CALL NO. 204

CONTRACT ID. 194215

KENTON COUNTY

FED/STATE PROJECT NUMBER 121GR19T010-HSIP & FD05

DESCRIPTION DECOURSEY PIKE (KY 177)

WORK TYPE ASPHALT PAVEMENT & ROADWAY REHAB

PRIMARY COMPLETION DATE 11/15/2019

LETTING DATE: June 21,2019

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

NO PLANS ASSOCIATED WITH THIS PROJECT.

DBE CERTIFICATION REQUIRED - 15%

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

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SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 06

CONTRACT ID - 194215

121GR19T010-HSIP & FD05

COUNTY - KENTON

PCN - 0605901771901
HSIP 5220 (001)

DECOURSEY PIKE (KY 177) (MP 6.150) FROM 0.314 MILES NORTH OF KY 2042 EXTENDING NORTH TO KY 2044 (MP 11.823), A DISTANCE OF 05.67 MILES.ASPHALT PAVEMENT & ROADWAY REHAB SYP NO. 06-09018.00.

GEOGRAPHIC COORDINATES LATITUDE 38:54:37.40 LONGITUDE 84:27:00.80

PCN - MP05901771901
FD05 059 0177 000-020

DECOURSEY PIKE (KY 177) (MP 9.174) BEGIN AT KY 536 EXTENDING NORTH TO THE BANKLICK CREEK BRIDGE (MP 19.215), A DISTANCE OF 010.04 MILES.ASPHALT RESURFACING

GEOGRAPHIC COORDINATES LATITUDE 38:57:00.00 LONGITUDE 84:28:13.00

COMPLETION DATE(S):

COMPLETED BY 11/15/2019 APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

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

JOINT VENTURE BIDDING

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

UNDERGROUND FACILITY DAMAGE PROTECTION

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

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

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

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

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

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

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

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

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

HARDWOOD REMOVAL RESTRICTIONS

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

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

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

ACCESS TO RECORDS

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

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

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

April 30, 2018

FEDERAL CONTRACT NOTES

The Kentucky Department of Highways, in accordance with the Regulations of the United States Department of Transportation 23 CFR 635.112 (h), hereby notifies all bidders that failure by a bidder to comply with all applicable sections of the current Kentucky Standard Specifications, including, but not limited to the following, may result in a bid not being considered responsive and thus not eligible to be considered for award:

102.02 Current Capacity Rating 102.10 Delivery of Proposals
102.8 Irregular Proposals 102.14 Disqualification of Bidders
102.9 Proposal Guaranty

CIVIL RIGHTS ACT OF 1964

The Kentucky Department of Highways, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Federal Department of Transportation (49 C.F.R., Part 21), issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin.

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071.

The U.S. Department of Transportation (DOT) operates the above toll-free “hotline” Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the “hotline” to report such activities.

The “hotline” is part of the DOT’s continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SECOND TIER SUBCONTRACTS

Second Tier subcontracts on federally assisted projects shall be permitted. However, in the case of DBE’s, second tier subcontracts will only be permitted where the other subcontractor is also a DBE. All second tier subcontracts shall have the consent of both the Contractor and the Engineer.

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

It is the policy of the Kentucky Transportation Cabinet ("the Cabinet") that Disadvantaged Business Enterprises ("DBE") shall have the opportunity to participate in the performance of highway construction projects financed in whole or in part by Federal Funds in order to create a level playing field for all businesses who wish to contract with the Cabinet. To that end, the Cabinet will comply with the regulations found in 49 CFR Part 26, and the definitions and requirements contained therein shall be adopted as if set out verbatim herein.

The Cabinet, contractors, subcontractors, and sub-recipients shall not discriminate on the basis of race, color, national origin, or sex in the performance of work performed pursuant to Cabinet contracts. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted highway construction projects. The contractor will include this provision in all its subcontracts and supply agreements pertaining to contracts with the Cabinet.

Failure by the contractor to carry out these requirements is a material breach of its contract with the Cabinet, which may result in the termination of the contract or such other remedy as the Cabinet deems necessary.

DBE GOAL

The Disadvantaged Business Enterprise (DBE) goal established for this contract, as listed on the front page of the proposal, is the percentage of the total value of the contract.

The contractor shall exercise all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises participate in a least the percent of the contract as set forth above as goals for this contract.

OBLIGATION OF CONTRACTORS

Each contractor prequalified to perform work on Cabinet projects shall designate and make known to the Cabinet a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs.

If a formal goal has not been designated for the contract, all contractors are encouraged to consider DBEs for subcontract work as well as for the supply of material and services needed to perform this work.

Contractors are encouraged to use the services of banks owned and controlled by minorities and women.

CERTIFICATION OF CONTRACT GOAL

Contractors shall include the following certification in bids for projects for which a DBE goal has been established. BIDS SUBMITTED WHICH DO NOT INCLUDE CERTIFICATION OF DBE PARTICIPATION WILL NOT BE ACCEPTED. These bids will not be considered for award by the Cabinet and they will be returned to the bidder.

"The bidder certifies that it has secured participation by Disadvantaged Business Enterprises ("DBE") in the amount of_____percent of the total value of this contract and that the DBE participation is in compliance with the requirements of 49 CFR 26 and the policies of the Kentucky Transportation Cabinet pertaining to the DBE Program."

The certification statement is located in the electronic bid file. All contractors must certify their DBE participation on that page. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted.

DBE PARTICIPATION PLAN

Lowest responsive bidders must submit the *DBE Plan/ Subcontractor Request*, form TC 14-35 DBE, within 5 days of the letting. This is necessary before the Awards Committee will review and make a recommendation. **The project will not be considered for award prior to submission and approval of the apparent low bidder's DBE Plan/Subcontractor Request.**

The DBE Participation Plan shall include the following:

1 Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
2 Description of the work each is to perform including the work item , unit, quantity, unit price and total amount of the work to be performed by the individual DBE. The Project Code Number (PCN), Category Number, and the Project Line Number can be found in the "material listing" on the Construction Procurement website under the specific letting;
3 The dollar value of each proposed DBE subcontract and the percentage of total project contract value this represents. DBE participation may be counted as follows; a) If DBE suppliers and manufactures assume actual and contractual responsibility, the dollar value of materials to be furnished will be counted toward the goal as follows:

- The entire expenditure paid to a DBE manufacturer;
- 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to the public, maintain an inventory and own and operate distribution equipment; and
- The amount of fees or commissions charged by the DBE firms for a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.

b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;
c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;

4 Written and signed documentation of the bidder's commitment to use a DBE contractor whose participation is being utilized to meet the DBE goal; and

5 Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment.

UPON AWARD AND BEFORE A WORK ORDER WILL BE ISSUED

Contractors must submit the signed subcontract between the contractor and the DBE contractor, the DBE's certificate of insurance, and an affidavit for bidders, offerors, and contractors from the DBE to the Division of Construction Procurement. The affidavit can be found on the Construction Procurement website. If the DBE is a supplier of materials for the project, a signed purchase order and an affidavit for bidders, offerors, and contractors must be submitted to the Division of Construction Procurement.

Changes to DBE Participation Plans must be approved by the Cabinet. The Cabinet may consider extenuating circumstances including, but not limited to, changes in the nature or scope of the project, the inability or unwillingness of a DBE to perform the work in accordance with the bid, and/or other circumstances beyond the control of the prime contractor.

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

If the DBE participation submitted in the bid by the apparent lowest responsive bidder does not meet or exceed the DBE contract goal, the apparent lowest responsive bidder must submit a Good Faith Effort Package to satisfy the Cabinet that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set and nine (9) copies of this information must be received in the office of the Division of Contract Procurement no later than 12:00 noon of the tenth calendar day after receipt of notification that they are the apparent low bidder.

Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a sample representative letter along with a distribution list of the firms solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the Cabinet considers in judging good faith efforts. This documentation may include written subcontractors' quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

The Good Faith Effort Package shall include, but may not be limited to information showing evidence of the following:

1 Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
2 Whether the bidder provided solicitations through all reasonable and available means;
3 Whether the bidder provided written notice to all DBEs listed in the DBE directory at the time of the letting who are prequalified in the areas of work that the bidder will be subcontracting;
4 Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainly whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the DBE Liaison in the Office of Minority Affairs to give notification of the bidder's inability to get DBE quotes;
5 Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise perform these work items with its own forces;
6 Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
7 Whether the bidder negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached;
8 Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm's quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;
9 Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;
10 Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal; and
11 Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

Where the apparent lowest responsive bidder fails to submit sufficient participation by DBE firms to meet the contract goal and upon a determination by the Good Faith Committee based upon the information submitted that the apparent lowest responsive bidder failed to make sufficient reasonable efforts to meet the contract goal, the bidder will be offered the opportunity to meet in person for administrative reconsideration. The bidder will be notified of the Committee's decision within 24 hours of its decision. The bidder will have 24 hours to request reconsideration of the Committee's decision. The reconsideration meeting will be held within two days of the receipt of a request by the bidder for reconsideration.

The request for reconsideration will be heard by the Office of the Secretary. The bidder will have the opportunity to present written documentation or argument concerning the issue of whether it met the goal or made an adequate good faith effort. The bidder will receive a written decision on the reconsideration explaining the basis for the finding that the bidder did or did not meet the goal or made adequate Good Faith efforts to do so.

The result of the reconsideration process is not administratively appealable to the Cabinet or to the United States Department of Transportation.

The Cabinet reserves the right to award the contract to the next lowest responsive bidder or to rebid the contract in the event that the contract is not awarded to the low bidder as the result of a failure to meet the good faith requirement.

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

Failure by the prime contractor to fulfill the DBE requirements of a project under contract or to demonstrate good faith efforts to meet the goal constitutes a breach of contract. When this occurs, the Cabinet will hold the prime contractor accountable, as would be the case with all other contract provisions. Therefore, the contractor's failure to carry our the DBE contract requirements shall constitute a breach of contract and as such the Cabinet reserves the right to exercise all administrative remedies at its disposal including, but not limited to the following:

- Disallow credit toward the DBE goal;
- Withholding progress payments;
- Withholding payment to the prime in an amount equal to the unmet portion of the contract goal; and/or
- Termination of the contract.

PROMPT PAYMENT

The prime contractor will be required to pay the DBE within seven (7) working days after he or she has received payment from the Kentucky Transportation Cabinet for work performed or materials furnished.

CONTRACTOR REPORTING

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to complete and submit a signed and notarized affidavit (TC 18-7) and copies of checks for any monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal. These documents must be submitted within 10 days of being paid by the Cabinet.

Payment information that needs to be reported includes date the payment is sent to the DBE, check number, Contract ID, amount of payment and the check date. Before Final Payment is made on this contract, the Prime Contractor will certify that all payments were made to the DBE subcontractor and/or DBE suppliers.

The Prime Contractor should supply the payment information at the time the DBE is compensated for their work. Form to use is located at:
http://transportation.ky.gov/Construction/Pages/Subcontracts.aspx

The prime contractor should notify the KYTC Office of Civil Rights and Small Business Development seven (7) days prior to DBE contractors commencing work on the project. The contact is Melvin Bynes and the telephone number is (502) 564-3601.

Photocopied payments and completed, signed and notarized affidavit must be submitted by the Prime Contractor to: Office of Civil Rights and Small Business Development
6th Floor West 200 Mero Street
Frankfort, KY 40622

DEFAULT OR DECERTIFICATION OF THE DBE

If the DBE subcontractor or supplier is decertified or defaults in the performance of its work, and the overall goal cannot be credited for the uncompleted work, the prime contractor may utilize a substitute DBE or elect to fulfill the DBE goal with another DBE on a different work item. If after exerting good faith effort in accordance with the Cabinet's Good Faith Effort policies and procedures, the prime contractor is unable to replace the DBE, then the unmet portion of the goal may be waived at the discretion of the Cabinet.

1/27/2017

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – CARGO PREFERENCE ACT (CPA).

(REV 12-17-15) (1-16)

SECTION 7 is expanded by the following new Article:

102.10 **Cargo Preference Act – Use of United States-flag vessels.**

Pursuant to Title 46CFR Part 381, the Contractor agrees

- To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
- To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph 1 of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
- To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

SURFACING AREAS (for FD05 Resurfacing Project)

The Department estimates the mainline surfacing width to be varied 22 to 24 feet.

The Department estimates the total mainline area to be surfaced to be 141,351 square yards.

The Department estimates the shoulder width to be varied 1 to 5 feet on each side.

The Department estimates the total shoulder area to be surfaced to be 10,301 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 and DESCRIPTION OF WORK

CAUTION

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

STATIONING FOR HSIP FUNDED PROJECT

The contractor is advised that the planned locations of work for the HSIP funded project were established from a beginning station number which is STA 324+72 which is 0.3 miles north of the intersection of KY 177 and KY 2042 (Kenton Station Road). The milepoint of this location, based on the Route Log, is MP 6.15. NOTE: The existing mile marker signs may not correspond to the proposed milepoints in the Proposal.

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

CONTROL

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

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 work described below. Please note that this Proposal consists of two projects. One project is federally funded with HSIP funds; the MP limits of the HSIP project are MP 6.150 – 11.823. The other project is state funded with FD05 Resurfacing funds; the MP limits of the FD05 Resurfacing project are MP 9.174 – 19.215. Based on these MP limits, any work south of MP 9.174 will be funded by HSIP funds; any work north of MP 11.823 will be funded by FD05 funds; and any work between MP 9.174 – 11.823 may be funded by either project. Care should be taken to keep track of the work between MP 9.174 – 11.823 to ensure the correct project pays for the proposed work. The following notes may help to describe which project pays for which work items.

General Description & Notes for the HSIP Funded Project:

Superelevation Improvements. There are multiple curves where Superelevation Improvements are being proposed. The intent of this work is to bring a consistent pavement cross slope throughout the identified curves. Refer to the Superelevation Improvement Summary for locations and approximate quantities. The Contractor will need to utilize Leveling & Wedging in order to achieve the desired superelevation improvements at the identified curves. The Leveling & Wedging mix design will be based on the lift thicknesses being placed for each curve. The lift thickness will be determined by the Contractor as described in the Special Note for Staking. Based on the lift thickness for each Leveling & Wedging pass, the Engineer will make the final determination as to the appropriate mix design(s) that will be required. After placement of the Leveling & Wedging, the identified curves will be overlaid with a surface course. For Curves 6, 7, and 8, the surface course will be paid for with HSIP funds. The remainder of the superelevation improvement curves are within the FD05 resurfacing limits and the final surface of these curves will be paid for under the FD05 resurfacing project. As a result of the superelevation improvements and surfacing operations within the identified curves, the roadside shoulders, fill slopes, and/or ditches will have to be modified to match the final pavement elevations and tie in with the existing ground lines and/or ditches. A quantity of Ditching and Shouldering has been estimated for re-grading the shoulder, fill slopes, and/or ditches within the identified curves. Refer to the Special Note for Ditching and Shouldering for more details on the roadside re-grading.

NOTE: Some field adjustments of the proposed shoulder width, fill slope, ditch, and/or superelevation improvement may be required. The proposed shoulder and roadside grading is intended to occur within existing Right-of-Way and NOT disturb any sensitive obstructions (i.e. fences, buildings, utility poles, etc.). Superelevation improvements with sensitive obstructions along the roadside shall still require re-grading the roadside, but the slopes may have to be constructed steeper than shown on the representative cross section. The desire of the Department is to construct the new fill slopes at 3:1 or flatter. When a fill slope needs to be constructed steeper than 3:1 to remain within existing Right-of-Way or not impact a sensitive obstruction, and the existing fill slope is steeper than 3:1, then the new fill slope can be constructed steeper than 3:1, but the new fill slope shall not be constructed steeper than the existing fill slope. If a desired superelevation improvement will result in the new fill slope having to be graded steeper than the existing fill slope in order to remain within existing Right-of-Way or not impact a sensitive obstruction, then the proposed superelevation rate should be modified (reduced) in order to reduce the final change in pavement edge elevation, thereby reducing the height of the new fill slope grading, and allowing for a flatter new fill slope that will not be steeper than the existing fill slope. Prior to making modifications to

the proposed superelevation rate, shoulder width, and/or fill slope, coordinate with and obtain approval from the Engineer.

Pavement Repair. Locations in which HSIP funded pavement repair is to be performed are noted in the Pavement Repair Summary. Perform work as shown in the Pavement Repair Detail. The Engineer shall make the final determination as to the exact width, depth, length, and location of each pavement repair. For measurement and payment of this work, please refer to the Special Note for Pavement and Shoulder Repair (Paid by Ton).

Shoulder Pavement Repair. Locations in which an approximate 4' wide shoulder pavement repair is to be performed are noted in the Shoulder Pavement Repair Summary. This work will be funded by the HSIP project. Perform work as shown in the Shoulder Pavement Repair Detail. The Engineer shall make the final determination as to the exact width, depth, length, and location of each shoulder pavement repair. For measurement and payment of this work, please refer to the Special Note for Pavement and Shoulder Repair (Paid by Ton).

Tree Trimming. Locations of tree trimming are noted in the Tree Trimming summary. Trim the tree canopy a horizontal distance of 10' from the edge of pavement and a vertical distance of 35'. Refer to the Special Note for Tree Removal for any Tree Cutting Restrictions. For details on this item of work, refer to the Tree Clearing Detail and the Special Note for Tree, Stump, and Brush Removal.

Guardrail Replacement and Installation. The existing guardrail within the HSIP project limits will be replaced. Refer to the Guardrail Summary for approximate locations for guardrail replacement. Also, a few locations of new guardrail will be installed as part of the HSIP funded project. This may require the replacement of existing cribbing, ditching and shouldering, and the placement of additional DGA. Refer to the Guardrail Summary and Cribbing Summary for approximate locations for new guardrail installation and cribbing replacement.

Guardrail End Treatments. 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.

Cribbing. Locations in which existing cribbing is to be replaced are noted in the Cribbing Summary. For details on this work refer to the Special Note for Embankment Slide Repair, the Typical Sections that cover Recycled Railroad Rails in Drilled Sockets, the Design Chart for Recycled Railroad Rails, and the Detail Sheet covering Schemes for Installing Railroad Rails in Drilled Sockets.

RCBC Extension. There is one location where a box culvert is being extended as noted in the RCBC Extension summary. Other items that are included with extensions are foundation preparation, concrete class A, and steel reinforcement. See structural plans for more information.

Culvert Pipe Extension/Replacement. There are locations throughout the project where culvert pipes are being extended or replaced. Locations are noted in the Culvert Pipe Extension/Replacement Summary. Other items that may be included with the pipe extensions include culvert headwalls, safety box inlets, sloped & mitered concrete headwalls, shouldering, ditching, channel lining, etc. Refer to the Special Note

for Pipe Replacements/Extensions for more information on this item of work. For each extension, the Contractor shall remove 4' of existing pipe or the length of existing pipe to the first joint or as directed by the Engineer. Refer to the Culvert Pipe Extension/Replacement Summary for estimated quantities. Pipe extensions shall be in-like kind of the existing pipe.

Entrance Pipe Replacement. Due to areas of drainage and superelevation improvements, there are locations where the existing entrance pipe will have to be removed and relocated to accommodate the improvements and/or location of the new ditch line. Refer to the Entrance Detail for details on this work item. The existing driveway surface is to be replaced with like-kind surfacing. The Engineer will make the final determination as to the locations and quantities required to complete the work based on the existing conditions encountered during construction.

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 Extension/Replacement 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. <u>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</u>. In other words the embankment slope should <u>not</u> 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. 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.

Ditching and Shouldering. Several areas throughout the project are set up for Ditching & Shouldering. Perform Ditching & Shouldering at the locations identified elsewhere in the Proposal, or the locations as directed by the Engineer. The proposed shoulder, ditch, and/or roadside dimensions are detailed on the Typical Sections. Perform Ditching & Shouldering according to the Special Note for Ditching & Shouldering. For details of the conditions and situations commonly encountered when performing Ditching & Shouldering, refer to the detail sheets titled: DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS. <u>No Embankment-In-Place quantities will be paid for the work listed as "Ditching and Shouldering"</u>. Immediately prior to completion, clean all existing and new culvert and entrance pipes within the Ditching and Shouldering limits. Ensure that all pavement, shoulders, slopes, and ditches within the Ditching and Shouldering limits have positive drainage at all times during and upon completion of construction. Use Erosion Control Blanket and/or Channel Lining Class II, as directed by the Engineer.

NOTE: The Department will include in the quantity all work required on the road approaches within the limits of right-of-way. No additional compensation will be allowed for excavation of rock encountered while executing the bid item "Ditching and Shouldering."

DGA Wedge & Chip Seal. Construct DGA Wedge & Chip Seal 18" wide and 4" deep as shown in typical section at the approximate locations specified in DGA Wedge & Chip Seal Summary or as directed by the Engineer. In some areas, the existing shoulder will need to be built up before the DGA wedge can be installed. The bid item "Ditching and Shouldering" is to be used for re-grading the shoulders, fill slopes and/or ditches prior to placing the DGA. Locations for which ditching and shouldering may be required in conjunction with DGA wedge & chip seal placement are identified in the Ditching and Shouldering Summary. For more information refer to the DGA Wedge & Chip Seal Detail and the Special Note for Double Asphalt Seal Coat.

Channel Lining. 395 Tons of Channel Lining Class II has been included on the Channel Lining Summary for use at the locations indicated on the Summary. 300 Tons have been included in the Ditching and Shouldering Summary for use in ditching and shouldering operations as directed by the Engineer. 284 Tons have been included in the Cribbing Summary. An additional 300 Tons of Channel Lining Class II have been included in the contract for potential use around drop box inlets, safety box inlets, inlets and outlets of pipes, along areas of regraded ditch line and/or fill slope, and other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of Channel Lining throughout this project. The Engineer will make the final determination as to the placement of Channel Lining.

Erosion Control Blanket. A quantity of 5357 square yards of Erosion Control Blanket has been included on the Ditching and Shouldering summary. An additional quantity of 3000 square yards has been included in the contract for use in the contract for potential use along areas of regraded ditch line and/or fill slopes, inlets and outlets of pipes, and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of Erosion Control Blanket throughout this project. The Engineer will make the final determination as to the placement of Erosion Control Blanket.

Temporary Pavement Striping. A total quantity of 7500 linear feet has been included in the HSIP funded project. 2500 linear feet of Pave Striping – Temp Paint – 4 in has been included in the superelevation improvement tabulation in conjunction with the superelevation improvements at Curves 6, 7, and 8. An additional quantity of 5000 linear feet of Pave Striping – Temp Paint – 4 in has been included in the contract for potential use in any 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 placement of temporary pavement striping.

Permanent Pavement Striping. A quantity of 2500 linear feet of Pave Striping – Perm Paint – 4 in has been included in the superelevation improvement tabulation. These quantities are for installing the final striping once the superelevation improvements and final surfacing for Curves 6, 7, and 8 are complete. All other permanent striping shall be paid for by the FD05 funded Resurfacing project.

Remove, Store & Reinstall Signs. A quantity of 10 each of Remove-Store and Reinstall Sign has been included in the contract for signs potentially affected in areas of ditching and shouldering work.

Signing. An estimated quantity of new signing and sign post is included in the Signing Summary. The District Traffic Sections will provide the final signing quantities and sign types after final surfacing operations are complete. Refer to the Special Note for Signing, Special Note for Staking, 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 Description & Notes for the FD05 Funded Resurfacing Project:

Base Failure Repairs. There are multiple locations of FD05 funded Base Failure Repairs that are being proposed. Refer to the Base Failure Repair Summary for approximate locations and quantities. Perform the work as described in the Special Note for Base Failure Repair. The Engineer shall make the final determination as to the exact width, depth, length, and location of each Base Failure Repair. For measurement and payment of this work, please refer to the Special Note for Base Failure Repair.

Pavement Resurfacing. The existing roadway between MP 9.174 – 19.215 is set up to be resurfaced using FD05 resurfacing funds. Other items be associated with the pavement resurfacing include: removal of 1 inch of existing pavement by milling and texturing, leveling & wedging, application of non-tracking tack coat, and installation of edgeline rumble strips. Refer to the rumble strip Sepia Drawings for recommended placement of rumble strips.

Temporary Pavement Striping. A total quantity of 200,000 linear feet of Pave Striping – Temp Paint – 4 IN has been included in the FD05 funded project for potential use during the resurfacing operations between MP 9.174 – 19.215. The Contractor and Engineer should work together to determine any locations requiring temporary pavement striping. The Engineer will make the final determination as to the placement of temporary pavement striping.

Permanent Pavement Striping. A quantity of 200,000 linear feet of Pave Striping – Perm Paint – 4 IN has been included in the FD05 funded project. These quantities are for installing the final striping between MP 9.174 – 19.215 once the resurfacing operations are complete. Any permanent striping that is needed south of MP 9.174 shall be paid for by the HSIP funded project.

SPECIAL NOTE FOR DITCHING & SHOULDERING
HSIP 5220 (001)

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, applicable Special Provisions and Special Notes, current editions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

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

II. MATERIALS

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

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

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

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

D. Asphalt Seal Coat. See the Special Note for Double Asphalt Seal Coat.

E. Asphalt Seal Aggregate. See the Special Note for Double Asphalt Seal Coat.

F. Channel Lining, Class II. Furnish Channel Lining, Class II as per Section 805.

G. Geotextile Fabric Type IV. Furnish Geotextile Fabric Type IV as per Section 843.

III. CONSTRUCTION METHODS

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

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

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

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

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

G. DGA Wedge & Chip Seal. Some, or possibly all, areas of Ditching & Shouldering may be set up to receive a 4” thick DGA Wedge & Chip Seal after the ditching and shouldering operations are complete. Other areas of Ditching & Shouldering may NOT be set up to receive the DGA Wedge & Chip Seal. See the Summary Sheets and/or Plan Sheets for the approximate locations to receive the DGA Wedge & Chip Seal. Generally, the existing turf areas that are NOT routinely mowed by the adjacent property owner are the areas to receive the DGA Wedge & Chip Seal. The existing turf areas that are routinely mowed by the adjoining property owner have NOT been set up for the DGA Wedge & Chip Seal, and in these locations the earth shoulder should be constructed flush with the edge of pavement. Unless otherwise directed by the Engineer, DO NOT place any DGA Wedge & Chip Seal where it appears the adjoining property owner is routinely mowing up to the edge of pavement. The Engineer will determine the exact limits of the DGA Wedge & Chip Seal at the time of construction. Construct and compact the DGA as required by Section 302.

Place Chip Seal over the entire width of the DGA Wedge. See the Special Note for Double Asphalt Seal Coat for the Chip Seal requirements.

H. Channel Lining. Install Class II Channel Lining along any sections of ditches identified in the Proposal, along any fill slopes or ditch backslopes identified in the Proposal requiring Slope Protection, or any other locations the Engineer directs for slope protection or erosion control. When Channel Lining is proposed to be installed along a steep fill slope in order to establish a width of shoulder (as shown in Figure 5 of the DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS), the Channel Lining is to be capped with Geotextile Fabric Type IV 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.

I. 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.

J. 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.

K. 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.

L. 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.

M. 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.

N. 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.

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

IV. METHOD OF MEASUREMENT

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

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

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

D. Staking. See Special Note for Staking.

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

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

G. DGA, CSB. When listed as bid items, DGA and Crushed Stone Base shall be measured according to Section 302.04.

H. Chip Seal. When specified in the contract, the bid items associated with Chip Seal shall be measured according to the Special Note for Double Asphalt Seal Coat.

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

J. Geotextile Fabric, Type IV. When listed as a bid item, Geotextile Fabric, Type IV shall be measured according to Section 214.04.

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

V. BASIS OF PAYMENT

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

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

C. Staking. See Special Note for Staking.

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

E. DGA, CSB. When listed as bid items, the Department will make payment for DGA and Crushed Stone Base according to Section 302.05.

F. Chip Seal. When specified in the contract, the Department will make payment for the bid items associated with Chip Seal according to the Special Note for Double Asphalt Seal Coat.

G. 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.

H. Geotextile Fabric, Type IV. When listed as a bid item, the Department will make payment for Geotextile Fabric, Type IV according to Section 214.05.

SPECIAL NOTES FOR PIPE REPLACEMENTS / EXTENSIONS
HSIP 5220 (001)

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 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 removing pipe, or 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, backfill culvert pipes with flowable fill for the width of the roadway and as shown on the Pipe Replacement Detail. 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.

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, 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.

SPECIAL NOTE FOR EMBANKMENT SLIDE REPAIR
HSIP 5220 (001)

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) Furnish and 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 Type IV 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 Type IV 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 Type IV 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 POLYPROPYLENE BARRIER WALL
HSIP 5220 (001)

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 a polypropylene barrier system filled with concrete to create a retaining wall; (3) Backfill the area behind the polypropylene barrier wall; (4) Reconstruct shoulder area and any necessary grading to ensure positive drainage; (5) Install guardrail, if required; (6) Maintain and Control Traffic; and (7) any other work as specified by this contract.

Repairs using a polypropylene barrier system 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 final 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. Polypropylene Barriers. Polypropylene barriers shall be made of 8 oz. polypropylene and shall be waterproof or plastic coated. All sizes of polypropylene barrier shall have a 2 ft opening at the top that is centered over the base of the barrier. The base of the barrier shall be 2 ft wider than the height of the barrier. The barrier shall be baffled every 2 ft. Barriers shall be capable of being connected together in order to make a continuous barrier wall. The barrier must be of sufficient strength to hold in place the needed amount of concrete until the concrete cures. Minimum barrier length shall be 50 ft and additional length shall be accommodated in 50 ft increments.

B. Concrete – Class B. See Section 601.

C. Fill Material behind Polypropylene Barrier Wall. Material used for backfill behind the polypropylene barrier wall shall be 6" minus stone. If guardrail will be installed behind the top run of polypropylene barrier wall, the backfill material behind the top run shall be Crushed Aggregate Size No. 2; otherwise, 6" minus stone may be used. All backfill material shall meet the requirements of Section 805. The Engineer will use visual inspection and/or material testing, as applicable, to determine acceptability.

D. DGA. When shown on the Typical Section and/or listed as a bid item, furnish DGA as per Section 805.

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

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

III. CONSTRUCTION METHODS

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

B. On-Site Technical Support. An experienced technical representative shall be on-site to provide technical support covering all aspects of layout, site preparation, and installation of polypropylene barrier wall.

C. Staking. Review the proposed polypropylene barrier wall construction site(s) with the Engineer to determine the exact limits and height of polypropylene barrier wall needed at each site. Once the limits and height are established, be responsible for field layout. Establish wall footing and top of wall elevations, shoulder widths, existing ditch profile, and final ditch profile to insure positive drainage. Positive drainage is required upon completion of the project and is the responsibility of the Contractor.

D. Site Preparation. Be responsible for preparing polypropylene sites according to the established layout and elevations. This includes clearing and grubbing, if necessary. The area to be cleared has not been measured by the Department and the bidder must draw his/her own conclusions. Remove all obstructions, as necessary. Excavate for roadway ditches, as necessary for slope, shoulder and pavement drainage. Sweep and remove debris, as necessary. 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.

E. Installation of Polypropylene Barriers. Excavate each repair area to provide a working platform and/or key for installing the bottom run of polypropylene barriers. Place the first 50 ft section of polypropylene barrier system, hold in place before and during filling with concrete, and if necessary, connect additional 50 ft sections, hold in place, and fill with concrete to form a continuous wall that satisfies the established layout. Once the concrete for a run has cured to a sufficient strength, backfill behind the wall and, if necessary, prepare the site for the next run of polypropylene barriers. NOTE: The Contractor shall ensure the polypropylene barrier system is secured prior

to filling with concrete to ensure stability of the system so that excessive concrete is not spilled into adjacent streams.

F. Final Backfill. Once the concrete within the top run of polypropylene barrier system has sufficiently cured, reconstruct the fill slope and shoulder area. Grade the shoulder flush with the edge of pavement and to the width and slope as shown on the Typical Section. If a Typical Section is not provided, match the surround typical section. If the surrounding typical section has a shoulder width that is less than 2 ft, then the minimum width of graded shoulder shall be 2 ft. Ensure that the newly graded shoulder and slope does not allow water to pond on the shoulder area or at the shoulder edge. Reconstruct the shoulder to the satisfaction of the Engineer before installing guardrail.

DO NOT USE EXCAVATED MATERIAL FROM THE SITE AS FILL MATERIAL, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

G. 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.

H. Final Dressing, Seeding and Protection. Grade all disturbed areas to blend with the adjacent roadway features and to provide a suitable seed bed. Apply Class A Final Dressing to all disturbed areas. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

I. On-Site Inspection. Each Contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his/her 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.

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. 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.

L. Erosion Control. See Special Note for Erosion Control.

IV. METHOD OF MEASUREMENT

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. Site Preparation. Other than the bid items listed, site preparation will NOT be measured for payment, but shall be incidental to the project bid items.

E. Polypropylene Barrier Wall. The Department will measure the finished in-place area of this item in Square Feet.

F. 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.

G. DGA. When listed as a bid item, DGA will be measured according to Section 302.04.

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.

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. Polypropylene Barrier Wall. The Department will make payment for the completed and accepted quantities under the bid item: RETAINING WALL (POLYPROPYLENE

BARRIER WALL). The Department will consider payment full compensation for furnishing all labor, materials, Class B Concrete, equipment, and incidentals necessary to construct a polypropylene barrier wall filled with concrete, as required by these notes, at the locations indicated on the summary sheets, plans, and/or as directed by the Engineer.

E. 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 labor, materials, equipment, and incidentals necessary to excavate and/or backfill the areas indicated on the summary sheets, plans, and/or as directed by the Engineer.

F. DGA. When listed as a bid item, DGA will be paid according to Section 302.05.

SPECIAL NOTE FOR EROSION CONTROL
HSIP 5220 (001)

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 Stream Protection

Kenton County
LOW COST SAFETY IMPROVEMENTS ON KY 177 FROM MP 6.150 TO MP 11.823.
Item No. 6-9018

THIS PROJECT CONSISTS OF TWO STREAM CROSSINGS AT THE NORTHERN AND SOUTHERN ENDS OF THE PROJECT FOOTPRINT. STEEP CREEK ON THE NORTH END AND ONE UNNAMED STREAM ON THE SOUTH END. NO DISTURBANCE WILL TAKE PLACE TO EITHER OF THESE STREAMS FOR THE DURATION OF THE PROJECT. NO DEBRIS WILL ENTER THE STREAM DUE TO THIS PROJECT.

If there are any questions regarding this note, please contact Danny Peake, Director, Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601; Phone: (502) 564-7250.

SPECIAL NOTE

For Tree Removal

Kenton County
LOW COST SAFETY IMPROVEMENTS ON KY 177 FROM MP 6.150 TO MP 11.823.
Item No. 6-9018

NO CLEARING OF TREES 5 INCHES OR GREATER (DIAMETER BREAST HEIGHT) FROM JUNE 1 THROUGH JULY 31.

If there are any questions regarding this note, please contact Danny Peake, Director, Division of Environmental Analysis, 200 Mero Street, Frankfort, KY 40601; Phone: (502) 564-7250.

SPECIAL NOTE FOR TREE, STUMP, AND BRUSH REMOVAL
HSIP 5220 (001)

I. DESCRIPTION

All work shall be performed in accordance with the Department's current Standard Specifications for Road and Bridge Construction and applicable Special Provisions, except as hereafter specified. Article references are to the Standard Specifications.

This work shall consist furnishing all equipment, labor, materials, and incidentals for the following: (1) Site Preparation; (2) Maintaining and controlling traffic; (3) Temporary erosion control and temporary pollution control; (4) Cutting, trimming, and/or removing trees, stumps, and/or brush as specified or directed by the Project Engineer; (5) Treating all cut stumps required by Project Engineer to prevent re-sprouting; (5) Clean up and disposal of waste; (6) Final dressing and seeding and protection; and (7) 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. The Contractor shall maintain and control traffic in accordance with the Traffic Control Plan.

B. Seeding and Protection. Use applicable Seed Mixture as specified per Section 212.03.03.

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

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. The Contractor shall maintain and control traffic in accordance with the Traffic Control Plan.

B. Cutting, Trimming, and/or Removing Trees, Stumps, and/or Brush. The Contractor shall cut trees and/or bushes as close to the ground as possible; three inches (3”) or less from ground line. Any tree trimming listed in the proposal shall be cleared as shown on the Tree Trimming Detail. Grinding of all tree stumps within the mowing zone shall be required as directed by the Engineer. All stumps that are listed on the summary and/or directed by the Engineer to be removed, are to be removed via mechanical grinding, or other methods approved by the Engineer, to a minimum depth of four (4) inches below the surrounding grade line. For trees that are cut, but will not be required to have their stump

removed, treat the stump, within one hour of cutting, with the specified herbicide solution. Replace and level any and all soil disturbed during the tree, stump, and/or brush removal and/or tree trimming operations. Leave the soil in a condition suitable for seeding that is level with the surrounding soil grade, with no holes or indentions to catch water or present unsafe mowing conditions. This work will be incidental to the bid items "Remove Trees or Stumps" and/or "Trim and Remove Trees and Brush."

NOTE: Tree cutting restrictions apply. See the Special Note for Tree Removal for details on the restrictions.

C. Removal of Tree, Stump, and Brush Debris. The Contractor will remove all debris and biomass from the trimming and/or removal of trees, stumps, and/or brush from the work site and dispose of such off the right-of-way in accordance with local, state, and federal solid waste laws and regulations. Cleanup and remove all existing down trees and brush located within the designated areas. At the discretion of the Project Engineer, the contractor may be permitted to chip and blow biomass onto non-mowing zones. Chips shall not be blown onto areas that would potentially restrict the flow of water in drainage ditches. All un-chipped biomass must be removed from roadway right-of-ways.

The Contractor shall keep the work zone free of accumulated waste material and debris at all times. Remove and dispose of all tree, stump, and brush chips off the right-of-way. Remove and dispose of all debris and waste material off the right-of-way as work is completed and at the end of each workday. Remove desirable wood pieces from the right-of-way at the end of each workday. Stockpile trees and brush off the right-of-way. At the discretion of the Project Engineer, the Contractor may be permitted to stockpile trees and brush at approved locations along the right-of-way.

The Contractor shall immediately correct any disturbance to all drainage features and structures caused by the Contractor's work.

D. Stump Treatment. Within one hour of cutting, the Contractor shall apply a stump treatment mix consisting of fifty percent (50%) Glyphosate (EPA Reg. No. 524-579) with water and add twelve (12) ounces of Imazapyr (EPA Reg. No. 241-431), as specified, per gallon of solution. The addition of a non-ionic surfactant 5% (v/v) shall be added to the solution to increase uptake of the herbicide solution into the root system. Generic formulations are not acceptable. Mix the herbicide solution in the presence of the Inspector. Include a color indicator in the herbicide solution to mark the treated stumps. Spray or paint the herbicide solution onto all cut stumps within one hour after cutting. Apply the herbicide solution in a manner to avoid drift onto surrounding vegetative ground cover. Stumps in the mowing zone, designated for mechanical grinding treatment, need not receive the herbicide treatment.

Provide herbicide material for the treatment of cut stumps meeting the following criteria:

a. Glyphosate

Active ingredient: (**Glyphosate**)
*Glyphosate, N-(phosphonomethyl)glycine, in the form of its potassium salt..... 48.7%
Inert ingredients 51.3%
Total 100.0%
* Contains 660 grams per liter or 5.5 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its potassium salt. Equivalent to 540 grams per liter or 4.5 pounds per U.S. gallon of the acid, glyphosate.
EPA Reg. No. 524-579

b. Imazapyr

Active ingredient: (**Imazapyr**)
*Isopropylamine salt of Imazapyr 2-[4,5-dihydro-4-methyl-4-(1methylethyl)-5oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid) 26.7%
Inert ingredients 73.3%
Total 100%
* Equivalent to 21.8 percent 2-[4,5-dihydro-4-methyl-4-(1methylethyl)-5oxo-1H-imidazolyl]-3-pyridinecarboxylic acid or 2 pounds acid per gallon.
EPA Reg. No. 241-431

KRS 217B requires that any individual who applies pesticides to Kentucky Highway Right-of-Way areas must be certified as a Pesticide Applicator under Category 6 guidelines. Comply with all current laws and regulations established by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and by KRS 217B that regulate the handling, use, and application of pesticides.

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

F. Coordination with Utility Companies. NOTICE: Utility locations shown in the plans are approximate and have not been specifically located by the Department. Locate all underground, above ground and overhead utilities prior to beginning construction. The Contractor shall have the responsibility 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 Utility Owner while they relocate their facilities. The Contractor shall be responsible for repairing all utility damage that occurs as a result of his operations.

G. Right-of-Way Limits. The exact limits of the Right-of-Way have not been established by the Department. The Contractor shall limit his activities to obvious Right-of-Way, permanent or temporary easements, and any work areas secured by consent and release of the adjacent property owners. The Contractor shall be responsible for all encroachments onto private lands.

H. Clean Up, Disposal of Waste. Clean up and dispose of all removed debris by the end of each work day, 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 clean up or disposal of waste and debris from the project. See the Special Provision for Waste and Borrow Sites.

I. Final Dressing, Seeding and Protection. Apply final dressing, class A to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the appropriate Seed Mixture as specified in Section 212.03.03.

J. 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 the project bid items.

C. Remove Trees or Stumps. The Department will measure the quantity as each tree or stump removed. Trees or stumps to be removed under this bid item are those listed on the Plans or in this Proposal, or as directed by the Engineer.

D. Trim & Remove Trees & Brush. The Department will measure the quantity by linear foot, per side of the highway. See the Tree Trimming Detail for the horizontal and vertical trimming dimensions. The horizontal width is taken from the edge of pavement measured perpendicular to the roadway but not to extend beyond the obvious Right-of-Way limits, or as directed by the Engineer.

E. Stump Treatment. The Department will NOT measure for payment the operation of Stump Treatment. This activity shall be incidental to the bid items “Remove Trees or Stumps” and/or “Trim & Remove Trees & Brush”.

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

G. Final Dressing, Seeding and Protection. The Department will NOT measure for payment the operations of Final Dressing. Seeding and Protection will be measured according to Section 212.

H. 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 Trees or Stumps. The Department will make payment for the completed and accepted quantities of each tree or stump removed. The Department will consider payment at the contract unit price as full compensation for furnishing all materials, equipment, labor, other expenses, and all incidentals necessary to complete the work of removing the trees and/or stumps.

C. Trim & Remove Trees & Brush. The Department will make payment for the completed and accepted quantities per linear foot. The Department will consider payment at the contract unit price as full compensation for furnishing all materials, equipment, labor, other expenses, and all incidentals necessary to complete the work of trimming and removing the trees and/or brush.

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

SPECIAL NOTE FOR SIGNAGE
HSIP 5220 (001)

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 route 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.

The following signs and sign components shall be fabricated using Type IX sheeting:

- White sign legends on panel signs
- STOP (R1-1) signs
- ALL WAY (R1-3P) signs
- YIELD (R1-2) signs
- DO NOT ENTER (R5-1) signs
- WRONG WAY (R5-1a) signs

The following signs and sign components shall be fabricated using Type IX 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 IX 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 point arrow (W16-7P) plaques that supplement Bicycle 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

All other permanent signs shall be fabricated using Type III or Type IV sheeting.

SPECIAL NOTE FOR SIGNING
HSIP 5220 (001)

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., Type I steel posts shall be mounted on a Type D surface mount. For Type D surface mounts there are two permissible alternatives: Kleen Break Model 425 for Surface Mount Concrete Installations by Xcessories Squared of Auburn, IL or Snap n Safe Model S200s for 2" Sign Post by Designovations Inc. of Stilman Valley, IL. 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 IX Sheeting)
- White and yellow (Type III and/or IV 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 there are more than one sign is mounted beside each other, the posts shall be spaced to provide approximately six inches (6") of spacing between sings.

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: There are two permissible Type D Surface Mount alternatives: Kleen Break Model 425 for Surface Mount Concrete Installations by Xcessories Squared of Auburn, IL or Snap n Safe Model S200s for 2” Sign Post by Designovations Inc. of Stilman, Valley, 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 NOTE FOR STAKING
HSIP 5220 (001)

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. Using the proposed pavement superelevation rates, runout, and runoff lengths, determine the necessary changes in pavement edge elevation along the curves and the transitions leading into and out of the curve to achieve the proposed superelevation improvements. The intent to provide a consistent superelevation throughout the curves and smooth transitions into and out of the curves. Once the proposed changes in pavement edge elevations are determined and prior to starting paving operations, verify the proposed roadside re-grading along the curve can be constructed so that the new roadside is flush with the new pavement edge elevation and the new toe of slope, or top of cut, will remain within the existing Right-of-Way and/or not impact a sensitive obstruction. If necessary, and with the approval of the Engineer, reduce the proposed superelevation rate of a curve if the new edge of pavement elevation will cause the new roadside grading to extend beyond the Right-of-Way and/or impact a sensitive obstruction. Alternatively, with the approval of the Engineer and to the extent allowable by the "Ditching & Shouldering and Embankment Benching Details" and/or the Special Note for Ditching & Shouldering, the Contractor may be allowed to make adjustments to the roadside grading so the proposed roadside re-grading will remain within the existing Right-of-Way and/or not impact a sensitive obstruction. After the final proposed changes in pavement edge elevations are determined and before paving operations begin, submit to the Engineer and obtain approval for the number of asphalt lifts, each asphalt lift's thickness, and the mix design of each lift of Leveling & Wedging the contractor plans to use to achieve the superelevation improvement. Ensure positive drainage upon completion of the work.
3. 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.
4. 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.

5. Produce and furnish to the Engineer "As Built" information for the superelevation improvements and the drainage improvements. For superelevation improvements, as built information will consist of a record of the final pavement cross slopes every 50 feet, for each lane of travel along the curves and the transitions into and out of the curves. Elevation data of the curve improvements is not necessary; simply the cross slope percentage every 50 feet. 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.
6. 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.
7. Prior to incorporating into the work, obtain the Engineers approval of all revisions determined by the Contractor.
8. Perform any and all other staking operations required to control and construct the work.

SPECIAL NOTES FOR PAVEMENT AND SHOULDER REPAIR (PAID BY TON)
HSIP 5220 (001)

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 12 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 4 inches of Crushed Limestone Size No. 23, wrapped on the bottom and sides in Type 3 Geotextile Fabric, and 8 inches of Class 2 Asphalt Base 1.00D PG64-22, in 4 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 7 calendar days have elapsed after placement of the final course of asphalt base. After the 7 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 No. 23, Asphalt Base, and Leveling and Wedging and unit price per square yard for Geotextile Fabric Type III 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 disposal of waste; these operations shall be incidental to the project bid items.

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	20 max.	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. As required by the manufacturer, ensure the spray bar is equipped with #1 or #2 ¼" V-slot Etnyre nozzles. Other nozzles are not acceptable. Arrange the nozzles in the following patterns from left to right:

Nozzle number(s)	Activity	Orientation
1	On	Vertical
2	Off	-
3	On	Horizontal
4 & 5	Off	-
6	On	Horizontal
Continue 2 off and 1 on pattern through rest of spray bar system.		

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 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. Ensure the roadway temperature is a minimum of 40 ˚F and rising during the application of the tack. This material is not suitable for use in colder temperatures. Prior to applying the tack, 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 initial heating to 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 rate of 0.50 pounds (0.06 gallons) per square yard. Ensure full coverage of the material on the pavement surface. Full coverage of this material is critical. If full coverage is not achieved, material application rate may be increased to ensure full coverage. Do not heat material more than twice in one day.

3.3 Non-tracking Tack Certification. Furnish the tacks 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 adhesive. 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. 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	20 max.	≤ 21	22 - 23	24 - 25	26 - 27	≥ 28
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

April 30, 2018

SPECIAL NOTE FOR MILLING AND TEXTURING
FD05 059 0177 009-020

Milling and texturing shall be performed for the entire length of the FD05 funded resurfacing project from KY 536/Visalia Road (MP 9.174) north to Banklick Creek Bridge (MP 19.215). The average depth shall be 1.0 inch except where the pavement has moved due to slides or settlement. The amount of milling in these locations shall be determined by the project engineer.

SPECIAL PROVISION FOR WASTE AND BORROW SITES

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

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

COORDINATION OF WORK WITH OTHER CONTRACTS

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

1-3193 Coordination Contracts
01/02/2012

SPECIAL NOTE FOR DOUBLE ASPHALT SEAL COAT

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

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

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

SPECIAL NOTE FOR PAVEMENT WEDGE AND SHOULDER MONOLITHIC OPERATION

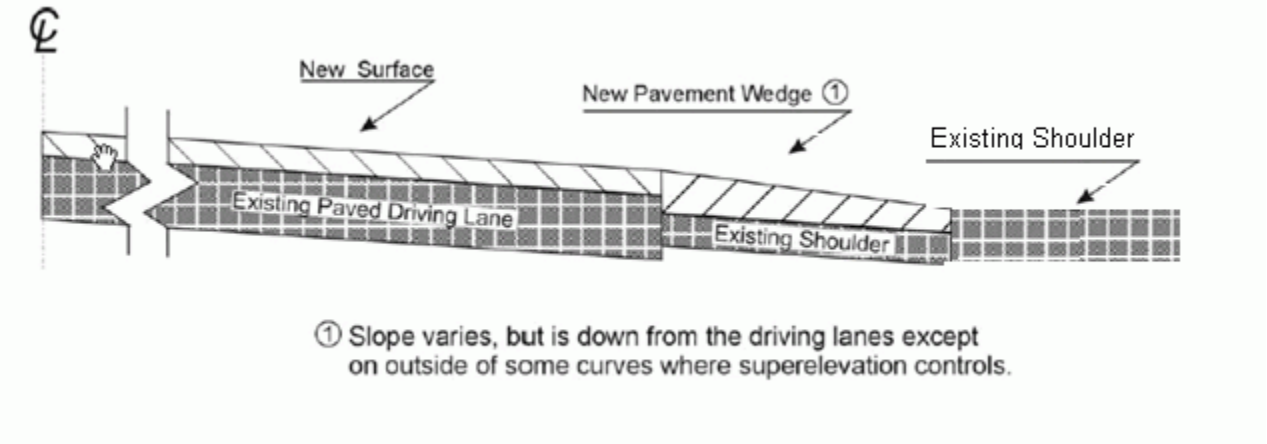
1.0 MATERIALS. Provide an Asphalt Surface Mixture conforming to Section 403 of the Standard Specifications, as applicable to the project, for the pavement wedge.

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.



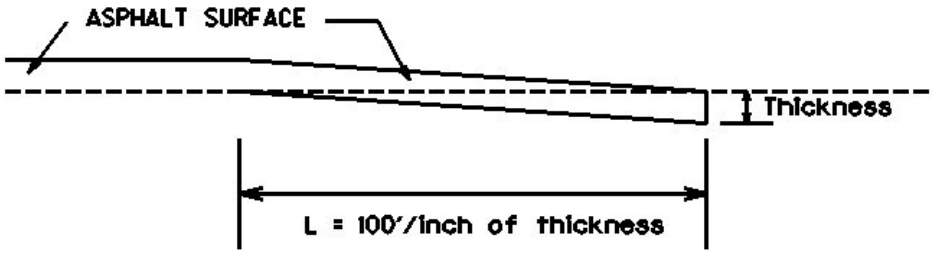
3.0 MEASUREMENT. The Department will measure Asphalt Surface Mixture placed as the pavement wedge according to Section 403.

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
HSIP 5220 (001)

Construct Edge Keys at the beginning of the Superelevation Improvement area for Curves 6 and at the end of the Superelevation Improvement area for Curve 8. Harrisburg Road intersects KY 177 within Curve 8; therefore, construct an Edge Key across Harrisburg Road, as necessary to tie Harrisburg Road into the final surface course along Curve 8. Cut out the existing asphalt surface to the required depth and width shown on the drawing below 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 = 1.25 Inches

L = 125 LF

L= Length of Edge Key

SPECIAL NOTES FOR GUARDRAIL
HSIP 5220 (001)

I. DESCRIPTION

Except as specified herein, perform all work in accordance with the Department's Standard and Supplemental Specifications, Special Notes and Special Provisions, and the Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications.

Furnish all equipment, labor, materials, and incidentals for the following work items:

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

II. MATERIALS

Except as specified herein, provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual and make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

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

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

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

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

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

III. CONSTRUCTION METHODS

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

B. Site Preparation. Remove existing guardrail system, including the guardrail end treatments, Bridge End connectors and all other elements of the existing guardrail system as per Section 719, except that the Contractor will take possession of all concrete posts and all concrete associated with the existing bridge and/or guardrail end treatments. Locate all disposal areas off the Right of Way. Be responsible for all site preparation, including but not limited to, clearing and grubbing, excavation, embankment, and removal of all

obstructions or any other items; regrading, reshaping, and adding and compacting suitable materials on the existing shoulders to provide proper template or foundation for the guardrail; filling voids left as the result of removing existing guardrail and guard posts with dry sand; temporary pollution and erosion control; disposal of excess, waste materials, and debris; and final dressing, cleanup, and seeding and protection. Perform all site preparation as approved or directed by the engineer.

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

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

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

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

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

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

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

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

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

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

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

IV. METHOD OF MEASUREMENT

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

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

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

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

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

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

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

V. BASIS OF PAYMENT

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

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

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

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

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

SPECIAL NOTE FOR
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
FD05 059 0177 009-020

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 overall milling and/or leveling and wedging, excavate the designated base failure areas to a depth 8 inches below the existing asphalt pavement surface level. Dispose of the excavated materials at waste sites off the Right-of-Way obtained by the Contractor at no additional cost to the Department. See Special Note for Waste and Borrow.

Backfill the excavated areas with Class 2 Asphalt Base 1.00D PG 64-22 in 4 inch maximum courses up to the existing pavement surface. 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 7 calendar days have elapsed after placement of the asphalt base. After a minimum of 7 calendar days and 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 conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and will not consider any claim for additional compensation if the materials encountered that are not in accord with the classification shown.

Accept payment at the Contract unit prices per square yard for Base Failure repair and per ton for Leveling and Wedging as full compensation for all labor, materials, equipment, and incidentals for removing pavement and disposing of the materials, furnishing and placing asphalt base, leveling and wedging, and all other items necessary to complete the work according to these notes to the satisfaction of the Engineer.

1-3606basefailurerepairmillinlaypaybysy
01/02/2012

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

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

1-3725 Typical Section Dimensions
01/02/2012

TRAFFIC CONTROL PLAN

TRAFFIC CONTROL GENERAL

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

Contrary to Section 106.01, traffic control devices used on this project may be new, or used in like new condition, at the beginning of the work and maintained in like new condition until completion of the work. Any temporary traffic control items, devices, materials, and incidentals shall remain the property of the contractor unless otherwise addressed, when no longer needed.

PROJECT PHASING & CONSTRUCTION PROCEDURES

For all construction activities, utilize a lane closure, and maintain alternating one way traffic. This may require part-width construction of certain elements. 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.

No lane closures will be allowed on the following dates:

Easter Weekend,	Friday, April 19, 2019 – Sunday, April 21, 2019
Memorial Day Weekend	Friday, May 24, 2019 – Monday, May 27, 2019
Independence Day Weekend	Wednesday, July 4, 2019 – Sunday, July 7, 2019
Labor Day Weekend	Friday, August 30, 2019 – Monday, September 2, 2019
Thanksgiving Holiday,	Thursday, November 28, 2019 – Sunday, December 1, 2019
Christmas Holiday,	Tuesday, December 24, 2019 – Wednesday, December 25, 2019
New Year's Holiday,	Tuesday, December 31, 2019 – Wednesday, January 1, 2020

At the discretion of the Engineer, additional days and hours may be specified when lane and/or road closures will not be allowed due to unforeseen events.

LANE CLOSURES

Do not leave lane closures in place during non-working hours or prohibited periods, unless otherwise approved by the Engineer. No long term lane closures (more than 3 days) will be allowed; therefore, lane closures will not be measured for payment.

TEMPORARY SIGNS

Temporary 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. Temporary signs, including any splices, shall be installed according to manufacturer's specifications and installation recommendations. Contrary to Section 112.04.02, only long term temporary signs (signs intended to be continuously in place for more than 3 days) will be measured for payment; short term temporary signs (signs intended to be left in place for 3 days or less) will not be measured for payment, but shall 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 24 hours. The Department will measure for payment the maximum number of Changeable Message Signs in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual Changeable Message Signs only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged Changeable Message Signs or for signs the Engineer directs be replaced due to poor condition or readability. Retain possession of the Changeable Message Signs upon completion of the work.

BARRICADES

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

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

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 EDGE DROP-OFFS

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

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

Less than 2" - No protection required.

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

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

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

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.

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

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Standard Abbreviations

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

Word	Abbrev	Example
Access	ACCS	ACCIDENT AHEAD/ USE ACCS RD NEXT RIGHT
Alternate	ALT	ACCIDENT AHEAD/ USE ALT RTE NEXT RIGHT
Avenue	AVE	FIFTH AVE CLOSED/ DETOUR NEXT LEFT
Blocked	BLKD	FIFTH AVE BLKD/ MERGE LEFT
Boulevard	BLVD	MAIN BLVD CLOSED/ USE ALT RTE
Bridge	BRDG	SMITH BRDG CLOSED/ USE ALT RTE
Cardinal Directions	N, S, E, W	N I75 CLOSED/ DETOUR EXIT 30
Center	CNTR	CNTR LANE CLOSED/ MERGE LEFT
Commercial	COMM	OVRSZ COMM VEH/ USE I275
Condition	COND	ICY COND POSSIBLE
Congested	CONG	HVY CONG NEXT 3 MI
Construction	CONST	CONST WORK AHEAD/ EXPECT DELAYS
Downtown	DWNTN	DWNTN TRAF USE EX 40
Eastbound	E-BND	E-BND I64 CLOSED/ DETOUR EXIT 20
Emergency	EMER	EMER VEH AHEAD/ PREPARE TO STOP
Entrance, Enter	EX, EXT	DWNTN TRAF USE EX 40
Expressway	EXPWY	WTRSN EXPWY CLOSED/ DETOUR EXIT 10
Freeway	FRWY, FWY	GN SYNDR FWY CLOSED/ DETOUR EXIT 15
Hazardous Materials	HAZMAT	HAZMAT IN ROADWAY/ ALL TRAF EXIT 25
Highway	HWY	ACCIDENT ON AA HWY/ EXPECT DELAYS
Hour	HR	ACCIDENT ON AA HWY/ 2 HR DELAY
Information	INFO	TRAF INFO TUNE TO 1240 AM
Interstate	I	E-BND I64 CLOSED/ DETOUR EXIT 20
Lane	LN	LN CLOSED MERGE LEFT
Left	LFT	LANE CLOSED MERGE LFT
Local	LOC	LOC TRAF USE ALT RTE
Maintenance	MAINT	MAINT WRK ON BRDG/ SLOW
Major	MAJ	MAJ DELAYS I75/ USE ALT RTE
Mile	MI	ACCIDENT 3 MI AHEAD/ USE ALT RTE
Minor	MNR	ACCIDENT 3 MI MNR DELAY
Minutes	MIN	ACCIDENT 3 MI/ 30 MIN DELAY
Northbound	N-BND	N-BND I75 CLOSED/ DETOUR EXIT 50
Oversized	OVRSZ	OVRSZ COMM VEH/ USE I275 NEXT RIGHT
Parking	PKING	EVENT PKING NEXT RGT
Parkway	PKWY	CUM PKWAY TRAF/ DETOUR EXIT 60
Prepare	PREP	ACCIDENT 3 MI/ PREP TO STOP
Right	RGT	EVENT PKING NEXT RGT
Road	RD	HAZMAT IN RD/ ALL TRAF EXIT 25
Roadwork	RDWK	RDWK NEXT 4 MI/ POSSIBLE DELAYS
Route	RTE	MAJ DELAYS I75/ USE ALT RTE
Shoulder	SHLDR	SHLDR CLOSED NEXT 5 MI
Slippery	SLIP	SLIP COND POSSIBLE/ SLOW SPD
Southbound	S-BND	S-BND I75 CLOSED/ DETOUR EXIT 50
Speed	SPD	SLIP COND POSSIBLE/ SLOW SPD

Traffic Control Plan
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Standard Abbreviations (cont)

Word	Abbrev	Example
Street	ST	MAIN ST CLOSED/ USE ALT RTE
Traffic	TRAF	CUM PKWAY TRAF/ DETOUR EXIT 60
Vehicle	VEH	OVRSZ COMM VEH/ USE I275 NEXT RIGHT
Westbound	W-BND	W-BND I64 CLOSED/ DETOUR EXIT 50
Work	WRK	CONST WRK 2MI/ POSSIBLE DELAYS

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

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

Typical Messages

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

Reason/Problem	Action
ACCIDENT	ALL TRAFFIC EXIT RT
ACCIDENT/XX MILES	AVOID DELAY USE XX
XX ROAD CLOSED	CONSIDER ALT ROUTE
XX EXIT CLOSED	DETOUR
BRIDGE CLOSED	DETOUR XX MILES
BRIDGE/(SLIPPERY, ICE, ETC.)	DO NOT PASS
CENTER/LANE/CLOSED	EXPECT DELAYS
DELAY(S), MAJOR/DELAYS	FOLLOW ALT ROUTE
DEBRIS AHEAD	KEEP LEFT
DENSE FOG	KEEP RIGHT
DISABLED/VEHICLE	MERGE XX MILES
EMER/VEHICLES/ONLY	MERGE LEFT
EVENT PARKING	MERGE RIGHT
EXIT XX CLOSED	ONE-WAY TRAFFIC
FLAGGER XX MILES	PASS TO LEFT
FOG XX MILES	PASS TO RIGHT

Traffic Control Plan
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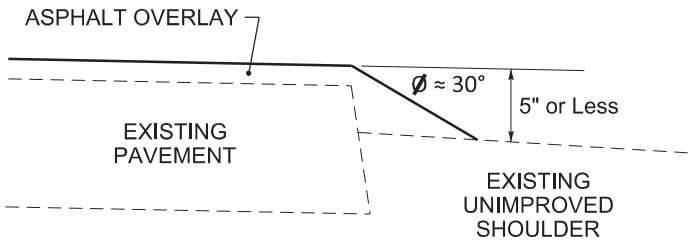
Typical Messages (cont)

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.)	
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	

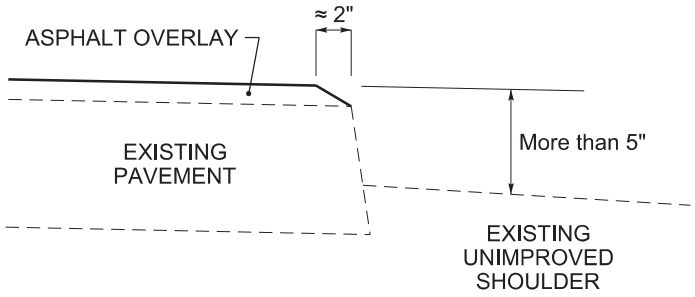
DURABLE PAVEMENT EDGE DETAIL

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



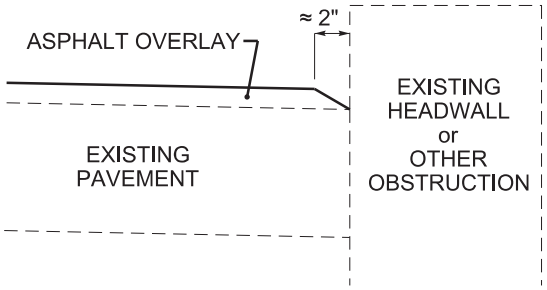
DURABLE PAVEMENT EDGE DETAIL

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



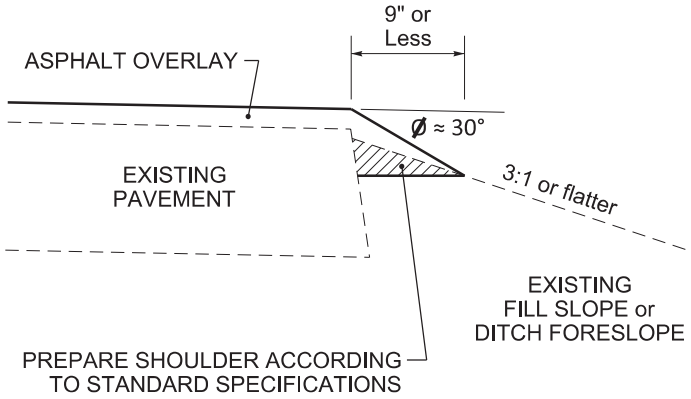
DURABLE PAVEMENT EDGE DETAIL

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



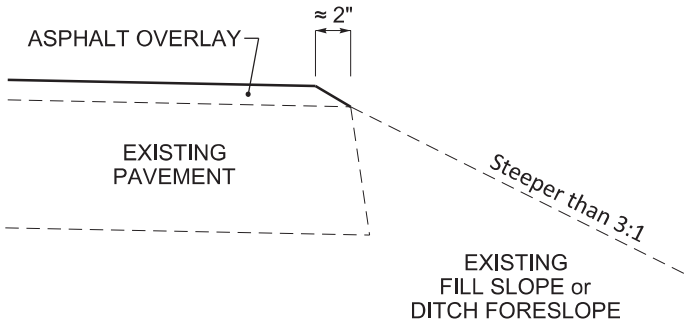
DURABLE PAVEMENT EDGE DETAIL

(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)
6-9018.00	Kenton	FD52 059 0177 006-012	HSIP 5220(001)

PROJECT DESCRIPTION

Safety Improvements along KY 177 from MP 6.150 - 11.823

☒ **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	Brian Cox
Signature		Signature	2019.04.22 08:17:14 -04'00'
Date		Date	

Right of Way Director		FHWA	
Printed Name		Printed Name	No Signature Required as per FHWA-KYTC Current Stewardship Agreement
Signature	DM Loy Digitally signed by DM Loy Date: 2019.04.22 08:20:35 -04'00'	Signature	
Date		Date	

UTILITIES AND RAIL CERTIFICATION NOTE

Kenton County - HSIP 5220 (001)
FD52 059 0177 006-012
Safety Improvements along KY 177 from MP 6.150 to MP 11.823
Item No. 6-9018.00

GENERAL PROJECT NOTE ON UTILITY PROTECTION

Utility coordination efforts determined that no significant utility relocation work is required to complete the project.

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

The following utilities may have utilities in this area and are not to be disturbed during construction activities: Owen Electric Cooperative, Duke Energy Kentucky, Northern Kentucky Water District, Cincinnati Bell Telephone, and Spectrum Communications.

- Water Mains: Water mains of various sizes are located on left and/or right sides of project throughout project limits.
- Overhead Electric/Telephone: Overhead electric/telephone is located on both left and right sides throughout project limits. Do not disturb underground or overhead utilities.
- Cincinnati Bell underground facilities located on the left side of KY 177 from Sta. 524+60 to Sta. 535+60, crossing under KY 177 at Sta. 535+60.

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

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

None

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

None

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

None

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

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

UTILITIES AND RAIL CERTIFICATION NOTE

Kenton County - HSIP 5220 (001)
FD52 059 0177 006-012
Safety Improvements along KY 177 from MP 6.150 to MP 11.823
Item No. 6-9018.00

UNDERGROUND FACILITY DAMAGE PROTECTION – BEFORE YOU DIG

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

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

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

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

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

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

UTILITIES AND RAIL CERTIFICATION NOTE

Kenton County - HSIP 5220 (001)
FD52 059 0177 006-012
Safety Improvements along KY 177 from MP 6.150 to MP 11.823
Item No. 6-9018.00

AREA UTILITIES CONTACT LIST

Utility Company/Agency	Contact Name	Contact Information
1. Cincinnati Bell Telephone		221 East Fourth Street Suite 700, Building 121-90 Cincinnati, OH 45202
2. Duke Energy Kentucky		139 East Fourth Street Annex 427 Cincinnati, OH 45202
3. Northern Kentucky Water District		PO Box 18640 2835 Crescent Springs Road Erlanger, KY 41018
4. Owen Electric Cooperative		PO Box 400 8205 Highway 127 North Owenton, KY 40359
5. Spectrum Communications		10920 Kenwood Road Blue Ash, OH 45242

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.

Updated Utility contact information will be provided at the Pre-Construction meeting.

N O T I C E

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NATIONWIDE PERMIT AUTHORIZATION
KENTUCKY DIVISION OF WATER 401 WQC

PROJECT: Kenton County, Item No. 6-9018
Perform low cost Highway safety improvements on KY 177 (Decoursey Pike).

The Section 404 & 401 activities for this project have been previously permitted under the authority of the Department of the Army Nationwide Permit No. 14 "Linear Transportation Projects" & Division of Water General Water Quality Certification. In order for these authorizations to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Permit & General WQC in a conspicuous location at the project site for the duration of construction and comply with the general conditions as required.

Station 391+66	Extend an existing 24" culvert and reconstruct headwalls. The **ephemeral** stream an U.T. to Bowman Creek will have impacts below the normal high water mark. The estimated area of impact is **6 linear feet** and **0.0003 acres**.
Station 409+90	Extend an existing 24" culvert/reconstruct a headwall. The **ephemeral** stream an U.T. to Bowman Creek will have impacts below the normal high water mark. The estimated area of impact is **13 linear feet** and **0.0006 acres**.
Station 414+09	Extend an existing 24" culvert/reconstruct a headwall. The **ephemeral** stream an U.T. to The Licking River will have impacts below the normal high water mark. The estimated area of impact is **18 linear feet** and **0.0008 acres**.
Station 427+05	Extend an existing 24" culvert/reconstruct a headwall. The **ephemeral** stream an U.T. to The Licking River will have impacts below the normal high water mark. The estimated area of impact is **14 linear feet** and **0.0006 acres**.
Station 477+38	Extend an existing 18" culvert and reconstruct headwalls. The **ephemeral** stream an U.T. to The Licking River will have impacts below the normal high water mark. The estimated area of impact is **14 linear feet** and **0.0006 acres**.

Station 519+72	Extend an existing 18” culvert and reconstruct headwalls. The **ephemeral** stream an U.T. to The Licking River will have impacts below the normal high water mark. The estimated area of impact is **11 linear feet** and **0.0005 acres**.
Station 522+82	Extend an existing 18” culvert and reconstruct headwalls. The **ephemeral** stream an U.T. to The Licking River will have impacts below the normal high water mark. The estimated area of impact is **11 linear feet** and **0.0005 acres**.
Station 563+94	Extend an existing 24” culvert and reconstruct headwalls. The **ephemeral** stream an U.T. to Steep Creek will have impacts below the normal high water mark. The estimated area of impact is **11 linear feet** and **0.0005 acres**.
Station 572+94	Extend an existing 24” culvert and reconstruct headwalls. The **ephemeral** stream an U.T. to Steep Creek will have impacts below the normal high water mark. The estimated area of impact is **10 linear feet** and **0.0005 acres**.
Station 589+52	Extend an existing 4 ft. X 4 ft. concrete box culvert. The **intermittent** stream an U.T. to Steep Creek will have impacts below the normal high water mark. The estimated area of impact is **10 linear feet** and **0.0007 acres**.
Station 593+19	Extend an existing 24” culvert and reconstruct headwalls. The **ephemeral** stream an U.T. to Steep Creek will have impacts below the normal high water mark. The estimated area of impact is **8 linear feet** and **0.0004 acres**.
Station 606+30	Extend an existing 24” culvert and reconstruct headwalls. The **ephemeral** stream an U.T. to Steep Creek will have impacts below the normal high water mark. The estimated area of impact is **6 linear feet** and **0.0003 acres**.
Station 612+62	Extend an existing 24” culvert and reconstruct headwalls. The **ephemeral** stream an U.T. to Steep Creek will have impacts below the normal high water mark. The estimated area of impact is **4 linear feet** and **0.0002 acres**.
Station 616+49	Extend an existing 24” culvert and reconstruct headwalls. The **ephemeral** stream an U.T. to Steep Creek will have impacts below the normal high water mark. The estimated area of impact is **6 linear feet** and **0.0003 acres**.

This project involves work near and/or within Jurisdictional Waters of the United States as defined by the United States Army Corps of Engineers and therefore requires a Nationwide 14 General 404 Permit. The Division of Water certified this General Permit with several conditions (See attached). One that should be brought to your attention is regarding the use of heavy equipment in the stream channel. If there is need to cross the stream channel with heavy equipment or conduct work from within the stream channel a working platform or temporary crossing is authorized. This should be constructed with clean rock and sufficient pipe to allow stream flow to continue unimpeded (see attached typical drawing).

In order for this authorization to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Approval in a conspicuous location at the project site for the duration of construction and comply with the general conditions as required.

To more readily expedite construction, the contractor may elect to alter the design or perform the work in a manner different from what was originally proposed and specified. Prior to commencing such alternative work, the contractor shall obtain **written** permission from the Division of Construction and the Division of Environmental Analysis. If such changes necessitate further permitting then the contractor will be responsible for applying to the Army Corps of Engineers and the Kentucky Division of Water (KDOW). A copy of any request to the Corps of Engineers or the KDOW to alter this proposal and subsequent responses shall be forwarded to the Division of Environmental Analysis, DA Permit Coordinator, for office records and for informational purposes.

MATTHEW G. BEVIN
GOVERNOR

CHARLES G. SNAVELY
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

R. BRUCE SCOTT
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

General Certification--Nationwide Permit # 14
Linear Transportation Projects

This General Certification is issued March 19, 2017, in conformity with the requirements of Section 401 of the Clean Water Act of 1977, as amended (33 U.S.C. §1341), as well as Kentucky Statute KRS 224.16-050.

For this and all nationwide permits, the definition of surface water is as per 401 KAR 10:001 Chapter 10, Section 1(80): Surface Waters means those waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface. Lagoons used for waste treatment and effluent ditches that are situated on property owned, leased, or under valid easement by a permitted discharger are not considered to be surface waters of the commonwealth.

Agricultural operations, as defined by KRS 224.71-100(1) conducting activities pursuant to KRS 224.71-100 (3), (4), (5), (6), or 10 are deemed to have certification if they are implementing an Agriculture Water Quality Plan pursuant to KRS 224.71-145.

For all other operations, the Commonwealth of Kentucky hereby certifies under Section 401 of the Clean Water Act (CWA) that it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 304, 306 and 307 of the CWA, will not be violated for the activity covered under NATIONWIDE PERMIT 14, namely Linear Transportation Projects, provided that the following conditions are met:

1. The activity will not occur within surface waters of the Commonwealth identified by the Kentucky Division of Water as Outstanding State or National Resource Water, Cold Water Aquatic Habitat, or Exceptional Waters.

2. The activity will not occur within surface waters of the Commonwealth identified as perpetually-protected (e.g. deed restriction, conservation easement) mitigation sites.

3. The activity will impact less than 1/2 acre of wetland/marsh.

General Certification--Nationwide Permit # 14
Linear Transportation Projects
Page 2

4. The activity will impact less than 300 linear feet of surface waters of the Commonwealth. Stream realignment greater than 100 feet and in-stream stormwater detention/retention basins are not covered under this general water quality certification.

5. For complete linear transportation projects, all impacts shall not exceed a cumulative length of 500 linear feet within each Hydrologic Unit Code (HUC) 14.

6. Any crossings must be constructed in a manner that does not impede natural water flow.

7. Stream impacts covered under this General Water Quality Certification and undertaken by those persons defined as an agricultural operation under the Agricultural Water Quality Act must be completed in compliance with the Kentucky Agricultural Water Quality Plan (KWQP).

8. The Kentucky Division of Water may require submission of a formal application for an individual certification for any project if the project has been determined to likely have a significant adverse effect upon water quality or degrade the waters of the Commonwealth so that existing uses of the water body or downstream waters are precluded.

9. Activities that do not meet the conditions of this General Water Quality Certification require an Individual Section 401 Water Quality Certification.

10. Activities qualifying for coverage under this General Water Quality Certification are subject to the following conditions:

    - Projects requiring in-stream stormwater detention/retention basins shall require individual water quality certifications.
    - Erosion and sedimentation pollution control plans and Best Management Practices must be designed, installed, and maintained in effective operating condition at all times during construction activities so that violations of state water quality standards do not occur (401 KAR 10:031 Section 2 and KRS 224.70-100).
    - Sediment and erosion control measures, such as check-dams constructed of any material, silt fencing, hay bales, etc., shall not be placed within surface waters of the Commonwealth, either temporarily or permanently, without prior approval by the Kentucky Division of Water's Water Quality Certification Section. If placement of sediment and erosion control measures in surface waters is unavoidable, design and placement of temporary erosion control measures shall not be conducted in such a manner that may result in instability of streams that are adjacent to,

General Certification--Nationwide Permit # 14
Linear Transportation Projects
Page 3

upstream, or downstream of the structures. All sediment and erosion control devices shall be removed and the natural grade restored within the completion timeline of the activities.

- Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse.
- Removal of riparian vegetation in the utility line right-of-way shall be limited to that necessary for equipment access.
- To the maximum extent practicable, all in-stream work under this certification shall be performed under low-flow conditions.
- Heavy equipment, e.g. bulldozers, backhoes, draglines, etc., if required for this project, should not be used or operated within the stream channel. In those instances in which such in-stream work is unavoidable, then it shall be performed in such a manner and duration as to minimize turbidity and disturbance to substrates and bank or riparian vegetation.
- Any fill shall be of such composition that it will not adversely affect the biological, chemical, or physical properties of the receiving waters and/or cause violations of water quality standards. If rip-rap is utilized, it should be of such weight and size that bank stress or slump conditions will not be created because of its placement.
- If there are water supply intakes located downstream that may be affected by increased turbidity and suspended solids, the permittee shall notify the operator when such work will be done.
- Should evidence of stream pollution or jurisdictional wetland impairment and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the KDOW shall be notified immediately by calling (800) 928-2380.

Non-compliance with the conditions of this general certification or violation of Kentucky state water quality standards may result in civil penalties.

2017 Nationwide Permits Regional and Permit-Specific Conditions
COMMONWEALTH OF KENTUCKY

These regional conditions are in addition to, but do not supersede, the requirements in the Federal Register (Volume 82, No. 4 of January 6, 2017, pp 1860).

Notifications for all Nationwide Permits (NWPs) shall be in accordance with General Condition No. 32.

1. For activities that would impact Outstanding State or National Resource Waters (OSNRWs), Exceptional Waters (EWs), Coldwater Aquatic Habitat Waters (CAHs) under the Endangered Species Act for the NWPs listed below, a Pre-Construction Notification (PCN) will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWPs (Section 404 activities), for impacts to these waters.

   NWP 3 (Maintenance)
   NWP 4 (Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities)
   NWP 5 (Scientific Measurement Devices)
   NWP 6 (Survey Activities)
   NWP 7 (Outfall Structures and Associated Intake Structures)
   NWP 12 (Utility Line Activities)
   NWP 13 (Bank Stabilization)
   NWP 14 (Linear Transportation Projects)
   NWP 15 (U.S. Coast Guard Approved Bridges)
   NWP 16 (Return Water from Upland Contained Disposal Areas)
   NWP 17 (Hydropower Projects)
   NWP 18 (Minor Discharges)
   NWP 19 (Minor Dredging)
   NWP 20 (Response Operations for Oil or Hazardous Substances)
   NWP 21 (Surface Coal Mining Activities)
   NWP 22 (Removal of Vessels)
   NWP 23 (Approved Categorical Exclusions)
   NWP 25 (Structural Discharges)
   NWP 27 (Aquatic Habitat Restoration, Establishment, and Enhancement Activities)
   NWP 29 (Residential Developments)
   NWP 30 (Moist Soil Management for Wildlife)
   NWP 31 (Maintenance of Existing Flood Control Facilities)
   NWP 32 (Completed Enforcement Actions)
   NWP 33 (Temporary Construction, Access, and Dewatering)
   NWP 34 (Cranberry Production Activities)
   NWP 36 (Boat Ramps)
   NWP 37 (Emergency Watershed Protection and Rehabilitation)
   NWP 38 (Cleanup of Hazardous and Toxic Waste)
   NWP 39 (Commercial and Institutional Developments)
   NWP 40 (Agricultural Activities)

NWP 41 (Reshaping Existing Drainage Ditches)
NWP 42 (Recreational Facilities)
NWP 43 (Stormwater Management Facilities)
NWP 44 (Mining Activities)
NWP 45 (Repair of Uplands Damaged by Discrete Events)
NWP 46 (Discharges in Ditches)
NWP 48 (Commercial Shellfish Aquaculture Activities)
NWP 49 (Coal Remining Activities)
NWP 50 (Underground Coal Mining Activities)
NWP 51 (Land-Based Renewable Energy Generation Facilities)
NWP 52 (Water-Based Renewable Energy Generation Pilot Projects)
NWP 53 (Removal of Low-Head Dams)
NWP 54 (Living Shorelines)

2. In addition to the notification and agency coordination requirements in the NWPs, for impacts greater than 0.25 acres in all "waters of the U.S." for the NWPs listed below, a PCN will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWPs:

NWP 3 (Maintenance)
NWP 7 (Outfall Structures and Associated Intake Structures)
NWP 12 (Utility Line Activities)
NWP 14 (Linear Transportation Projects)
NWP 29 (Residential Developments)
NWP 39 (Commercial and Institutional Developments)
NWP 40 (Agricultural Activities)
NWP 41 (Reshaping Existing Drainage Ditches)
NWP 42 (Recreational Facilities)
NWP 43 (Stormwater Management Facilities)
NWP 44 (Mining Activities)
NWP 51 (Land-Based Renewable Energy Generation Facilities)
NWP 52 (Water-Based Renewable Energy Generation Pilot Projects)
NWP 53 (Removal of Low-Head Dams)

3. For activities in all "waters of the U.S." for the NWPs listed below, a PCN will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWPs:

NWP 21 (Surface Coal Mining Activities)
NWP 27 (Aquatic Habitat Restoration, Establishment & Enhancement Activities)
NWP 49 (Coal Remining Activities)
NWP 50 (Underground Coal Mining Activities)

4. Nationwide Permit No. 14 – Linear Transportation Projects.

   (a) New road alignments or realignments are limited to a permanent loss of 500 linear feet of intermittent or perennial stream length at each crossing. Road crossings with permanent losses greater than 500 linear feet of intermittent or perennial stream associated with new

alignments or realignments will be evaluated as an individual permit (i.e., a Letter of Permission or as a Standard Individual Permit).

(b) In addition to the notification requirements contained in NWP 14, the permittee must submit a PCN to the district engineer prior to commencing the activity for the permanent loss of greater than 300 feet of ephemeral, intermittent and perennial stream of all "waters of the U.S." (See General Condition 32 and the definition of "loss of waters of the United States" in the Nationwide Permits for further information.)

5. Notification in accordance with General Condition 32 is required to the Corps for all activities which are subject to jurisdiction under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

6. All applications are required as both a paper copy and in an electronic media format, including electronic mail or compact disc.

7. For all activities, the applicant shall review the U.S. Fish and Wildlife Service's IPaC website: http://ecos.fws.gov/ipac to determine if the activity might affect threatened and/or endangered species or designated critical habitat. If federally-listed species or designated critical habitat are identified, a PCN in accordance with General Condition 18 and 32 would be triggered and the official species list generated from the IPaC website must be submitted with the PCN.

Further information:

Outstanding State or National Resource Water (OSNRWs), Exceptional Waters (EWs), and Coldwater Aquatic Habitat Waters (CAHs) are waters designated by the Commonwealth of Kentucky, Natural Resources and Environmental Protection Cabinet. The list can be found at the following link: http://eppcapp.ky.gov/spwaters/

Information on Pre-Construction Notification (PCN) can be found at NWP General Condition No. 32 in the Federal Register (Volume 81, No. 105 of June 1, 2017, pp 35211).

COORDINATING RESOURCE AGENCIES

Chief, Wetlands Regulatory Section
U.S. Environmental Protection Agency
Region IV
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303

Supervisor
U.S. Fish & Wildlife Service
JC Watts Federal Building, Room 265
330 West Broadway
Frankfort, Kentucky 40601

Supervisor
401 Water Quality Certification
Kentucky Division of Water
300 Sower Boulevard, 3rd Floor
Frankfort, KY 40601

Commissioner
Department of Fish and Wildlife Resources
#1 Game Farm Road
Frankfort, Kentucky 40601

Executive Director and State Historic Preservation Officer
Kentucky Heritage Council
300 Washington Street
Frankfort, Kentucky 40601

ADDITIONAL COORDINATING RESOURCE AGENCY FOR NWPS 21, 49, AND 50

Kentucky Department for Natural Resources
Division of Mine Permits
300 Sower Boulevard
Frankfort, KY 40601

Terms for Nationwide Permit No. 14
Linear Transportation Projects

Activities required for crossings of waters of the United States associated with the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

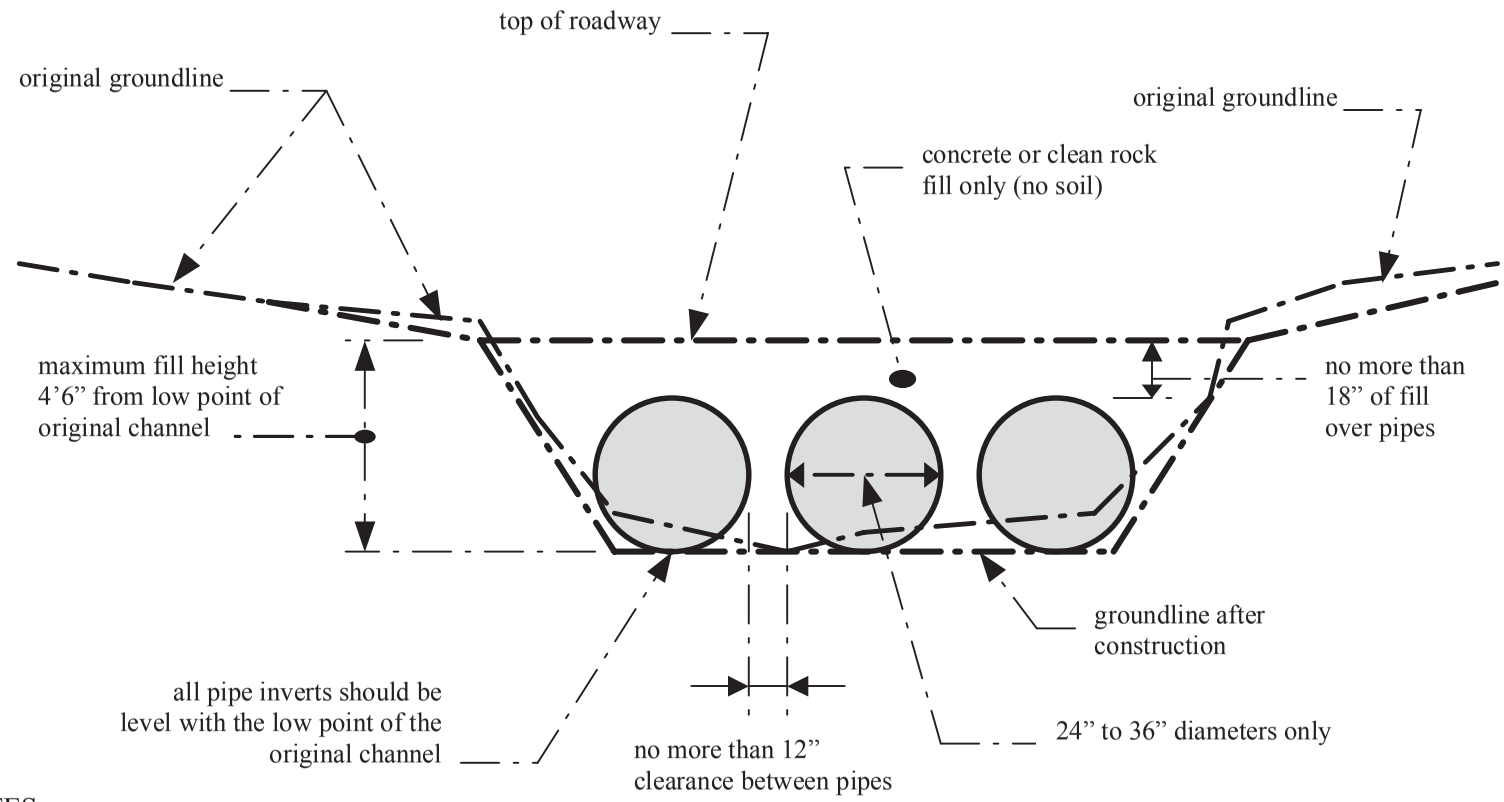
Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: For linear transportation projects crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Linear transportation projects must comply with 33 CFR 330.6(d).

Note 2: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under section 404(f) of the Clean Water Act (see 33 CFR 323.4).

Note 3: For NWP 14 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, “District Engineer’s Decision.” The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

ATTACHMENT 1



NOTES:

1. This is a conceptual drawing. The number and size of pipes and other details will vary depending on specific site conditions.
2. The pipes and backfill must be contained within the stream channel as shown above. During the construction of the approaches and access roadway across the floodplain, unstable and unconsolidated materials unsuitable for roadways may be excavated and replaced with riprap, crushed stone, or other stable road construction materials. This may only be done, however, with the following provisions: (1) the disposal of excess, unconsolidated materials thus excavated must be outside of the floodplain and (2) the finished surface of the completed road may be no more than three inches (3") above the pre-construction surface of the floodplain at any point beyond the top of banks.

LOW-WATER CROSSING

STANDARD DRAWING
Not to Scale

KYTC BMP Plan for Project CID **19 - 4215**

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 177 in Kenton County

Project: CID 19 - 4215

Revised 3/4/2016

KYTC BMP Plan for Project CID **19 - 4215**

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 177
6. Latitude/Longitude (project mid-point): 38° 54’ 37”, -84° 27’ 01”
7. County (project mid-point): Kenton
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

KYTC BMP Plan for Project CID **19 - 4215**

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: 220 CY (Fill), 8035 LF Ditching and Shouldering

4. Estimate of total project area (acres): 61.5

5. Estimate of area to be disturbed (acres): 4.0

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: Licking River, Bowman Creek, Steep Creek

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

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

12. Potential sources of pollutants:

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

B. Sediment and Erosion Control Measures:

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

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

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

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

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

- 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 clean up will be disposed in accordance with appropriate regulations.

D. Other State and Local Plans

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

E. Maintenance

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

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

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

F. Inspections

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

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

G. Non – Storm Water discharges

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

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

- Uncontaminated groundwater and rain water (from dewatering during excavation).

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

H. Groundwater Protection Plan (3)

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

- Contractors statement: (3)

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

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

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

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

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

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

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

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

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

KYTC BMP Plan for Project CID **19 - 4215**

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 **19 - 4215**

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.

KYTC BMP Plan for Project CID **19 - 4215**

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.

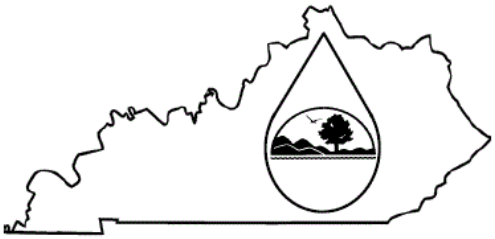
Signed _____title_____, _____
Typed or printed name[1] signature

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.

CID 19-4215
Kenton County
Highway Safety Improvement Project along KY 177
from MP 6.150 – 11.823
Item No.: 6-9018

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: 155192



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		

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	Bob		Yeager

Mailing Address:(*)	City:(*)	State:(*)	Zip:(*)
421 Buttermilk Pike	Ft. Mitchell	Kentucky	41017

eMail Address:(*)	Business Phone:(*)	Alternate Phone:
Robert.Yeager@ky.gov	859-341-2700	

SECTION II -- GENERAL SITE LOCATION INFORMATION

Project Name:(*)	Status of Owner/Operator(*)	SIC Code(*)
KYTC Project: CID 194215	State Government	1611 Highway and Street

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

Site Physical Address:(*)
KY 177

City:(*)	State:(*)	Zip:(*)
Visalia	Kentucky	41063

County:(*)	Latitude(decimal degrees)(*)DMS to DD Converter (https://www.fcc.gov/media/radio/dms-decimal)	Longitude(decimal degrees)(*)
Kenton	38.910398	-84.450222

SECTION III -- SPECIFIC SITE ACTIVITY INFORMATION

Project Description:(*)
Highway Safety Improvement Project consisting of superelevation improvements, replacing/extending pipes, shouldering, ditching, guardrail, drilled

a. For single projects provide the following information

Total Number of Acres in Project:(✓)	Total Number of Acres Disturbed:(✓)
61.5	4
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:(✓)
Number of individual lots in development, if applicable:(✓)	Number of lots in development:(✓)
Total acreage of lots intended to be developed:(✓)	Number of acres intended to be disturbed at any one time:(✓)
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	38.887971		Bowman Creek	Delete
2	No	38.888985		Bowman Creek	Delete
3	No	38.889572		Bowman Creek	Delete
4	No	38.891373		Bowman Creek	Delete
5	No	38.891643		Bowman Creek	Delete
6	No	38.893704		Bowman Creek	Delete
7	No	38.893900		Bowman Creek	Delete
8	No	38.894936		Bowman Creek	Delete
9	No	38.894970		Bowman Creek	Delete
10	Yes	38.877427		Licking 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):(*)

	Latitude	Longitude	
+			

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

Will the project require construction activities in a water body or the riparian zone?:(*)	Yes
If Yes, describe scope of activity: (✓)	Culvert Extensions
Is a Clean Water Act 404 permit required?:(*)	Yes

Is a Clean Water Act 401 Water Quality Certification required?:(*)	Yes

SECTION VII -- NOI PREPARER INFORMATION

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

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

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

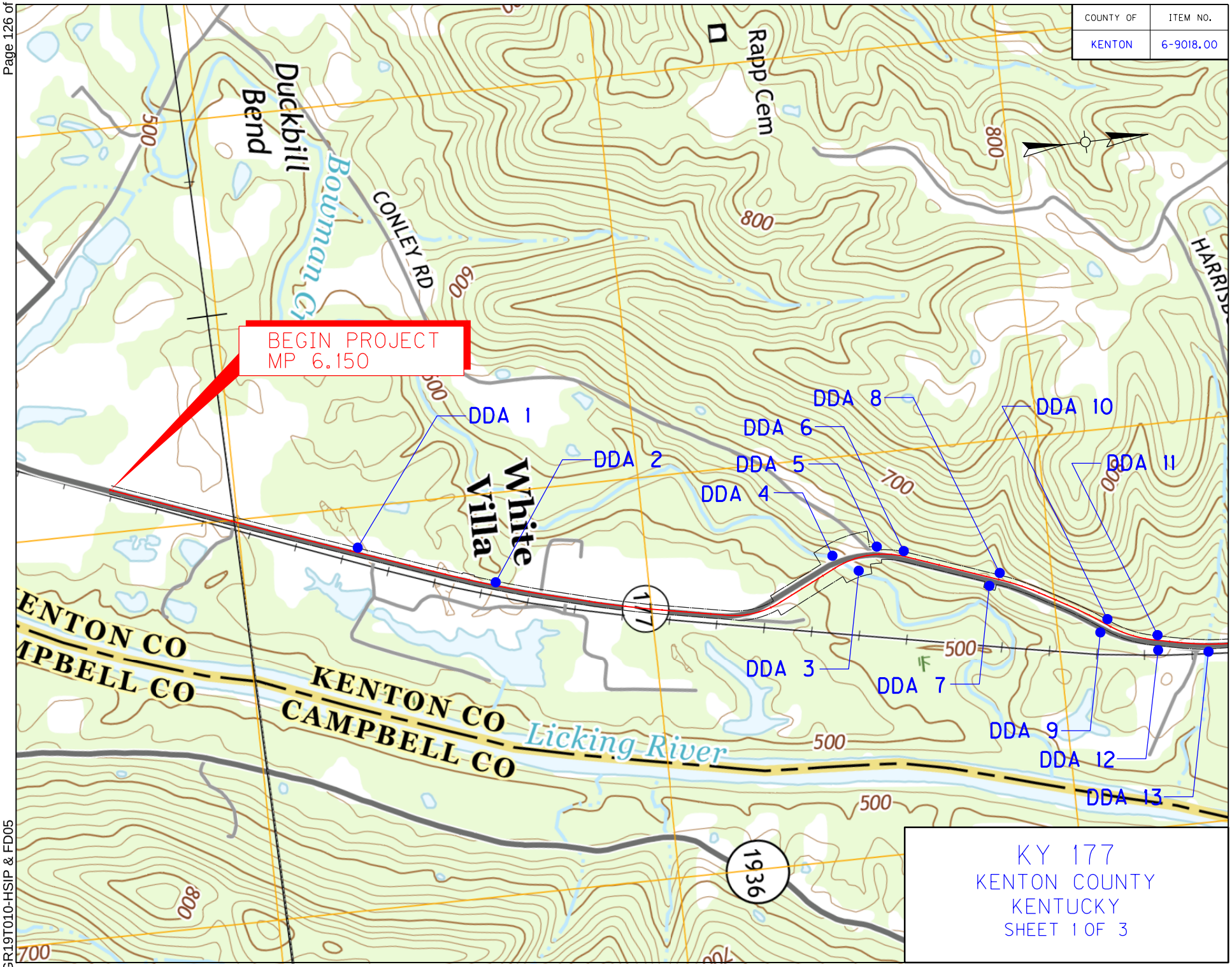
Signature:(*)	Title:(*)

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

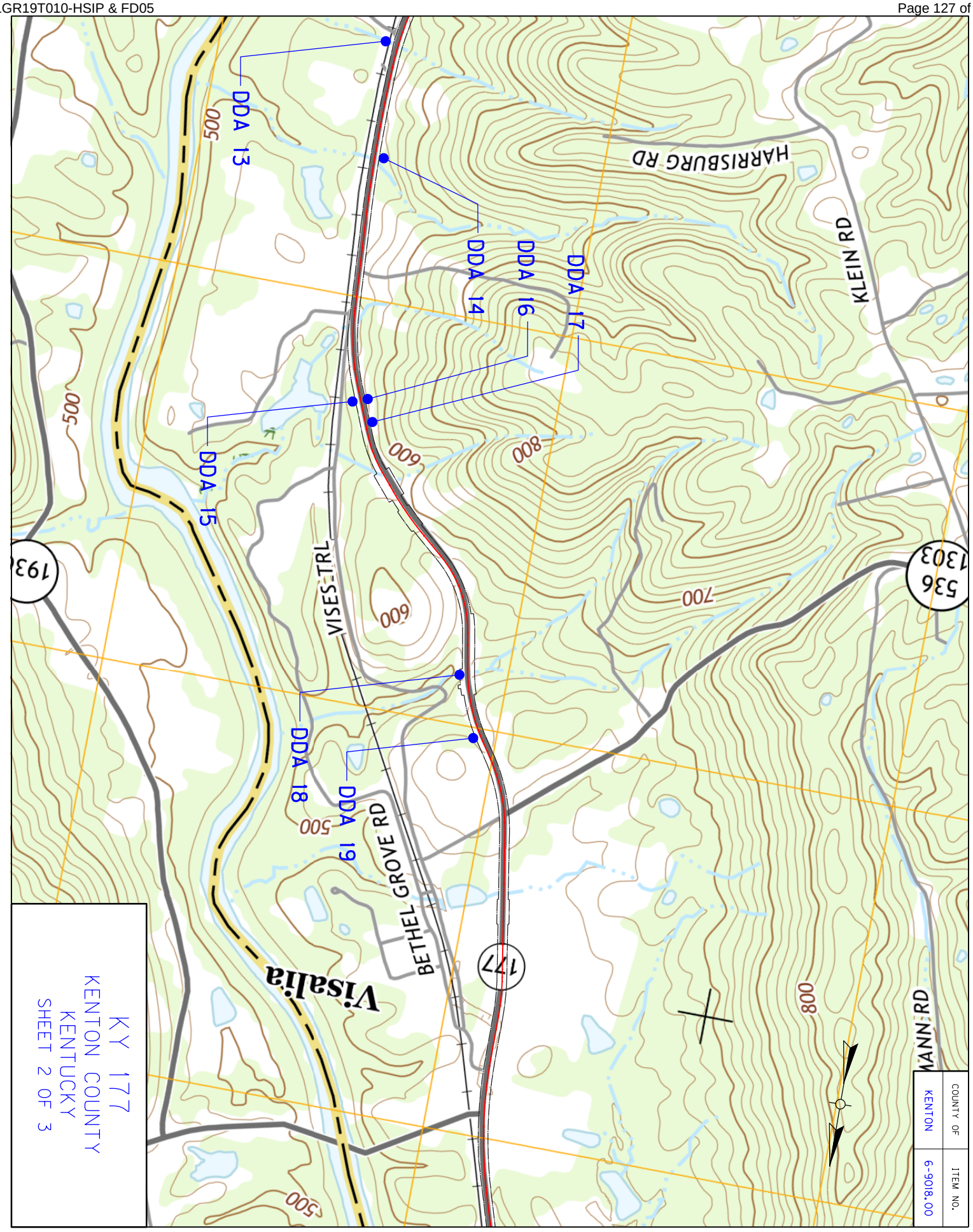
eMail Address:(*)	Business Phone:(*)	Alternate Phone:	Signature Date:(*)

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

COUNTY OF	ITEM NO.
KENTON	6-9018.00



KY 177
KENTON COUNTY
KENTUCKY
SHEET 1 OF 3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DDA 18
DDA 19
HARRISBURG RD
KLEIN RD
VISES TRL
BETHEL GROVE RD
Visalia
177
536
1303
193
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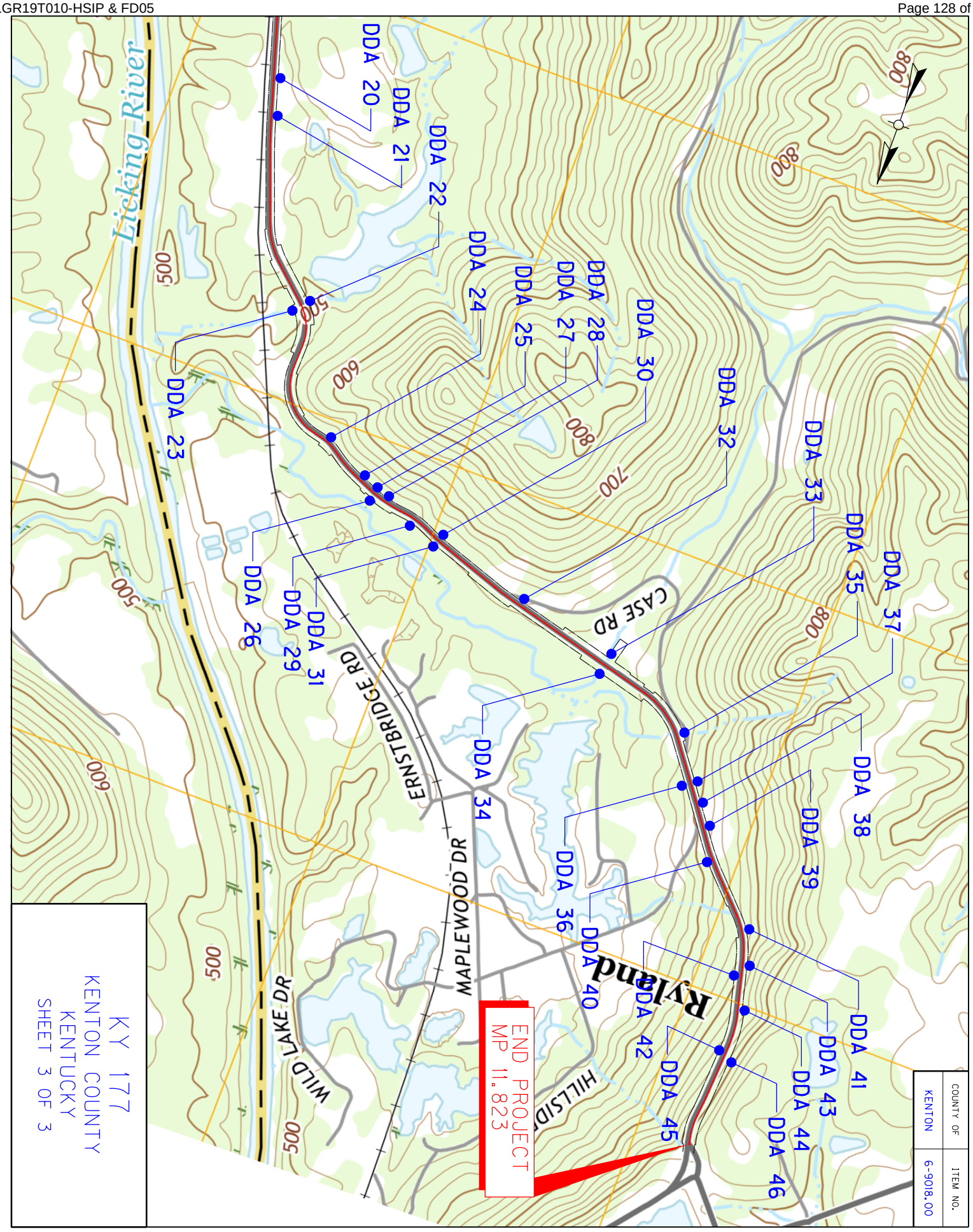
COUNTY OF
KENTON
ITEM NO.
6-9018.00
KY 177
KENTON COUNTY
KENTUCKY
SHEET 2 OF 3


Licking River
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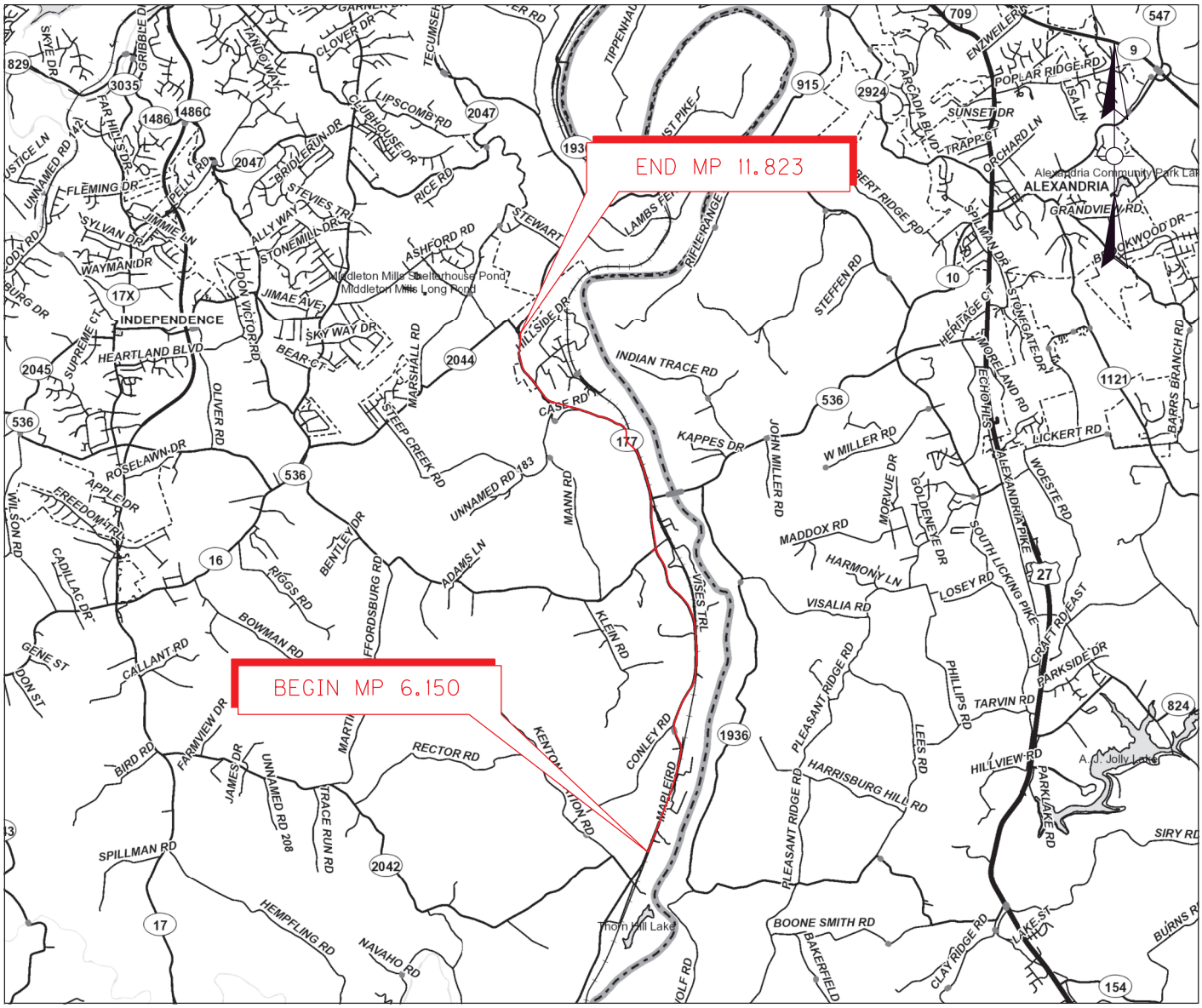
DDA 41
DDA 42
DDA 43
DDA 44
DDA 45
DDA 46
CASE RD
ERNSTBRIDGE RD
MAPLEWOOD DR
WILD LAKE DR
Ryland
END PROJECT
MP 11.823
KY 177
KENTON COUNTY
KENTUCKY
SHEET 3 OF 3
COUNTY OF
KENTON
ITEM NO.
6-9018.00

COUNTY OF	ITEM NO.
KENTON	6-9018.00

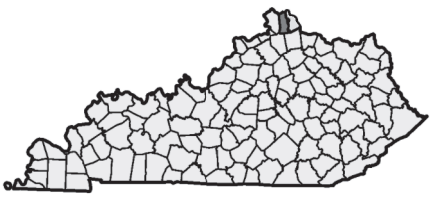
PROJECT LMITS FOR HSIP FUNDED PORTION



SCALE: 1"=8000'

KENTON COUNTY
KY 177
HSIP SAFETY IMPROVEMENTS

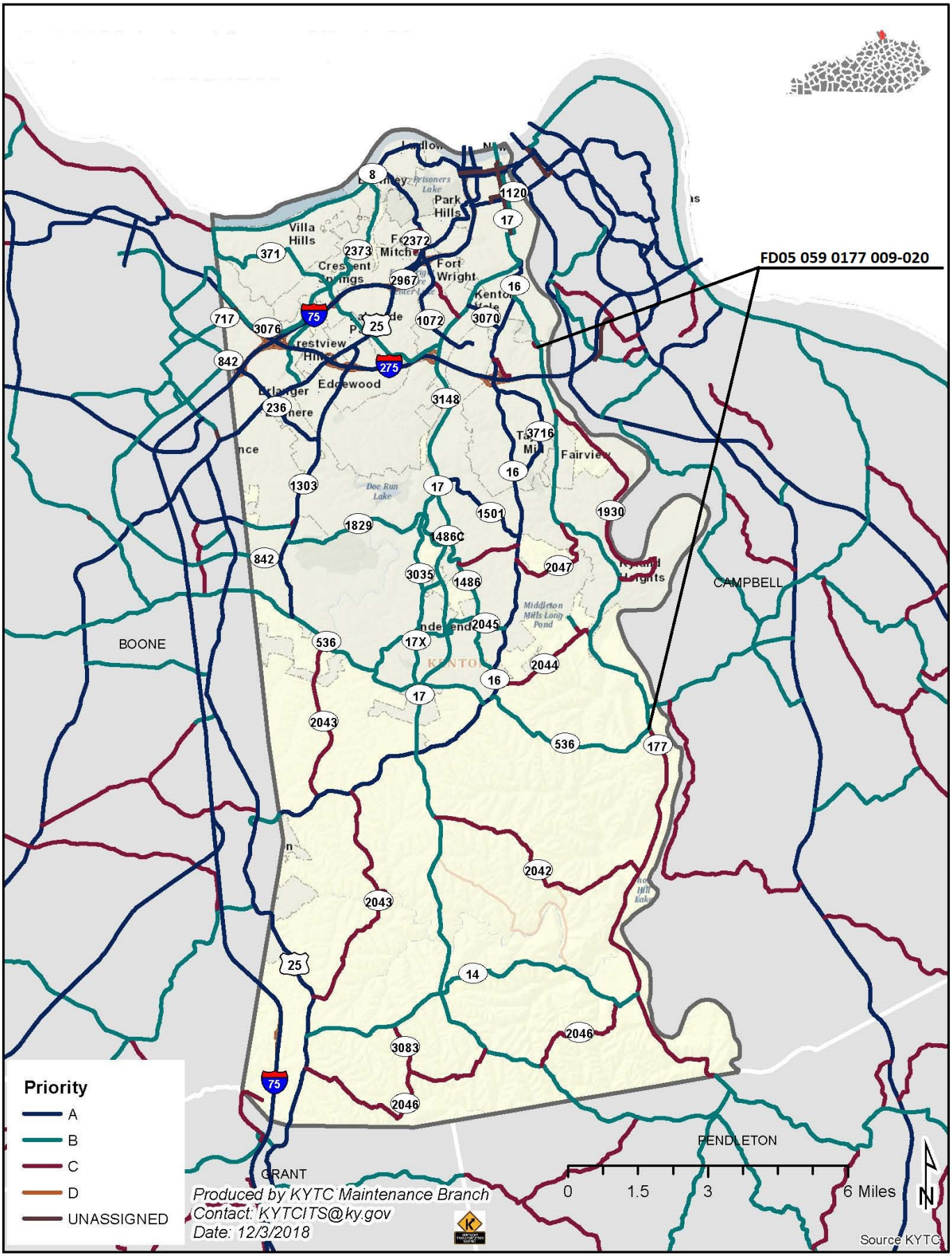
KENTUCKY TRANSPORTATION CABINET



KENTON COUNTY KY 177

FD05 RESURFACING PROJECT

MP 9.174 to 19.215



MATERIAL SUMMARY

CONTRACT ID: 194215 **121GR19T010-HSIP & FD05** **0605901771901**

DECOURSEY PIKE (KY 177) FROM 0.314 MILES NORTH OF KY 2042 EXTENDING NORTH TO KY 2044
ASPHALT PAVEMENT & ROADWAY REHAB, A DISTANCE OF 5.67 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0080	00001	DGA BASE	434.00	TON
0085	00080	CRUSHED AGGREGATE SIZE NO 23	239.00	TON
0090	00100	ASPHALT SEAL AGGREGATE	71.00	TON
0095	00103	ASPHALT SEAL COAT	8.30	TON
0100	00190	LEVELING & WEDGING PG64-22	673.00	TON
0105	00212	CL2 ASPH BASE 1.00D PG64-22	546.00	TON
0110	00301	CL2 ASPH SURF 0.38D PG64-22	308.00	TON
0115	24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	6.50	TON
0120	02676	MOBILIZATION FOR MILL & TEXT - (KENTON KY 177 HSIP)	1.00	LS
0125	02677	ASPHALT PAVE MILLING & TEXTURING	502.00	TON
0130	02697	EDGELINE RUMBLE STRIPS	2,500.00	LF
0135	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	77.00	EACH
0140	02159	TEMP DITCH	15,000.00	LF
0145	02160	CLEAN TEMP DITCH	7,500.00	LF
0150	02360	GUARDRAIL TERMINAL SECTION NO 1	3.00	EACH
0155	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	4.00	EACH
0160	02367	GUARDRAIL END TREATMENT TYPE 1	18.00	EACH
0165	02373	GUARDRAIL END TREATMENT TYPE 3	2.00	EACH
0170	02381	REMOVE GUARDRAIL	2,655.00	LF
0175	02391	GUARDRAIL END TREATMENT TYPE 4A	3.00	EACH
0180	02575	DITCHING AND SHOULDERING	8,035.00	LF
0185	02650	MAINTAIN & CONTROL TRAFFIC - (KENTON KY 177 HSIP)	1.00	LS
0190	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH
0195	02701	TEMP SILT FENCE	15,000.00	LF
0200	02703	SILT TRAP TYPE A	6.00	EACH
0205	02704	SILT TRAP TYPE B	6.00	EACH
0210	02705	SILT TRAP TYPE C	6.00	EACH
0215	02706	CLEAN SILT TRAP TYPE A	6.00	EACH
0220	02707	CLEAN SILT TRAP TYPE B	6.00	EACH
0225	02708	CLEAN SILT TRAP TYPE C	6.00	EACH
0230	02726	STAKING - (KENTON KY 177 HSIP)	1.00	LS
0235	03234	RAILROAD RAILS-DRILLED	2,125.00	LF
0240	03235	EXCAVATION AND BACKFILL	97.00	CUYD
0245	03236	CRIBBING	2,680.00	SQFT
0250	03269	TRIM & REMOVE TREES & BRUSH	4,110.00	LF
0255	05952	TEMP MULCH	16,750.00	SQYD
0260	05953	TEMP SEEDING AND PROTECTION	12,500.00	SQYD
0265	05963	INITIAL FERTILIZER	1.00	TON
0270	05964	MAINTENANCE FERTILIZER	1.50	TON
0275	05985	SEEDING AND PROTECTION	21,000.00	SQYD
0280	05992	AGRICULTURAL LIMESTONE	16.00	TON
0285	06510	PAVE STRIPING-TEMP PAINT-4 IN	7,500.00	LF

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0290	06514	PAVE STRIPING-PERM PAINT-4 IN	2,500.00	LF
0295	08018	RETAINING WALL - (POLYPROPYLENE BARRIER WALL)	400.00	SQFT
0300	21802EN	G/R STEEL W BEAM-S FACE (7 FT POST)	5,050.00	LF
0305	00439	ENTRANCE PIPE-12 IN	24.00	LF
0310	00440	ENTRANCE PIPE-15 IN	30.00	LF
0315	00441	ENTRANCE PIPE-18 IN	20.00	LF
0320	00461	CULVERT PIPE-15 IN	22.00	LF
0325	00462	CULVERT PIPE-18 IN	46.00	LF
0330	00464	CULVERT PIPE-24 IN	142.00	LF
0335	01208	PIPE CULVERT HEADWALL-24 IN - (SLOPED & FLARED)	3.00	EACH
0340	01310	REMOVE PIPE	194.00	LF
0345	01727	SAFETY BOX INLET-24 IN SDB-1	4.00	EACH
0350	02483	CHANNEL LINING CLASS II	1,279.00	TON
0355	02598	FABRIC-GEOTEXTILE TYPE III	1,245.00	SQYD
0360	02599	FABRIC-GEOTEXTILE TYPE IV	1,225.00	SQYD
0365	02625	REMOVE HEADWALL	16.00	EACH
0370	02625	REMOVE HEADWALL - (RCBC @ MP 11.165)	1.00	EACH
0375	03262	CLEAN PIPE STRUCTURE	4.00	EACH
0380	05950	EROSION CONTROL BLANKET	8,357.00	SQYD
0385	08003	FOUNDATION PREPARATION - (RCBC @ MP 11.165)	1.00	LS
0390	08100	CONCRETE-CLASS A - (RCBC @ MP 11.165)	10.50	CUYD
0395	08150	STEEL REINFORCEMENT - (RCBC @ MP 11.165)	1,365.00	LB
0400	24395EC	SAFETY BOX INLET-15 IN SDB-1	2.00	EACH
0405	24575ES610	HEADWALL - (SLOPED & MITERED CONCRETE-FOR 15 INCH PIPE)	1.00	EACH
0410	24575ES610	HEADWALL - (SLOPED & MITERED CONCRETE-FOR 18 INCH PIPE)	4.00	EACH
0415	24575ES610	HEADWALL - (SLOPED & MITERED CONCRETE-FOR 24 INCH PIPE)	4.00	EACH
0420	06406	SBM ALUM SHEET SIGNS .080 IN	246.00	SQFT
0425	06410	STEEL POST TYPE 1	470.00	LF
0430	21134ND	REMOVE-STORE AND REINSTALL SIGN	10.00	EACH
0435	21373ND	REMOVE SIGN	5.00	EACH
0440	21813NN	REMOVE AND RELOCATE SHEET SIGNS	4.00	EACH
0445	24631EC	BARCODE SIGN INVENTORY	88.00	EACH
0450	02569	DEMOBILIZATION	1.00	LS
0455	10020NS	FUEL ADJUSTMENT	3,100.00	DOLL
0460	10030NS	ASPHALT ADJUSTMENT	6,000.00	DOLL

MATERIAL SUMMARY

CONTRACT ID: 194215 **121GR19T010-HSIP & FD05** **MP05901771901**

DECOURSEY PIKE (KY 177) BEGIN AT KY 536 EXTENDING NORTH TO THE BANKLICK CREEK BRIDGE ASPHALT RESURFACING, A DISTANCE OF 10.04 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	02562	TEMPORARY SIGNS	570.00	SQFT
0010	02650	MAINTAIN & CONTROL TRAFFIC - (KENTON KY 177 FD05)	1.00	LS
0015	00301	CL2 ASPH SURF 0.38D PG64-22	8,345.00	TON
0020	00190	LEVELING & WEDGING PG64-22	450.00	TON
0025	02676	MOBILIZATION FOR MILL & TEXT - (KENTON KY 177 FD05)	1.00	LS
0030	02677	ASPHALT PAVE MILLING & TEXTURING	8,345.00	TON
0035	03240	BASE FAILURE REPAIR	330.00	SQYD
0040	06514	PAVE STRIPING-PERM PAINT-4 IN	200,000.00	LF
0045	06510	PAVE STRIPING-TEMP PAINT-4 IN	200,000.00	LF
0050	06568	PAVE MARKING-THERMO STOP BAR-24IN	68.00	LF
0055	24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	45.00	TON
0060	10030NS	ASPHALT ADJUSTMENT	35,030.00	DOLL
0065	10020NS	FUEL ADJUSTMENT	13,947.00	DOLL
0070	02569	DEMOBILIZATION	1.00	LS
0075	02697	EDGELINE RUMBLE STRIPS	64,110.00	LF

COUNTY OF	ITEM NO.
KENTON	6-9018

GENERAL SUMMARY

HSIP 5220 (001)

ITEM	DESCRIPTION		UNIT	TOTAL PROJECT
1	DGA BASE	① ② ④ ⑦ ⑧	TON	434
80	CRUSHED AGGREGATE SIZE NO. 23	⑩ ⑪	TON	239
100	ASPHALT SEAL AGGREGATE	① ② ⑦ ⑧	TON	71
103	ASPHALT SEAL COAT	① ② ⑦ ⑧	TON	8.3
190	LEVELING & WEDGING PG64-22	① ⑩ ⑪	TON	673
212	CL2 ASPH BASE 1.00D PG64-22	③ ④ ⑩ ⑪	TON	546
301	CL2 ASPH SURF 0.38D PG64-22	① ③ ④	TON	308
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	① ⑩ ⑪	TON	6.5
439	ENTRANCE PIPE-12 IN	④	LF	24
440	ENTRANCE PIPE-15 IN	④	LF	30
441	ENTRANCE PIPE-18 IN	④	LF	20
461	CULVERT PIPE-15 IN	③	LF	22
462	CULVERT PIPE-18 IN	③	LF	46
464	CULVERT PIPE-24 IN	③	LF	142
1208	PIPE CULVERT HEADWALL-24 IN	③	EACH	3
1310	REMOVE PIPE	③ ④	LF	194
1727	SAFETY BOX INLET-24 IN SDB-1	③	EACH	4
1987	DELINEATOR FOR GUARDRAIL B/W	②	EACH	77
2159	TEMP DITCH		LF	15,000
2160	CLEAN TEMP DITCH		LF	7,500
2360	GUARDRAIL TERMINAL SECTION NO 1	②	EACH	3
2363	GUARDRAIL CONNECTOR TO BRIDGE END TYPE A	②	EACH	4
2367	GUARDRAIL END TREATMENT TYPE 1	②	EACH	18
2373	GUARDRAIL END TREATMENT TYPE 3	②	EACH	2
2381	REMOVE GUARDRAIL	②	LF	2,655
2391	GUARDRAIL END TREATMENT TYPE 4A	②	EACH	3
2483	CHANNEL LINING CLASS II	⑦ ⑧ ⑫ ⑬	TON	1,279
2569	DEMOBILIZATION		LS	1
2575	DITCHING AND SHOULDERING	⑧	LF	8,035
2598	FABRIC-GEOTEXTILE TYPE III	⑩ ⑪	SQYD	1,245
2599	FABRIC-GEOTEXTILE TYPE IV	⑦ ⑧	SQYD	1,225
2625	REMOVE HEADWALL	③	EACH	16
2625	REMOVE HEADWALL (RCBC MP 11.165)	⑥	EACH	1
2650	MAINTAIN & CONTROL TRAFFIC		LS	1

① QUANTITY CARRIED OVER FROM SUPERELEVATION IMPROVEMENT SUMMARY
② QUANTITY CARRIED OVER FROM GUARDRAIL SUMMARY
③ QUANTITY CARRIED OVER FROM CULVERT PIPE SUMMARY
④ QUANTITY CARRIED OVER FROM ENTRANCE PIPE SUMMARY
⑤ QUANTITY CARRIED OVER FROM SIGNING SUMMARY
⑥ QUANTITY CARRIED OVER FROM RCBC EXTENSION SUMMARY
⑦ QUANTITY CARRIED OVER FROM CRIBBING SUMMARY
⑧ QUANTITY CARRIED OVER FROM DITCHING AND SHOULDERING AND DGA WEDGE & CHIP SEAL SUMMARY
⑨ QUANTITY CARRIED OVER FROM TREE TRIMMING SUMMARY
⑩ QUANTITY CARRIED OVER FROM PAVEMENT REPAIR SUMMARY
⑪ QUANTITY CARRIED OVER FROM SHOULDER REPAIR SUMMARY
⑫ QUANTITY CARRIED OVER FROM CHANNEL LINING SUMMARY
⑬ ADDITIONAL QUANTITY INCLUDED FOR USE AS DIRECTED BY ENGINEER

KY 177
GENERAL SUMMARY

COUNTY OF	ITEM NO.
KENTON	6-9018

GENERAL SUMMARY

HSIP 5220 (001)

ITEM	DESCRIPTION	UNIT	TOTAL PROJECT
2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2
2676	MOBILIZATION FOR MILL & TEXT	LS	1
2677	ASPHALT PAVE MILLING & TEXTURING (1)	TON	502
2697	EDGELINE RUMBLE STRIPS (1)	LF	2,500
2701	TEMP SILT FENCE	LF	15,000
2703	SILT TRAP TYPE A	EACH	6
2704	SILT TRAP TYPE B	EACH	6
2705	SILT TRAP TYPE C	EACH	6
2706	CLEAN SILT TRAP TYPE A	EACH	6
2707	CLEAN SILT TRAP TYPE B	EACH	6
2708	CLEAN SILT TRAP TYPE C	EACH	6
2726	STAKING	LS	1
3234	RAILROAD RAILS-DRILLED (7)	LF	2,125
3235	EXCAVATION AND BACKFILL (7) (14)	CUYD	97
3236	CRIBBING (7)	SQFT	2,680
3262	CLEAN PIPE STRUCTURE (3)	EACH	4
3269	TRIM & REMOVE TREES & BRUSH (9)	LF	4,110
5950	EROSION CONTROL BLANKET (8) (13)	SQYD	8,357
5952	TEMP MULCH	SQYD	16,750
5953	TEMP SEEDING AND PROTECTION	SQYD	12,500
5963	INITIAL FERTILIZER	TON	1
5964	20-10-10 FERTILIZER	TON	1.5
5985	SEEDING & PROTECTION	SQYD	21,000
5992	AGRICULTURAL LIMESTONE	TON	16
6406	SBM ALUM SHEET SIGNS .080 IN (5)	SQFT	246
6410	STEEL POST TYPE 1 (5)	LF	470
6510	PAVE STRIPING-TEMP PAINT-4 IN (1) (13)	LF	7,500
6514	PAVE STRIPING-PERM PAINT-4 IN (1)	LF	2,500
8003	FOUNDATION PREPARATION (6)	LS	1
8018	RETAINING WALL (POLYPROPYLENE BARRIER WALL) (14)	SQFT	400
8100	CONCRETE-CLASS A (6)	CUYD	10.5
8150	STEEL REINFORCEMENT (6)	LB	1,365

(1) QUANTITY CARRIED OVER FROM SUPERELEVATION IMPROVEMENT SUMMARY
(2) QUANTITY CARRIED OVER FROM GUARDRAIL SUMMARY
(3) QUANTITY CARRIED OVER FROM CULVERT PIPE SUMMARY
(4) QUANTITY CARRIED OVER FROM ENTRANCE PIPE SUMMARY
(5) QUANTITY CARRIED OVER FROM SIGNING SUMMARY
(6) QUANTITY CARRIED OVER FROM RCBC EXTENSION SUMMARY
(7) QUANTITY CARRIED OVER FROM CRIBBING SUMMARY
(8) QUANTITY CARRIED OVER FROM DITCHING AND SHOULDERING AND DGA WEDGE & CHIP SEAL SUMMARY
(9) QUANTITY CARRIED OVER FROM TREE TRIMMING SUMMARY
(10) QUANTITY CARRIED OVER FROM PAVEMENT REPAIR SUMMARY
(11) QUANTITY CARRIED OVER FROM SHOULDER REPAIR SUMMARY
(12) QUANTITY CARRIED OVER FROM CHANNEL LINING SUMMARY
(13) ADDITIONAL QUANTITY INCLUDED FOR USE AS DIRECTED BY ENGINEER
(14) QUANTITY CARRIED OVER FROM POLYPROPYLENE BARRIER WALL SUMMARY

KY 177
GENERAL SUMMARY

COUNTY OF	ITEM NO.
KENTON	6-9018

GENERAL SUMMARY

HSIP 5220 (001)

ITEM	DESCRIPTION	UNIT	TOTAL PROJECT
21134ND	REMOVE-STORE AND REINSTALL SIGN	EACH	10
21373ND	REMOVE SIGN (5)	EACH	5
21802EN	G/R STEEL W BEAM-S FACE (7 FT POST) (2)	LF	5,050
21813NN	REMOVE AND RELOCATE SHEET SIGNS (5)	EACH	4
24395EC	SAFETY BOX INLET-15 IN SDB-1 (3)	EACH	2
24575ES610	HEADWALL (SLOPED & MITERED CONCRETE FOR 15 INCH PIPE) (3)	EACH	1
24575ES610	HEADWALL (SLOPED & MITERED CONCRETE FOR 18 INCH PIPE) (3)	EACH	4
24575ES610	HEADWALL (SLOPED & MITERED CONCRETE FOR 24 INCH PIPE) (3)	EACH	4
24631EC	BARCODE SIGN INVENTORY (5)	EACH	88

(1) QUANTITY CARRIED OVER FROM SUPERELEVATION IMPROVEMENT SUMMARY
(2) QUANTITY CARRIED OVER FROM GUARDRAIL SUMMARY
(3) QUANTITY CARRIED OVER FROM CULVERT PIPE SUMMARY
(4) QUANTITY CARRIED OVER FROM ENTRANCE PIPE SUMMARY
(5) QUANTITY CARRIED OVER FROM SIGNING SUMMARY
(6) QUANTITY CARRIED OVER FROM RCBC EXTENSION SUMMARY
(7) QUANTITY CARRIED OVER FROM CRIBBING SUMMARY
(8) QUANTITY CARRIED OVER FROM DITCHING AND SHOULDERING AND DGA WEDGE & CHIP SEAL SUMMARY
(9) QUANTITY CARRIED OVER FROM TREE TRIMMING SUMMARY
(10) QUANTITY CARRIED OVER FROM PAVEMENT REPAIR SUMMARY
(11) QUANTITY CARRIED OVER FROM SHOULDER REPAIR SUMMARY
(12) QUANTITY CARRIED OVER FROM CHANNEL LINING SUMMARY
(13) ADDITIONAL QUANTITY INCLUDED FOR USE AS DIRECTED BY ENGINEER

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GENERAL SUMMARY

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COUNTY OF	ITEM NO.
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HSIP 5220 (001)

SUPERELEVATION IMPROVEMENTS

Curve No.	PC Station	PC Milepoint	PT Station	PT Milepoint	Advisory Speed	Radius	Length of Curve (ft)	Existing Superelevation	Desired Superelevation	Runoff Length	Runout Length	Leveling & Wedging PG 64-22 (ton)	CL2 Asph. Surf. 0.38D PG 64-22	Asphalt Pave Milling & Texturing (ton)	DGA Base (ton)	
6 NB	405+96.22	7.689	408+60.37	7.739	--	2,800	264	2.9%					33	33		
6 SB					--		264	-0.6%	3.0%	77	52	59	33	24	8	
7 NB	409+88.78	7.763	413+73.91	7.836	--	980	385	1.9%	5.0%	128	52	90	54	37	10	
7 SB					--		385	6.0%					54	54		
8 NB	415+66.6	7.872	420+10.15	7.956	--	2,500	444	-1.7%	2.0%	51	51	120	60	41	12	*
8 SB					--		444	2.0%					52	52		
24 NB	556+89.64	10.547	560+08.88	10.608	--	1,050	319	1.5%	5.0%	128	52	53		32		
24 SB					--		319	5.6%						50		
26 NB	563+50.07	10.672	565+03.86	10.701	--	1,500	154	1.1%	4.0%	102	51	117		19		
26 SB					--		154	2.2%						33		
29 NB	598+48.46	11.335	601+30.88	11.388	--	1,950	282	0.8%	3.5%	90	52	55		24		
29 SB					45		282	3.4%						41		
32 NB	620+46.77	11.751	621+40.72	11.769	--	2,000	94	2.7%						37		
32 SB					--		94	-2.2%	3.0%	77	52	89		25		
											SUPERELEVATION TOTALS:	**583**	**286**	**502**	**30**	

ITEM	DESCRIPTION	UNIT	QUANTITY
1	DGA BASE	TON	30
100	ASPHALT SEAL AGGREGATE	TON	11
103	ASPHALT SEAL COAT	TON	1.4
190	LEVELING & WEDGING PG 64-22	TON	583
301	CL2 ASPH SURF 0.38D PG64-22	TON	286
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	TON	6
2677	ASPHALT PAVE MILLING & TEXTURING	TON	502
2697	EDGELINE RUMBLE STRIPS	LF	2500**
6510	PAVE STRIPING-TEMP PAINT-4 IN	LF	2500**
6514	PAVE STRIPING-PERM PAINT-4 IN	LF	2500**

* ADDITIONAL QUANTITIES ARE INCLUDED TO TIE HARRISBURG ROAD INTO PROPOSED SUPERELEVATION IMPROVEMENTS.

** QUANTITIES ARE INCLUDED FOR CURVES 6, 7, AND 8. QUANTITIES FOR CURVES 24, 26, 29, AND 32 TO BE PAID BY FD05 RESURFACING.

NOTES:
1. THESE NUMBERS ARE FOR ESTIMATE PURPOSES ONLY. FINAL LOCATIONS AND QUANTITIES WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. ALL QUANTITIES CARRIED OVER TO THE GENERAL SUMMARY.

KY 177
SUPERELEVATION IMPROVEMENT SUMMARY

KENTON COUNTY
121GR19T010-HSIP & FD05

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COUNTY OF	ITEM NO.
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HSIP 5220 (001)

GUARDRAIL TABULATION

REMOVE EXISTING GUARDRAIL						REPLACEMENT GUARDRAIL - 7 FT POSTS							Notes
Offset	Begin Station	End Treatment	End Station	End Treatment	Length to Remove*	Offset	Begin Station	End Treatment	End Station	End Treatment	Length of Guardrail	Delineators for Guardrail	
LT	383+19	Type 3	386+67	Bridge End Ty A	350	LT	383+19	Type 3	386+67	Bridge End Ty A	325	4	
LT	388+25	Bridge End Ty A	389+69	TS 1	152	LT	388+25	Bridge End Ty A	389+69	TS 1	137.5	3	
LT	398+88	Type 7	401+29	Type 7	241	LT	398+80	Type 1	401+30	Type 1	150	3	
LT	537+43	Type 4A	541+82	TS 1	452	LT	537+10	Type 4A	541+85	TS 1	437.5	8	
LT	--	--	--	--	0	LT	579+50	Type 1	583+50	Type 1	300	3	New Guardrail
LT	--	--	--	--	0	LT	588+50	Type 1	591+00	Type 1	150	3	New Guardrail
RT	382+95	Type 3	386+93	Bridge End Ty A	398	RT	382+93	Type 3	386+93	Bridge End Ty A	375	4	**
RT	388+51	Bridge End Ty A	391+06	Type 4A	253	RT	388+51	Bridge End Ty A	391+14	Type 4A	200	5	**
RT	398+58	Type 4A	401+46	Type 7	290	RT	398+50	Type 4A	401+50	Type 1	225	4	
RT	405+06	Type 7	409+09	Type 7	402	RT	405+00	Type 1	409+25	Type 1	325	7	
RT	472+79	TS 2	473+55	TS 2	77	RT	471+60	Type 1	474+10	TS 1	200	4	
RT	473+60	TS 2	474+00	TS 2	40	--	--	--	--	--	--	--	
RT	--	--	--	--	0	RT	538+50	Type 1	543+75	Type 1	425	5	New Guardrail
RT	--	--	--	--	0	RT	551+00	Type 1	559+00	Type 1	700	8	New Guardrail
RT	--	--	--	--	0	RT	579+50	Type 1	583+00	Type 1	250	3	New Guardrail
RT	--	--	--	--	0	RT	611+50	Type 1	613+50	Type 1	100	2	New Guardrail
RT	--	--	--	--	0	RT	615+50	Type 1	624+00	Type 1	750	11	New Guardrail

* Includes length of existing end treatments. End treatment removal is incidental to remove guardrail.

** Some length of guardrail and/or the bridge end connector may be eliminated at the time of construction depending on the condition of the existing guardrail and/or bridge end connector.

ITEM	DESCRIPTION	UNIT	QUANTITY	
1	DGA BASE	TON	200	***
100	ASPHALT SEAL AGGREGATE	TON	35	***
103	ASPHALT SEAL COAT	TON	4.2	***
1987	DELINEATOR FOR GUARDRAIL B/W	EACH	77	
2360	GUARDRAIL TERMINAL SECTION NO 1	EACH	3	
2363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	EACH	4	
2367	GUARDRAIL END TREATMENT TYPE 1	EACH	18	
2373	GUARDRAIL END TREATMENT TYPE 3	EACH	2	
2381	REMOVE GUARDRAIL	LF	2655	
2391	GUARDRAIL END TREATMENT TYPE 4A	EACH	3	
21802EN	G/R STEEL W BEAM-S FACE (7-FT POST)	LF	5050	

***For new guardrail installation.

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

2. ALL QUANTITIES CARRIED OVER TO THE GENERAL SUMMARY.

KY 177
GUARDRAIL SUMMARY

KENTON COUNTY
121GR19T010 HSIP & FD05

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COUNTY OF	ITEM NO.
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CULVERT PIPE EXTENSION/REPLACEMENT TABULATION HSIP 5220 (001)

Mile Point	Station	Existing Culvert Pipe	Skew	Remove Pipe (LF)	Proposed Length for Extension (LF)			Proposed Length for Replacement	Remove Headwall (ea)	Clean Pipe Structure (ea)	Left Headwall - Proposed	Right Headwall - Proposed
					15"	18"	24"	24"				
6.318	333+59	18" RCP	0°	--							--	--
6.766	357+24	18" CMP	21° Rt.	--							--	--
7.050	372+23	24" RCP	0°	--							--	--
7.080	373+80	24" RCP	0°	--							--	--
7.418	391+66	24" RCP	3° Rt.	4			6		1		Safety Box Inlet	--
7.763	409+90	24" RCP	0°	4			13		1		Sloped & Mitered Concrete Headwall	--
7.843	414+09	24" RCP	19° Rt.	8			18		2	1	Sloped & Mitered Concrete Headwall	Sloped & Flared Headwall
8.088	427+05	24" RCP	0°	4			14		1		Sloped & Mitered Concrete Headwall	--
8.476	447+54	15" RCP	0°	8	18				2		Safety Box Inlet	Sloped & Mitered Concrete Headwall
8.508	449+24	15" RCP	19° Rt.	4	4				1		Safety Box Inlet	--
8.534	450+60	15" RCP	12° Rt.	--							--	--
8.718	460+32	15" RCP	0°	--							--	--
9.041	477+38	18" RCP	0°	4		14					--	Sloped & Mitered Concrete Headwall
9.534	503+42	24" RCP	3° Lt.	--							--	--
9.714	512+90	24" RCP	0°	--							--	--
9.843	519+72	18" RCP	0°	4		11			1		Sloped & Mitered Concrete Headwall	--
9.902	522+82	18" RCP	0°	4		11			1		Sloped & Mitered Concrete Headwall	--
10.269	542+21	24" CMP	3° Rt.	--							--	--
10.452	551+89	24" RCP	0°	--						1	--	--
10.533	556+16	24" RCP	0°	--							--	--
10.562	557+66	18" RCP	0°	--							--	--
10.576	558+39	18" RCP	0°	--							--	--
10.609	560+14	24" RCP	0°	--							--	--
10.681	563+94	24" RCP	0°	4			11		1		Sloped & Mitered Concrete Headwall	--
10.723	566+18	24" RCP	0°	--						1	--	--
10.763	568+29	24" RCP	4° Lt.	--							--	--
10.851	572+94	18" CMP	24° Lt.	4		10					Sloped & Mitered Concrete Headwall	--
11.235	593+19	24" RCP	21° Lt.	4			8		1		--	Sloped & Flared Headwall
11.404	602+13	24" RCP	0°	--							--	--
11.483	606+30	24" RCP	0°	4			6		1	1	Safety Box Inlet	--
11.603	612+62	24" RCP	0°	56				60	2		Safety Box Inlet	Sloped & Flared Headwall
11.676	616+49	24" RCP	0°	4			6		1		Safety Box Inlet	--
CULVERT PIPE EXTENSION/REPLACEMENT TOTALS:				**120**	**22**	**46**	**82**	**60**	**16**	**4**		

ITEM	DESCRIPTION	UNIT	QUANTITY
212	CL2 ASPH BASE 1.00D PG 64-22	TON	10
301	CL2 ASPH SURF 0.38D PG 64-22	TON	15
461	CULVERT PIPE-15 IN	LF	22
462	CULVERT PIPE-18 IN	LF	46
464	CULVERT PIPE-24 IN	LF	142
1208	PIPE CULVERT HEADWALL-24 IN	EACH	3
1310	REMOVE PIPE	LF	120
1727	SAFETY BOX INLET-24 IN SDB-1	EACH	4
2625	REMOVE HEADWALL	EACH	16
2677	ASPHALT PAVE MILLING & TEXTURING	TON	15
3262	CLEAN PIPE STRUCTURE	EACH	4
24395EC	SAFETY BOX INLET-15 IN SDB-1	EACH	2
24575ES610	HEADWALL (SLOPED & MITERED CONCRETE FOR 15 INCH PIPE)	EACH	1
24575ES610	HEADWALL (SLOPED & MITERED CONCRETE FOR 18 INCH PIPE)	EACH	4
24575ES610	HEADWALL (SLOPED & MITERED CONCRETE FOR 24 INCH PIPE)	EACH	4

NOTES:
1. THESE NUMBERS ARE FOR ESTIMATE PURPOSES ONLY. FINAL LOCATIONS AND QUANTITIES WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. THE CONTRACTOR SHALL FIELD VERIFY TYPES AND DIMENSIONS PRIOR TO ORDERING.
2. ALL QUANTITIES CARRIED OVER TO THE GENERAL SUMMARY.

KY 177
CULVERT PIPE EXTENSION/REPLACEMENT SUMMARY

KENTON COUNTY
121GR19T010-HSIP & FD05

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KENTON	6-9018

HSIP 5220 (001)

ENTRANCE PIPE REPLACEMENT TABULATION

Mile Point	Station	Offset	Existing Entrance Pipe	Remove Pipe (LF)	Proposed Entrance Pipe			DGA (ton)	CL2 Asph Base 1.00D PG64-22 (ton)	CL2 Asph Surf 0.38D PG64-22 (ton)	Comments
					12"	15"	18"				
6.401	337+99	LT	12" CMP	24	24			10	5	4	In conjuction with ditching & shouldering
6.415	338+69	LT	18" CMP	20			20	6	3	3	In conjuction with ditching & shouldering
11.529	608+71	LT	15" CMP	30		30		17			In conjuction with ditching & shouldering
ENTRANCE PIPE REPLACEMENT TOTALS:				**74**	**24**	**30**	**20**	**33**	**8**	**7**	

ITEM	DESCRIPTION	UNIT	QUANTITY
1	DGA BASE	TON	33
212	CL2 ASPH BASE 1.00D PG 64-22	TON	8
301	CL2 ASPH SURF 0.38D PG 64-22	TON	7
439	ENTRANCE PIPE-12 IN	LF	24
440	ENTRANCE PIPE-15 IN	LF	30
441	ENTRANCE PIPE-18 IN	LF	20
1310	REMOVE PIPE	LF	74

RCBC EXTENSION TABULATION

Station	Milepoint	Skew	Size	Extension End	Extension Length (LF)	Existing Length (LF)	Concrete - Class A (CUYD)	Steel Reinforcement (LB)
589+52	11.165	0°	4'X4'	LT	5	56	10.5	1365
						BOX CULVERT EXTENSION TOTALS:	10.5	1365

*Length includes removal of 2' of existing box culvert

ITEM	DESCRIPTION	UNIT	QUANTITY
2625	REMOVE HEADWALL (RCBC @ MP 11.165	EACH	1
8003	FOUNDATION PREPARATION	EACH	1
8100	CONCRETE-CLASS A	CUYD	10.5
8150	STEEL REINFORCEMENT	LB	1365

NOTES:
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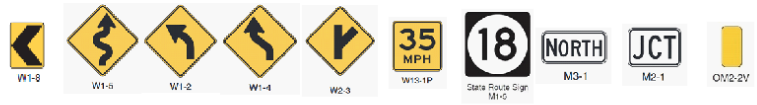
2. ALL QUANTITIES CARRIED OVER TO THE GENERAL SUMMARY.

KY 177
ENTRANCE PIPE AND BOX CULVERT SUMMARY

KENTON COUNTY
121GR19T010-HSIP & FD05



COUNTY OF	ITEM NO.
KENTON	6-9018

SIGNING HSIP 5220 (001)

Direction	Offset	Station	Milepoint	SBM Alum Sheet Signs .080 in (SQFT)											Steel Post Type 1 (LF)	Remove Sign	Remove and Relocate Sheet Signs	Notes
				W1-8 18"x24"	W1-5 30"x30"	W1-2 30"x30"	W1-4 30"x30"	W2-3 30"x30"	W13-1P 18"x18"	M1-5 30"x24"	M3-1 24"x12"	M2-1 21"x15"	OM2-2V 6"x12"	Reflective Post Panels 2"x60"				
NB	RT	374+76	7.098														1	Relocate reverse curve warning @ 370+26
Both	RT	377+46	7.149											1.67				Add reflective sign post panels to existing chevrons
Both	RT	378+29	7.165											1.67				Add reflective sign post panels to existing chevrons
Both	RT	379+08	7.180											1.67				Add reflective sign post panels to existing chevrons
Both	RT	379+87	7.195											1.67				Add reflective sign post panels to existing chevrons
Both	RT	380+65	7.209											1.67				Add reflective sign post panels to existing chevrons
SB	LT	393+81	7.459														1	Relocate reverse curve warning @ 397+21
Both	RT	428+10	8.108										1		8			Object marker for box culvert
Both	LT	428+40	8.114										1		8			Object marker for box culvert
Both	LT	441+95	8.370										1		8			Object marker for box culvert
Both	RT	442+10	8.373										1		8			Object marker for box culvert
Both	Both	444+24	8.414										2		16			Object marker for box culvert
SB	LT	483+54	9.158														1	Relocate route guide sign @ 481+05
NB	RT	486+89	9.221							10	2				14	1		Replace faded, leaning route guide sign @ 487+59
NB	RT	503+66	9.539							5		2.1875			14			Route guide sign @ 500+22 faded, leaning
SB	RT	532+40	10.083	3										0.83	12			
Both	RT	533+20	10.098	6										1.67	12			
Both	RT	534+00	10.114	6										1.67	12			
NB	RT	534+80	10.129	3										0.83	12			
SB	LT	539+00	10.208	3										0.83	12			
Both	LT	539+80	10.223	6										1.67	12			
Both	LT	540+60	10.239	6										1.67	12			
Both	LT	541+40	10.254	6										1.67	12			
SB	LT	542+20	10.269	6										1.67	12			
SB	RT	544+50	10.313	3										0.83	12			
Both	RT	545+30	10.328	6										1.67	12			
Both	RT	546+10	10.343	6										1.67	12			
Both	RT	546+90	10.358	6										1.67	12			
Both	RT	547+70	10.373	6										1.67	12			
Both	RT	548+50	10.388	6										1.67	12			
Both	RT	549+30	10.403	6										1.67	12			
NB	RT	550+10	10.419	3										0.83	12			
SB	LT	554+80	10.508		6.25				2.25						14			
SB	LT	565+51	10.710		6.25				2.25						14	1		Replace existing sign that has been spray-painted
NB	RT	584+25	11.065			6.25			2.25						14			
SB	LT	585+65	11.092	3										0.83	12			
Both	LT	586+85	11.115	6										1.67	12			
Both	LT	588+05	11.137	6										1.67	12			
NB	LT	589+25	11.160	3										0.83	12			
SB	LT	590+50	11.184			6.25			2.25						14			
Both	RT	594+75	11.264										1		8			Object marker for box culvert
Both	LT	595+05	11.270										1		8			Object marker for box culvert
SB	LT	609+40	11.542				6.25		2.25						14			
NB	RT	612+45	11.599			6.25			2.25						14			
SB	LT	616+70	11.680			6.25			2.25						14			
NB	RT	618+14	11.707													1		Remove existing reverse curve warning
NB	RT	620+00	11.742													1		Remove intersection warning sign
NB	RT	620+50	11.752														1	Relocate JCT 2044 sign @ 618+65
NB	LT	621+40	11.769				6.25		2.25						14			
NB	RT	621+46	11.770													1		Remove intersection warning and spd adv.
NB	RT	623+30	11.805					6.25	2.25						14			
		SIGNING TOTALS:		105	12.5	25	12.5	6.25	20.25	15	2	2.1875	8	37.54	470	5	4	

ITEM	DESCRIPTION	UNIT	QUANTITY
6406	SBM ALUM SHEET SIGNS .080 IN	SQFT	246.2275
6410	STEEL POST TYPE 1	LF	470
21373ND	REMOVE SIGN	EACH	5
21813NN	REMOVE AND RELOCATE SHEET SIGNS	EACH	4
24631EC	BARCODE SIGN INVENTORY	EACH	88

Notes:
1. The advisory speed to be used on the Advisory Speed plaques (W13-1P) shall be determined by the District Traffic Section after final asphalt surfacing operations are complete.

2. The signing quantities and sign types shown here are estimated. The District Traffic Section will provide the final signing quantities and sign types after final surfacing operations are complete. Refer to the Special Note for Signing, Special Note for Staking, and the Special Note for Signage for more details concerning the procedures for determining and staking the final layout and installation of the curve signing. DO NOT ORDER ANY CURVE SIGNING MATERIAL UNTIL AFTER COORDINATING WITH THE DISTRICT TRAFFIC SECTION.

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

2. ALL QUANTITIES CARRIED OVER TO THE GENERAL SUMMARY.

KY 177
SIGNING SUMMARY

Contract ID: 194215
Page 142 of 300

COUNTY OF	ITEM NO.
KENTON	6-9018

HSIP 5220 (001)

CRIBBING TABULATION

Direction	Begin Mile Point	Begin Station	End Mile Point	End Station	Description	Quantity	Notes
RT	11.245	593+75	11.257	594+35	Excavation & Backfill	6 CUYD	Replace existing cribbing where soil is washing out at Ryland Lakes Dr.
					Proposed Cribbing	240 SQFT	
					Railroad Rails - Drilled	225 LF	
					Channel lining Class II	26 Tons	
					Geotextile Fabric Type IV	65 SQYD	
RT	11.659	615+60	11.672	616+30	Excavation & Backfill	5 CUYD	Replace existing cribbing to install new guardrail.
					Proposed Cribbing	210 SQFT	
					Railroad Rails - Drilled	216 LF	
					Channel Lining Class II	23 Tons	
					Geotextile Fabric Type IV	65 SQYD	
RT	11.712	618+40	11.784	622+20	Excavation & Backfill	32 CUYD	Replace existing cribbing to install new guardrail.
					Proposed Cribbing	2000 SQFT	
					Railroad Rails - Drilled	1480 LF	
					Channel Lining Class II	210 Tons	
					Geotextile Fabric Type IV	530 SQYD	
RT	11.787	622+35	11.799	623+00	Excavation & Backfill	4 CUYD	Replace existing cribbing to install new guardrail.
					Proposed Cribbing	230 SQFT	
					Railroad Rails - Drilled	204 LF	
					Channel Lining Class II	25 Tons	
					Geotextile Fabric Type IV	65 SQYD	

* Removal of existing cribbing and railroad rails-drilled is incidental to excavation and backfill.

ITEM	DESCRIPTION	UNIT	QUANTITY
1	DGA BASE	TON	59
100	ASPHALT SEAL AGGREGATE	TON	7
103	ASPHALT SEAL COAT	TON	0.7
2483	CHANNEL LINING CLASS II	TON	284
2599	FABRIC-GEOTEXTILE TYPE IV	SQYD	725
3234	RAILROAD RAILS-DRILLED	LF	2125
3235	EXCAVATION AND BACKFILL	CUYD	47
3236	CRIBBING	SQFT	2680

NOTES:
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2. ALL QUANTITIES CARRIED OVER TO THE GENERAL SUMMARY.

KY 177
CRIBBING SUMMARY

KENTON COUNTY
121GR19T010 HSIP & FD05

Contract ID: 194215
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COUNTY OF	ITEM NO.
KENTON	6-9018

HSIP 5220 (001)

POLYPROPYLENE BARRIER WALL (POLY BAGS) TABULATION							
Offset	Begin Mile Point	Begin Station	End Mile Point	End Station	Description	Quantity	Notes
LT	8.116	428+50	8.125	429+00	Excavation & Backfill	50 CUYD	Install Propylene Barrier Wall system. Approximate max. height 8'.
					Retaining Wall (Polypropylene Barrier Wall)	400 SQFT	

ITEM	DESCRIPTION	UNIT	QUANTITY
3235	EXCAVATION AND BACKFILL	CUYD	50
8018	RETAINING WALL (POLYPROPYLENE BARRIER WALL)	SQFT	400

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

2. ALL QUANTITIES CARRIED OVER TO THE GENERAL SUMMARY.

KY 177
POLYPROPYLENE BARRIER WALL
SUMMARY

KENTON COUNTY
121GR19T010 HSIP & FD05

Contract ID: 194215
Page 144 of 300

COUNTY OF	ITEM NO.
KENTON	6-9018

HSIP 5220 (001)

DITCHING AND SHOULDERING				
Offset	Begin Station	End Station	Ditching and Shouldering (LF)	Comment
LT	337+40	339+00	160	Clean and reshape ditch
LT	390+00	395+00	500	Clean and reshape ditch
LT	400+50	401+75	125	Clean and reshape ditch
LT	405+10	410+00	490	Superelevation improvement
LT	519+50	520+50	100	Widen earth shoulder
LT	528+50	531+00	250	Widen earth shoulder
LT	547+00	558+50	1150	Clean and reshape ditch
LT	571+60	573+50	190	Reshape ditch, shoulder repair
LT	594+50	595+50	100	Clean and reshape ditch
LT	597+00	598+00	100	Clean and reshape ditch
LT	608+00	611+50	350	Clean and reshape ditch
LT	619+30	624+40	510	Clean and reshape ditch
RT	408+00	421+00	1300	Superelevation improvement
RT	447+00	448+00	100	Widen shoulder
RT	476+20	478+00	180	Widen shoulder
RT	538+50	543+50	500	Build up shoulder for DGA
RT	555+00	561+30	630	Superelevation improvement
RT	562+20	566+30	410	Superelevation improvement
RT	580+50	581+50	100	Build up shoulder for DGA
RT	597+50	602+40	490	Superelevation improvement
RT	608+00	609+00	100	Build up shoulder for DGA
RT	610+00	612+00	200	Build up shoulder for DGA
DITCHING AND SHOULDERING TOTALS:			8035	

DGA WEDGE & CHIP SEAL					
Offset	Begin Station	End Station	DGA (tons)	Asphalt Seal Aggregate (tons)	Asphalt Seal Coat (tons)
LT	383+30	386+67	17	3	0.4
RT	356+00	358+00	10	2	0.2
RT	384+00	386+93	15	2	0.3
RT	388+51	390+75	12	2	0.2
RT	398+50	402+00	18	3	0.4
RT	405+00	408+50	27	3	0.4
RT	471+50	474+00	13	3	0.3
DGA WEDGE & CHIP SEAL TOTALS:			112	18	2

ITEM	DESCRIPTION	UNIT	QUANTITY
1	DGA BASE	TON	112
100	ASPHALT SEAL AGGREGATE	TON	18
103	ASPHALT SEAL COAT	TON	2
2483	CHANNEL LINING CLASS II	TON	300
2575	DITCHING AND SHOULDERING	LF	8035
2599	FABRIC-GEOTEXTILE TYPE IV	SQYD	500
5950	EROSION CONTROL BLANKET	SQYD	5357

NOTES:
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2. ALL QUANTITIES CARRIED OVER TO THE GENERAL SUMMARY.

KY 177
DITCHING AND SHOULDERING AND
DGA WEDGE & CHIP SEAL SUMMARY

KENTON COUNTY
121GR19T010-HSIP & FD05

Contract ID: 194215
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COUNTY OF	ITEM NO.
KENTON	6-9018

HSIP 5220 (001)

TREE TRIMMING					
Offset	Begin Milepoint	Begin Station	End Milepoint	End Station	Trim & Remove Trees & Brush (LF)
LT	7.907	417+50	7.926	418+50	100
LT	8.106	428+00	8.134	429+50	150
LT	8.570	452+50	8.589	453+50	100
LT	10.388	548+50	10.426	550+50	200
LT	10.511	555+00	10.568	558+00	300
LT	10.833	572+00	10.881	574+50	250
LT	10.919	576+50	10.975	579+50	300
LT	11.742	620+00	11.828	624+50	450
RT	8.106	428+00	8.182	432+00	400
RT	8.542	451+00	8.580	453+00	200
RT	8.854	467+50	8.892	469+50	200
RT	10.379	548+00	10.464	552+50	450
RT	10.521	555+50	10.540	556+50	100
RT	10.682	564+00	10.710	565+50	150
RT	10.814	571+00	10.852	573+00	200
RT	10.919	576+50	10.975	579+50	300
RT	11.780	622+00	11.830	624+60	260
				TREE TRIMMING TOTALS:	4110

ITEM	DESCRIPTION	UNIT	QUANTITY
3269	TRIM & REMOVE TREES & BRUSH	LF	4110

NOTES:
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2. ALL QUANTITIES CARRIED OVER TO THE GENERAL SUMMARY.

KY 177
TREE TRIMMING SUMMARY

KENTON COUNTY
121GR19T010 HSIP & FD05

Contract ID: 194215
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COUNTY OF	ITEM NO.
KENTON	6-9018

HSIP 5220 (001)

PAVEMENT REPAIR										
Offset	Begin Milepoint	Begin Station	End Milepoint	End Station	Length	Width	Crushed Aggregate Size No. 23 (Ton)	Asphalt Base 1.00D PG64-22 (Ton)	Fabric - Geotextile Type III (SQYD)	
Both	11.241	593+50	11.255	594+25	75	22	42	90	200	
RT	11.487	606+50	11.534	609+00	250	8	51	110	240	
RT	11.572	611+00	11.600	612+50	150	5	19	41	95	
RT	11.771	621+50	11.790	622+50	100	11	28	60	130	
					PAVEMENT REPAIR TOTALS:		**140**	**301**	**665**	

ITEM	DESCRIPTION	UNIT	QUANTITY
80	CRUSHED AGGREGATE SIZE NO. 23	TON	140
190	LEVELING & WEDGING	TON	50
212	CL2 ASPH BASE 1.00D PG64-22	TON	301
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	TON	0.3
2598	FABRIC-GEOTEXTILE TYPE III	SQYD	665

NOTE: ASPHALT SURFACE TO BE PAID BY FD05 RESURFACING.

SHOULDER PAVEMENT REPAIR									
Offset	Begin Milepoint	Begin Station	End Milepoint	End Station	Length	Crushed Aggregate # 23 (Ton)	CL2 Asph Base 1.00D PG64-22 (Ton)	Fabric-Geotextile Type III (SQYD)	
LT	10.824	571+50	10.862	573+50	200	15	44	148	
LT	11.269	595+00	11.278	595+50	50	5	11	26	
LT	11.307	597+00	11.326	598+00	100	10	22	52	
LT	11.553	610+00	11.559	610+30	30	3	7	16	
LT	11.799	623+00	11.818	624+00	100	10	22	52	
RT	10.625	561+00	10.644	562+00	100	10	22	52	
RT	10.975	579+50	11.032	582+50	300	31	66	156	
RT	11.553	610+00	11.572	611+00	100	10	22	52	
RT	11.667	616+00	11.676	616+50	50	5	11	26	
				SHOULDER PAVEMENT REPAIR TOTALS:		**99**	**227**	**580**	

ITEM	DESCRIPTION	UNIT	QUANTITY
80	CRUSHED AGGREGATE SIZE NO. 23	TON	99
190	LEVELING & WEDGING PG64-22	TON	40
212	CL2 ASPH BASE 1.00D PG64-22	TON	227
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	TON	0.2
2598	FABRIC-GEOTEXTILE TYPE III	SQYD	580

NOTE: ASPHALT SURFACE TO BE PAID BY FD05 RESURFACING.

NOTES:
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2. ALL QUANTITIES CARRIED OVER TO THE GENERAL SUMMARY.

KY 177
PAVEMENT REPAIR AND
SHOULDER PAVEMENT REPAIR SUMMARY

KENTON COUNTY
121GR19T010-HSIP & FD05

Contract ID: 194215
Page 147 of 300

COUNTY OF	ITEM NO.
KENTON	6-9018

HSIP 5220 (001)

CHANNEL LINING				
Offset	Mile Point	Station	Description	Quantity (tons)
LT	7.044 - 7.051	371+90 - 372+30	Protect Ditch Bottom and Backslope	30
LT	10.533	556+16	Protect Ditch Bottom and Backslope	25
LT	10.562	557+66	Protect Ditch Bottom and Backslope	25
LT	10.576	558+39	Protect Ditch Bottom and Backslope	20
LT	10.663 - 10.682	563+00 - 564+00	Protect Ditch Bottom and Backslope	40
LT	10.833 - 10.852	572+00 - 573+00	Protect Ditch Bottom and Backslope	40
LT	11.307 - 11.316	597+00 - 597+50	Protect Ditch Bottom and Backslope	25
LT	11.483	606+30	Protect Ditch Bottom and Backslope	15
LT	11.780 - 11.818	622+00 - 624+00	Protect Ditch Bottom and Backslope	50
RT	7.843	414+09	Protect Embankment at Pipe Culvert Outlet	20
RT	8.414	444+24	Protect Embankment at Box Culvert Outlet	25
RT	7.923 - 7.929	418+35 - 418+65	Protect Embankment at Box Culvert Outlet	60
RT	10.998 - 11.000	580+70 - 580+80	Protect and Repair Erosion on Embankment Slope	20
			CHANNEL LINING TOTALS:	**395**

ITEM	DESCRIPTION	UNIT	QUANTITY
2483	CHANNEL LINING CLASS II	TON	395

NOTES:
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2. ALL QUANTITIES CARRIED OVER TO THE GENERAL SUMMARY.

KY 177
CHANNEL LINING SUMMARY

KENTON COUNTY
121GR19T010 HSIP & FD05

GENERAL SUMMARY
FD05 059 0177 009-020

BID CODE	DESCRIPTION	QUANTITY	UNIT
00190	LEVELING & WEDGING PG64-22	450	TON
00301	CL2 ASPH SURF 0.38D PG64-22	8,345	TON
02562	TEMPORARY SIGNS	570	SQFT
02569	DEMOBILIZATION	1	LS
02650	MAINTAIN & CONTROL TRAFFIC	1	LS
02676	MOBILIZATION FOR MILL & TEXT	1	LS
02677	ASPHALT PAVE MILLING & TEXTURING	8,345	TON
02697	EDGELINE RUMBLE STRIPS	64,110	LF
03240	BASE FAILURE REPAIR	165	SQYD
06510	PAVE STRIPING-TEMP PAINT-4 IN	200,000	LF
06514	PAVE STRIPING-PERM PAINT-4 IN	200,000	LF
06568	PAVE MARKING-THERMO STOP BAR-24IN	68	LF
10020NS	FUEL ADJUSTMENT	13,947	DOLL
10030NS	ASPHALT ADJUSTMENT	35,030	DOLL
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	45	TON

KENTON COUNTY
THERMOPLASTIC INTERSECTION PAVEMENT MARKINGS SUMMARY
FD05 059 0177 009-020

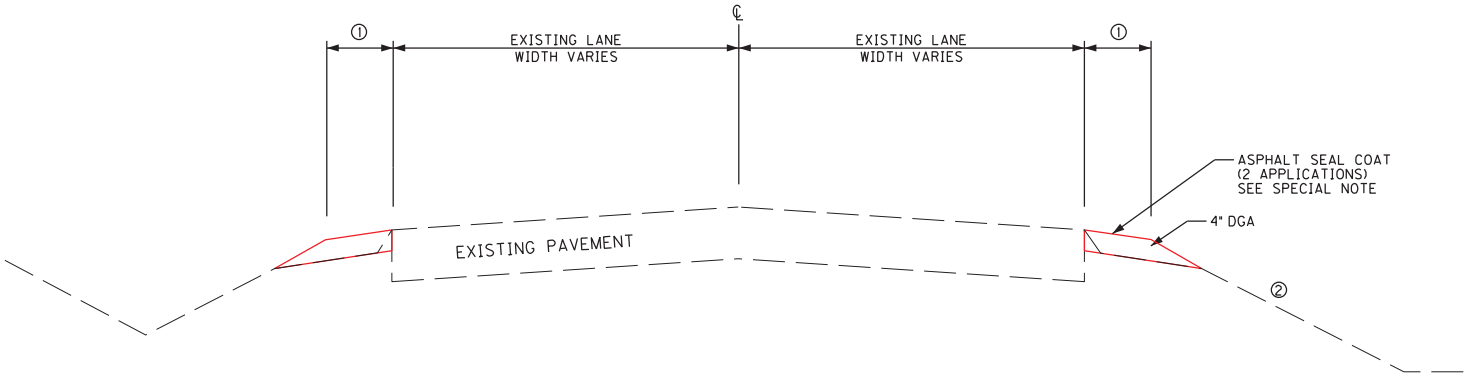
MPT.	INTERSECTION	X-WALKS 6 INCH LF	STP BARS 24 INCH LF	ARROWS CURVE EA	ARROWS STR EA	ARROWS COMB EA	"ONLY" EA	"STOP" EA	CATRAXX 6 INCH LF	RAILROAD "R" 6 FOOT EA	RAILROAD CROSS BUCK 16" LF	NOTES
9.584	KY 536		68									
TOTAL			68									

Base Failure Repair Summary
FD05 059 0177 009-020

			Total	330	165
Milepoint	Lane	Length	Width	SQYD	Tons
11.200	SOUTH	40	6	26.67	13.20
11.220	BOTH	30	24	80.00	39.60
11.230	SOUTH	40	6	26.67	13.20
12.02	NORTH	80	3	26.67	13.20
13.15	NORTH	60	3	20.00	9.90
13.17	NORTH	60	3	20.00	9.90
13.58	SOUTH	40	6	26.67	13.20
16.10	NORTH	40	12	53.33	26.40
16.95	NORTH	10	6	6.67	3.30
16.98	NORTH	10	6	6.67	3.30
17.06	NORTH	10	6	6.67	3.30
MISC.				30.00	14.85

COUNTY OF	ITEM NO.
KENTON	6-9018.00

TYPICAL SECTIONS
HSIP 5220 (001)



NOTES:

① A 1.5' SHOULDER IS DESIRABLE BUT MAY HAVE TO BE NARROWED OR ELIMINATED BASED ON FIELD CONDITIONS.

② SEE DITCHING & SHOULDERING AND EMBANKMENT DETAILS FOR AREAS THAT REQUIRE DITCHING & SHOULDERING WORK PRIOR TO PLACEMENT OF DGA WEDGE & CHIP SEAL.

DGA WEDGE & CHIP SEAL DETAIL

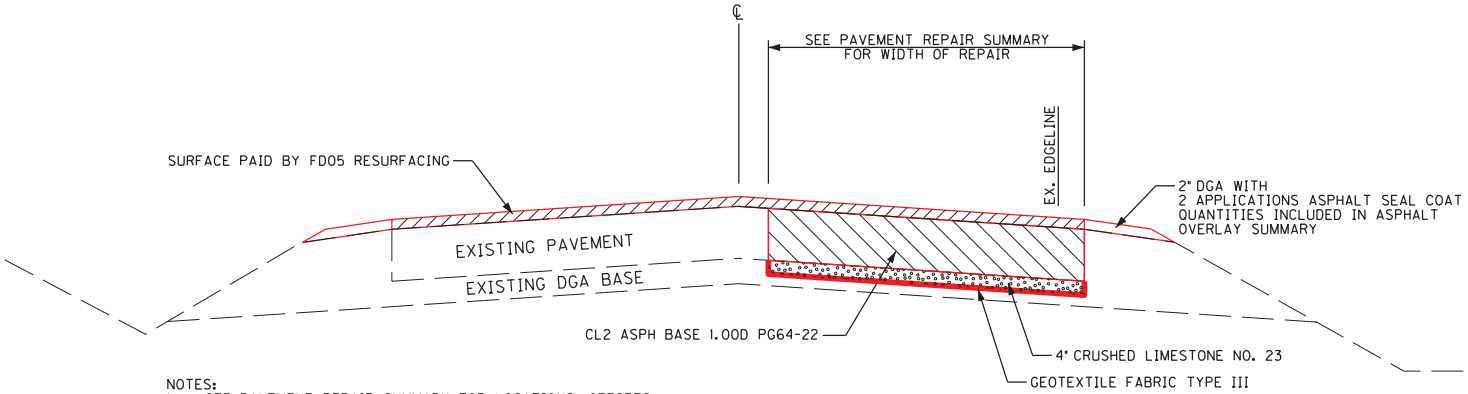
LT. STA. 383+30 - STA. 386+67
RT. STA. 356+00 - STA. 358+00
RT. STA. 384+00 - STA. 386+93
RT. STA. 388+51 - STA. 390+75
RT. STA. 398+50 - STA. 402+00
RT. STA. 405+00 - STA. 408+50
RT. STA. 471+50 - STA. 474+00

NOT TO SCALE

KY 177
DGA WEDGE & CHIP SEAL DETAIL

COUNTY OF	ITEM NO.
KENTON	6-9018.00

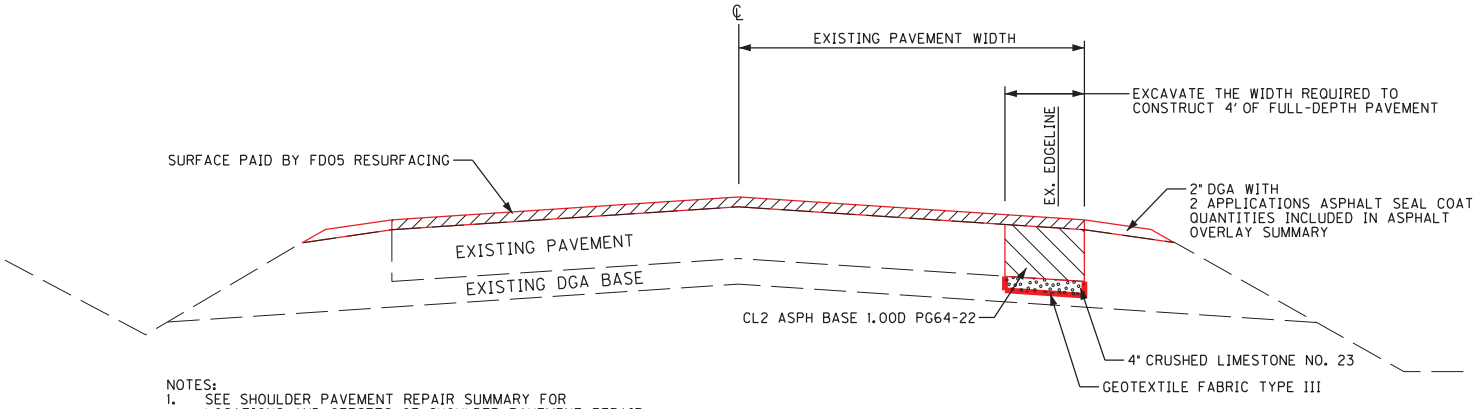
TYPICAL SECTIONS
HSIP 5220 (001)



NOTES:
1. SEE PAVEMENT REPAIR SUMMARY FOR LOCATIONS, OFFSETS, AND WIDTHS OF PAVEMENT REPAIR.
2. APPLY ASPHALT BASE IN LIFTS NOT TO EXCEED 4".

PAVEMENT REPAIR DETAIL

LT. AND RT. STA. 593+50 - STA. 594+25
RT. STA. 606+50 - STA. 606+90
RT. STA. 611+00 - STA. 612+50
RT STA. 621+50 - STA. 622+50



NOTES:
1. SEE SHOULDER PAVEMENT REPAIR SUMMARY FOR LOCATIONS AND OFFSETS OF SHOULDER PAVEMENT REPAIR.
2. APPLY ASPHALT BASE IN LIFTS NOT TO EXCEED 4".

SHOULDER PAVEMENT REPAIR DETAIL

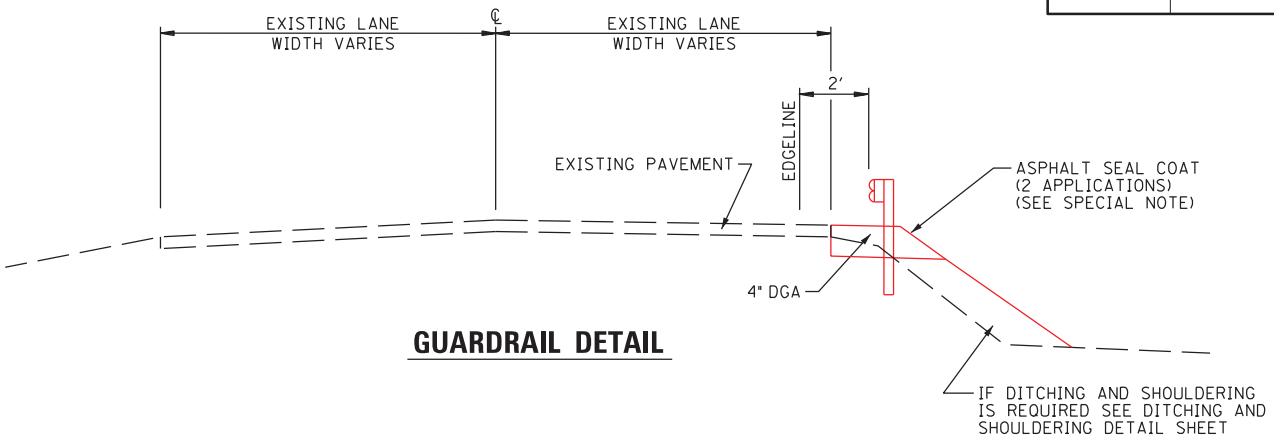
LT. STA. 571+50 - STA. 573+50
LT. STA. 595+00 - STA. 595+50
LT. STA. 597+00 - STA. 598+00
LT. STA. 610+00 - STA. 610+30
LT. STA. 623+00 - STA. 624+00
RT. STA. 561+00 - STA. 562+00
RT. STA. 579+50 - STA. 582+50
RT. STA. 610+00 - STA. 611+00
RT. STA. 616+00 - STA. 616+50

NOT TO SCALE

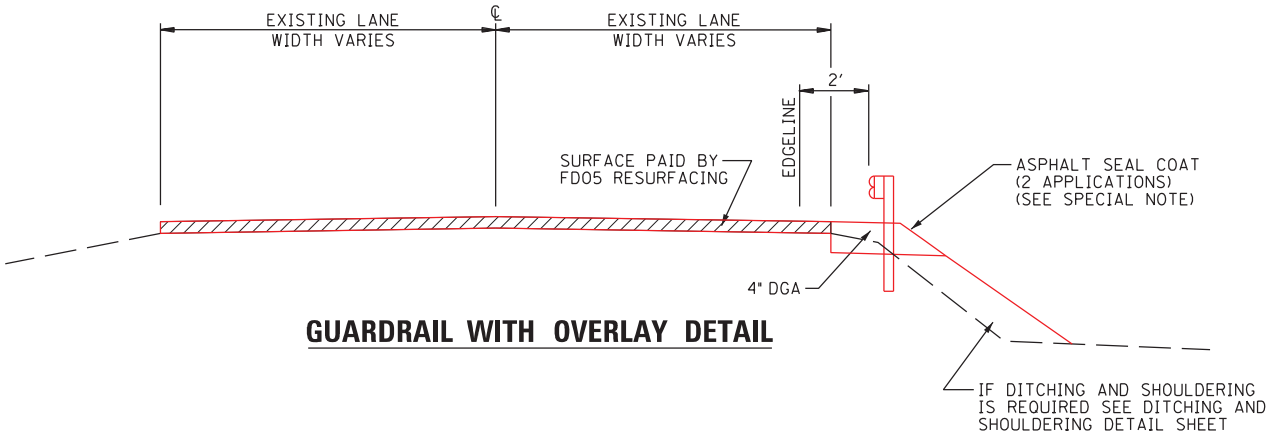
KY 177
PAVEMENT AND SHOULDER REPAIR DETAILS

TYPICAL SECTIONS HSIP 5220 (001)

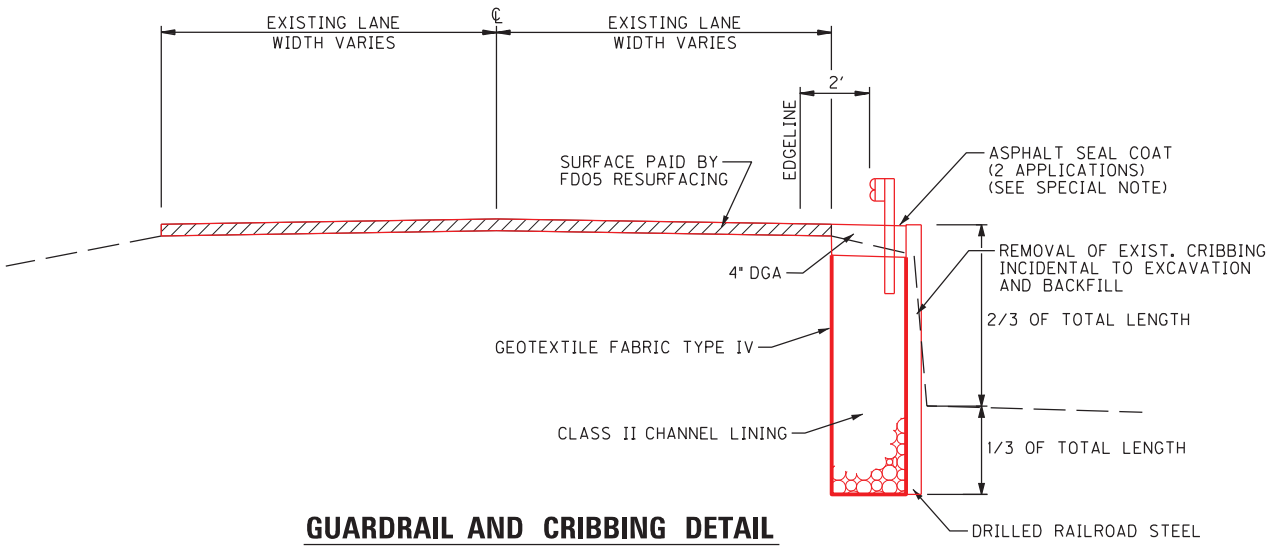
COUNTY OF	ITEM NO.
KENTON	6-9018.00



GUARDRAIL DETAIL



GUARDRAIL WITH OVERLAY DETAIL



GUARDRAIL AND CRIBBING DETAIL

NOTES:

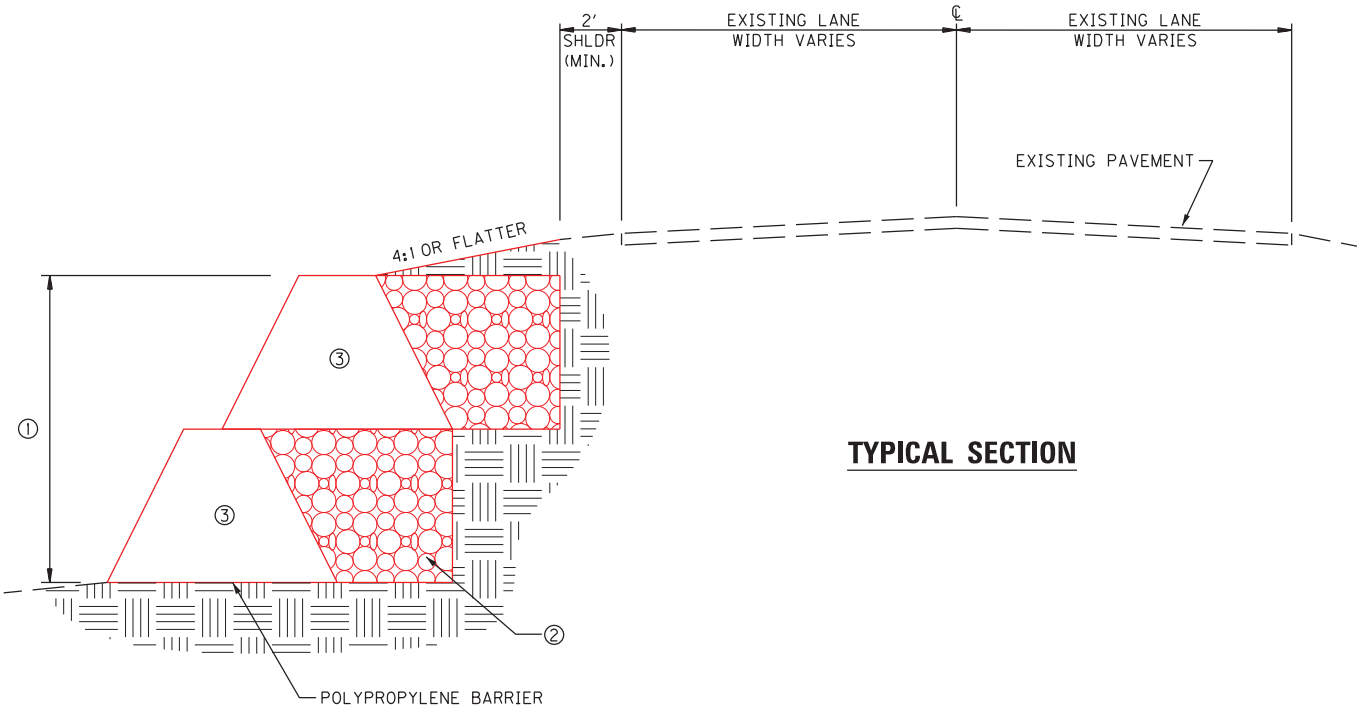
1. SEE GUARDRAIL SUMMARY FOR GUARDRAIL LOCATIONS.
2. CONSTRUCT DITCHING AND SHOULDERING, DGA WEDGE, OR CRIBBING (AS APPLICABLE) BEFORE INSTALLING GUARDRAIL. REMOVAL OF EXISTING CRIBBING IS INCIDENTAL TO EXCAVATION & BACKFILL.

NOT TO SCALE

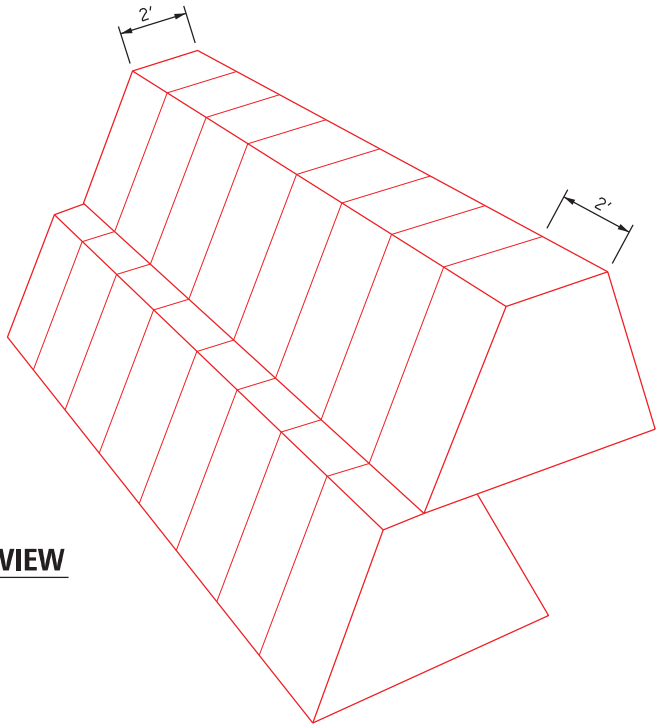
KY 177
GUARDRAIL AND CRIBBING DETAIL

COUNTY OF	ITEM NO.
KENTON	6-9018.00

TYPICAL SECTIONS
HSIP 5220 (001)



TYPICAL SECTION



ISOMETRIC VIEW

NOTES:

① SEE POLYPROPYLENE BARRIER WALL SUMMARY SHEET FOR APPROXIMATE HEIGHT AND QUANTITIES TO BE USED AT EACH LOCATION. THE ENGINEER WILL DETERMINE THE EXACT LIMITS AND WALL HEIGHTS AT THE TIME OF CONSTRUCTION.

② SEE SPECIAL NOTE FOR AGGREGATE BACKFILL REQUIREMENTS.

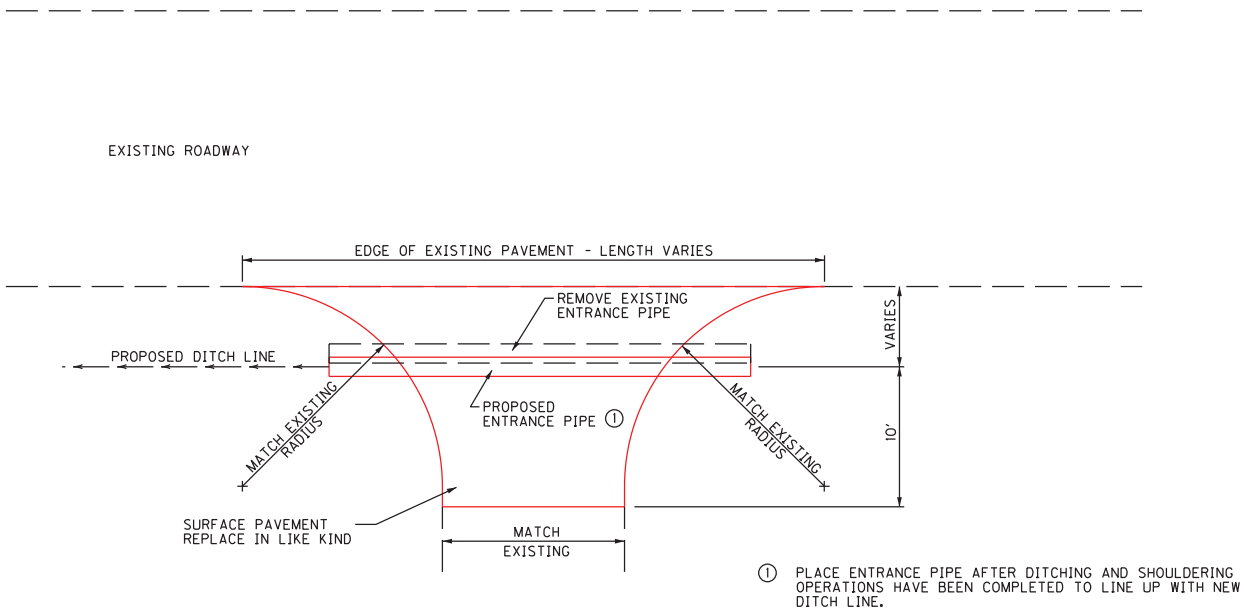
③ FILL PROPYLENE BARRIER WITH CONCRETE-CLASS B. SEE SPECIAL NOTE.

NOT TO SCALE

KY 177
POLYPROPYLENE BARRIER WALL
DETAILS

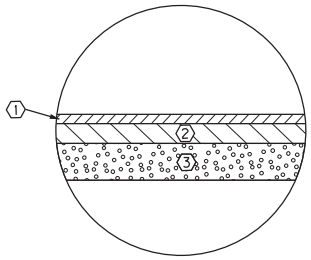
COUNTY OF	ITEM NO.
KENTON	6-9018.00

TYPICAL SECTIONS
HSIP 5220 (001)



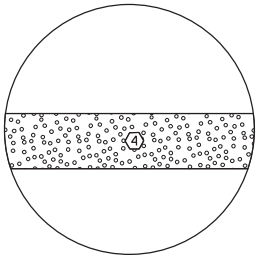
(1) PLACE ENTRANCE PIPE AFTER DITCHING AND SHOULDERING OPERATIONS HAVE BEEN COMPLETED TO LINE UP WITH NEW DITCH LINE.

ENTRANCE DETAIL



ASPHALT ENTRANCE
NTS

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



GRAVEL ENTRANCE
NTS

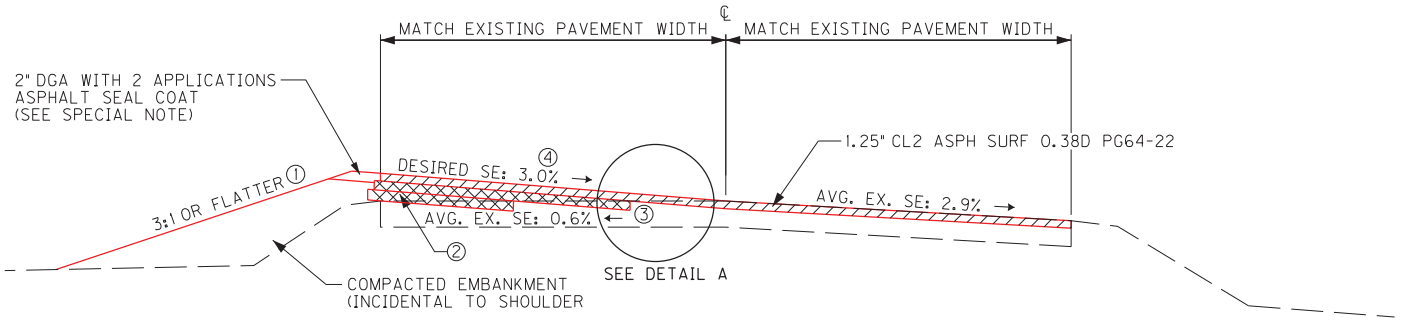
(4) 6.00" DGA

NOT TO SCALE

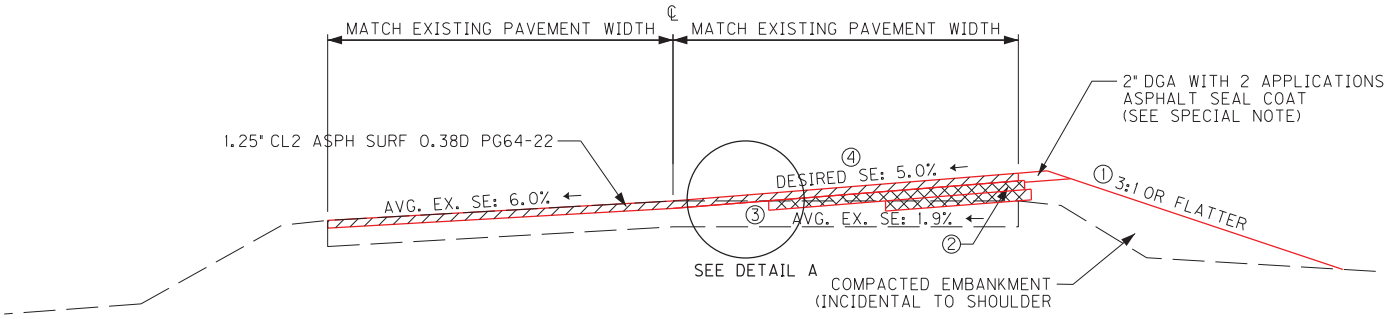
KY 177
ENTRANCE AND ENTRANCE PIPE DETAILS

TYPICAL SECTIONS HSIP 5220 (001)

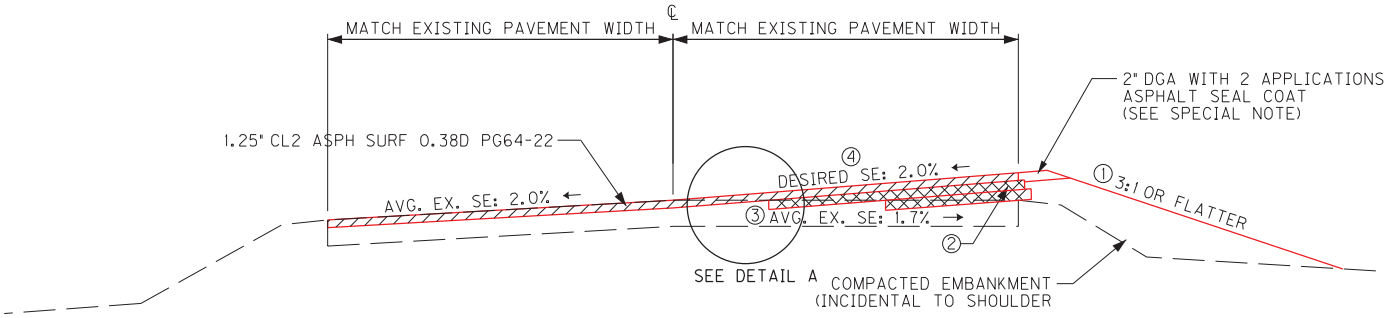
COUNTY OF	ITEM NO.
KENTON	6-9018.00



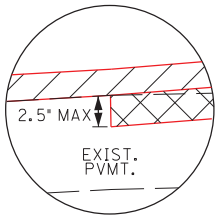
CURVE 6 SUPERELEVATION IMPROVEMENT



CURVE 7 SUPERELEVATION IMPROVEMENT



CURVE 8 SUPERELEVATION IMPROVEMENT



DETAIL A

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

② LEVELING & WEDGING MIX DESIGN WILL BE BASED ON THE LIFT THICKNESSES BEING PLACED FOR EACH CURVE. NUMBER AND THICKNESS OF LIFTS SHOWN IN THESE DETAILS ARE GRAPHICAL REPRESENTATIONS ONLY AND ARE NOT MEANT TO BE TAKEN AS AN INDICATION OF ACTUAL FIELD CONDITIONS.

③ MAXIMUM DEPTH OF MILLING AT LONGITUDINAL EDGE KEY SHALL BE 2.5".

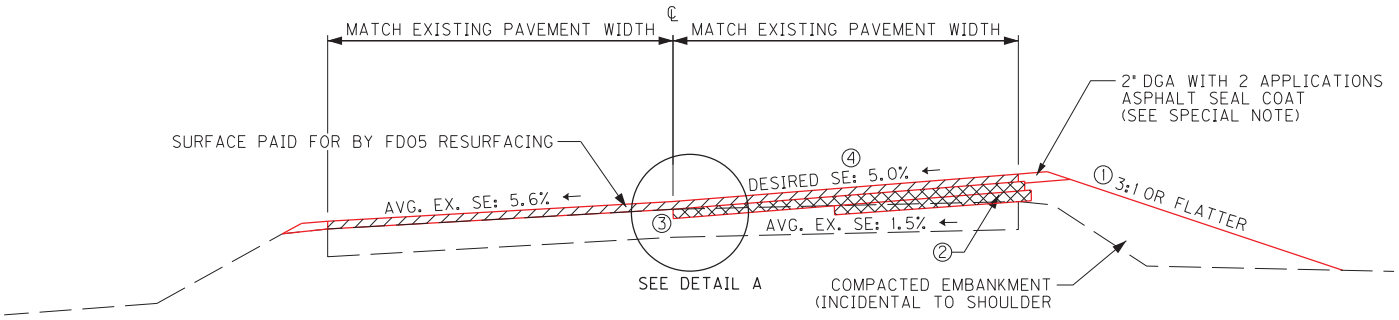
④ FINAL SUPERELEVATION RATE TO BE DETERMINED BY THE ENGINEER IN THE FIELD. DESIRED SUPERELEVATION RATE MAY NEED TO BE MODIFIED IN ORDER TO REMAIN WITHIN RIGHT-OF-WAY OR AVOID A SENSITIVE OBSTRUCTION.

NOT TO SCALE

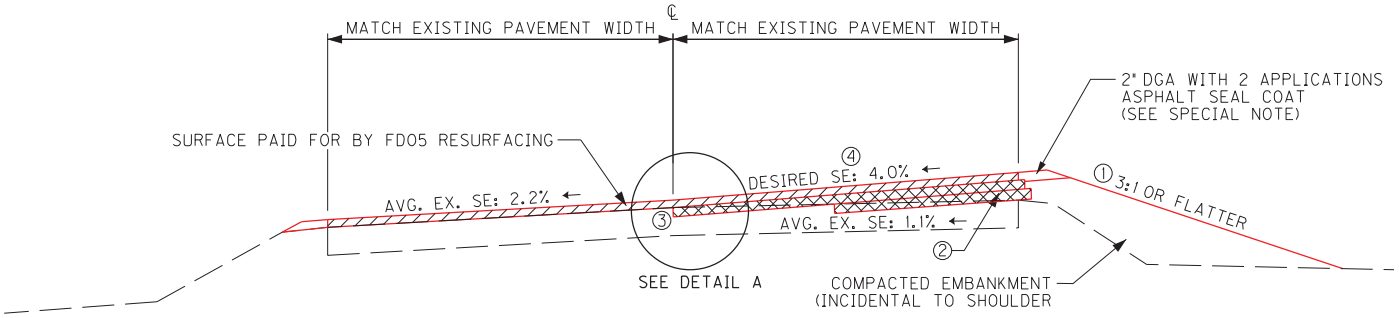
KY 177
SUPERELEVATION IMPROVEMENT
TYPICAL SECTIONS

TYPICAL SECTIONS HSIP 5220 (001)

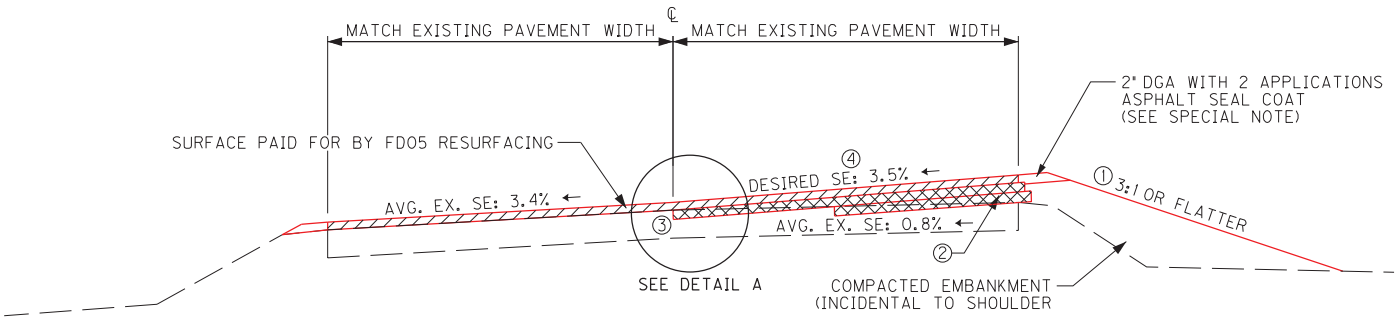
COUNTY OF	ITEM NO.
KENTON	6-9018.00



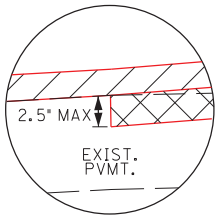
CURVE 24 SUPERELEVATION IMPROVEMENT



CURVE 26 SUPERELEVATION IMPROVEMENT



CURVE 29 SUPERELEVATION IMPROVEMENT



DETAIL A

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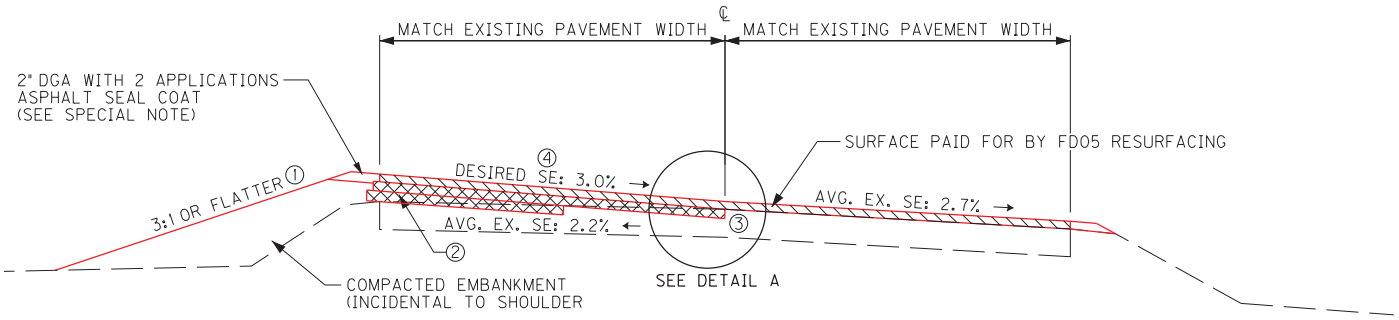
NOT TO SCALE

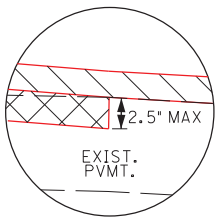
KY 177
SUPERELEVATION IMPROVEMENT
TYPICAL SECTIONS

TYPICAL SECTIONS HSIP 5220 (001)

COUNTY OF	ITEM NO.
KENTON	6-9018.00



CURVE 32 SUPERELEVATION IMPROVEMENT



DETAIL A

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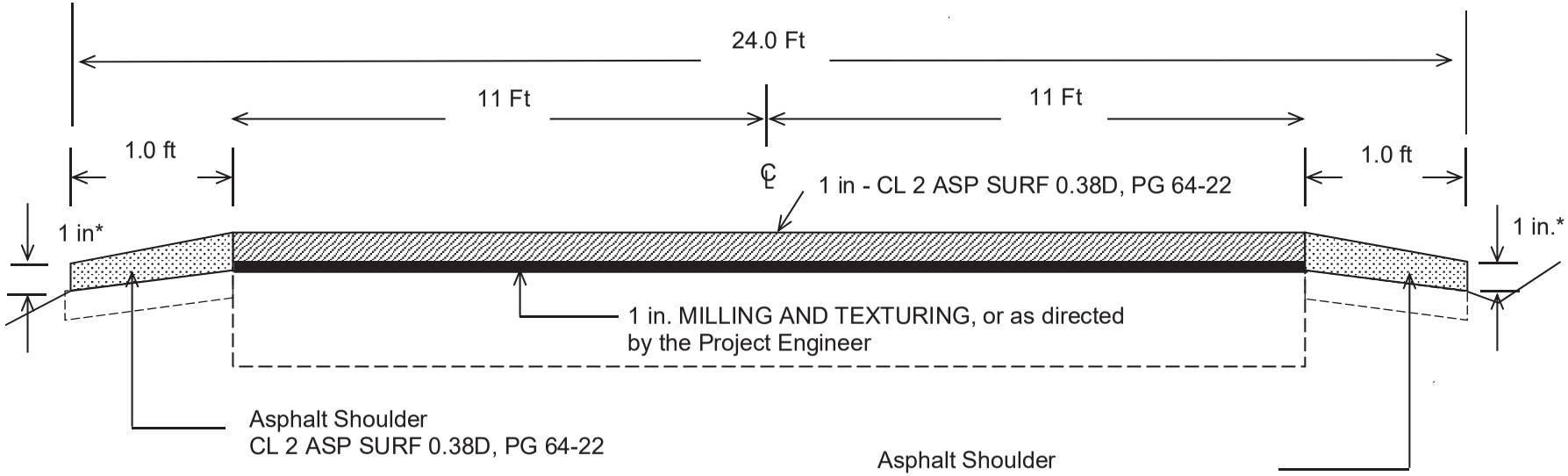
NOT TO SCALE

KY 177
SUPERELEVATION IMPROVEMENT
TYPICAL SECTIONS

Kenton County
FD05 059 0177 009-020
TYPICAL SECTION
MP's 9.174 - 9.483
MP's, 9.813 - 15.151
MP's 15.311 - 19.215



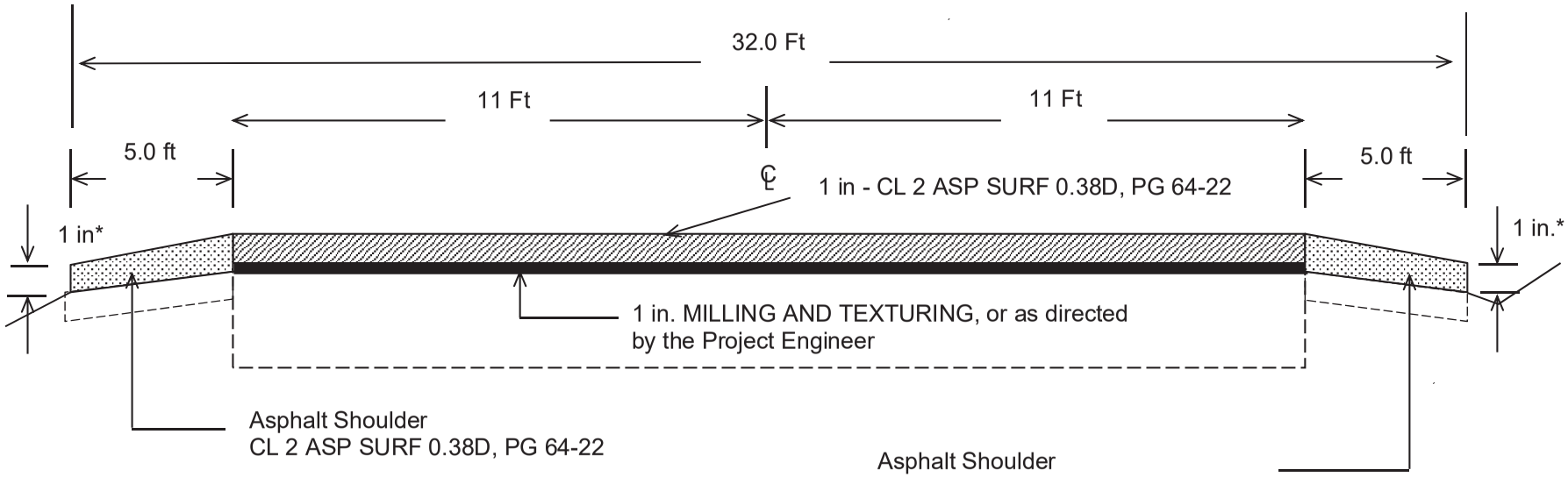
Install Edgeline Rumble Strips:

MP 9.174 - 9.483
MP 9.813 - 11.823
MP 14.294 - 15.151
MP 15.311 - 16.451
MP 17.690 - 18.955

***Where Existing Site Conditions Permit**

***Asphalt shoulders may be placed monolithically**

Kenton County
FD05 059 0177 009-020
TYPICAL SECTION
MP's 9.483 - 9.813
MP's 15.151 - 15.311



Install Edgeline Rumble Strips:

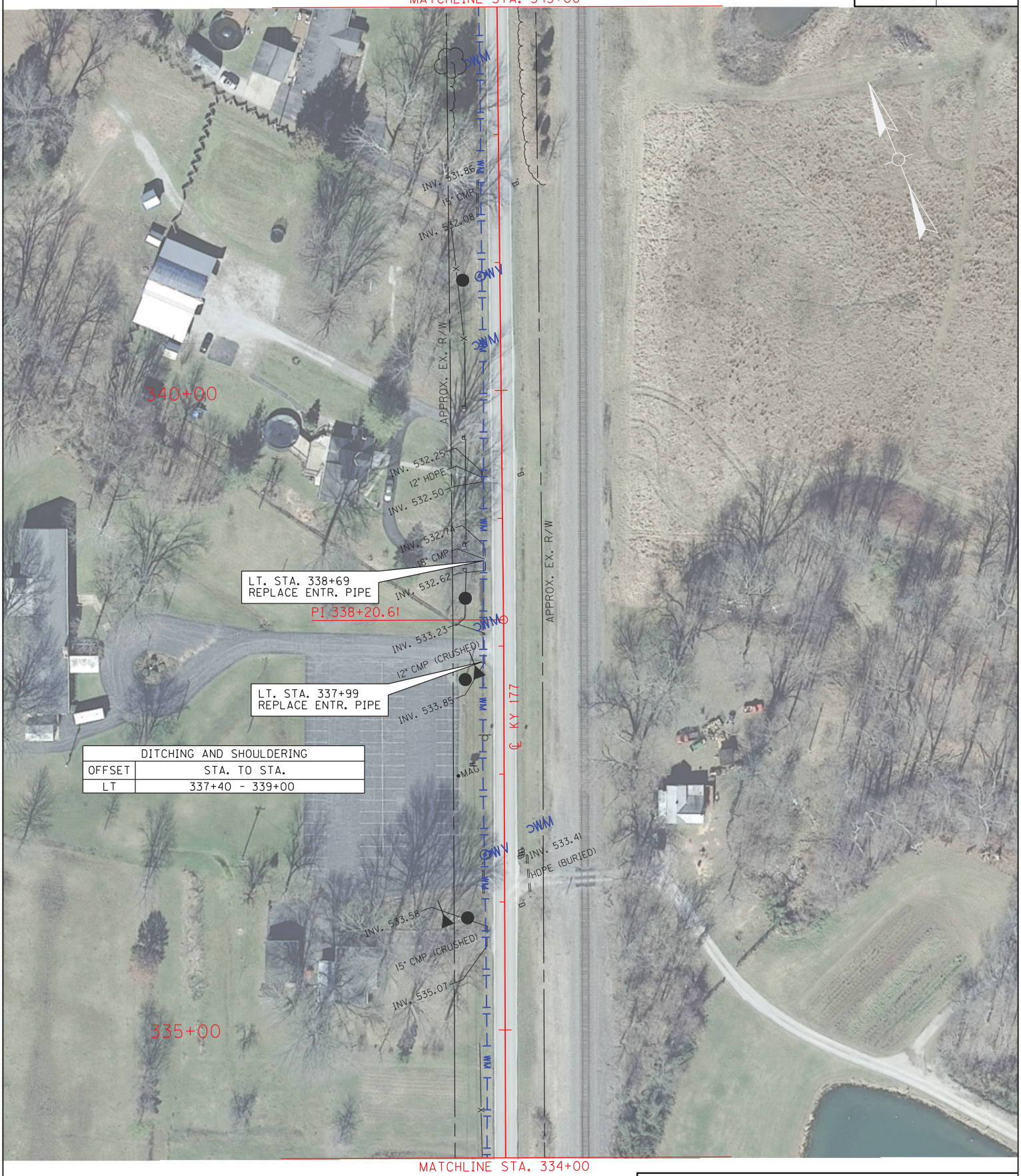
MP 9.483 - 9.813
MP 15.151 - 15.311

***Where Existing Site Conditions Permit**

***Asphalt shoulders may be placed monolithically**

MATCHLINE STA. 334+00
COUNTY OF
KENTON
ITEM NO.
6-9018
INV. 531.14
18" RCP
INV. 531.24
INV. 534.34
10" CAST IRON/HDPE
INV. 534.42
APPROX. EX. R/W
APPROX. EX. R/W
330+00
INV. 534.60
CMP (CRUSHED)
INV. 534.78
℄ KY 177
SIGN
TELECOM MARKER
BEGIN PROJECT
STA. 324+72 ℄ KY 177
MP 6.15
325+00
POB 324+72.00
NOTE: LOCATION OF EXISTING UNDERGROUND UTILITIES IS APPROXIMATE AND NOT ALL UTILITIES MAY BE SHOWN. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS WHEN PERFORMING WORK IN THESE AREAS.
SCALE: 1"= 100
KY 177
PLAN SHEET 1
BEGIN PROJECT TO STA. 334+00

COUNTY OF	ITEM NO.
KENTON	6-9018



DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
LT	337+40 - 339+00

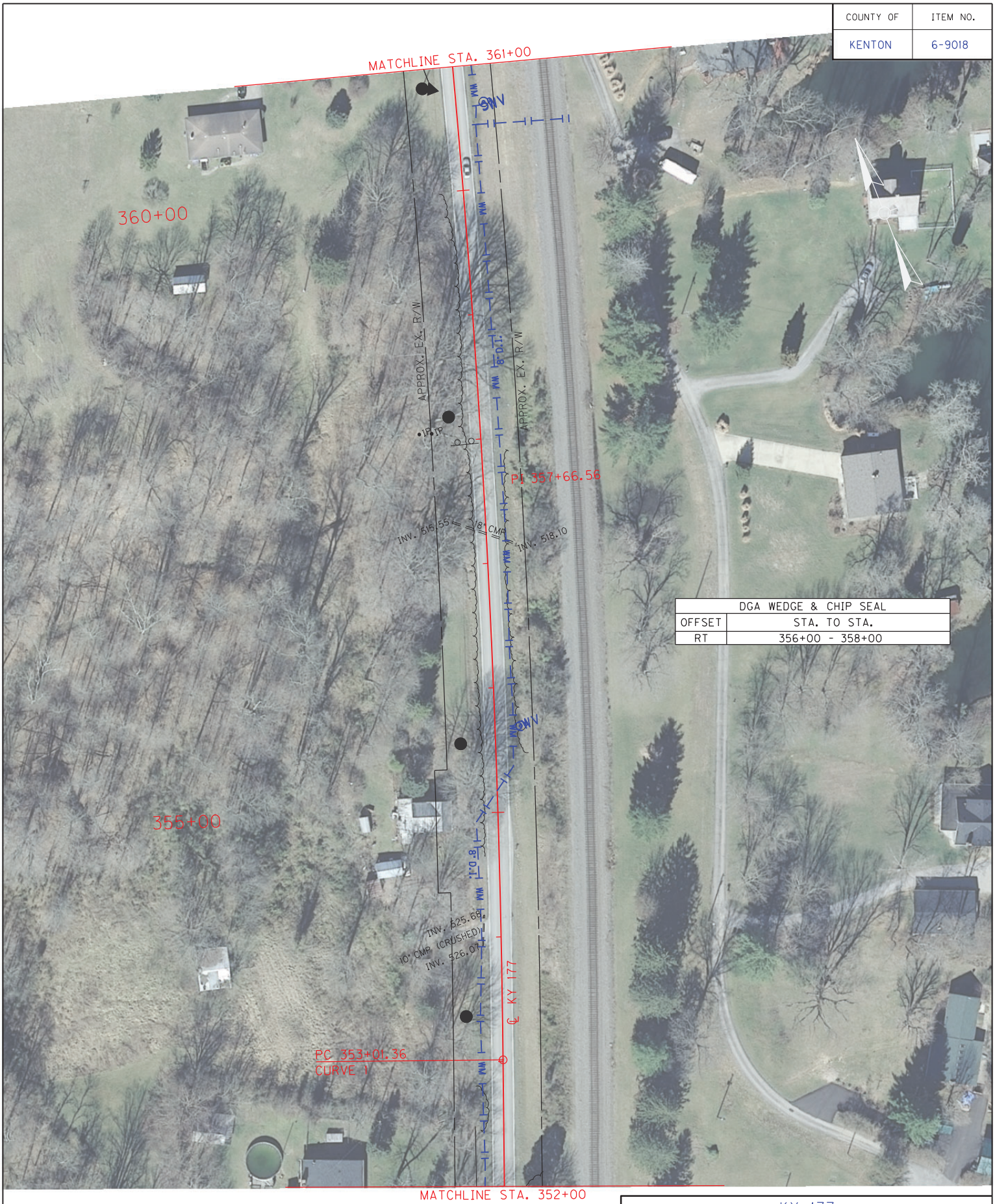
SCALE: 1"= 100

KY 177
PLAN SHEET 2
STA. 334+00 TO STA. 343+00

COUNTY OF	ITEM NO.
KENTON	6-9018

SCALE: 1"= 100

KY 177
PLAN SHEET 3
STA. 343+00 TO STA. 352+00


COUNTY OF
ITEM NO.
KENTON
6-9018
MATCHLINE STA. 361+00
360+00
APPROX. EX. R/W
APPROX. EX. R/W
P.I. STA. 357+66.58
INV. 516.55
8" CMP
INV. 518.10
DGA WEDGE & CHIP SEAL
OFFSET
STA. TO STA.
RT
356+00 - 358+00
355+00
INV. 525.68
10' CMP (CRUSHED)
INV. 526.01
℄ KY 177
PC 353+01.36
CURVE 1
MATCHLINE STA. 352+00
SCALE: 1"= 100
KY 177
PLAN SHEET 4
STA. 352+00 TO STA. 361+00

COUNTY OF
KENTON
ITEM NO.
6-9018
MATCHLINE STA. 370+00
370+00
12" CMP
INV. 528.28
INV. 529.15
15" CMP
INV. 529.56
INV. 529.99
15" CMP
INV. 530.25
PI 368+23.66
INV. 530.58
12" CMP
INV. 530.62
℄ KY 177
PC 365+46.73
CURVE 2
365+00
APPROX. EX. R/W
APPROX. EX. R/W
SIGN
SPRINT MARKER
INV. 526.90
12" HDPE
INV. 526.88
PT 362+31.09
CURVE 1
INV. 525.63
15" CMP
INV. 525.66
MATCHLINE STA. 361+00
SCALE: 1"= 100
KY 177
PLAN SHEET 5
STA. 361+00 TO STA. 370+00

COUNTY OF	ITEM NO.
KENTON	6-9018

PROPOSED SIGNS		
OFFSET	STA.	DESCRIPTION
RT (NB)	377+46	REFL. PANEL ON EX. CHEVRON POST
RT (SB)	377+46	REFL. PANEL ON EX. CHEVRON POST
RT (NB)	378+29	REFL. PANEL ON EX. CHEVRON POST
RT (SB)	378+29	REFL. PANEL ON EX. CHEVRON POST

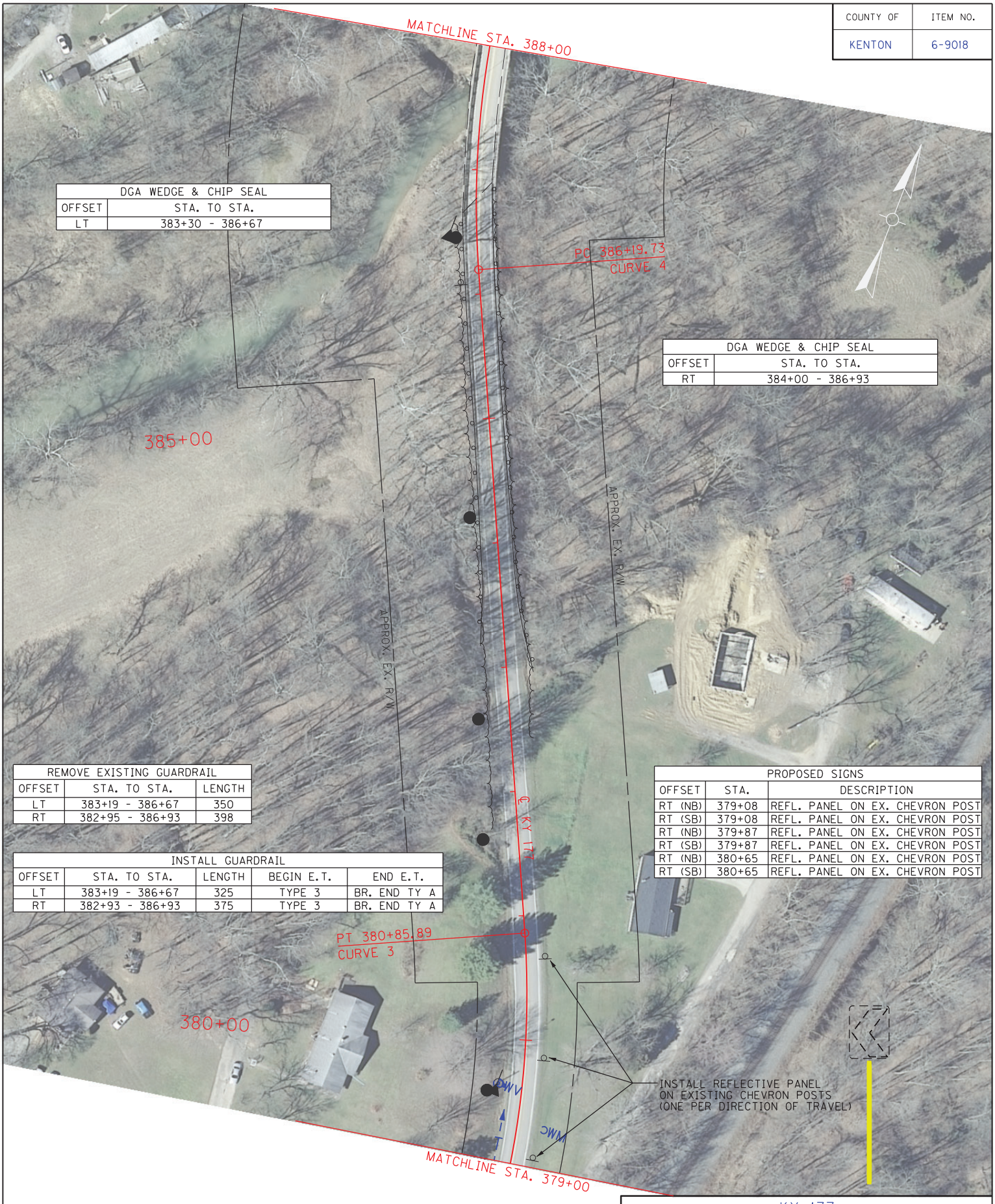
CHANNEL LINING	
OFFSET	STA. TO STA.
LT	371+90 - 372+30

RELOCATE EXISTING SIGN			
OFFSET	FROM STA.	TO STA.	DESCRIPTION
RT	370+26	374+76	REVERSE CURVE 35 MPH

SCALE: 1"= 100

KY 177
PLAN SHEET 6
STA. 370+00 TO STA. 379+00

COUNTY OF	ITEM NO.
KENTON	6-9018



DGA WEDGE & CHIP SEAL	
OFFSET	STA. TO STA.
LT	383+30 - 386+67

DGA WEDGE & CHIP SEAL	
OFFSET	STA. TO STA.
RT	384+00 - 386+93

REMOVE EXISTING GUARDRAIL		
OFFSET	STA. TO STA.	LENGTH
LT	383+19 - 386+67	350
RT	382+95 - 386+93	398

INSTALL GUARDRAIL				
OFFSET	STA. TO STA.	LENGTH	BEGIN E.T.	END E.T.
LT	383+19 - 386+67	325	TYPE 3	BR. END TY A
RT	382+93 - 386+93	375	TYPE 3	BR. END TY A

PROPOSED SIGNS		
OFFSET	STA.	DESCRIPTION
RT (NB)	379+08	REFL. PANEL ON EX. CHEVRON POST
RT (SB)	379+08	REFL. PANEL ON EX. CHEVRON POST
RT (NB)	379+87	REFL. PANEL ON EX. CHEVRON POST
RT (SB)	379+87	REFL. PANEL ON EX. CHEVRON POST
RT (NB)	380+65	REFL. PANEL ON EX. CHEVRON POST
RT (SB)	380+65	REFL. PANEL ON EX. CHEVRON POST

SCALE: 1"= 100

KY 177
PLAN SHEET 7
STA. 379+00 TO STA. 388+00

COUNTY OF	ITEM NO.
KENTON	6-9018

RELOCATE EXISTING SIGN			
OFFSET	FROM STA.	TO STA.	DESCRIPTION
LT	397+21	393+82	REVERSE CURVE 35 MPH

DGA WEDGE & CHIP SEAL	
OFFSET	STA. TO STA.
RT	388+51 - 390+75

DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
LT	390+00 - 395+00

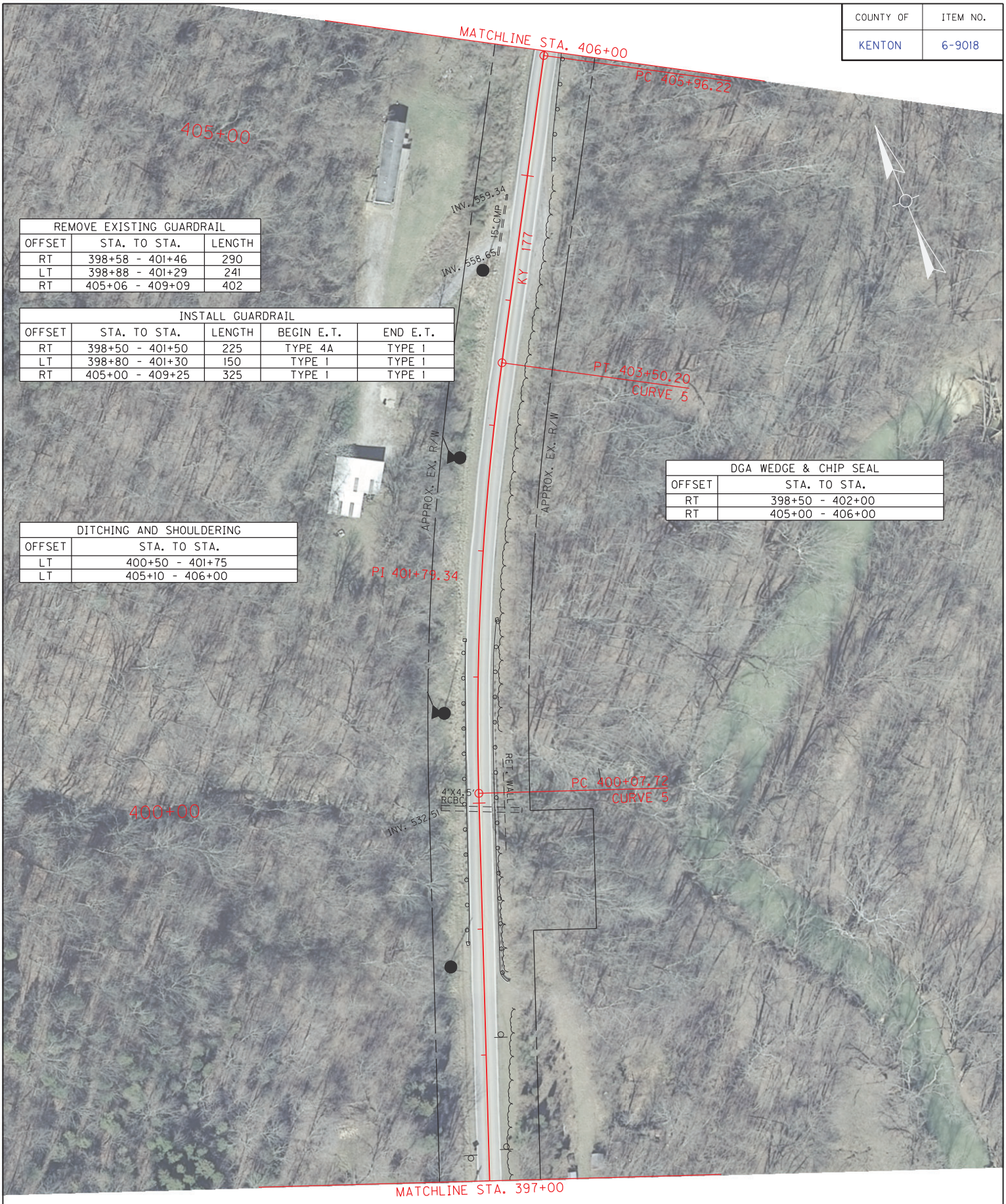
REMOVE EXISTING GUARDRAIL		
OFFSET	STA. TO STA.	LENGTH
LT	388+25 - 389+69	152
RT	388+51 - 391+06	253

INSTALL GUARDRAIL				
OFFSET	STA. TO STA.	LENGTH	BEGIN E.T.	END E.T.
LT	388+25 - 389+69	137.5	BR. END TY A	TS 1
RT	388+51 - 391+14	187.5	BR. END TY A	TYPE 4A

SCALE: 1"= 100

KY 177
PLAN SHEET 8
STA. 388+00 TO STA. 397+00

COUNTY OF	ITEM NO.
KENTON	6-9018



REMOVE EXISTING GUARDRAIL		
OFFSET	STA. TO STA.	LENGTH
RT	398+58 - 401+46	290
LT	398+88 - 401+29	241
RT	405+06 - 409+09	402

INSTALL GUARDRAIL				
OFFSET	STA. TO STA.	LENGTH	BEGIN E.T.	END E.T.
RT	398+50 - 401+50	225	TYPE 4A	TYPE 1
LT	398+80 - 401+30	150	TYPE 1	TYPE 1
RT	405+00 - 409+25	325	TYPE 1	TYPE 1

DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
LT	400+50 - 401+75
LT	405+10 - 406+00

DGA WEDGE & CHIP SEAL	
OFFSET	STA. TO STA.
RT	398+50 - 402+00
RT	405+00 - 406+00

SCALE: 1"= 100

KY 177
PLAN SHEET 9
STA. 397+00 TO STA. 406+00

COUNTY OF
ITEM NO.
KENTON
6-9018
MATCHLINE STA. 415+00
415+00
STA. 414+09
EXTEND 24" RCP AND CLEAN PIPE STRUCTURE
LEFT:
REMOVE 4 L.F. EXISTING PIPE
INSTALL 12 L.F. 24" CULVERT PIPE WITH
SLOPED & MITERED CONCRETE HEADWALL
RIGHT:
REMOVE 4 L.F. EXISTING PIPE
INSTALL 6 L.F. 24" CULVERT PIPE WITH
SLOPED & FLARED HEADWALL
ADD 20 TONS CLASS II CHANNEL LINING
TO PROTECT EMBANKMENT AT OUTLET
INV. 537.38
24" RCP
INV. 533.57
PT 413+73.91
CURVE 7
PI 411+83.87
STA. 409+90
EXTEND 24" RCP
LEFT:
REMOVE 4 L.F. EXISTING PIPE
INSTALL 13 L.F. 24" CULVERT PIPE WITH
SLOPED & MITERED CONCRETE HEADWALL
410+00
APPROX. EX. R/W
APPROX. EX. R/W
PC 409+88.78
CURVE 7
INV. 546.39
24" RCP
INV. 544.03
KY 177
PT 408+60.37
CURVE 6
PI 407+28.39
MATCHLINE STA. 406+00
CURVE 6
SUPERELEVATION IMPROVEMENT
CURVE NO. | PC STA. | PT STA.
7 (NB) | 409+88.78 | 413+73.91
DITCHING AND SHOULDERING
OFFSET | STA. TO STA.
RT | 408+00 - 415+00
SUPERELEVATION IMPROVEMENT
CURVE NO. | PC STA. | PT STA.
6 (SB) | 405+96.22 | 408+60.37
DITCHING AND SHOULDERING
OFFSET | STA. TO STA.
LT | 406+00 - 410+00
DGA WEDGE & CHIP SEAL
OFFSET | STA. TO STA.
RT | 406+00 - 408+50
SCALE: 1"= 100
KY 177
PLAN SHEET 10
STA. 406+00 TO STA. 415+00

COUNTY OF
ITEM NO.
KENTON
6-9018
MATCHLINE STA. 424+00
℄ KY 177
DGA WEDGE & CHIP SEAL
OFFSET
STA. TO STA.
RT
420+00 - 421+00
SUPERELEVATION IMPROVEMENT
CURVE NO.
PC STA.
PT STA.
8 (NB)
415+66.60
420+10.15
DITCHING AND SHOULDERING
OFFSET
STA. TO STA.
RT
415+00 - 421+00
INV. 533.03
15" CMP
PC 421+21.36
CURVE 9
INV. 532.53
PT 420+10.15
CURVE 8
420+00
APPROX. EX. R/W
APPROX. EX. R/W
TREE TRIMMING
OFFSET
STA. TO STA.
LT
417+50 - 418+50
INV. 521.90
4'X4' RCBC
36" CMP
INV. 518.00
INV. 518.63
PI 417+88.96
HARRISBURG RD
INV. 533.75
18" CMP
INV. 534.37
CHANNEL LINING
OFFSET
STA. TO STA.
RT
418+35 - 418+65
PC 415+66.60
CURVE 8
415+00
MATCHLINE STA. 415+00
SCALE: 1"= 100
KY 177
PLAN SHEET 11
STA. 415+00 TO STA. 424+00

COUNTY OF	ITEM NO.
KENTON	6-9018

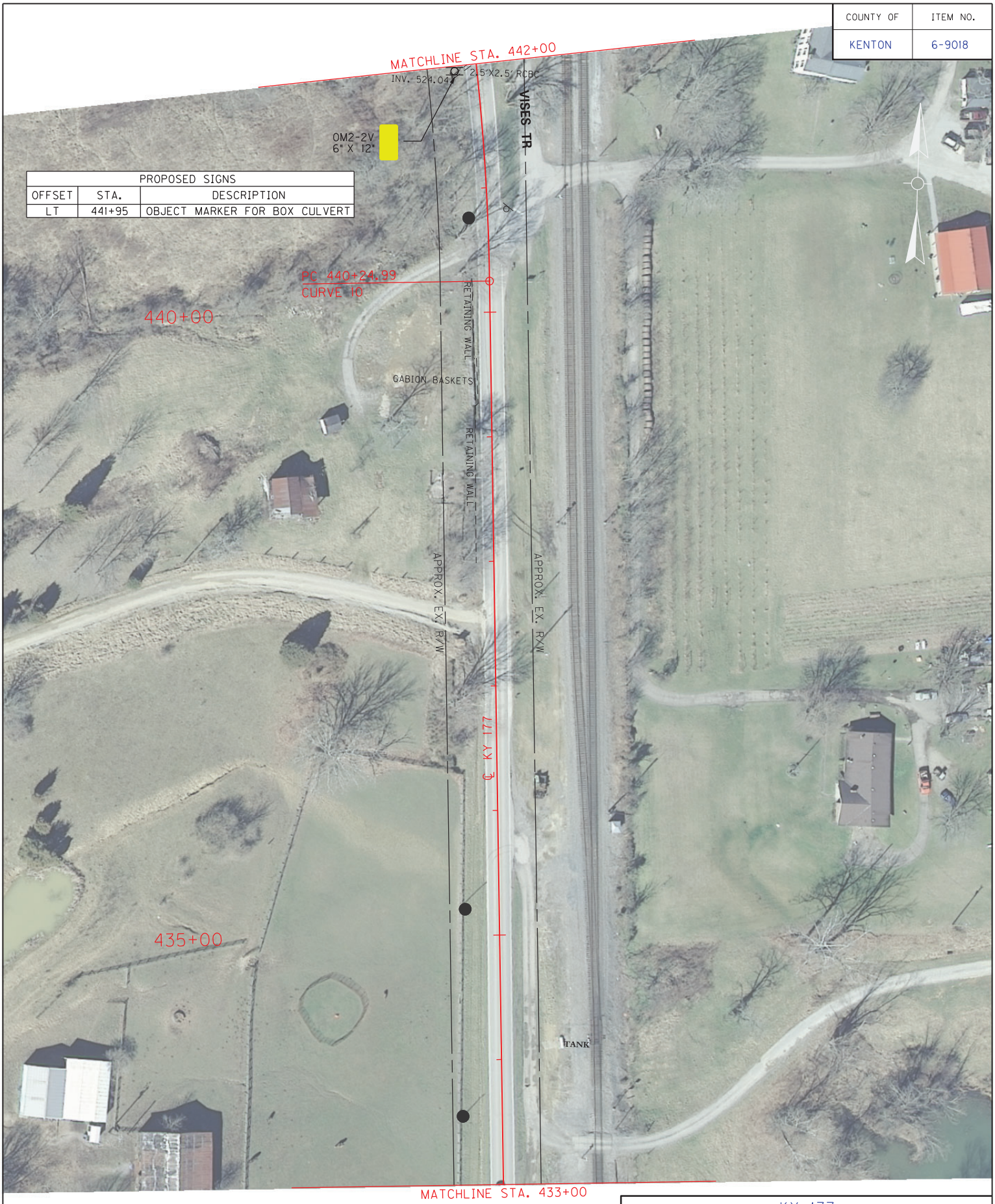
PROPOSED SIGNS		
OFFSET	STA.	DESCRIPTION
RT	428+10	OBJECT MARKER FOR BOX CULVERT
LT	428+40	OBJECT MARKER FOR BOX CULVERT

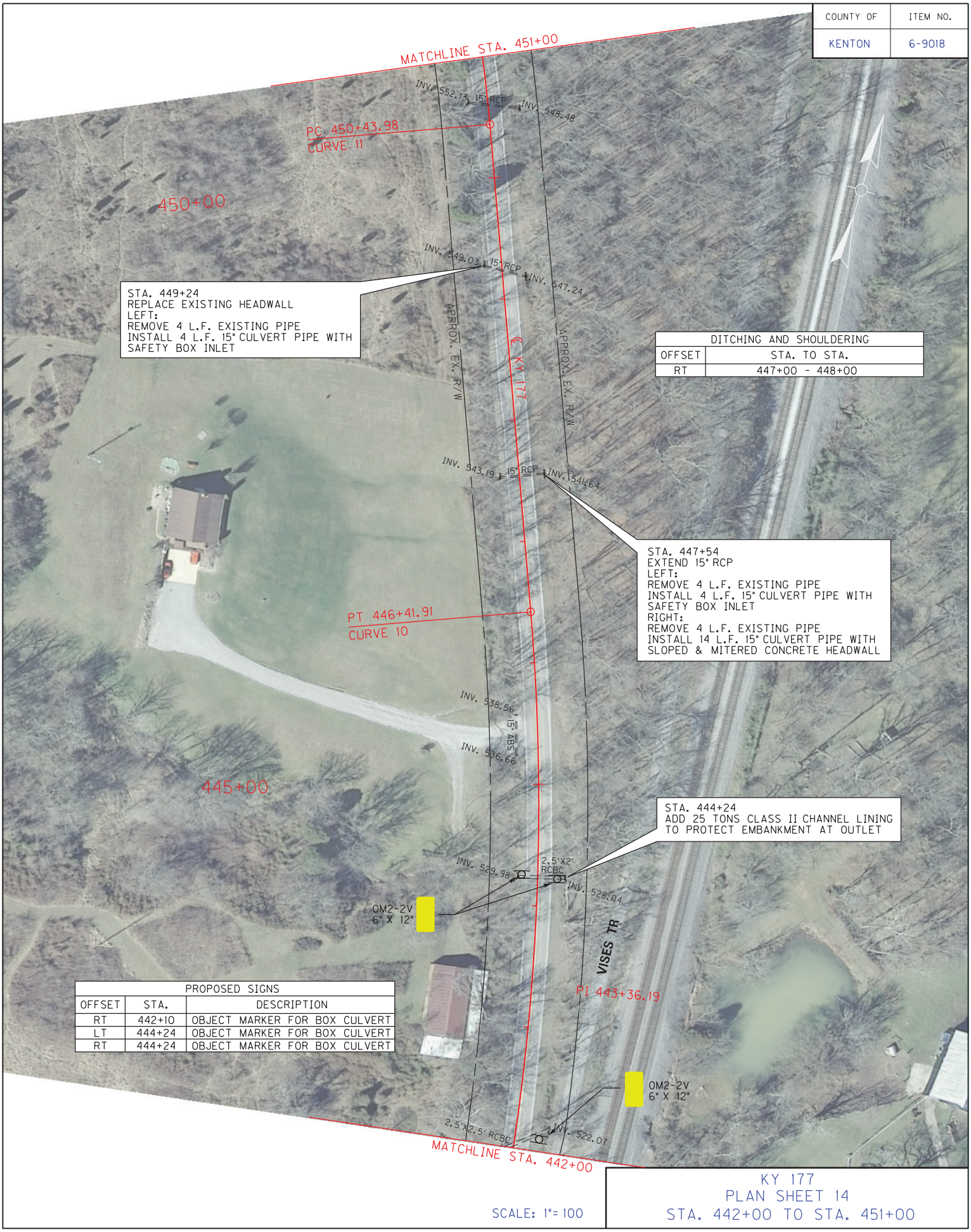
INSTALL POLY BAGS		
OFFSET	FROM STA.	TO STA.
LT	428+50	429+00

TREE TRIMMING	
OFFSET	STA. TO STA.
LT	428+00 - 429+50
RT	428+00 - 432+00

SCALE: 1"= 100

KY 177
PLAN SHEET 12
STA. 424+00 TO STA. 433+00

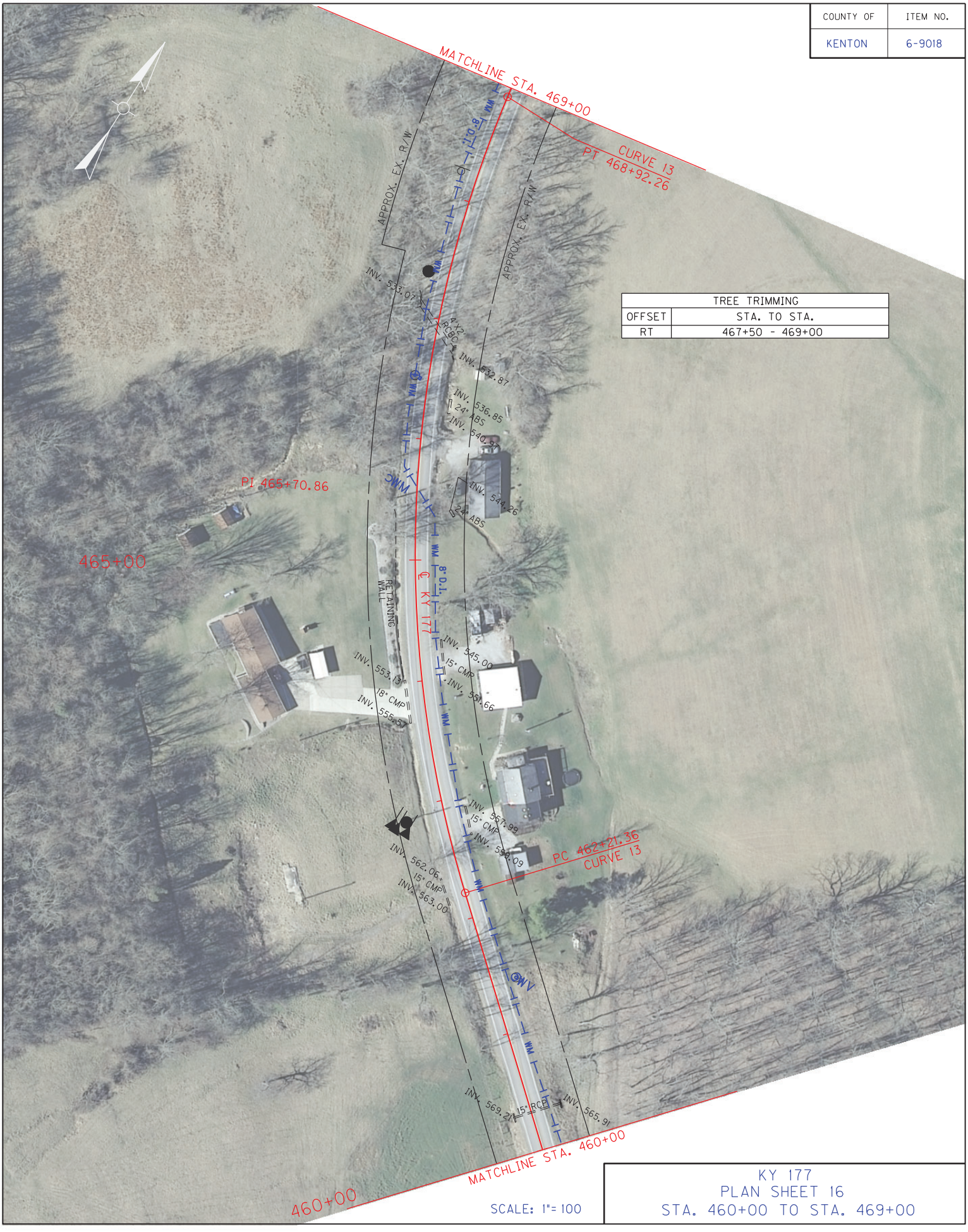

COUNTY OF
ITEM NO.
KENTON
6-9018
MATCHLINE STA. 442+00
INV. 524.04±
2.5'X2.5' RCBC
OM2-2V
6" X 12"
VISES TR
PROPOSED SIGNS
OFFSET
STA.
DESCRIPTION
LT
441+95
OBJECT MARKER FOR BOX CULVERT
PC 440+24.99
CURVE 10
440+00
RETAINING WALL
GABION BASKETS
RETAINING WALL
APPROX. EX. R/W
APPROX. EX. R/W
℄ KY 177
435+00
TANK
MATCHLINE STA. 433+00
SCALE: 1"= 100
KY 177
PLAN SHEET 13
STA. 433+00 TO STA. 442+00

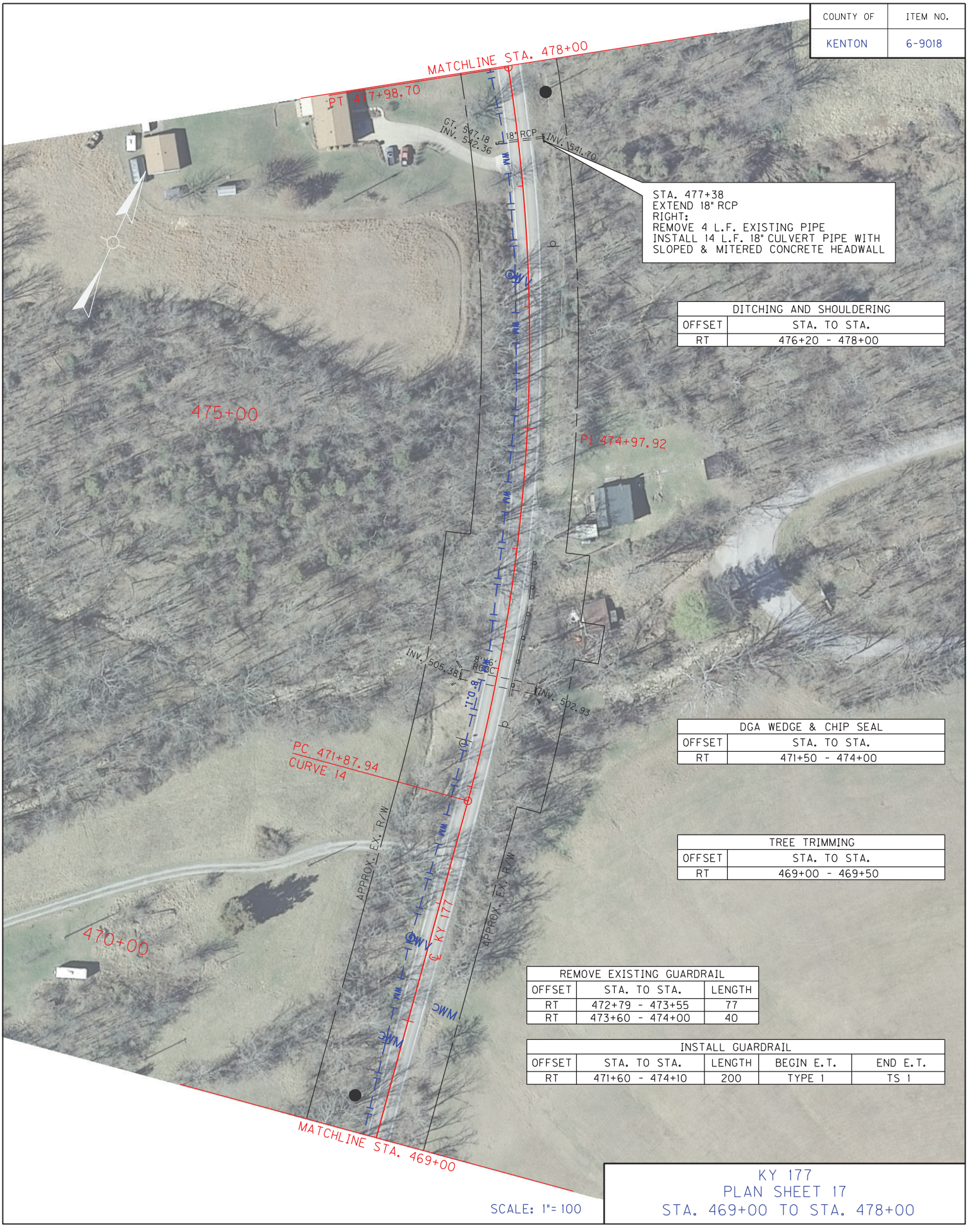

MATCHLINE STA. 451+00
INV. 552.13
15" RCP
INV. 548.48
PC 450+43.98
CURVE 11
450+00
INV. 549.03
15" RCP
INV. 547.24
STA. 449+24
REPLACE EXISTING HEADWALL
LEFT:
REMOVE 4 L.F. EXISTING PIPE
INSTALL 4 L.F. 15" CULVERT PIPE WITH SAFETY BOX INLET
APPROX. EX. R/W
℄ KY 177
APPROX. EX. R/W
DITCHING AND SHOULDERING
OFFSET
STA. TO STA.
RT
447+00 - 448+00
INV. 543.19
15" RCP
INV. 541.64
STA. 447+54
EXTEND 15" RCP
LEFT:
REMOVE 4 L.F. EXISTING PIPE
INSTALL 4 L.F. 15" CULVERT PIPE WITH SAFETY BOX INLET
RIGHT:
REMOVE 4 L.F. EXISTING PIPE
INSTALL 14 L.F. 15" CULVERT PIPE WITH SLOPED & MITERED CONCRETE HEADWALL
PT 446+41.91
CURVE 10
INV. 538.56
15" ABS
INV. 536.66
445+00
STA. 444+24
ADD 25 TONS CLASS II CHANNEL LINING TO PROTECT EMBANKMENT AT OUTLET
INV. 529.98
2.5'X2' RCBC
INV. 528.04
OM2-2V
6" X 12"
VISES TR
PI 443+36.19
PROPOSED SIGNS
OFFSET
STA.
DESCRIPTION
RT
442+10
OBJECT MARKER FOR BOX CULVERT
LT
444+24
OBJECT MARKER FOR BOX CULVERT
RT
444+24
OBJECT MARKER FOR BOX CULVERT
OM2-2V
6" X 12"
2.5'X2.5' RCBC
INV. 522.07
MATCHLINE STA. 442+00
COUNTY OF
ITEM NO.
KENTON
6-9018
SCALE: 1"= 100
KY 177
PLAN SHEET 14
STA. 442+00 TO STA. 451+00

COUNTY OF	ITEM NO.
KENTON	6-9018

TREE TRIMMING	
OFFSET	STA. TO STA.
LT	452+50 - 453+50
RT	451+00 - 453+00

KY 177
PLAN SHEET 15
STA. 451+00 TO STA. 460+00


COUNTY OF
ITEM NO.
KENTON
6-9018
MATCHLINE STA. 469+00
CURVE 13
PT 468+92.26
APPROX. EX. R/W
APPROX. EX. R/W
8" D.I.
INV. 533.07
4'X2' RCBC
INV. 532.87
INV. 536.85
24" ABS
INV. 540.93
PI 465+70.86
INV. 544.26
24" ABS
465+00
RETAINING WALL
8" D.I.
KY 177
INV. 545.00
15" CMP
INV. 551.66
INV. 553.13
18" CMP
INV. 555.57
INV. 557.99
15" CMP
INV. 559.09
PC 462+21.36
CURVE 13
INV. 562.06
15" CMP
INV. 563.00
INV. 569.21
15" RCP
INV. 565.91
MATCHLINE STA. 460+00
460+00
TREE TRIMMING
OFFSET
STA. TO STA.
RT
467+50 - 469+00
SCALE: 1"= 100
KY 177
PLAN SHEET 16
STA. 460+00 TO STA. 469+00



COUNTY OF	ITEM NO.
KENTON	6-9018

DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
RT	476+20 - 478+00

DGA WEDGE & CHIP SEAL	
OFFSET	STA. TO STA.
RT	471+50 - 474+00

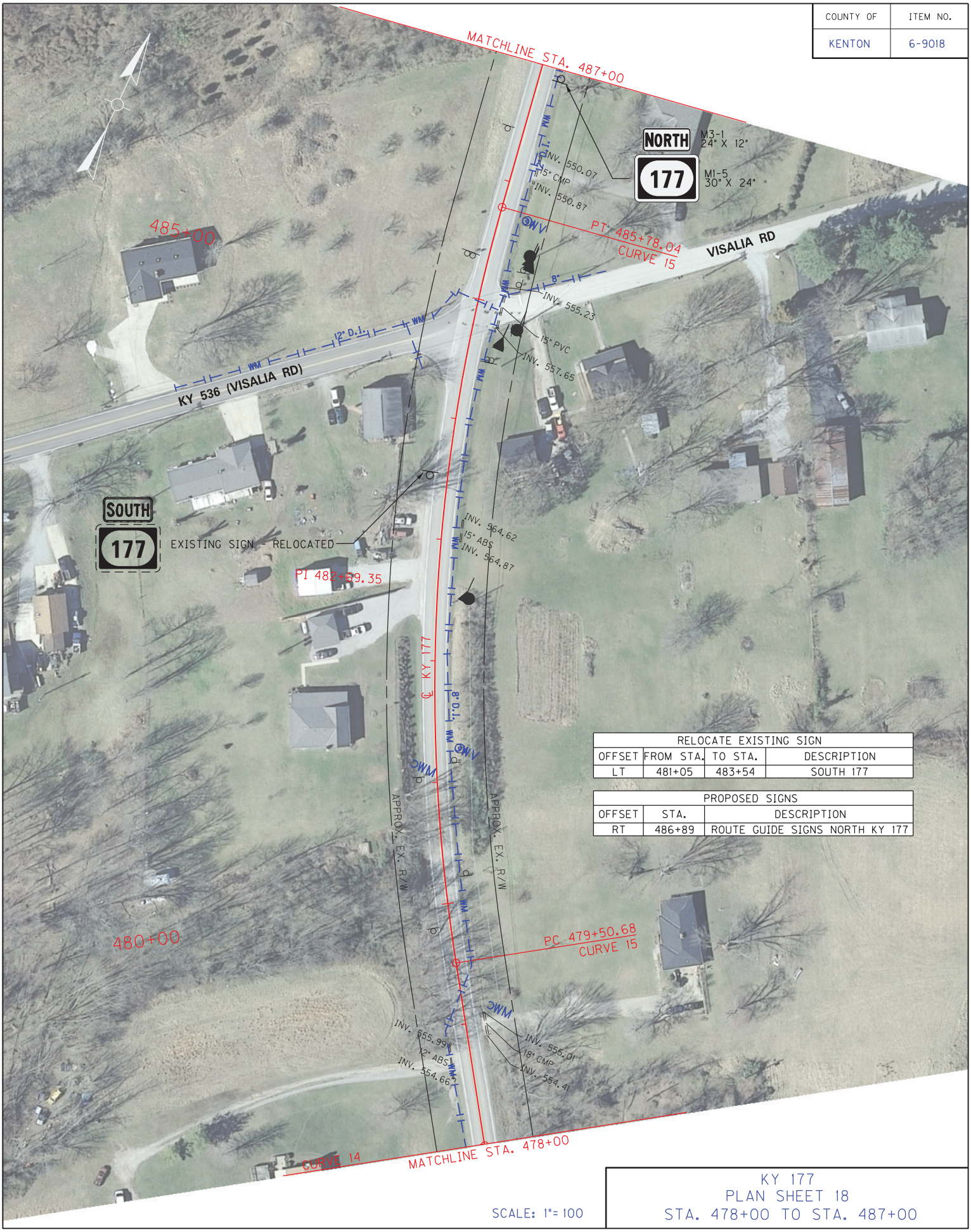
TREE TRIMMING	
OFFSET	STA. TO STA.
RT	469+00 - 469+50

REMOVE EXISTING GUARDRAIL		
OFFSET	STA. TO STA.	LENGTH
RT	472+79 - 473+55	77
RT	473+60 - 474+00	40

INSTALL GUARDRAIL				
OFFSET	STA. TO STA.	LENGTH	BEGIN E.T.	END E.T.
RT	471+60 - 474+10	200	TYPE 1	TS 1

SCALE: 1"= 100

KY 177
PLAN SHEET 17
STA. 469+00 TO STA. 478+00


COUNTY OF
KENTON
ITEM NO.
6-9018
MATCHLINE STA. 487+00
NORTH
177
M3-1
24" X 12"
M1-5
30" X 24"
INV. 550.07
15" CMP
INV. 550.87
PT 485+78.04
CURVE 15
VISALIA RD
485+00
8" D.I.
INV. 555.23
15" PVC
INV. 557.65
12" D.I.
KY 536 (VISALIA RD)
SOUTH
177
EXISTING SIGN - RELOCATED
INV. 564.62
15" ABS
INV. 564.87
PI 482+69.35
℄ KY 177
8" D.I.
APPROX. EX. R/W
APPROX. EX. R/W
480+00
PC 479+50.68
CURVE 15
INV. 555.99
12" ABS
INV. 554.66
INV. 555.01
18" CMP
INV. 554.41
CURVE 14
MATCHLINE STA. 478+00
RELOCATE EXISTING SIGN
OFFSET | FROM STA. | TO STA. | DESCRIPTION
LT | 481+05 | 483+54 | SOUTH 177
PROPOSED SIGNS
OFFSET | STA. | DESCRIPTION
RT | 486+89 | ROUTE GUIDE SIGNS NORTH KY 177
SCALE: 1"= 100
KY 177
PLAN SHEET 18
STA. 478+00 TO STA. 487+00

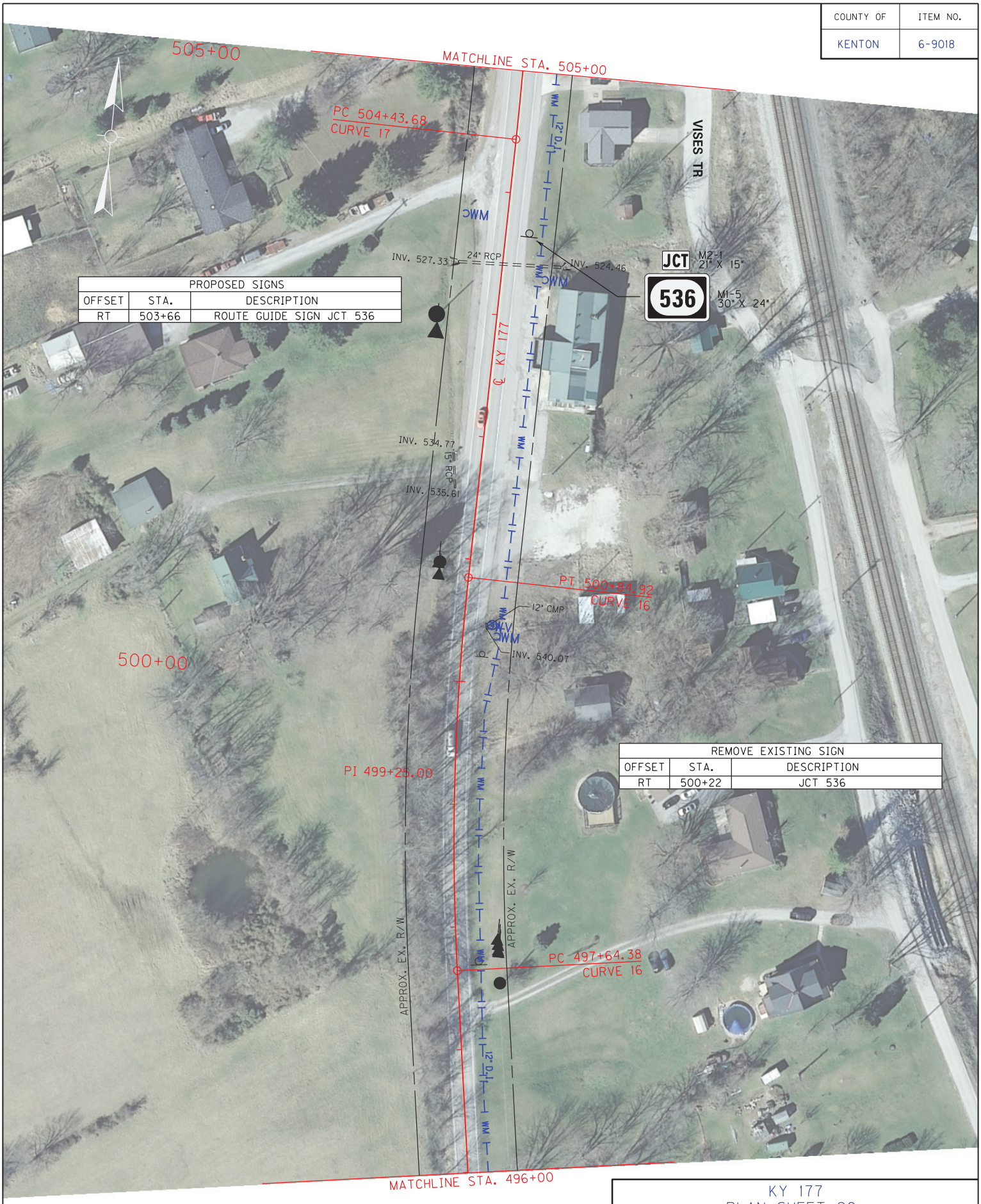
COUNTY OF	ITEM NO.
KENTON	6-9018

REMOVE EXISTING SIGN		
OFFSET	STA.	DESCRIPTION
RT	487+59	NORTH KY 177/536

SCALE: 1"= 100

KY 177
PLAN SHEET 19
STA. 487+00 TO STA. 496+00

COUNTY OF	ITEM NO.
KENTON	6-9018

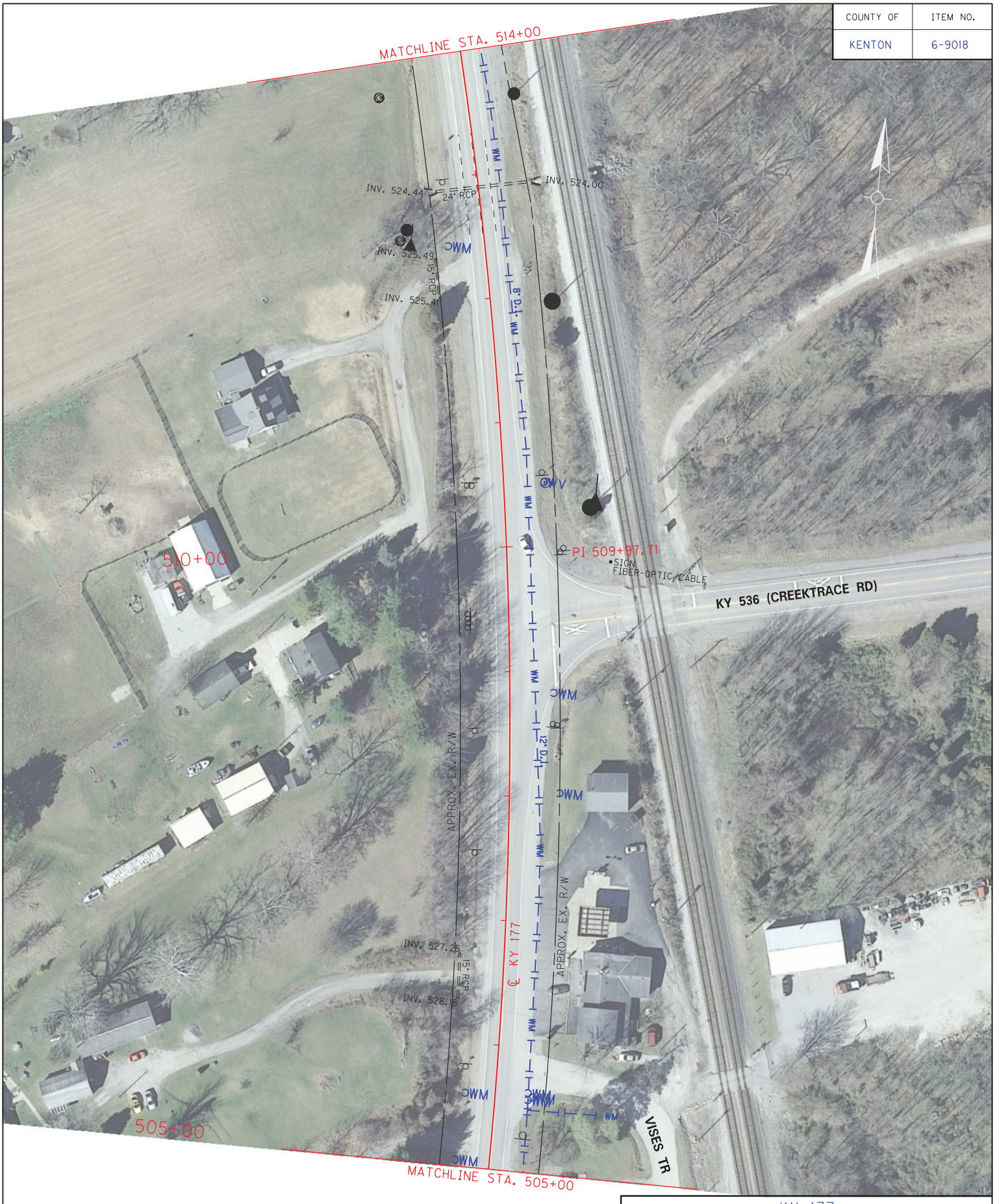


PROPOSED SIGNS		
OFFSET	STA.	DESCRIPTION
RT	503+66	ROUTE GUIDE SIGN JCT 536

REMOVE EXISTING SIGN		
OFFSET	STA.	DESCRIPTION
RT	500+22	JCT 536

SCALE: 1"= 100

KY 177
PLAN SHEET 20
STA. 496+00 TO STA. 505+00


COUNTY OF
KENTON
ITEM NO.
6-9018
MATCHLINE STA. 514+00
INV. 524.44
24" RCP
INV. 524.00
INV. 525.49
15" RCP
INV. 525.41
8" D.I. WM
PI 509+97.71
SIGN
FIBER-OPTIC CABLE
KY 536 (CREEKTRACE RD)
510+00
12" D.I. WM
APPROX. EX. R/W
APPROX. EX. R/W
INV. 527.25
15" RCP
INV. 528.18
℄ KY 177
505+00
VISES TR
MATCHLINE STA. 505+00
SCALE: 1"= 100
KY 177
PLAN SHEET 21
STA. 505+00 TO STA. 514+00

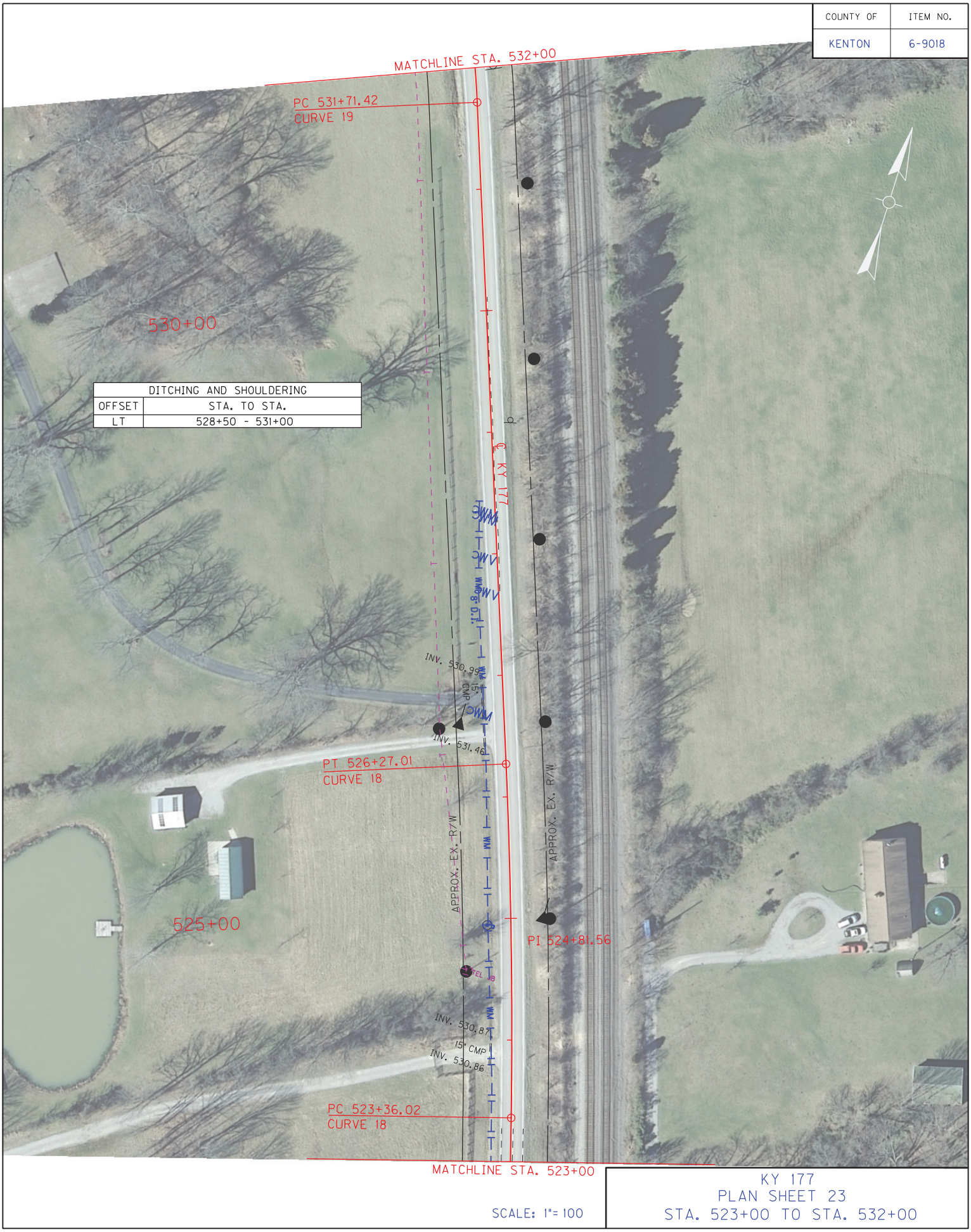
COUNTY OF	ITEM NO.
KENTON	6-9018

DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
LT	519+50 - 520+50

SCALE: 1"= 100

KY 177
PLAN SHEET 22
STA. 514+00 TO STA. 523+00

COUNTY OF	ITEM NO.
KENTON	6-9018

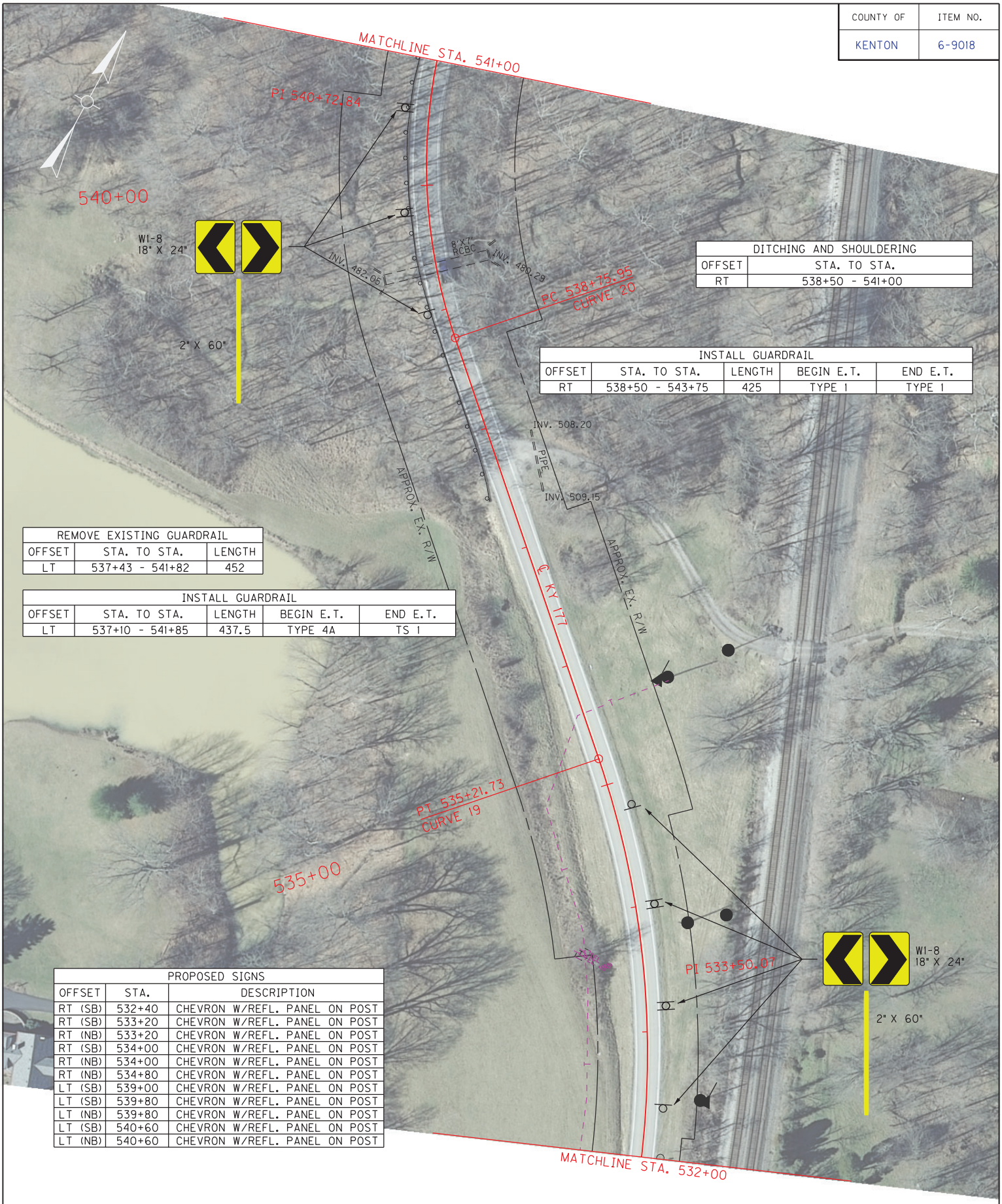


DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
LT	528+50 - 531+00

SCALE: 1"= 100

KY 177
PLAN SHEET 23
STA. 523+00 TO STA. 532+00

COUNTY OF	ITEM NO.
KENTON	6-9018



DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
RT	538+50 - 541+00

INSTALL GUARDRAIL				
OFFSET	STA. TO STA.	LENGTH	BEGIN E.T.	END E.T.
RT	538+50 - 543+75	425	TYPE 1	TYPE 1

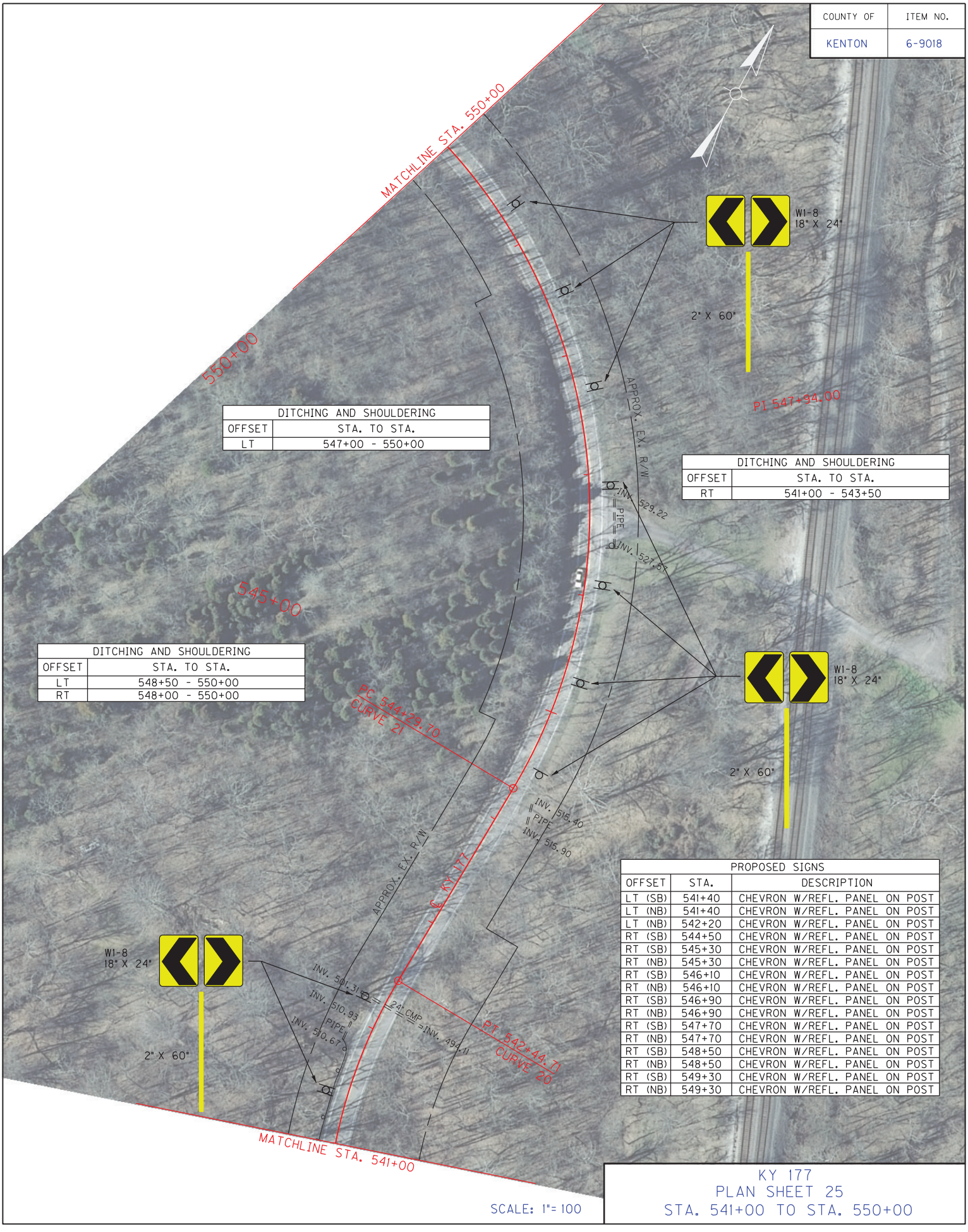
REMOVE EXISTING GUARDRAIL		
OFFSET	STA. TO STA.	LENGTH
LT	537+43 - 541+82	452

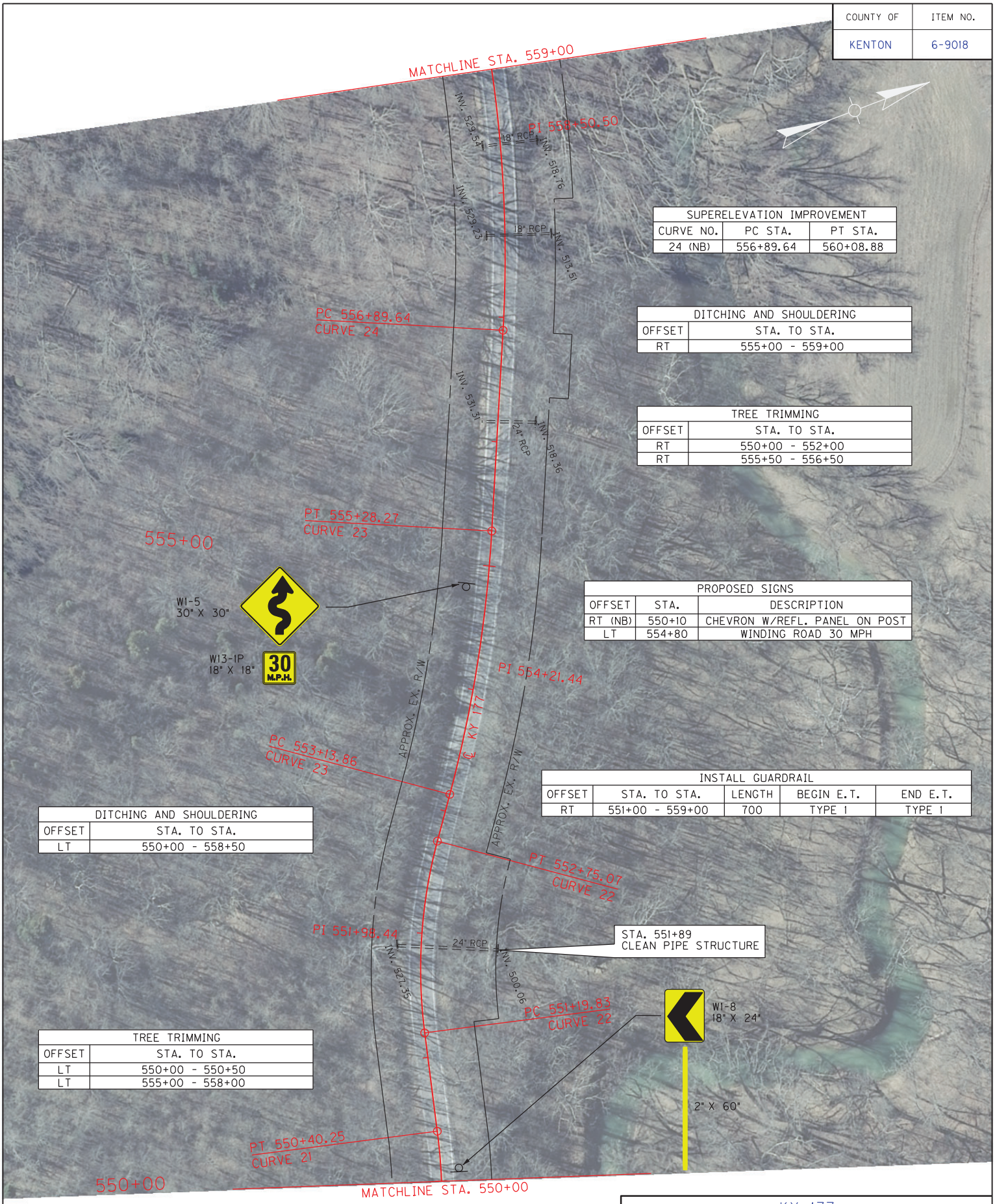
INSTALL GUARDRAIL				
OFFSET	STA. TO STA.	LENGTH	BEGIN E.T.	END E.T.
LT	537+10 - 541+85	437.5	TYPE 4A	TS 1

PROPOSED SIGNS		
OFFSET	STA.	DESCRIPTION
RT (SB)	532+40	CHEVRON W/REFL. PANEL ON POST
RT (SB)	533+20	CHEVRON W/REFL. PANEL ON POST
RT (NB)	533+20	CHEVRON W/REFL. PANEL ON POST
RT (SB)	534+00	CHEVRON W/REFL. PANEL ON POST
RT (NB)	534+00	CHEVRON W/REFL. PANEL ON POST
RT (NB)	534+80	CHEVRON W/REFL. PANEL ON POST
LT (SB)	539+00	CHEVRON W/REFL. PANEL ON POST
LT (SB)	539+80	CHEVRON W/REFL. PANEL ON POST
LT (NB)	539+80	CHEVRON W/REFL. PANEL ON POST
LT (SB)	540+60	CHEVRON W/REFL. PANEL ON POST
LT (NB)	540+60	CHEVRON W/REFL. PANEL ON POST

SCALE: 1"= 100

KY 177
PLAN SHEET 24
STA. 532+00 TO STA. 541+00


COUNTY OF
KENTON
ITEM NO.
6-9018
MATCHLINE STA. 550+00
550+00
545+00
MATCHLINE STA. 541+00
W1-8
18" X 24"
2" X 60"
PI 547+94.00
APPROX. EX. R/W
INV. 529.22
PIPE
INV. 527.51
PC 544+29.70
CURVE 21
INV. 515.40
PIPE
INV. 515.90
℄ KY 177
INV. 501.31
INV. 510.93
PIPE
INV. 510.67
24" CMP
INV. 494.11
PT 542+44.71
CURVE 20
DITCHING AND SHOULDERING
OFFSET
STA. TO STA.
LT
547+00 - 550+00
DITCHING AND SHOULDERING
OFFSET
STA. TO STA.
RT
541+00 - 543+50
DITCHING AND SHOULDERING
OFFSET
STA. TO STA.
LT
548+50 - 550+00
RT
548+00 - 550+00
PROPOSED SIGNS
OFFSET
STA.
DESCRIPTION
LT (SB) 541+40 CHEVRON W/REFL. PANEL ON POST
LT (NB) 541+40 CHEVRON W/REFL. PANEL ON POST
LT (NB) 542+20 CHEVRON W/REFL. PANEL ON POST
RT (SB) 544+50 CHEVRON W/REFL. PANEL ON POST
RT (SB) 545+30 CHEVRON W/REFL. PANEL ON POST
RT (NB) 545+30 CHEVRON W/REFL. PANEL ON POST
RT (SB) 546+10 CHEVRON W/REFL. PANEL ON POST
RT (NB) 546+10 CHEVRON W/REFL. PANEL ON POST
RT (SB) 546+90 CHEVRON W/REFL. PANEL ON POST
RT (NB) 546+90 CHEVRON W/REFL. PANEL ON POST
RT (SB) 547+70 CHEVRON W/REFL. PANEL ON POST
RT (NB) 547+70 CHEVRON W/REFL. PANEL ON POST
RT (SB) 548+50 CHEVRON W/REFL. PANEL ON POST
RT (NB) 548+50 CHEVRON W/REFL. PANEL ON POST
RT (SB) 549+30 CHEVRON W/REFL. PANEL ON POST
RT (NB) 549+30 CHEVRON W/REFL. PANEL ON POST
KY 177
PLAN SHEET 25
STA. 541+00 TO STA. 550+00
SCALE: 1"= 100



COUNTY OF	ITEM NO.
KENTON	6-9018

SUPERELEVATION IMPROVEMENT		
CURVE NO.	PC STA.	PT STA.
24 (NB)	556+89.64	560+08.88

DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
RT	555+00 - 559+00

TREE TRIMMING	
OFFSET	STA. TO STA.
RT	550+00 - 552+00
RT	555+50 - 556+50

PROPOSED SIGNS		
OFFSET	STA.	DESCRIPTION
RT (NB)	550+10	CHEVRON W/REFL. PANEL ON POST
LT	554+80	WINDING ROAD 30 MPH

INSTALL GUARDRAIL				
OFFSET	STA. TO STA.	LENGTH	BEGIN E.T.	END E.T.
RT	551+00 - 559+00	700	TYPE 1	TYPE 1

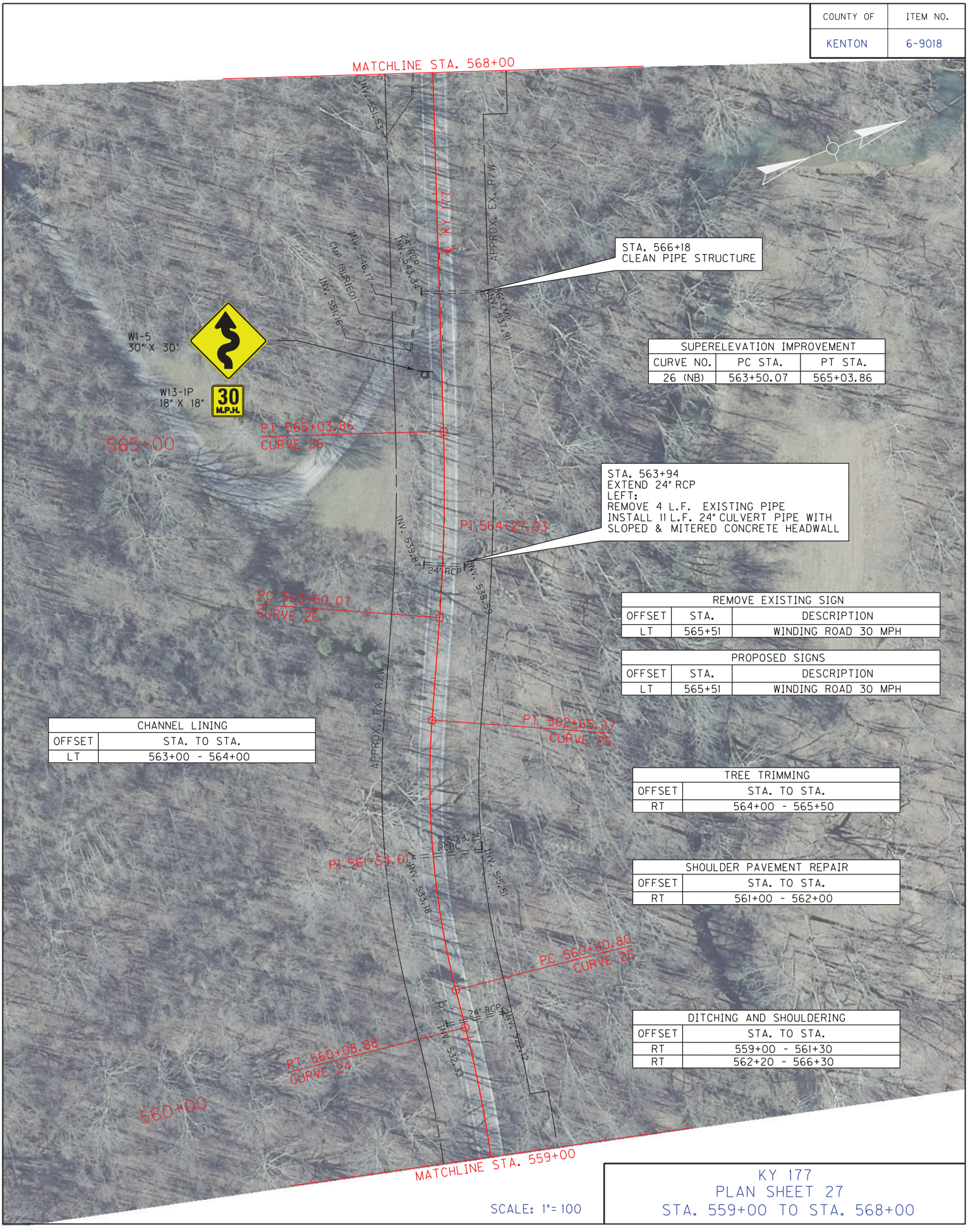
DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
LT	550+00 - 558+50

TREE TRIMMING	
OFFSET	STA. TO STA.
LT	550+00 - 550+50
LT	555+00 - 558+00

SCALE: 1"= 100

KY 177
PLAN SHEET 26
STA. 550+00 TO STA. 559+00

COUNTY OF	ITEM NO.
KENTON	6-9018



SUPERELEVATION IMPROVEMENT		
CURVE NO.	PC STA.	PT STA.
26 (NB)	563+50.07	565+03.86

REMOVE EXISTING SIGN		
OFFSET	STA.	DESCRIPTION
LT	565+51	WINDING ROAD 30 MPH

PROPOSED SIGNS		
OFFSET	STA.	DESCRIPTION
LT	565+51	WINDING ROAD 30 MPH

CHANNEL LINING	
OFFSET	STA. TO STA.
LT	563+00 - 564+00

TREE TRIMMING	
OFFSET	STA. TO STA.
RT	564+00 - 565+50

SHOULDER PAVEMENT REPAIR	
OFFSET	STA. TO STA.
RT	561+00 - 562+00

DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
RT	559+00 - 561+30
RT	562+20 - 566+30

SCALE: 1"= 100

KY 177
PLAN SHEET 27
STA. 559+00 TO STA. 568+00

COUNTY OF	ITEM NO.
KENTON	6-9018

DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
LT	571+60 - 573+50

SHOULDER PAVEMENT REPAIR	
OFFSET	STA. TO STA.
LT	571+50 - 573+50

TREE TRIMMING	
OFFSET	STA. TO STA.
LT	572+00 - 574+50
LT	576+50 - 577+00

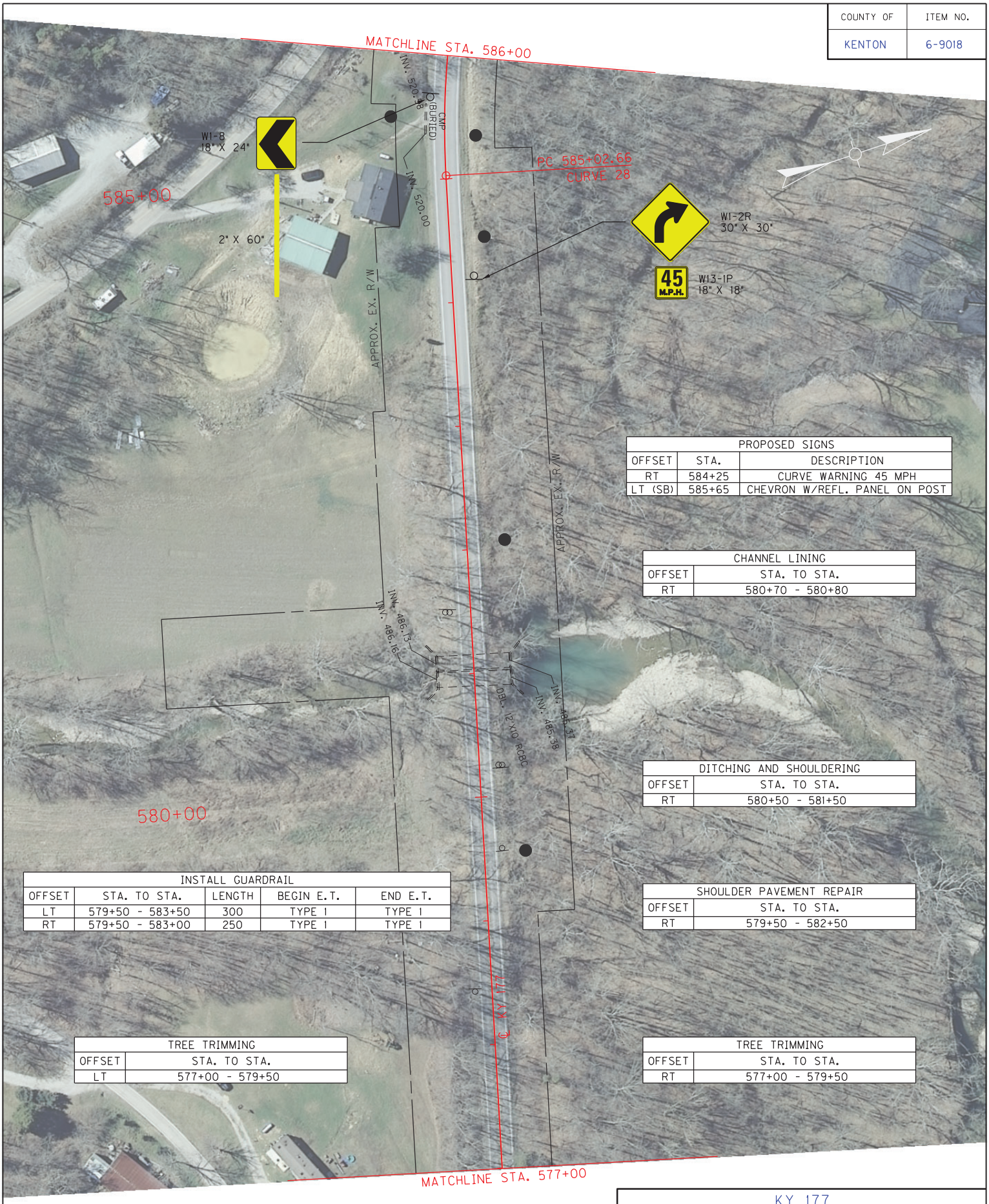
CHANNEL LINING	
OFFSET	STA. TO STA.
LT	572+00 - 573+00

TREE TRIMMING	
OFFSET	STA. TO STA.
RT	571+00 - 573+00
RT	576+50 - 577+00

SCALE: 1"= 100

KY 177
PLAN SHEET 28
STA. 568+00 TO STA. 577+00

COUNTY OF	ITEM NO.
KENTON	6-9018



PROPOSED SIGNS		
OFFSET	STA.	DESCRIPTION
RT	584+25	CURVE WARNING 45 MPH
LT (SB)	585+65	CHEVRON W/REFL. PANEL ON POST

CHANNEL LINING	
OFFSET	STA. TO STA.
RT	580+70 - 580+80

DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
RT	580+50 - 581+50

INSTALL GUARDRAIL				
OFFSET	STA. TO STA.	LENGTH	BEGIN E.T.	END E.T.
LT	579+50 - 583+50	300	TYPE 1	TYPE 1
RT	579+50 - 583+00	250	TYPE 1	TYPE 1

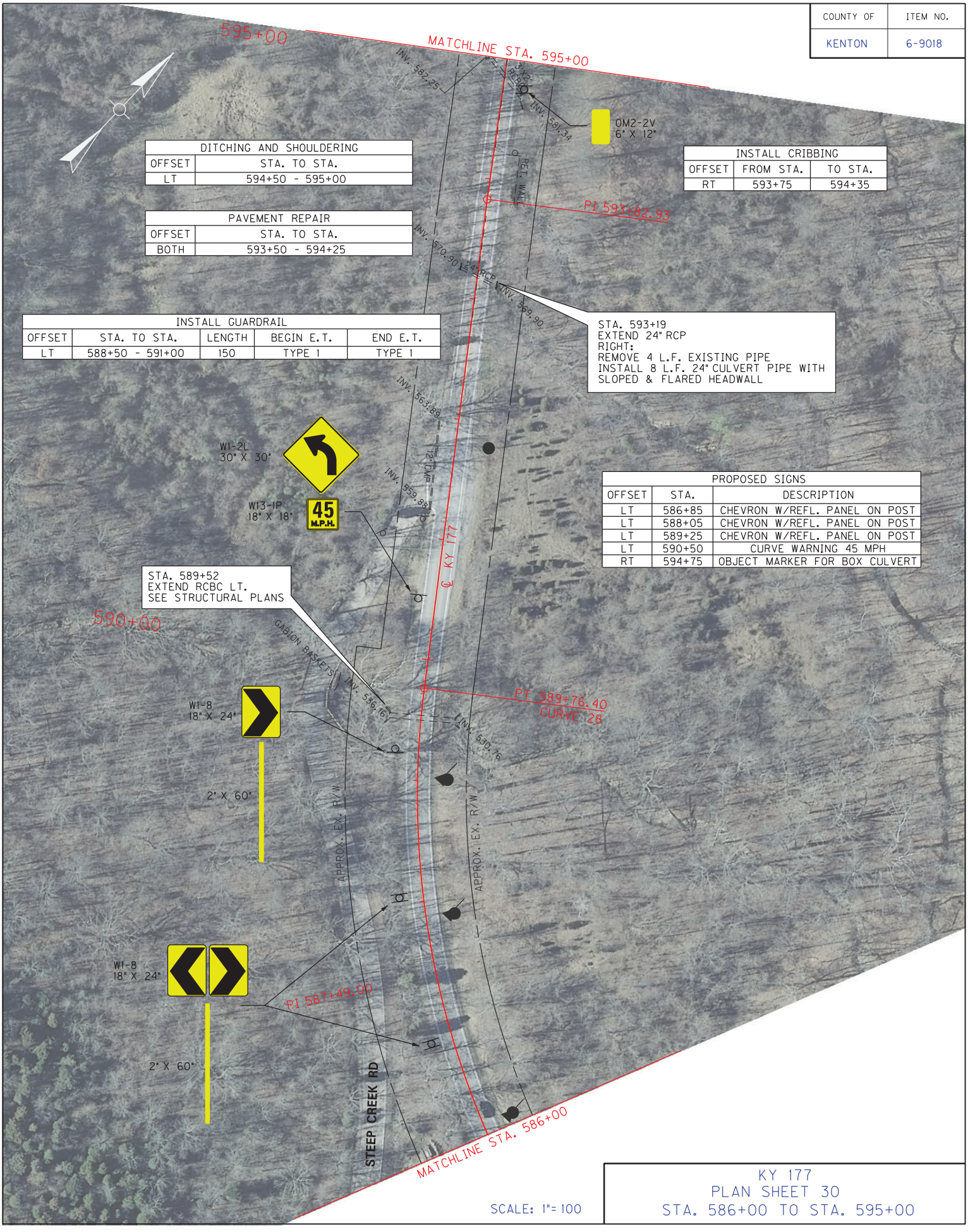
SHOULDER PAVEMENT REPAIR	
OFFSET	STA. TO STA.
RT	579+50 - 582+50

TREE TRIMMING	
OFFSET	STA. TO STA.
LT	577+00 - 579+50

TREE TRIMMING	
OFFSET	STA. TO STA.
RT	577+00 - 579+50

SCALE: 1"= 100

KY 177
PLAN SHEET 29
STA. 577+00 TO STA. 586+00



COUNTY OF	ITEM NO.
KENTON	6-9018

DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
LT	594+50 - 595+00

PAVEMENT REPAIR	
OFFSET	STA. TO STA.
BOTH	593+50 - 594+25

INSTALL CRIBBING		
OFFSET	FROM STA.	TO STA.
RT	593+75	594+35

INSTALL GUARDRAIL				
OFFSET	STA. TO STA.	LENGTH	BEGIN E.T.	END E.T.
LT	588+50 - 591+00	150	TYPE 1	TYPE 1

STA. 593+19
EXTEND 24" RCP
RIGHT:
REMOVE 4 L.F. EXISTING PIPE
INSTALL 8 L.F. 24" CULVERT PIPE WITH
SLOPED & FLARED HEADWALL

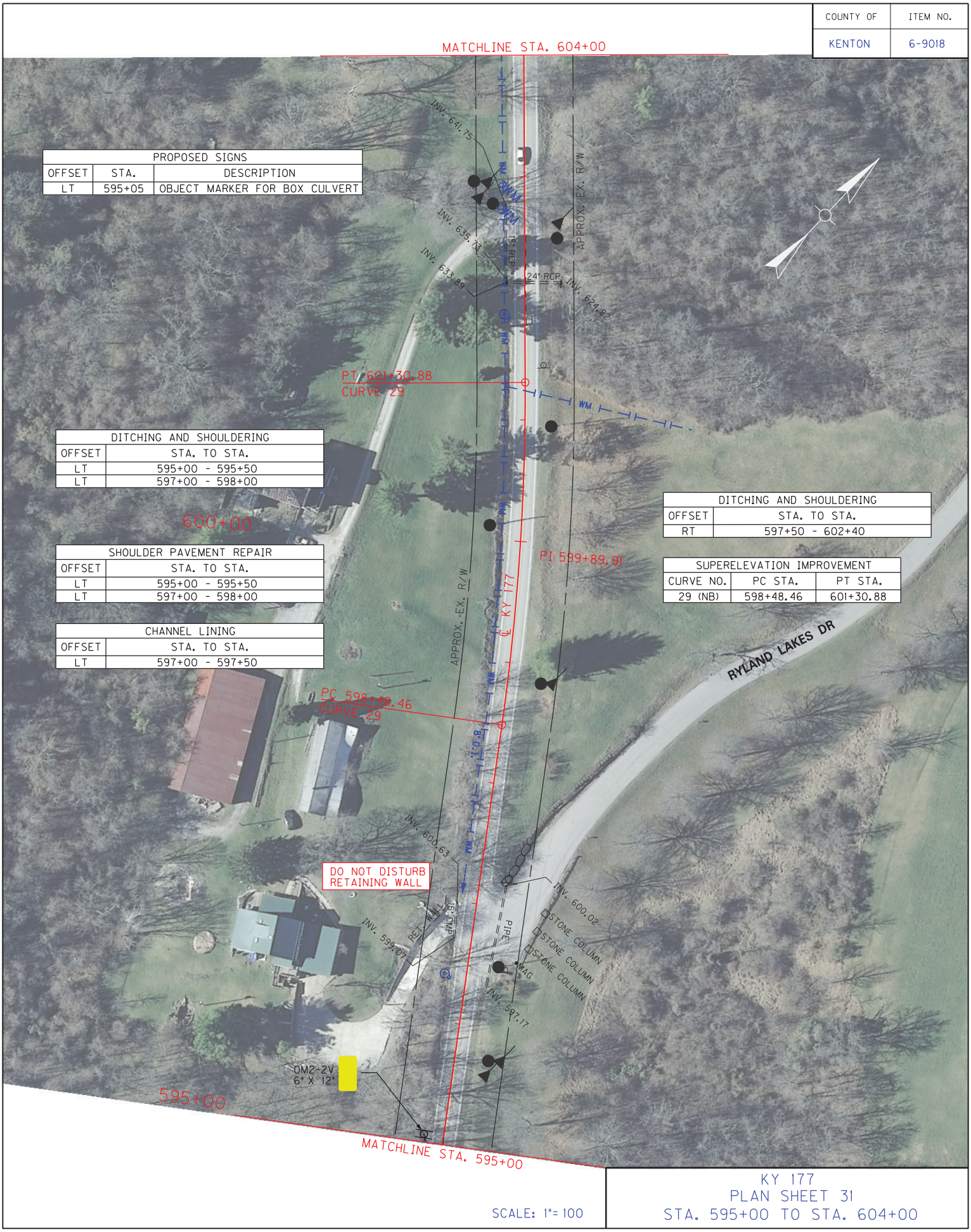
PROPOSED SIGNS		
OFFSET	STA.	DESCRIPTION
LT	586+85	CHEVRON W/REFL. PANEL ON POST
LT	588+05	CHEVRON W/REFL. PANEL ON POST
LT	589+25	CHEVRON W/REFL. PANEL ON POST
LT	590+50	CURVE WARNING 45 MPH
RT	594+75	OBJECT MARKER FOR BOX CULVERT

STA. 589+52
EXTEND RCBC LT.
SEE STRUCTURAL PLANS

SCALE: 1"= 100

KY 177
PLAN SHEET 30
STA. 586+00 TO STA. 595+00

COUNTY OF	ITEM NO.
KENTON	6-9018



PROPOSED SIGNS		
OFFSET	STA.	DESCRIPTION
LT	595+05	OBJECT MARKER FOR BOX CULVERT

DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
LT	595+00 - 595+50
LT	597+00 - 598+00

SHOULDER PAVEMENT REPAIR	
OFFSET	STA. TO STA.
LT	595+00 - 595+50
LT	597+00 - 598+00

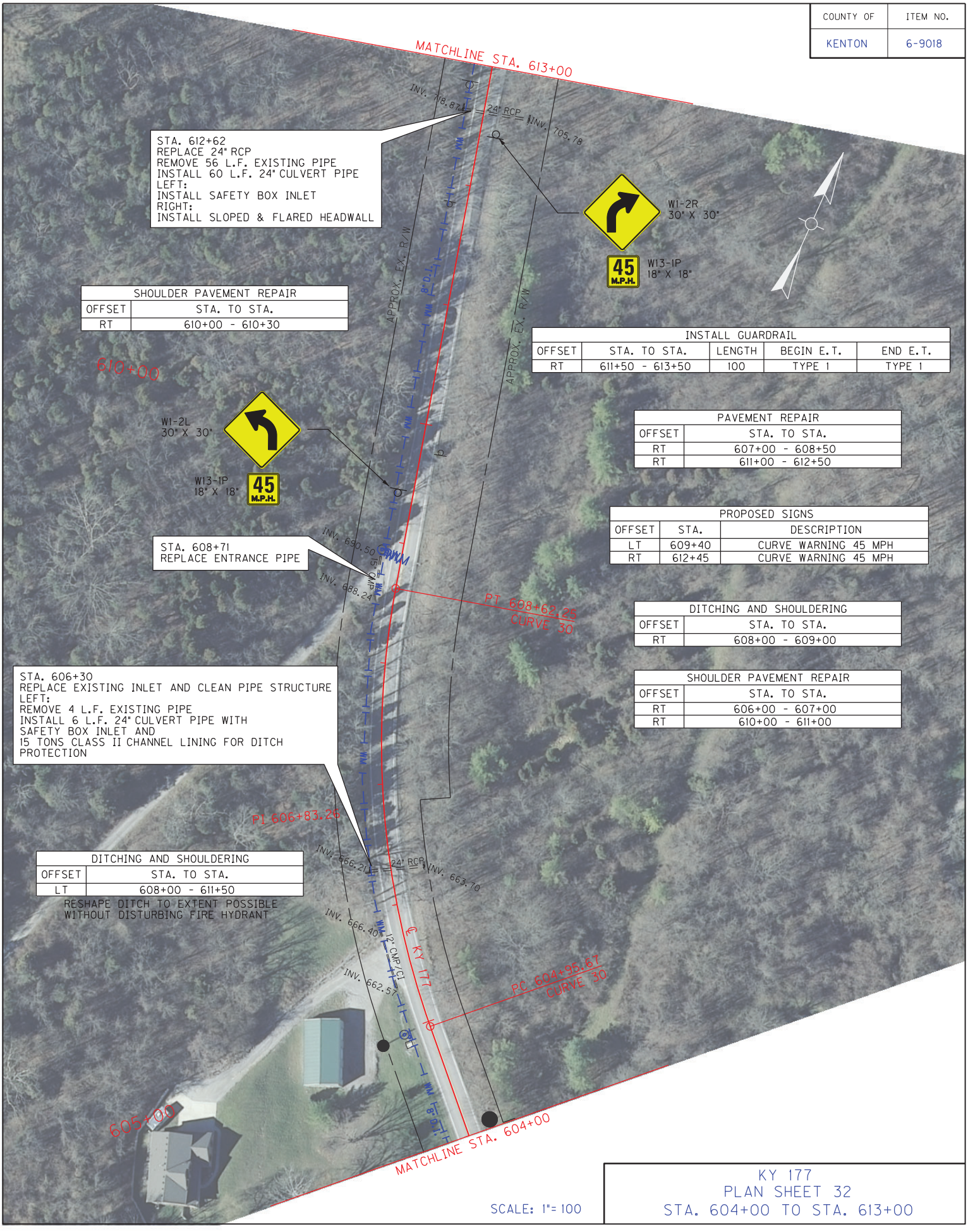
CHANNEL LINING	
OFFSET	STA. TO STA.
LT	597+00 - 597+50

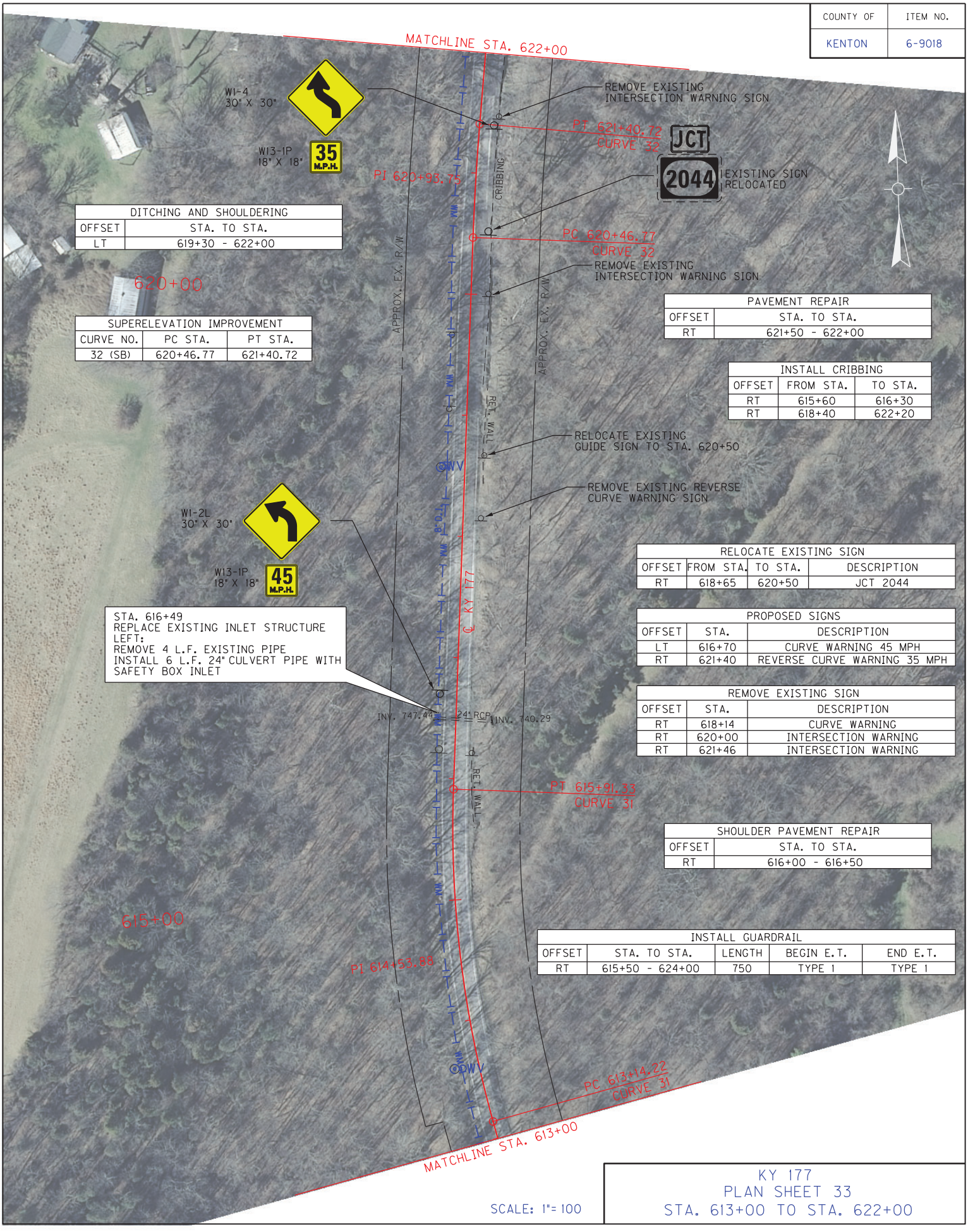
DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
RT	597+50 - 602+40

SUPERELEVATION IMPROVEMENT		
CURVE NO.	PC STA.	PT STA.
29 (NB)	598+48.46	601+30.88

SCALE: 1"= 100

KY 177
PLAN SHEET 31
STA. 595+00 TO STA. 604+00


COUNTY OF
ITEM NO.
KENTON
6-9018
MATCHLINE STA. 613+00
INV. 718.87
24" RCP
INV. 705.78
STA. 612+62
REPLACE 24" RCP
REMOVE 56 L.F. EXISTING PIPE
INSTALL 60 L.F. 24" CULVERT PIPE
LEFT:
INSTALL SAFETY BOX INLET
RIGHT:
INSTALL SLOPED & FLARED HEADWALL
W1-2R
30" X 30"
45
M.P.H.
W13-1P
18" X 18"
APPROX. EX. R/W
APPROX. EX. R/W
SHOULDER PAVEMENT REPAIR
OFFSET
STA. TO STA.
RT
610+00 - 610+30
INSTALL GUARDRAIL
OFFSET
STA. TO STA.
LENGTH
BEGIN E.T.
END E.T.
RT
611+50 - 613+50
100
TYPE 1
TYPE 1
610+00
W1-2L
30" X 30"
W13-1P
18" X 18"
45
M.P.H.
PAVEMENT REPAIR
OFFSET
STA. TO STA.
RT
607+00 - 608+50
RT
611+00 - 612+50
PROPOSED SIGNS
OFFSET
STA.
DESCRIPTION
LT
609+40
CURVE WARNING 45 MPH
RT
612+45
CURVE WARNING 45 MPH
STA. 608+71
REPLACE ENTRANCE PIPE
INV. 690.50
INV. 688.24
PT 608+62.25
CURVE 30
DITCHING AND SHOULDERING
OFFSET
STA. TO STA.
RT
608+00 - 609+00
SHOULDER PAVEMENT REPAIR
OFFSET
STA. TO STA.
RT
606+00 - 607+00
RT
610+00 - 611+00
STA. 606+30
REPLACE EXISTING INLET AND CLEAN PIPE STRUCTURE
LEFT:
REMOVE 4 L.F. EXISTING PIPE
INSTALL 6 L.F. 24" CULVERT PIPE WITH
SAFETY BOX INLET AND
15 TONS CLASS II CHANNEL LINING FOR DITCH
PROTECTION
PI 606+83.26
INV. 666.21
24" RCP
INV. 663.70
DITCHING AND SHOULDERING
OFFSET
STA. TO STA.
LT
608+00 - 611+50
RESHAPE DITCH TO EXTENT POSSIBLE
WITHOUT DISTURBING FIRE HYDRANT
INV. 666.40
12" CMP/CI
INV. 662.57
℄ KY 177
PC 604+95.67
CURVE 30
605+00
MATCHLINE STA. 604+00
SCALE: 1"= 100
KY 177
PLAN SHEET 32
STA. 604+00 TO STA. 613+00



COUNTY OF	ITEM NO.
KENTON	6-9018

DITCHING AND SHOULDERING	
OFFSET	STA. TO STA.
LT	619+30 - 622+00

SUPERELEVATION IMPROVEMENT		
CURVE NO.	PC STA.	PT STA.
32 (SB)	620+46.77	621+40.72

PAVEMENT REPAIR	
OFFSET	STA. TO STA.
RT	621+50 - 622+00

INSTALL CRIBBING		
OFFSET	FROM STA.	TO STA.
RT	615+60	616+30
RT	618+40	622+20

RELOCATE EXISTING SIGN			
OFFSET	FROM STA.	TO STA.	DESCRIPTION
RT	618+65	620+50	JCT 2044

PROPOSED SIGNS		
OFFSET	STA.	DESCRIPTION
LT	616+70	CURVE WARNING 45 MPH
RT	621+40	REVERSE CURVE WARNING 35 MPH

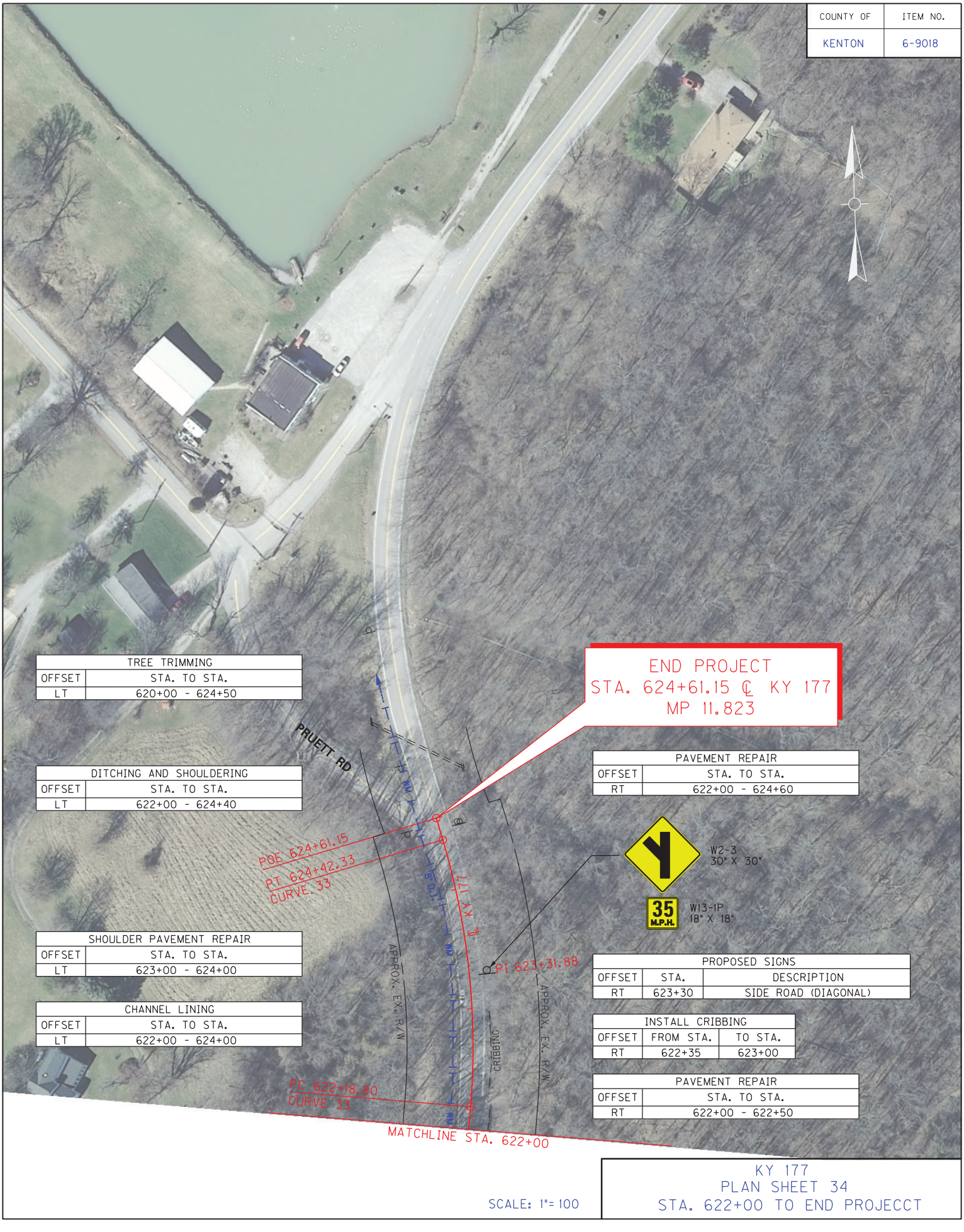
REMOVE EXISTING SIGN		
OFFSET	STA.	DESCRIPTION
RT	618+14	CURVE WARNING
RT	620+00	INTERSECTION WARNING
RT	621+46	INTERSECTION WARNING

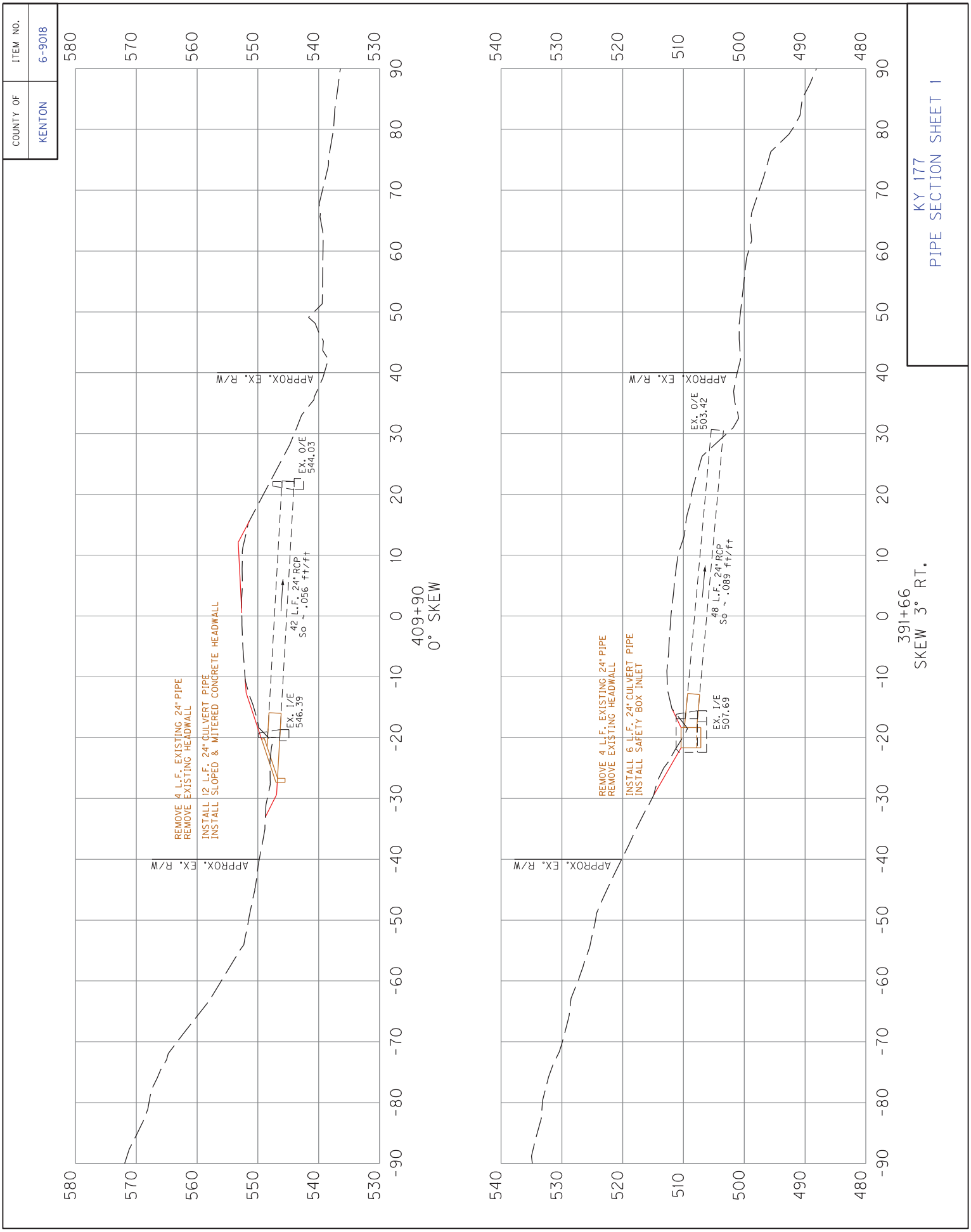
SHOULDER PAVEMENT REPAIR	
OFFSET	STA. TO STA.
RT	616+00 - 616+50

INSTALL GUARDRAIL				
OFFSET	STA. TO STA.	LENGTH	BEGIN E.T.	END E.T.
RT	615+50 - 624+00	750	TYPE 1	TYPE 1

SCALE: 1"= 100

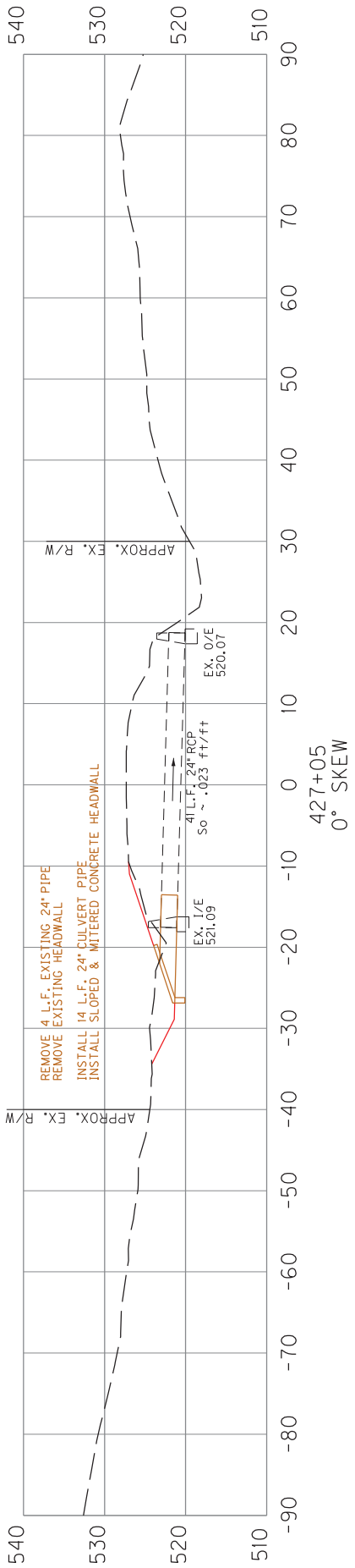
KY 177
PLAN SHEET 33
STA. 613+00 TO STA. 622+00

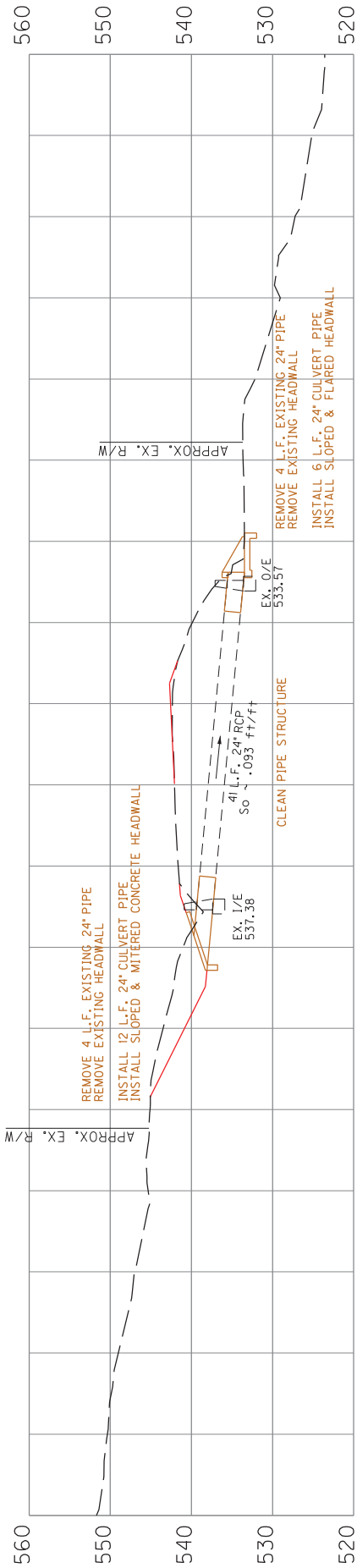

COUNTY OF
ITEM NO.
KENTON
6-9018
TREE TRIMMING
OFFSET
STA. TO STA.
LT
620+00 - 624+50
DITCHING AND SHOULDERING
OFFSET
STA. TO STA.
LT
622+00 - 624+40
SHOULDER PAVEMENT REPAIR
OFFSET
STA. TO STA.
LT
623+00 - 624+00
CHANNEL LINING
OFFSET
STA. TO STA.
LT
622+00 - 624+00
END PROJECT
STA. 624+61.15 ℄ KY 177
MP 11.823
PAVEMENT REPAIR
OFFSET
STA. TO STA.
RT
622+00 - 624+60
PRUETT RD
POE 624+61.15
PT 624+42.33
CURVE 33
W2-3
30" X 30"
35
M.P.H.
W13-1P
18" X 18"
PROPOSED SIGNS
OFFSET
STA.
DESCRIPTION
RT
623+30
SIDE ROAD (DIAGONAL)
PT 623+31.88
APPROX. EX. R/W
APPROX. EX. R/W
CRIBBING
INSTALL CRIBBING
OFFSET
FROM STA.
TO STA.
RT
622+35
623+00
PAVEMENT REPAIR
OFFSET
STA. TO STA.
RT
622+00 - 622+50
PC 622+18.80
CURVE 33
MATCHLINE STA. 622+00
SCALE: 1"= 100
KY 177
PLAN SHEET 34
STA. 622+00 TO END PROJECCT


COUNTY OF
KENTON
ITEM NO.
6-9018
KY 177
PIPE SECTION SHEET 1
409+90
0° SKEW
391+66
SKEW 3° RT.
APPROX. EX. R/W
REMOVE 4 L.F. EXISTING 24" PIPE
REMOVE EXISTING HEADWALL
INSTALL 12 L.F. 24" CULVERT PIPE
INSTALL SLOPED & MITERED CONCRETE HEADWALL
42 L.F. 24" RCP
So ~ .056 ft/ft
EX. I/E
546.39
EX. O/E
544.03
REMOVE 4 L.F. EXISTING 24" PIPE
REMOVE EXISTING HEADWALL
INSTALL 6 L.F. 24" CULVERT PIPE
INSTALL SAFETY BOX INLET
48 L.F. 24" RCP
So ~ .089 ft/ft
EX. I/E
507.69
EX. O/E
503.42

COUNTY OF	ITEM NO.
KENTON	6-9018

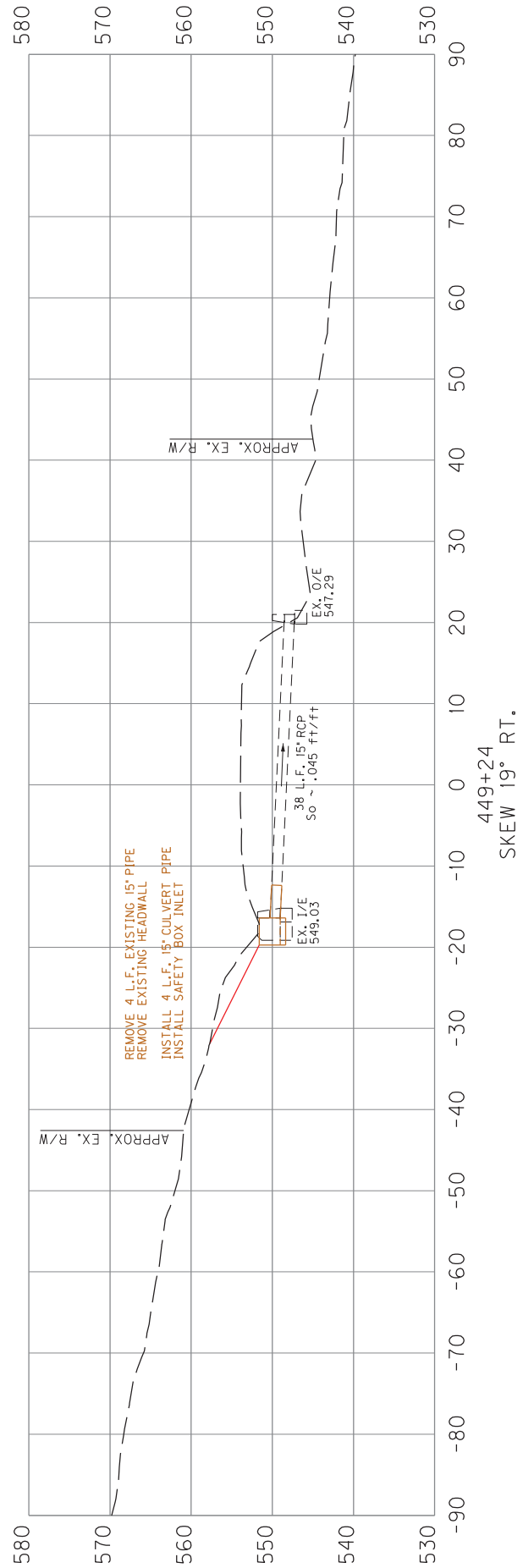
KY 177
PIPE SECTION SHEET 2

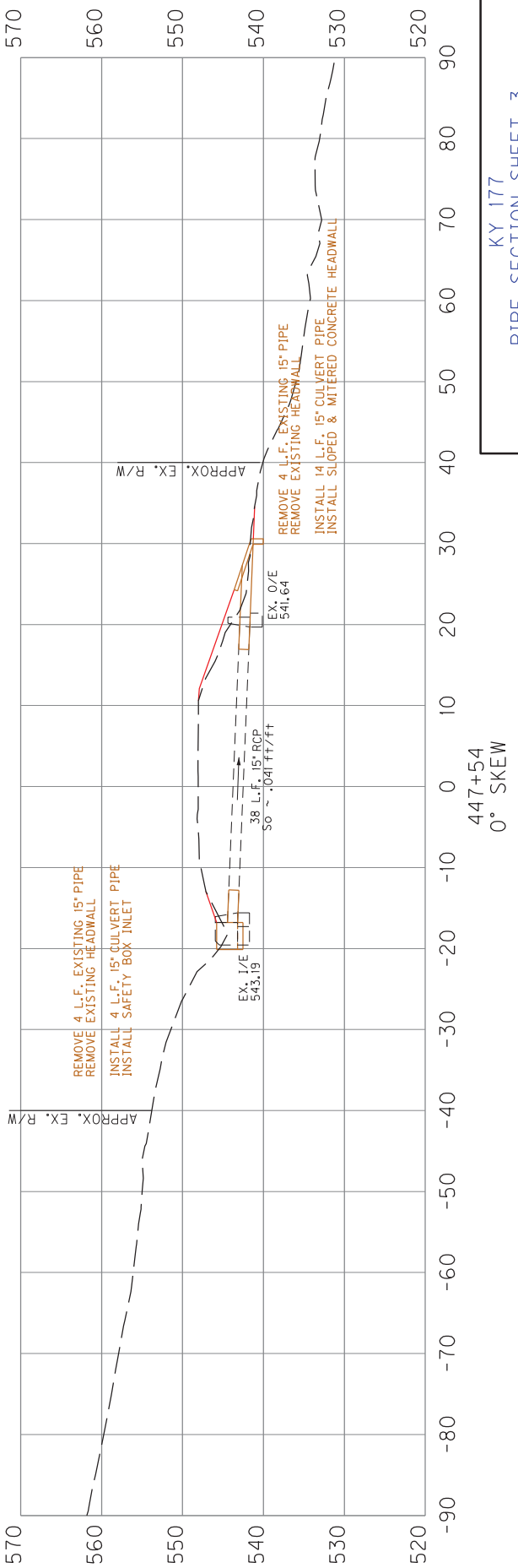


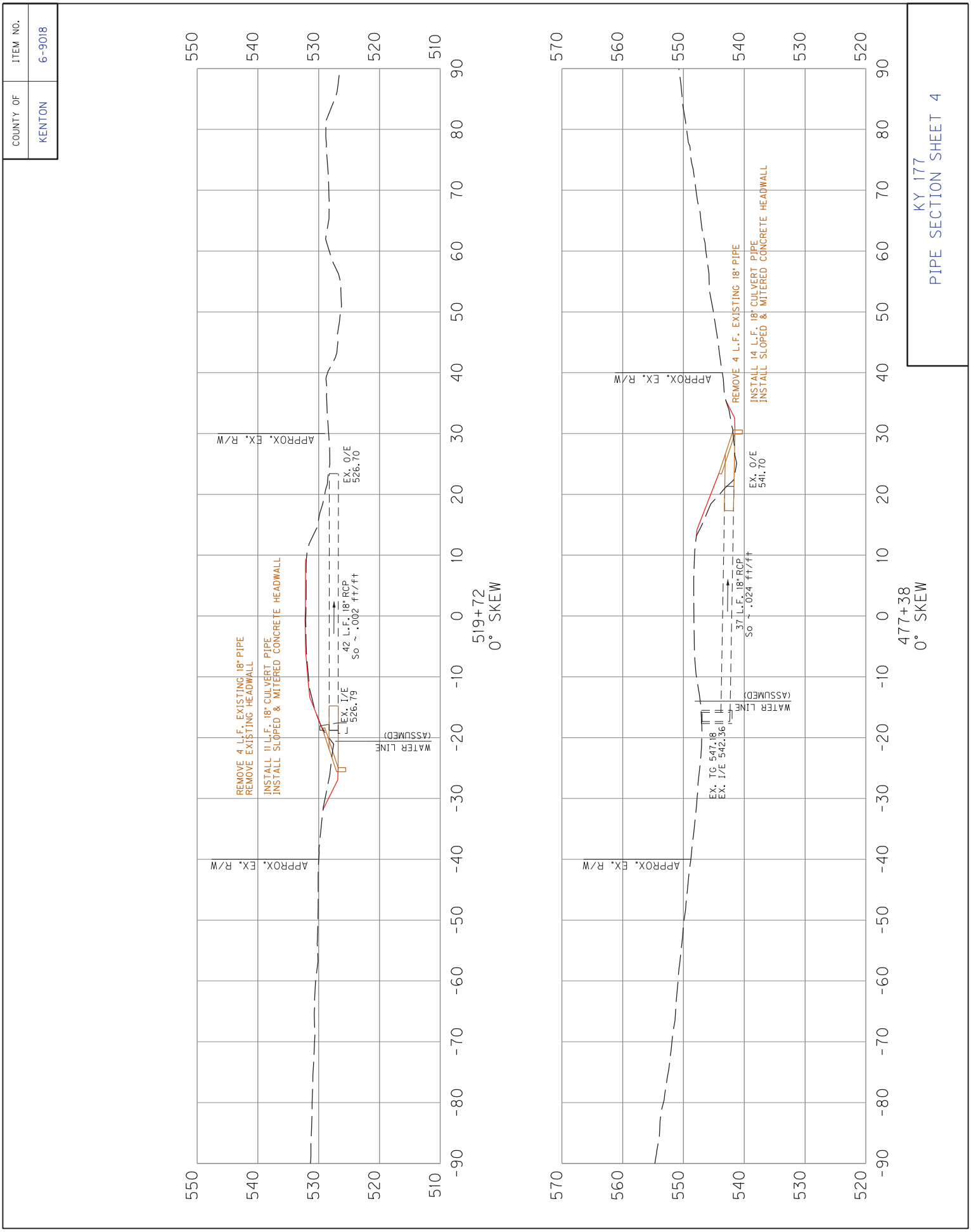


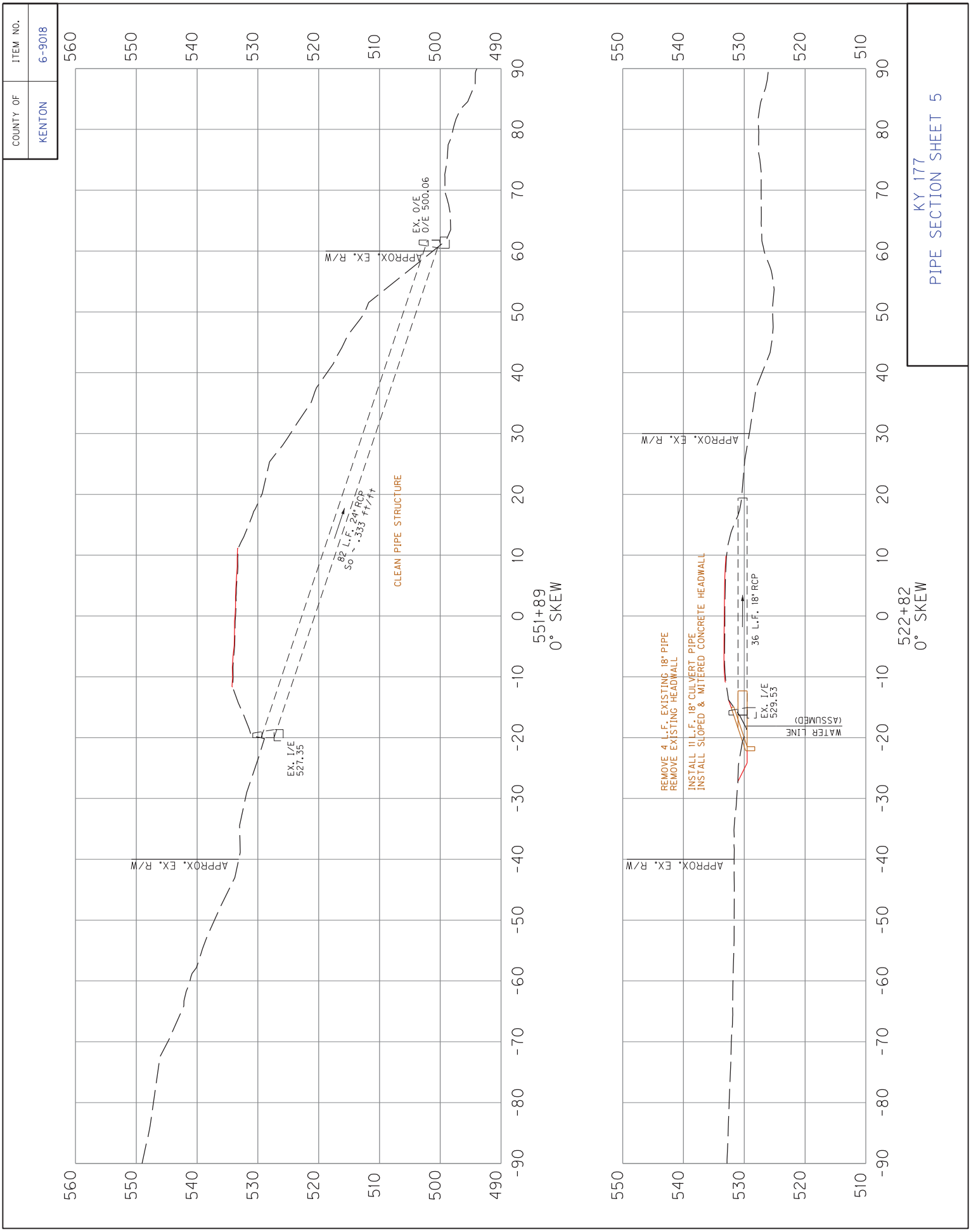
COUNTY OF	ITEM NO.
KENTON	6-9018

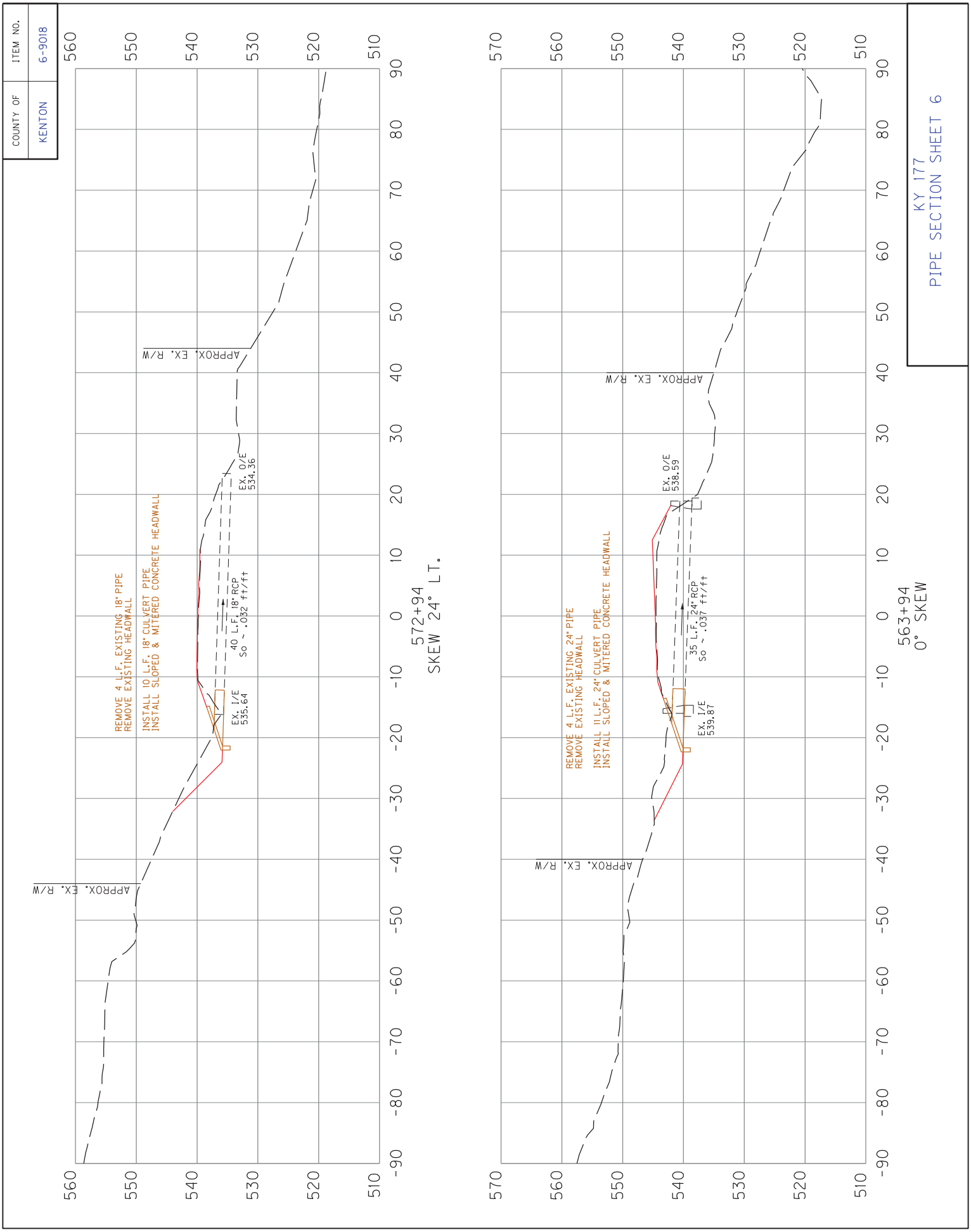
KY 177
PIPE SECTION SHEET 3

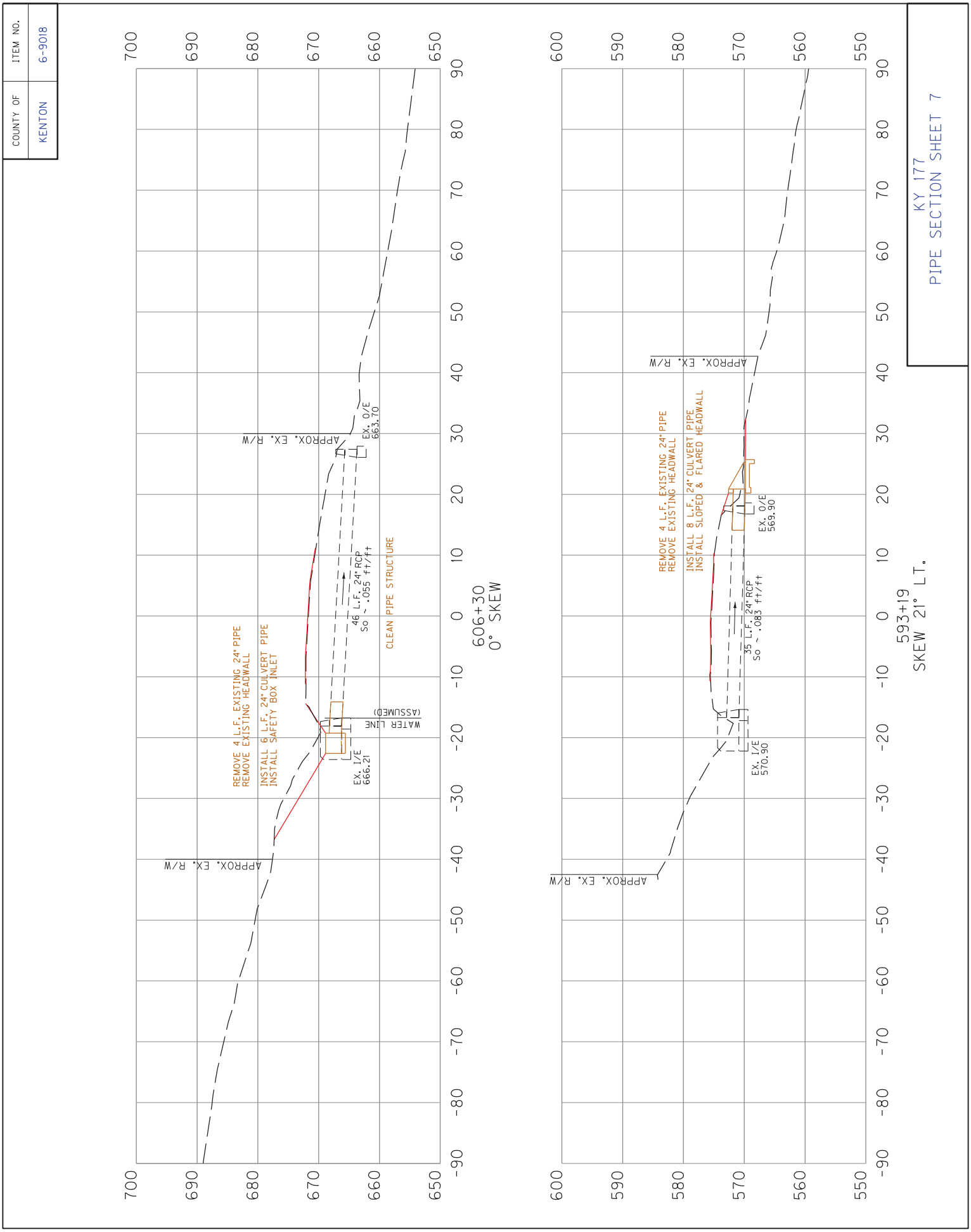


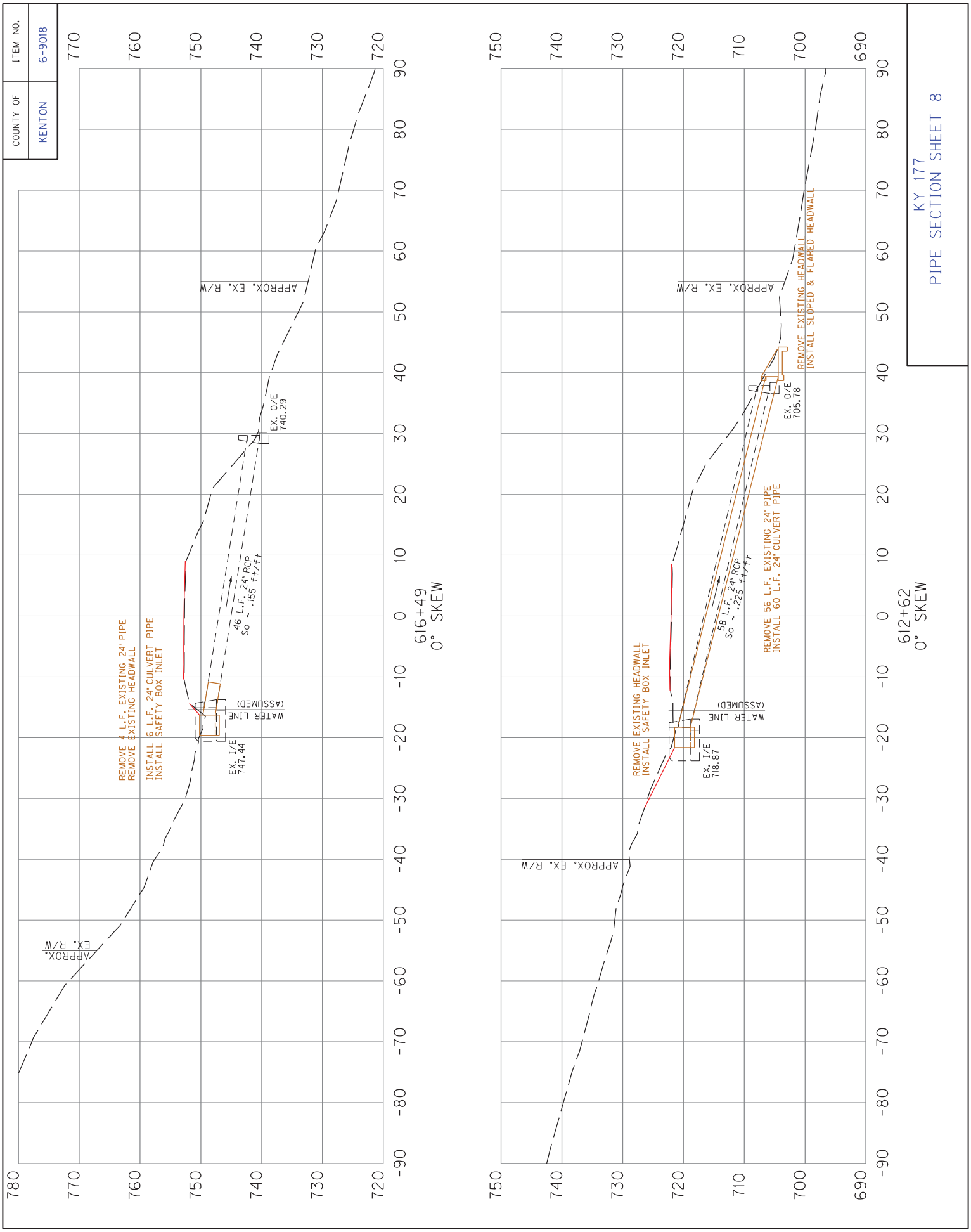



COUNTY OF
KENTON
ITEM NO.
6-9018
KY 177
PIPE SECTION SHEET 4
519+72
0° SKEW
REMOVE 4 L.F. EXISTING 18" PIPE
REMOVE EXISTING HEADWALL
INSTALL 11 L.F. 18" CULVERT PIPE
INSTALL SLOPED & MITERED CONCRETE HEADWALL
42 L.F. 18" RCP
So ~ .002 ft/ft
EX. I/E
526.79
EX. O/E
526.70
WATER LINE
(ASSUMED)
APPROX. EX. R/W
477+38
0° SKEW
REMOVE 4 L.F. EXISTING 18" PIPE
INSTALL 14 L.F. 18" CULVERT PIPE
INSTALL SLOPED & MITERED CONCRETE HEADWALL
37 L.F. 18" RCP
So ~ .024 ft/ft
EX. O/E
541.70
EX. TG 547.18
EX. I/E 542.36
WATER LINE
(ASSUMED)
APPROX. EX. R/W

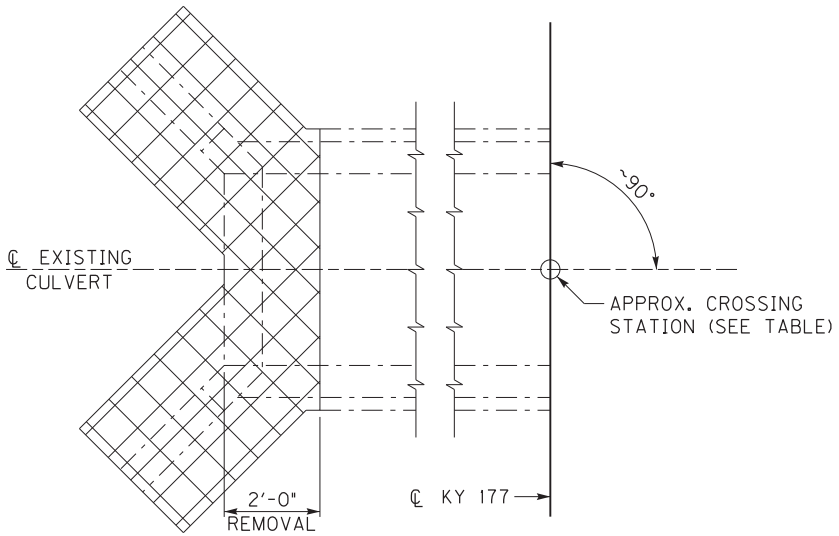

COUNTY OF
KENTON
ITEM NO.
6-9018
KY 177
PIPE SECTION SHEET 5
551+89
0° SKEW
APPROX. EX. R/W
EX. O/E
O/E 500.06
82 L.F. 24" RCP
So = .333 ft/ft
CLEAN PIPE STRUCTURE
EX. I/E
527.35
APPROX. EX. R/W
522+82
0° SKEW
APPROX. EX. R/W
REMOVE 4 L.F. EXISTING 18" PIPE
REMOVE EXISTING HEADWALL
INSTALL 11 L.F. 18" CULVERT PIPE
INSTALL SLOPED & MITERED CONCRETE HEADWALL
36 L.F. 18" RCP
EX. I/E
529.53
WATER LINE
(ASSUMED)
APPROX. EX. R/W


COUNTY OF
KENTON
ITEM NO.
6-9018
KY 177
PIPE SECTION SHEET 6
572+94
SKEW 24° LT.
563+94
0° SKEW
APPROX. EX. R/W
REMOVE 4 L.F. EXISTING 18" PIPE
REMOVE EXISTING HEADWALL
INSTALL 10 L.F. 18" CULVERT PIPE
INSTALL SLOPED & MITERED CONCRETE HEADWALL
40 L.F. 18" RCP
So ~ .032 ft/ft
EX. I/E
535.64
EX. O/E
534.36
REMOVE 4 L.F. EXISTING 24" PIPE
REMOVE EXISTING HEADWALL
INSTALL 11 L.F. 24" CULVERT PIPE
INSTALL SLOPED & MITERED CONCRETE HEADWALL
35 L.F. 24" RCP
So ~ .037 ft/ft
EX. I/E
539.87
EX. O/E
538.59


COUNTY OF
KENTON
ITEM NO.
6-9018
KY 177
PIPE SECTION SHEET 7
606+30
0° SKEW
REMOVE 4 L.F. EXISTING 24" PIPE
REMOVE EXISTING HEADWALL
INSTALL 6 L.F. 24" CULVERT PIPE
INSTALL SAFETY BOX INLET
CLEAN PIPE STRUCTURE
46 L.F. 24" RCP
So ~ .055 ft/ft
EX. I/E
666.21
EX. O/E
663.70
WATER LINE
(ASSUMED)
APPROX. EX. R/W
APPROX. EX. R/W
593+19
SKEW 21° LT.
REMOVE 4 L.F. EXISTING 24" PIPE
REMOVE EXISTING HEADWALL
INSTALL 8 L.F. 24" CULVERT PIPE
INSTALL SLOPED & FLARED HEADWALL
35 L.F. 24" RCP
So ~ .083 ft/ft
EX. I/E
570.90
EX. O/E
569.90
APPROX. EX. R/W
APPROX. EX. R/W


COUNTY OF
KENTON
ITEM NO.
6-9018
KY 177
PIPE SECTION SHEET 8
616+49
0° SKEW
612+62
0° SKEW
REMOVE 4 L.F. EXISTING 24" PIPE
REMOVE EXISTING HEADWALL
INSTALL 6 L.F. 24" CULVERT PIPE
INSTALL SAFETY BOX INLET
46 L.F. 24" RCP
So ~ .155 ft/ft
EX. I/E
747.44
EX. O/E
740.29
WATER LINE
(ASSUMED)
APPROX. EX. R/W
REMOVE EXISTING HEADWALL
INSTALL SAFETY BOX INLET
58 L.F. 24" RCP
So ~ .225 ft/ft
REMOVE 56 L.F. EXISTING 24" PIPE
INSTALL 60 L.F. 24" CULVERT PIPE
REMOVE EXISTING HEADWALL
INSTALL SLOPED & FLARED HEADWALL
EX. I/E
718.87
EX. O/E
705.78

COUNTY OF	ITEM NO.
KENTON	06-9018.00



SINGLE BARREL, STRAIGHT

APPROXIMATE LIMITS OF REMOVAL —

DEMOLITION OF EXISTING CULVERT

GENERAL NOTES

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

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

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

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

CONCRETE: CLASS "A" SHALL BE USED THROUGHOUT.

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

REINFORCEMENT: DIMENSIONS SHOWN FROM THE FACE OF CONCRETE TO BARS ARE TO CENTER OF BARS UNLESS OTHERWISE SHOWN. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS. CLEAR DISTANCE TO FACE OF CONCRETE IS 2" UNLESS OTHERWISE NOTED. BARS DESIGNATED BY SUFFIX (E) SHALL BE EPOXY COATED IN ACCORDANCE WITH SECTION 811.10 OF THE SPECS. BARS DESIGNATED BY SUFFIX (S) SHALL BE CONSIDERED STIRRUPS FOR THE PURPOSE OF BEND DIAMETERS. DUE TO THE GENERIC NATURE OF SOME EXTENSIONS AND LIMITED DETAILS SHOWN HEREIN, FIELD CUT BARS TO FACILITATE PLACEMENT WHENEVER REQUIRED. THIS INCLUDES, BUT IS NOT LIMITED TO, TRANSVERSE AND LONGITUDINAL BARREL BARS NEAR SKEWED ENDS AND VERTICAL & HORIZONTAL WINGWALL BARS.

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

CONSTRUCTION NOTE: REMOVE PORTIONS OF THE EXISTING CULVERT TO THE LIMITS SHOWN HEREIN. EXISTING REINFORCING STEEL SHALL BE THOROUGHLY CLEANED OF CONCRETE AND STRAIGHTENED FOR USE TO BOND THE NEW CONCRETE WITH A MINIMUM PROJECTION OF 1'-9". AS AN ALTERNATE, CENTER 3'-0" LONG, #6 DOWEL BARS @ 12" SPACING INTO THE EXISTING SLABS AND WALLS, EMBEDDED 1'-6" INTO EXISTING CULVERT CONCRETE AND SET WITH AN ADHESIVE ANCHORAGE SYSTEM TO PROVIDE A PULLOUT STRENGTH OF EQUAL OR GREATER CAPACITY THAN THE CORRESPONDING REINFORCING STEEL. THE COST OF THE ALTERNATE SHALL BE INCIDENTAL TO THE UNIT PRICE FOR CLASS "A" CONCRETE.

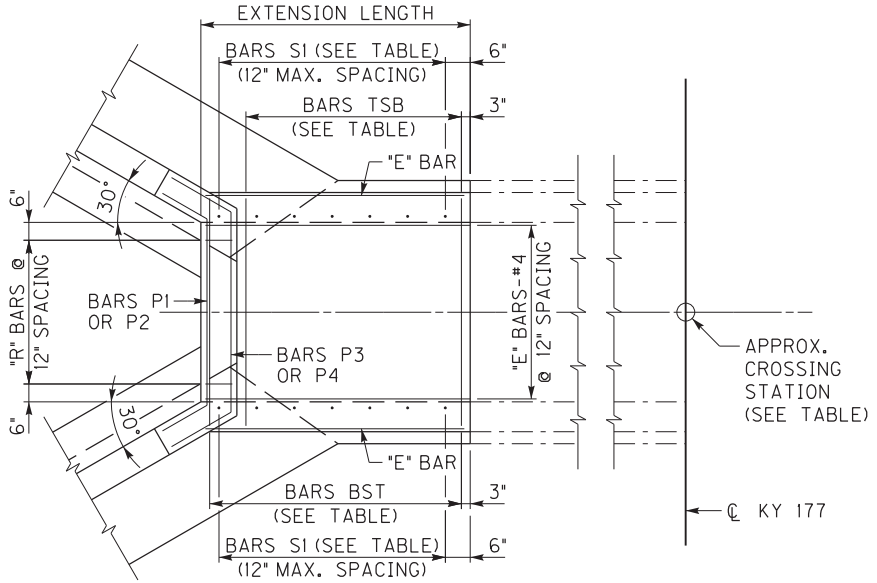
COMPLETION OF STRUCTURE: THE CONTRACTOR IS REQUIRED TO COMPLETE THE STRUCTURE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. MATERIAL, LABOR OR CONSTRUCTION OPERATIONS, NOT OTHERWISE SPECIFIED, ARE TO BE INCLUDED IN THE BID ITEM MOST APPROPRIATE TO THE WORK INVOLVED. THIS MAY INCLUDE COFFERDAMS, SHORING,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

CULVERTS WITH YIELDING FOUNDATIONS: DURING CONSTRUCTION OF THE YIELDING FOUNDATION, ANY POOR SOILS ENCOUNTERED SHOULD BE UNDERCUT TO A MINIMUM OF TWO (2) FEET BELOW THE BOTTOM SLAB OF THE CULVERT OR WINGWALL FOOTINGS, AS APPLICABLE. THE RESULTING EXCAVATED AREAS SHOULD THEN BE BACKFILLED WITH "GRANULAR EMBANKMENT", NON-ERODIBLE ONLY, MEETING THE MATERIAL REQUIREMENTS OF SECTION 805 IN THE CURRENT EDITION OF THE KENTUCKY STANDARD SPECIFICATIONS.

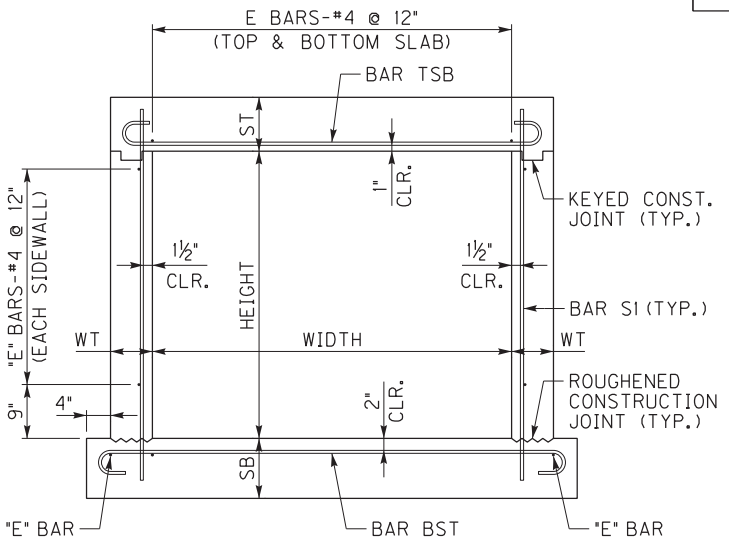
CULVERTS WITH UNYIELDING FOUNDATIONS: IF SOLID ROCK IS NOT ENCOUNTERED AT THE DESIGN FOOTING ELEVATION, SOIL MUST BE EXCAVATED AND BACKFILLED WITH "GRANULAR EMBANKMENT", NON-ERODIBLE ONLY, MEETING THE MATERIAL REQUIREMENTS OF SECTION 805 IN THE CURRENT EDITION OF THE KENTUCKY STANDARD SPECIFICATIONS WITH THE EXCEPTION THAT THE MAX. SIZE IS 4 INCHES.

KY 177 CULVERT EXTENSION
DEMOLITION LIMITS & GENERAL NOTES
SHEET 1 OF 5

COUNTY OF	ITEM NO.
KENTON	06-9018.00



PLAN – PROPOSED EXTENSION, STRAIGHT



TYPICAL BARREL SECTION

TABLE NOTE:
EXISTING DATA SHOWN IS APPROXIMATE ONLY. CONTRACTOR TO CONFIRM EXISTING CONDITIONS AND MAKE ADJUSTMENTS BEFORE ORDERING REINFORCING.

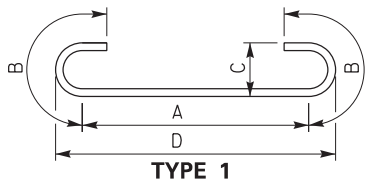
R.C.B.C. EXTENSION DATA TABLE

EXISTING DATA			DIMENSIONS					"BST" – TYPE 1, #5 AT 6" SPA.					
STATION	WIDTH	HEIGHT	EXTENSION LENGTH	EXT. END	ST (IN)	SB (IN)	WT (IN)	NO.	LENGTH	A	B	C	D
589+52	4'-0"	4'-0"	7'-0"	INLET	8	9	10	14	7'-3"	5'-7"	0'-10"	0'-5"	6'-0"

R.C.B.C. EXTENSION DATA TABLE CON'T

EXISTING DATA			"TSB" – TYPE 1, #5 AT 6" SPA.						"S1"			"E"–#4	
STATION	WIDTH	HEIGHT	NO.	LENGTH	A	B	C	D	NO.	SIZE	LENGTH	NO.	LENGTH
589+52	4'-0"	4'-0"	12	6'-7"	4'-11"	0'-10"	0'-5"	5'-4"	14	#4	5'-0"	20	6'-10"

REBAR NOTES:
BARS "S1" & "E" ARE STRAIGHT BARS. THE TOTAL BAR NUMBER LISTED IN THE TABLE IS THE TOTAL NUMBER REQUIRED AT EACH STATION.



TYPE 1

KY 177 CULVERT EXTENSION
SINGLE BARREL EXTENSION DETAILS
SHEET 2 OF 5

KENTON COUNTY
121GR19T010-HSIP & FD05
Contract ID: 194215
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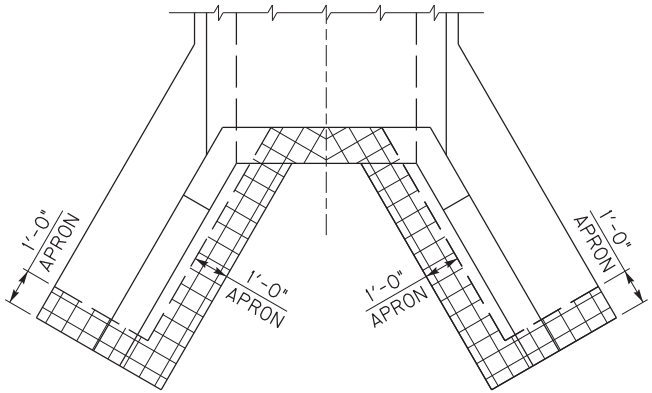
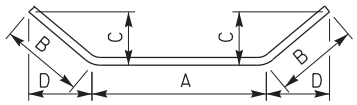
COUNTY OF	ITEM NO.
KENTON	06-9018.00

REINFORCED CONCRETE BOX CULVERT PARAPET TABLE

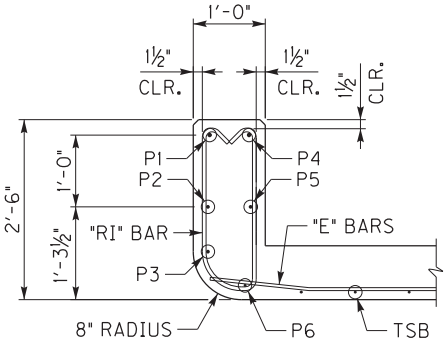
EXISTING DATA			"P1"–#6 & "P2"–#5 (TYPE 6)							"P3"–#6 & "P4"–#5 (TYPE 6)							"RI"
STATION	OPENING	EXT. END	NUMBER P1	NUMBER P2	LENGTH	A	B	C	D	NUMBER P3	NUMBER P4	LENGTH	A	B	C	D	NO.
589+52	4'x4'	INLET	1	2	7'-2"	4'-3"	1'-5½"	1'-3¼"	0'-8¾"	1	2	8'-3"	4'-5"	1'-11"	1'-8"	0'-11½"	4



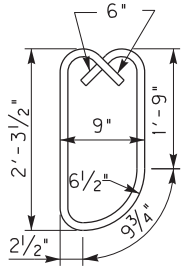
PLAN – STRAIGHT



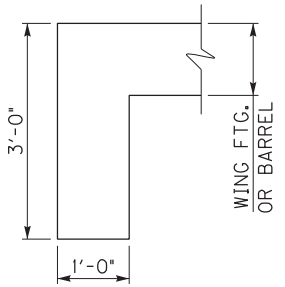
TYPE 6



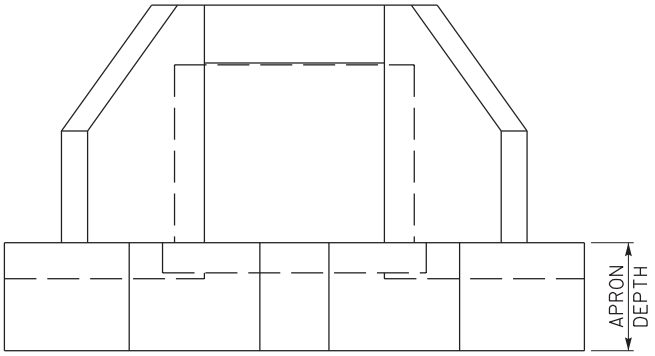
INLET PARAPET DETAIL



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



SINGLE BARREL
SECTION THRU APRON



END ELEVATION – STRAIGHT

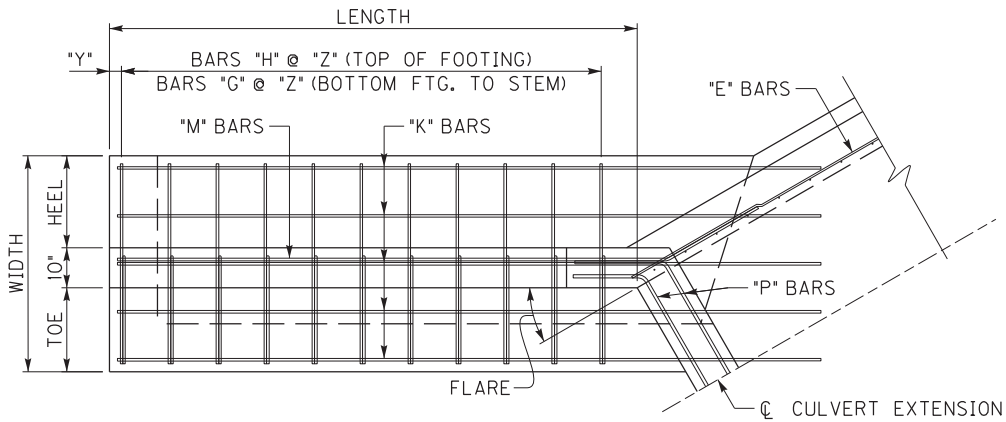
LIMITS OF APRON —

LIMITS OF APRON CONSTRUCTION

KY 177 CULVERT EXTENSION
APRON & PARAPET DETAILS
SHEET 3 OF 5

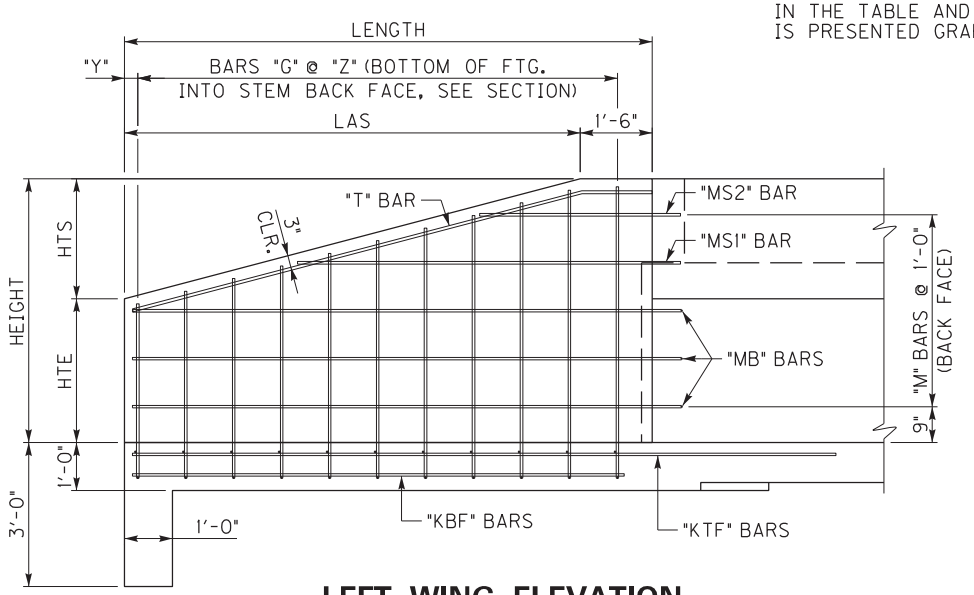
KENTON COUNTY
121GR19T010-HSIP & FD05
Contract ID: 194215
Page 205 of 300

COUNTY OF	ITEM NO.
KENTON	06-9018.00



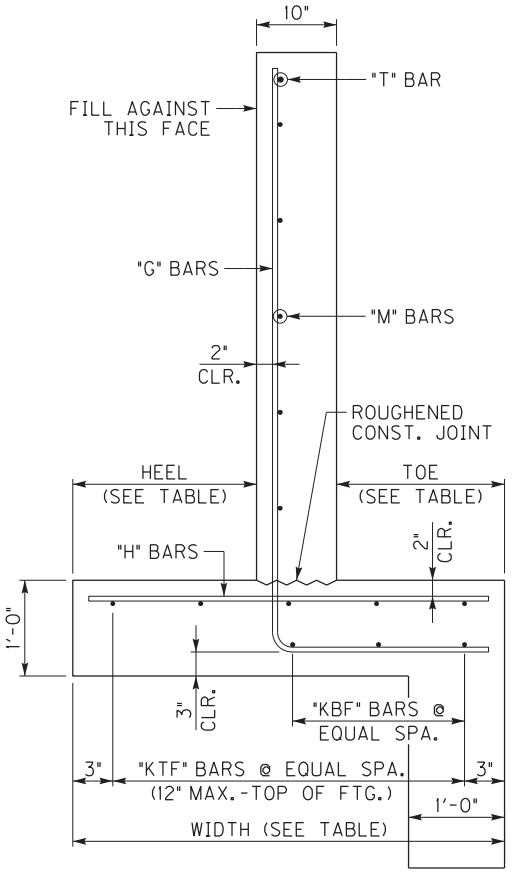
LEFT WING PLAN

NOTE:
WING DETAILS SHOWN ARE A GRAPHICAL REPRESENTATION ONLY AND NOT TO SCALE. THE NUMBER OF BARS REQUIRED IS SHOWN IN THE TABLE AND MAY DIFFER FROM WHAT IS PRESENTED GRAPHICALLY.



LEFT WING ELEVATION

(LEFT WING SHOWN; RIGHT WING SIMILAR, BUT OPPOSITE HAND)



WING SECTION

NOTE:
FOR WING DIMENSION & REINFORCING VARIABLES, SEE NEXT SHEET.

KY 177 CULVERT EXTENSION
WINGWALL SCHEMATIC
SHEET 4 OF 5

COUNTY OF	ITEM NO.
KENTON	06-9018.00

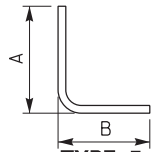
REINFORCED CONCRETE BOX CULVERT WINGWALL TABLE

GENERAL DATA				DIMENSIONS								"G" – TYPE 5, #4						"KBF"–#4		"KTF"–#4	
STATION	EXT. END	FLARE	NO.	LENGTH	LAS	WIDTH	HEEL	TOE	HEIGHT	HTE	HTS	NO.	"Y"	"Z"	LENGTH	A	B	NO.	LENGTH	NO.	LENGTH
589+52	INLET	30°	2	8'-0"	6'-6"	3'-6"	1'-6"	1'-2"	6'-6"	3'-0"	3'-6"	16	3"	12"	8'-9"	7'-1"	1'-8"	4	8'-6"	8	10'-9"

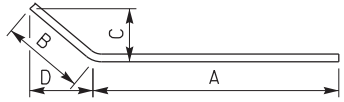
REINFORCED CONCRETE BOX CULVERT WINGWALL TABLE CON'T

STATION	EXT. END	"H"–#4				"MB" – TYPE 8, #4						"MS1"–#4		"MS2"–#4		"T" – TYPE 8, #6					
		NO.	"Y"	"Z"	LENGTH	NO.	LENGTH	A	B	C	D	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	A	B	C	D
589+52	INLET	16	3"	12"	3'-2"	8	10'-7"	8'-5"	2'-2"	1'-1"	1'-10½"	2	4'-11"	2	3'-1"	2	9'-3"	7'-3"	2'-0"	0'-11½"	1'-9"

REBAR NOTES:
BARS "KBF", "KTF", "H", "MS1" & "MS2" ARE STRAIGHT BARS. THE "G" BAR STEM LEG LENGTH IS GIVEN AT THE TALLEST POINT FOR THE SLOPING WING AND SHALL BE FIELD CUT TO FACILITATE CONCRETE PLACEMENT. SOME "KTF" & "MB" BARS ALSO REQUIRE A FIELD CUT TO FACILITATE PLACEMENT OF CONCRETE. ALL FIELD CUT BARS SHALL MAINTAIN A 2" MIN. CLEARANCE FROM THE CONCRETE FACE. THE BAR NUMBER TOTAL LISTED IN THE TABLE IS THE TOTAL NUMBER REQUIRED AT EACH STATION.



TYPE 5



TYPE 8

KY 177 CULVERT EXTENSION
WINGWALL TABLE & NOTES
SHEET 5 OF 5

FIGURE 1

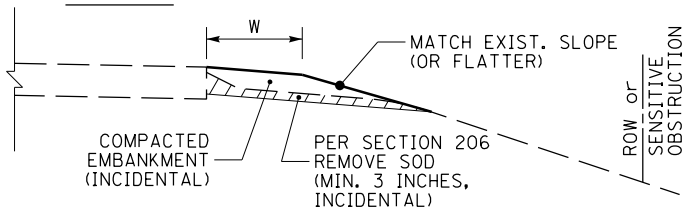


FIGURE 2

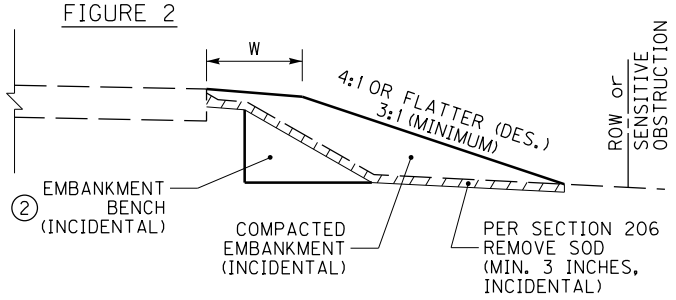


FIGURE 3

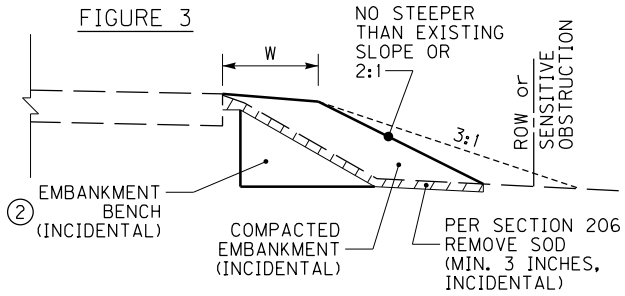


FIGURE 4

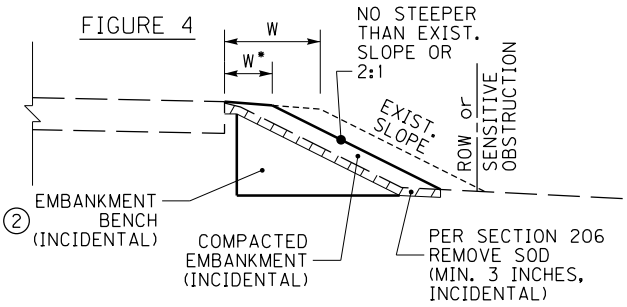


FIGURE 5

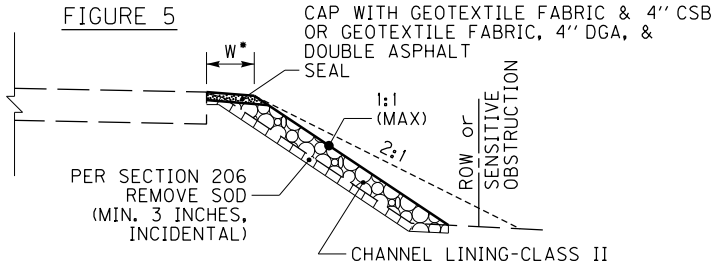
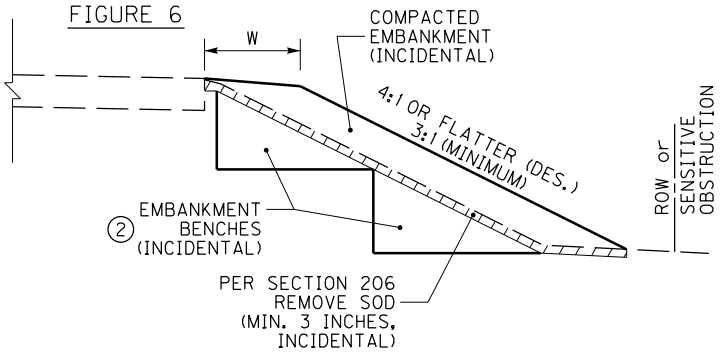


FIGURE 6



~ NOTES ~

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

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

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

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

SEE SHEET 2 FOR
NOTES 9 THRU 13

NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS

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

FIGURE 7

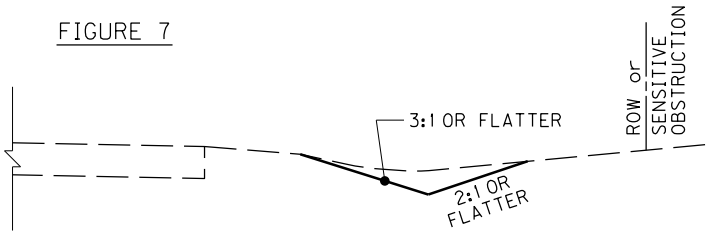


FIGURE 8

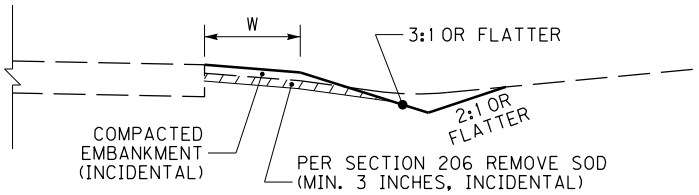


FIGURE 9

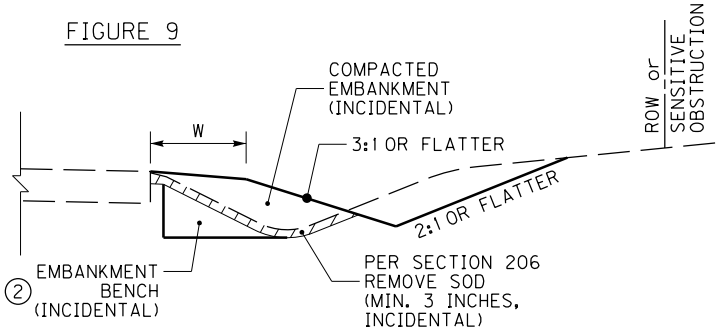


FIGURE 10

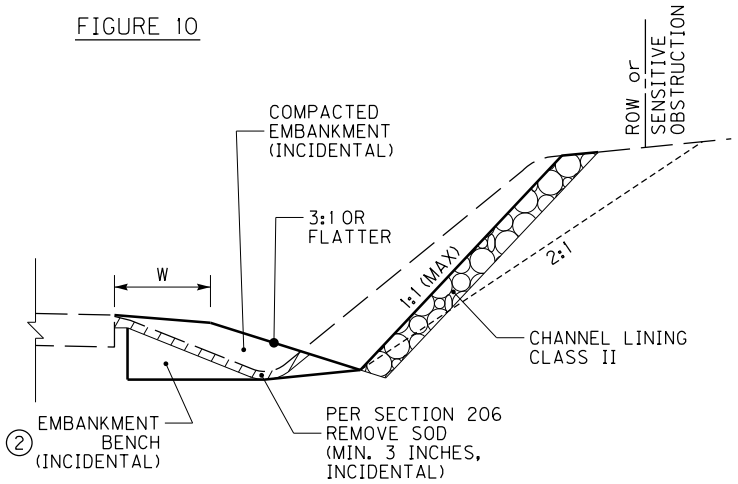
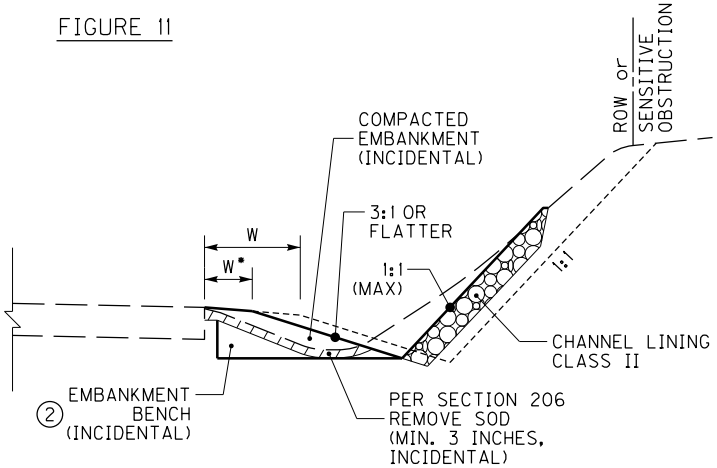


FIGURE 11



~ NOTES ~

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

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

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

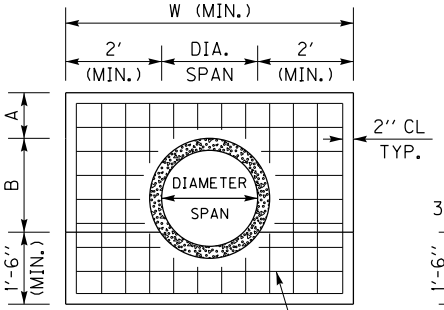
SEE SHEET 1 FOR NOTES 3. THRU 8.

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

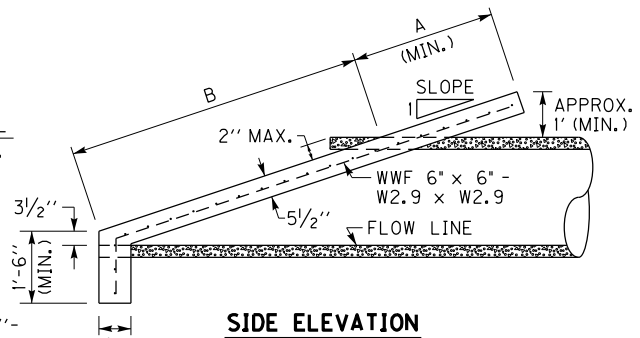
NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS

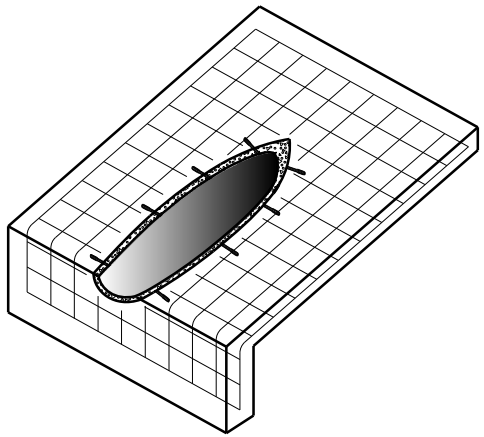
DITCHING & SHOULDERING AND EMBANKMENT BENCHING DETAILS (SHEET 2 OF 2)



END ELEVATION
SHOWN WITH WOVEN WIRE REINFORCEMENT



SIDE ELEVATION
SHOWN WITHOUT GRATE



ISOMETRIC VIEW
SHOWN WITH WOVEN WIRE REINFORCEMENT AND WEDGE ANCHORS

COUNTY OF	ITEM NO.	SHEET NO.

~ NOTES ~

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

1. 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.
2. 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.
3. 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. NOTE: THE HEADWALL DIMENSIONS AND CONCRETE QUANTITIES MAY VARY BASED ON THE FINAL GRADED SLOPE, PIPE SKEW, AND/OR TYPE OF PIPE.
4. WOVEN WIRE REINFORCEMENT (WWF 6"x6" - W2.9xW2.9) IS REQUIRED FOR THE SLOPE PAVING AND TOE WALL. UTILIZE 2" CLEARANCE FROM ALL EDGES.
5. CONCRETE QUANTITIES SHOWN ARE FOR ONE (1) HEADWALL.
6. 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.

⑦ 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

8. 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

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

NOTE: CONCRETE QUANTITIES ARE LISTED FOR IMFORMATIONAL PURPOSES ONLY.

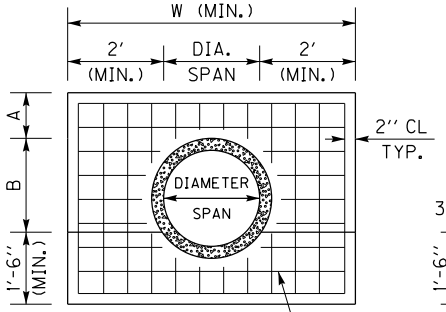
SEE SHEET 2 FOR DIMENSIONS OF HEADWALLS FOR PIPE OVER 30" DIAMETER

NOT TO SCALE

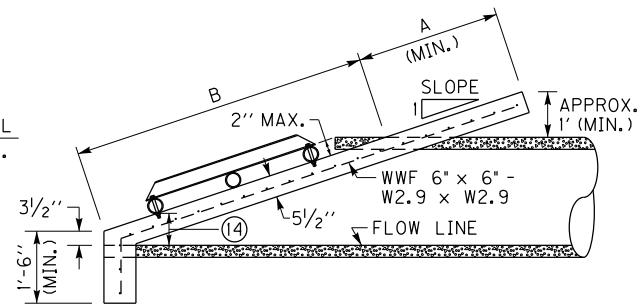
KENTUCKY DEPARTMENT OF HIGHWAYS

SLOPED & MITERED CONCRETE HEADWALL (SHEET 1 OF 2)

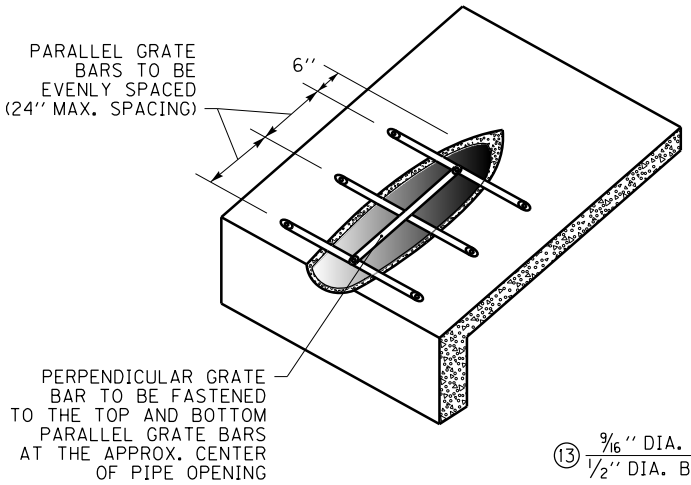
COUNTY OF	ITEM NO.	SHEET NO.



END ELEVATION
SHOWN WITH WOVEN WIRE REINFORCEMENT



SIDE ELEVATION
SHOWN WITH GRATE



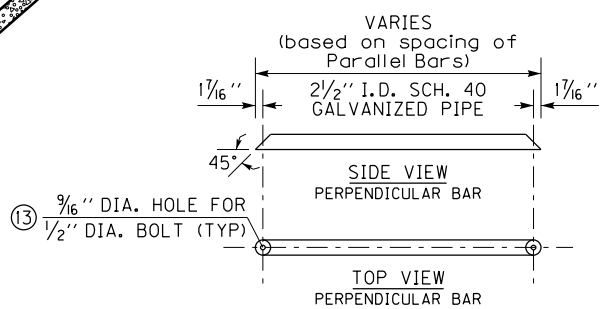
ISOMETRIC VIEW
SHOWING HEADWALL WITH GRATE

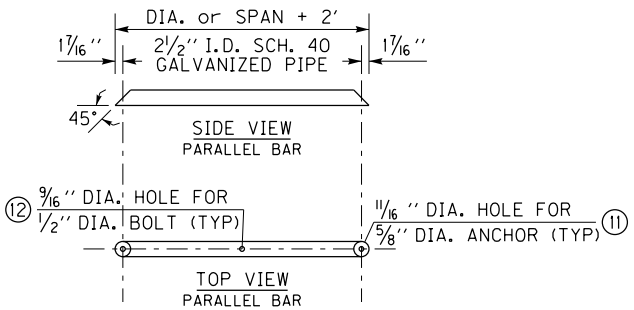
~ NOTES ~

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

SEE SHEET 1 FOR NOTES 1 THRU 5

7. 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
8. ALL BOLTS AND HARDWARE SHALL BE RUST RESISTANT: ZINC PLATED, STAINLESS STEEL, OR STEEL THAT HAS BEEN GALVANIZED IN ACCORDANCE WITH AASHTO M 232.
9. 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.
10. ANY RAW METAL EXPOSED BY FIELD CUTTING AND/OR DRILLING SHALL BE TREATED WITH A COLD GALVANIZING COMPOUND.
⑪ 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
⑫ CENTER BOLT HOLE SHALL ONLY BE DRILLED IN THE TOP AND BOTTOM PARALLEL BARS.
⑬ 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.
⑭ THE BOTTOM PARALLEL BAR IS TO BE PLACED SO THAT IT IS APPROX. 6" ABOVE THE FLOWLINE OF THE PIPE.





PIPE FOR GRATE DETAILS
SEE NOTE 6 TO DETERMINE IF GRATE IS REQUIRED

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

NOTE: CONCRETE QUANTITIES ARE LISTED FOR IMFORMATIONAL PURPOSES ONLY.

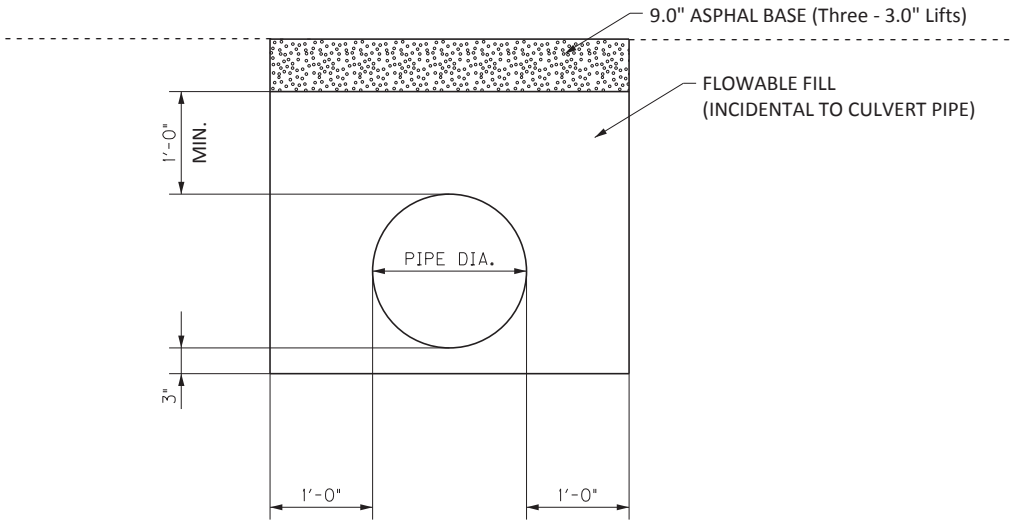
SEE SHEET 1 FOR DIMENSIONS OF HEADWALLS FOR PIPE 30" DIAMETER & LESS

NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS

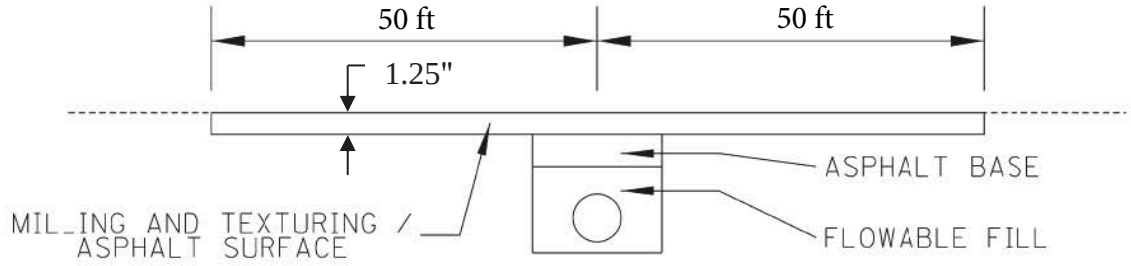
SLOPED & MITERED CONCRETE HEADWALL (SHEET 2 OF 2)

CULVERT PIPE REPLACEMENT DETAIL

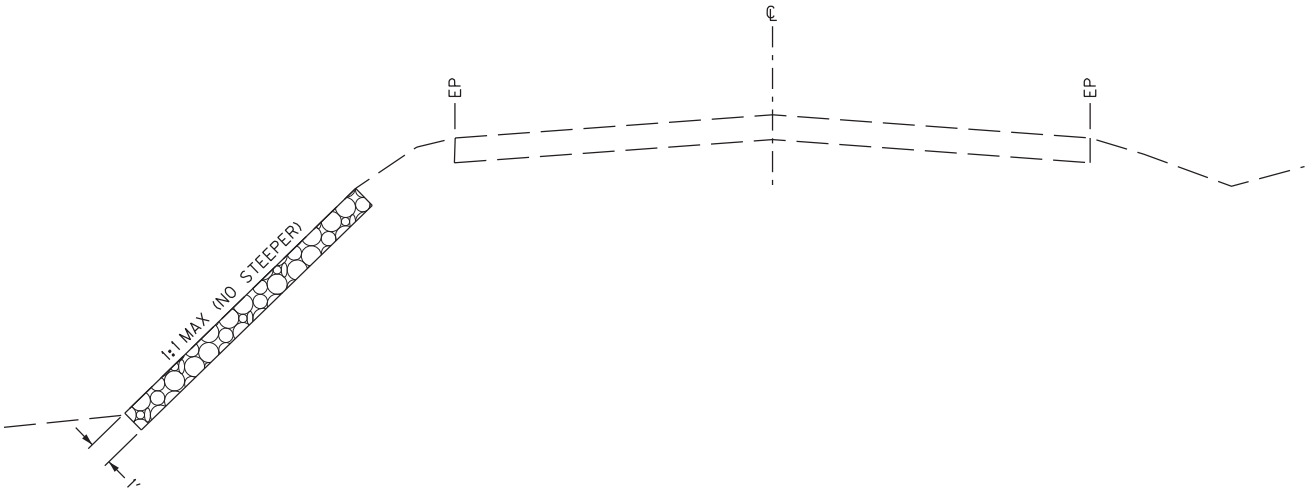


CULVERT PIPE REPLACEMENTS - INITAL BACKFILL

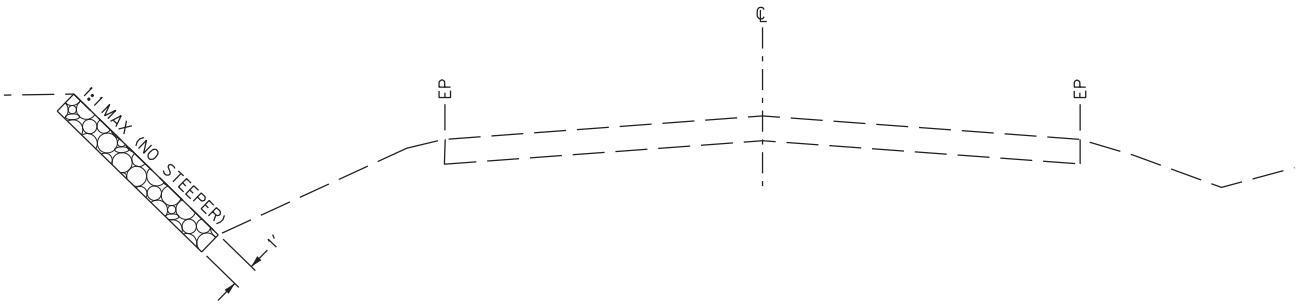
Culvert Pipe Replacements shall be constructed according to the Inital Backfill Detail shown above, or as directed by the Engineer. Allow the newly placed asphalt base to be exposed to traffic a minimum of 14 days to allow for settlement. After the 14 day waiting period, mill and inlay the final asphalt surface course. For any pipe replacement locations that are south of the FD05 resurfacing limits (i.e. south of MP 9.174), mill and inlay the final surface course according to the detail below.



COUNTY OF	ITEM NO.	SHEET NO.



PROTECTION DETAIL FOR EMBANKMENT FILL SLOPE



PROTECTION DETAIL FOR DITCH BACKSLOPE

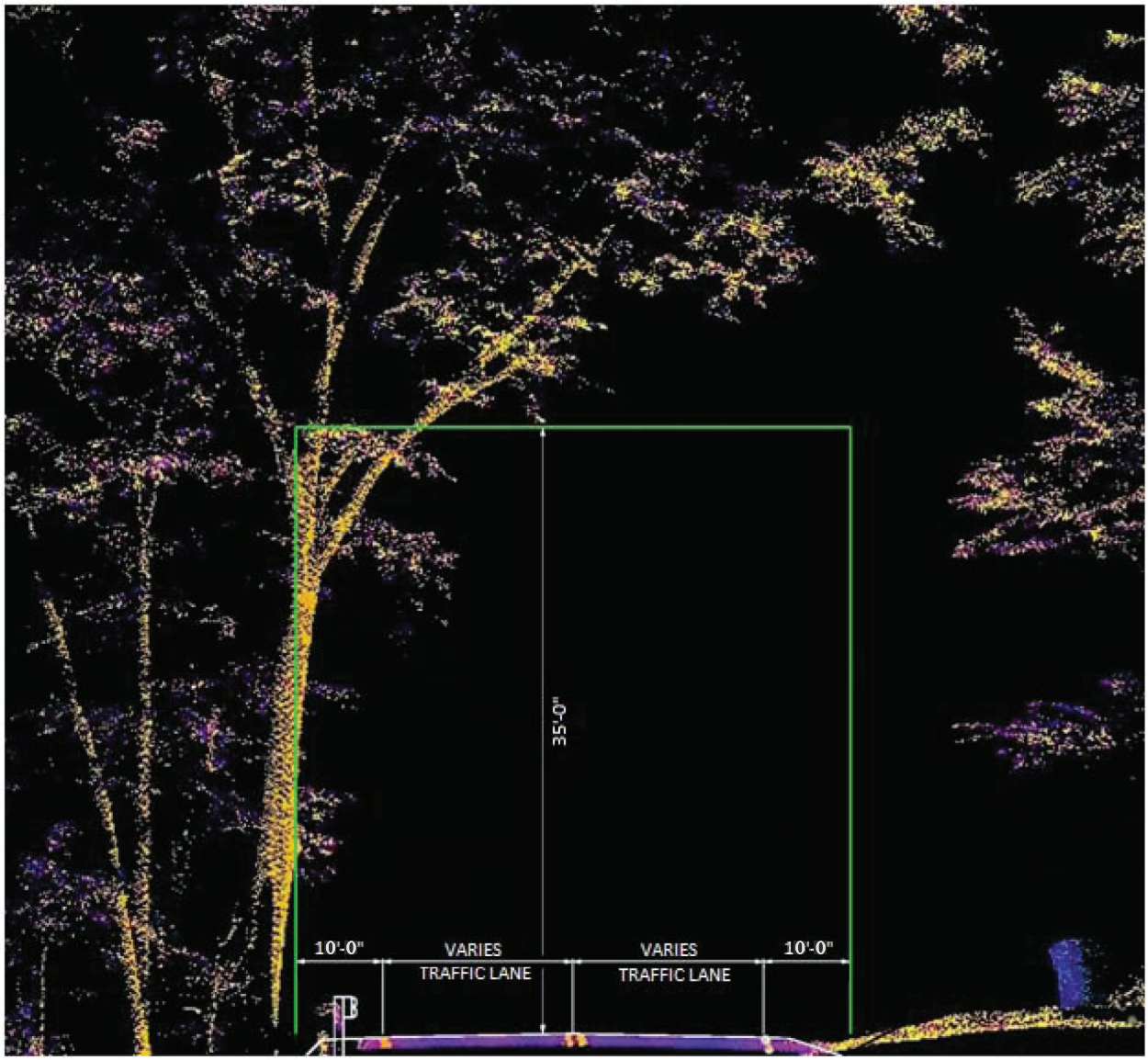
NOTES:

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

SLOPE PROTECTION DETAILS

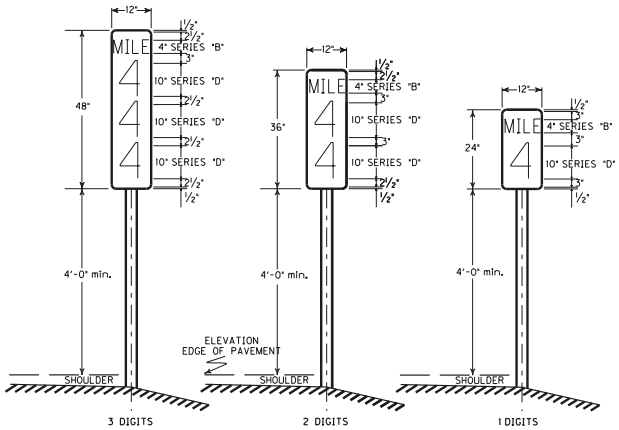
TREE CLEARING DETAIL

Clearing offset: 10 feet from edge of pavement, both sides, cutting with a vertical reach of 35 feet



COUNTY OF	ITEM NO.	SHEET NO.

MILEPOST MARKERS



TYPICAL SIGN PANEL DIMENSIONS AND MILEPOST LOCATIONS

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

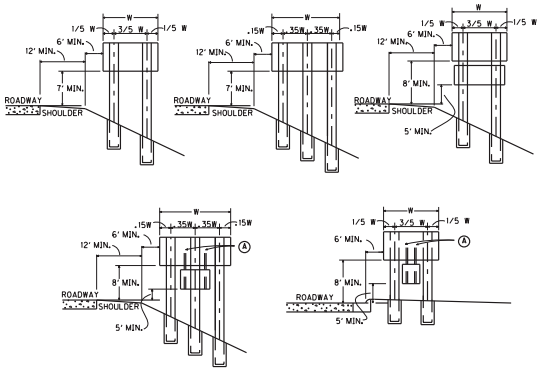
MILE POST NUMBER	STATION NUMBER * ____ BOUND LANE (S)

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:

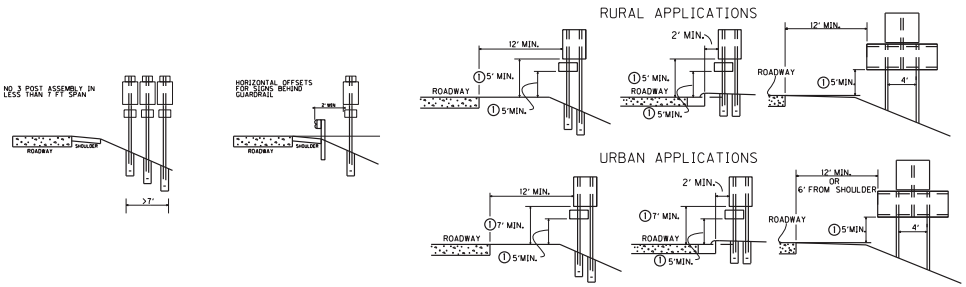
901 WEST MAIN STREET
LOUISVILLE, KY 40202
502-587-6624
270-307-7456

PANEL SIGNS



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

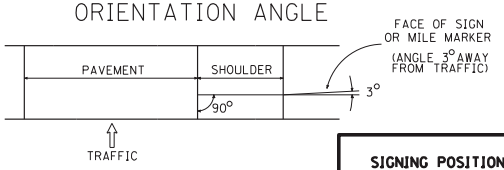
SHEETING SIGNS



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

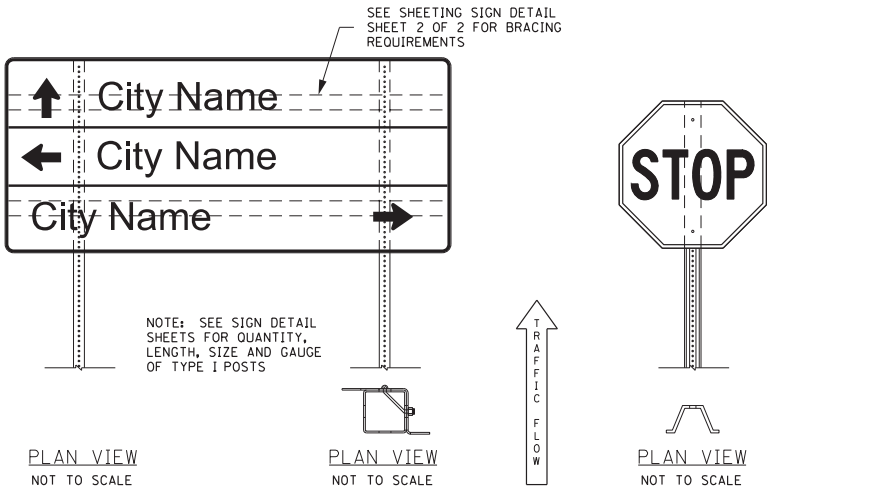
① NOT TO EXCEED 8' IN URBAN AREAS AND 6' IN RURAL AREAS UNLESS SPECIFIED BY THE ENGINEER

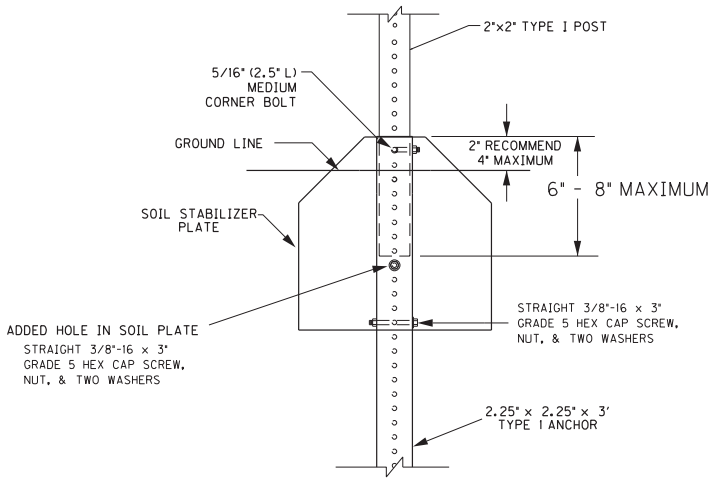
ORIENTATION ANGLE



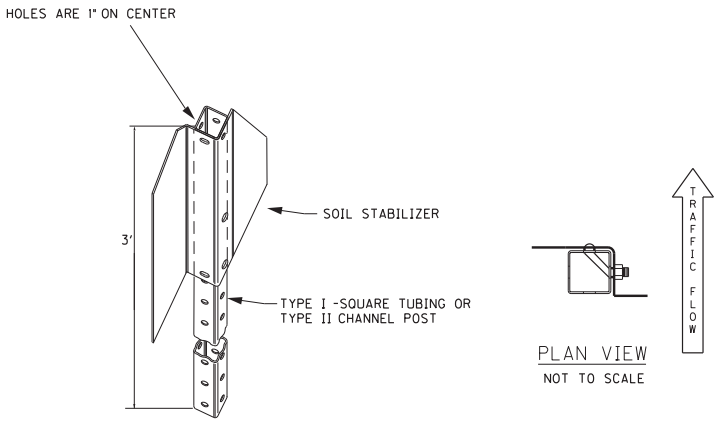
SIGNING POSITIONING DETAIL SHEET

COUNTY OF	ITEM NO.	SHEET NO.





SOIL STABILIZER DETAIL
FOR TYPE I POST



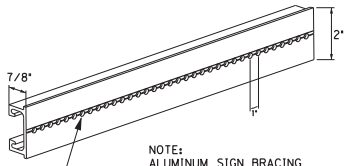
SOIL STABILIZER DETAIL

NOT TO SCALE

SHEETING SIGN DETAIL
SHEET 1 OF 2

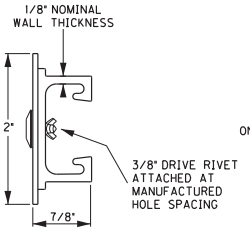
COUNTY OF	ITEM NO.	SHEET NO.

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

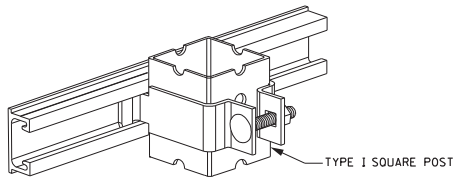


NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE x 7/8" DEPTH x 1/8" NOMINAL WALL THICKNESS

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



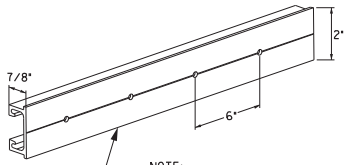
SIGN BRACE



SQUARE POST CLAMP & BRACE

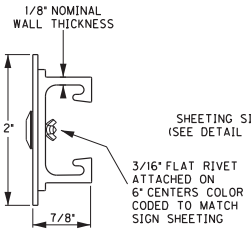
FOR ATTACHMENT OF SIGNS GREATER THAN, OR EQUAL TO, 72" IN WIDTH.

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

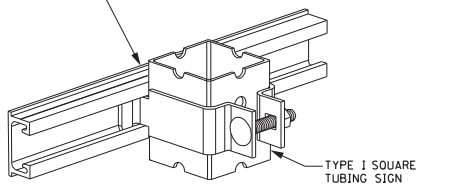


NOTE:
ALUMINUM SIGN BRACING
2" MOUNTING SURFACE x 7/8" DEPTH x 1/8" NOMINAL WALL THICKNESS

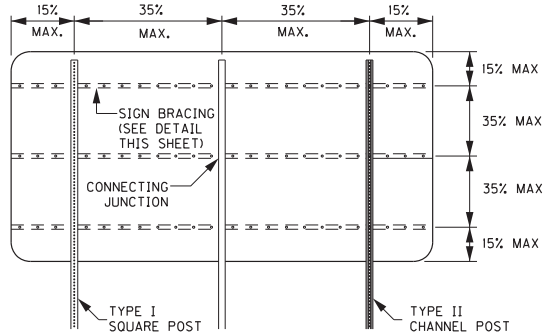
6061-T6 ALUMINUM ALLOY, PUNCHED WITH 3/16" DIAMETER HOLES ON 6" CENTERS FOR ATTACHMENT OF SIGN SUBSTRATE USING RIVETS



SIGN BRACE



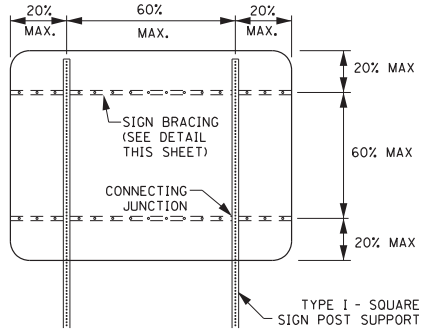
SQUARE POST CLAMP & BRACE



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.

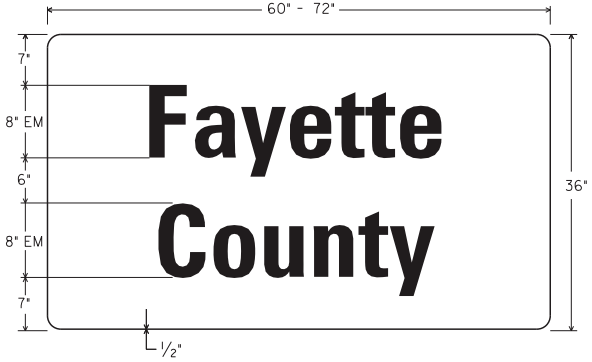
NOT TO SCALE

SHEETING SIGN DETAIL

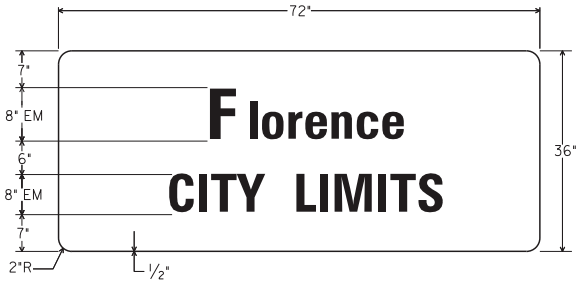
SHEET 2 OF 2

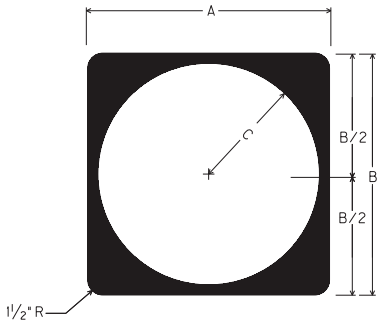
COUNTY OF	ITEM NO.	SHEET NO.

T-1



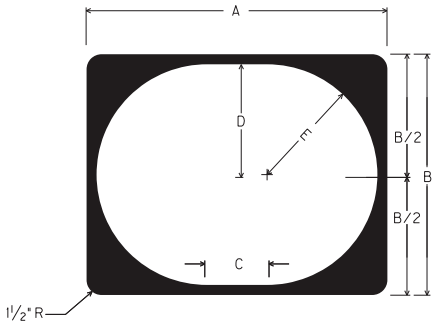
T-2





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

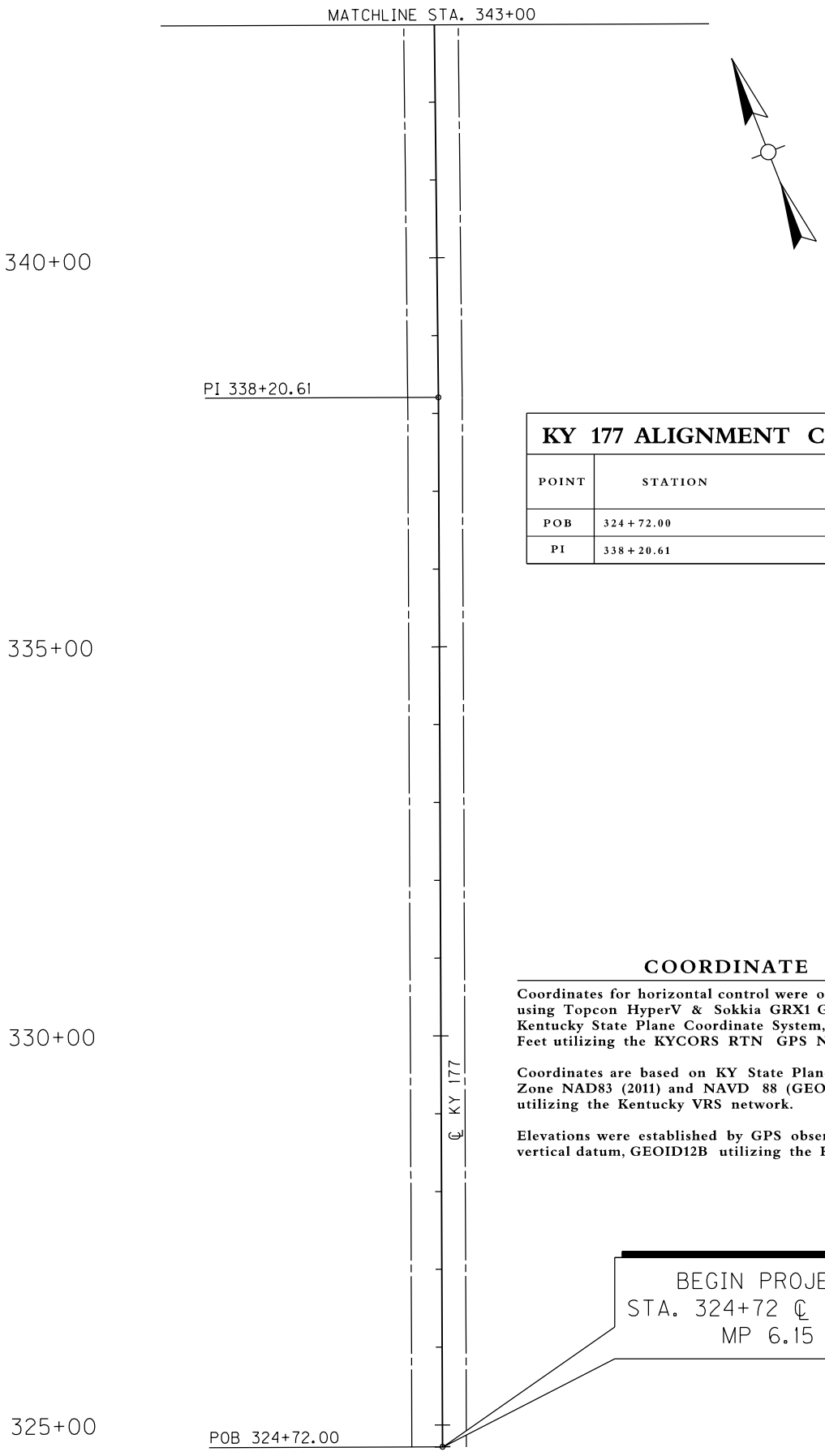
NOTE: EXPRESSWAY/FREEWAY DEFINED AS A DIVIDED HIGHWAY WITH PARTIAL OR FULL CONTROL OF ACCESS

S-1

NOT TO SCALE

TYPICAL SIGNS

COUNTY OF	ITEM NO.
KENTON	6-9018



KY 177 ALIGNMENT COORDINATES

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
POB	324+72.00	4207846.14	5290293.87
PI	338+20.61	4209103.27	5290782.10

COORDINATE SYSTEM

Coordinates for horizontal control were obtained by GPS observations using Topcon HyperV & Sokkia GRX1 GNSS receivers on the NAD83 Kentucky State Plane Coordinate System, KY Single Zone, U.S. Survey Feet utilizing the KYCORS RTN GPS Network.

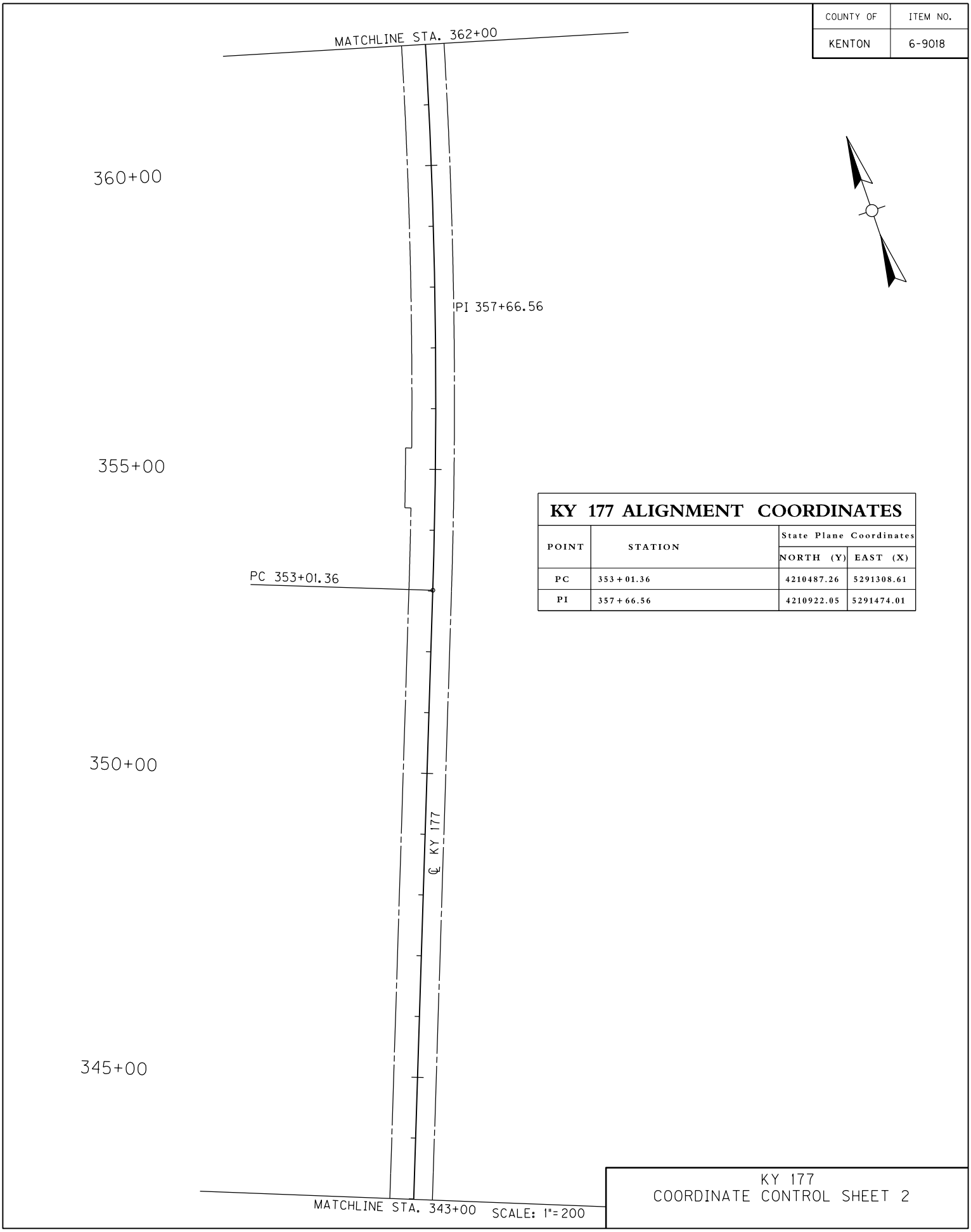
Coordinates are based on KY State Plane Coordinate System Single Zone NAD83 (2011) and NAVD 88 (GEOID12B) in U.S. Survey Feet utilizing the Kentucky VRS network.

Elevations were established by GPS observations on the NAVD88 vertical datum, GEOID12B utilizing the KYCORS RTN Network.

SCALE: 1"= 200

KY 177
COORDINATE CONTROL SHEET 1

COUNTY OF	ITEM NO.
KENTON	6-9018

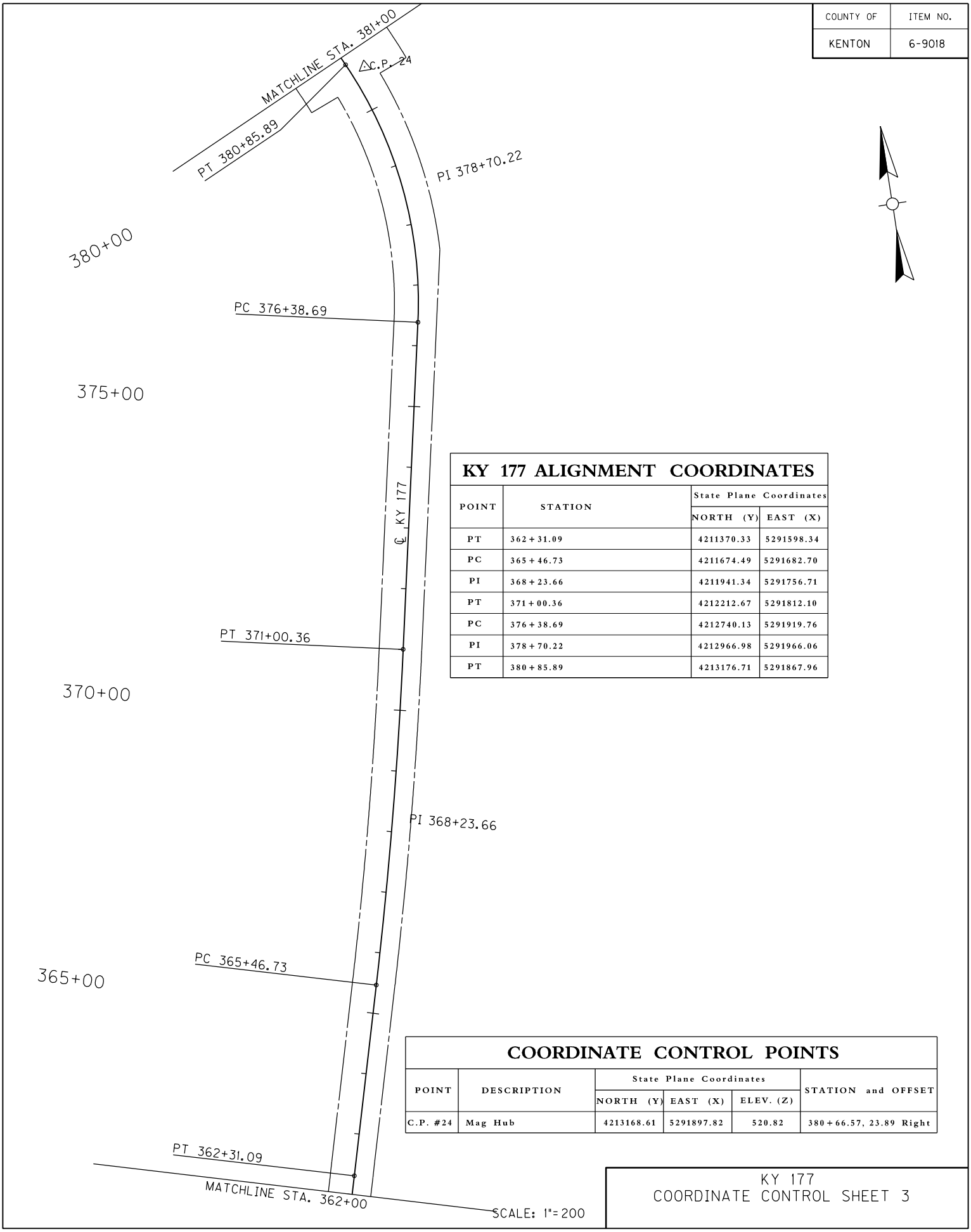


KY 177 ALIGNMENT COORDINATES

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PC	353+01.36	4210487.26	5291308.61
PI	357+66.56	4210922.05	5291474.01

KY 177
COORDINATE CONTROL SHEET 2

COUNTY OF	ITEM NO.
KENTON	6-9018



KY 177 ALIGNMENT COORDINATES

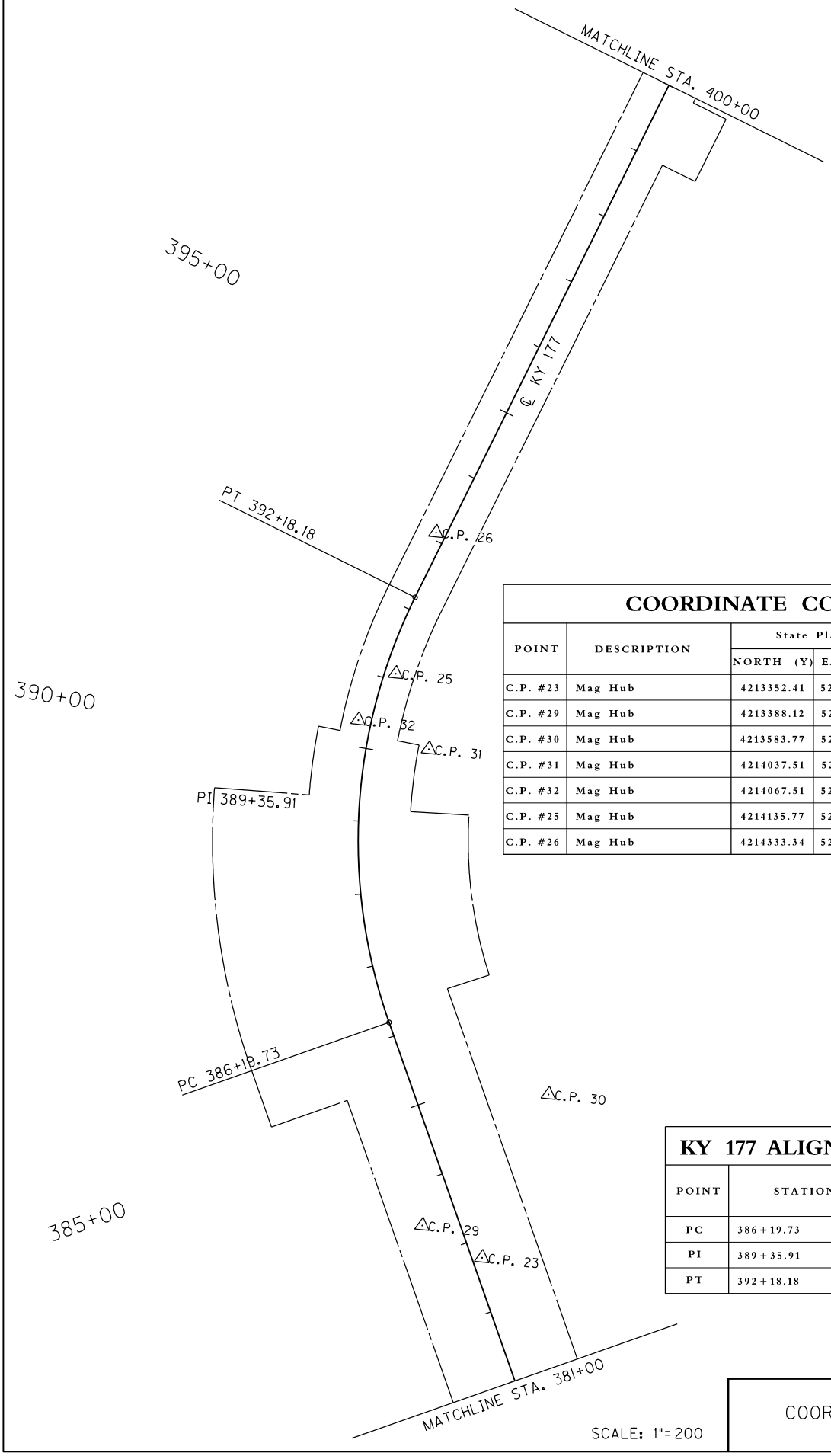
POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PT	362+31.09	4211370.33	5291598.34
PC	365+46.73	4211674.49	5291682.70
PI	368+23.66	4211941.34	5291756.71
PT	371+00.36	4212212.67	5291812.10
PC	376+38.69	4212740.13	5291919.76
PI	378+70.22	4212966.98	5291966.06
PT	380+85.89	4213176.71	5291867.96

COORDINATE CONTROL POINTS

POINT	DESCRIPTION	State Plane Coordinates			STATION and OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
C.P. #24	Mag Hub	4213168.61	5291897.82	520.82	380+66.57, 23.89 Right

KY 177
COORDINATE CONTROL SHEET 3

COUNTY OF	ITEM NO.
KENTON	6-9018



COORDINATE CONTROL POINTS

POINT	DESCRIPTION	State Plane Coordinates			STATION and OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
C.P. #23	Mag Hub	4213352.41	5291799.97	512.93	382+73.85, 12.86 RT
C.P. #29	Mag Hub	4213388.12	5291714.05	514.85	383+42.61, 49.84 LT
C.P. #30	Mag Hub	4213583.77	5291868.18	516.83	384+54.52, 172.67 RT
C.P. #31	Mag Hub	4214037.51	5291658.11	490.52	390+14.97, 84.31 RT
C.P. #32	Mag Hub	4214067.51	5291558.03	510.17	390+35.41, 18.33 LT
C.P. #25	Mag Hub	4214135.77	5291602.75	509.06	391+19.98, 14.50 RT
C.P. #26	Mag Hub	4214333.34	5291638.40	518.31	393+09.88, 14.18 LT

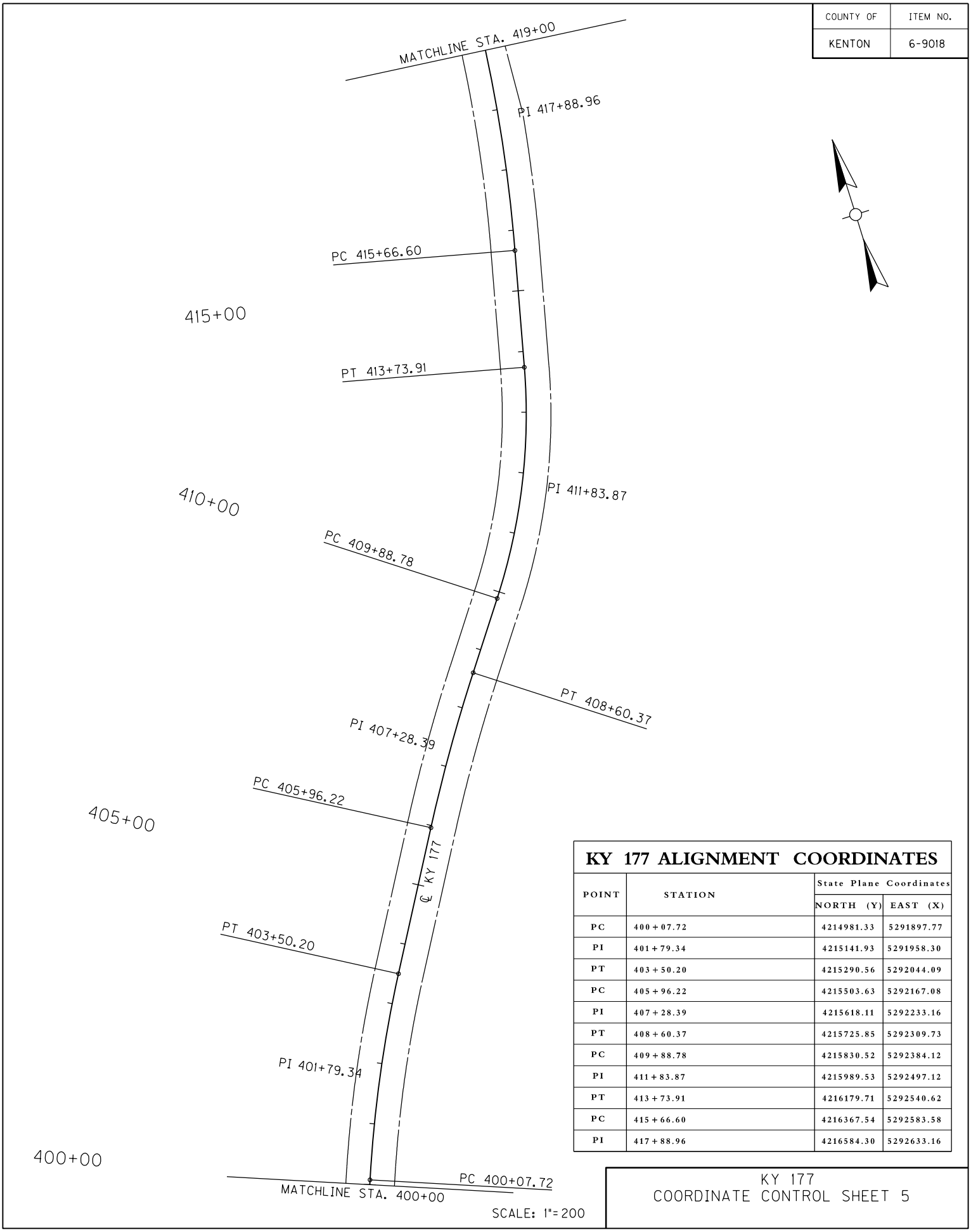
KY 177 ALIGNMENT COORDINATES

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PC	386+19.73	4213660.25	5291641.78
PI	389+35.91	4213946.66	5291507.82
PT	392+18.18	4214242.52	5291619.33

SCALE: 1"=200

KY 177
COORDINATE CONTROL SHEET 4

COUNTY OF	ITEM NO.
KENTON	6-9018

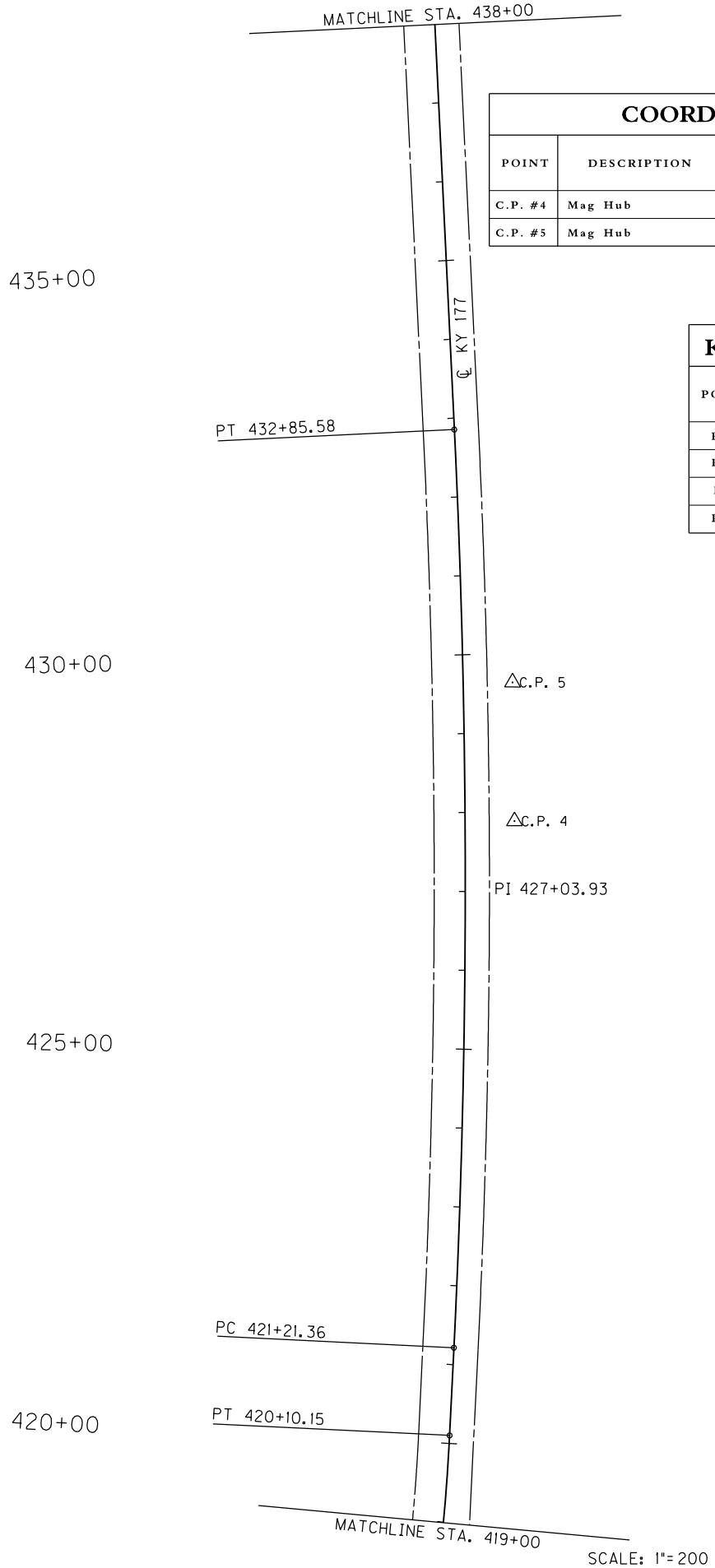


KY 177 ALIGNMENT COORDINATES

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PC	400+07.72	4214981.33	5291897.77
PI	401+79.34	4215141.93	5291958.30
PT	403+50.20	4215290.56	5292044.09
PC	405+96.22	4215503.63	5292167.08
PI	407+28.39	4215618.11	5292233.16
PT	408+60.37	4215725.85	5292309.73
PC	409+88.78	4215830.52	5292384.12
PI	411+83.87	4215989.53	5292497.12
PT	413+73.91	4216179.71	5292540.62
PC	415+66.60	4216367.54	5292583.58
PI	417+88.96	4216584.30	5292633.16

KY 177
COORDINATE CONTROL SHEET 5

COUNTY OF	ITEM NO.
KENTON	6-9018



COORDINATE CONTROL POINTS

POINT	DESCRIPTION	State Plane Coordinates			STATION and OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
C.P. #4	Mag Hub	4217585.79	5292724.06	524.96	427+89.36, 61.99 RT
C.P. #5	Mag Hub	4217761.63	5292721.46	525.43	429+64.31,62.12 RT

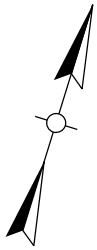
KY 177 ALIGNMENT COORDINATES

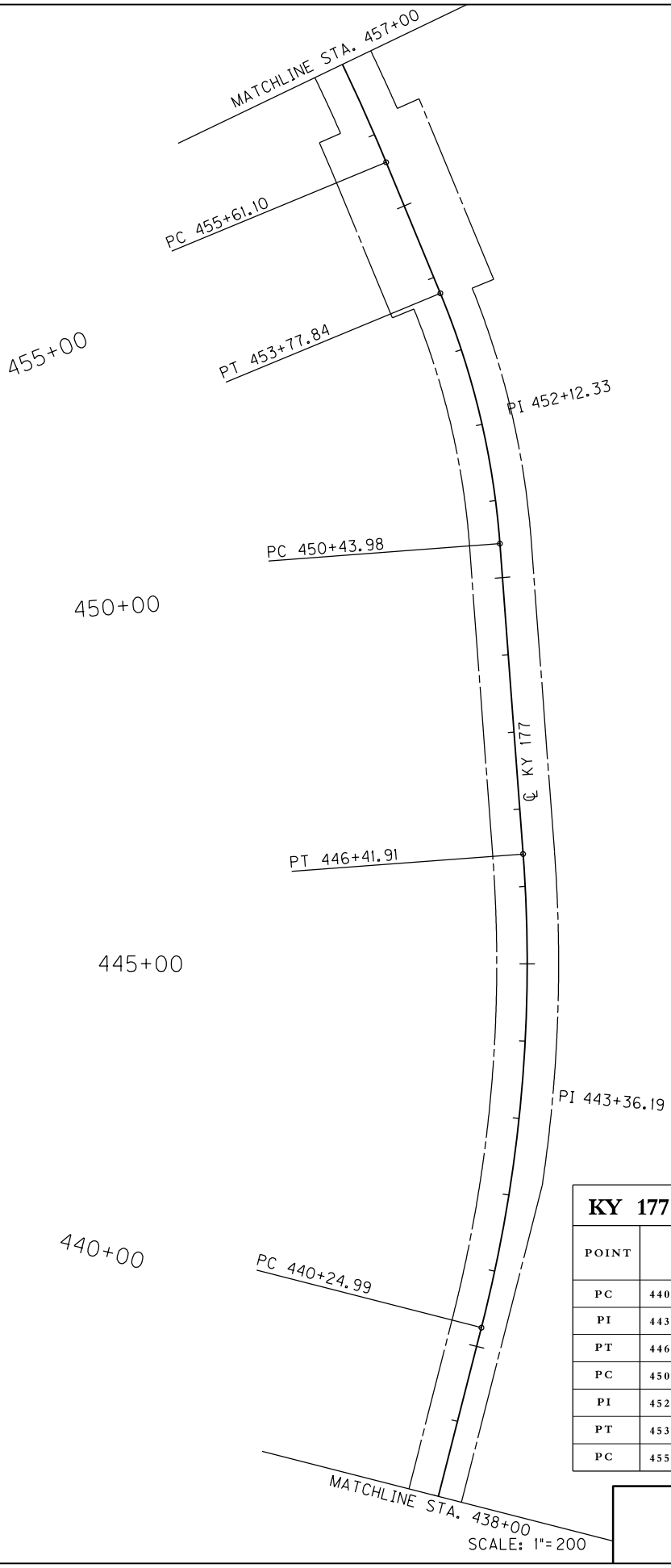
POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PT	420+10.15	4216806.41	5292643.71
PC	421+21.36	4216917.50	5292648.98
PI	427+03.93	4217499.41	5292676.60
PT	432+85.58	4218081.25	5292647.73

SCALE: 1"=200

KY 177
COORDINATE CONTROL SHEET 6

COUNTY OF	ITEM NO.
KENTON	6-9018





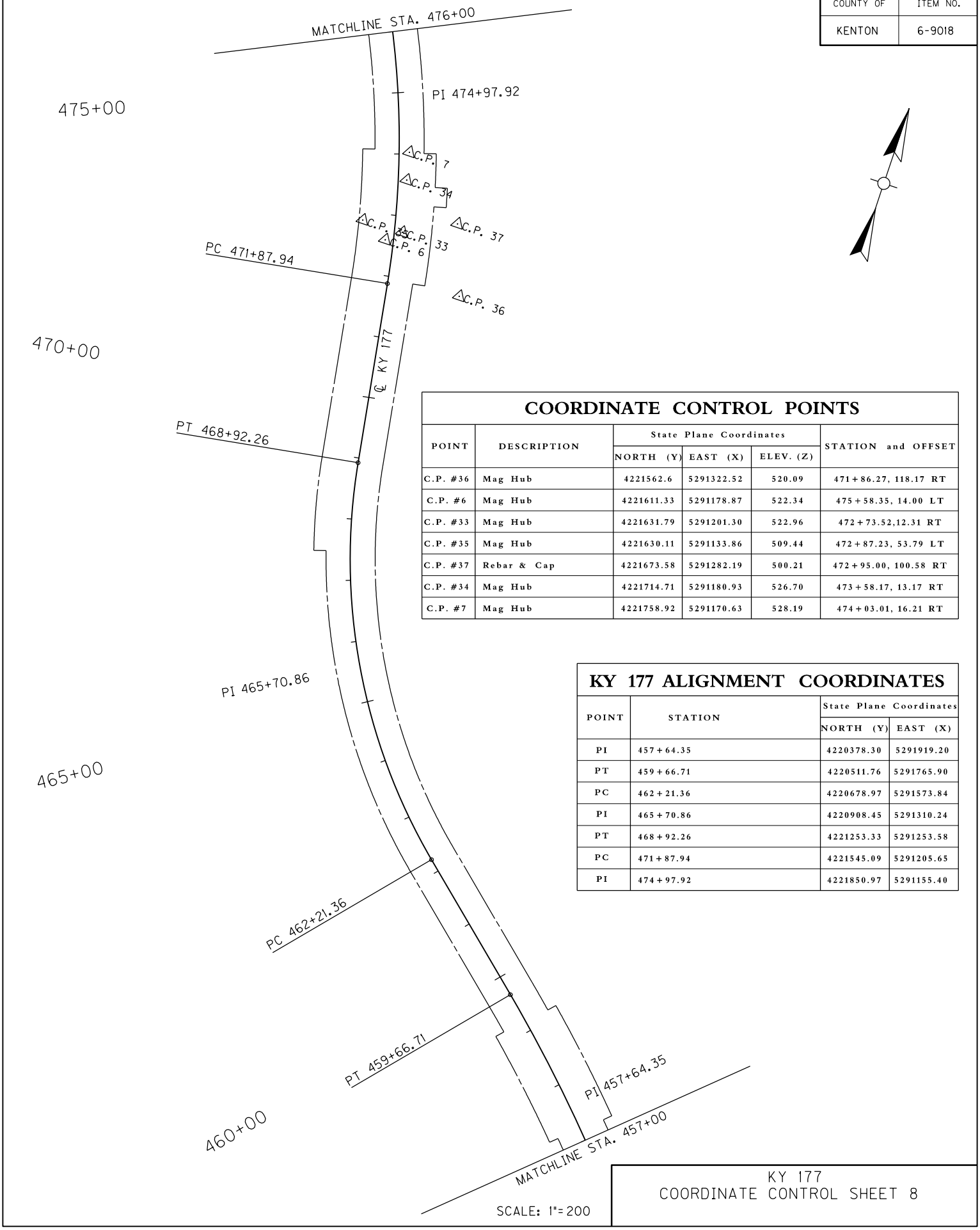
SCALE: 1"= 200

KY 177 ALIGNMENT COORDINATES

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PC	440+24.99	4218819.76	5292611.09
PI	443+36.19	4219130.58	5292595.66
PT	446+41.91	4219420.23	5292481.89
PC	450+43.98	4219794.46	5292334.90
PI	452+12.33	4219951.16	5292273.35
PT	453+77.84	4220080.76	5292165.90
PC	455+61.10	4220221.84	5292048.93

KY 177
COORDINATE CONTROL SHEET 7

COUNTY OF	ITEM NO.
KENTON	6-9018



COORDINATE CONTROL POINTS

POINT	DESCRIPTION	State Plane Coordinates			STATION and OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
C.P. #36	Mag Hub	4221562.6	5291322.52	520.09	471+86.27, 118.17 RT
C.P. #6	Mag Hub	4221611.33	5291178.87	522.34	475+58.35, 14.00 LT
C.P. #33	Mag Hub	4221631.79	5291201.30	522.96	472+73.52,12.31 RT
C.P. #35	Mag Hub	4221630.11	5291133.86	509.44	472+87.23, 53.79 LT
C.P. #37	Rebar & Cap	4221673.58	5291282.19	500.21	472+95.00, 100.58 RT
C.P. #34	Mag Hub	4221714.71	5291180.93	526.70	473+58.17, 13.17 RT
C.P. #7	Mag Hub	4221758.92	5291170.63	528.19	474+03.01, 16.21 RT

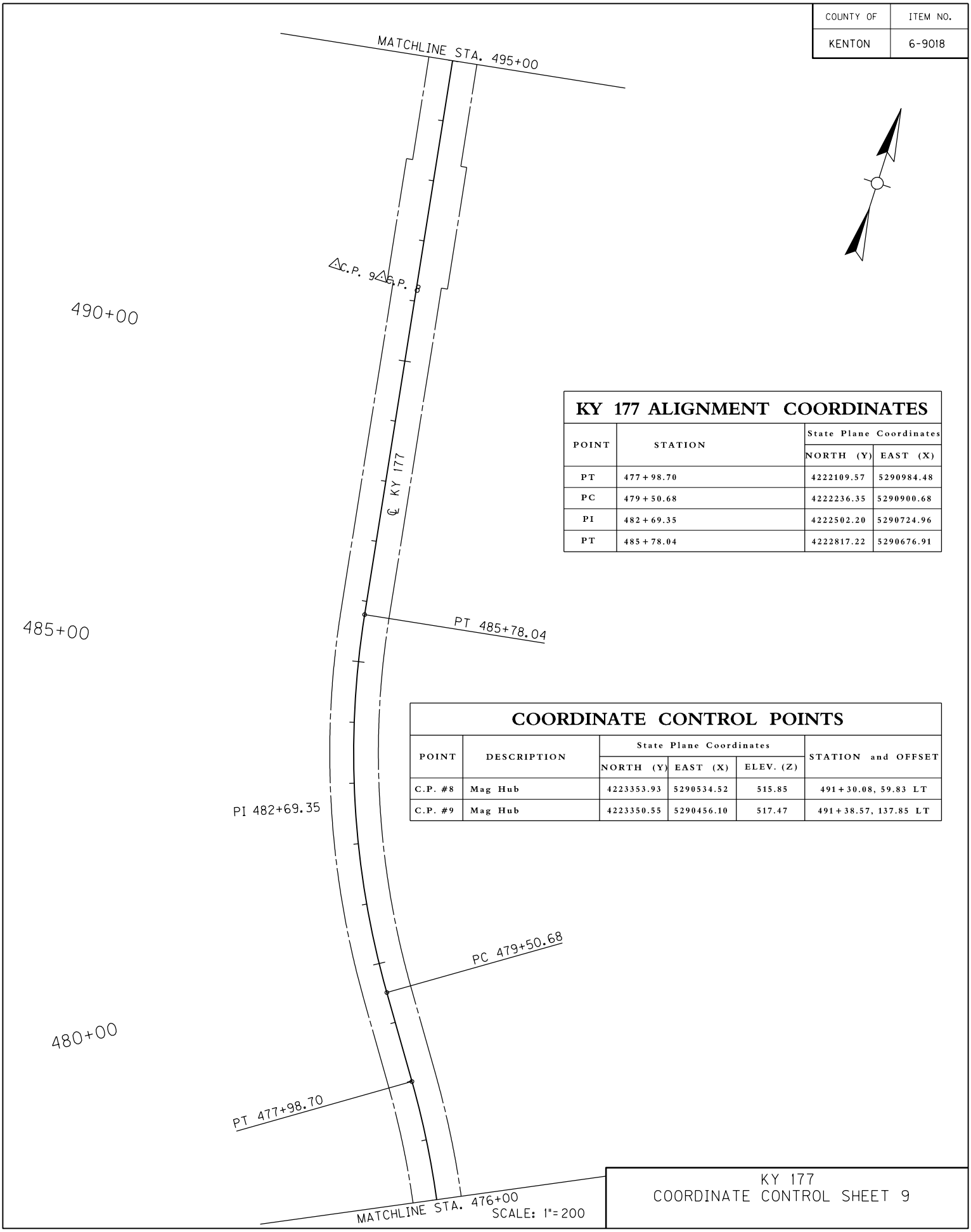
KY 177 ALIGNMENT COORDINATES

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PI	457+64.35	4220378.30	5291919.20
PT	459+66.71	4220511.76	5291765.90
PC	462+21.36	4220678.97	5291573.84
PI	465+70.86	4220908.45	5291310.24
PT	468+92.26	4221253.33	5291253.58
PC	471+87.94	4221545.09	5291205.65
PI	474+97.92	4221850.97	5291155.40

SCALE: 1"=200

KY 177
COORDINATE CONTROL SHEET 8

COUNTY OF	ITEM NO.
KENTON	6-9018



KY 177 ALIGNMENT COORDINATES

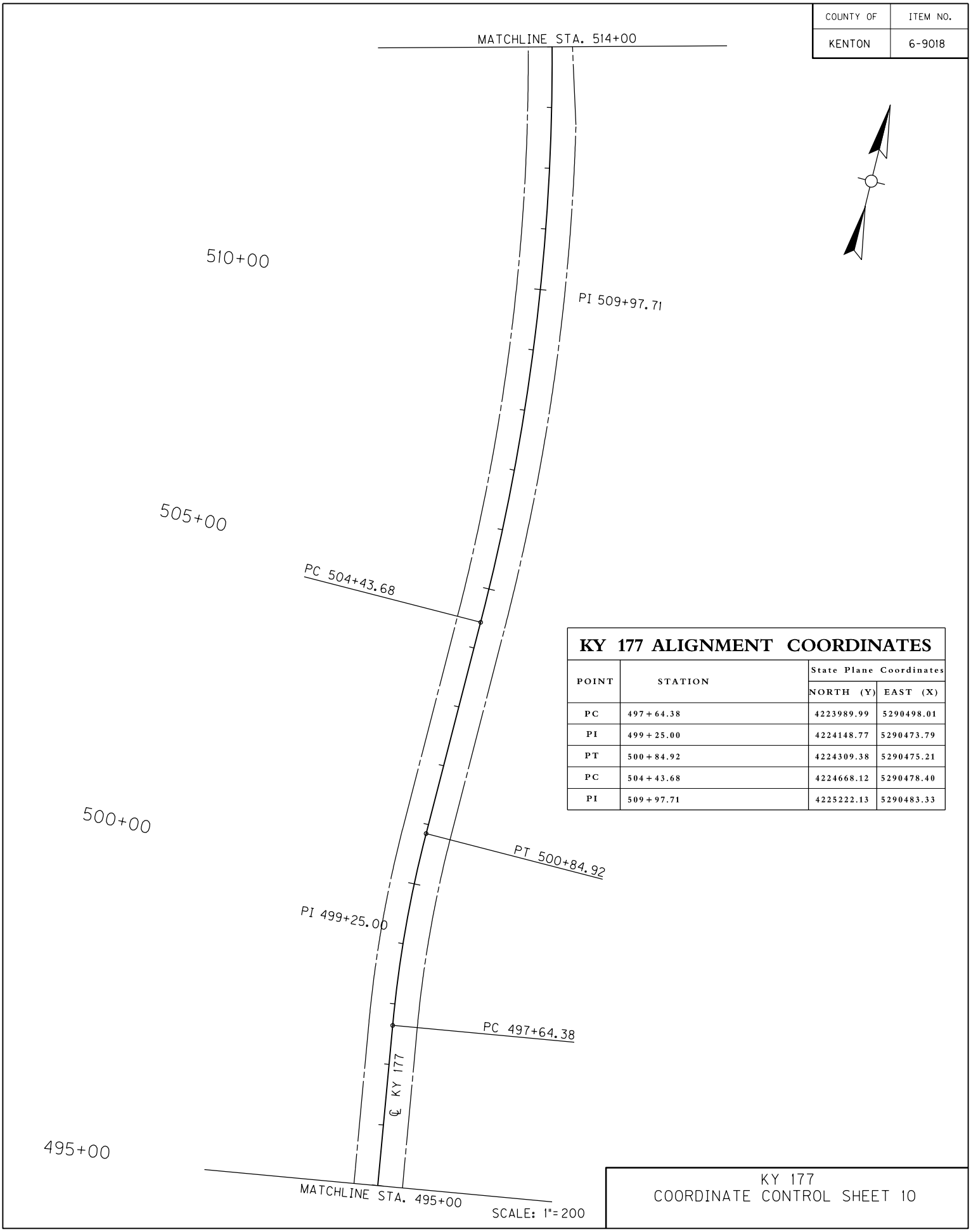
POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PT	477+98.70	4222109.57	5290984.48
PC	479+50.68	4222236.35	5290900.68
PI	482+69.35	4222502.20	5290724.96
PT	485+78.04	4222817.22	5290676.91

COORDINATE CONTROL POINTS

POINT	DESCRIPTION	State Plane Coordinates			STATION and OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
C.P. #8	Mag Hub	4223353.93	5290534.52	515.85	491+30.08, 59.83 LT
C.P. #9	Mag Hub	4223350.55	5290456.10	517.47	491+38.57, 137.85 LT

KY 177
COORDINATE CONTROL SHEET 9

COUNTY OF	ITEM NO.
KENTON	6-9018

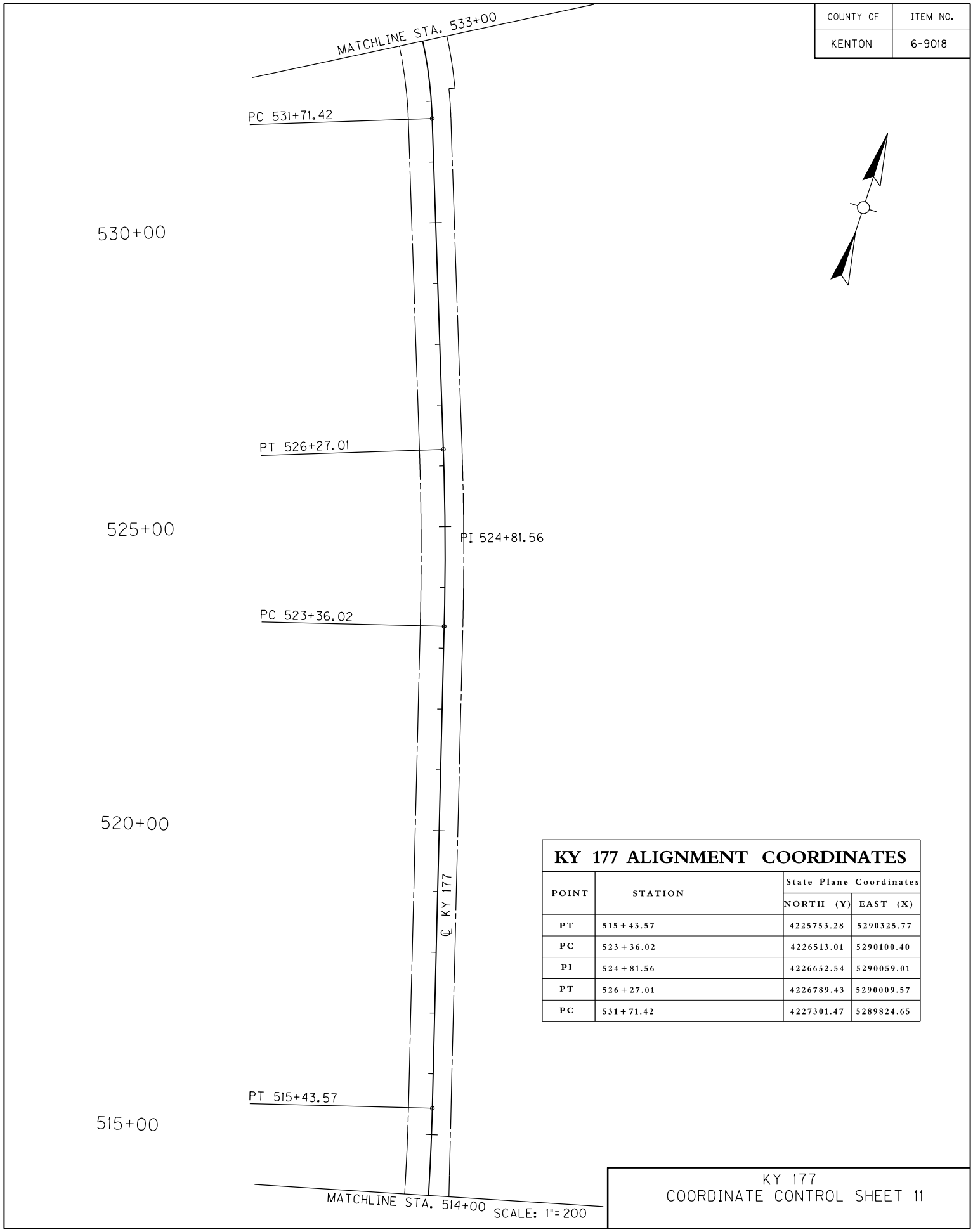


KY 177 ALIGNMENT COORDINATES

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PC	497+64.38	4223989.99	5290498.01
PI	499+25.00	4224148.77	5290473.79
PT	500+84.92	4224309.38	5290475.21
PC	504+43.68	4224668.12	5290478.40
PI	509+97.71	4225222.13	5290483.33

KY 177
COORDINATE CONTROL SHEET 10

COUNTY OF	ITEM NO.
KENTON	6-9018

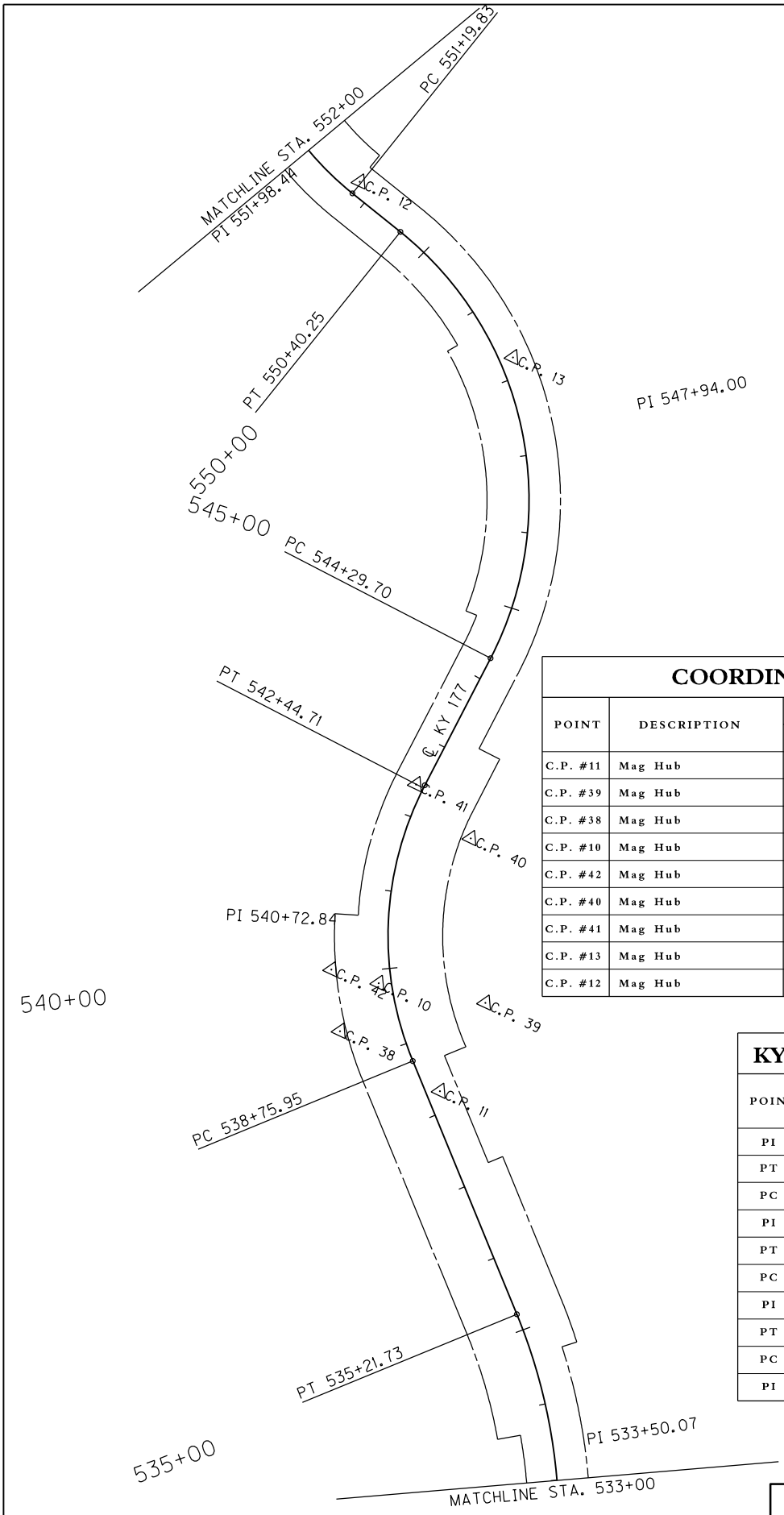


KY 177 ALIGNMENT COORDINATES

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PT	515+43.57	4225753.28	5290325.77
PC	523+36.02	4226513.01	5290100.40
PI	524+81.56	4226652.54	5290059.01
PT	526+27.01	4226789.43	5290009.57
PC	531+71.42	4227301.47	5289824.65

KY 177
COORDINATE CONTROL SHEET 11

COUNTY OF	ITEM NO.
KENTON	6-9018



COORDINATE CONTROL POINTS

POINT	DESCRIPTION	State Plane Coordinates			STATION and OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
C.P. #11	Mag Hub	4227808.88	5289418.6	506.63	538+27.00,17.25 RT
C.P. #39	Mag Hub	4227937.19	5289423.14	483.18	539+22.80, 113.09 RT
C.P. #38	Mag Hub	4227824.01	5289268.51	484.32	539+36.98, 78.08 LT
C.P. #10	Mag Hub	4227901.47	5289287.36	507.77	359+83.21, 17.03 LT
C.P. #42	Mag Hub	4227891.41	5289224.56	502.46	540+05.15, 75.81 LT
C.P. #40	Mag Hub	4228121.72	5289315.44	490.34	542+02.52, 82.07 RT
C.P. #41	Mag Hub	4228154.64	5289221.75	509.89	542+40.19, 11.14 LT
C.P. #13	Mag Hub	4228707.97	5289099.98	533.44	548+25.22, 17.02 RT
C.P. #12	Mag Hub	4228829.27	5288824.02	532.31	551+22.41, 17.33 RT

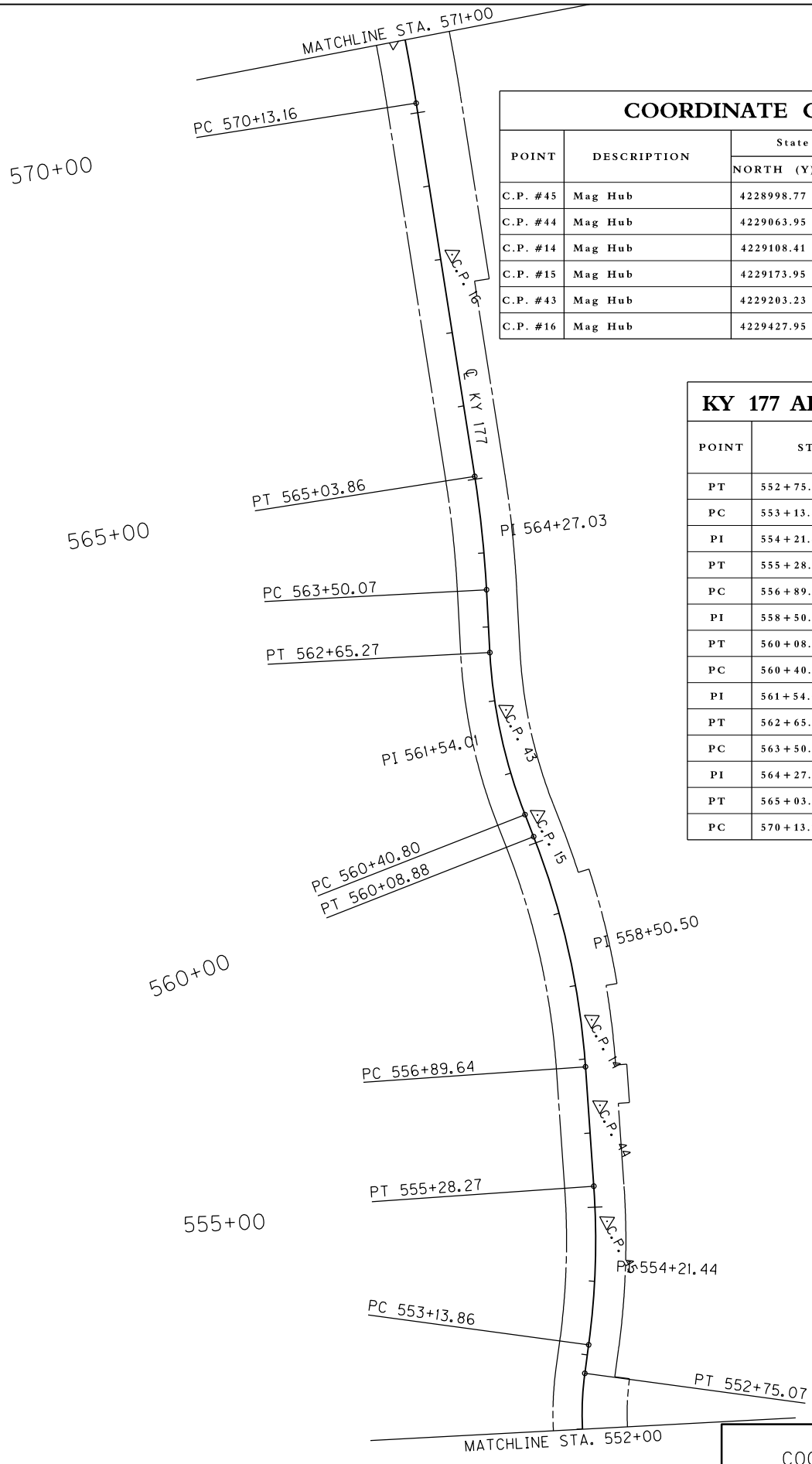
KY 177 ALIGNMENT COORDINATES

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PI	533+50.07	4227469.49	5289763.97
PT	535+21.73	4227590.08	5289632.17
PC	538+75.95	4227829.20	5289370.83
PI	540+72.84	4227962.11	5289225.57
PT	542+44.71	4228158.86	5289233.04
PC	544+29.70	4228343.72	5289240.05
PI	547+94.00	4228707.76	5289253.86
PT	550+40.25	4228793.18	5288899.71
PC	551+19.83	4228811.84	5288822.35
PI	551+98.44	4228830.27	5288745.94

SCALE: 1"=200

KY 177
COORDINATE CONTROL SHEET 12

COUNTY OF	ITEM NO.
KENTON	6-9018



COORDINATE CONTROL POINTS

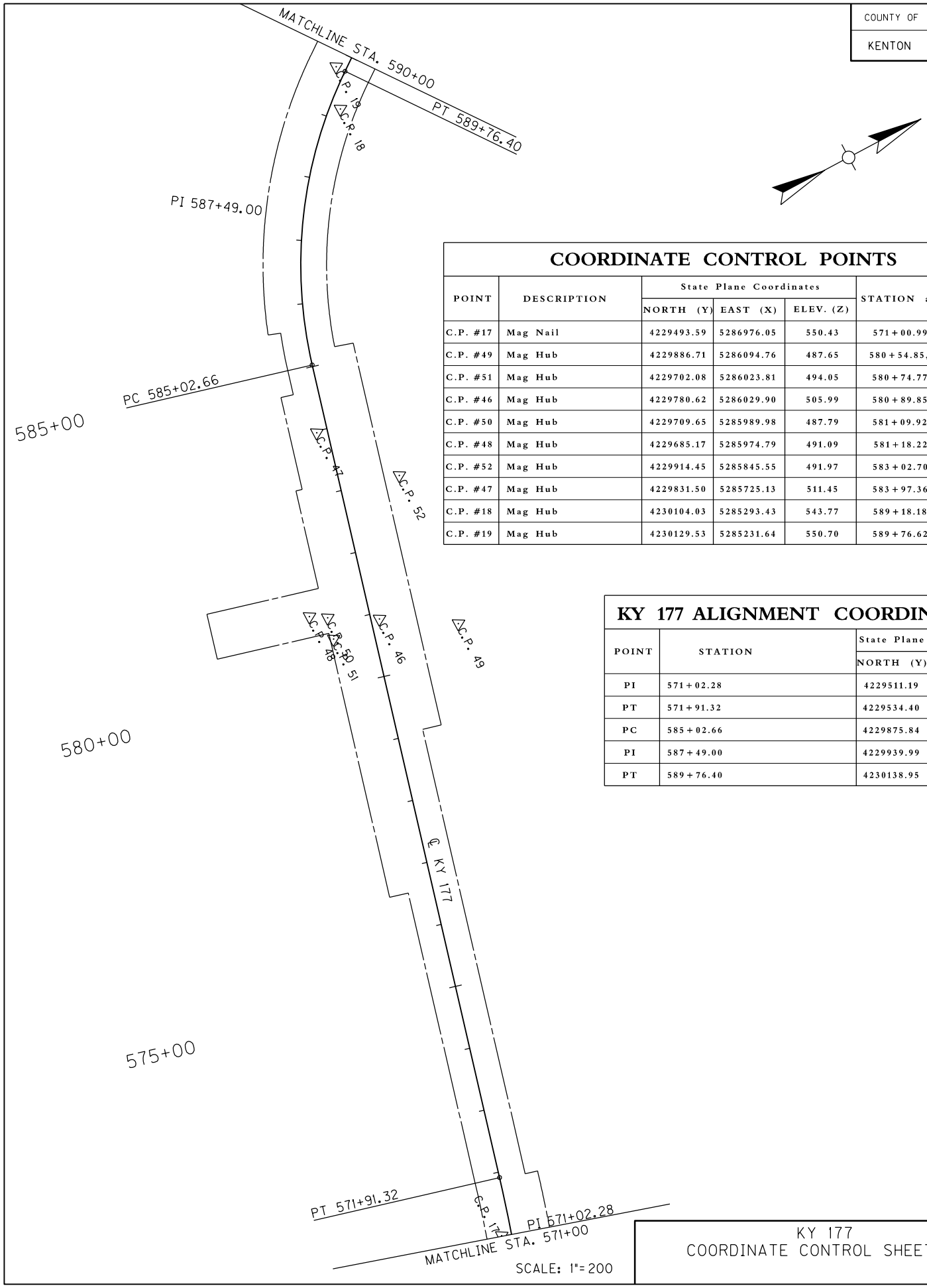
POINT	DESCRIPTION	State Plane Coordinates			STATION and OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
C.P. #45	Mag Hub	4228998.77	5288514.92	532.40	554+80.73, 14.96 RT
C.P. #44	Mag Hub	4229063.95	5288372.38	531.63	556+36.80, 15.17 RT
C.P. #14	Mag Hub	4229108.41	5288265.5	531.72	557+51.73, 13.99 RT
C.P. #15	Mag Hub	4229173.95	5287987.53	535.45	560+34.61, 15.01 RT
C.P. #43	Mag Hub	4229203.23	5287842.44	537.88	561+85.72, 12.54 RT
C.P. #16	Mag Hub	4229427.95	5287266.94	550.33	568+04.09, 15.57 RT

KY 177 ALIGNMENT COORDINATES

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PT	552+75.07	4228876.25	5288682.18
PC	553+13.86	4228898.94	5288650.72
PI	554+21.44	4228961.86	5288563.46
PT	555+28.27	4229005.79	5288465.25
PC	556+89.64	4229071.67	5288317.94
PI	558+50.50	4229137.35	5288171.10
PT	560+08.88	4229156.05	5288011.34
PC	560+40.80	4229159.77	5287979.63
PI	561+54.01	4229172.93	5287867.19
PT	562+65.27	4229220.86	5287764.64
PC	563+50.07	4229256.77	5287687.81
PI	564+27.03	4229289.35	5287618.09
PT	565+03.86	4229314.63	5287545.39
PC	570+13.16	4229481.92	5287064.35

KY 177
COORDINATE CONTROL SHEET 13

COUNTY OF	ITEM NO.
KENTON	6-9018



COORDINATE CONTROL POINTS

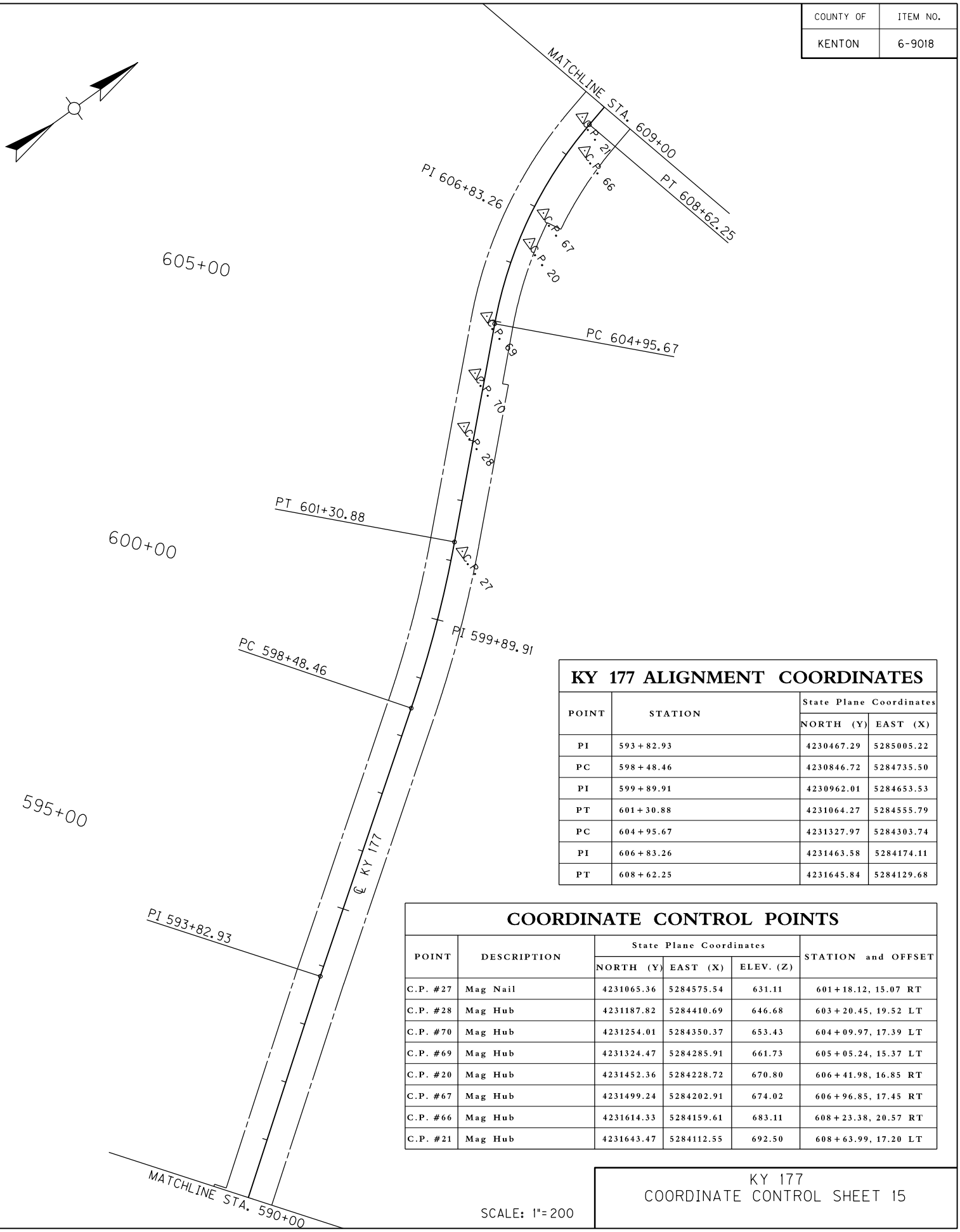
POINT	DESCRIPTION	State Plane Coordinates			STATION and OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
C.P. #17	Mag Nail	4229493.59	5286976.05	550.43	571+00.99, 16.45 LT
C.P. #49	Mag Hub	4229886.71	5286094.76	487.65	580+54.85, 132.02 RT
C.P. #51	Mag Hub	4229702.08	5286023.81	494.05	580+74.77, 64.57 LT
C.P. #46	Mag Hub	4229780.62	5286029.90	505.99	580+89.85, 12.70 RT
C.P. #50	Mag Hub	4229709.65	5285989.98	487.79	581+09.92, 66.22 LT
C.P. #48	Mag Hub	4229685.17	5285974.79	491.09	581+18.22, 93.81 LT
C.P. #52	Mag Hub	4229914.45	5285845.55	491.97	583+02.70, 93.91 RT
C.P. #47	Mag Hub	4229831.50	5285725.13	511.45	583+97.36, 17.53 LT
C.P. #18	Mag Hub	4230104.03	5285293.43	543.77	589+18.18, 16.22 RT
C.P. #19	Mag Hub	4230129.53	5285231.64	550.70	589+76.62, 16.29 LT

KY 177 ALIGNMENT COORDINATES

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PI	571+02.28	4229511.19	5286980.18
PT	571+91.32	4229534.40	5286894.14
PC	585+02.66	4229875.84	5285628.03
PI	587+49.00	4229939.99	5285390.18
PT	589+76.40	4230138.95	5285244.93

KY 177
COORDINATE CONTROL SHEET 14

COUNTY OF	ITEM NO.
KENTON	6-9018



KY 177 ALIGNMENT COORDINATES

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PI	593+82.93	4230467.29	5285005.22
PC	598+48.46	4230846.72	5284735.50
PI	599+89.91	4230962.01	5284653.53
PT	601+30.88	4231064.27	5284555.79
PC	604+95.67	4231327.97	5284303.74
PI	606+83.26	4231463.58	5284174.11
PT	608+62.25	4231645.84	5284129.68

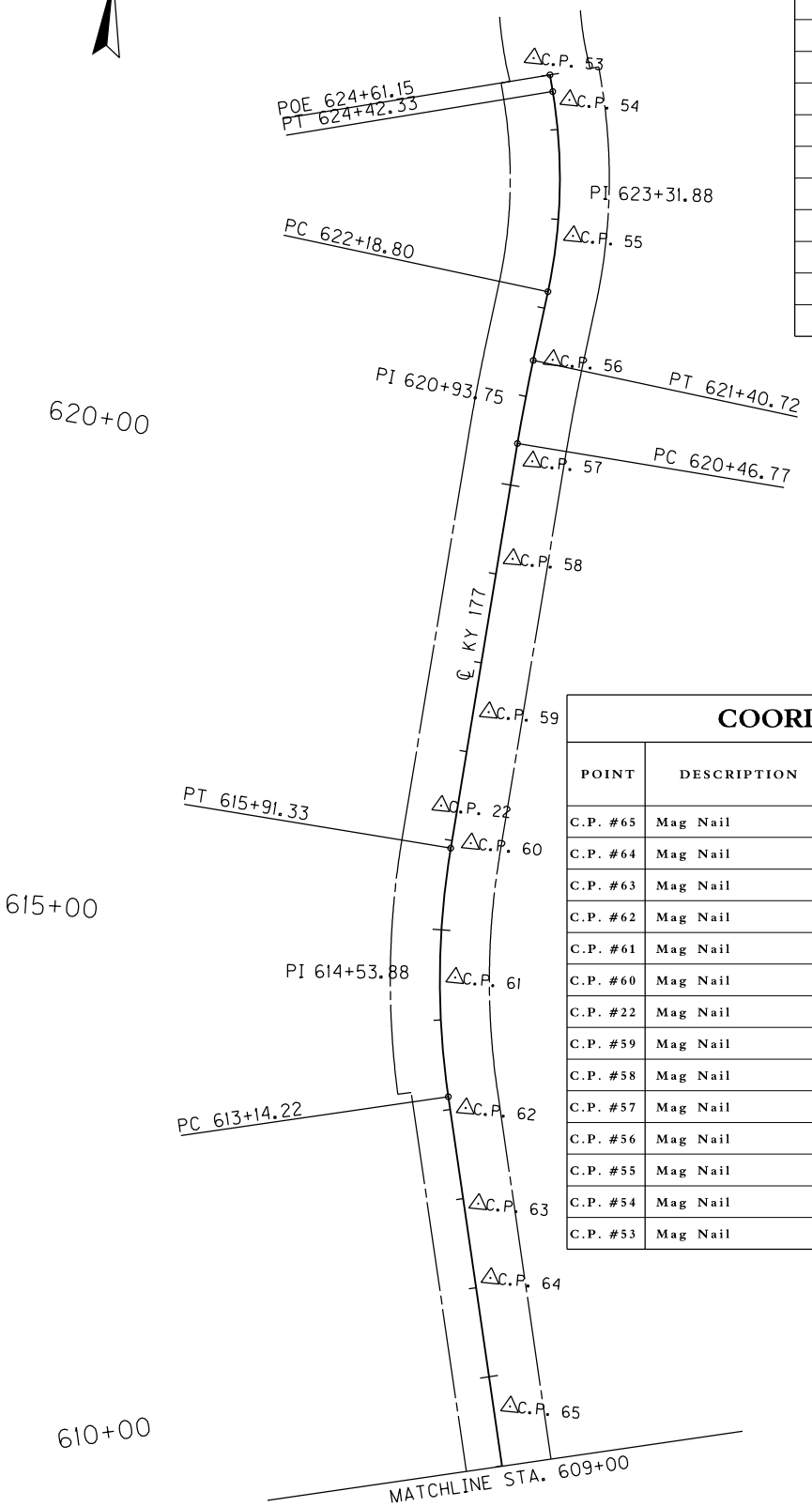
COORDINATE CONTROL POINTS

POINT	DESCRIPTION	State Plane Coordinates			STATION and OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
C.P. #27	Mag Nail	4231065.36	5284575.54	631.11	601+18.12, 15.07 RT
C.P. #28	Mag Hub	4231187.82	5284410.69	646.68	603+20.45, 19.52 LT
C.P. #70	Mag Hub	4231254.01	5284350.37	653.43	604+09.97, 17.39 LT
C.P. #69	Mag Hub	4231324.47	5284285.91	661.73	605+05.24, 15.37 LT
C.P. #20	Mag Hub	4231452.36	5284228.72	670.80	606+41.98, 16.85 RT
C.P. #67	Mag Hub	4231499.24	5284202.91	674.02	606+96.85, 17.45 RT
C.P. #66	Mag Hub	4231614.33	5284159.61	683.11	608+23.38, 20.57 RT
C.P. #21	Mag Hub	4231643.47	5284112.55	692.50	608+63.99, 17.20 LT

SCALE: 1"=200

KY 177
COORDINATE CONTROL SHEET 15

COUNTY OF	ITEM NO.
KENTON	6-9018



KY 177 ALIGNMENT COORDINATES

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PC	613+14.22	4232084.95	5284022.62
PI	614+53.88	4232220.64	5283989.54
PT	615+91.33	4232359.97	5283999.14
PC	620+46.77	4232814.33	5284030.43
PI	620+93.75	4232861.21	5284033.66
PT	621+40.72	4232907.88	5284039.09
PC	622+18.80	4232985.43	5284048.10
PI	623+31.88	4233097.75	5284061.16
PT	624+42.33	4233207.12	5284032.44
POE	624+61.15	4233225.33	5284027.66

COORDINATE CONTROL POINTS

POINT	DESCRIPTION	State Plane Coordinates			STATION and OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)	
C.P. #65	Mag Nail	4231749.52	5284123.40	694.97	609+64.47, 18.45 RT
C.P. #64	Mag Nail	4231889.47	5284088.27	707.30	611+08.75, 17.48 RT
C.P. #63	Mag Nail	4231970.29	5284066.95	713.23	611+92.32, 15.90 RT
C.P. #62	Mag Nail	4232074.59	5284043.04	721.92	612+99.32, 17.39 RT
C.P. #61	Mag Nail	4232217.77	5284017.74	734.53	614+47.42, 17.06 RT
C.P. #60	Mag Nail	4232367.86	5284020.95	743.05	616+00.70, 21.22 RT
C.P. #22	Mag Nail	4232406.36	5283984.17	750.54	616+36.58, 18.12 LT
C.P. #59	Mag Nail	4232514.69	5284026.90	757.49	617+47.59, 17.06 RT
C.P. #58	Mag Nail	4232686.45	5284037.32	772.70	619+19.66, 15.66 RT
C.P. #57	Mag Nail	4232796.43	5284048.75	778.34	620+30.16, 19.51 RT
C.P. #56	Mag Nail	4232910.68	5284060.55	787.21	621+45.99, 20.99 RT
C.P. #55	Mag Nail	4233049.90	5284069.98	800.01	622+83.56, 17.88 RT
C.P. #54	Mag Nail	4233199.70	5284051.77	813.14	624+30.57, 16.93 RT
C.P. #53	Mag Nail	4233242.25	5284007.88	818.61	N/A

SCALE: 1"=200

KY 177
COORDINATE CONTROL SHEET 16

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

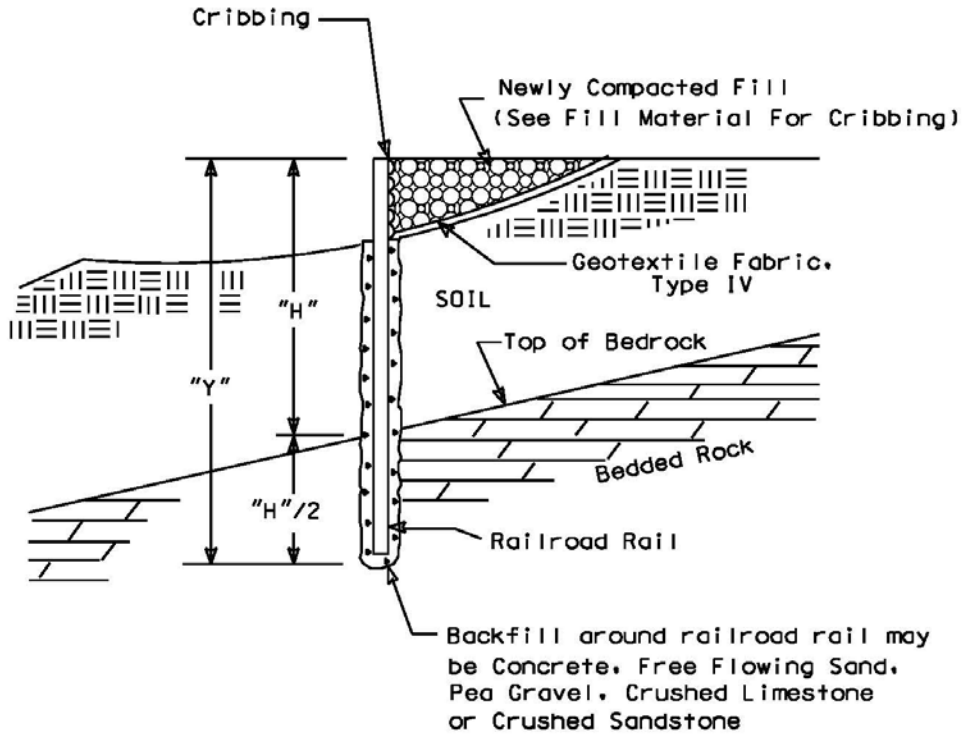
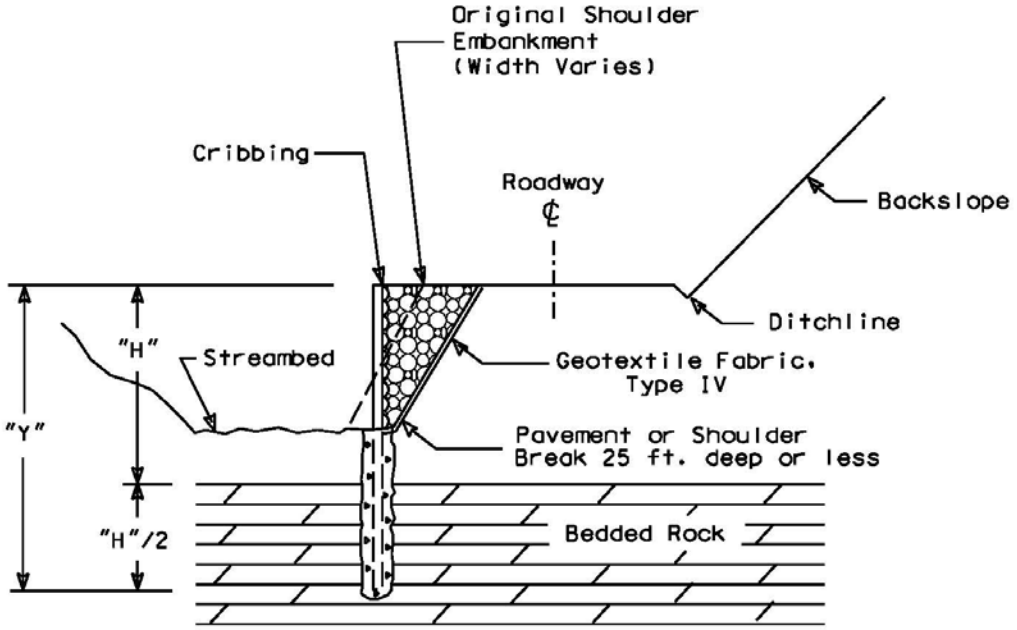


Figure 1

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

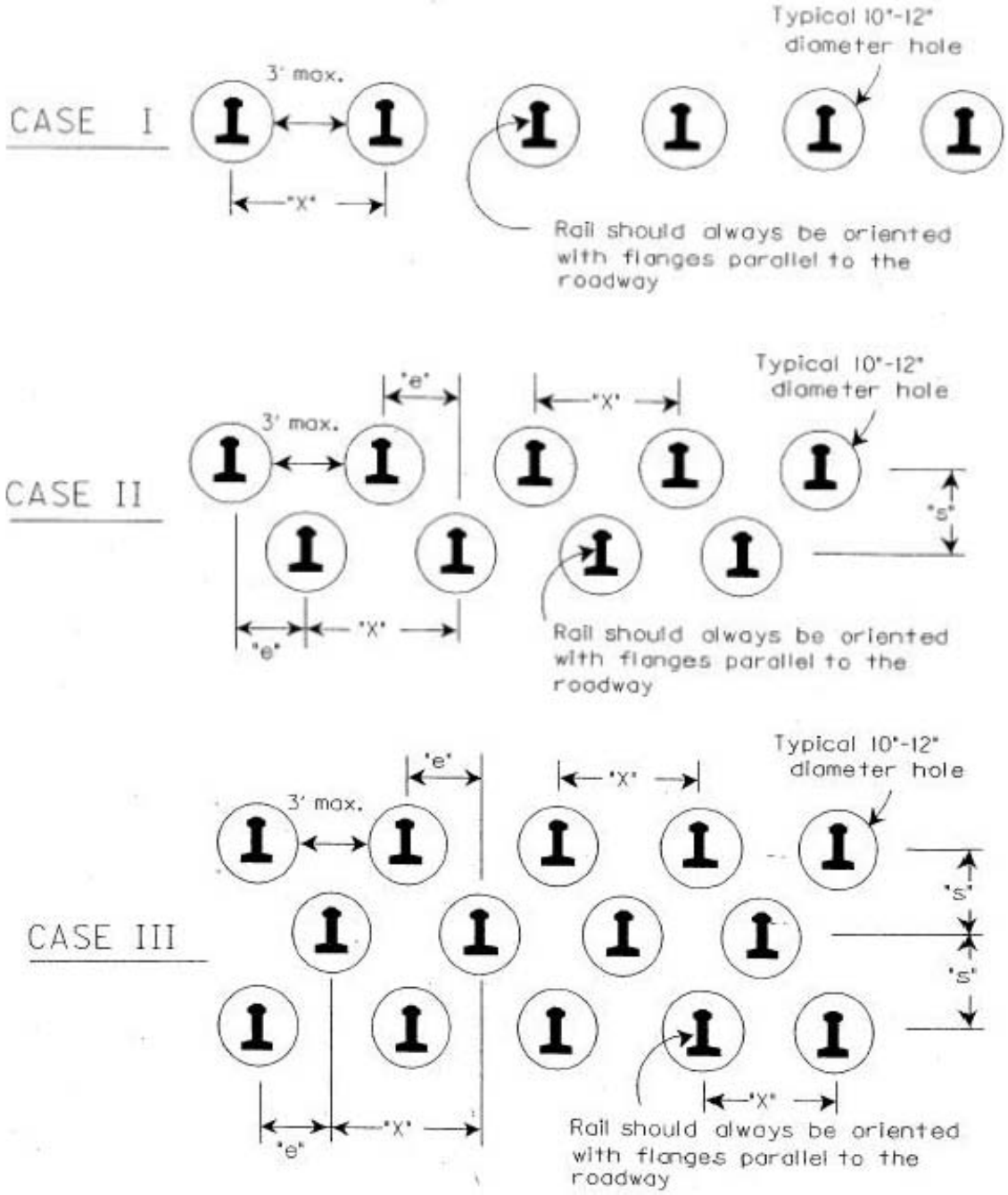


FIGURE 3

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 :

   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_____

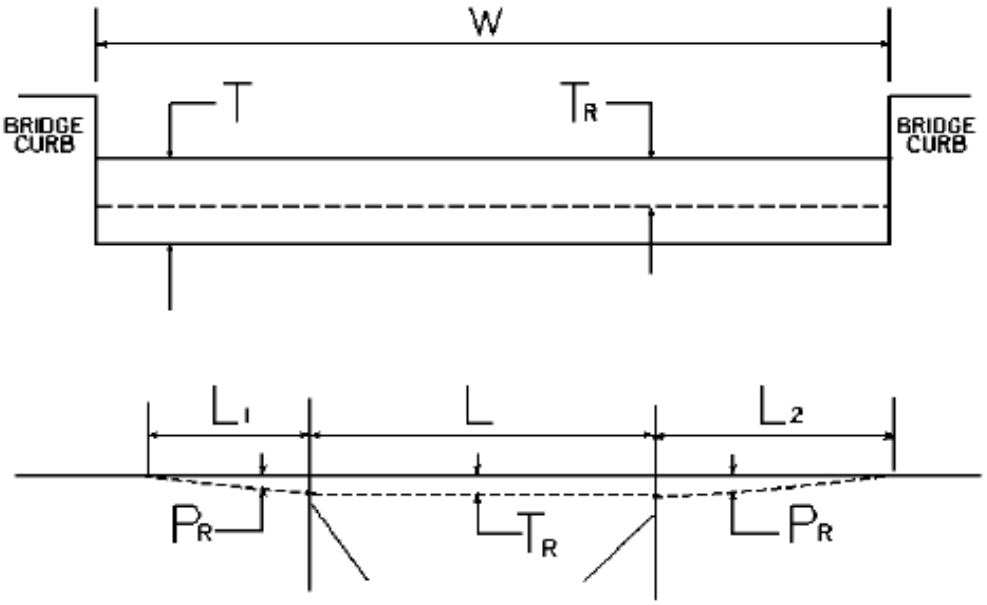
Printed Contractor's Representative_____& Date_____

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 059 0177 009-020



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 177	B00086N	15.221	50.00	0.00	100.00	100.00	0.00	169.00	1.00
KY 177	B00071N	19.250	30.00	0.00	100.00	0.00	0.00	350.00	1.00

01/01/2009

Contract ID: 194200
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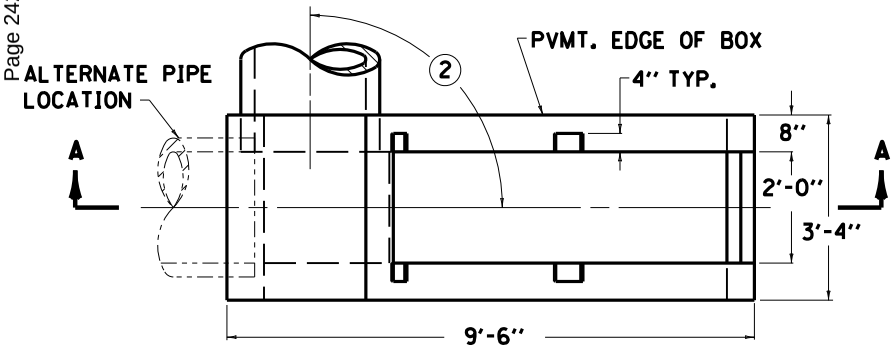
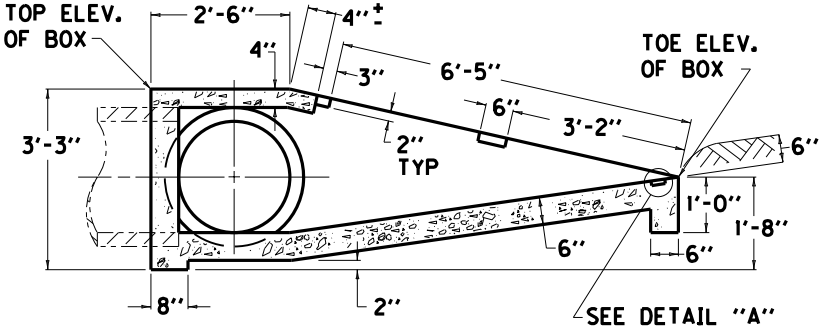
COUNTY OF	ITEM NO.	SHEET NO.



PLAN VIEW



SECTION A-A

NOTES

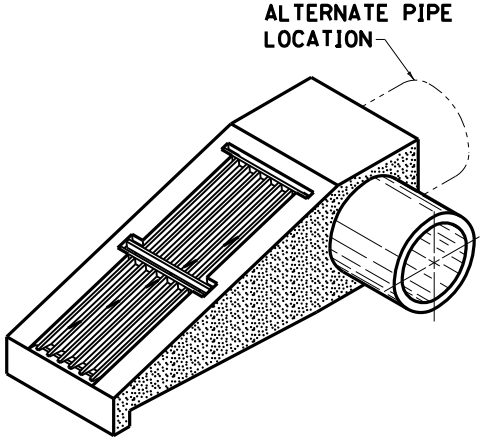
ITEM CODE	BID ITEM	UNIT
1726	SAFETY BOX INLET-18 INCH SDB-1	EACH
1727	SAFETY BOX INLET-24 INCH SDB-1	EACH

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.

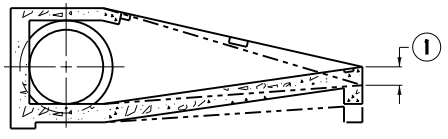
(1) TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.

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

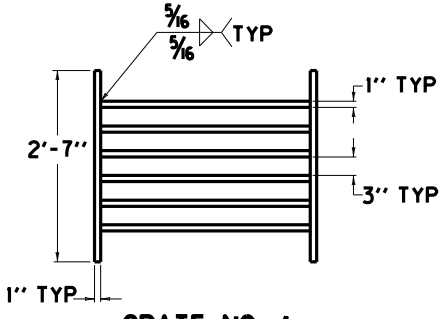
APPROXIMATE QUANTITIES			
CLASS "A" CONC.	GRATE	LBS. STRUCTURAL STEEL	
CUBIC YARDS	NUMBER	EACH GRATE	TOTAL POUNDS
1.44	1	145	298
	2	153	



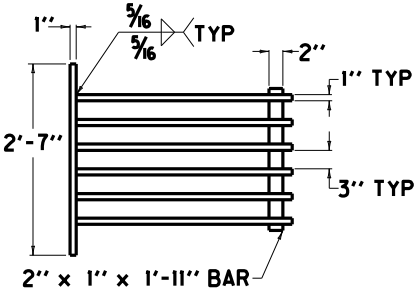
ISOMETRIC VIEW



SECTIONAL VIEW



GRATE NO. 1
PLAN VIEW



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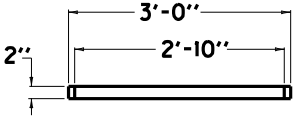
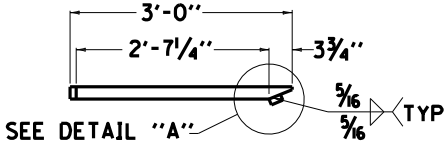
PLAN VIEW



GRATE NO. 1
SIDE ELEVATION



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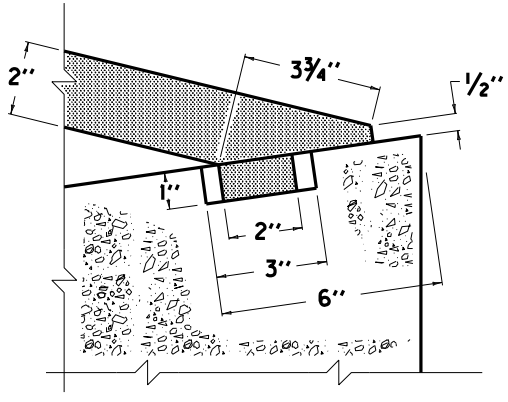
SIDE ELEVATION



DETAIL "A"

KENTUCKY
DEPARTMENT OF HIGHWAYS

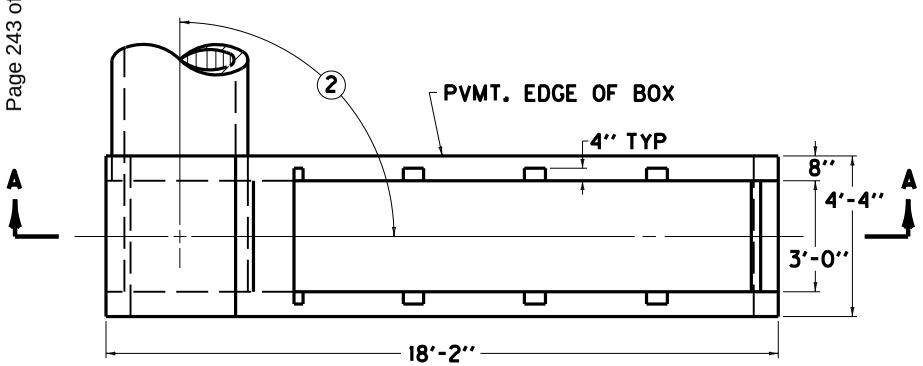
SAFETY TYPE BOX INLET (18" OR 24")

APPROVED _____ PROJECT ENGINEER 06-04-2008 DATE

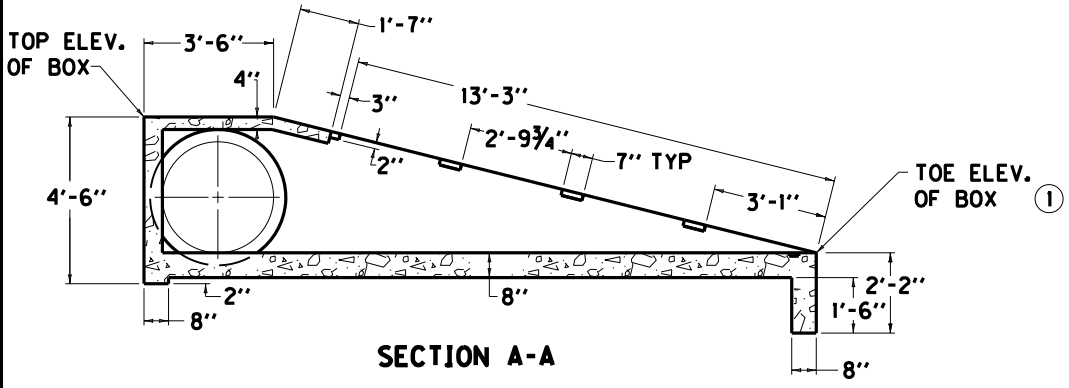
KENTON COUNTY
12-GR19T010-HSIP & FD05

Contract ID: 194200 Page 243 of 3

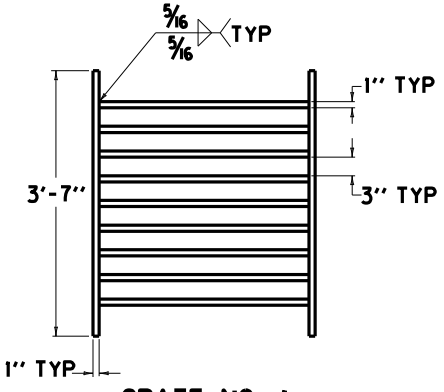
COUNTY OF	ITEM NO.	SHEET NO.



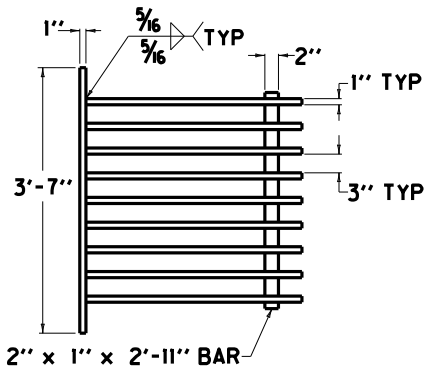
PLAN VIEW



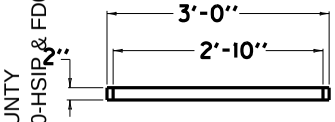
SECTION A-A



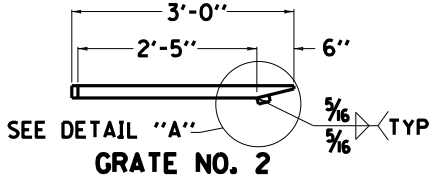
GRATE NO. 1
PLAN VIEW



GRATE NO. 2
PLAN VIEW



GRATE NO. 1
SIDE ELEVATION



GRATE NO. 2
SIDE ELEVATION

NOTES

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

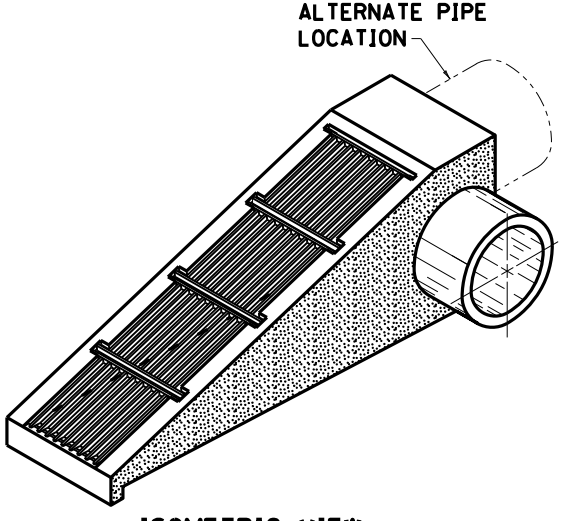
THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.

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

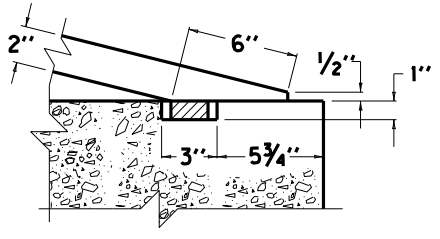
(2) SKEW OF BOX SHALL VARY TO FIT EXISTING FIELD CONDITIONS.

3. ALL QUANTITIES ARE FOR ONE HEADWALL.

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



ISOMETRIC VIEW



DETAIL "A"

SHEET 1 OF 2

KENTUCKY
DEPARTMENT OF HIGHWAYS

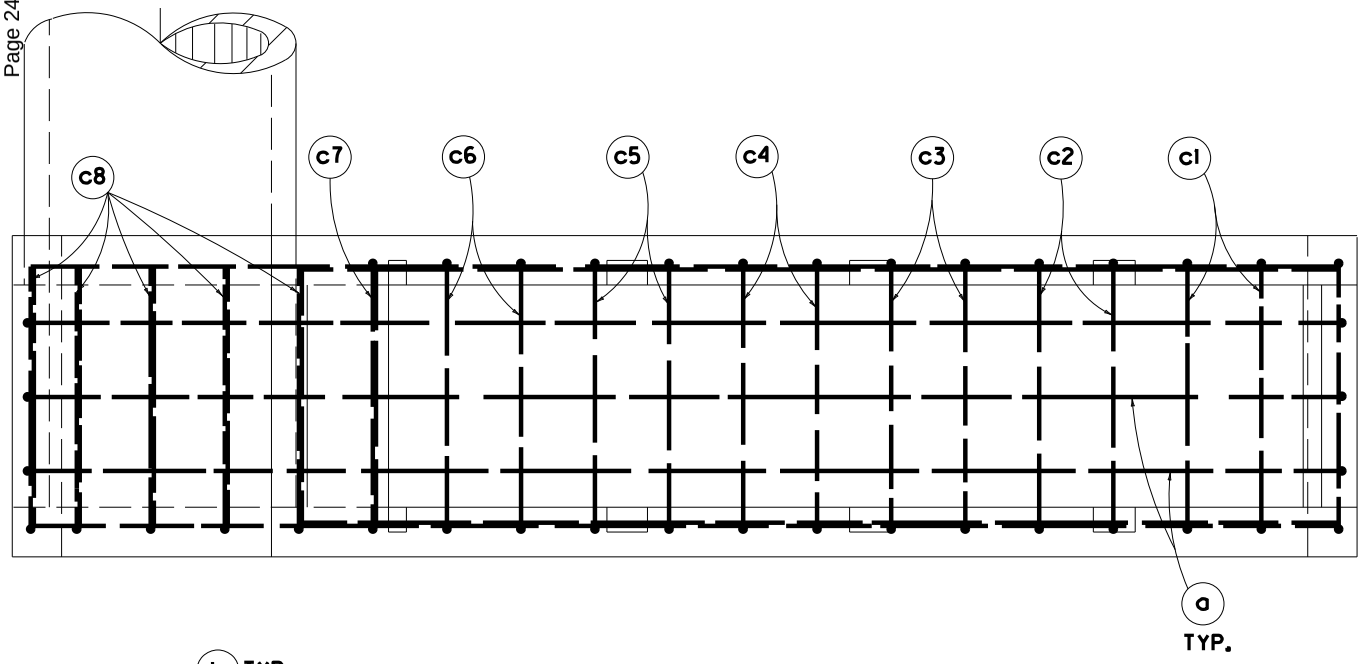
SAFETY TYPE BOX INLET (36")

APPROVED _____ PROJECT ENGINEER 06-04-2008 DATE

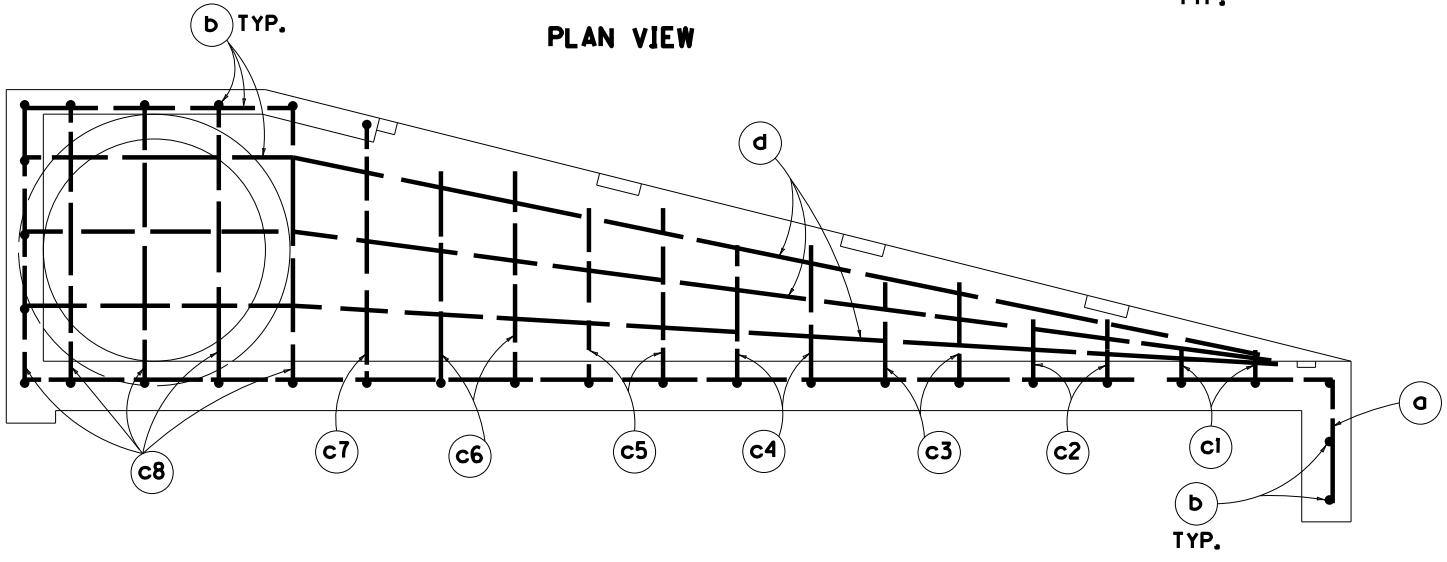
KENTON COUNTY
12IGR19T010-HSIP & FD05

Contract ID: 194200
Page 244 of 3

COUNTY OF	ITEM NO.	SHEET NO.



PLAN VIEW



ELEVATION VIEW

NOTES

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

BENT BAR SHAPES

K=3'-6"

BARS (c)

K=1'-8"

BARS (a)

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

SHEET 2 OF 2

KENTUCKY
DEPARTMENT OF HIGHWAYS

BILL OF REINFORCEMENT SAFETY TYPE BOX INLET (36")

APPROVED _____ PROJECT ENGINEER 06-04-2008 DATE

KENTON COUNTY
12-GR19T010-HSIP & FD05

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2019* and *Standard Drawings, Edition of 2016.*

SUPPLEMENTAL SPECIFICATIONS

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

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

SPECIAL NOTE FOR BARCODE LABEL ON PERMANENT SIGNS

1.0 DESCRIPTION. Install barcode label on sheeting signs. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

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).

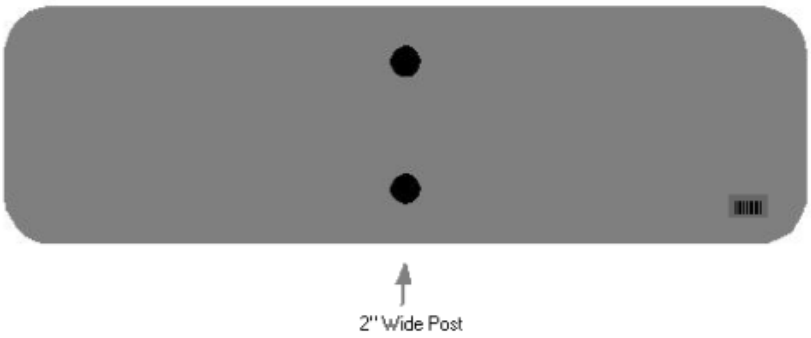
The installation of the permanent sign will be measured in accordance to Section 715.

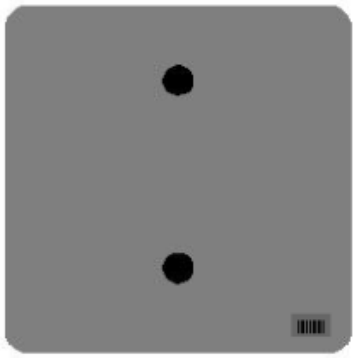
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24631EC	Barcode Sign Inventory	Each

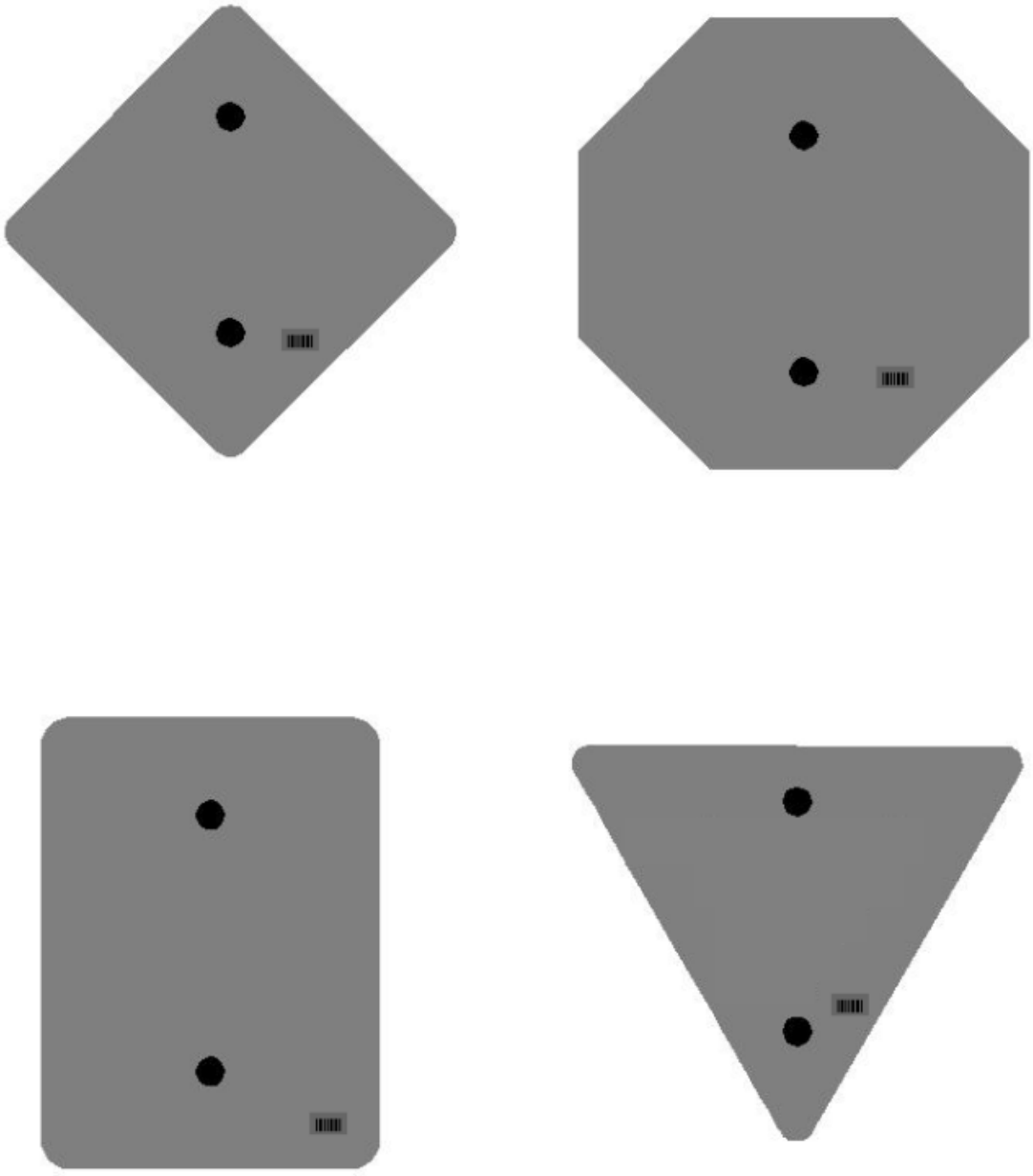
The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment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

One Sign Post

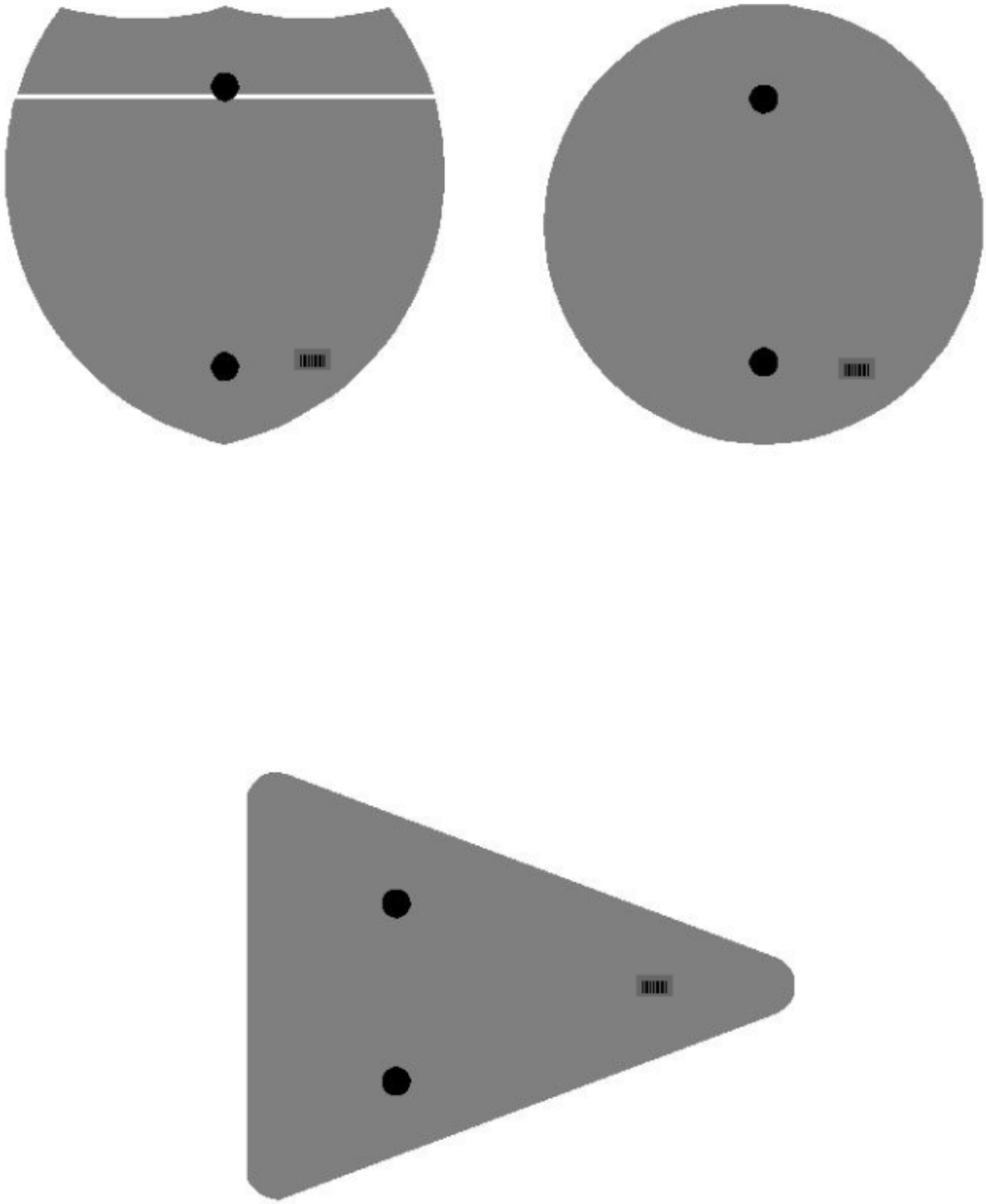




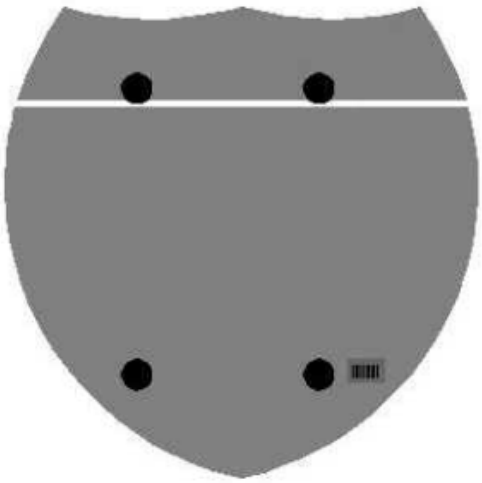
One Sign Post



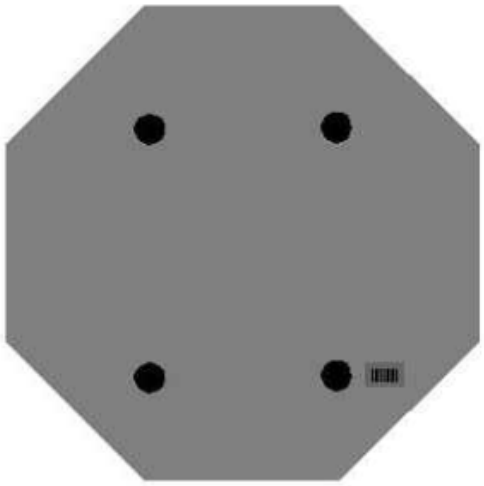
One Sign Post



Double Sign Post

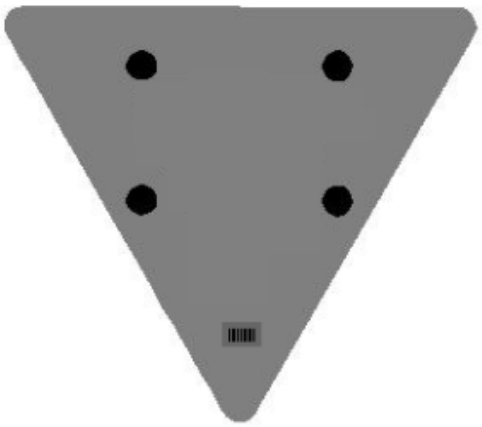


Interstate
Shield



48" Stop

2 Post Signs



2016 STANDARD DRAWINGS THAT APPLY

ROADWAY

~ *BARRIERS* ~

GUARDRAIL CONNECTORS TO BRIDGE ENDS

GUARDRAIL CONNECTOR TO BRIDGE END TYPE A COMPONENTS RBC-002-03
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A AND A-1 COMPONENTS SEPIA-013
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A SEPIA-015

TYPICAL BARRIER INSTALLATIONS

TYPICAL GUARDRAIL INSTALLATIONS SEPIA-024
TYPICAL GUARDRAIL INSTALLATIONS RBI-002-07
INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1 ..... SEPIA-025

GUARDRAIL HARDWARE

STEEL BEAM GUARDRAIL (W-BEAM) SEPIA-027
GUARDRAIL COMPONENTS RBR-005-11
GUARDRAIL TERMINAL SECTIONS RBR-010-06
STEEL GUARDRAIL POSTS SEPIA-028
GUARDRAIL END TREATMENT TYPE 1 ..... SEPIA-029
GUARDRAIL END TREATMENT TYPE 3 ..... RBR-030-05
GUARDRAIL END TREATMENT TYPE 3 ALTERNATE ANCHOR RBR-032
GUARDRAIL END TREATMENT TYPE 4A SEPIA-030
DELINEATORS FOR GUARDRAIL SEPIA-032

~ *DRAINAGE* ~

PAVED DITCHES, FLUME INLETS AND CHANNEL LININGS

CHANNEL LINING CLASS II AND III RDD-040-05

PIPE AND BOX CULVERT HEADWALLS

SLOPED AND FLARED HEADWALLS FOR 12” TO 27” PIPE RDH-020-03

TYPICAL DRAINAGE INSTALLATIONS

CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (12” – 24” PIPE) RDI-001-10
CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (27” – 42” PIPE) RDI-002-05
PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER PIPE RDI-020-09
PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER, REINFORCED CONC. PIPE RDI-021-01
PIPE BEDDING, TRENCH CONDITION RDI-025-05
PIPE BEDDING, TRENCH CONDITION, REINFORCED CONC. PIPE RDI-026-01
EROSION CONTROL BLANKET SLOPE INSTALLATION RDI-040-01
EROSION CONTROL BLANKET CHANNEL INSTALLATION RDI-041-01

MISCELLANEOUS DRAINAGE

TEMPORARY SILT FENCE RDX-210-03
TEMPORARY SILT FENCE WITH WOVEN WIRE FENCE FABRIC RDX-215-01
SILT TRAP - TYPE A RDX-220-05
SILT TRAP - TYPE B RDX-225-01
SILT TRAP - TYPE C RDX-230-01

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 PART 1 ..... RGX-001-06

~ *PAVEMENT* ~

MEDIANS, CURBS, APPROACHES, ENTRANCES, ETC.

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

TRAFFIC

~ *PERMANENT* ~

RAISED PAVEMENT MARKERS

SHOULDER & EDGELINE RUMBLE STRIP DETAILS SEPIA-005
EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS SEPIA-006

~ *TEMPORARY* ~

TRAFFIC CONTROL

LANE CLOSURE TWO-LANE HIGHWAY TTC-100-04
SHOULDER CLOSURE TTC-135-02

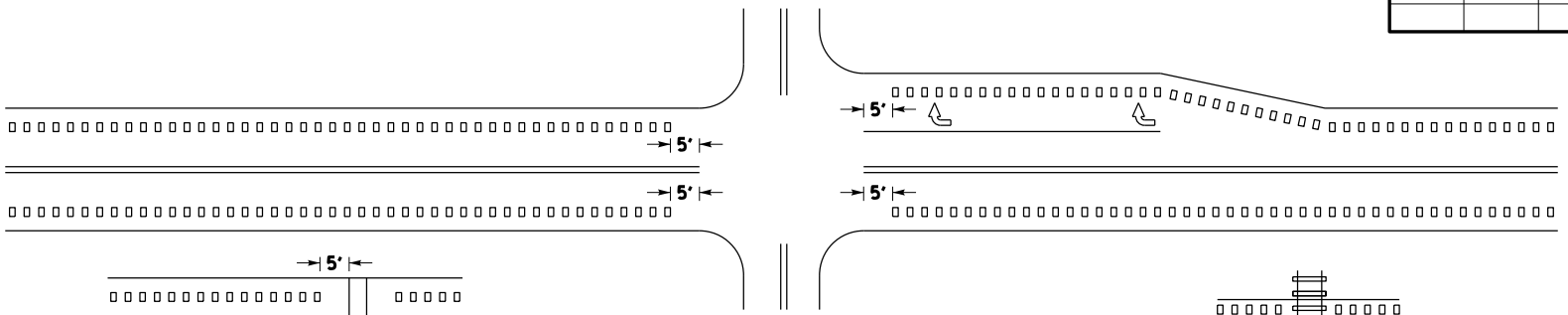
DEVICES

PAVEMENT CONDITION WARNING SIGNS TTD-125-02

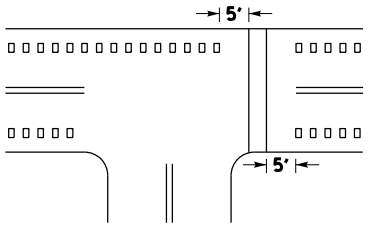
STRIPING OPERATIONS

MOBILE OPERATION FOR PAINT STRIPING CASE I TTS-100-02
MOBILE OPERATION FOR PAINT STRIPING CASE II TTS-105-02

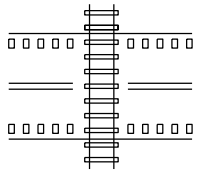
COUNTY OF	ITEM NO.	SHEET



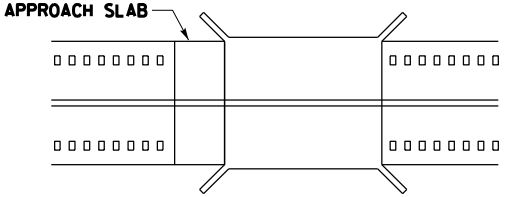
INTERSECTIONS WITH OR WITHOUT ①
RIGHT TURN LANES



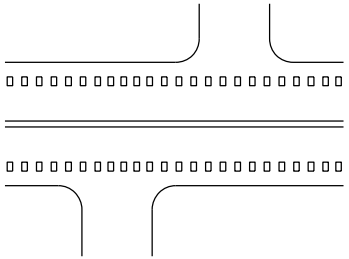
MARKED CROSSWALK ②



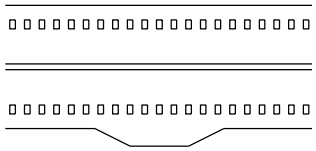
HIGHWAY-RAIL GRADE CROSSINGS ③



BRIDGE DECK/APPROACH SLAB ④



DRIVEWAYS/MINOR
COMMERCIAL ENTRANCES ⑤



MAILBOX TURNOUTS ⑥

~ NOTES ~

① RUMBLE STRIPS SHALL BE OMITTED THROUGH MAJOR INTERSECTIONS WITH, OR WITHOUT, RIGHT-TURN LANES. OMIT RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF THE AREA WHERE EDGELINE PAVEMENT MARKINGS HAVE BEEN OMITTED (NORMALLY WHERE SIDE STREET RADIUS INTERSECTS MAINLINE).

② RUMBLE STRIPS SHALL NOT BE INSTALLED THROUGH MARKED CROSSWALKS. OMIT RUMBLE STRIPS APPROXIMATELY 5' IN ADVANCE OF MARKED CROSSWALKS.

③ RUMBLE STRIPS SHALL NOT BE INSTALLED ACROSS HIGHWAY-RAIL GRADE CROSSINGS.

④ RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS OR APPROACH SLABS.

⑤ RUMBLE STRIPS SHALL BE INSTALLED THROUGH DRIVEWAYS & MINOR COMMERCIAL ENTRANCES.

⑥ RUMBLE STRIPS SHALL BE INSTALLED THROUGH MAILBOX TURNOUTS.

7. RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.

BID ITEMS AND UNIT TO BID

EDGELINE RUMBLE STRIPS	LF
SHOULDER RUMBLE STRIPS	LF

DRAWING NOT TO SCALE

USE WITH SEPIA 006, 007, AND 008

KENTUCKY
DEPARTMENT OF HIGHWAYS

SHOULDER & EDGELINE RUMBLE STRIP DETAILS

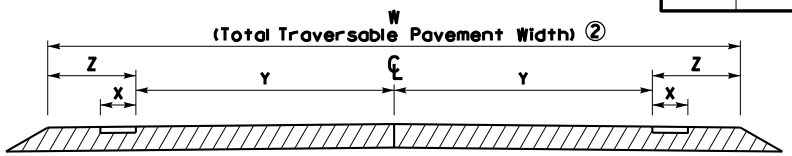
SUBMITTED B. Jeffrey Wolfe 11-23-16
DATE

005

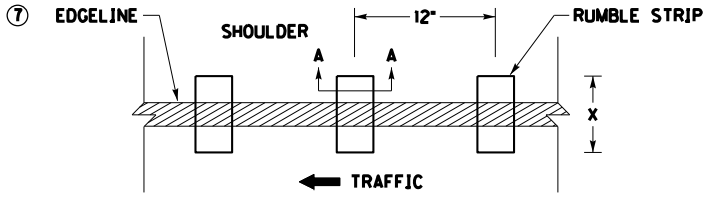
MicroStation v8.11.7.443
E-SHEET NAME: —
USER: jeffjull
DATE PLOTTED: December 2, 2016
FILE NAME: C:\USERS\JEFF.LAU\DESKTOP\SEPIA 005 - TPM16S - SHOULDER & EDGELINE RUMBLE STRIP DETAILS.DGN

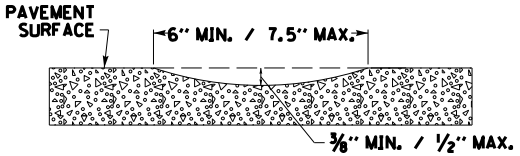
COUNTY OF	ITEM NO.	SHEET

PAVEMENT WIDTH (W) ②	RUMBLE LENGTH (X) ⑥	ELRS ONLY		CLRS & ELRS	
		LANE WIDTH (Y) ③	SHOULDER WIDTH (Z) ④	LANE WIDTH (Y) ③	SHOULDER WIDTH (Z) ④
20'	8"	9'	1'	N/A	N/A
21'	8"	9.5'	1'	N/A	N/A
22'	8"	10'	1'	N/A	N/A
23'	8"	10'	1.5'	N/A	N/A
24'	8"	10.5'	1.5'	N/A	N/A
25'	8"	N/A	N/A	11'	1.5'
26'	8"	N/A	N/A	11'	2'
27'	8"	N/A	N/A	11.5'	2'
28'	8"	N/A	N/A	12'	2'
29'	8"	N/A	N/A	12'	2.5'
30'	8"	N/A	N/A	12'	3'
31'	8"	N/A	N/A	12'	3.5'
32'	8"	N/A	N/A	12'	4'
33'	8"	N/A	N/A	12'	4.5'



PAVEMENT CROSS-SECTION





SECTION A-A

~ NOTES ~

1. EDGELINE RUMBLE STRIPS SHOULD BE INSTALLED ACCORDING TO THE DIMENSIONS PROPOSED ABOVE UNLESS THERE IS AN ENGINEERING BASIS THAT SUPPORTS A CHANGE IN DIMENSION. FOR EXAMPLE, IF THE EXISTING LANE WIDTH IS NARROWER THAN THE LANE WIDTH PROPOSED IN THIS DRAWING AND THE EXISTING SHOULDER PAVEMENT DEPTH IS NOT SUITABLE TO BE CONVERTED INTO A PORTION OF THE PROPOSED LANE WIDTH, THEN THE EXISTING LANE WIDTH SHOULD BE USED INSTEAD OF THE WIDTH PROPOSED IN THIS DRAWING.

② PAVEMENT WIDTH (W) IS THE TOTAL WIDTH OF TRAVERSABLE PAVEMENT. DO NOT INCLUDE THE WIDTH OF ANY NON-TRAVERSABLE PAVEMENT, SUCH AS PAVEMENT WEDGES, WHEN MEASURING THE PAVEMENT WIDTH (W).

③ LANE WIDTH (Y) TO BE MEASURED FROM CENTER OF ROAD TO LANE SIDE EDGE OF RUMBLE STRIP.

④ PAVED SHOULDER WIDTH (Z) TO BE MEASURED FROM LANE SIDE EDGE OF RUMBLE STRIP TO OUTSIDE EDGE OF TRAVERSABLE PAVEMENT.

5. DISTANCES SHOWN ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE. IF THE TYPICAL SECTION SHOWS A LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) THAT DIFFERS FROM THE WIDTHS LISTED IN THIS DRAWING, THE ENGINEER SHALL DETERMINE THE LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) AT THE TIME OF CONSTRUCTION.
NOTE: CENTERLINE RUMBLE STRIPS SHOULD BE OMITTED WHEN THE LANE WIDTH (Y) IS LESS THAN 11 FT.

⑥ RUMBLE LENGTH (X) MAY BE MODIFIED AS THE ENGINEER DIRECTS, IF THE SHOULDER WIDTH (Z) IS EQUAL TO OR LESS THAN THE PROPOSED RUMBLE LENGTH (X).

⑦ PLACE THE EDGELINE MARKING IN THE CENTER OF THE RUMBLE STRIP.

8. EDGELINE RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.

BID ITEM AND UNIT TO BID
EDGELINE RUMBLE STRIPS LF

DRAWING NOT TO SCALE

USE WITH SEPIA 005

KENTUCKY
DEPARTMENT OF HIGHWAYS

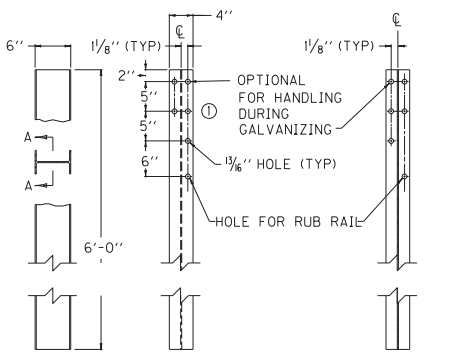
EDGELINE RUMBLE STRIP DETAILS
TWO LANE ROADWAYS

SUBMITTED B. Jeffrey Wolfe 11-23-16
DATE

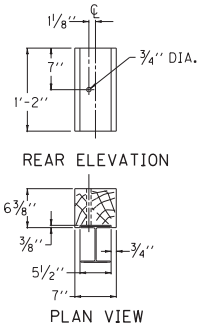
006

FILE NAME: C:\USERS\JEFF.LA\DESKTOP\SEPIA 006 - EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS.DGN
USER: jeff.la
DATE PLOTTED: November 30, 2016
E-SHEET NAME: ——
MicroStation v8.11.7.443

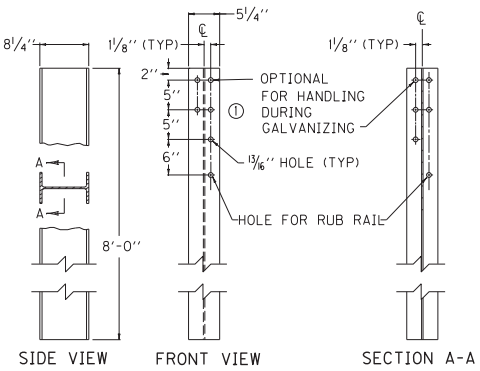
COUNTY OF	ITEM NO.	SHEET NO.



~ W6 X 9.0 STEEL GUARDRAIL POST ~
(USED WITH C6 X 8.2 RUB RAIL)

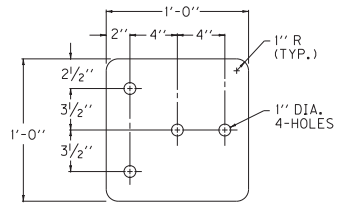


OFFSET BLOCK TYPE 6
(TIMBER OR APPROVED COMPOSITE)

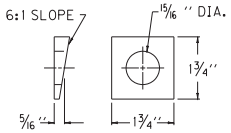


~ W8 X 21 STEEL GUARDRAIL POST ~

~ NOTES ~
① THESE HOLES ARE REQUIRED FOR ATTACHING RAIL.



5/8'' STEEL PLATE ''A''



BEVELED WASHER

USE WITH CUR. STD. DWGS.
RBC-002, RBC-005, RBC-006

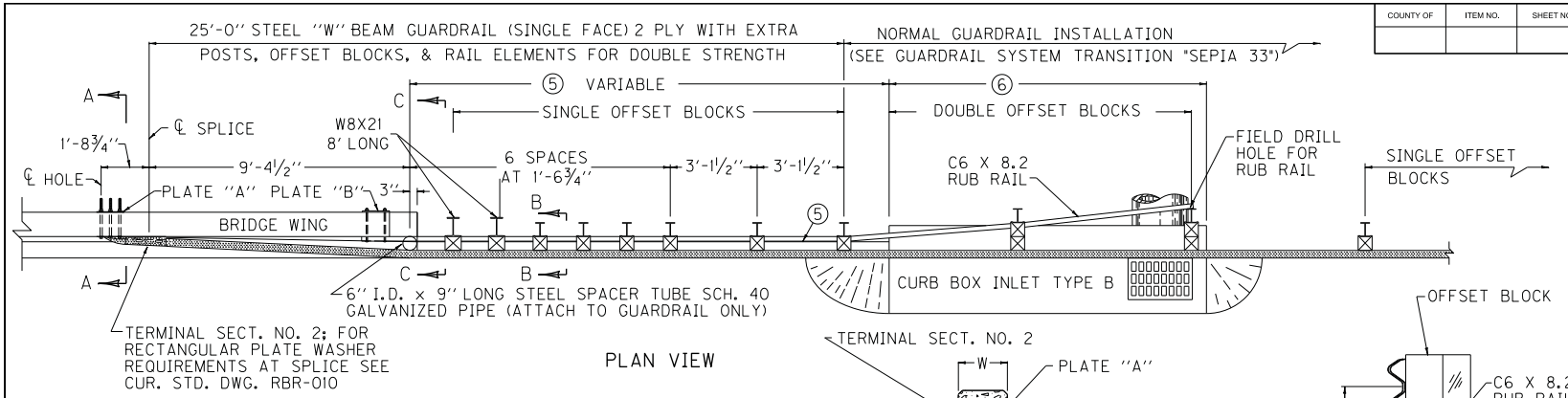
KENTUCKY DEPARTMENT OF HIGHWAYS

GUARDRAIL CONNECTOR TO BRIDGE END TYPE A AND A-1 COMPONENTS

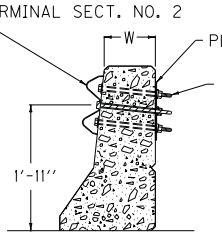
SUBMITTED _____ ACTING DIRECTOR DIVISION OF DESIGN — DATE 12-20-18

013

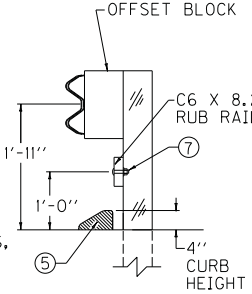
COUNTY OF	ITEM NO.	SHEET NO.



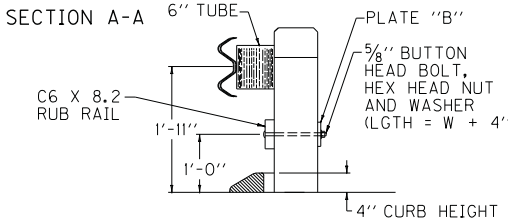
PLAN VIEW



SECTION A-A



SECTION B-B



SECTION C-C

~ NOTES ~

1. GENERAL
   a. SEE CUR. STD. DWGS. IN THE RBB, RBI, RBR, AND RPM-SERIES FOR OTHER RELATED GUARDRAIL DETAILS AND BRIDGE PLANS FOR BRIDGE WING DETAIL.
   b. SEE CUR. STD. DWG. RDB-SERIES FOR CURB BOX INLET TYPE B.
   c. GUARDRAIL CONNECTOR TO BRIDGE END TYPE A IS FOR USE ON BOTH BRIDGE ENDS OF AN UNDIVIDED HIGHWAY AND ON THE APPROACH BRIDGE ENDS OF A DIVIDED HIGHWAY.
2. MATERIAL REQUIREMENTS
   ALL HARDWARE SHALL BE GALVANIZED. (AASHTO M-232)
   ⅝" STEEL PLATE "A" AND "B" (AASHTO M-270)
   ⅞" HEX HEAD BOLTS OR STEEL THREADED RODS (LENGTH AS SHOWN)
   ⅞" HEAVY HEX NUTS (⅞" THICK) (AASHTO M-291)
   ⅞" FLAT WASHERS (3/16" THICK) (AASHTO M-293)
   ⅞" BEVELED WASHERS (5/16" MEAN THICKNESS) (AASHTO M-293)
   BOTH THE BOLT AND THREADED ROD SHALL HAVE A MINIMUM OF 50,000 LBS. TENSILE STRENGTH AT THE NARROWEST POINT.
3. CONSTRUCTION METHODS
   a. ELIMINATE EXTRA OFFSET BLOCKS WHEN CURB BOX INLET TYPE B IS NOT REQUIRED.
   b. HOLES TO BE FORMED THROUGH BRIDGE WING WITH 1" I.D. PLASTIC PIPE FOR ⅞" BOLTS AND ¾" I.D. PLASTIC PIPE FOR ⅝" BOLTS, PIPE SHALL REMAIN IN PLACE.
4. METHOD OF MEASUREMENT AND BASIS OF PAYMENT
   a. GUARDRAIL CONNECTOR TO BRIDGE END TYPE A SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, AND INCLUDES: TERMINAL SECTION NO. 2; ALL ITEMS WHICH ARE IN ADDITION TO THE NORMAL INSTALLATION OF STEEL BEAM GUARDRAIL (EXTRA POSTS, OFFSET BLOCKS, RAIL ELEMENTS, SPACER TUBE, HARDWARE, RUB RAIL, ETC.), AND OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION AS DETAILED. STEEL "W" BEAM GUARDRAIL (SINGLE FACE) AND ISLAND HEADER CURB ARE SEPARATE BID ITEMS WHICH ARE ALWAYS REQUIRED. CURB BOX INLET TYPE B IS A SEPARATE BID ITEM THAT WILL BE USED WHEN REQUIRED FOR BRIDGE END DRAINAGE.

BID ITEMS AND UNIT TO BID	
GUARDRAIL CONNECTOR TO BRIDGE END TY A	EACH
GUARDRAIL-STEEL "W" BEAM-S FACE	LF
ISLAND HEADER CURB TYPE 1 OR 2	LF
CURB BOX INLET TYPE B (AS REQUIRED)	EACH

   b. THE PLASTIC PIPE AND COST OF FORMING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR BRIDGE SUPERSTRUCTURE CONCRETE.

⑤ ISLAND HEADER CURB. TRANSITION FROM ISLAND CURB SHAPE TO SHAPE ON BRIDGE WING WITHIN 7'-3". LENGTH OF CURB VARIABLE (22'-3" WHEN L=5'-0") (17'-3" WHEN L=10'-0") (12'-3" WHEN L=15'-0") (7'-3" WHEN L=20'-0"). ON APPROACH END CONSTRUCT 25'-0" OF ISLAND HEADER CURB EVEN WHEN CURB BOX INLET TYPE B IS NOT REQUIRED.

⑥ 6'-4" WHEN L=5'-0"
11'-4" WHEN L=10'-0" ☆
16'-4" WHEN L=15'-0"
21'-4" WHEN L=20'-0"

⑦ ⅝" X 3½" BUTTON HEAD BOLT, HEX HEAD NUT.

8. CURB BOX NOT REQUIRED UNLESS NEEDED FOR DRAINAGE.

☆ 10'-0" LENGTH IS REQUIRED UNLESS OTHERWISE NOTED.

L EQUALS THROAT LENGTH OF BOX.

USE WITH CUR. STD. DWGS.
BHS-008, RBC-002, RBC-003
RBR-010

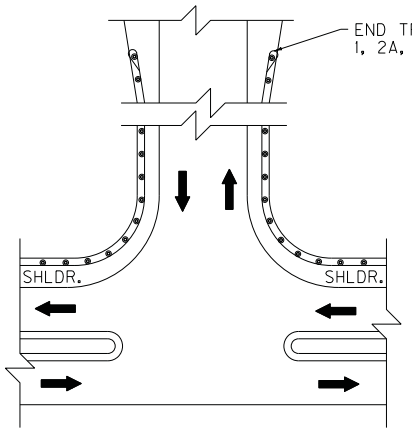
KENTUCKY DEPARTMENT OF HIGHWAYS

GUARDRAIL CONNECTOR TO BRIDGE END TYPE A

SUBMITTED William S. Ballard DIRECTOR DIVISION OF DESIGN 4-04-18 DATE

015

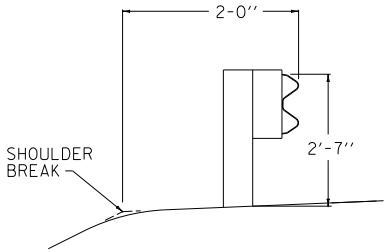
COUNTY OF	ITEM NO.	SHEET NO.
———	———	--



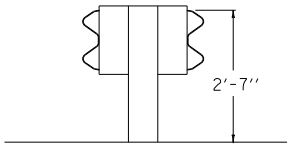
APPROACH ROADS

~ NOTES ~

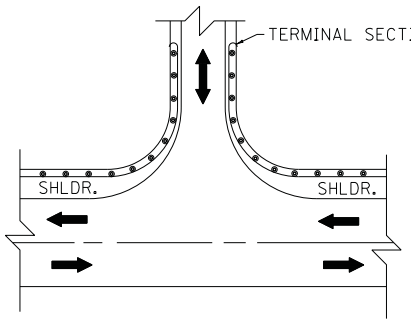
1. FOR END TREATMENT TYPE 4A USE CUR. STD. DWG. RBR-035 FOR OFFSETS.
2. THE MINIMUM LENGTH OF GUARDRAIL, INCLUDING THE END TREATMENT, PRECEDING A FIXED OBJECT IS 200 FEET: (LENGTH MAY BE REDUCED SHOULD FIELD CONDITIONS WARRANT).



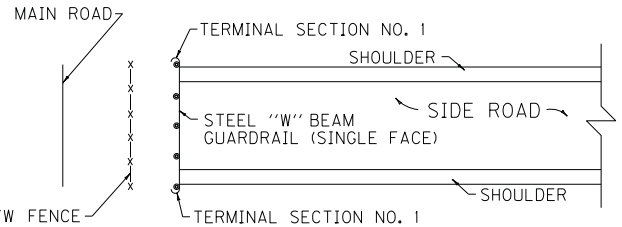
NORMAL GUARDRAIL INSTALLATION



TYPICAL DOUBLE FACE
GUARDRAIL INSTALLATION



ENTRANCES



GUARDRAIL USED AS A BARRICADE

USE WITH CUR. STD. DWG.
RBI-002, RBR-035

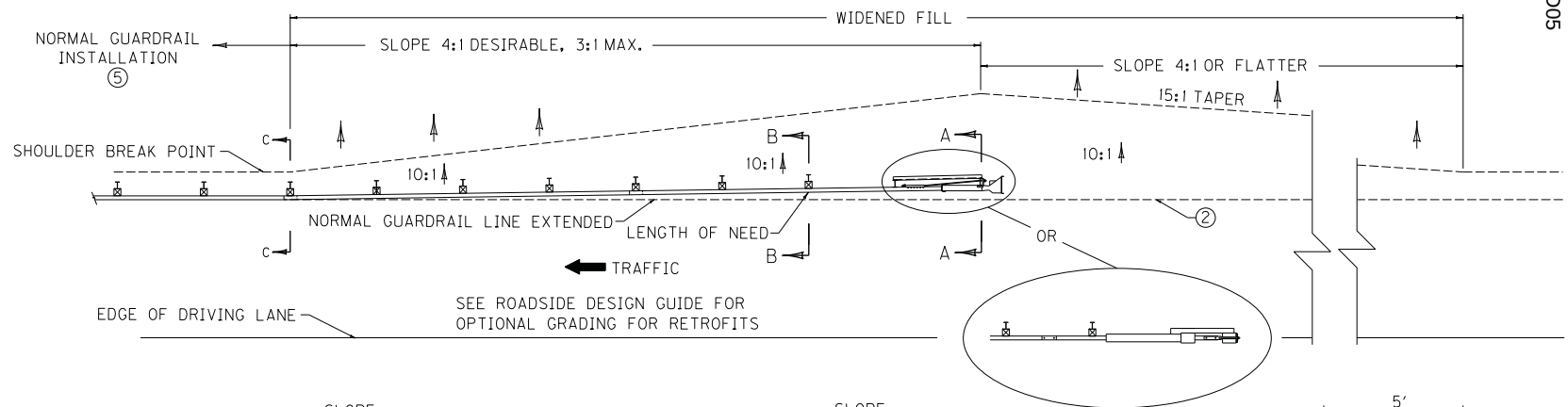
KENTUCKY
DEPARTMENT OF HIGHWAYS

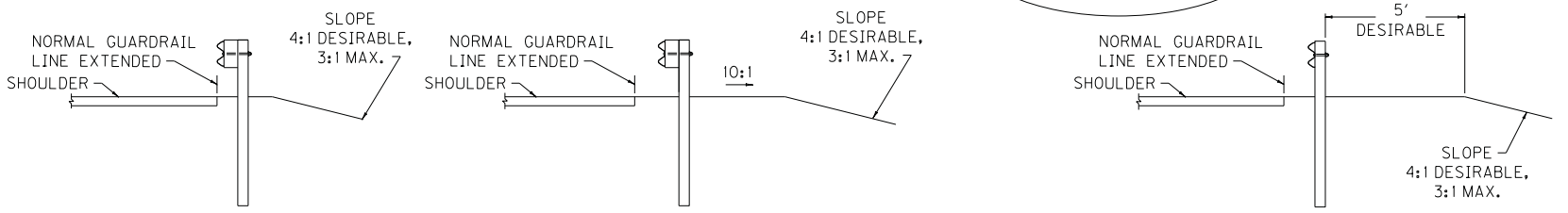
TYPICAL GUARDRAIL
INSTALLATIONS

SUBMITTED William S. Ballard 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

024

COUNTY OF	ITEM NO.	SHEET NO.
———	———	—





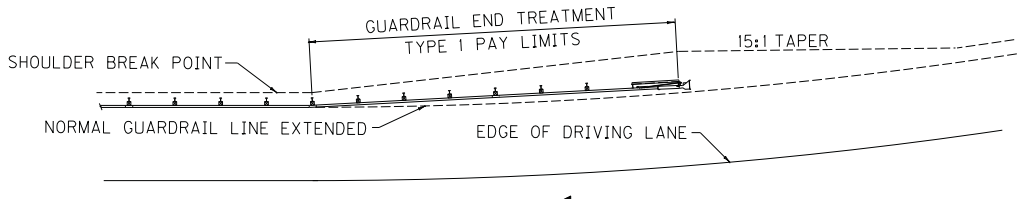
SECTION C-C SECTION B-B SECTION A-A

~ NOTES ~

BID ITEMS AND UNIT TO BID:

GUARDRAIL END TREATMENT TYPE 1	EACH
ROADWAY OR BORROW EXCAVATION, OR EMBANKMENT IN PLACE	CUYD

1. THE MINIMUM LENGTH OF GUARDRAIL, INCLUDING THE END TREATMENT, PRECEDING A FIXED OBJECT IS 200 FEET (LENGTH MAY BE REDUCED SHOULD FIELD CONDITIONS WARRANT).
② GUARDRAIL EXTRUDER EDGE CLOSEST TO TRAFFIC SHALL BE PLACED ON NORMAL GUARDRAIL LINE EXTENDED.
③ END TREATMENT TYPE 1 MAY BE ATTACHED TO CURVED GUARDRAIL PROVIDED CURVE IS A 550′ RADIUS OR MORE. END TREATMENT TYPE 1 SHALL BE INSTALLED ON A STRAIGHT LINE TAPER WITHIN THE PAY LIMITS.
4. INTENDED USE: FILLS WITH ADEQUATE VEHICLE RECOVERY ZONE BEHIND GUARDRAIL.
⑤ FOR MAINTENANCE AND REPAIR PROJECTS, USE "GUARDRAIL SYSTEM TRANSITION "SEPIA 33", TO TRANSITION BACK TO 27" OR 29" GUARDRAIL HEIGHT, IF ONLY THE TERMINAL IS PROPOSED TO BE REPLACED.



GUARDRAIL END TREATMENT TYPE 1
INSTALLED ON A CURVE ③

USE WITH CUR. STD. DWG.
RBR-020

KENTUCKY DEPARTMENT OF HIGHWAYS

INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1

SUBMITTED William S. Ballard 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

025

COUNTY OF	ITEM NO.	SHEET NO.
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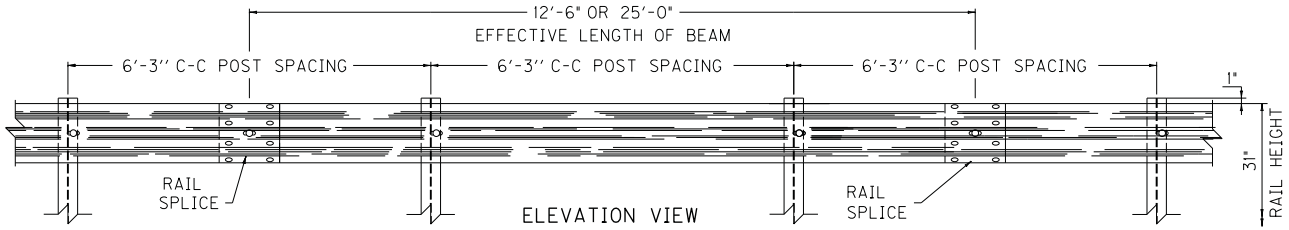

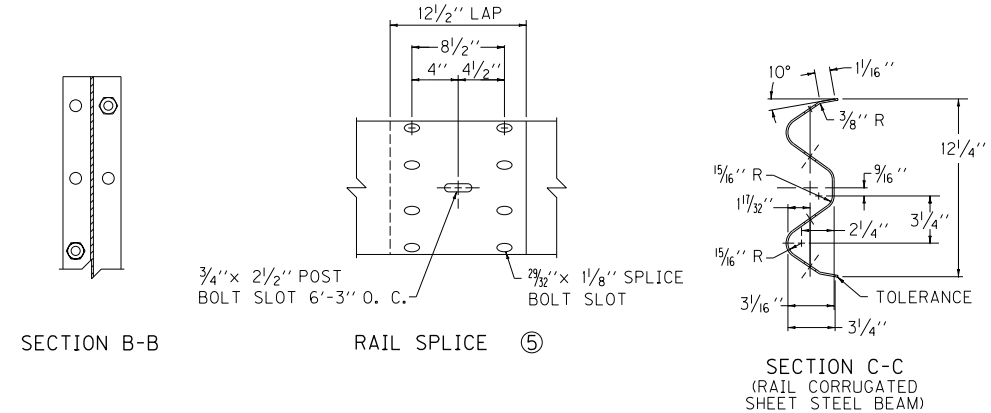

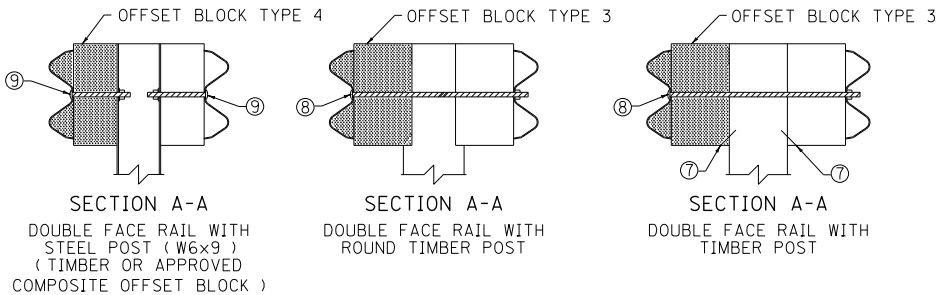

~ NOTES ~

BID ITEM AND UNIT TO BID
GUARDRAIL-STEEL W BEAM-S FACE LF
OR
GUARDRAIL-STEEL W BEAM-D FACE LF

1. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE AND ACCEPTED MANUFACTURING PRACTICES.
2. THE RAIL ELEMENT SHALL COMPLY WITH AASHTO M-180 -CLASS A, TYPE II.
3. ALL LAPS SHALL BE PLACED IN THE DIRECTION OF TRAFFIC FLOW.

④ TOLERANCE + 1¼", -¼"

⑤ 8-⅝"× 1¼" LONG BUTTON HEAD BOLTS AND HEX HEAD RECESS NUTS REQUIRED FOR EACH RAIL SPLICE.

⑥ LENGTH EQUALS POST AND BLOCK WIDTH PLUS 2" FOR BOLT OR 2¼" FOR THREADED ROD.

⑦ GALVANIZED STEEL 10d COMMON COATED NAIL (DRIVE NAIL AT THE TOP OR BOTTOM CENTER OF BLOCK AND POST AFTER BOLT IS INSTALLED).

⑧ ⅝"× ⑥ STEEL THREADED ROD AND TWO (2) HEX HEAD NUTS OR ⅝"× ⑥ BUTTON OR HEX HEAD BOLT AND HEX HEAD NUT.

⑨ ⅝"×8" BUTTON HEAD BOLT, HEX HEAD RECESS NUT AND ONE ⅝" ROUND WASHER (TYP.). BOLT SHALL HAVE A MINIMUM THREAD LENGTH OF 2".

▨ REQUIRED FOR DOUBLE RAIL

10. BOTH 12'-6" AND 25' LENGTHS OF "W" BEAM GUARDRAIL SECTIONS WILL BE PERMITTED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

KENTUCKY DEPARTMENT OF HIGHWAYS

STEEL BEAM GUARDRAIL ("W" BEAM)

SUBMITTED William S. Ballard 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

027

COUNTY OF	ITEM NO.	SHEET NO.
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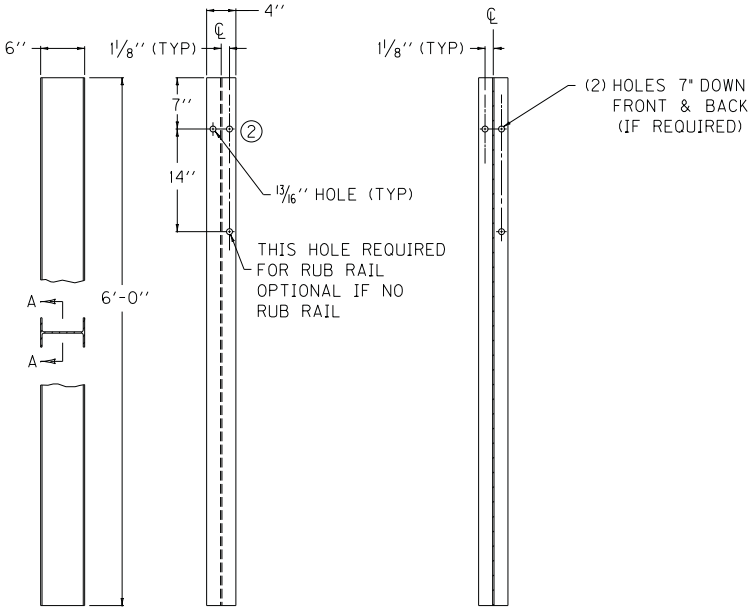


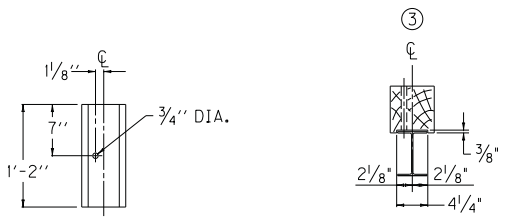
~ W6 X 9.0 STEEL POST ① ~

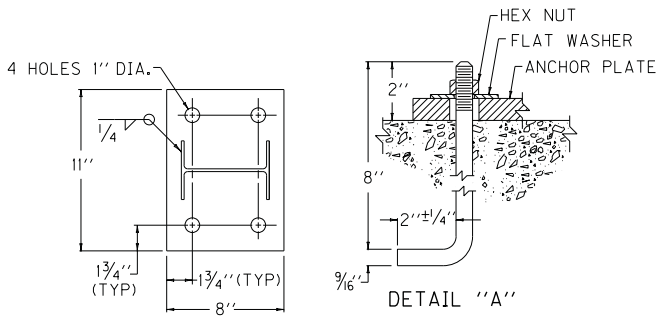
~ NOTES ~

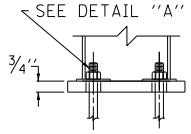
① W6 X 8.5 IS AN ACCEPTABLE ALTERNATE.

② THESE HOLES ARE REQUIRED FOR ATTACHING RAIL.

③ TIMBER OR COMPOSITE BLOCKOUTS MAY BE USED WITH STEEL POST.







OFFSET BLOCK TYPE 4
6" X 8" (Nominal Size)
(TIMBER OR APPROVED COMPOSITE)
(FOR USE WITH STEEL POST ONLY)

KENTUCKY DEPARTMENT OF HIGHWAYS

STEEL
GUARDRAIL POSTS

SUBMITTED William S. Stallard
DIRECTOR DIVISION OF DESIGN
3-06-18
DATE

028

COUNTY OF	ITEM NO.	SHEET NO.
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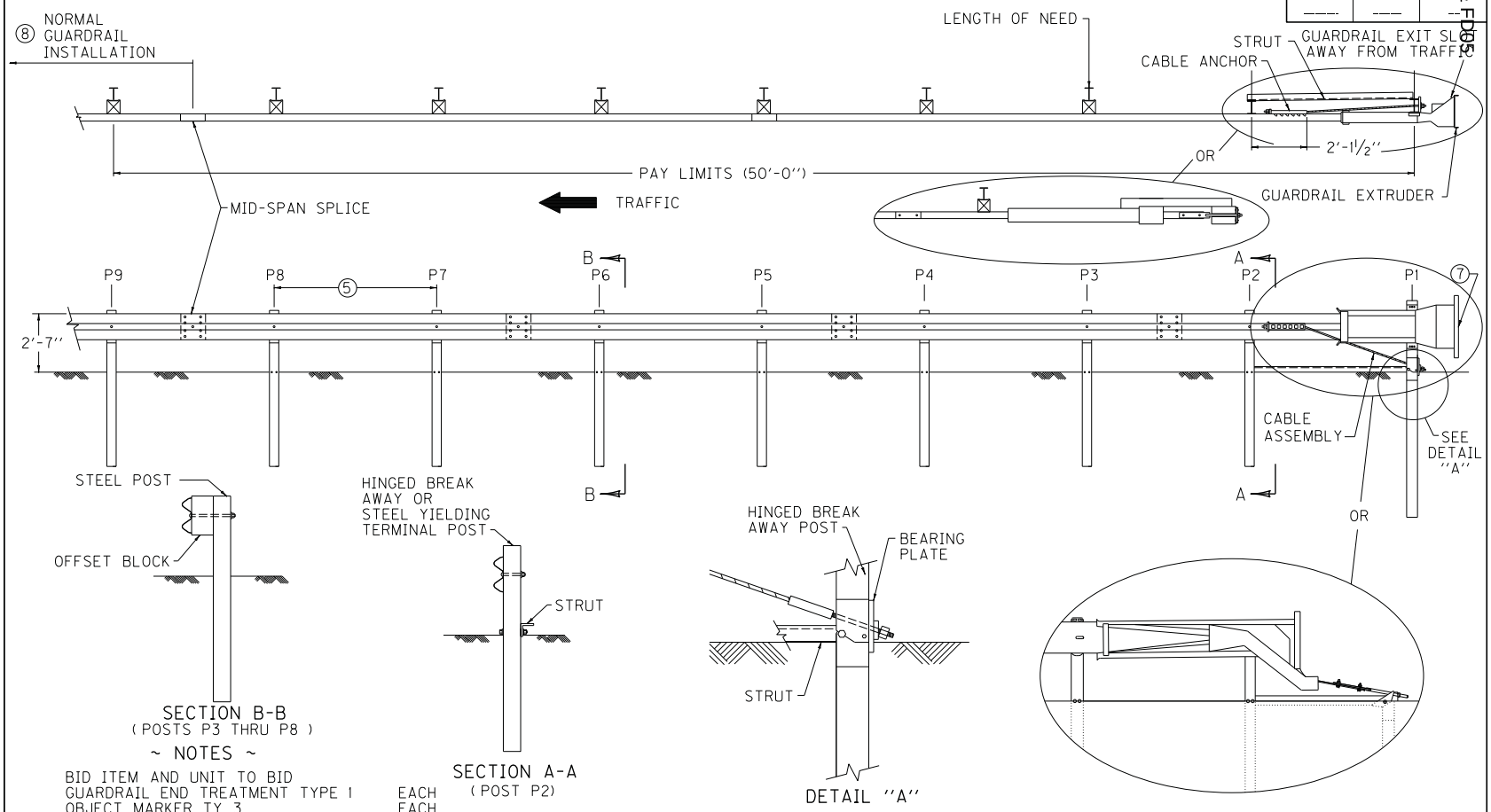

~ NOTES ~

BID ITEM AND UNIT TO BID	
GUARDRAIL END TREATMENT TYPE 1	EACH
OBJECT MARKER TY 3	EACH

1. GUARDRAIL END TREATMENT TYPE 1 SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, AND INCLUDES POSTS, RAIL ELEMENTS, GUARDRAIL EXTRUDER AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION AS DETAILED.
2. PERMISSIBLE ALTERNATES FOR GUARDRAIL END TREATMENT TYPE 1 ARE PATENTED ITEMS: SOFT-STOP MANUACTURED BY TRINITY INDUSTRIES OF DALLAS, TEXAS OR MSKT MANUFACTURED BY ROAD SYSTEMS INC. OF BIG SPRINGS, TEXAS.
3. THE MANUFACTURER SHALL FURNISH TWO (2) SETS OF SHOP PLANS TO THE CONTRACTOR WITH EACH INSTALLATION.
4. THE COMPLETED INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE MANUFACTURER (SEE SHOP DRAWINGS).

⑤ POSTS P1 THROUGH P9 ARE SPACED 6'-3" ON CENTER.

6. INTENDED USE: AREAS WITH ADEQUATE VEHICLE RECOVERY ZONE BEHIND END TREATMENT.

⑦ OBJECT MARKER TYPE 3 (SEE CURRENT MUTCD MANUAL FOR DETAILS)

⑧ FOR MAINTENANCE AND REPAIR PROJECTS, USE "GUARDRAIL SYSTEM TRANSITION "SEPIA 33", TO TRANSITION BACK TO 27" OR 29" GUARDRAIL HEIGHT, IF ONLY THE TERMINAL IS PROPOSED TO BE REPLACED.

USE WITH CUR. STD. DWG. RBI-004

KENTUCKY DEPARTMENT OF HIGHWAYS

GUARDRAIL END TREATMENT TYPE 1

SUBMITTED William S. Haskell 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

029

COUNTY OF	ITEM NO.	SHEET NO.
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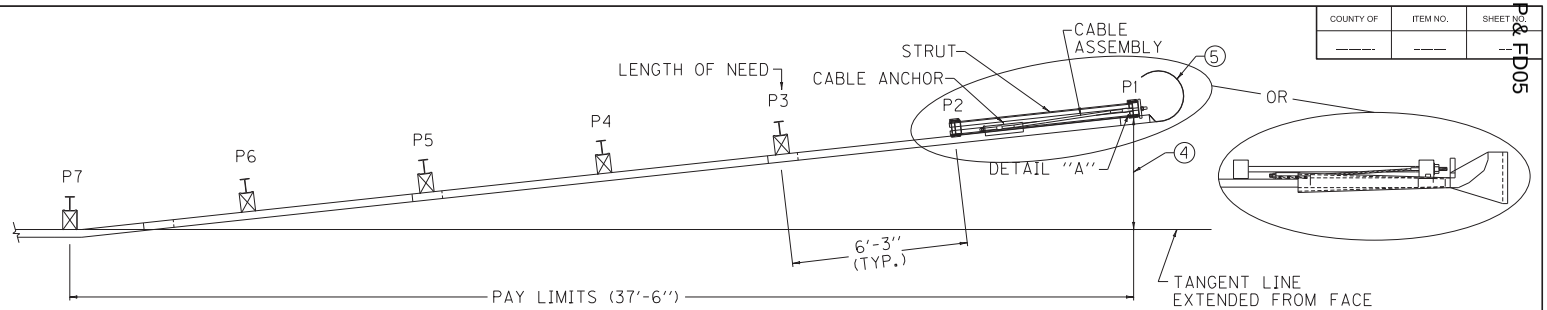
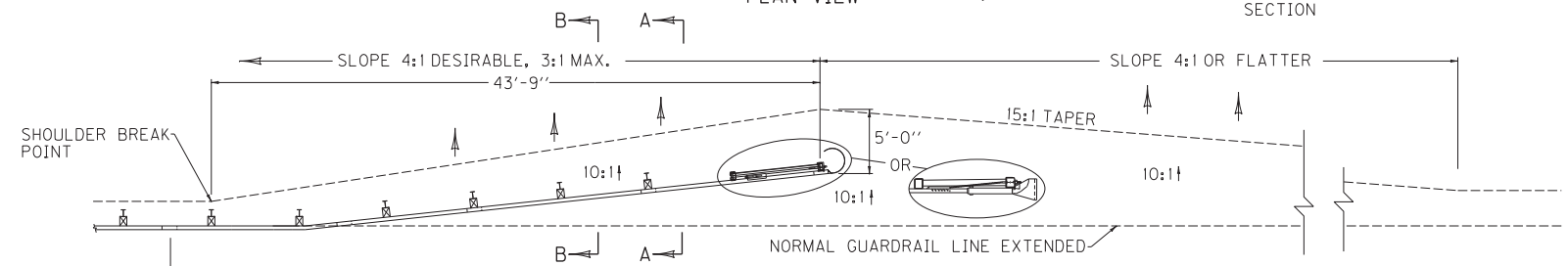
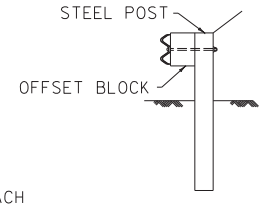
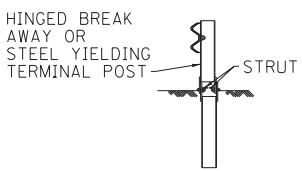




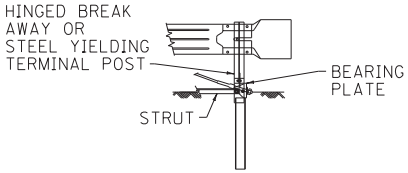
SLOPE LAYOUT AND GRADING DETAIL



SECTION B-B
(POSTS P3 THRU P7)



SECTION A-A
(POST P2)



DETAIL "A"
(ENLARGED VIEW P1)

~ NOTES ~

BID ITEMS AND UNIT TO BID:	
GUARDRAIL END TREATMENT TYPE 4A	EACH
ROADWAY OR BORROW EXCAVATION OR EMBANKMENT-IN-PLACE	CUYD
OBJECT MARKER TY 3	EACH

1. INTENDED USE: AREAS WITH ADEQUATE VEHICLE RECOVERY ZONE BEHIND GUARDRAIL.
2. PERMISSIBLE ALTERNATES FOR GUARDRAIL END TREATMENT TYPE 4A ARE PATENTED ITEMS: SRT-31 MANUFACTURED BY TRINITY INDUSTRIES OF DALLAS, TEXAS OR FLEAT-SP-MGS MANUFACTURED BY ROAD SYSTEMS INC. OF BIG SPRINGS, TEXAS.
3. THE MANUFACTURER SHALL FURNISH TWO (2) SETS OF SHOP PLANS TO THE CONTRACTOR WITH EACH INSTALLATION.
4. SYSTEM OFFSET OF 4'-0" SHALL BE MEASURED FROM FACE OF OFFSET BLOCK AT NORMAL GUARDRAIL SECTION TO FACE OF POST AT P1.
5. OBJECT MARKER TYPE 3 (SEE CURRENT MUTCD MANUAL FOR DETAILS).
6. THE COMPLETED INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE MANUFACTURER. (SEE SHOP DRAWINGS)
7. FOR MAINTENANCE AND REPAIR PROJECTS, USE "GUARDRAIL SYSTEM TRANSITION "SEPIA 33", TO TRANSITION BACK TO 27" OR 29" GUARDRAIL HEIGHT, IF ONLY THE TERMINAL IS PROPOSED TO BE REPLACED.
8. NCHRP-350-COMPLIANT CRASH CUSHIONS WILL BE ACCEPTED IN INSTANCES WHERE MASH-COMPLIANT DEVISES ARE NOT YET AVAILABLE.

KENTUCKY DEPARTMENT OF HIGHWAYS

GUARDRAIL END TREATMENT TYPE 4A

SUBMITTED _____ 1-02-19
ACTING DIRECTOR DIVISION OF HIGHWAY DESIGN — DATE

030

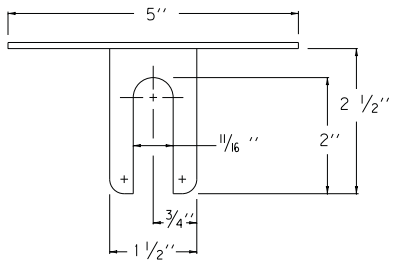
COUNTY OF	ITEM NO.	SHEET NO.

~ NOTES ~

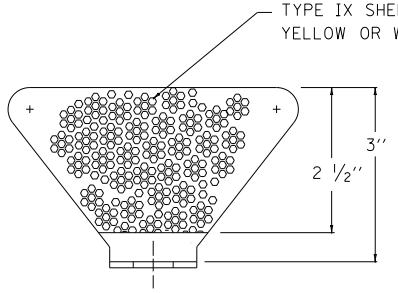
BID ITEMS AND UNIT TO BID

DELINEATOR FOR GUARDRAIL B/W	EACH
DELINEATOR FOR GUARDRAIL M/W	EACH
DELINEATOR FOR GUARDRAIL M/Y	EACH

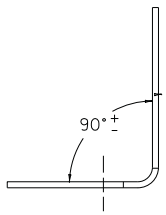
1. DELINEATORS SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE EACH AND SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR ONE COMPLETE INSTALLATION.
2. DELINEATOR SHAPE AND DIMENSIONS ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY. TYPES OF DELINEATORS PERMITTED SHALL BE FROM THE LIST OF APPROVED MATERIALS.
3. GUARDRAIL DELINEATORS SHALL BE REQUIRED ON ALL GUARDRAIL.
4. DELINEATORS SHALL NOT BE INSTALLED WITHIN THE PAY LIMITS OF THE END TREATMENT.
5. DELINEATORS SHALL BE MANUFACTURED FROM 12 GA. GALVANIZED STEEL.
6. DIMENSIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MANUFACTURER'S TOLERANCES.
7. WHEN CONCRETE BARRIERS EXTEND ACROSS BRIDGE STRUCTURES IN LIEU OF STEEL BEAM GUARDRAIL, DELINEATORS SHALL BE INSTALLED AT SAME VERTICAL ALIGNMENT AS ON THE GUARDRAIL, AND DELINEATORS SHALL COMPLY WITH CURRENT STANDARD DRAWING RBM-020.
8. DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



PLAN VIEW

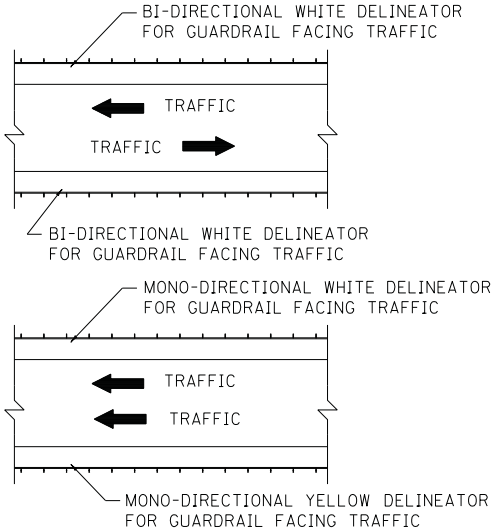


FRONT VIEW

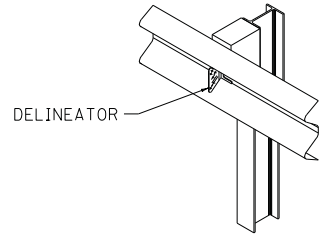


SIDE VIEW

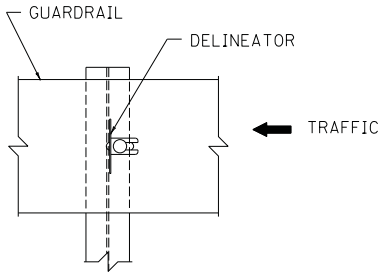
DIMENSIONS SHOWN ARE FOR ONE VERSION OF A WEB-MOUNTED GUARDRAIL DELINEATOR. DELINEATORS WITH ALTERNATE DIMENSIONS MAY BE CONSIDERED FOR INCLUSION ON THE APPROVED PRODUCTS LIST.



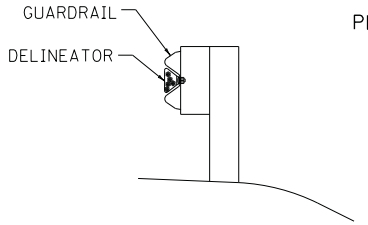
PLACEMENT OF DELINEATORS FOR GUARDRAIL



ISOMETRIC VIEW



FRONT VIEW



SIDE VIEW

APPROXIMATE DELINEATOR SPACING	
TANGENT	100'
CURVE	50'

SPACING SHOULD BE ADJUSTED IN CURVES SO THAT SEVERAL DELINEATORS ARE ALWAYS SIMULTANEOUSLY VISIBLE TO THE ROAD USER.

USE WITH CUR. STD. DWGS. RBM-020, RBR-060

KENTUCKY DEPARTMENT OF HIGHWAYS

DELINEATORS FOR GUARDRAIL

SUBMITTED William S. Ballard DIRECTOR DIVISION OF DESIGN 11-17-17 DATE

032

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

EMPLOYMENT REQUIREMENTS
RELATING TO
NONDISCRIMINATION OF EMPLOYEES
(APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)

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

Standard Title VI/Non-Discrimination Assurances

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, **Federal Highway Administration**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the **Federal Highway Administration** to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the **Federal Highway Administration**, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the **Federal Highway Administration** may determine to be appropriate, including, but not limited to:

    a. withholding payments to the contractor under the contract until the contractor complies; and/or
    b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the **Federal Highway Administration** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Standard Title VI/Non-Discrimination Statutes and Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq*., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq*.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq*.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq*.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

EXECUTIVE BRANCH CODE OF ETHICS

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

KRS 11A.040 (7) provides:

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

KRS 11A.040 (9) states:

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

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

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

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

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

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

Revised: January 27, 2017

General Decision Number: KY190039 05/10/2019 KY39

Superseded General Decision Number: KY20180101

State: Kentucky

Construction Type: Highway

Counties: Boone, Campbell, Kenton and Pendleton Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate,if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019
1	02/01/2019
2	05/10/2019

BRKY0002-005 06/01/2017

	Rates	Fringes
BRICKLAYER	$ 27.81	13.01

BROH0001-005 06/01/2008

	Rates	Fringes

CEMENT MASON/CONCRETE FINISHER...$ 25.75 8.60

CARP0698-001 05/01/2014

BOONE, CAMPBELL, KENTON & PENDLETON COUNTIES:

	Rates	Fringes
Carpenter & Piledrivermen	$ 27.27	14.59
Diver	$ 40.58	9.69

ELEC0212-007 06/04/2018

	Rates	Fringes
ELECTRICIAN	$ 28.39	18.98

ELEC0212-013 11/26/2018

	Rates	Fringes
Sound & Communication Technician	$ 24.35	10.99

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* ENGI0018-013 05/01/2019

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1	$ 37.39	14.95
GROUP 2	$ 37.27	14.95
GROUP 3	$ 36.23	14.95
GROUP 4	$ 35.05	14.95
GROUP 5	$ 29.59	14.95
GROUP 6	$ 37.64	14.95
GROUP 7	$ 37.89	14.95

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - Air Compressor on Steel Erection; Barrier Moving Machine; Boiler Operator on Compressor or Generator when mounted on a Rig; Cableway; Combination Concrete Mixer & Tower; Concrete Plant (over 4 yd. Capacity); Concrete Pump; Crane (All Types, Including Boom Truck, Cherry Picker); Crane-Compact, Track or Rubber over 4,000 lbs. capacity; Cranes-Self Erecting, Stationary, Track or Truck (All Configurations); Derrick; Dragline; Dredge (Dipper, Clam or Suction); Elevating Grader or Euclid Loader; Floating Equipment (All Types); Gradall; Helicopter Crew (Operator-Hoist or Winch); Hoe (all types); Hoisting Engine on Shaft or Tunnel Work; Hydraulic Gantry (Lifting System); Industrial-Type Tractor; Jet Engine Dryer (D8 or D9) Diesel Tractor; Locomotive (Standard Gauge); Maintenance Operator Class A; Mixer, Paving (Single or Double Drum); Mucking Machine; Multiple Scraper; Piledriving Machine (All Types); Power Shovel; Prentice Loader; Quad 9 (Double Pusher); Rail Tamper (with auto lifting & aligning device); Refrigerating Machine (Freezer Operation); Rotary Drill, on Caisson work; Rough Terrain Fork Lift with Winch/Hoist; Side-Boom; Slip-Form Paver;

Tower Derrick; Tree Shredder; Trench Machine (Over 24" wide); Truck Mounted Concrete Pump; Tug Boat; Tunnel Machine and/or Mining Machine; & Wheel Excavator

GROUP 2 - Asphalt Paver; Automatic Subgrader Machine, Self-Propelled (CMI Type); Bobcat Type and/or Skid Steer Loader with Hoe Attachment Greater than 7,000 lbs.; Boring Machine More than 48"; Bulldozer; Endloader; Hydro Milling Machine; Horizontal Directional Drill (over 500,000 ft. lbs. thrust); Kolman-type Loader (production type-Dirt); Lead Greaseman; Lighting & Traffic Signal Installation Equipment (includes all groups or classifications); Material Transfer Equipment (Shuttle Buggy) Asphalt; Pettibone-Rail Equipment; Power Grader; Power Scraper; Push Cat; Rotomill (all), Grinders & Planers of All types; Trench Machine (24" wide & under); & Vermeer type Concrete Saw

GROUP 3 - A-Frame; Air Compressor on Tunnel Work (low pressure); Asphalt Plant Engineer; Bobcat-type and/or Skid Steer Loader with or without Attachments; Highway Drills (all types); Locomotive (narrow gauge); Material Hoist/Elevator; Mixer, Concrete (more than one bag capacity); Mixer, one bag capacity (Side Loader); Power Boiler (Over 15 lbs. Pressure) Pump Operator installing & operating Well Points; Pump (4" & over discharge); Roller, Asphalt; Rotovator (lime soil stabilizer); Switch & Tie Tampers (without lifting & aligning device); Utility Operator (Small equipment); & Welding Machines

GROUP 4 - Backfiller; Ballast Re-locator; Bars, Joint & Mesh Installing Machine; Batch Plant; Boring Machine Operator (48" or less); Bull Floats; Burlap & Curing Machine; Concrete Plant (capacity 4 yd. & under); Concrete Saw (Multiple); Conveyor (Highway); Crusher; Deckhand; Farm-type Tractor with attachments (highway) except Masonry); Finishing Machine; Fireperson, Floating Equipment (all types); Fork Lift (highway); Form Trencher; Hydro Hammer; Hydro Seeder; Pavement Breaker; Plant Mixer; Post Driver; Post Hole Digger (Power Auger); Power Brush Burner; Power Form Handling Equipment; Road Widening Trencher; Roller (Brick, Grade & Macadam); Self-Propelled Power Spreader; Self-Propelled Power Subgrader; Steam Fireperson; Tractor (Pulling Sheepfoot, Roller or Grader); & Vibratory Compactor with Integral Power

GROUP 5 - Compressor (Portable, Sewer, Heavy & Highway); Drum Fireperson (Asphalt); Generator; Masonry Fork Lift; Inboard-Outboard Motor Boat Launch; Masonry Fork Lift; Oil Heater (asphalt plant); Oiler; Power Driven Heater; Power Sweeper & Scrubber; Pump (under 4" discharge); Signalperson; Tire Repairperson; & VAC/ALLS

GROUP 6 - Master Mechanic & Boom from 150 to 180

GROUP 7 - Boom from 180 and over

IRON0044-008 06/01/2018

	Rates	Fringes
Ironworkers:		
Fence Erector	$ 26.76	21.20
Structural	$ 28.17	21.20

IRON0044-018 06/01/2018

	Rates	Fringes
IRONWORKER, REINFORCING	$ 28.17	21.20

LABO0189-004 07/01/2018

PENDLETON COUNTY:

	Rates	Fringes
LABORER		
GROUP 1	$ 23.07	14.21
GROUP 2	$ 23.32	14.21
GROUP 3	$ 23.37	14.21
GROUP 4	$ 23.97	14.21

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster;

& Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Driller (All Types); Powderman & Blaster; Troxler & Concrete Tester if Laborer is Utilized

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LABO0265-009 05/01/2018

BOONE, CAMPBELL & KENTON COUNTIES:

	Rates	Fringes
LABORER		
GROUP 1	$ 30.62	10.95
GROUP 2	$ 30.79	10.95
GROUP 3	$ 31.12	10.95
GROUP 4	$ 31.57	10.95

LABORER CLASSIFICATIONS

GROUP 1 - Asphalt Laborer; Carpenter Tender; Concrete Curing Applicator; Dump Man (Batch Truck); Guardrail and Fence Installer; Joint Setter; Laborer (Construction); Landscape Laborer; Highway Lighting Worker; Signalization Worker; Mesh Handlers & Placer; Right-of-way Laborer; Riprap Laborer & Grouter; Scaffold Erector; Seal Coating; Surface Treatment or Road Mix Laborer; Sign Installer; Slurry Seal; Utility Man; Bridge Man; Handyman; Waterproofing Laborer; Flagperson; Hazardous Waste (level D); Diver Tender; Zone Person & Traffic Control

GROUP 2 - Skid Steer; Asphalt Raker; Concrete Puddler; Kettle Man (Pipeline); Machine Driven Tools (Gas, Electric, Air); Mason Tender; Brick Paver; Mortar Mixer; Power Buggy or Power Wheelbarrow; Sheeting & Shoring Man; Surface Grinder Man; Plastic Fusing Machine Operator; Pug Mill Operator; & Vacuum Devices (wet or dry); Rodding Machine Operator; Diver; Screwman or Paver; Screed Person; Water Blast, Hand Held Wand; Pumps 4" & Under (Gas, Air or Electric) & Hazardous Waste (level C); Air Track and Wagon Drill; Bottom Person; Cofferdam (below 25 ft. deep); Concrete Saw Person; Cutting with Burning Torch; Form Setter; Hand Spiker (Railroad); Pipelayer; Tunnel Laborer (without air) & Caisson; Underground Person (working in Sewer and Waterline, Cleaning, Repairing & Reconditioning); Sandblaster Nozzle Person; & Hazardous Waste (level B)

GROUP 3 - Blaster; Mucker; Powder Person; Top Lander; Wrencher (Mechanical Joints & Utility Pipeline); Yarner; Hazardous Waste (level A); Concrete Specialist; Concrete Crew in Tunnels (With Air-pressurized - $1.00 premium); Curb Setter & Cutter; Grade Checker; Utility Pipeline Tapper; Waterline; and Caulker

GROUP 4 - Miner; & Gunite Nozzle Person

TUNNEL LABORER WITH AIR-PRESSURIZED ADD $1.00 TO BASE RATE

SIGNAL PERSON WILL RECEIVE THE RATE EQUAL TO THE RATE PAID THE LABORER CLASSIFICATION FOR WHICH HE OR SHE IS SIGNALING.

PAIN0012-016 05/01/2015

	Rates	Fringes
PAINTER		
Bridge	$ 24.39	9.06
Bridge Equipment Tender and Containment Builder	$ 20.73	9.06
Brush & Roller	$ 23.39	9.06
Sandblasting & Water Blasting	$ 24.14	9.06
Spray	$ 23.89	9.06

PLUM0392-008 06/01/2018

	Rates	Fringes
PLUMBER	$ 32.01	19.67

SUKY2010-161 02/05/1996

	Rates	Fringes
Truck drivers:		
GROUP 1	$ 15.85	4.60
GROUP 2	$ 16.29	4.60

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Driver

GROUP 2 - Euclid Wagon; End Dump; Lowboy; Heavy Duty Equipment; Tractor-Trailer Combination; & Drag

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the

interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid to an employee at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Director
Division of Construction Procurement
Frankfort, Kentucky 40622
502-564-3500

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (Executive Order 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
11.0%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. The notification shall be mailed to:

Evelyn Teague, Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8609

4. As used in this Notice, and in the contract resulting from this solicitation, the **"covered area"** is Kenton County.

PART IV

INSURANCE

INSURANCE

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

1) Commercial General Liability-Occurrence form – not less than $2,000,000 General aggregate, $2,000,000 Products & Completed Aggregate, $1,000,000 Personal & Advertising, $1,000,000 each occurrence.

2) Automobile Liability- $1,000,000 per accident

3) Employers Liability:

   a) $100,000 Each Accident Bodily Injury
   b) $500,000 Policy limit Bodily Injury by Disease
   c) $100,000 Each Employee Bodily Injury by Disease

4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
   a) "policy contains no deductible clauses."
   b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."

5) KENTUCKY WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

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

PART V

BID ITEMS

194215

PROPOSAL BID ITEMS

Report Date 5/29/19

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	434.00	TON		$	
0020	00080		CRUSHED AGGREGATE SIZE NO 23	239.00	TON		$	
0030	00100		ASPHALT SEAL AGGREGATE	71.00	TON		$	
0040	00103		ASPHALT SEAL COAT	8.30	TON		$	
0050	00190		LEVELING & WEDGING PG64-22	1,123.00	TON		$	
0060	00212		CL2 ASPH BASE 1.00D PG64-22	546.00	TON		$	
0070	00301		CL2 ASPH SURF 0.38D PG64-22	8,653.00	TON		$	
0080	02562		TEMPORARY SIGNS	570.00	SQFT		$	
0090	02598		FABRIC-GEOTEXTILE TYPE III	1,245.00	SQYD		$	
0100	02650		MAINTAIN & CONTROL TRAFFIC (KENTON KY 177 FD05)	1.00	LS		$	
0110	02676		MOBILIZATION FOR MILL & TEXT (KENTON KY 177 FD05)	1.00	LS		$	
0120	02676		MOBILIZATION FOR MILL & TEXT (KENTON KY 177 HSIP)	1.00	LS		$	
0130	02677		ASPHALT PAVE MILLING & TEXTURING	8,847.00	TON		$	
0140	02697		EDGELINE RUMBLE STRIPS	66,610.00	LF		$	
0150	03240		BASE FAILURE REPAIR	330.00	SQYD		$	
0160	06510		PAVE STRIPING-TEMP PAINT-4 IN	200,000.00	LF		$	
0170	06514		PAVE STRIPING-PERM PAINT-4 IN	200,000.00	LF		$	
0180	06568		PAVE MARKING-THERMO STOP BAR-24IN	68.00	LF		$	
0190	10020NS		FUEL ADJUSTMENT	17,047.00	DOLL	$1.00	$	$17,047.00
0200	10030NS		ASPHALT ADJUSTMENT	41,030.00	DOLL	$1.00	$	$41,030.00
0210	24970EC		ASPHALT MATERIAL FOR TACK NON-TRACKING	51.50	TON		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0220	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	77.00	EACH		$	
0230	02159		TEMP DITCH	15,000.00	LF		$	
0240	02160		CLEAN TEMP DITCH	7,500.00	LF		$	
0250	02575		DITCHING AND SHOULDERING	8,035.00	LF		$	
0260	02599		FABRIC-GEOTEXTILE TYPE IV	1,225.00	SQYD		$	
0270	02650		MAINTAIN & CONTROL TRAFFIC (KENTON KY 177 HSIP)	1.00	LS		$	
0280	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		$	
0290	02701		TEMP SILT FENCE	15,000.00	LF		$	
0300	02703		SILT TRAP TYPE A	6.00	EACH		$	
0310	02704		SILT TRAP TYPE B	6.00	EACH		$	
0320	02705		SILT TRAP TYPE C	6.00	EACH		$	
0330	02706		CLEAN SILT TRAP TYPE A	6.00	EACH		$	
0340	02707		CLEAN SILT TRAP TYPE B	6.00	EACH		$	
0350	02708		CLEAN SILT TRAP TYPE C	6.00	EACH		$	
0360	02726		STAKING (KENTON KY 177 HSIP)	1.00	LS		$	
0370	03234		RAILROAD RAILS-DRILLED	2,125.00	LF		$	

194215

PROPOSAL BID ITEMS

Report Date 5/29/19

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0380	03235		EXCAVATION AND BACKFILL	97.00	CUYD		$	
0390	03236		CRIBBING	2,680.00	SQFT		$	
0400	03269		TRIM & REMOVE TREES & BRUSH	4,110.00	LF		$	
0410	05950		EROSION CONTROL BLANKET	8,357.00	SQYD		$	
0420	05952		TEMP MULCH	16,750.00	SQYD		$	
0430	05953		TEMP SEEDING AND PROTECTION	12,500.00	SQYD		$	
0440	05963		INITIAL FERTILIZER	1.00	TON		$	
0450	05964		MAINTENANCE FERTILIZER	1.50	TON		$	
0460	05985		SEEDING AND PROTECTION	21,000.00	SQYD		$	
0470	05992		AGRICULTURAL LIMESTONE	16.00	TON		$	
0480	06510		PAVE STRIPING-TEMP PAINT-4 IN	7,500.00	LF		$	
0490	06514		PAVE STRIPING-PERM PAINT-4 IN	2,500.00	LF		$	
0500	08018		RETAINING WALL (POLYPROPYLENE BARRIER WALL)	400.00	SQFT		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0510	00439		ENTRANCE PIPE-12 IN	24.00	LF		$	
0520	00440		ENTRANCE PIPE-15 IN	30.00	LF		$	
0530	00441		ENTRANCE PIPE-18 IN	20.00	LF		$	
0540	00461		CULVERT PIPE-15 IN	22.00	LF		$	
0550	00462		CULVERT PIPE-18 IN	46.00	LF		$	
0560	00464		CULVERT PIPE-24 IN	142.00	LF		$	
0570	01208		PIPE CULVERT HEADWALL-24 IN (SLOPED & FLARED)	3.00	EACH		$	
0580	01310		REMOVE PIPE	194.00	LF		$	
0590	01727		SAFETY BOX INLET-24 IN SDB-1	4.00	EACH		$	
0600	02483		CHANNEL LINING CLASS II	1,279.00	TON		$	
0610	02625		REMOVE HEADWALL	16.00	EACH		$	
0620	02625		REMOVE HEADWALL (RCBC @ MP 11.165)	1.00	EACH		$	
0630	03262		CLEAN PIPE STRUCTURE	4.00	EACH		$	
0640	08003		FOUNDATION PREPARATION (RCBC @ MP 11.165)	1.00	LS		$	
0650	08100		CONCRETE-CLASS A (RCBC @ MP 11.165)	10.50	CUYD		$	
0660	08150		STEEL REINFORCEMENT (RCBC @ MP 11.165)	1,365.00	LB		$	
0670	24395EC		SAFETY BOX INLET-15 IN SDB-1	2.00	EACH		$	
0680	24575ES610		HEADWALL (SLOPED & MITERED CONCRETE-FOR 15 INCH PIPE)	1.00	EACH		$	
0690	24575ES610		HEADWALL (SLOPED & MITERED CONCRETE-FOR 18 INCH PIPE)	4.00	EACH		$	
0700	24575ES610		HEADWALL (SLOPED & MITERED CONCRETE-FOR 24 INCH PIPE)	4.00	EACH		$	

PROPOSAL BID ITEMS

194215

Page 3 of 3

Report Date 5/29/19

Section: 0004 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0710	06406		SBM ALUM SHEET SIGNS .080 IN	246.00	SQFT		$	
0720	06410		STEEL POST TYPE 1	470.00	LF		$	
0730	21134ND		REMOVE-STORE AND REINSTALL SIGN	10.00	EACH		$	
0740	21373ND		REMOVE SIGN	5.00	EACH		$	
0750	21813NN		REMOVE AND RELOCATE SHEET SIGNS	4.00	EACH		$	
0760	24631EC		BARCODE SIGN INVENTORY	88.00	EACH		$	

Section: 0005 - GUARDRAIL

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0770	02360		GUARDRAIL TERMINAL SECTION NO 1	3.00	EACH		$	
0780	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	4.00	EACH		$	
0790	02367		GUARDRAIL END TREATMENT TYPE 1	18.00	EACH		$	
0800	02373		GUARDRAIL END TREATMENT TYPE 3	2.00	EACH		$	
0810	02381		REMOVE GUARDRAIL	2,655.00	LF		$	
0820	02391		GUARDRAIL END TREATMENT TYPE 4A	3.00	EACH		$	
0830	21802EN		G/R STEEL W BEAM-S FACE (7 FT POST)	5,050.00	LF		$	

Section: 0006 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0840	02569		DEMOBILIZATION	1.00	LS		$	