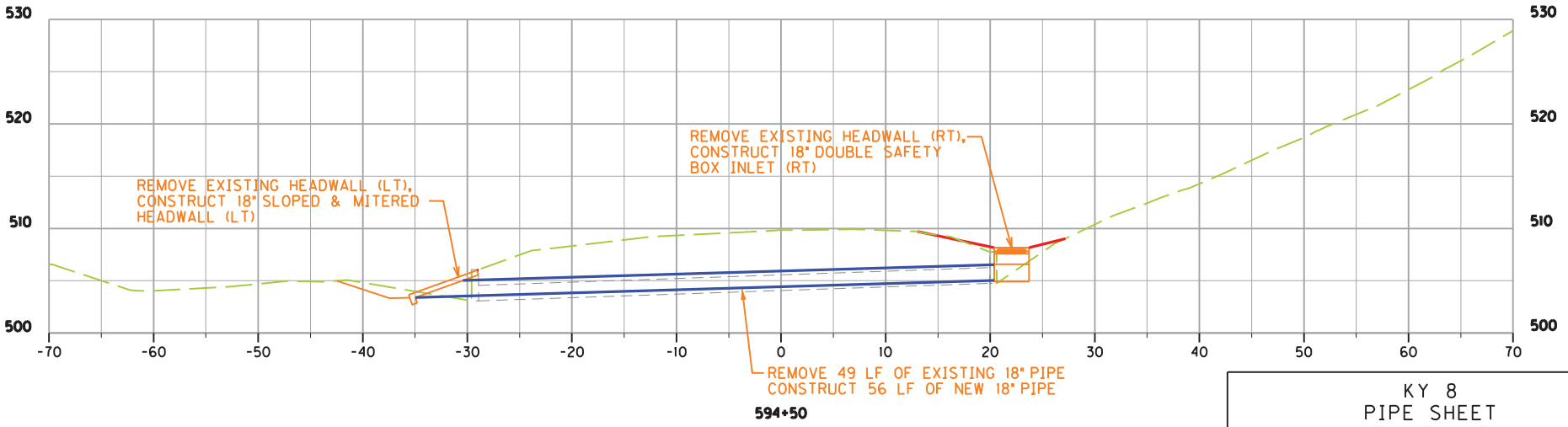


KY 8
PIPE SHEET
STA. 591+40

COUNTY OF	ITEM NO.
BRACKEN	6-902.00

LEGEND
PROPOSED PIPE
PROPOSED DRAINAGE STRUCTURE
PROPOSED PVC FOLD AND FORM LINER
PROPOSED SURFACE

NOTE: These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.

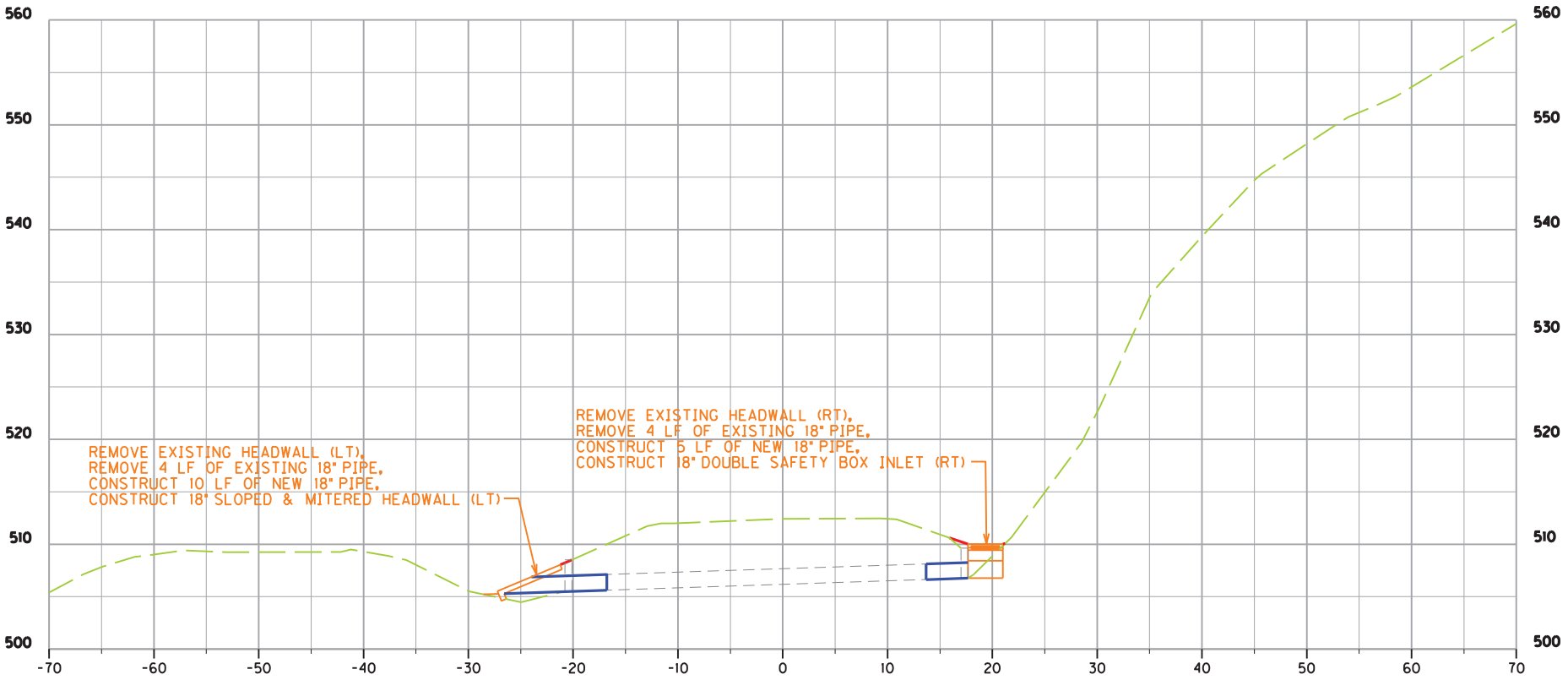


KY 8
PIPE SHEET
STA. 594+50

COUNTY OF	ITEM NO.
BRACKEN	6-902.00

LEGEND
PROPOSED PIPE
PROPOSED DRAINAGE STRUCTURE
PROPOSED PVC FOLD AND FORM LINER
PROPOSED SURFACE

NOTE: These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.

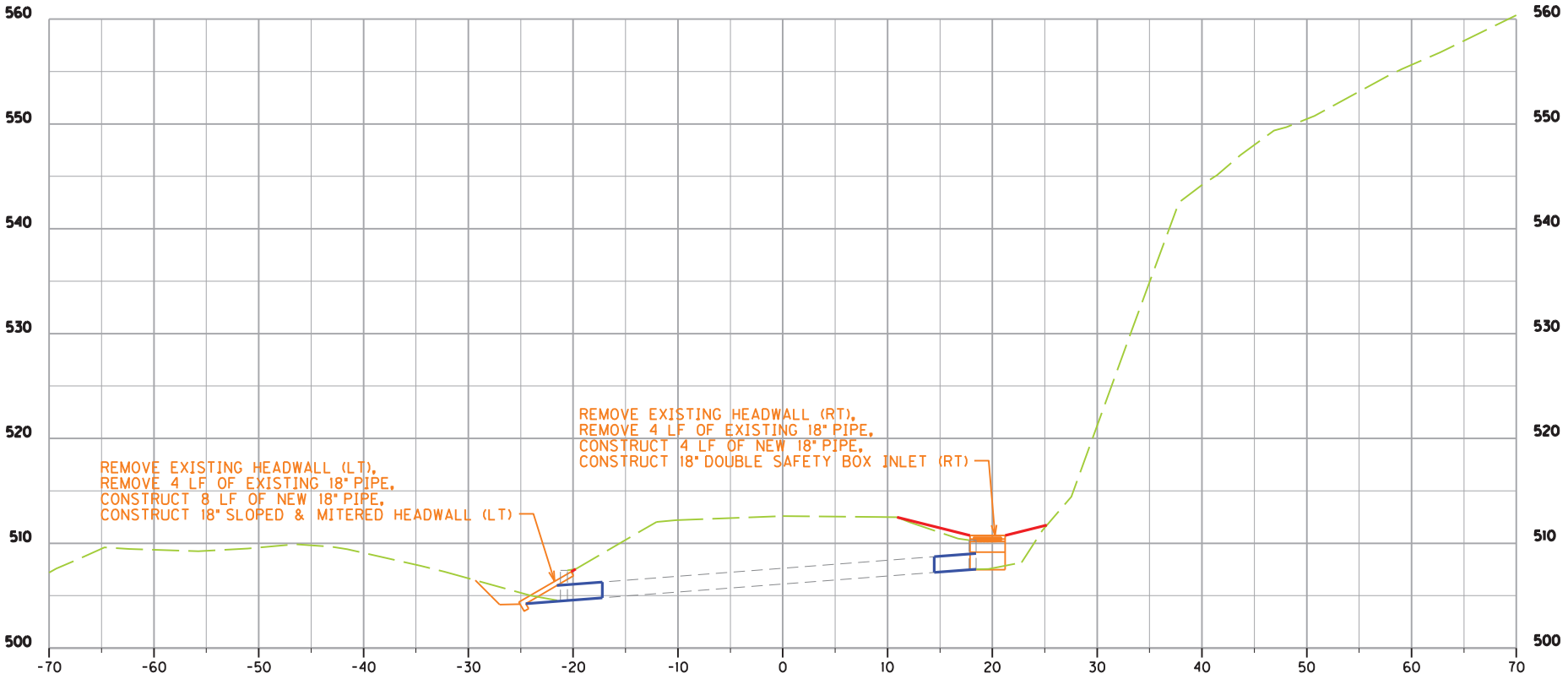


KY 8
PIPE SHEET
STA. 619+05

COUNTY OF	ITEM NO.
BRACKEN	6-902.00

LEGEND
PROPOSED PIPE
PROPOSED DRAINAGE STRUCTURE
PROPOSED PVC FOLD AND FORM LINER
PROPOSED SURFACE

NOTE: These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.

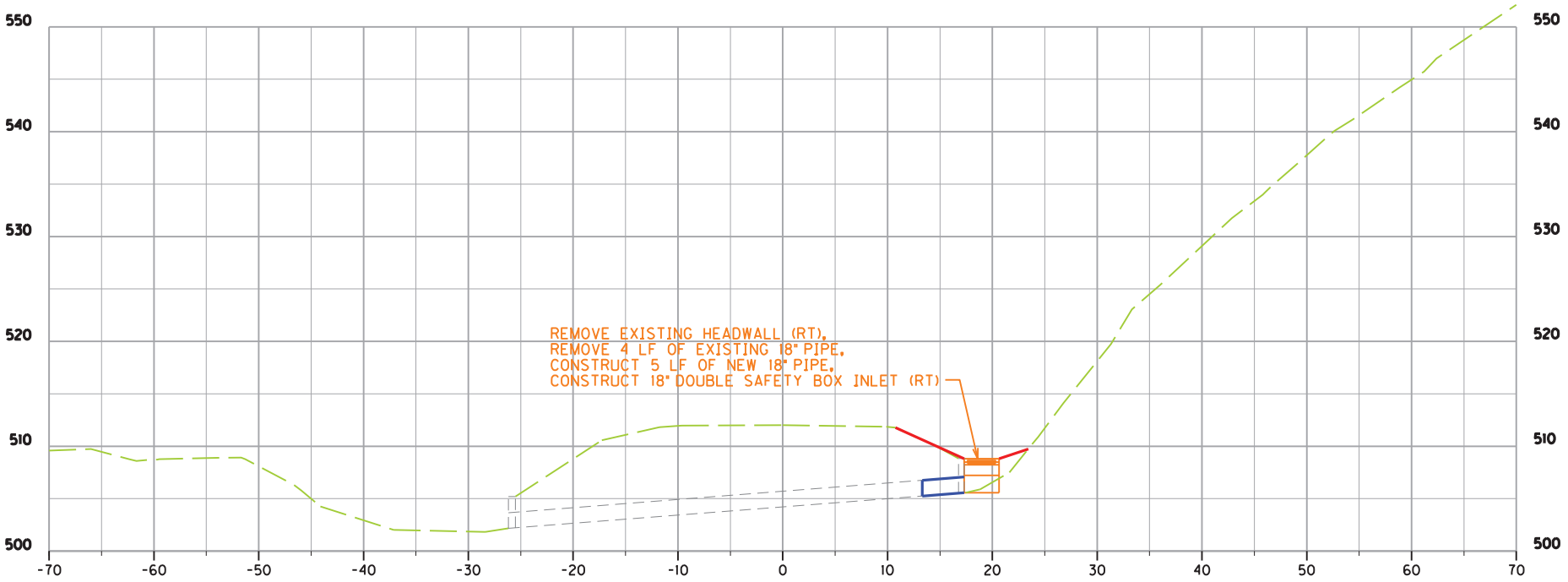


KY 8
PIPE SHEET
STA. 622+70

COUNTY OF	ITEM NO.
BRACKEN	6-902.00

LEGEND
PROPOSED PIPE
PROPOSED DRAINAGE STRUCTURE
PROPOSED PVC FOLD AND FORM LINER
PROPOSED SURFACE

NOTE: These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.

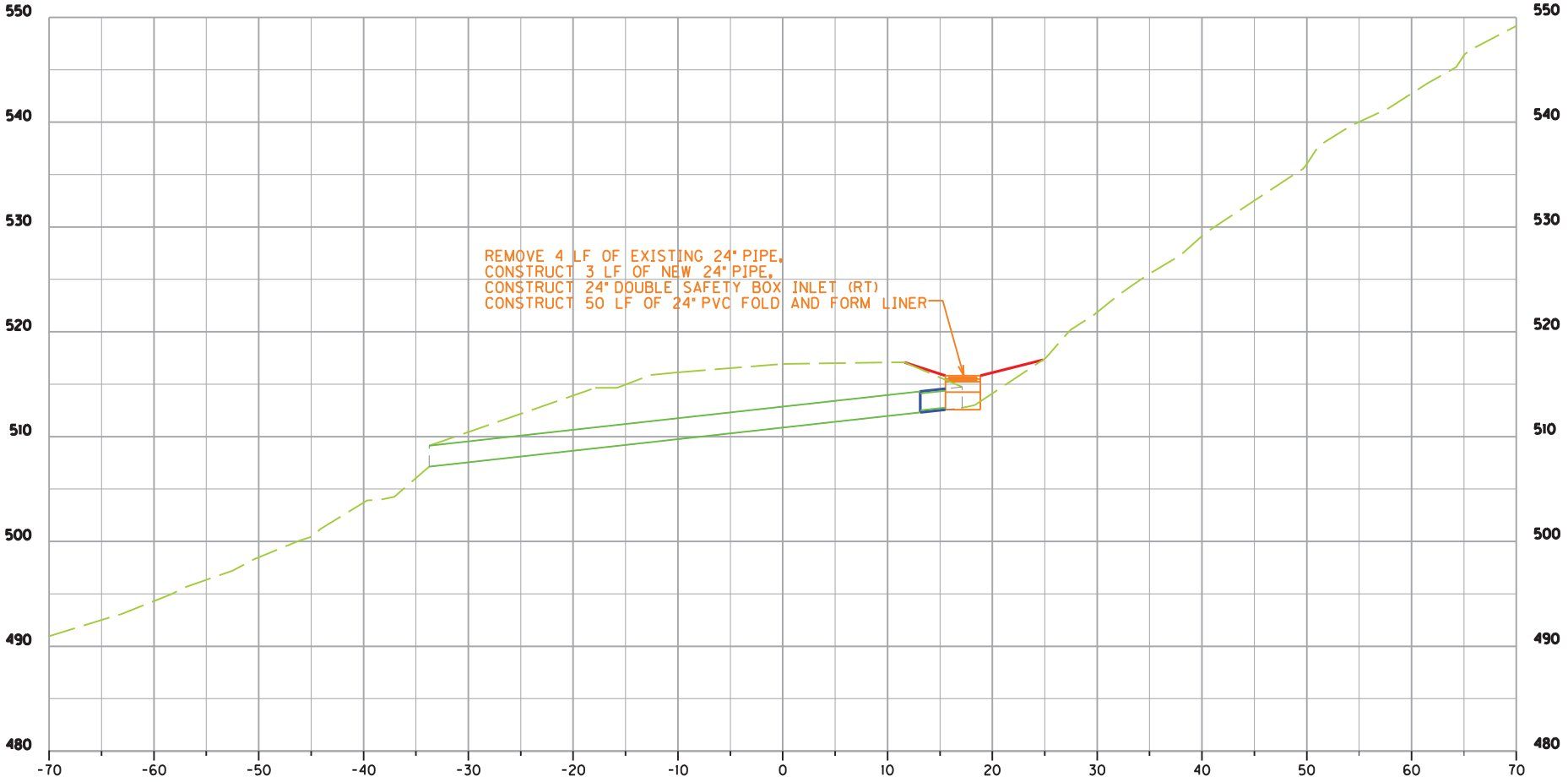


KY 8
PIPE SHEET
STA. 625+95

COUNTY OF	ITEM NO.
BRACKEN	6-9028.00

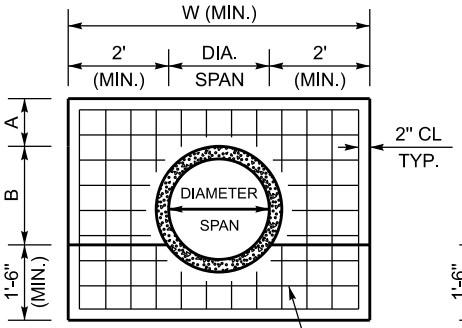
LEGEND
PROPOSED PIPE
PROPOSED DRAINAGE STRUCTURE
PROPOSED PVC FOLD AND FORM LINER
PROPOSED SURFACE

NOTE: These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the Contractor and approved by the Engineer in the field based on conditions discovered at the time of construction.

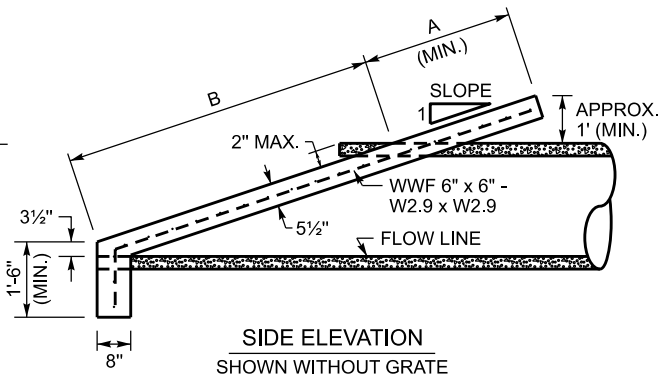


633+45
(2.7° SKEW LT)

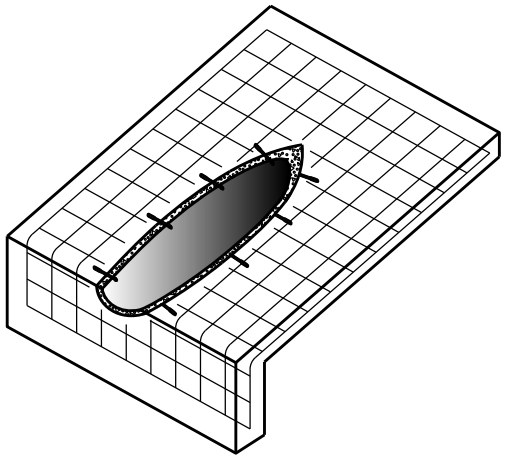
KY 8
PIPE SHEET
STA. 633+45



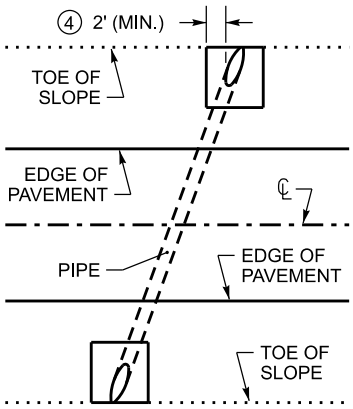
END ELEVATION
SHOWN WITH WOVEN WIRE REINFORCEMENT



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"	0.79	4'	4'-8¾"	5'-3"	0.97	6'	6'-11¾"	5'-3"	1.35	NO
18"	3'	4'-5¾"	5'-6"	0.89	4'	5'-10"	5'-6"	1.10	6'	8'-7¼"	5'-6"	1.54	NO
24"	3'	6'-2½"	6'-0"	1.11	4'	8'-1"	6'-0"	1.38	6'	11'-11"	6'-0"	1.93	SEE ⑨
30"	3'	7'-10¾"	6'-6"	1.33	4'	10'-3¾"	6'-6"	1.67	6'	15'-2½"	6'-6"	2.35	SEE ⑨

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

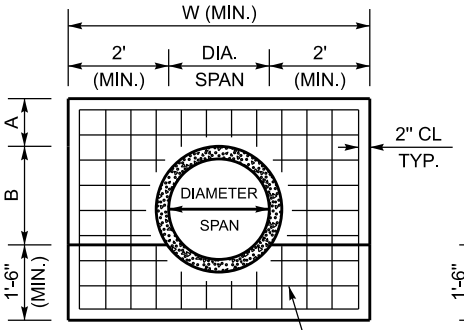
BID ITEM AND UNIT TO BID FOR PIPES BETWEEN 15 - 42 INCHES: SLOPED & MITERED HEADWALL - _ IN EACH
BID ITEM AND UNIT TO BID FOR PIPES LARGER THAN 42 INCHES: HEADWALL (SLOPED & MITERED FOR _ INCH PIPE) EACH

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

NOT TO SCALE

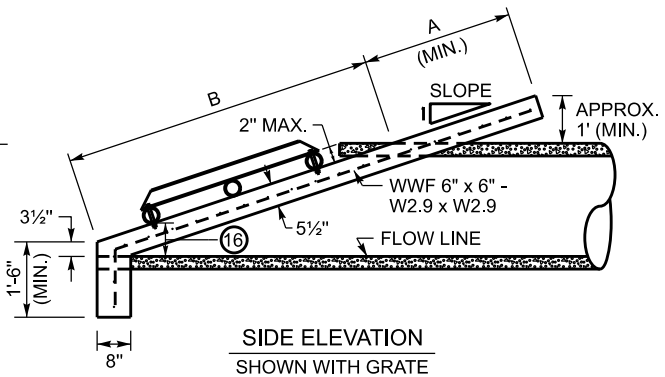
KENTUCKY DEPARTMENT OF HIGHWAYS

SLOPED & MITERED CONCRETE HEADWALL (SHEET 1 OF 2)



END ELEVATION

SHOWN WITH WOVEN WIRE REINFORCEMENT



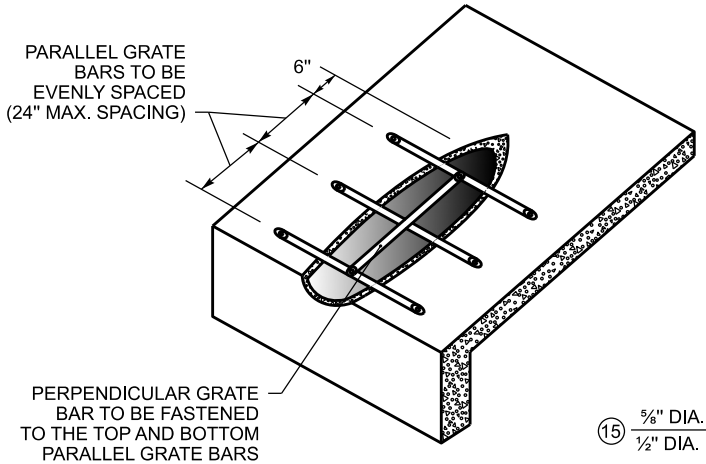
SIDE ELEVATION

SHOWN WITH GRATE

~ NOTES ~

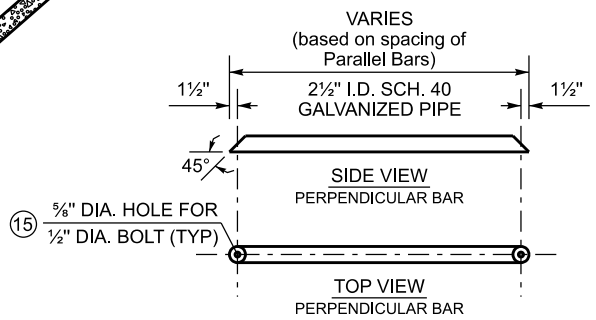
SEE SHEET 1 FOR NOTES 1 THRU 8

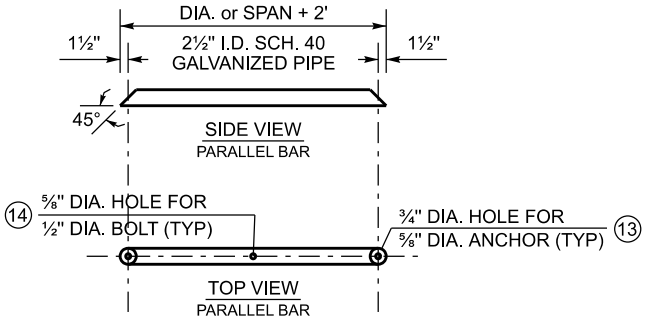
9. THE FOLLOWING SITUATIONS REQUIRE A HEADWALL WITH A GRATE:
-24" DIAMETER PIPE ON GREATER THAN 30° SKEW
-30" DIAMETER PIPE ON GREATER THAN 15° SKEW
-PIPE WITH GREATER THAN 30" DIAMETER.
-ELLIPTICAL PIPE GREATER THAN 24" EQUIVALENT DIAMETER
10. ALL BOLTS AND HARDWARE SHALL BE RUST RESISTANT: ZINC PLATED, 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 ⅝" 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"	1.57	4'	12'-6½"	7'-0"	1.98	6'	18'-6"	7'-0"	2.80	YES
42"	3'	11'-4"	7'-6"	1.83	4'	14'-9¼"	7'-6"	2.31	6'	21'-9½"	7'-6"	3.27	YES
48"	3'	12'-11"	8'-0"	2.07	4'	16'-10"	8'-0"	2.40	6'	24'-10"	8'-0"	3.33	YES

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

BID ITEM AND UNIT TO BID FOR PIPES BETWEEN 15 - 42 INCHES: SLOPED & MITERED HEADWALL - _ IN EACH

BID ITEM AND UNIT TO BID FOR PIPES LARGER THAN 42 INCHES: HEADWALL (SLOPED & MITERED 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)

FIGURE 1

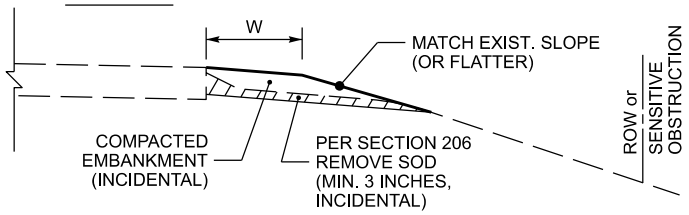


FIGURE 2

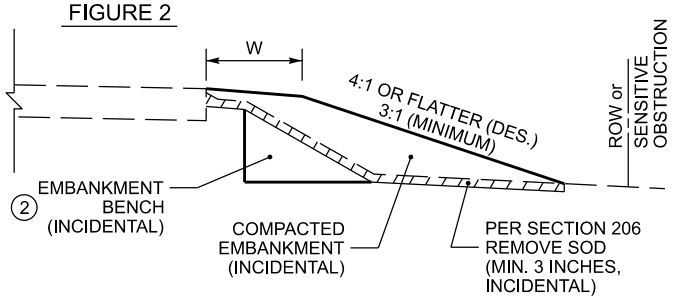


FIGURE 3

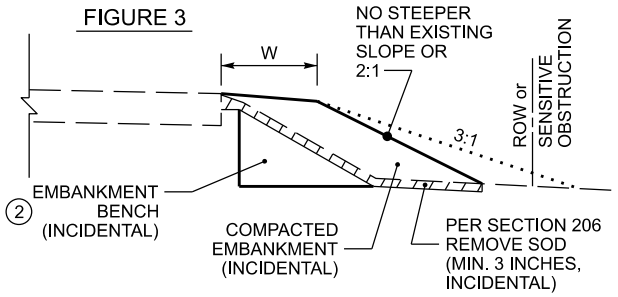


FIGURE 4

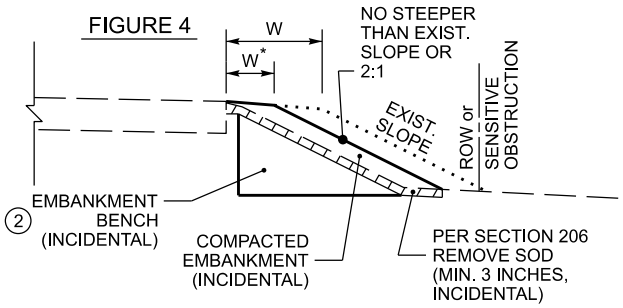


FIGURE 5

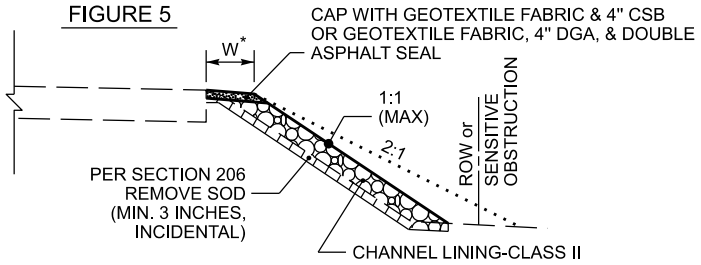
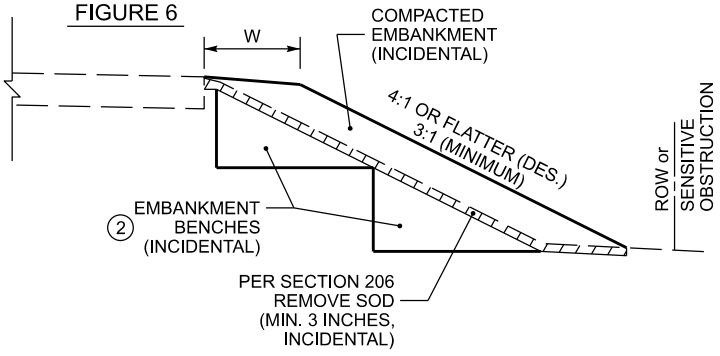


FIGURE 6



~ NOTES ~

BID ITEM AND UNIT TO BID:
26175EC - ROADSIDE REGRADING - LF

1. THE BID ITEM 'ROADSIDE REGRADING' 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 ROADSIDE REGRADING PERFORMED, AND WILL INCLUDE ALL WORK AND INCIDENTALS NECESSARY TO PERFORM THE ROADSIDE REGRADING 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, ROADSIDE REGRADING 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 'ROADSIDE REGRADING'. THE FOLLOWING ARE GUIDELINES FOR EMBANKMENT BENCHING USED IN CONJUNCTION WITH THE BID ITEM 'ROADSIDE REGRADING':
   - 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 CLASS 1 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

ROADSIDE REGRADING
AND EMBANKMENT DETAILS
(SHEET 1 OF 2)

FIGURE 7

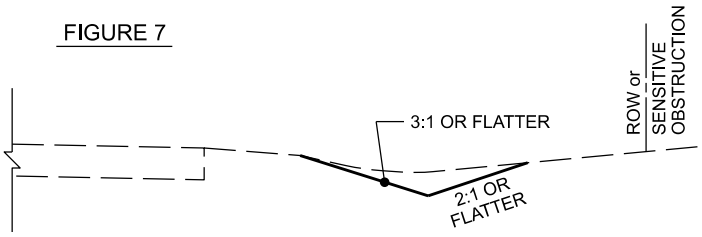


FIGURE 8

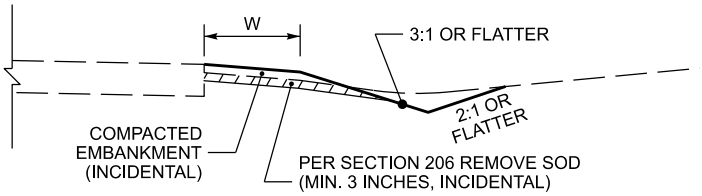


FIGURE 9

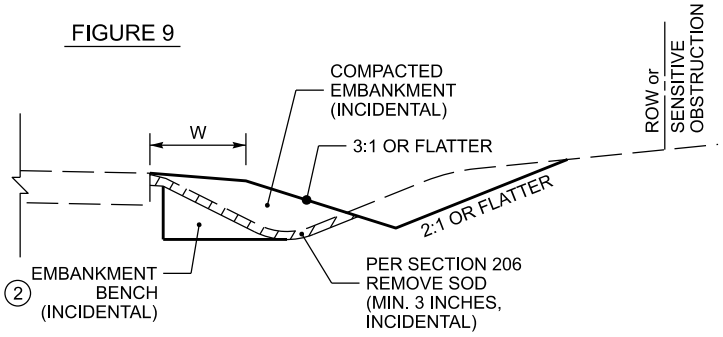


FIGURE 10

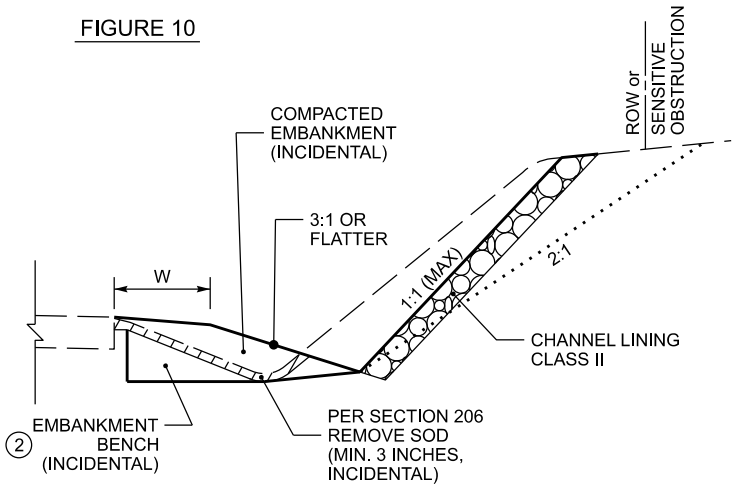
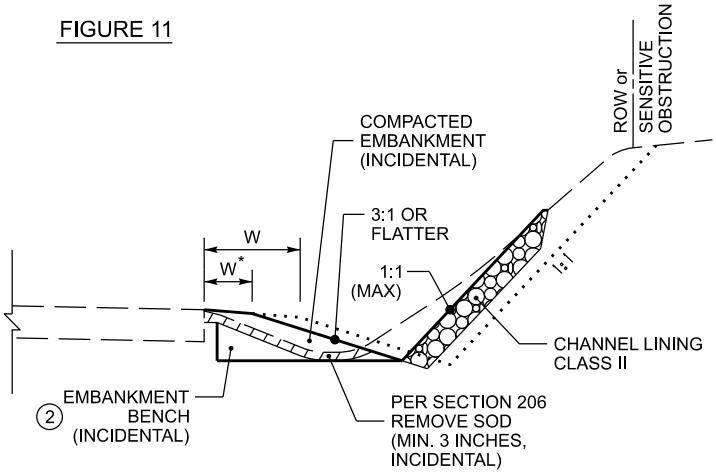


FIGURE 11



~ NOTES ~

BID ITEM AND UNIT TO BID:
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1. THE BID ITEM 'ROADSIDE REGRADING' 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 ROADSIDE REGRADING PERFORMED, AND WILL INCLUDE ALL WORK AND INCIDENTALS NECESSARY TO PERFORM THE ROADSIDE REGRADING 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, ROADSIDE REGRADING 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 'ROADSIDE REGRADING'. THE FOLLOWING ARE GUIDELINES FOR EMBANKMENT BENCHING USED IN CONJUNCTION WITH THE BID ITEM 'ROADSIDE REGRADING':
   - 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.

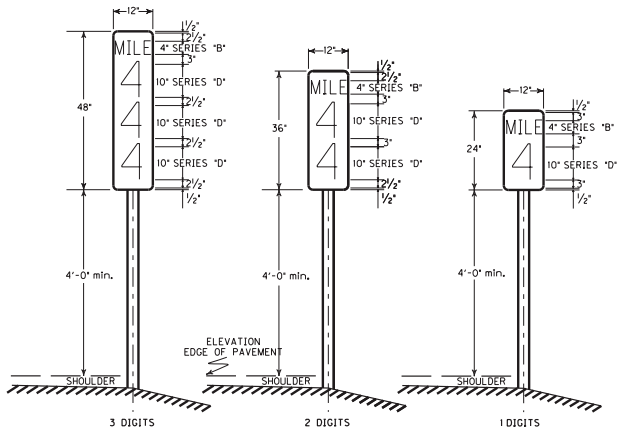
NOT TO SCALE

KENTUCKY
DEPARTMENT OF HIGHWAYS

ROADSIDE REGRADING AND EMBANKMENT DETAILS (SHEET 2 OF 2)

COUNTY OF	ITEM NO.	SHEET NO.

MILEPOST MARKERS



TYPICAL SIGN PANEL DIMENSIONS AND MILEPOST LOCATIONS

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

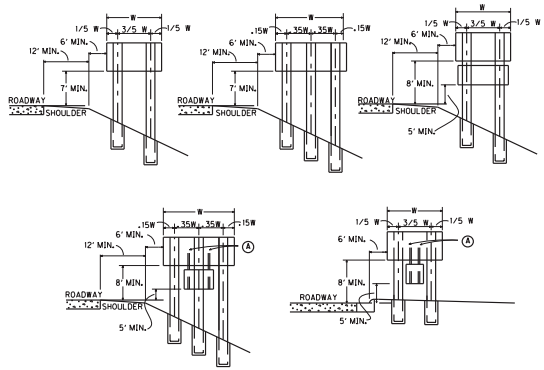
MILE POST NUMBER	STATION NUMBER ✳ ____ BOUND LANE (S)

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:

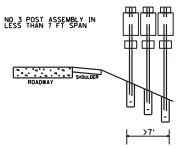
901 WEST MAIN STREET
LOUISVILLE, KY 40202
502-587-6624
270-307-7456

PANEL SIGNS

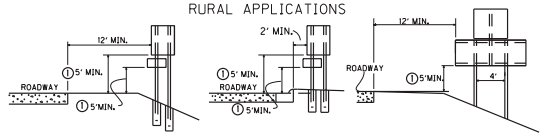


Ⓐ ATTACHMENT OF SECONDARY SIGN TO MAJOR SIGN IS TO BE MADE WITH TWO (2) 3" X 3" X ¾" ANGLES OF SUFFICIENT LENGTH TO EXTEND FROM THE LOWER EDGE OF THE SECONDARY SIGN TO AT LEAST THREE FEET UP THE BACK OF THE MAJOR SIGN. A MINIMUM OF ONE POST CLIP PER FOOT SHALL BE USED IN ATTACHING EXTRUSIONS TO EACH ANGLE.

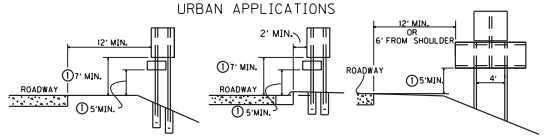
SHEETING SIGNS



RURAL APPLICATIONS



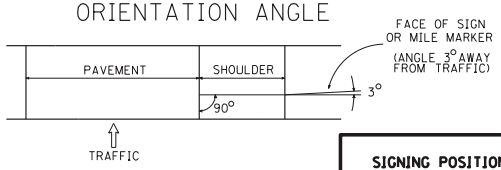
URBAN APPLICATIONS



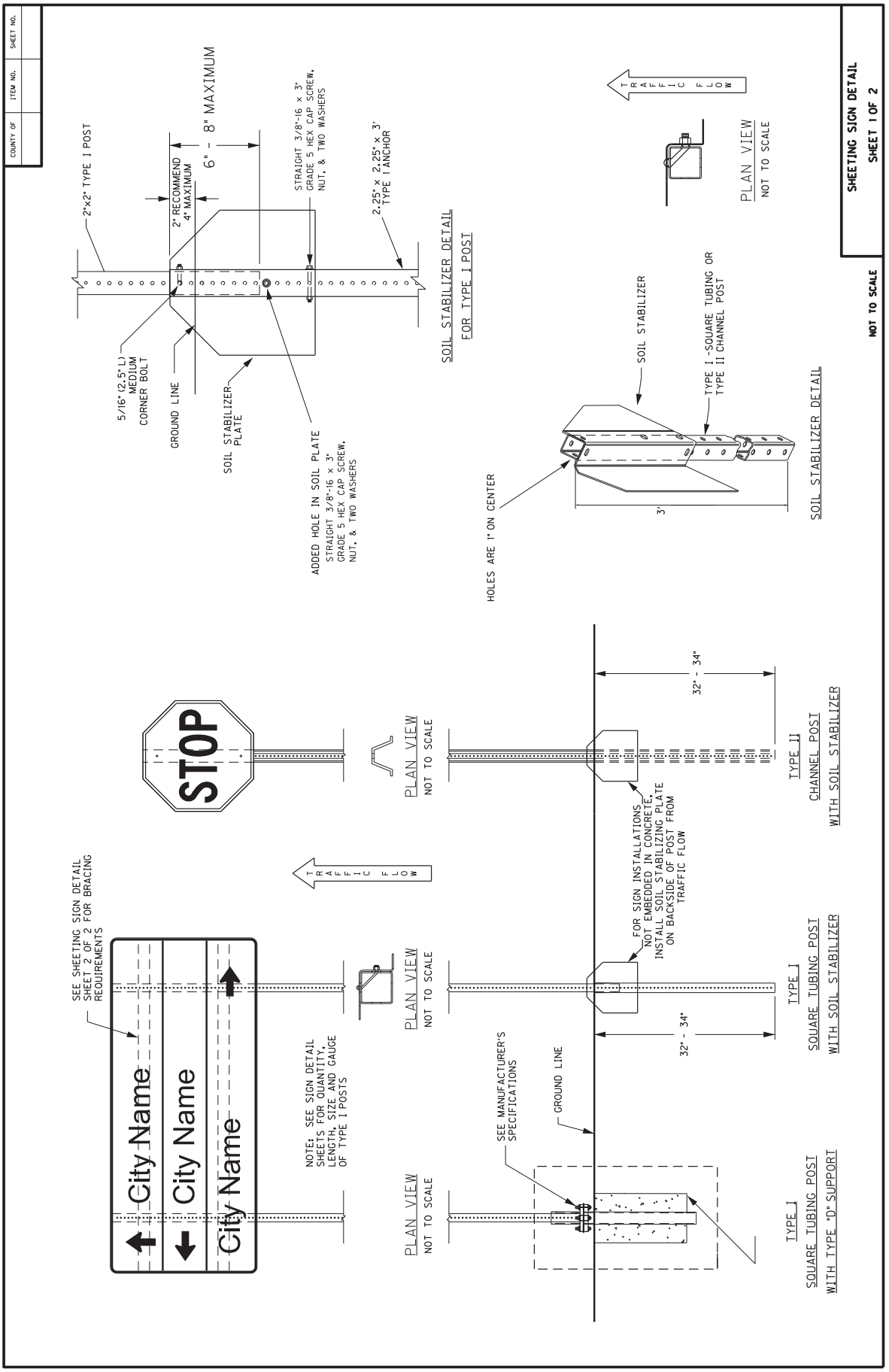
NOTE: SHOULD A SIGN BE LOCATED AT A POINT WHERE GUARDRAIL IS CALLED FOR OR EXISTING, ALL SIGN SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL AND LATERAL OFFSET SHALL BE MEASURED FROM THE GUARDRAIL.

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

ORIENTATION ANGLE

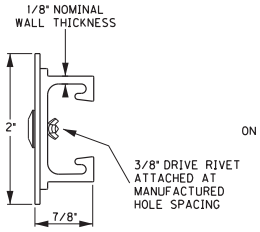


SIGNING POSITIONING DETAIL SHEET

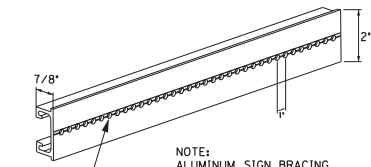

COUNTY OF
ITEM NO.
SHEET NO.
SHEETING SIGN DETAIL
SHEET 1 OF 2
NOT TO SCALE
2"x2" TYPE I POST
2" RECOMMEND 4" MAXIMUM
6" - 8" MAXIMUM
STRAIGHT 3/8"-16 x 3" GRADE 5 HEX CAP SCREW, NUT, & TWO WASHERS
2.25" x 2.25" x 3' TYPE I ANCHOR
5/16" (2.5" L) MEDIUM CORNER BOLT
GROUND LINE
SOIL STABILIZER PLATE
ADDED HOLE IN SOIL PLATE STRAIGHT 3/8"-16 x 3" GRADE 5 HEX CAP SCREW, NUT, & TWO WASHERS
SOIL STABILIZER DETAIL
FOR TYPE I POST
PLAN VIEW
NOT TO SCALE
TRAFFIC FLOW
SOIL STABILIZER
TYPE I -SQUARE TUBING OR TYPE II CHANNEL POST
HOLES ARE 1" ON CENTER
3'
SOIL STABILIZER DETAIL
STOP
SEE SHEETING SIGN DETAIL SHEET 2 OF 2 FOR BRACING REQUIREMENTS
City Name
City Name
City Name
NOTE: SEE SIGN DETAIL SHEETS FOR QUANTITY, LENGTH, SIZE AND GAUGE OF TYPE I POSTS
SEE MANUFACTURER'S SPECIFICATIONS
GROUND LINE
32" - 34"
FOR SIGN INSTALLATIONS NOT EMBEDDED IN CONCRETE, INSTALL SOIL STABILIZING PLATE ON BACKSIDE OF POST FROM TRAFFIC FLOW
TYPE I
SQUARE TUBING POST
WITH TYPE "D" SUPPORT
TYPE I
SQUARE TUBING POST
WITH SOIL STABILIZER
TYPE II
CHANNEL POST
WITH SOIL STABILIZER

COUNTY OF	ITEM NO.	SHEET NO.

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

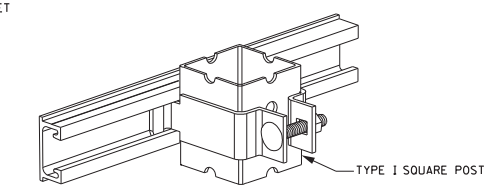


SIGN BRACE



NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE x 7/8" DEPTH x 1/8" NOMINAL WALL THICKNESS

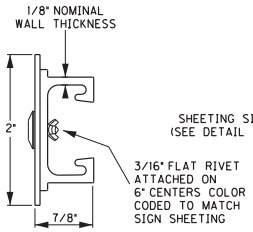
6061-T6 ALUMINUM ALLOY, PUNCHED WITH 3/8" DIAMETER HOLES ON 1" CENTERS FOR ATTACHMENT OF SIGN SUBSTRATE USING 3/8" DRIVE RIVETS



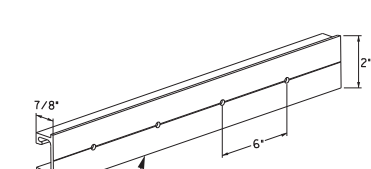
SQUARE POST CLAMP & BRACE

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

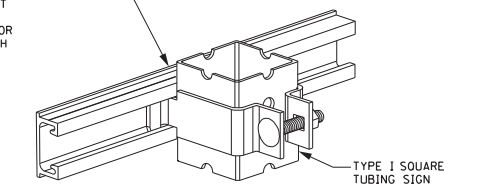


SIGN BRACE

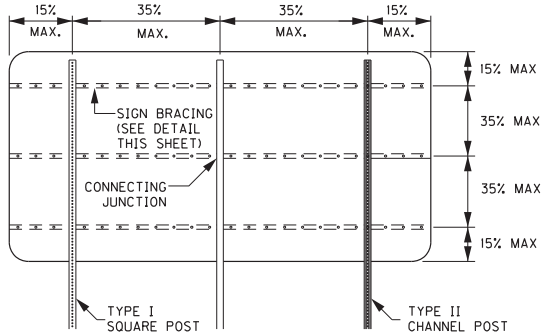


NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE x 7/8" DEPTH x 1/8" NOMINAL WALL THICKNESS

6061-T6 ALUMINUM ALLOY, PUNCHED WITH 3/16" DIAMETER HOLES ON 6" CENTERS FOR ATTACHMENT OF SIGN SUBSTRATE USING RIVETS



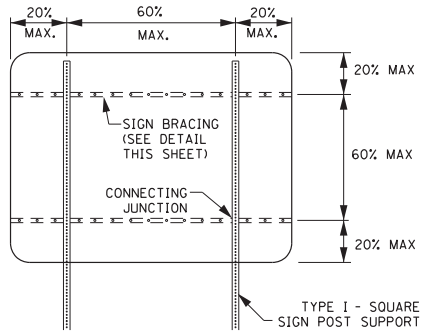
SQUARE POST CLAMP & BRACE



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.

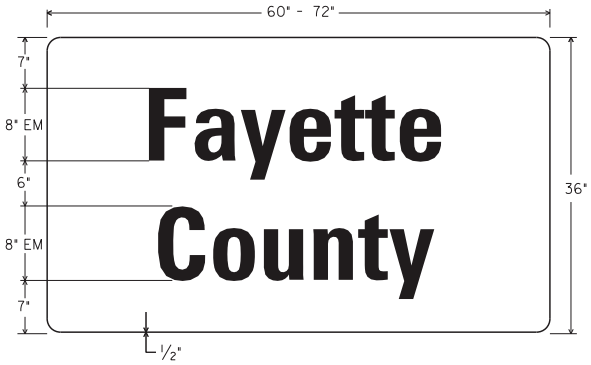
NOT TO SCALE

SHEETING SIGN DETAIL

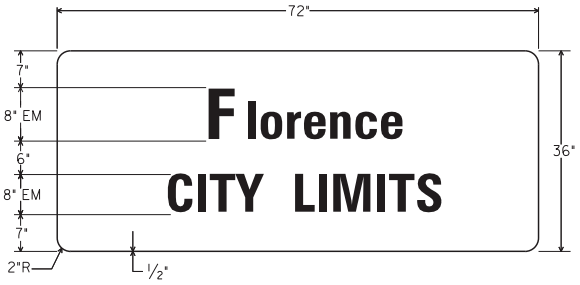
SHEET 2 OF 2

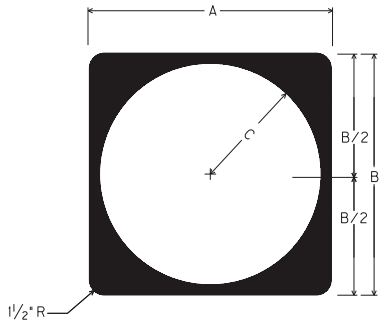
COUNTY OF	ITEM NO.	SHEET NO.

T-1



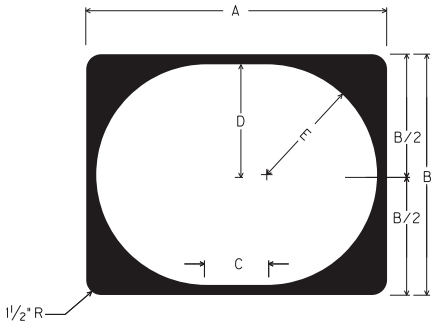
T-2





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

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

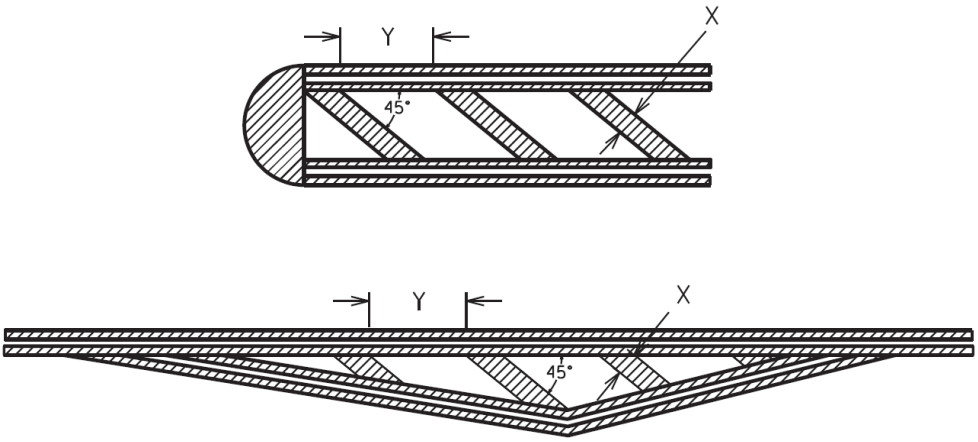
S-1

NOT TO SCALE

TYPICAL SIGNS

CROSS-HATCH PAVEMENT MARKINGS DETAIL

TYPICAL CROSS-HATCH MARKINGS



The cross-hatch pavement marking width (X) and spacing (Y) will usually be specified in the plans. The width to spacing values usually have a ratio of 1:10. If the plans do not specify the width (X) and spacing (Y) the Engineer will provide the contractor with the X and Y values for each cross-hatch installation. If necessary, the Engineer may obtain guidance from the District Traffic Engineer and/or the Division of Traffic Operations.

NOTE: Adjust the width and spacing of the cross-hatch pavement markings as necessary so that a minimum of three (3) cross-hatch markings are placed within the area being marked. The 1:10 ratio between width and spacing values should be maintained as much as possible.

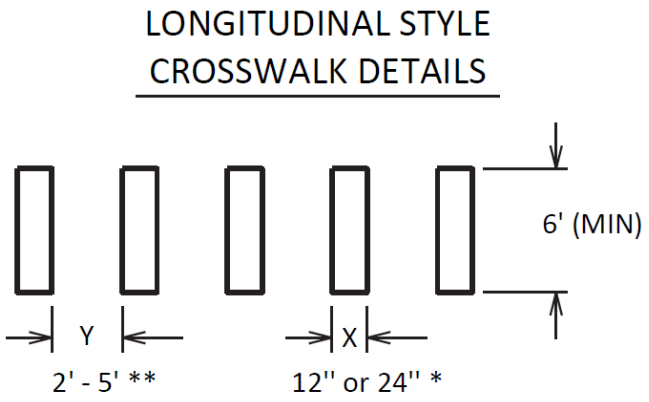
Refer to Section 717 of the Standard Specifications for Road and Bridge Construction, current edition, for more information concerning Material and Construction specifications.

The Department will measure the finished in-place area of Cross-Hatch Pavement Markings in Square Feet. The Department will NOT measure overlaps or the void space between cross-hatching. See Section 717.04 for additional measurement information.

When listed in the bid items, the Department will make payment for the completed and accepted quantities of Cross-Hatch Pavement Markings under the following:

Code	Pay Item	Pay Unit
06569	Pave Marking-Thermo Cross-Hatch	Square Foot
23253ES717	Pave Mark TY 1 Tape Cross Hatch	Square Foot

LONGITUDINAL STYLE CROSSWALK DETAIL



*BARS WILL BE SPECIFIED AS 12'' OR 24''

*THE SPACE BETWEEN BARS IS TYPICALLY TWICE THE WIDTH OF THE BAR. ADJUST LAYOUT OF BARS AND/OR SPACING SO AS TO AVOID THE WHEEL PATHS OF APPROACHING VEHICLES.

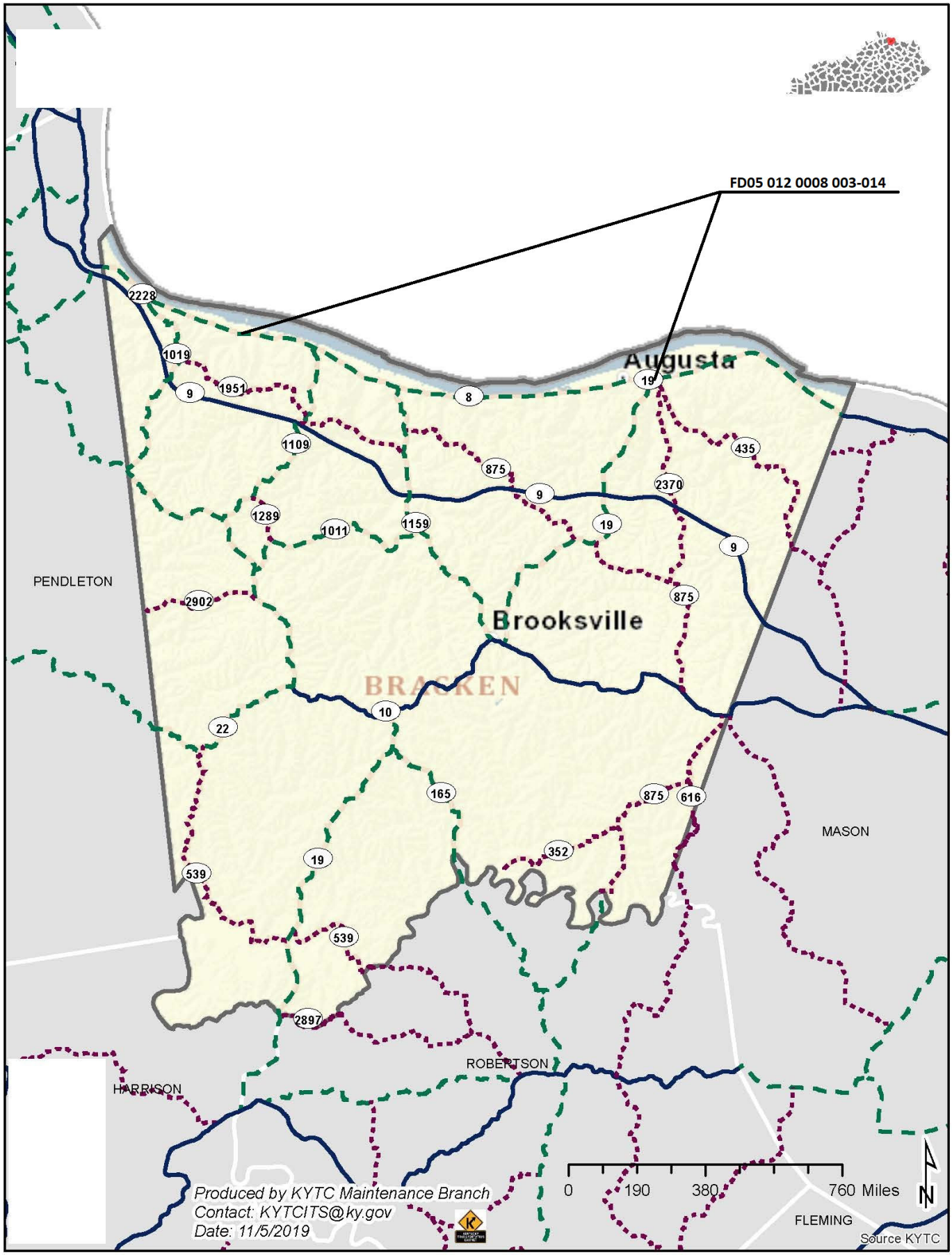
The longitudinal crosswalk bar width (X) will be specified in the bid item descriptions, summary sheets, and/or plans. The spacing (Y) between the longitudinal cross walk bars should be twice the bar width, unless otherwise specified, or otherwise directed by the Engineer:

Refer to Section 717 of the Standard Specifications for Road and Bridge Construction, current edition, for more information concerning Material and Construction specifications.

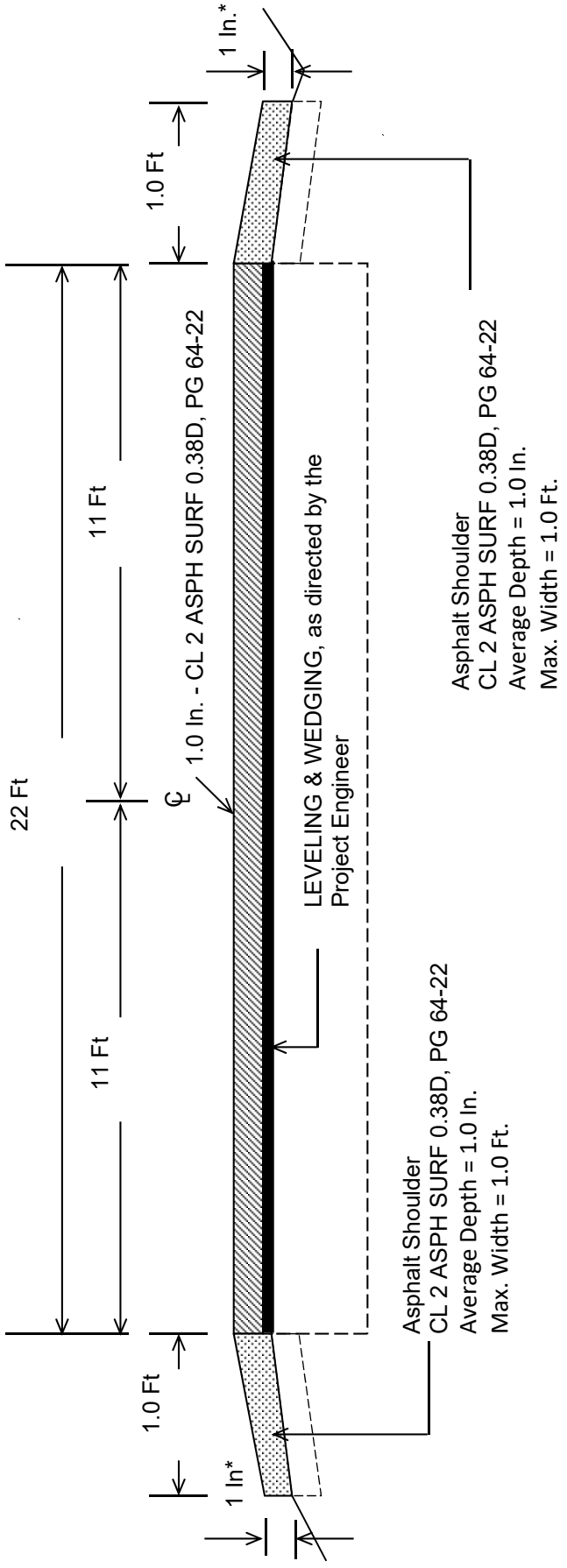
The Department will measure the sum of the lengths of all the longitudinal crosswalk bars in Linear Feet. See Section 717.04 for additional measurement information.

When listed in the bid items, the Department will make payment for the completed and accepted quantities of longitudinal style crosswalks under the following:

Code	Pay Item	Pay Unit
06566	Pave Marking-Thermo X-Walk-12 Inch	Linear Foot
23261EC	Pave Mark-Thermo-X-Walk-24 Inch	Linear Foot
23264ES717	Pave Mark TY 1 Tape X-Walk-12 Inch	Linear Foot
26164ES717	Pave Mark TY 1 Tape X-Walk-24 Inch	Linear Foot


FD05 012 0008 003-014
Augusta
Brooksville
BRACKEN
PENDLETON
MASON
ROBERTSON
HARRISON
FLEMING
2228
1019
9
1951
8
19
1109
875
435
2370
1289
1011
1159
2902
22
10
165
352
539
2897
616
0
190
380
760 Miles
N
Produced by KYTC Maintenance Branch
Contact: KYTCITS@ky.gov
Date: 11/5/2019
Source KYTC

Bracken County
TYPICAL SECTION
FD05 012 0008 003-014
MP's 3.597 TO 12.907,
13.938 TO 13.946

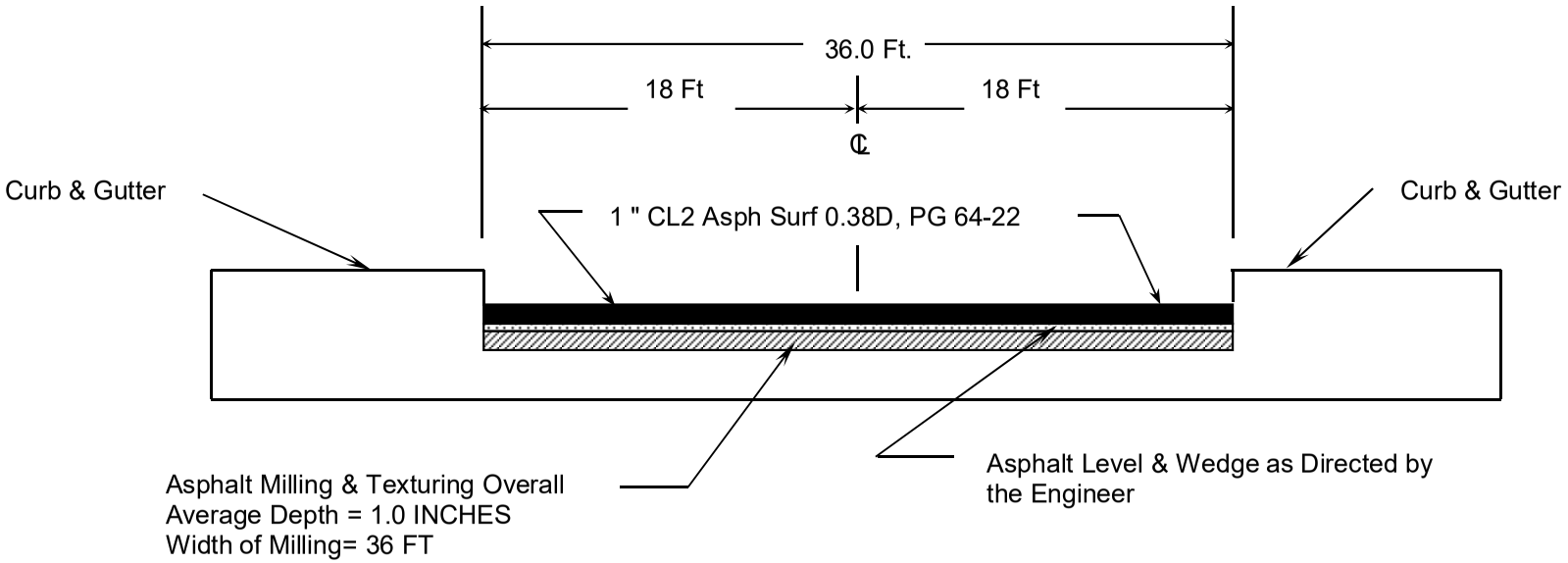


***Where Existing Site Conditions Permit**

TYPICAL SECTION

FD05 012 0008 003-014
BRACKEN COUNTY

MP 12.907 TO MP 13.447
MP 13.758 TO MP 13.828

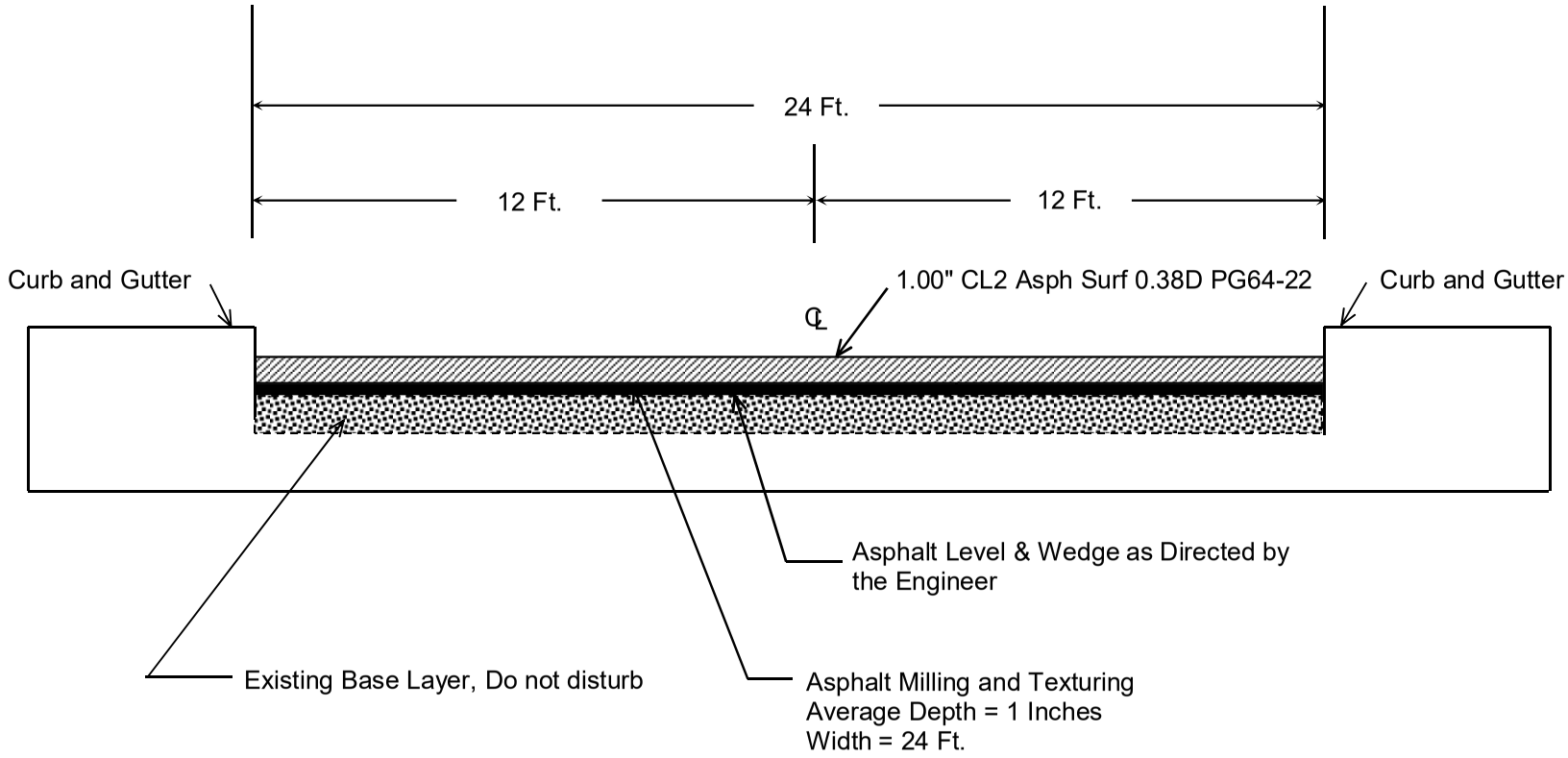


TSPAVECurbGutter
TYPICAL 2

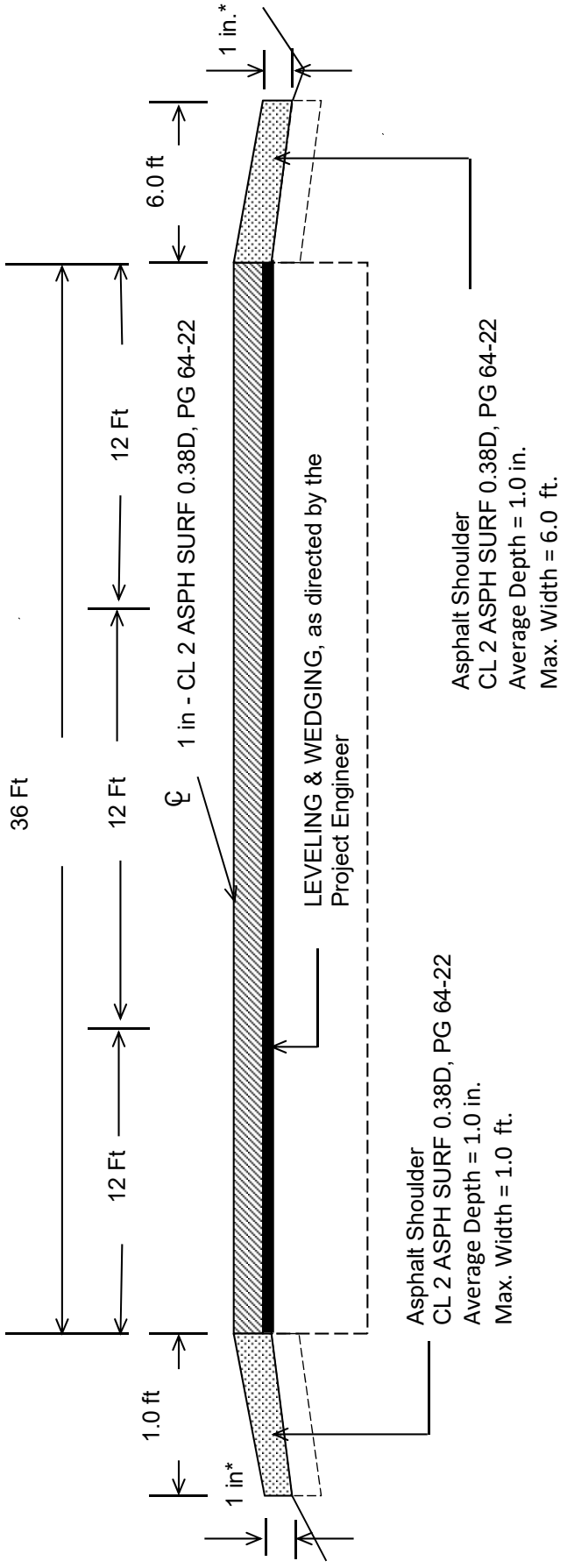
TYPICAL SECTION

BRACKEN COUNTY

FD05 012 0008 003 014
M. P. 13.447 to M.P. 13.758



Bracken County
TYPICAL SECTION
FD05 012 0008 003-014
MILEPOINTS 13.828 TO 13.938



***Where Existing Site Conditions Permit**

Bracken County
SIDEWALK RAMP AND DETECTABLE WARNING SUMMARY
FD05 012 0008 007-014

	INTERSECTION	RAMP TYPE	RAMP SY	DETECTABLE WARNING QUANTITY	DETECTABLE WARNING (NEW) SF	NOTES
13.265	Elizabeth St		9		8	Will need to cut curb to install ramp
13.265	Elizabeth St	1	3		8	Will need to saw cut concrete to excavate
TOTAL			12	0	16	

Milling
Summary
FD05 012 0008 003-014

				Total	1015
Milepoint	Comment	Length	Width	Avg Depth	Tons
3.597		100	24	0.5	7.333
3.950		20	20	0.5	1.222
4.191		100	28	0.5	8.556
4.251		100	28	0.5	8.556
4.26		20	20	0.5	1.222
5.315		20	24	0.5	1.467
6.79		20	20	0.5	1.222
7.038		100	24	0.5	7.333
7.108		100	24	0.5	7.333
7.15		20	25	0.5	1.528
7.16		20	25	0.5	1.528
7.485		20	24	0.5	1.467
7.795		20	30	0.5	1.833
7.826		20	20	0.5	1.222
9.666		20	20	0.5	1.222
10.912		20	20	0.5	1.222
12.193		20	20	0.5	1.222
12.218		260	24	0.5	19.067
12.673		514	24	0.5	37.693
12.717		20	20	0.5	1.222
12.907		2851	36	1	627.220
13.447		1220	24	1	178.933
13.758		370	36	1	81.400
13.828		20	48	0.5	2.933
13.933		20	26	0.5	1.589
13.946		100	24	0.5	7.333

TYPICAL SECTION DEPICTING INSTALLATION OF RECYCLED RAILROAD RAIL PLACED IN DRILLED SOCKET FOR LANDSLIDE CORRECTION

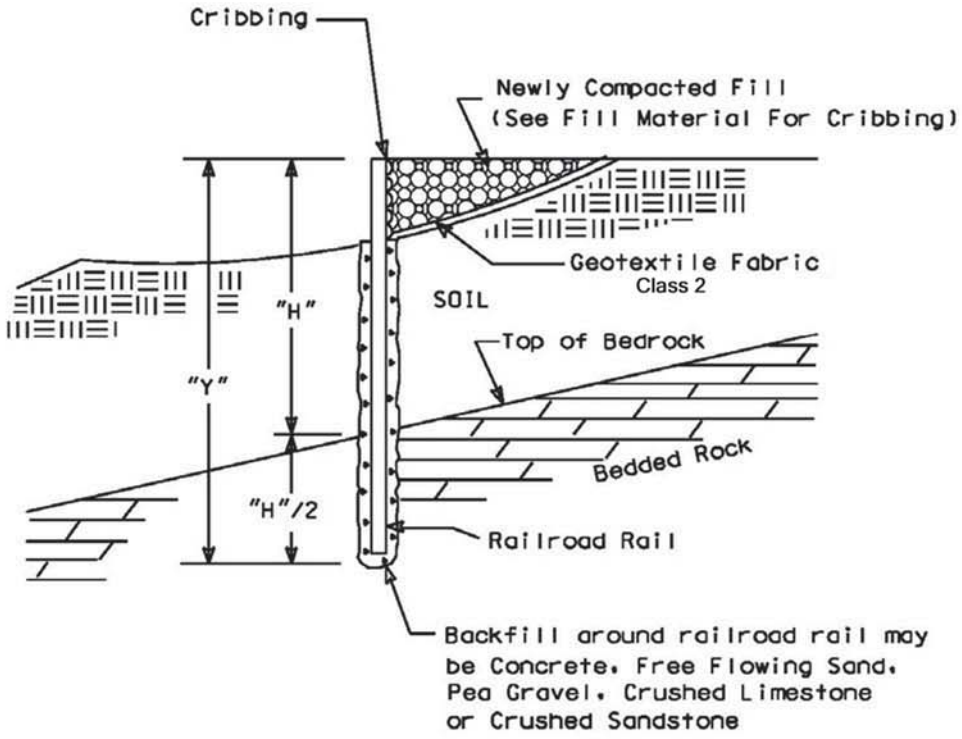
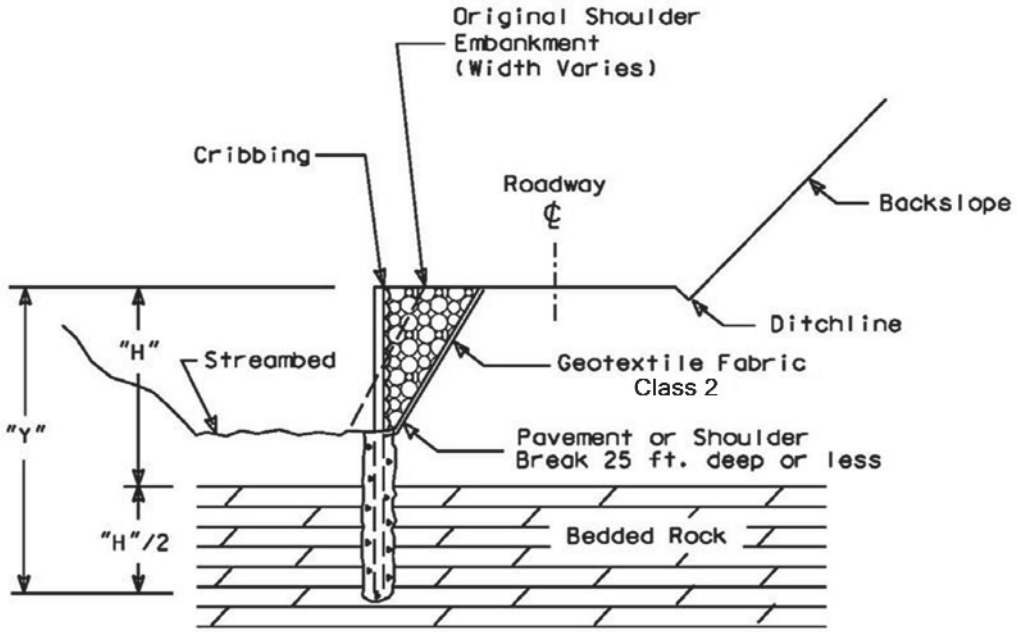


Figure 1

TYPICAL CROSS SECTION OF ROADWAY REPAIRS UTILIZING RECYCLED RAILROAD RAILS IN DRILLED SOCKETS FOR EMBANKMENT EROSION CORRECTION

NOTE:
Spacing from edge to edge of drilled socket : 3 ft. max.



NOTE :
"H"/2 Depth of Rail into bedded rock = 1/3 total length where rock is present.

Figure 2

ALTERNATE SCHEMES FOR INSTALLING RAILROAD RAILS IN DRILLED SOCKETS

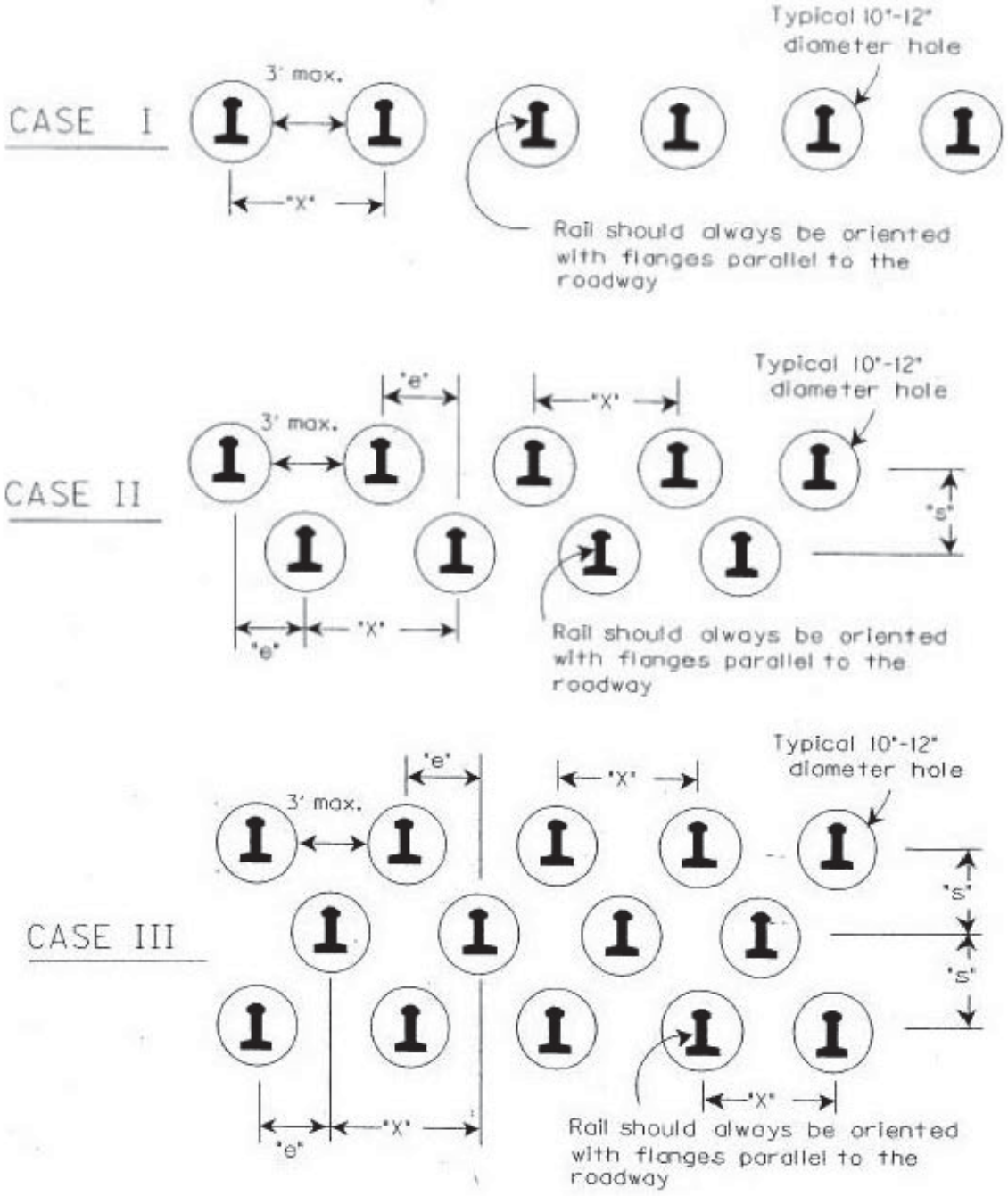


FIGURE 3

DESIGN CHART FOR 130LBS/YD TO 133 LBS/YD RECYCLED (USED) RAILROAD RAILS FACTOR OF SAFETY = 1

Soil Depth to Bedded Rock "H" (Feet)	Minimum Embedment into Bedded Rock "H/2" (Feet)	Total Length of Installed Railroad Rail "Y" (Feet)	Required Number of Rows	Maximum Spacing Between Rails "X" (Max. 48") (Inches)	Effective Spacing Between Rows of Rails "e'" (Inches)
8	4	12	1	48	N/A
9	4.5	13.5	1	48	N/A
10	5	15	1	48	N/A
11	5.5	16.5	1	48	N/A
12	6	18	1	48	N/A
13	6.5	19.5	1	48	N/A
14	7	21	1	32	N/A
15	7.5	22.5	2	48	24
16	8	24	2	44	22
17	8.5	25.5	2	36	18
18	9	27	2	28	14
19	9.5	28.5	2	24	12
20	10	30	3	33	11
21	10.5	31.5	3	28.5	9.5
>21	N/A	N/A	N/A	N/A	N/A

NOTES: 1. REFER TO FIGURES 1, 2, & 3 FOR DIMENSIONS SHOWN
2. FOR SOIL DEPTHS "H" GREATER THAN 21 FEET CONTACT THE ENGINEER.

TABLE I

IDENTIFICATION OF RAILROAD RAIL SIZES

1. Typically classified in units of lbs-per-yard.

   Examples :

   155 lbs/yd, 140 lbs/yd, 132 lbs/yd, 90 lbs/yd

2. Each rail has a classification stamped in web:

   Example :

   112 25 RE OH ILLINOIS USA 1935 IIIIII

   Weight in lbs/yd

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_____

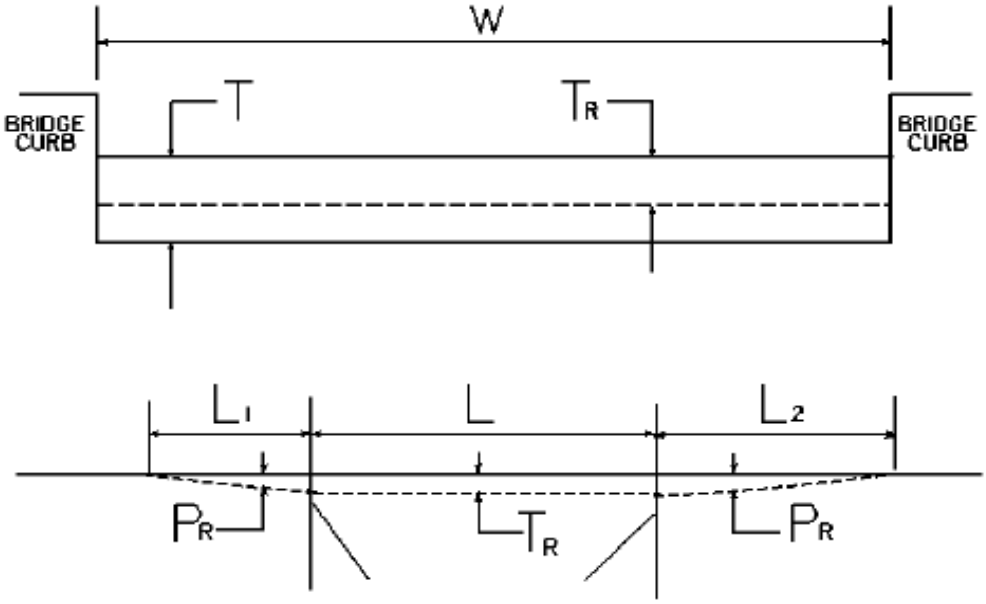
Printed Contractor's Representative_____& Date_____

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: _____

BRIDGE DETAIL FOR PAVING PROJECT – FD05 012 0008 003-014

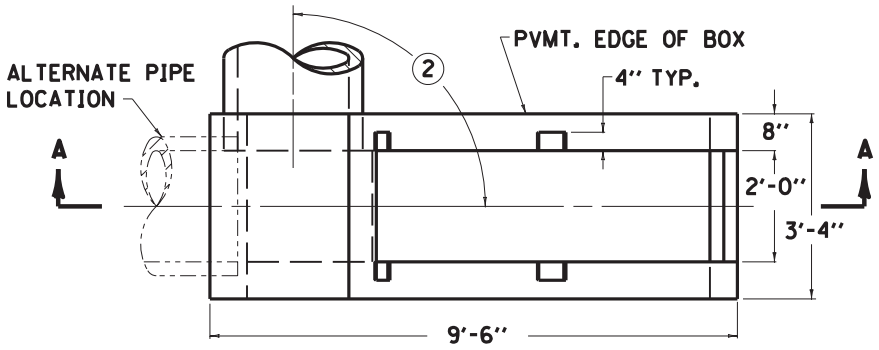


W = bridge width curb to curb
T = thickness of existing asphalt overlay
L = length of bridge
L_1 & L_2 = length of approach pavement to be removed
T_R = thickness to be removed and replaced on bridge
P_R = thickness to be removed and replaced on pavement
Note: L_1 & L_2 lengths shall be determined by using a transition rate of 100 ft/in of thickness

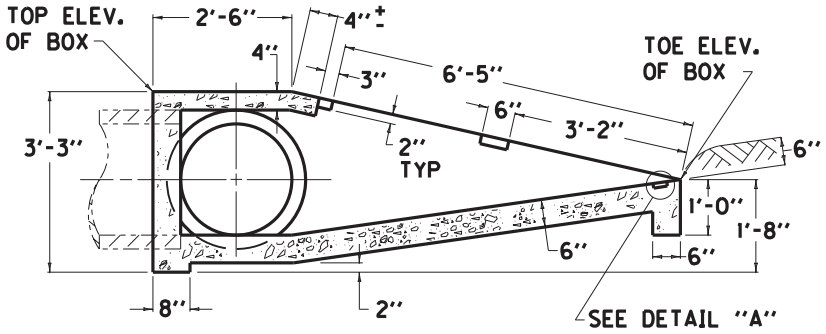
Route	Bridge No.	MP	W (ft)	T (in)	L_1 (ft)	L_2 (ft)	T_R (in)	L (ft)	P_R (in)
KY 8	B00033N	4.218	26.000	0.000	100.000	100.000	0.000	332.60	1.000
KY 8	B00006N	7.070	26.000	0.000	100.000	100.000	0.000	365.20	1.000
KY 8	B00007N	12.218	24.000	1.000	100.000	100.000	1.000	30.000	1.000
KY 8	B00019N	12.673	24.000	1.000	100.000	100.000	1.000	30.000	1.000
KY 8	B00008N	13.946	24.000	0.000	100.000	0.000	0.000	157.00	1.000

01/01/2009

COUNTY OF	ITEM NO.	SHEET NO.



PLAN VIEW



SECTION A-A

NOTES

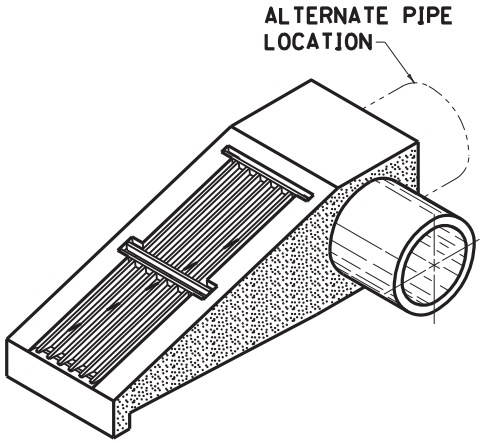
ITEM CODE	BID ITEM	UNIT
1726	SAFETY BOX INLET-18 INCH SDB-1	EACH
1727	SAFETY BOX INLET-24 INCH SDB-1	EACH

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.

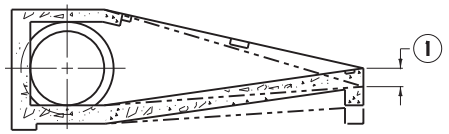
(1) TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.

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

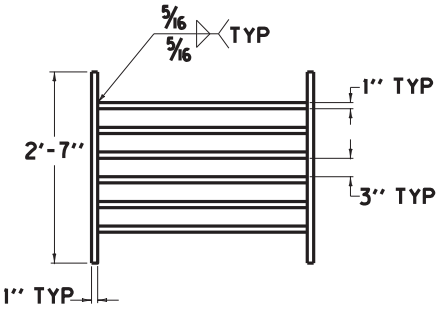
APPROXIMATE QUANTITIES			
CLASS "A" CONC.	GRATE	LBS. STRUCTURAL STEEL	
CUBIC YARDS	NUMBER	EACH GRATE	TOTAL POUNDS
1.44	1	145	298
	2	153	



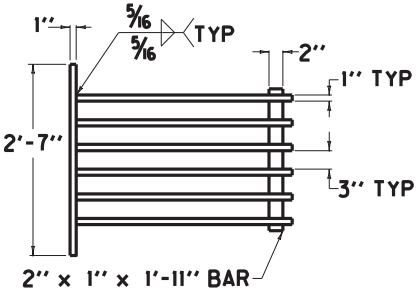
ISOMETRIC VIEW



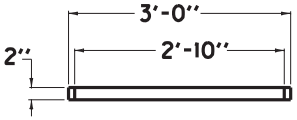
SECTIONAL VIEW



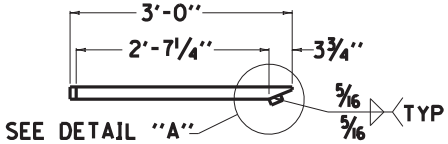
GRATE NO. 1
PLAN VIEW



GRATE NO. 2
PLAN VIEW



GRATE NO. 1
SIDE ELEVATION



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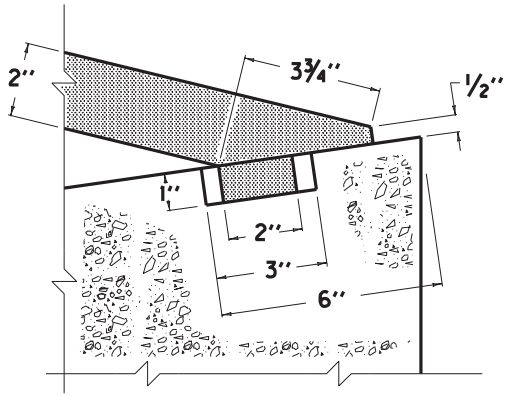
SIDE ELEVATION



DETAIL "A"

KENTUCKY
DEPARTMENT OF HIGHWAYS

SAFETY TYPE BOX INLET (18" OR 24")

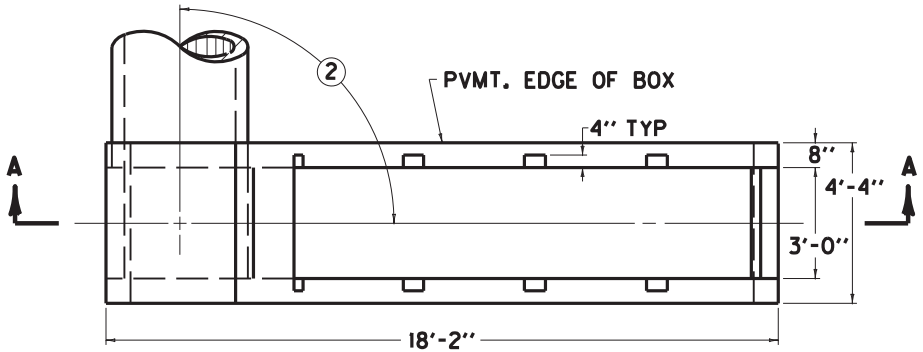
APPROVED _____ PROJECT ENGINEER

06-04-2008 DATE

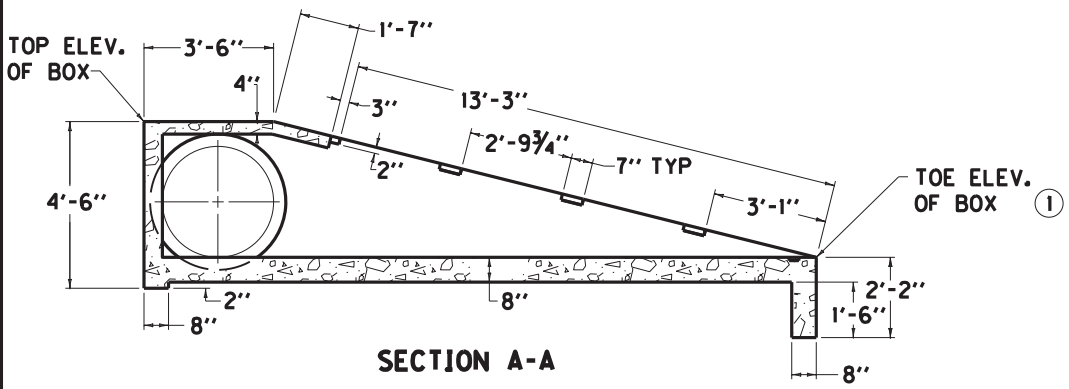
Contract ID: 224455
Page 204 of 228

BRACKEN COUNTY
012GR22T034-FD04 & FD05

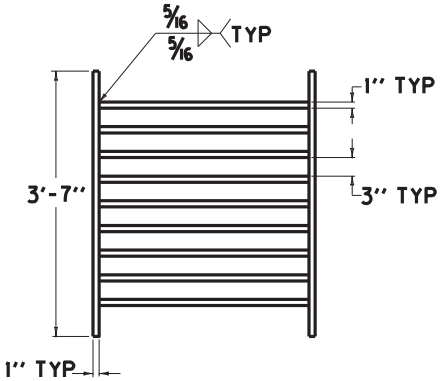
COUNTY OF	ITEM NO.	SHEET NO.



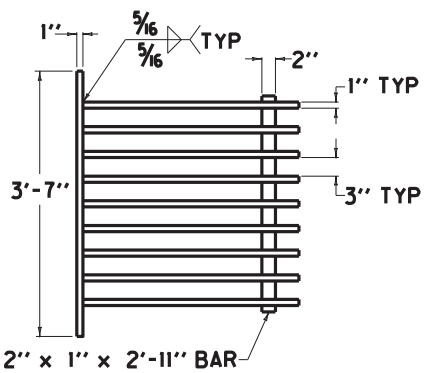
PLAN VIEW



SECTION A-A



GRATE NO. 1
PLAN VIEW



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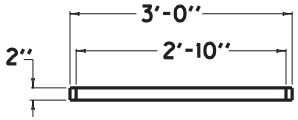
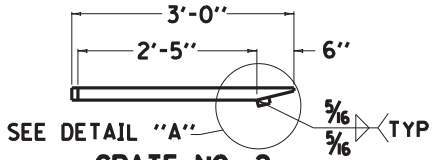
PLAN VIEW



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

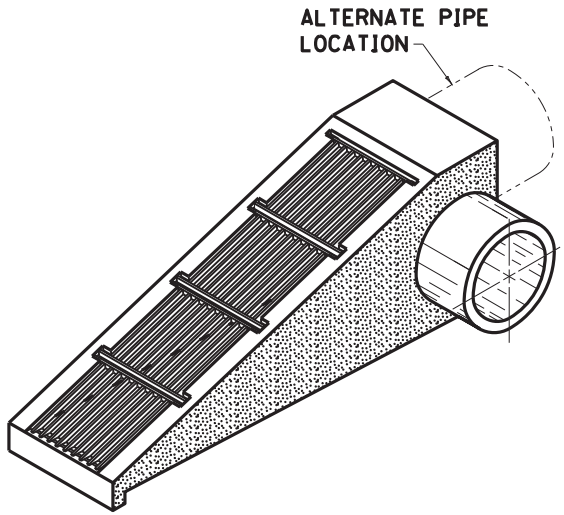
THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.

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

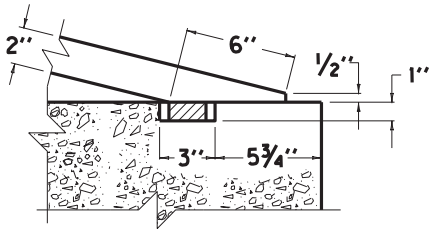
(2) SKEW OF BOX SHALL VARY TO FIT EXISTING FIELD CONDITIONS.

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

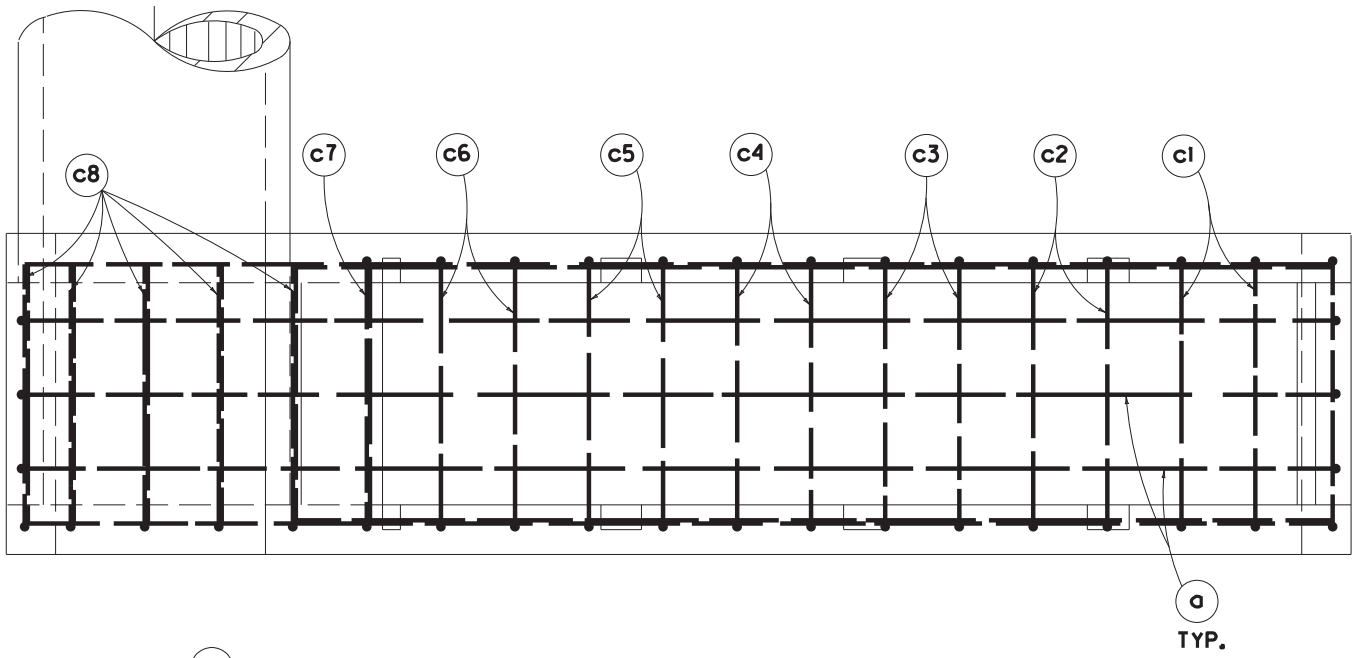
SAFETY TYPE
BOX INLET
(36")

APPROVED _____ PROJECT ENGINEER _____ DATE 06-04-2008

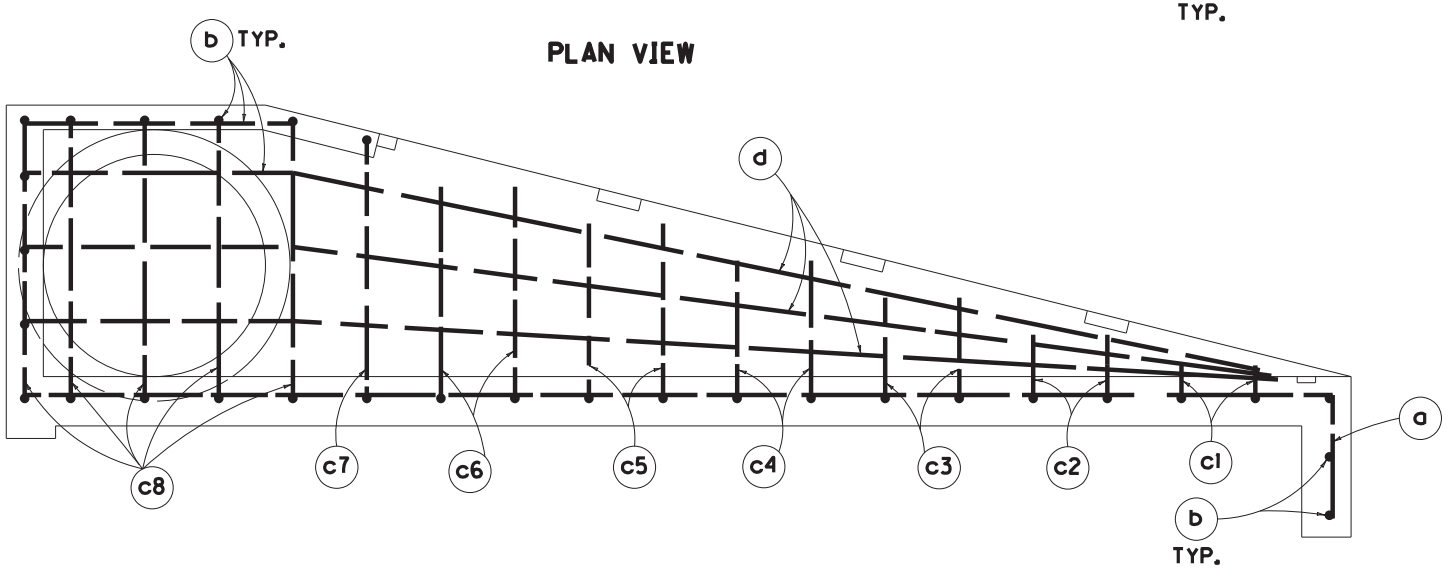
BRACKEN COUNTY
012GR22T034-FD04 & FD05

Contract ID: 224455
Page 195 of 228

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

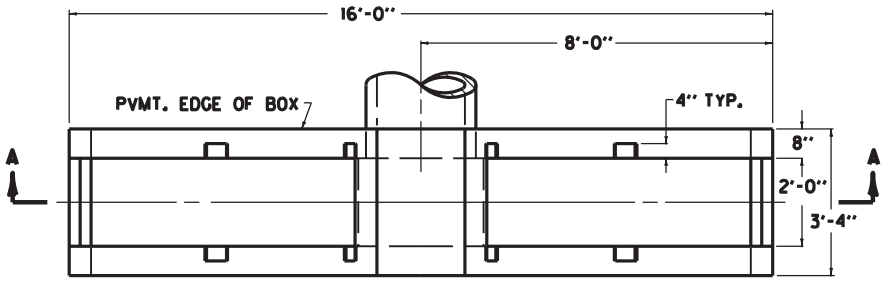
BILL OF REINFORCEMENT SAFETY TYPE BOX INLET (36")

APPROVED _____ 06-04-2008
PROJECT ENGINEER DATE

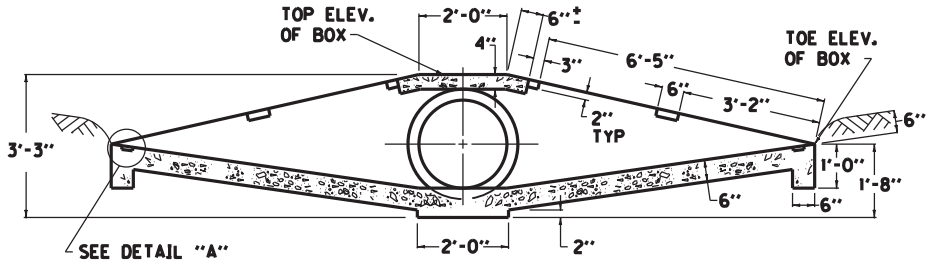
BRACKEN COUNTY
012GR22T034-FD04 & FD08

Contract ID: 224455
Page 106 of 228

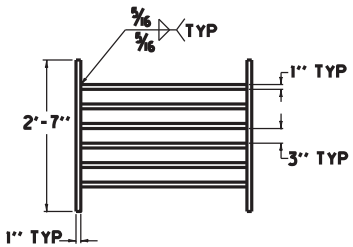
COUNTY OF	ITEM NO.	SHEET



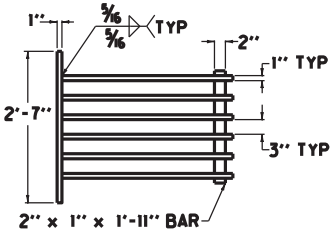
PLAN VIEW



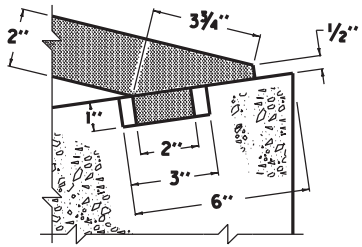
SECTION A-A



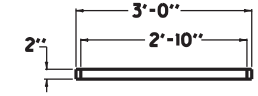
GRATE NO. 1
PLAN VIEW



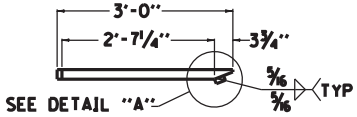
GRATE NO. 2
PLAN VIEW



DETAIL "A"



GRATE NO. 1
SIDE ELEVATION



GRATE NO. 2
SIDE ELEVATION

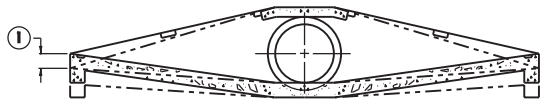
NOTES

ITEM CODE	BID ITEM	UNIT
1728	SAFETY BOX INLET-18 IN DBL SDB-5	EACH
1729	SAFETY BOX INLET-24 IN DBL SDB-5	EACH

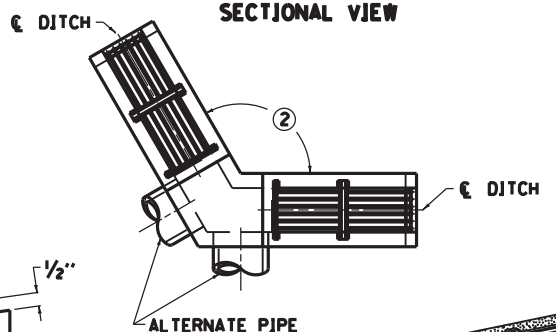
THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.

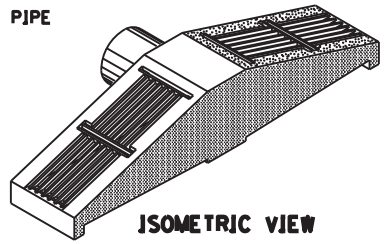
(1) TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.

(2) ANGLE BETWEEN BOX WALLS MAY VARY TO FIT EXISTING FIELD CONDITIONS.



SECTIONAL VIEW





ISOMETRIC VIEW

APPROXIMATE QUANTITIES			
CLASS "A" CONC.	GRATE	LBS. STRUCTURAL STEEL	
CUBIC YARDS	NUMBER	EACH GRATE	TOTAL POUNDS
2.07	1	145	596
	2	153	

N/A

DBL SAFETY BOX INLET DETAIL SHEET

MicroStation v8.11.7.443
E-SHEET NAME: ——
USER: Patrick.Stone
DATE PLOTTED: September 24, 2013
FILE NAME: C:\USERS\PATRICK.STONE\APPDATA\LOCAL\MICROSOFT\WINDOWS\TEMPORARY INTERNET FILES\CONTENT.OUTLOOK\Y0843LNA\SAFETY BOX.DGN

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).

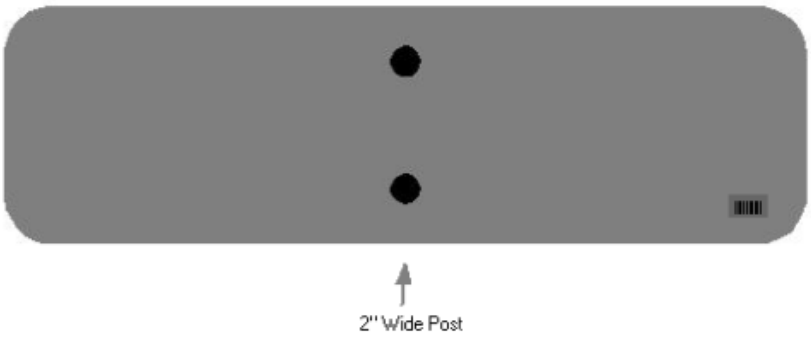
The installation of the permanent sign will be measured in accordance to Section 715.

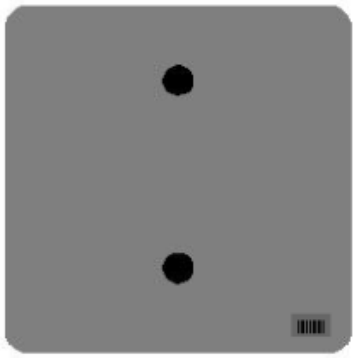
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24631EC	Barcode Sign Inventory	Each

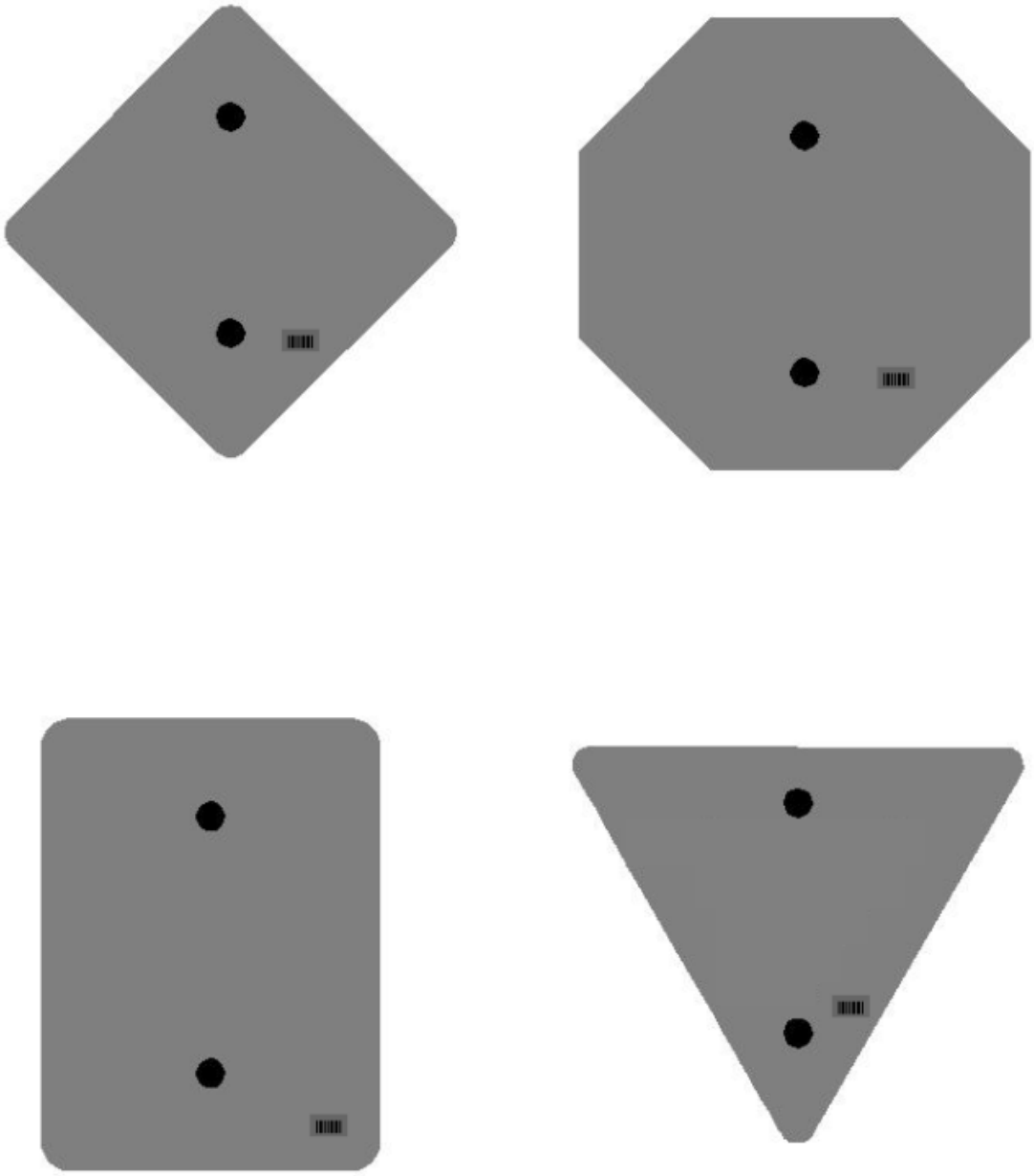
The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment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

One Sign Post

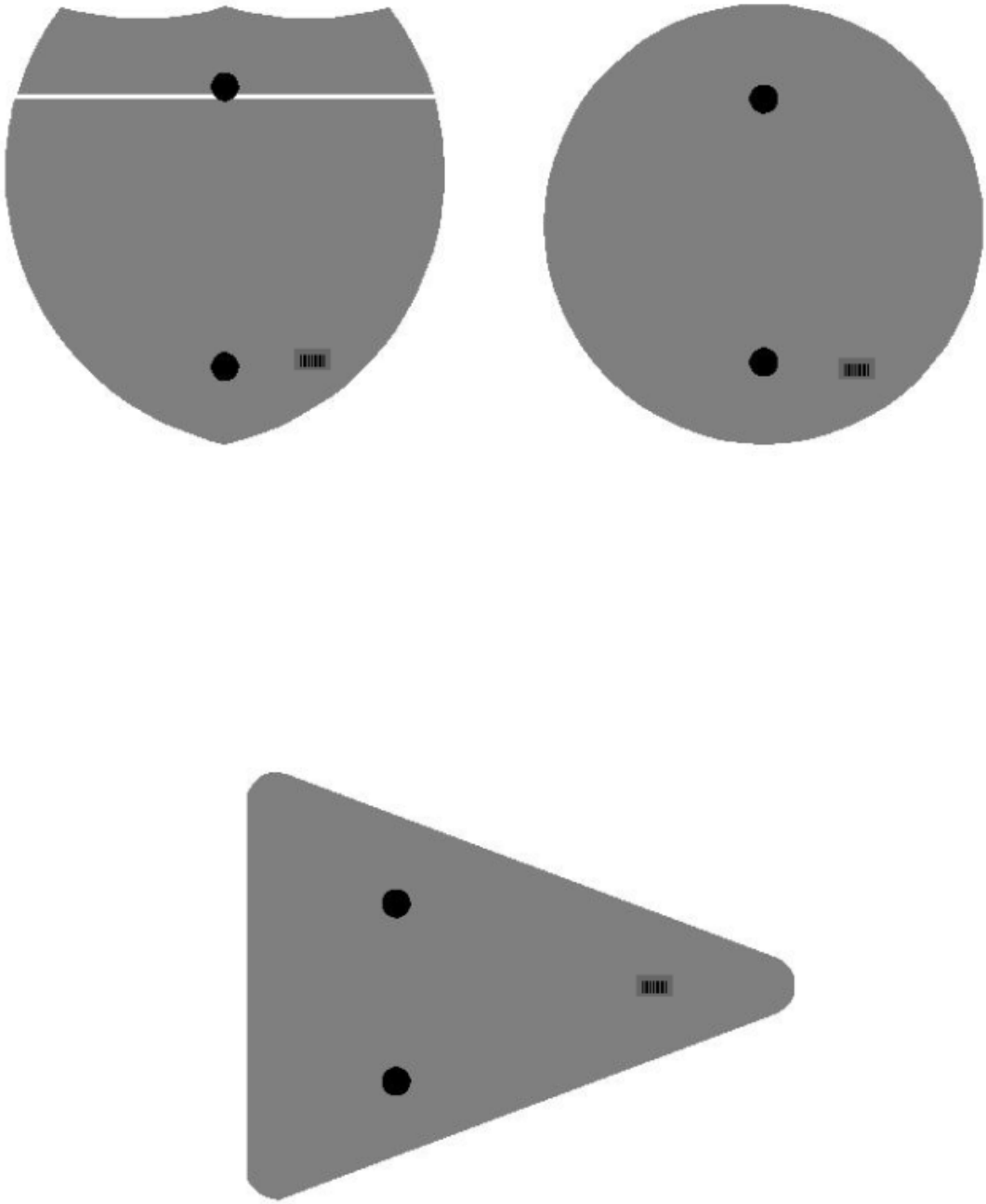




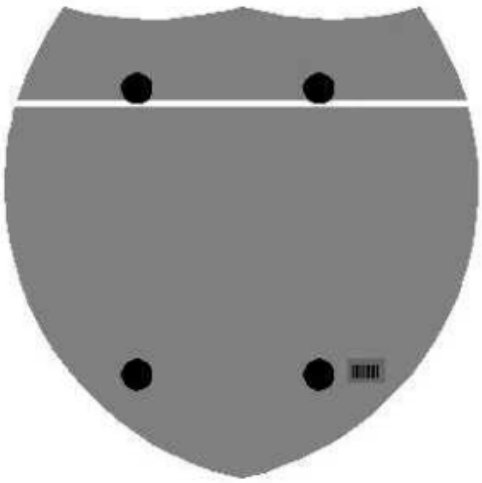
One Sign Post



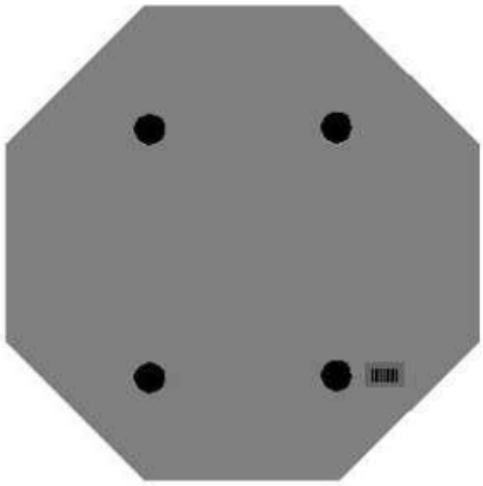
One Sign Post



Double Sign Post

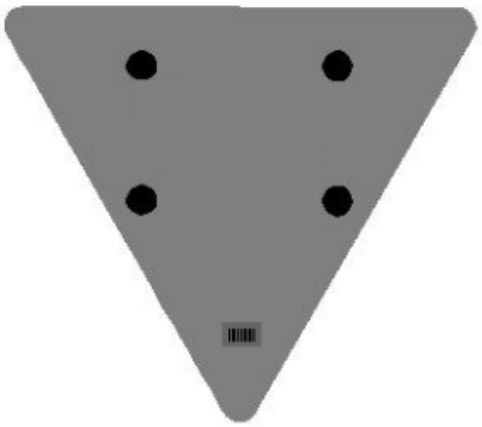


Interstate
Shield



48" Stop

2 Post Signs



2020 STANDARD DRAWINGS THAT APPLY – FD04 Safety and FD05 Resurfacing

ROADWAY

~ BARRIERS ~

GUARDRAIL AND BRIDGE END DRAINAGE

GUARDRAIL CONNECTORS TO BRIDGE ENDS

TYPICAL BARRIER INSTALLATIONS

GUARDRAIL HARDWARE

~ DRAINAGE ~

TYPICAL DRAINAGE INSTALLATIONS

PERFORATED PIPE

MISCELLANEOUS DRAINAGE

Standard Drawings That Apply
Page 2 of 2

~ GENERAL ~

CURVE WIDENING AND SUPERELEVATION

CURVE WIDENING AND SUPERELEVATION TRANSITIONS RGS-001-07
SUPERELEVATION FOR MULTILANE PAVEMENTS RGS-002-06

MISCELLANEOUS STANDARDS

MISCELLANEOUS STANDARDS RGX-001-06
DETECTABLE WARNINGS RGX-040-03
TYPE D BREAKAWAY SIGN SUPPORT RGX-065-02

~ PAVEMENT ~

MEDIANS, CURBS, APPROACHES, ENTRANCES, ETC.

APPROACHES, ENTRANCES, AND MAIL BOX TURNOUT RPM-110-07
CONCRETE ENTRANCE PAVEMENT AND SIDEWALK RPM-150-08
CONCRETE ENTRANCE PAVEMENT AND SIDEWALK RPM-152-08
SIDEWALK RAMPS RPM-170-09

TRAFFIC

~ PERMANENT ~

MARKERS

PAVEMENT STRIPING DETAILS FOR TWO LANE TWO WAY ROADWAYS TPM-175
TYPICAL MARKINGS AT SIGNALIZED INTERSECTIONS TPM-203
TYPICAL MARKINGS FOR ISLANDS AND MEDIANS TPM-205
TYPICAL MARKINGS FOR TURN LANES PAGE 1 ..... TPM-206

RUMBLE STRIPS

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

STRIPING OPERATIONS

MOBILE OPERATION FOR PAINT STRIPING CASE I TTS-100-02
MOBILE OPERATION FOR PAINT STRIPING CASE II TTS-105-02
MOBILE OPERATION FOR DURABLE STRIPING CASE III TTS-130-02
MOBILE OPERATION FOR DURABLE STRIPING CASE IV TTS-135-02

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

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

I. APPLICATION

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

224455

PROPOSAL BID ITEMS

Report Date 11/4/22

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	360.00	TON		$	
0020	00080		CRUSHED AGGREGATE SIZE NO 23	4,060.00	TON		$	
0030	00190		LEVELING & WEDGING PG64-22	1,537.00	TON		$	
0040	00203		CL2 ASPH BASE 1.50D PG64-22	2,939.00	TON		$	
0050	00301		CL2 ASPH SURF 0.38D PG64-22	8,320.00	TON		$	
0060	00356		ASPHALT MATERIAL FOR TACK	72.00	TON		$	
0070	02562		TEMPORARY SIGNS	430.00	SQFT		$	
0080	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
0090	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		$	
0100	02677		ASPHALT PAVE MILLING & TEXTURING	1,479.00	TON		$	
0110	02720		SIDEWALK-4 IN CONCRETE	12.00	SQYD		$	
0120	06510		PAVE STRIPING-TEMP PAINT-4 IN	65,112.00	LF		$	
0130	06515		PAVE STRIPING-PERM PAINT-6 IN	186,750.00	LF		$	
0140	06517		PAVE STRIPING-PERM PAINT-12 IN	150.00	LF		$	
0150	06565		PAVE MARKING-THERMO X-WALK-6 IN	72.00	LF		$	
0160	06568		PAVE MARKING-THERMO STOP BAR-24IN	73.00	LF		$	
0170	06569		PAVE MARKING-THERMO CROSS-HATCH	113.00	SQFT		$	
0180	06574		PAVE MARKING-THERMO CURV ARROW	4.00	EACH		$	
0190	10020NS		FUEL ADJUSTMENT	5,091.00	DOLL	$1.00	$	$5,091.00
0200	10030NS		ASPHALT ADJUSTMENT	12,460.00	DOLL	$1.00	$	$12,460.00
0210	23158ES505		DETECTABLE WARNINGS (NEW)	16.00	SQFT		$	
0220	24970EC		ASPHALT MATERIAL FOR TACK NON-TRACKING	3.02	TON		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0230	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	104.00	EACH		$	
0240	02159		TEMP DITCH	27,354.00	LF		$	
0250	02160		CLEAN TEMP DITCH	13,677.00	LF		$	
0260	02351		GUARDRAIL-STEEL W BEAM-S FACE	4,988.65	LF		$	
0270	02355		GUARDRAIL-STEEL W BEAM-S FACE A	50.00	LF		$	
0280	02360		GUARDRAIL TERMINAL SECTION NO 1	7.00	EACH		$	
0290	02367		GUARDRAIL END TREATMENT TYPE 1	2.00	EACH		$	
0300	02371		GUARDRAIL END TREATMENT TYPE 7	1.00	EACH		$	
0310	02378		GUARDRAIL CONNECTOR TO BRIDGE END TY D	2.00	EACH		$	
0320	02381		REMOVE GUARDRAIL	4,900.00	LF		$	
0330	02391		GUARDRAIL END TREATMENT TYPE 4A	2.00	EACH		$	
0340	02562		TEMPORARY SIGNS	300.00	SQFT		$	
0350	02603		FABRIC-GEOTEXTILE CLASS 2	3,922.00	SQYD		$	
0360	02650		MAINTAIN & CONTROL TRAFFIC (BRACKEN KY 8 FD04)	1.00	LS		$	
0370	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		$	

PROPOSAL BID ITEMS

224455

Report Date 11/4/22

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0380	02676		MOBILIZATION FOR MILL & TEXT (BRACKEN KY 8 FD04)	1.00	LS		$	
0390	02701		TEMP SILT FENCE	27,354.00	LF		$	
0400	02703		SILT TRAP TYPE A	5.00	EACH		$	
0410	02704		SILT TRAP TYPE B	5.00	EACH		$	
0420	02705		SILT TRAP TYPE C	5.00	EACH		$	
0430	02706		CLEAN SILT TRAP TYPE A	5.00	EACH		$	
0440	02707		CLEAN SILT TRAP TYPE B	5.00	EACH		$	
0450	02708		CLEAN SILT TRAP TYPE C	5.00	EACH		$	
0460	02726		STAKING (BRACKEN KY 8 FD04)	1.00	LS		$	
0470	02775		ARROW PANEL	2.00	EACH		$	
0480	03234		RAILROAD RAILS-DRILLED	8,982.00	LF		$	
0490	03235		EXCAVATION AND BACKFILL	6,113.00	CUYD		$	
0500	03236		CRIBBING	23,580.00	SQFT		$	
0510	05952		TEMP MULCH	16,456.00	SQYD		$	
0520	05953		TEMP SEEDING AND PROTECTION	12,342.00	SQYD		$	
0530	05963		INITIAL FERTILIZER	1.30	TON		$	
0540	05964		MAINTENANCE FERTILIZER	.80	TON		$	
0550	05985		SEEDING AND PROTECTION	24,684.00	SQYD		$	
0560	05992		AGRICULTURAL LIMESTONE	15.30	TON		$	
0570	26175EC		ROADSIDE REGRADING	7,195.00	LF		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0580	00462		CULVERT PIPE-18 IN	222.00	LF		$	
0590	00464		CULVERT PIPE-24 IN	57.00	LF		$	
0600	01000		PERFORATED PIPE-4 IN	156.00	LF		$	
0610	01010		NON-PERFORATED PIPE-4 IN	96.00	LF		$	
0620	01020		PERF PIPE HEADWALL TY 1-4 IN	12.00	EACH		$	
0630	01310		REMOVE PIPE	228.00	LF		$	
0640	01726		SAFETY BOX INLET-18 IN SDB-1	3.00	EACH		$	
0650	01727		SAFETY BOX INLET-24 IN SDB-1	1.00	EACH		$	
0660	01728		SAFETY BOX INLET-18 IN DBL SDB-5	4.00	EACH		$	
0670	02625		REMOVE HEADWALL	18.00	EACH		$	
0680	03262		CLEAN PIPE STRUCTURE	4.00	EACH		$	
0690	08100		CONCRETE-CLASS A	12.98	CUYD		$	
0700	23484EC		PIPE LINER ACCEPTANCE TESTING (BRACKEN KY 8 FD04)	1.00	LS		$	
0710	24862EC		PVC FOLD AND FORM PIPE LINER-18 IN	171.00	LF		$	
0720	24863EC		PVC FOLD AND FORM PIPE LINER-24 IN	50.00	LF		$	
0730	26131ED		SLOPED AND MITERED HEADWALL-18 IN	6.00	EACH		$	
0740	26132ED		SLOPED AND MITERED HEADWALL-24 IN	1.00	EACH		$	

Section: 0004 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT

PROPOSAL BID ITEMS

224455

Report Date 11/4/22

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0750	06406		SBM ALUM SHEET SIGNS .080 IN	465.00	SQFT		$	
0760	06407		SBM ALUM SHEET SIGNS .125 IN	177.92	SQFT		$	
0770	06410		STEEL POST TYPE 1	1,766.00	LF		$	
0780	21134ND		REMOVE-STORE AND REINSTALL SIGN	2.00	EACH		$	
0790	21373ND		REMOVE SIGN	78.00	EACH		$	
0800	24631EC		BARCODE SIGN INVENTORY	156.00	EACH		$	

Section: 0005 - WATERLINE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0810	14077		W SERV PE/PLST LONG SIDE 1 IN	1.00	EACH		$	
0820	14080		W SERV PE/PLST LONG SIDE 3/4 IN	1.00	EACH		$	

Section: 0006 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0830	02569		DEMOBILIZATION	1.00	LS		$	