CALL NO. 325

CONTRACT ID. 234105

PIKE COUNTY

FED/STATE PROJECT NUMBER FD04 098 0080 000-002

DESCRIPTION KY HIGHWAY 80 (KY 80)

WORK TYPE ASPHALT PAVEMENT & ROADWAY REHAB

PRIMARY COMPLETION DATE 11/15/2023

LETTING DATE: January 26,2023

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN STANDARD TIME January 26,2023. Bids will be publicly announced at 10:00 AM EASTERN STANDARD TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

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

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PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 12

CONTRACT ID - 234105

FD04 098 0080 000-002

COUNTY - PIKE

PCN - 1209800802201
FD04 098 0080 000-002

KY HIGHWAY 80 (KY 80) (MP 0.000) FROM US 460 TO 0.561 MILES EAST OF KY 1373 (MP 1.650), A DISTANCE OF 01.65 MILES.ASPHALT PAVEMENT & ROADWAY REHAB SYP NO. 12-09014.00.

GEOGRAPHIC COORDINATES LATITUDE 37:19:52.81 LONGITUDE 82:22:08.25

ADT 3,439

COMPLETION DATE(S):

COMPLETED BY 11/15/2023 APPLIES TO ENTIRE PROJECT

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

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

JOINT VENTURE BIDDING

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

UNDERGROUND FACILITY DAMAGE PROTECTION

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

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

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

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

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

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

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

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

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

HARDWOOD REMOVAL RESTRICTIONS

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

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

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

ACCESS TO RECORDS

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

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

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

BUILD AMERICA, BUY AMERICA ACT (BABA)

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

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

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

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

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

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

SPECIAL NOTE FOR RECIPROCAL PREFERENCE

RECIPROCAL PREFERENCE TO BE GIVEN BY PUBLIC AGENCIES TO RESIDENT BIDDERS

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

April 30, 2018

NATIONAL HIGHWAY

Be advised this project is on the NATIONAL HIGHWAY SYSTEM.

ASPHALT MIXTURE

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

DGA BASE

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

OPTION B

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

Special Notes Applicable to Project – General Notes & 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. Section references are to the Standard Specifications.

CAUTION – PROPOSAL INFORMATION IS APPROXIMATE – PERFORM AN ON-SITE INSPECTION

Potential bidders are cautioned that the information within this proposal is approximate only and is not to be taken as an exact evaluation of the bid quantities, nor the materials and conditions that may be encountered during construction. As such, before submitting a bid, potential bidders shall make a thorough inspection of the site to examine the conditions to be encountered per Section 104.07. Furthermore, during the execution of the work, the Engineer reserves the right to make changes to the bid item quantities and/or alterations in the work when necessary to complete the project satisfactorily per Section 104.02.

NOTE: The Department will pay for bid item quantity overruns, but only if pre-approved by the Engineer.

BUY AMERICA REQUIREMENT

Federal Funds were used for the design of this project; therefore, the Contractor shall follow the "Buy America" provisions as required by Title 23 Code of Federal Regulations 635.410.

STATIONING

The contractor is advised that the planned locations of work were established from a station number which is STA 0+00 at the intersection of US 460 and KY 80. Mile Points were established from a beginning Mile Points which is MP 0.000 at the intersection of US 460 and KY 80. The existing mile marker signs may not correspond to the proposed work locations.

SURVEY & LIDAR

Survey information was obtained from two sources for this project. The existing ground line was obtained from KYTC Statewide Aerial LiDAR. Edges of pavement, centerlines, and pipe inlet and outlet elevations were obtained from conventional survey with control from GPS methods. All work 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 form is obtained from the adjoining property owner, limit work activities to the obvious Right-of-Way and staging areas secured and environmentally cleared by the Contractor at no additional cost to the Department. If private improvements (i.e. fences, buildings, etc.) encroach upon the Right-of-Way, the contractor shall notify the Engineer and limit work activities 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 following work:

Superelevation Improvements. Multiple curves, within the project limits, will receive superelevation improvements. Work will include edge key, longitudinal edge key, and placing asphalt leveling and wedging, placement of an asphalt surface course, installation of edge line rumble strips, and application of pavement markings. The intent of this work is to create a consistent cross slope through the curves identified in this proposal. The Engineer will make the final determination as to the appropriate lift thicknesses and the number of lifts required to achieve the desired cross slope based on the existing conditions encountered at the time of construction. As a result of this work, the shoulders, fill slopes, and/or ditches may need modifications to match the final pavement elevations and tie to the existing ground. The bid item 'Roadside Regrading' has been included for these roadside modifications. The Contractor is required to complete this work item prior to KY 80 being resurfaced.

NOTE: Some field adjustment of the proposed shoulder width, fill slope, ditch, and/or superelevation rate may be required. The proposed shoulder and fill slope grading is intended to occur within Right-of-Way without disturbing any sensitive obstructions (i.e. fences, buildings, utility poles, etc.). The Department desires to construct new fill slopes at 3:1 or flatter. When a fill slope needs to be constructed steeper than 3:1 to remain within Right-of-Way or not impact a sensitive obstruction, and the existing fill slope is steeper than 3:1, then the new fill slope may be constructed steeper than 3:1, but not steeper than the existing fill slope. If a superelevation adjustment requires a fill slope steeper than the existing fill slope in order to remain within Right-of-Way or not impact a sensitive obstruction, then the superelevation rate may be modified (reduced) in order to reduce the change in pavement edge elevation, thereby reducing the height of the new fill slope grading and allowing for a flatter fill slope.

Pipe Replacements and Extensions. Multiple culvert pipes are being replaced and/or extended throughout the project corridor. Locations are noted on the Pipe Replacement & Extension Summary. Other items that may be associated with the pipe replacements and/or extensions include: Sloped & Mitered Concrete Headwalls, Roadside Regrading, Drainage Structures, and Channel Lining. Refer to the Special Note for Pipe Replacements / Extensions for more information on this item of work. The Contractor is required to complete

this work item prior to KY 80 being resurfaced.

Guardrail & Guardrail End Treatment Replacement. Existing guardrail and guardrail end treatments, within the project limits, will be replaced. Refer to the Guardrail Summary for the approximate locations. This work will include the removal of the existing guardrail and/or guardrail end treatments and the installation of new guardrail and end treatments. See the Special Note for Guardrail for more information on this work. **ALL TYPE 1 END TREATMENTS SHALL BE TRINITY SOFTSTOP SYSTEM TEST LEVEL 3.**

Replace Existing Signing. In addition to placing new curve signing along the project corridor, all existing roadway signs will be removed and replaced with new signs. Refer to the Proposed Signing Summary for approximate locations and approximate quantities. The District Traffic Engineer will make the final determination as to the placement of all signs and the advisory speeds for all curves. **The Contractor shall NOT order signs until the District Traffic Engineer has approved the final signing layout and provided final advisory speeds.** Refer to the Special Note for Signing, and Special Note for Signage for more details.

Roadside Regrading. Areas have been identified along the route for Roadside Regrading. The overall intent of the Roadside Regrading work operation is to improve the existing roadside by constructing a proposed width of earth shoulder and regrading the roadside fill slopes, ditch foreslopes, and/or ditch backslopes as flat as possible within the Right-of-Way (or any work areas the Department has obtained through Consent & Release), while NOT disturb any sensitive obstructions (i.e. fences, buildings, utilities, etc.). A variety of information is included in the proposal to communicate the proposed Roadside Regrading.

- The Special Note for Roadside Regrading provides information on:
    - The required materials and construction methods.
    - How roadside regrading is measured and paid.
- The ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS includes:
    - 11 different Figures that show the common conditions and situations that may be encountered when performing Roadside Regrading.
    - Notes that provide guidance on how to adjust the proposed shoulder and/or roadside dimensions so that Roadside Regrading work operations will remain within the Right-of-Way (or Consent & Release work area) and/or not impact a sensitive obstruction.
- The Typical Section(s) show:
    - The desired dimensions of the proposed shoulder, ditch, and/or roadside slopes.
    - NOTE: There may situations where the desired shoulder, ditch, and/or roadside dimensions must be modified based on existing site conditions. When situations arise where the desired roadside dimensions need to be adjusted, the Contractor and Engineer should work together to determine the final dimensions for the proposed shoulder, ditch, and/or roadside slopes. The notes within the ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS provide guidance on ways to adjust the Roadside Regrading when common site conditions and constraints are encountered.
- The Roadside Regrading Summary:
    - Lists the locations where Roadside Regrading is to be performed. While the Department anticipates the limits of Roadside Regrading shown on the Roadside Regrading Summary are accurate, it is always possible the existing conditions of the shoulders and ditches can change between the Design phase and Construction phase of the project. Therefore, the

Contractor and the Engineer are to work together to review the limits of Roadside Regrading and make adjustments, as needed.

- Lists estimated volumes of excavation and embankment for each Roadside Regrading location to help indicate the approximate level of effort of each Roadside Regrading location. NOTE: the estimated volumes of excavation and embankment are provided for informational purposes only and final payment for Roadside Regrading will be made based on the actual LF of Roadside Regrading performed.
- Indicates which Figure reference within the ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS is the closest representation of each proposed Roadside Regrading location.
- Lists the Targeted Fill Slope (or Ditch Foreslope) and, if applicable, the Targeted Backslope for each Roadside Regrading location.
- Indicates if there is a need for Embankment Benching, a DGA Wedge, and Channel Lining for each Roadside Regrading location.
- If applicable, lists the estimated quantities of DGA, Asphalt Seal Coat, Asphalt Seal Aggregate, Channel Lining, and Geotextile Fabric for each Roadside Regrading location.
- Summarizes the quantities of the bid items associated with the Roadside Regrading work operation.

Channel Lining. In addition to the Class II Channel Lining Quantified in the Pipe Replacement and Extension Summary, **an additional quantity of 500 Tons of Channel Lining Class II** has been included for use at the locations indicated in both the Embankment Repair Summary and Roadside Regrading Summary. 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 needed quantities and placement of Channel Lining.

Erosion Control Blanket. **A quantity of 5,000 square yards of Erosion Control Blanket** has been included in the Roadside Regrading Summary for potential use along areas of regraded shoulders, ditch lines, fills slopes and/or back slopes, inlets and outlets of pipes, and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of Erosion Control Blanket throughout this project. The Engineer will make the final determination as to the quantities and placement of Erosion Control Blanket.

Special Note for Staking

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

1. Contrary to Section 201.03.01, perform items 1 & 2 usually performed by the Engineer.
2. Using the proposed pavement superelevation rates, runout lengths, and runoff lengths, determine the necessary elevation changes along the edges of pavement for each proposed curve and the transitions leading into and out of each curve to achieve the proposed superelevation improvements. The intent is to provide a consistent superelevation throughout each proposed curve and smooth transitions into and out of each curve. Once the elevation changes along the edges of pavement for each proposed curve are determined and prior to starting paving operations, verify the proposed roadside re-grading corresponding to each curve can be constructed so that the new roadside will be flush with the new edges of pavement and the new toe of slope, or top of cut, will remain within the Right-of-Way, or within the general area noted on any applicable Consent & Releases, 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 elevations of the edges of pavement will cause the proposed roadside grading to extend beyond the Right-of-Way, or extend outside of the general area described on any applicable Consent & Releases, and/or impact a sensitive obstruction. Alternatively, with the approval of the Engineer and to the extent allowable by the "Roadside Regrading and Embankment Benching Details" and/or the Special Note for Roadside Regrading, the Contractor may be allowed to adjust the proposed dimensions of the roadside grading so the new toe of slope or top of cut will remain within the Right-of-Way, or within the general area noted on any applicable Consent & Releases, and/or not impact a sensitive obstruction. After the final proposed elevation changes along the edges of pavement for each curve 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 proposed 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 Note for Erosion Control

I. DESCRIPTION

Perform all erosion and water pollution control work in accordance with any other notes in the Proposal, the Department's Standard and Interim Supplemental Specifications, the Special Provisions and Special Notes, and the Standard and Sepia Drawings, current editions, or as directed by the Engineer. Section references are to the Standard Specifications. This work shall consist of:

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

II. MATERIALS

Furnish materials in accordance with these notes, the Standard Specifications and Interim Supplemental Specifications, applicable Special Provisions and Special Notes, and the Standard and Sepia Drawings, current editions. Provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual. Unless directed otherwise by the Engineer, make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

III. CONSTRUCTION

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

vegetation not required to be removed by the work or the contract. Seed and/or mulch disturbed areas at the earliest opportunity. Use silt fence, silt traps, temporary ditches, brush barriers, erosion control blankets, sodding, channel lining, and other erosion control measures in a timely manner as required by the BMP and as directed or approved by the Engineer. Prevent sediment laden water from leaving the project, entering an existing drainage structure, or entering a steam.

Provide for erosion control measures to be in place and functioning prior to any earth disturbance within a drainage area. Compute the volume and size of silt control devices necessary to control sediment during each phase of construction. All silt control devices shall be sized to retain a volume of 3,600 cubic feet per disturbed contributing acre. Remove sediment from silt traps before they become a maximum of ½ full. Maintain silt fence by removing accumulated trappings and/or replacing the geotextile fabric when it becomes clogged, damaged, or deteriorated, or when directed by the Engineer. Properly dispose of all materials trapped by erosion control devices at approved sites off the right of way obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

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

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

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

The use of Temporary Mulch is encouraged.

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

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

IV. MEASUREMENT

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

V. Basis of Payment

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

Special Note for Roadside Regrading

I. DESCRIPTION

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

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

II. MATERIALS

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

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

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

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

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

III. CONSTRUCTION METHODS

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

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

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

D. Staking. See Special Note for Staking.

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

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

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

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

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

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

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

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

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

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

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

N. Final Dressing, Seeding and Protection. Grade all disturbed areas to blend with the adjacent roadways features and to provide a suitable seed bed. Apply Class A Final Dressing to all disturbed

areas, both on and off the Right-of-Way. Sow all disturbed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

IV. METHOD OF MEASUREMENT

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

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

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

D. Staking. See Special Note for Staking.

E. Roadside Regrading. The Department will measure the bid item ROADSIDE REGRADING in linear feet along the centerline of the roadway as the length of the actual Roadside Regrading work performed. Further, this measurement will only include one side of the roadway. Therefore, for areas where roadside regrading occurs on both sides of the road, the Department will measure each side independently. The Department will not measure cleaning pipe structures 36 inches or less in diameter or reshaping any deformed ends on metal entrance pipes that are to remain in place, as these operations are considered incidental to the bid item ROADSIDE REGRADING.

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

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

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

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

V. BASIS OF PAYMENT

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

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

C. Staking. See Special Note for Staking.

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

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

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

Special Note for Tree, Stump, and Brush Removal

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) 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 and/or Removing Trees and/or Stumps. The Contractor shall cut and/or remove the trees and/or stumps as indicated in the Proposal, or as directed by the Engineer. Cut trees as close to the ground as possible; three inches (3”) or less from ground line. All tree stumps within the mowing zone shall be removed via mechanical grinding, or other methods approved by the Engineer, to a minimum depth of four inches (4”) 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 herbicide solution specified below.

Replace and level any and all soil disturbed during the tree, stump, and/or brush removal 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.”

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 cutting 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 downed 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/her 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/her 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/her activities to the 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 workday, 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 and/or stump removed. Trees and/or stumps to be measured under this bid item are only those trees and/or stumps indicated on the Plans or in the Proposal, or as directed by the Engineer.

D. Stump Treatment. The Department will NOT measure for payment the operation of Stump Treatment. This activity shall be incidental to the bid item "Remove Trees or Stumps".

E. 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.

F. 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.

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

Special Note for Box Culvert Extensions

I. DESCRIPTION

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

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

II. MATERIALS

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

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

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

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

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

E. Steel Reinforcement. See Section 811.

III. CONSTRUCTION

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

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

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

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

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

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

E. Box Culvert Extensions. Construct the box culvert extension(s) according to the notes and details in the drawings, and Sections 601, 602, 603, 610, 611, and/or any other applicable Standard Specifications. Class A Concrete shall be used throughout. All exposed concrete edges shall be beveled ¾", unless otherwise noted. Reinforcement shall have a 2" clear distance to the proposed face of concrete, unless otherwise noted. Obtain the Engineer's approval of the final centerline, flow line, length, skew, and revised dimensions and/or steel pattern, if any, of each box culvert extension prior to placing concrete.

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

F. Remove Concrete Masonry. Remove existing concrete headwalls and segments of reinforced concrete box culvert as detailed in the plans, standard drawings, standard specifications, or as directed by the engineer.

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

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

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

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

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

L. Coordination with Utility Companies. Locate all underground, above ground, and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require utilities to be

relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of the Contractor's operations at no additional cost to the Department.

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

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

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

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

IV. MEASUREMENT

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

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

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

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

D. Remove Concrete Masonry. The Department will measure the removal of concrete masonry in cubic yards.

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

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

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

H. Clean Culvert. The Department will not measure clean culvert. This work shall be considered part of site preparation.

V. PAYMENT

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

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

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

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

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

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

Special Note for Pipe Replacements and Extensions

I. DESCRIPTION

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

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

II. MATERIALS

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

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

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

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

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

III. CONSTRUCTION METHODS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

IV. METHOD OF MEASUREMENT

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

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

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

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

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

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

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

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

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

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

V. BASIS OF PAYMENT

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

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

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

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

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

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

SPECIAL NOTE FOR PIPELINE INSPECTION

1.0 DESCRIPTION. The Department will perform visual inspections on all pipe on the project. A video inspection will be required on projects having more than 250 linear feet of storm sewer and/or culvert pipe and on routes with an ADT of greater than 1,000 vehicles. Conduct video inspections on all pipe located under the roadway and 50 percent of the remaining pipe not under the roadway. Storm sewer runs and outfall pipes not under the roadway take precedence over rural entrance pipes. Contractors performing this item of work must be prequalified with the Department in the work type J51 (Video Pipe Inspection and Cleaning). Deflection testing shall be completed using a mandrel in accordance with the procedure outlined below or by physical measurement for pipes greater than 36inches in diameter. Mandrel testing for deflection must be completed prior to the video inspection testing. Unless otherwise noted, Section references herein are to the Department's most current version of the Standard Specifications for Road and Bridge Construction.

2.0 VIDEO INSPECTION. Ensure pipe is clear of water, debris or obstructions. Complete the video inspection and any necessary measurement prior to placing the final surface over any pipe. When paving will not be delayed, take measurements 30 days or more after the completion of earthwork to within 1 foot of the finished subgrade. Notify the Engineer a minimum of 24 hours in advance of inspection and notify the Engineer immediately if distresses or locations of improper installation are logged.

2.1 INSPECTION FOR DEFECTS AND DISTRESSES

A) Begin at the outlet end and proceed through to the inlet at a speed less than or equal to 30 ft/minute. Remove blockages that will prohibit a continuous operation.

B) Document locations of all observed defects and distresses including but not limited to: cracking, spalling, slabbing, exposed reinforcing steel, sags, joint offsets, joint separations, deflections, improper joints/connections, blockages, leaks, rips, tears, buckling, deviation from line and grade, damaged coatings/paved inverts, and other anomalies not consistent with a properly installed pipe.

C) During the video inspection provide a continuous 360 degree pan of every pipe joint.

D) Identify and measure all cracks greater than 0.1" and joint separations greater than 0.5".

E) Video Inspections are conducted from junction to junction which defines a pipe run. A junction is defined as a headwall, drop box inlet, curb box inlet, manhole, buried junction, or other structure that disturbs the continuity of the pipe. Multiple pipe inspections may be conducted from a single set up location, but each pipe run must be on a separate video file and all locations are to be referenced from nearest junction relative to that pipe run.

F) Record and submit all data on the TC 64-765 and TC 64-766 forms.

3.0 MANDREL TESTING. Mandrel testing will be used for deflection testing. For use on Corrugated Metal Pipe, High Density Polyethylene Pipe, and Polyvinyl Chloride Pipe,

use a mandrel device with an odd number of legs (9 minimum) having a length not less than the outside diameter of the mandrel. The diameter of the mandrel at any point shall not be less than the diameter specified in Section 3.6. Mandrels can be a fixed size or a variable size.

3.1 Use a proving ring or other method recommended by the mandrel manufacturer to verify mandrel diameter prior to inspection. Provide verification documentation for each size mandrel to the Engineer.

3.2 All deflection measurements are to be based off of the AASHTO Nominal Diameters. Refer to the chart in section 3.6.

3.3 Begin by using a mandrel set to the 5.0% deflection limit. Place the mandrel in the inlet end of the pipe and pull through to the outlet end. If resistance is met prior to completing the entire run, record the maximum distance achieved from the inlet side, then remove the mandrel and continue the inspection from the outlet end of the pipe toward the inlet end. Record the maximum distance achieved from the outlet side.

3.4 If no resistance is met at 5.0% then the inspection is complete. If resistance occurred at 5.0% then repeat 3.1 and 3.2 with the mandrel set to the 10.0% deflection limit. If the deflection of entire pipe run cannot be verified with the mandrel then immediately notify the Engineer.

3.5 Care must be taken when using a mandrel in all pipe material types and lining/coating scenarios. Pipe damaged during the mandrel inspection will be video inspected to determine the extent of the damage. If the damaged pipe was video inspected prior to mandrel inspection then a new video inspection is warranted and supersedes the first video inspection. Immediately notify the Engineer of any damages incurred during the mandrel inspection and submit a revised video inspection report.

3.6 AASHTO Nominal Diameters and Maximum Deflection Limits.

Base Pipe Diameter	AASHTO Nominal Diameter	Max. Deflection Limit	
		5.0%	10.0%
(inches)	(inches)	(inches)	
15	14.76	14.02	13.28
18	17.72	16.83	15.95
24	23.62	22.44	21.26
30	29.53	28.05	26.58
36	35.43	33.66	31.89
42	41.34	39.27	37.21
48	47.24	44.88	42.52
54	53.15	50.49	47.84
60	59.06	56.11	53.15

4.0 PHYSICAL MEASUREMENT OF PIPE DEFLECTION. Alternate method for deflection testing when there is available access or the pipe is greater than 36 inches in diameter, as per 4.1. Use a contact or non-contact distance instrument. A leveling device is recommended for establishing or verifying vertical and horizontal control.

4.1 Physical measurements may be taken after installation and compared to the AASHTO Nominal Diameter of the pipe as per Section 3.6. When this method is used, determine the smallest interior diameter of the pipe as measured through the center point of the pipe (D2). All measurements are to be taken from the inside crest of the corrugation. Take the D2 measurements at the most deflected portion of the pipe run in question and at intervals no greater than ten (10) feet through the run. Calculate the deflection as follows:

% Deflection = [(AASHTO Nominal Diameter - D2) / AASHTO Nominal Diameter] x 100%

Note: The Engineer may require that preset monitoring points be established in the culvert prior to backfilling. For these points the pre-installation measured diameter (D1) is measured and recorded. Deflection may then be calculated from the following formula:

$$\% \text{ Deflection} = [(D1 - D2) / D1] (100\%)$$

4.2 Record and submit all data.

5.0 DEDUCTION SCHEDULE. All pipe deductions shall be handled in accordance with the tables shown below.

FLEXIBLE PIPE DEFLECTION	
Amount of Deflection (%)	Payment
0.0 to 5.0	100% of the Unit Bid Price
5.1 to 9.9	50% of the Unit Bid Price [(1)]
10 or greater	Remove and Replace [(2)]

[(1)] Provide Structural Analysis for HDPE and metal pipe. Based on the structural analysis, pipe may be allowed to remain in place at the reduced unit price. [(2)] The Department may allow the pipe to remain in place with no pay to the Contractor in instances where it is in the best interest to the public and where the structural analysis demonstrates that the pipe should function adequately.

RIGID PIPE REMEDIATION TABLE PIPE	
Crack Width (inches)	Payment
≤ 0.1	100% of the Unit Bid Price
Greater than 0.1	Remediate or Replace [(1)]

[(1)] Provide the Department in writing a method for repairing the observed cracking. Do not begin work until the method has been approved.

6.0 PAYMENT. The Department will measure the quantity in linear feet of pipe to inspect. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24814EC	Pipeline Inspection	Linear Foot
10065NS	Pipe Deflection Deduction	Dollars

Special Note for Signage

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

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

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

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

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

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

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

Special Note for Signing

I. DESCRIPTION

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

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

II. MATERIALS

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

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

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

III. CONSTRUCTION METHODS

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

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

C. Staking. See Special Note for Staking.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

IV. METHOD OF MEASUREMENT

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

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

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

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

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

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

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

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

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

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

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

V. BASIS OF PAYMENT

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

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

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

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

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

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

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

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

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

Special Note for Completion Date & Liquidated Damages

I. COMPLETION DATE

The ultimate fixed completion date for this project will be November 15, 2023. Liquidated Damages for failure to complete the project on time will be assessed following Section 108.09.

II. LIQUIDATED DAMAGES

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

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

NOTE: At the sole discretion of the Engineer, all, or part, of these Liquidated Damages may be waived due to unforeseen circumstances, such as unexpected weather.

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

All liquidated damages will be applied accumulatively.

All other applicable portions of Section 108 apply.

SPECIAL PROVISION FOR WASTE AND BORROW SITES

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

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

October 2021

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. Provide the correct nozzles that is recommend by the producer to ensure proper coverage of tack is obtained. Ensure the bar can be raised to between 14" and 18" from the roadway.

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

3. CONSTRUCTION.

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

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

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

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

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

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

October 2021

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

COORDINATION OF WORK WITH OTHER CONTRACTS

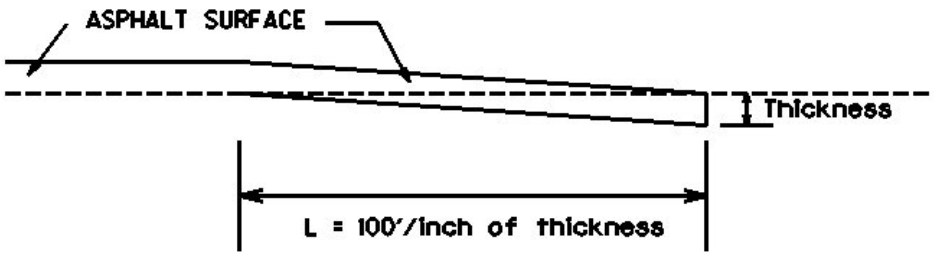
Be advised, there may be an active project(s) adjacent to or within this project. The Engineer will coordinate the work of the Contractors. See Section 105.06.

1-3193 Coordination Contracts
01/02/2012

SPECIAL NOTE FOR EDGE KEY

Construct Edge Keys at the beginning of project, end of project, at railroad crossings, and at ramps, as applicable. Unless specified in the Contract or directed by the Engineer, do not construct edge keys at intersecting streets, roads, alleys, or entrances. Cut out the existing asphalt surface to the required depth and width shown on the drawing and heel the new surface into the existing surface. The Department will make payment for this work at the Contract unit price per ton for Asphalt Pavement Milling and Texturing, which shall be full compensation for all labor, materials, equipment, and incidentals for removal and disposal of the existing asphalt surface required to construct the edge key.

EDGE KEY



Thickness = 1.25 Inches

L = 125 LF

L= Length of Edge Key

1-3309 Edge key by Ton
01/02//2012

Special Note for Guardrail

I. DESCRIPTION

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

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

II. MATERIALS

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

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

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

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

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

III. CONSTRUCTION METHODS

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

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

approved or directed by the engineer.

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

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

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

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

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

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

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

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

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

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

IV. METHOD OF MEASUREMENT

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

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

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

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

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

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

V. BASIS OF PAYMENT

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

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

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

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

SPECIAL NOTE FOR
ASPHALT MILLING AND TEXTURING

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

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

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

SPECIAL NOTE FOR 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, Supplemental 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 shall be paid at the lump sum bid price to "Maintain and Control Traffic".

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

PROJECT PHASING & CONSTRUCTION PROCEDURES

Maintain alternating one-way traffic during construction. Provide a minimum clear lane width of 10 feet (may be reduced to 9 feet locally for culvert extension construction); 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.

Take these restrictions into account in submitting bid. The Department will not consider any claims for money or grant contract time extensions for any delays to the Contractor as a result of these restrictions.

Unless otherwise approved by the Engineer, no lane closures will be allowed during the following times:

Easter Weekend	3 pm Friday, April 7, 2023 – 8 pm Sunday, April 9, 2023
Memorial Day Weekend	3 pm Friday, May 26, 2023 – 8 pm Monday, May 29, 2023
Independence Day	7 am Saturday, July 1, 2023 – 11 pm Tuesday, July 4, 2023
Labor Day Weekend	3 pm Friday, September 1, 2023 – 8 pm Monday, September 4, 2023
Thanksgiving Holiday	3 pm Wednesday, November 22, 2023 – 8 pm Sunday, November 26, 2023

The Contractor shall submit proposed lane closure days and times to the Engineer at least 14 calendar days in advance for approval. Liquidated Damages will be assessed for each hour or fraction of an hour that a lane closure is in place outside of an approved time period. See the Special Notes for Completion Dates & Liquidated Damages for details on the Liquidated Damages amount.

LANE CLOSURES

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

TEMPORARY SIGNS

Temporary signposts and splices shall be compliant with NCHRP 350 or MASH. Manufacturer's documentation validating this compliance shall be provided to the Engineer prior to installation. Temporary signs, including any splices, shall be installed according to manufacturer's specifications and installation recommendations. Contrary to section 112.04.02, only long-term temporary signs (temporary signs intended

to be continuously in place for more than 3 days) will be measured for payment. Short-term temporary signs (temporary signs intended to be left in place for 3 days or less) will not be measured for payment but will be incidental to Maintain and Control Traffic.

CHANGEABLE MESSAGE SIGNS

Provide changeable message signs in advance of and within the project at locations determined by the Engineer. If work is in progress concurrently in both directions or if more than one lane closure is in place in the same direction of travel, provide additional changeable message signs as directed by the Engineer. Place changeable message signs approximately one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens, relocate or provide additional changeable message signs so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. The Engineer may vary the designated locations as the work progresses. The Engineer will determine the messages to be displayed. In the event of damage or mechanical/electrical failure, repair or replace the Changeable Message Sign. If the damage or mechanical/electrical failure is identified during active work operations, repair or replace the Changeable Message Sign within 6 hours. If the damage or mechanical/electrical failure is identified when there are no active work operations on the project, repair or replace the Changeable Message Sign within 12 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/or relocated during the duration of the project. The Department will not measure for payment any replacements for damaged Changeable Message Signs or any changeable message signs the Engineer directs to be replaced due to poor condition or readability. Retain possession of the Changeable Message Signs upon completion of the work.

BARRICADES

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

TEMPORARY ENTRANCES

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

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

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

THERMOPLASTIC INTERSECTION MARKINGS

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

PAVEMENT EDGE DROP-OFFS

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

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

> Less than 2" - No protection required.
>
> 2" to 4" - Place plastic drums, vertical panels, or barricades every 50 feet. During daylight working hours only, the Engineer will allow the Contractor to use cones in lieu of plastic drums, panels, and barricades. Wedge the drop-off with DGA or asphalt mixture for leveling and wedging with a 1:1 or flatter slope in daylight hours, or 3:1 or flatter slope during nighttime hours, when work is not active in the drop-off area.
>
> Greater than 4" - Protect drop-offs greater than 4 inches within 10 feet of traffic by placing drums, vertical panels, or barricades every 25 feet. The Engineer will not allow the use of cones in lieu of drums, vertical panels, or barricades for drop-offs greater than 4". Place Type III Barricades directly in front of the drop-off facing oncoming traffic in both directions of travel. Provide warning signs as shown on the Standard Drawings or as directed by the Engineer
>
> Pedestrians & Bicycles - Protect pedestrian and bicycle traffic as directed by the Engineer.

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

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

Traffic Control Plan
Page 6 of 8

Standard Abbreviations

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

Word	Abbrev	Example
Access	ACCS	CRASH AHEAD/ USE ACCS RD NEXT RIGHT
Alternate	ALT	CRASH 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	CRASH ON AA HWY/ EXPECT DELAYS
Hour	HR	CRASH 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	CRASH 3 MI AHEAD/ USE ALT RTE
Minor	MNR	CRASH 3 MI MNR DELAY
Minutes	MIN	CRASH 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	CRASH 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

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

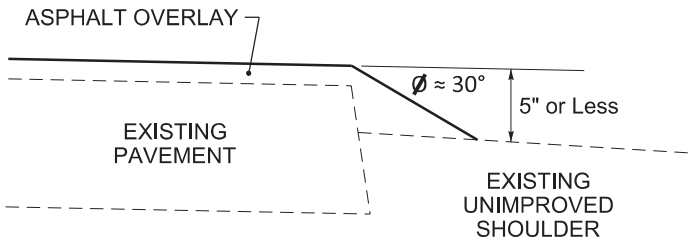
Traffic Control Plan
Page 8 of 8

Typical Messages (cont.)

Reason/Problem	**Action**
FOG XX MILES	PASS TO RIGHT
FREEWAY CLOSED	PREPARE TO STOP
FRESH OIL	REDUCE SPEED
HAZMAT SPILL	SLOW
ICE	SLOW DOWN
INCIDENT AHEAD	STAY IN LANE
LANES (NARROW, SHIFT, MERGE, ETC.)	STOP AHEAD
LEFT LANE CLOSED	STOP XX MILES
LEFT LANE NARROWS	TUNE RADIO 1610 AM
LEFT 2 LANES CLOSED	USE NN ROAD
LEFT SHOULDER CLOSED	USE CENTER LANE
LOOSE GRAVEL	USE DETOUR ROUTE
MEDIAN WORK XX MILES	USE LEFT TURN LANE
MOVING WORK ZONE, WORKERS IN ROADWAY	USE NEXT EXIT
NEXT EXIT CLOSED	USE RIGHT LANE
NO OVERSIZED LOADS	WATCH FOR FLAGGER
NO PASSING	
NO SHOULDER	
ONE LANE BRIDGE	
PEOPLE CROSSING	
RAMP CLOSED	
RAMP (SLIPPERY, ICE, ETC.)	
RIGHT LANE CLOSED	
RIGHT LANE NARROWS	
RIGHT SHOULDER CLOSED	
ROAD CLOSED	
ROAD CLOSED XX MILES	
ROAD (SLIPPERY, ICE, ETC.)	
ROAD WORK	
ROAD WORK (OR CONSTRUCTION) (TONIGHT, TODAY, TOMORROW, DATE)	
ROAD WORK XX MILES	
SHOULDER (SLIPPERY, ICE, SOFT, BLOCKED, ETC.)	
NEW SIGNAL XX MILES	
SLOW 1 (OR 2) - WAY TRAFFIC	
SOFT SHOULDER	
STALLED VEHICLES AHEAD	
TRAFFIC BACKUP	
TRAFFIC SLOWS	
TRUCK CROSSING	
TRUCKS ENTERING	
TOW TRUCK AHEAD	
UNEVEN LANES	
WATER ON ROAD	
WET PAINT	
WORK ZONE XX MILES	
WORKERS AHEAD	

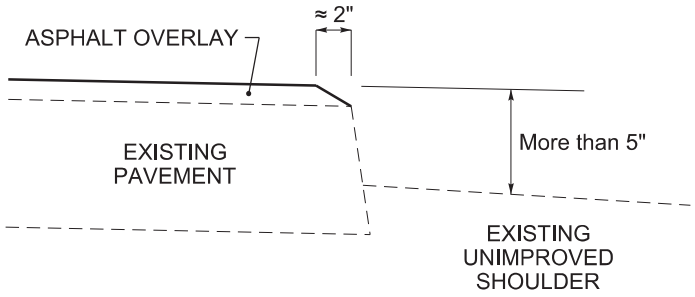
DURABLE PAVEMENT EDGE DETAIL

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



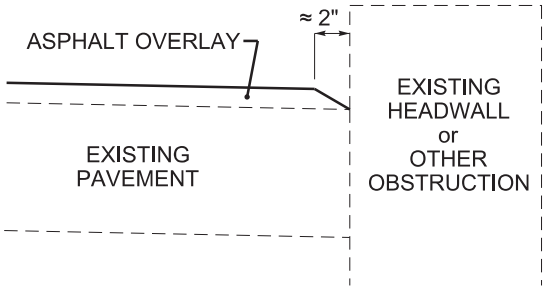
DURABLE PAVEMENT EDGE DETAIL

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



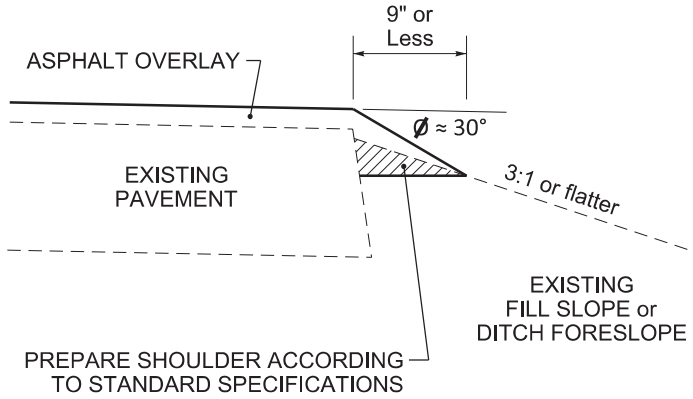
DURABLE PAVEMENT EDGE DETAIL

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



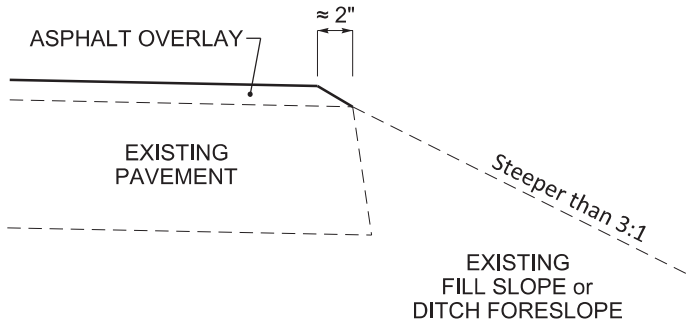
DURABLE PAVEMENT EDGE DETAIL

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



DURABLE PAVEMENT EDGE DETAIL

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



NOTES

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

DRAWING NOT TO SCALE

DURABLE PAVEMENT EDGE DETAILS

SPECIAL NOTE FOR SPRAY APPLIED THERMOPLASTIC PAVEMENT MARKING MATERIALS

I. DESCRIPTION

Except as provided herein, all work shall be performed in accordance with the 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) Spray applied thermoplastic pavement marking materials with reflectorized glass beads for permanent applications

II. MATERIALS

A. DROP ON BEADS. Use beads that will ensure the pavement marking material will meet retroreflectivity requirements. The Department will evaluate the beads as part of the marking system through retroreflectivity readings.

B. APPROVAL. Select materials that conform to the composition and physical characteristic requirements below when evaluated in accordance with AASHTO T-250 or other test methods as cited. The Department will sample and evaluate for approval each lot of thermoplastic material delivered for use per contract prior to installation of the thermoplastic material. Do not allow the installation of thermoplastic material until it has been approved by the Division of Materials. Allow the Department a minimum of 10 working days to evaluate and approve thermoplastic material from the date sampled.

C. Composition. Use a maleic-modified glycerol ester resin (alkyd binder) to formulate the thermoplastic material. Ensure the pigment, pre-mix beads, and filler are uniformly dispersed in the resin. Use material that is free from all dirt and foreign material. Provide independent analysis data and certification for each formulation stating the total concentration of each heavy metal present, the test method used for each determination, and compliance to 40 CFR 261 for leachable heavy metals content.

COMPOSITION
(Percentage by Weight)

Component	White	Yellow
Binder, [(1)]	26.0 min.	26.0 min.
Glass Beads (Premixed)	30 - 40	30 - 40
Titanium Dioxide (Rutile, Type II)	10.0 min.	—
Calcium Carbonate & Inert Fillers [(2)]	42.0 max.	50.0 max.
Heavy Metals Content	Comply with 40 CFR 261	Comply with 40 CFR 261

[(1)]Use a binder that consists of a mixture of synthetic resins, at least one being solid at room temperature, and high boiling point plasticizers. Ensure that at least one-third of the binder composition is solid maleic-modified glycerol ester resin and is not less than 8 percent by weight of the entire material formulation. Do not use alkyd binder that contains petroleum based hydrocarbon resins.

[(2)]The manufacturer may choose the amount of calcium carbonate and inert fillers, providing all other requirements of this section are met.

D. Physical Characteristics. For thermoplastic material heated for 4 hours at 425ºF under agitation, conform to the following requirements.

a) Color. As determined with a spectrophotometer using D65 illuminant with a 45 degree entrance angle and 0 degree observation angle geometry.

CIELAB Color Coordinates		
	Yellow	White
Daytime Color (CIELAB) Spectrophotometer using illuminant D65 at 45º illumination and 0º viewing with a 2º observer	L* 81.76 a* 19.79 b* 89.89 Maximum allowable variation 6.0ΔE*	L* 93.51 a* -1.01 b* 0.70 Maximum allowable variation 6.0ΔE*
Nighttime Color (CIELAB) Spectrophotometer using illuminant A at 45º illumination and 0º viewing with a 2º observer	L* 86.90 a* 24.80 b* 95.45 Maximum allowable variation 6.0ΔE*	L* 93.45 a* -0.79 b* 0.43 Maximum allowable variation 6.0ΔE*

b) Set Time. Use material that, when applied at a temperature range of 375 ± 25 ºF and thickness of 60 ± 10 mils, sets to bear traffic in not more than 2 minutes when the air and road surface temperature is approximately ≥ 50 ± 3 ºF, and not more than 10 minutes when the air and road surface temperature is approximately < 50 ± 3 ºF.

c) Softening Point. Ensure that the thermoplastic material has a softening point of 180 ± 15 ºF.

d) Bond Strength. Ensure that the bond strength of the thermoplastic material to concrete exceeds 180 psi.

e) Cracking Resistance at Low Temperature. Ensure that the thermoplastic material shows no cracks when observed from a distance exceeding one foot.

f) Impact Resistance. Ensure the impact resistance of the thermoplastic material is a minimum of 50 inch-pounds.

g) Flash Point. Use thermoplastic material that has a flash point not less than 475 °F.

E. PACKAGING. Package thermoplastic material in suitable 50 pound containers to which the material shall not adhere during shipment or storage. Include a label stating that the thermoplastic material is to be maintained with a temperature range of 350 – 400ºF during application. Provide the thermoplastic material in granular form.

F. SHELF LIFE. Ensure that the thermoplastic material conforms to this section for a period of one year. Replace any thermoplastic material not conforming to the above requirements.

G. MANUFACTURER'S TESTING. Perform testing in accordance with AASHTO T-250 on a minimum of one composite sample per 10,000 pounds, or portion thereof, per lot of thermoplastic produced.

H. CERTIFICATION. Submit manufacturer's certification stating conformance to the requirements of this section for each lot of extruded thermoplastic delivered for use on projects. Clearly state the manufacture, formulation identification, product name, color, date of manufacturer, total quantity of lot produced, actual quantity of thermoplastic material represented, sampling method utilized to obtain the samples, and required manufacturer's testing data for each composite sample tested to represent each lot produced.

III. CONSTRUCTION METHODS

A. SURFACE PREPARATION. The contractor will be required to sweep all pavement surfaces prior to striping and maintain the cleaning operation far enough in advance of the striping operation to prevent any dust from the cleaning operation from mixing with the paint. The sweeper must maintain contact with the roadway. When the Engineer determines abnormal amounts of debris or other material have accumulated beyond the capability of the required sweeping unit which will require shoveling or other means to remove, the Engineer will make arrangements, prior to painting, to have the material removed by the Department.

B. INSTALLATION. Install thermoplastic materials in accordance with Section 714, Durable Pavement Striping, and the following exceptions:

- Install the thermoplastic materials at a minimum thickness of 60 mils.
- Ensure the material temperature is maintained between 350 and 400°F.
- Do not allow the material temperature to exceed 400°F.
- Removal of existing stripe on asphalt surfaces is not required.

C. RETROREFLECTIVITY. The Department will evaluate installed markings in accordance with Section 714.03.06, Proving Period for Durable Markings.

IV. METHOD OF MEASUREMENT

A. ACCEPTANCE AND PAYMENT. The Department will accept spray applied thermoplastic materials based on compliance of the manufacturer's certification and conformance of test results obtained by the Department to the requirements of this special note.

Contrary to Section 714.03.08, Acceptance of Non-Specification Thermoplastic Markings, the Department will not accept non-specification compliant markings. Remove non-specification compliant markings by water blasting. The Department will perform random thickness tests on applied markings to determine compliance to thickness requirements

IV. BASIS OF PAYMENT

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

Code	Pay Item	Pay Unit
24995EC	PAVE STRIPING-SPRAY THERMO-6 IN W	LF
24996EC	PAVE STRIPING-SPRAY THERMO-6 IN Y	LF

The Department will consider payment as full compensation for furnishing all labor, materials, equipment, and incidentals required to construct spray applied thermoplastic pavement markings.

Revised: 1/14/2021

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

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

RIGHT OF WAY CERTIFICATION

☒ Original	☐ Re-Certification	RIGHT OF WAY CERTIFICATION	
ITEM #	**COUNTY**	**PROJECT # (STATE)**	**PROJECT # (FEDERAL)**
12-9014.00	Pike	FD04 098 0080 000-002	
PROJECT DESCRIPTION			

PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 80 FROM MP 0.000 TO MP 1.650 IN PIKE COUNTY, KY.

☒ **No Additional Right of Way Required**

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

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

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

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

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

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

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

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

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

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Joe Tackett
Signature		Signature	Joe Tackett
Date		Date	9/19/2022
Right of Way Director		**FHWA**	
Printed Name		Printed Name	
Signature	2022.09.19 14:25:55 -04'00'	Signature	
Date		Date	

UTILITIES AND RAIL CERTIFICATION NOTE

Pike County
FD04 098 0080 000-002
Safety Improvements along KY 80 from MP 0 to MP 1.650
Item No. 12-9014.00

GENERAL PROJECT NOTES ON UTILITIES

For all projects over 2000 linear feet, which are defined as a "Large Project" in KRS 367.4903(18), the awarded contractor shall initially mark the first 2000 linear feet minimally of proposed excavation or construction boundaries of the project to be worked using the procedure set forth in KRS 367.4909(9)(k). This temporary field locating of the project excavation boundary shall take place prior to submitting an excavation location request to the underground utility protection Kentucky Contact Center. For large projects, the awarded contractor shall work with the impacted utilities to determine when additional white lining of the remainder of the project site will take place. This provision shall not alter or relieve the awarded contractor from complying with requirements of KRS 367.4905 to 367.4917 in their entirety.

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

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his/her activities. The contractor will coordinate his/her 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.

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. The contractor is instructed to contact KY 811 for the location of existing underground utilities. Contact shall be made a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY 811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom are to be contacted through their individual Protection Notification Center. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area. Non-compliance with these directives can result in the enforcement of penalties.

UTILITIES AND RAIL CERTIFICATION NOTE

Pike County
FD04 098 0080 000-002
Safety Improvements along KY 80 from MP 0 to MP 1.650
Item No. 12-9014.00

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

American Electric Power, East KY Network & AT&T have overhead lines adjacent to and crossing KY 80 at various locations. These facilities are to remain in place and are not to be disturbed.

Elkhorn City Water Dept. has a water main running along the north side of KY 80. Coordination will be required with the water district when the contractor is constructing pipe extensions. **The contractor shall notify the water district's representative 2 days in advance of any proposed work that may conflict with the existing water line. The water district will be present for any work in the vicinity of the existing water main. The water district indicated that the water line is installed directly off the edge of pavement and not in the ditch (in most locations).**

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.

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☒ **No Rail Involvement** ☐ **Rail Involved** ☐ **Rail Adjacent**

UTILITIES AND RAIL CERTIFICATION NOTE

Pike County
FD04 098 0080 000-002
Safety Improvements along KY 80 from MP 0 to MP 1.650
Item No. 12-9014.00

AREA UTILITIES CONTACT LIST

Utility Company/Agency	Contact Name	Contact Information
AT&T – Kentucky	Jack Salyers	102 Walters Road Pikeville, KY 41501 606-424-9328
East Kentucky Network	Gerald Robinette	101 Technology Trail Ivel, KY 41642 606-874-7550
American Electric Power	Bill Johnson	3249 North Mayo Trail Pikeville, KY 41501 606-437-3823
Elkhorn City Water Dept.	Mike Taylor-Mayor	395 S. Patty Loveless Dr. Elkhorn City, KY 41522 606-754-5080

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

Kentucky Transportation
Cabinet Project: 12-9014
KY 80 Safety Improvements
Pike County STA 37+29

N O T I C E

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NATIONWIDE SECTION 404 PERMIT AUTHORIZATION

DEPARTMENT FOR ENVIRONMENTAL PROTECTION
KENTUCKY DIVISION OF WATER
SECTION 401 WATER QUALITY CERTIFICATION

PROJECT DESCRIPTION: Pike County 12-9014 - KY 80 Safety Improvements

The Sections 404 and 401 activities for this project have previously been permitted under the authority of the Department of the Army, Nationwide Section 404 Permit Number 14, *Linear Transportation Projects* (with additional *Kentucky Regional General Conditions*), and the Division of Section 401 Water General Water Quality Certification. For these authorized permits to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Number 14 permit and General Water Quality Certification in a conspicuous location at the project site, with unencumbered public access, for the duration of construction and comply with the general conditions required.

Locations Impacting Water Quality

Kentucky Transportation
Cabinet Project: 12-9014
KY 80 Safety Improvements
Pike County STA 37+29

Station-Location	Description
Site 1 STA 37+29	Extend existing 4’ x 3’ RCBC 17 LF on the outlet end with headwall and riprap to an unnamed tributary of Russell Fork. The total for new stream impacts will be approximately 17 LF and 0.004 acres of impacts to an intermittent stream. The watershed for this structure is approximately 65 acres. Latitude: 37.333043 deg. Longitude: -82.369278 deg.

This project involves work near and/or within Jurisdictional Waters of the United States as defined by the U. S. Army Corps of Engineers; therefore, requiring a Nationwide Number 14 General Section 404 permit. The Division of Water conditionally certified this General Permit. Importantly, one of those conditions regards the use of heavy equipment in any stream channel, or streambed. If there is need to cross the stream channel with heavy equipment, or conduct work within the stream channel, a work platform or temporary crossing, is authorized. This should be constructed with clean rock (preferably sandstone or granite east of a line stretching from the McCreary-Wayne County line to the southwest, northeasterly to Lewis-Greenup County line), and sufficient pipe to allow stream flow to continue, unimpeded (refer to the attached standard drawing for low-water crossings at end of the document). Other conditions may be found under the heading, *General Certification—Nationwide Permit # 14 Linear Transportation Projects*.

In order for this authorization to be valid, the attached conditions must be followed. The contractor shall post a copy of this Nationwide Number 14 Approval in a conspicuous location at the project site, for the duration of the 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 Kentucky Transportation Cabinet, Division of Environmental Analysis. If such changes necessitate further permitting, then the contractor will be responsible for applying to the U. S. Army Corps of Engineers and the Kentucky Division of Water. A copy of any request to the Corps of Engineers or Division of Water 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.

Public Notice

US Army Corps of Engineers

Louisville District ®

Public Notice No.
LRL-2020-00006

Please address all comments and inquiries to:
U.S. Army Corps of Engineers, Louisville District
ATTN: Meagan Knuckles, CELRL-RDS, Rm 752
P.O. Box 59
Louisville, Kentucky 40201-0059
Phone: (502) 315-6709

PUBLIC NOTICE FOR FEDERAL REGISTER NOTICE ANNOUNCING THE REISSUANCE OF THE NATIONWIDE PERMITS

On January 13, 2021, the U.S. Army Corps of Engineers (Corps) published a final rule in the *Federal Register* (86 FR 2744) announcing the reissuance of 12 existing nationwide permits (NWPs) and four new NWPs, as well as the reissuance of NWP general conditions and definitions with some modifications. The January 13, 2021, *Federal Register* notice is available for viewing at https://www.federalregister.gov/documents/2021/01/13/2021-00102/reissuance-and-modification-of-nationwide-permits. The 16 NWPs, listed below, become effective on March 15, 2021, and will expire on March 14, 2026:

- NWP 12 – Oil or Natural Gas Pipeline Activities
- NWP 21 – Surface Coal Mining Activities
- NWP 29 – Residential Developments
- NWP 39 – Commercial and Institutional Developments
- NWP 40 – Agricultural Activities
- NWP 42 – Recreational Facilities
- NWP 43 – Stormwater Management Facilities
- NWP 44 – Mining Activities
- NWP 48 – Commercial Shellfish Mariculture 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 55 – Seaweed Mariculture Activities
- NWP 56 – Finfish Mariculture Activities
- NWP 57 – Electric Utility Line and Telecommunications Activities
- NWP 58 – Utility Line Activities for Water and Other Substances

On February 15, 2021, the Great Lakes and Ohio River Division (LRD) approved Kentucky regional conditions for the 2021 NWPs in the Commonwealth of Kentucky. The Kentucky Regional Conditions for the 2021 NWPs for the Commonwealth of Kentucky become effective on March 15, 2021 and are attached to this public notice. Additionally, the Louisville District has posted the Regional Conditions for the Commonwealth of Kentucky for the 2021 NWPs on its

internet home page at: http://www.lrl.usace.army.mil/Missions/Regulatory/Obtain-a-Permit/Nationwide/.

KDOW denied the 401 WQC for NWP 43, NWP 44 and NWP 52, therefore an individual 401 WQC will be required for a project authorized by NWP 43, NWP 44 and NWP 52. The KDOW issued general WQCs for NWPs 12, 21, 29, 39, 42, 50, 51, 57 and 58. An individual 401 WQC will be required by the KDOW if the proposed activities do not meet the conditions of the general WQC. The KDOW certified NWPs 40, 48, 55 and 56 as written, therefore, projects authorized by these activities are certified as written and no further contact with KDOW would be required. The 401 WQC for the 2021 NWPs becomes effective on March 15, 2021 and is attached to this public notice. Additionally, the Louisville District has posted the 401 WQC on its internet homepage at the link noted above.

There are 40 existing NWPs that were not reissued or modified by the January 13, 2021 final rule. Those 40 NWPs were published in the January 6, 2017 issue of the Federal Register (82 FR 1860). The 40 2017 NWPs, accompanying regional conditions and 401 WQC will remain in effect until the Corps issues a final rule reissuing those NWPs, Regional Conditions, and 401 WQC, or until March 18, 2022, whichever comes first. Listed below are the 40 2017 NWPs that remain in effect, and the 2017 Kentucky Regional Conditions are on the Louisville Districts internet homepage at the link noted above.

- NWP 1 – Aids to Navigation
- NWP 2 – Structures in Artificial Canals
- 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 8 – Oil and Gas Structures on the Outer Continental Shelf
- NWP 9 – Structures in Fleeting and Anchorage Areas
- NWP 10 – Mooring Buoys
- NWP 11 – Temporary Recreational Structures
- 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 22 – Removal of Vessels
- NWP 23 – Approved Categorical Exclusions

- NWP 24 – Indian Tribe or State Administered Section 404 Programs
- NWP 25 – Structural Discharges
- NWP 27 – Aquatic Habitat Restoration, Establishment, and Enhancement Activities
- NWP 28 – Modifications of Existing Marinas
- 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 35 – Maintenance Dredging of Existing Basins
- NWP 36 – Boat Ramps
- NWP 37 – Emergency Watershed Protection and Rehabilitation
- NWP 38 – Cleanup of Hazardous and Toxic Waste
- NWP 41 – Reshaping Existing Drainage Ditches
- NWP 45 – Repair of Uplands Damaged by Discrete Events
- NWP 46 – Discharges in Ditches
- NWP 49 – Coal Remining Activities
- NWP 53 – Removal of Low-Head Dams
- NWP 54 – Living Shorelines

Questions concerning implementation of the NWPs and associated Regional Conditions should be sent to LRL.RegulatoryPublicComment@usace.army.mil or you can contact Ms. Meagan Knuckles at (502) 315-6709.

2021 KENTUCKY REGIONAL GENERAL CONDITIONS

These regional conditions are in addition to, but do not supersede, the requirements in the Federal Register (Volume 86, No. 8 on Date January 13, 2021, pp 2744).

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

1. For activities that would result in a loss of Outstanding State or National Resource Waters (OSNRWs), Exceptional Waters (EWs), Coldwater Aquatic Habitat Waters (CAHs) and waters with Designated Critical Habitat (DCH) 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 for impacts to these waters.

   NWP 12 (Oil or Natural Gas Pipeline Activities)
   NWP 51 (Land-Based Renewable Energy Generation Facilities)
   NWP 57 (Electric Utility Line and Telecommunications Activities)
   NWP 58 (Utility Line Activities for Water and Other Substances

2. All applications and requests should be submitted electronically. To submit applications or other requests electronically, all documents should be saved as a PDF document, and then submitted as an attachment in an email to the following email address:

   CELRL.Door.To.The.Corps@usace.army.mil

   Your email should include the following:
   a) Subject Line with the name of the applicant, type of request, and location (County and State). Example: RE: Doe, John, DA Permit Application, Jefferson County, KY
   b) Brief description of the request and contact information (phone number, mailing address, and email address) for the applicant and/or their agent.
   c) Project Location: Address and Latitude/Longitude in decimal degrees (e.g. 42.927883, -88.362576).

   All forms that require signature must be digitally signed or signed manually, scanned and then sent electronically.

   Electronic documents must have sufficient resolution to show project details. In order to have the highest quality documents, the original digital documents should be converted to PDF rather than providing scanned copies of original documents.

   The electronic application and attached documents must not exceed 10 megabytes (10MB).

3. 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/

Designated Critical Habitat (DCH) under the Endangered Species Act is determined within the Commonwealth of Kentucky by the U.S. Fish and Wildlife Service. The current list of Kentucky's Threatened, Endangered, and Federal Candidate Species can be found at the following link: http://www.fws.gov/frankfort/EndangeredSpecies.html Information on Pre-Construction Notification (PCN) can be found at NWP General Condition No. 32 in the Federal Register (Volume 86, No. 8 on Date January 13, 2021, pp 2873).

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 Sportsman's Lane
Frankfort, KY 40601

Executive Director and State Historic Preservation Officer
Kentucky Heritage Council
410 High Street
Frankfort, KY 40601

ANDY BESHEAR
GOVERNOR

REBECCA W. GOODMAN
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

ANTHONY R. HATTON
COMMISSIONER

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601

December 18, 2020

Mr. David Baldridge
Chief, South Branch
Regulatory Division
U.S. Army Corps of Engineers, Louisville District
600 Dr. Martin Luther King Jr Pl
Louisville, Kentucky 40202

Re: §401 Water Quality Certification
Nationwide Permits 2020
AI No.: 35050; Activity ID: APE20200005
USACE ID No.: LRL-2020-00006

Dear Mr. Baldridge:

The Kentucky Division of Water (Division) received requests for Section 401 Water Quality Certification from the U.S. Army Corps of Engineers, Louisville District for the proposed 2020 Nationwide Permits 3, 4, 5, 6, 7, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 27, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 45, 46, 48, 49, 50, 51, 52, 53, 54, C, D and E on October 19, 2020 and proposed 2020 Nationwide Permits 1, 2, 8, 9, 10, 11, 24, 28, 35, A and B on December 10, 2020. The Division has reviewed the conditions specified in each proposed permit and the general conditions that apply to all Nationwide Permits and made determinations to certify, deny or waive. Please review the enclosed package for a summary of these determinations.

It is the determination of the Division that proposed Nationwide Permits 1, 2, 4, 6, 8, 9, 10, 11, 20, 22, 24, 28, 34, 35, 40, 41, 48, 54, A and B provide reasonable assurances as written, that the applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 303, 304, 306, and 307 of the CWA, will not be violated. The Division considers Nationwide Permits 1, 2, 4, 6, 8, 9, 10, 11, 20, 22, 24, 28, 34, 35, 40, 41, 48, 54, A and B certified as written.

It is the determination of the Division that proposed Nationwide Permits 3, 5, 7, 12, 13, 14, 15, 18, 19, 21, 23, 25, 27, 29, 30, 31, 33, 36, 37, 39, 42, 45, 46, 49, 50, 51, C, D, and E can provide reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 303, 304, 306, and 307 of the CWA, will not be violated if these activities are performed in compliance with the conditions included for each General Certification. The Division considers Nationwide Permits 3, 5, 7, 12, 13, 14, 15, 18, 19, 21, 23, 25, 27, 29, 30, 31, 33, 36, 37, 39, 42, 45, 46, 49, 50, 51, C, D, and E certified with conditions.

Consistent with Section 401 of the Clean Water Act, the General Certification conditions are designed to ensure activities carried out under Nationwide Permits authorized by the U.S. Army Corps of Engineers will comply with applicable water quality requirements. Where applicable, these conditions are in addition to, not a replacement for, any federal requirements or conditions.

It is the determination of the Division that proposed Nationwide Permits 16, 17, 32, 38, 43, 44, 52, and 53 will require a site-specific Individual Water Quality Certification and will be denied a general certification for these activities. The activities, as permitted in these proposed Nationwide Permits, do not provide sufficient information about the activity design and methodology or the discharge that may occur to be certified as written. The denial for a general certification is based on the Division's inability to generally condition these activities to ensure that the activities will comply with Kentucky's water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 303, 304, 306, and 307 of the CWA.

The draft determinations were made available for public comment from November 17, 2020 through December 17, 2020. The final determinations will be available to the public on our website at https://eec.ky.gov. Please contact Elizabeth Harrod by phone at 502-782-6700 or email at Elizabeth.Harrod@ky.gov if you have any questions.

Sincerely,

Elizabeth M Harrod

Elizabeth Harrod, Supervisor
Water Quality Certification Section
Kentucky Division of Water

Enclosure

cc: Mike Ricketts, Louisville District [Michael.S.Ricketts@usace.army.mil]
Josh Frost, Nashville District [Joshua.W.Frost@usace.army.mil]
Timothy Wilder, Memphis District [Timothy.C.Wilder@usace.army.mil]
Ashley Monroe, U.S. EPA [Monroe.Ashley@epa.gov]
Lee Andrews, USFWS: Frankfort [kentuckyes@fws.gov]
Doug Dawson, Kentucky Department of Fish and Wildlife Resources [doug.dawson@ky.gov]

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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.

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,

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.

GENERAL CONDITIONS FOR WATER QUALITY CERTIFICATION

1. 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.

2. Nationwide permits issued by the U.S. Army Corps of Engineers for projects in Outstanding State Resource Waters, Cold Water Aquatic Habitats, and Exceptional Waters as defined by 401 KAR 10:026 shall require individual water quality certifications.

3. Projects requiring in-stream stormwater detention/retention basins shall require individual water quality certifications.

4. 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.

5. Sediment and erosion control measures (e.g., check-dams, silt fencing, or hay bales) 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, placement shall not be conducted in such a manner that may cause instability of streams that are adjacent to, upstream, or downstream of the structures. All sediment and erosion control measures shall be removed and the natural grade restored prior to withdrawal from the site.

6. Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse.

7. To the maximum extent practicable, all in-stream work under this certification shall be performed during low flow.

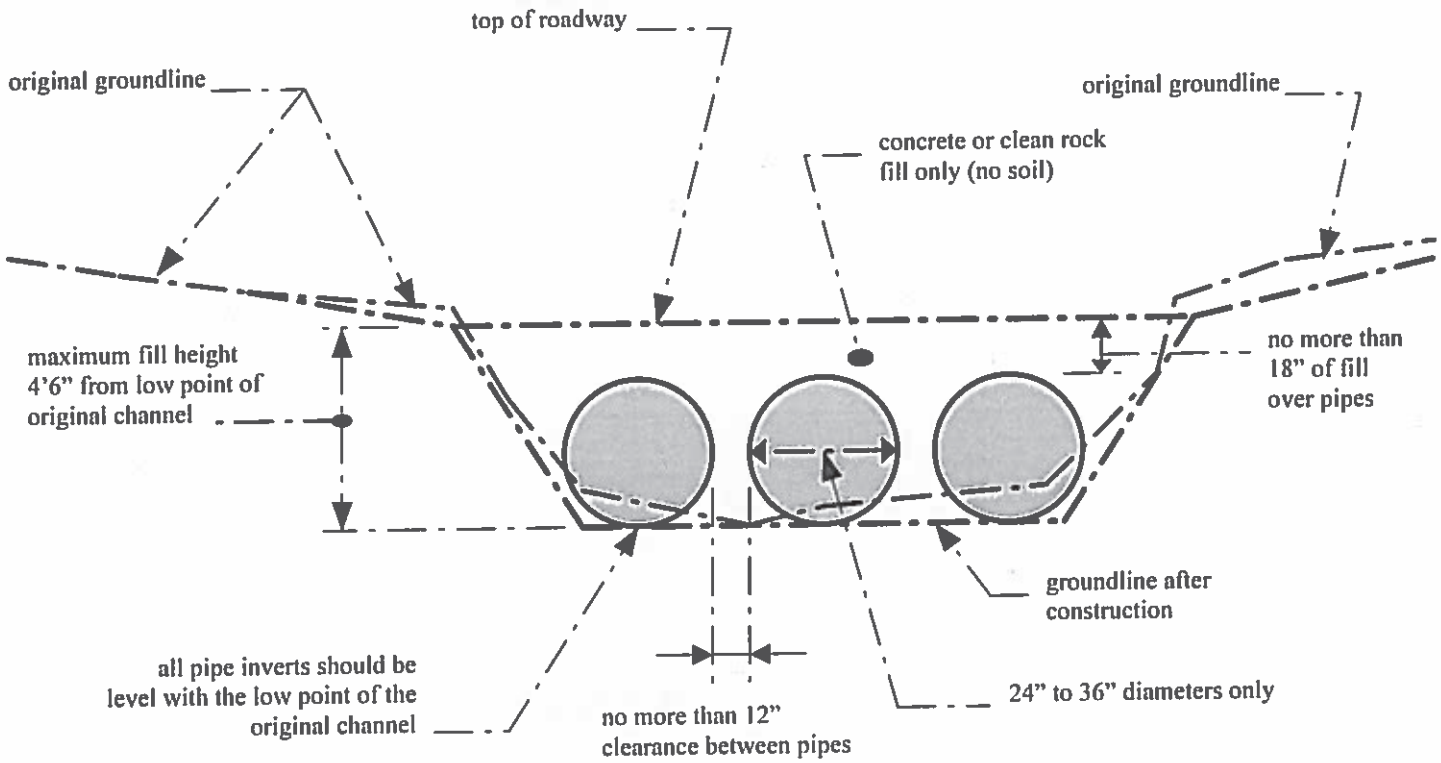
8. Heavy equipment (e.g. bulldozers, backhoes, draglines, etc.), if required for this project, should not be used or operated within the stream channel. In those instances where such in-stream work is unavoidable, then it shall be performed in such a manner and duration as to minimize re-suspension of sediments and disturbance to the channel, banks, or riparian vegetation.

9. If there are water supply intakes located downstream that may be affected by increased turbidity, the permittee shall notify the operator when work will be performed.

10. Removal of existing riparian vegetation should be restricted to the minimum necessary for project construction.

11. Should stream pollution, 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 Kentucky Division of Water shall be notified immediately by calling 800/564-2380.

ATTACHMENT 1



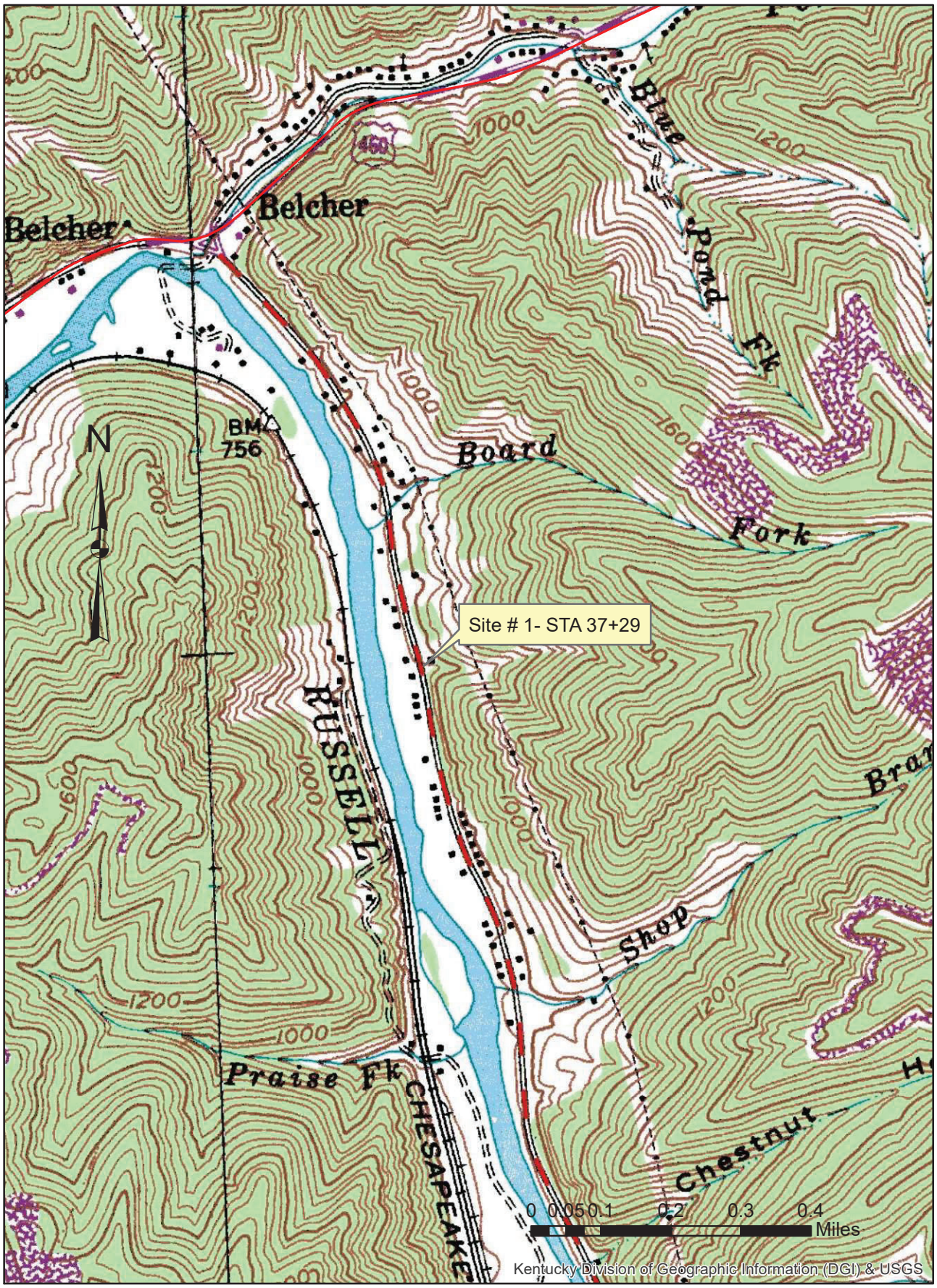
NOTES:

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

12-9014- KY 80 Safety Improvements- Pike County



Kentucky Transportation Cabinet

Highway District 12

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-80 in Pike County

Project: Item # 12-9014

Revised 3/4/2016

KYTC BMP Plan for Project Item # 12-9014

Project information

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

1. Owner – Kentucky Transportation Cabinet, District 12
2. Resident Engineer: (2)
3. Contractor name: (2)
   Address: (2)

   Phone number: (2)
   Contact: (2)
   Contractor's agent responsible for compliance with the KPDES permit requirements (3):
4. Project Control Number: (2)
5. Route (Address): KY-80
6. Latitude/Longitude (project mid-point): 37° 19' 52.8132", -82° 22' 8.2452"
7. County (project mid-point): Pike
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

KYTC BMP Plan for Project Item # 12-9014

A. Site description:

1. Nature of Construction Activity (from letting project description): Ditching & Shouldering, Pipe Extension, Paving, Guardrail, and Signing.

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

3. Projected volume of material to be moved: *This project does not involve significant cut and fill.*

4. Estimate of total project area (acres): 12.0

5. Estimate of area to be disturbed (acres): 6.0

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: Russel Fork & Board Fork

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.

KYTC BMP Plan for Project Item # 12-9014

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

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

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

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

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

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

C. Other Control Measures

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

2. Waste Materials

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

3. Hazardous Waste

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

4. Spill Prevention

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

➢ **Good Housekeeping:**

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

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

➢ **Hazardous Products:**

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

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

The following product-specific practices will be followed onsite:

➢ **Petroleum Products:**

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

The contractor shall prepare an Oil Pollution Spill Prevention Control and Countermeasure plan when the project that involves the storage of petroleum

products in 55 gallon or larger containers with a total combined storage capacity of 1,320 gallons. This is a requirement of 40 CFR 112.

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

- **Fertilizers:**

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

- **Paints:**

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

- **Concrete Truck Washout:**

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

- **Spill Control Practices**

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

- Manufacturers' recommended methods for spill cleanup will be clearly posted. All personnel will be made aware of procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area. Equipment and materials will include as appropriate, brooms, dust pans, mops, rags, gloves, oil absorbents, sand, sawdust, and plastic and metal trash containers.
- All spills will be cleaned up immediately after discovery.

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

D. Other State and Local Plans

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

E. Maintenance

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

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

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

KYTC BMP Plan for Project Item # 12-9014

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

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

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

KYTC BMP Plan for Project Item # 12-9014

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. 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.

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

Sub-Contractor Certification

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

Subcontractor

Name:
Address:
Address:

Phone:

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

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

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

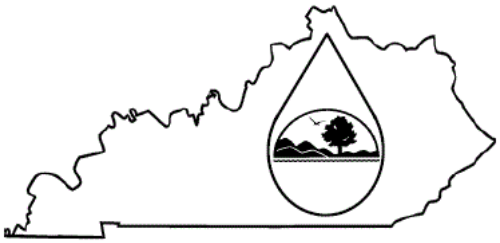
1. Sub-Contractor Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner, or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager,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

Item No.: 12-9014
Pike County
Highway Safety Improvement Project along KY-80
from MP 0.000 – 1.650

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: 312168

eForm Transaction ID: 2fa7ed48-c80f-4bf2-8aab-5890cc364c25



KENTUCKY POLLUTION DISCHARGE ELIMINATION SYSTEM (KPDES)

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

Click here for Instructions
(Controls/KPDES_FormKYR10_Instructions.htm)

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

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

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

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

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

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

SECTION I -- FACILITY OPERATOR INFORMATION (PERMITTEE)

Company Name:(✓)	First Name:(✓)	M.I.:	Last Name:(✓)
Kentucky Transportation Cabinet, District 12	Mary	MI	Westfall-Holbrook

Mailing Address:(*)	City:(*)	State:(*)	Zip:(*)
109 Loraine Street	Pikeville	Kentucky	41501

eMail Address:(*)	Business Phone:(*)	Alternate Phone:
MaryW.Holbrook@ky.gov	6064437791	Phone

SECTION II -- GENERAL SITE LOCATION INFORMATION

Project Name:(*)	Status of Owner/Operator(*)	SIC Code(*)
Item No. 12-9014	State Government	1611 Highway and Street Cons

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

Site Physical Address:(*)
KY 80

City:(*)	State:(*)	Zip:(*)
Elkhorn City	Kentucky	41522

County:(*)	Latitude(decimal degrees)(*)DMS to DD Converter (https://www.fcc.gov/media/radio/dms-decimal)	Longitude(decimal degrees)(*)
Pike	37.331337	-82.368957

SECTION III -- SPECIFIC SITE ACTIVITY INFORMATION

Project Description:(*)
Highway Safety Improvement Program consisting of various improvements such as Ditching & Shouldering, Pipe Replacement/Extension, Box Culvert Extension, Asphalt

a. For single projects provide the following information

Total Number of Acres in Project:(✓)	Total Number of Acres Disturbed:(✓)
12.0	6.0
Anticipated Start Date:(✓)	Anticipated Completion Date:(✓)

b. For common plans of development provide the following information

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

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

	Company Name	
+		

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

Discharge Point(s):

	Unnamed Tributary?	Latitude	Longitude	Receiving Water Name	
1	No	37.320270	-82.365446	Russel Fork	Delete
2	No	37.324054	-82.367012	Russel Fork	Delete
3	No	37.325462	-82.367155	Russel Fork	Delete
4	No	37.326102	-82.367210	Russel Fork	Delete
5	No	37.327374	-82.367489	Russel Fork	Delete
6	No	37.328861	-82.368334	Russel Fork	Delete
7	No	37.331939	-82.369229	Russel Fork	Delete
8	No	37.333039	-82.369325	Russel Fork	Delete
9	No	37.334575	-82.369820	Russel Fork	Delete
10	No	37.335164	-82.369965	Russel Fork	Delete

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

Name of MS4:

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

	Latitude	Longitude	
+			

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

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

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

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

SECTION VIII -- ATTACHMENTS

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

SECTION IX -- CERTIFICATION

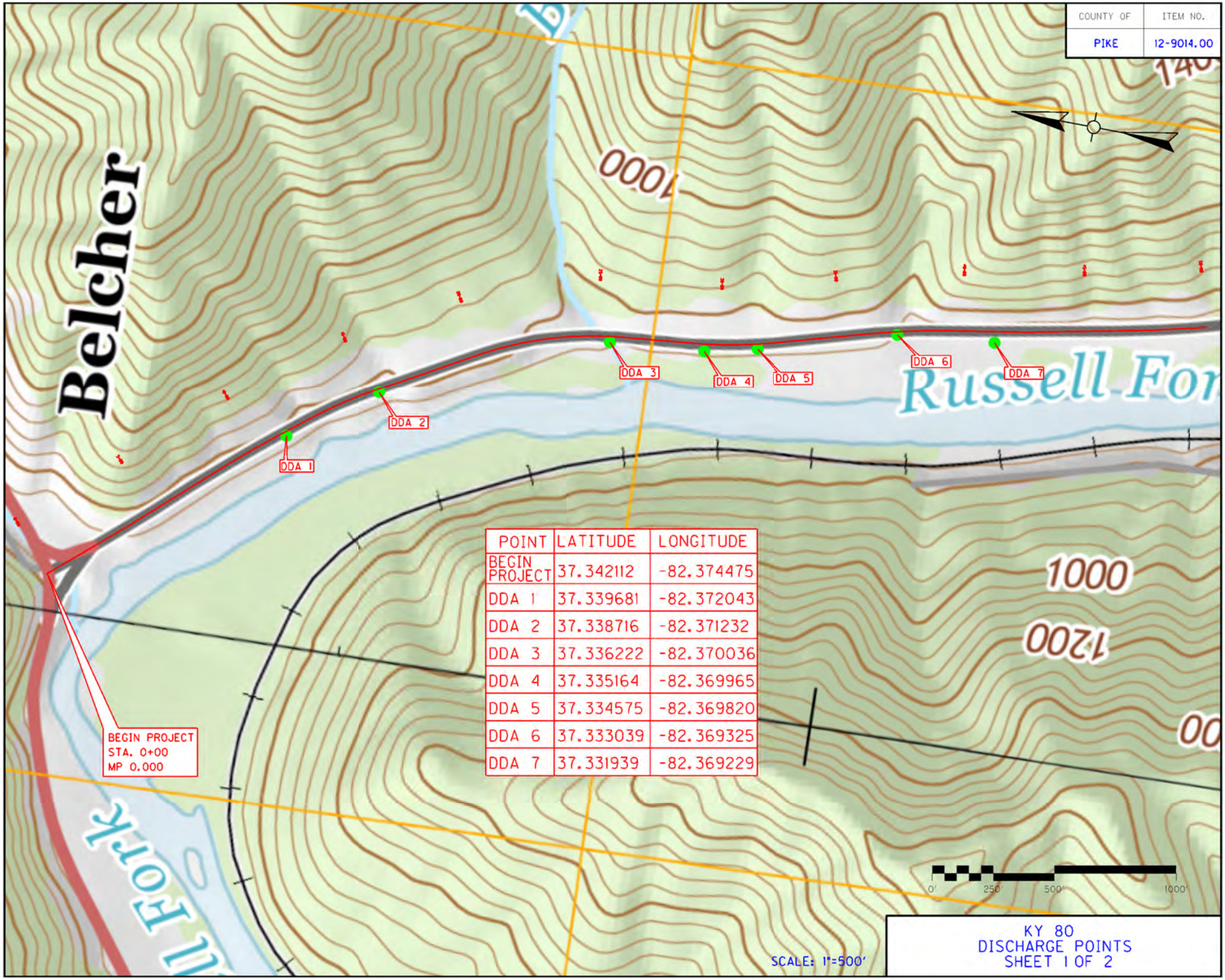
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage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

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

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

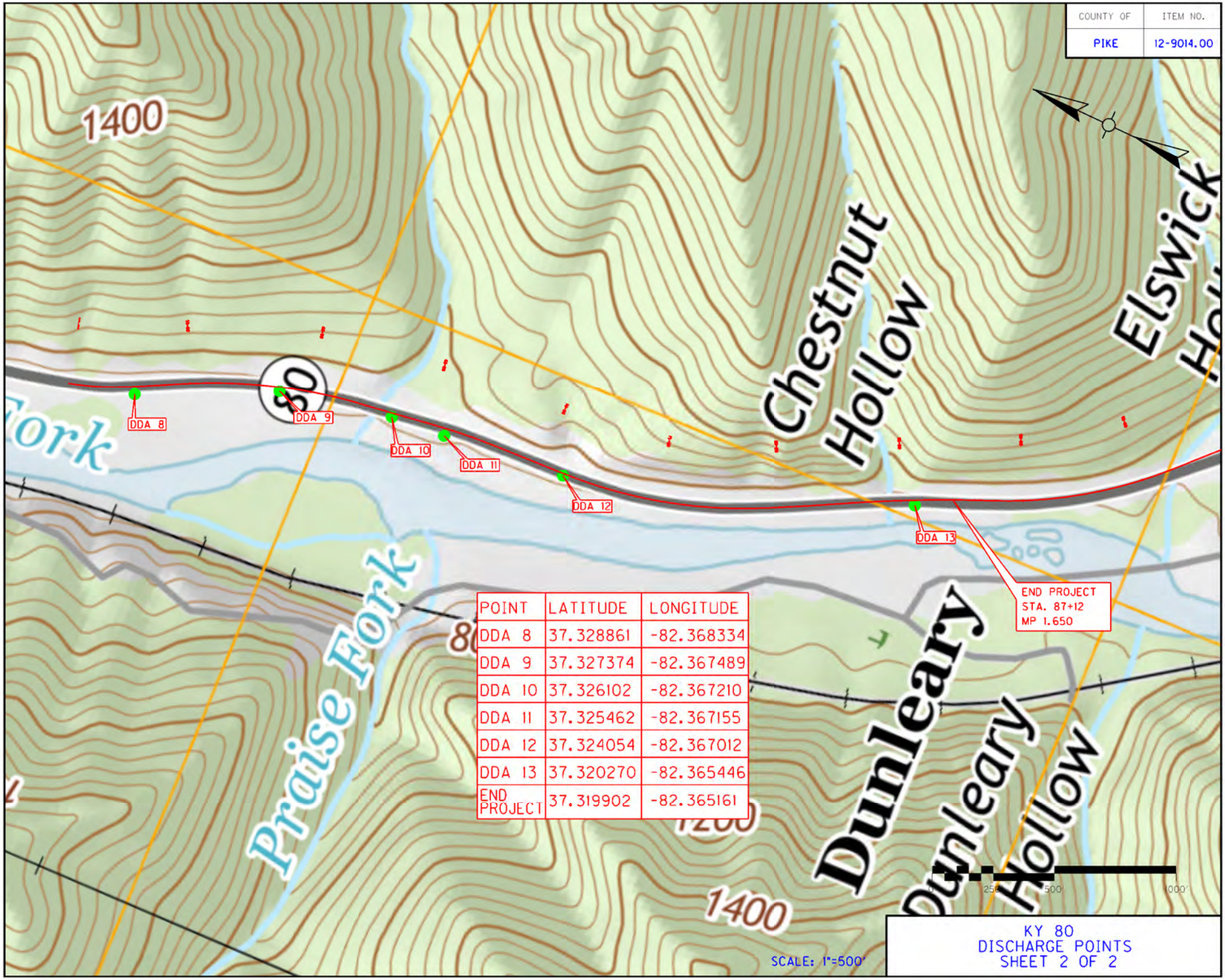
eMail Address:(*)	Business Phone:(*)	Alternate Phone:	Signature Date:(*)
eMail Address	Phone	Phone	Date

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



POINT	LATITUDE	LONGITUDE
BEGIN PROJECT	37.342112	-82.374475
DDA 1	37.339681	-82.372043
DDA 2	37.338716	-82.371232
DDA 3	37.336222	-82.370036
DDA 4	37.335164	-82.369965
DDA 5	37.334575	-82.369820
DDA 6	37.333039	-82.369325
DDA 7	37.331939	-82.369229

COUNTY OF	ITEM NO.
PIKE	12-9014.00



POINT	LATITUDE	LONGITUDE
DDA 8	37.328861	-82.368334
DDA 9	37.327374	-82.367489
DDA 10	37.326102	-82.367210
DDA 11	37.325462	-82.367155
DDA 12	37.324054	-82.367012
DDA 13	37.320270	-82.365446
END PROJECT	37.319902	-82.365161

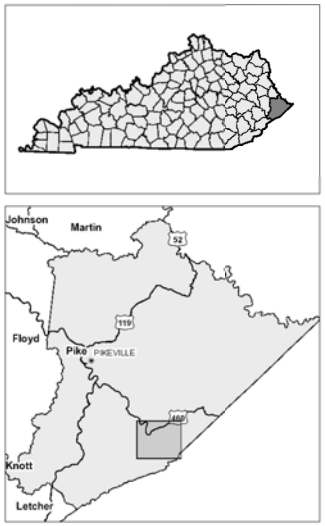
KY 80
DISCHARGE POINTS
SHEET 2 OF 2

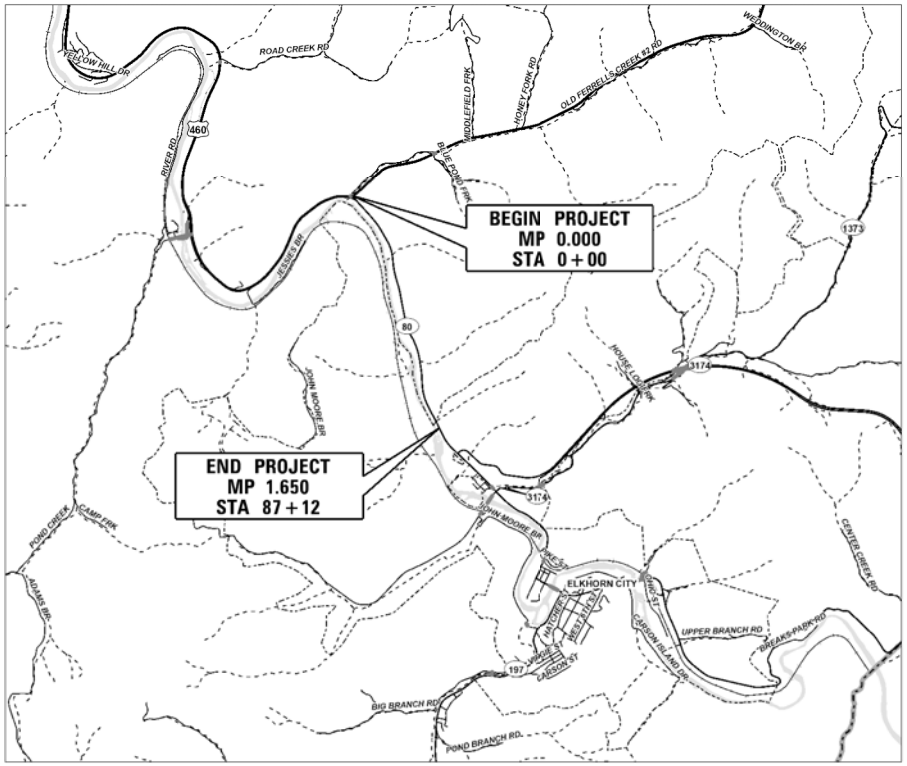
COUNTY OF	ITEM NO.
PIKE	12-9014.00

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

PIKE COUNTY

KY 80
12-9014.00





VICINITY MAP

GENERAL SUMMARY

Item	Description	Unit	Quantity
1	DGA	TON	4.5
68	Aggregate for Entrances	TON	12
190	Leveling & Wedging PG 64-22	TON	293
212	CL2 Asph Base 1.00D PG64-22	TON	21.5
307	CL 2 Asph Surf 0.38B PG 64-22	TON	221.6
440	Entrance Pipe - 15 in	LF	234
461	Culvert Pipe - 15 in	LF	4
462	Culvert Pipe - 18 in	LF	8
464	Culvert Pipe - 24 in	LF	4
468	Culvert Pipe - 36 in	LF	105
1310	Remove Pipe	LF	220
1493	Drop Box Inlet Type 2	EACH	2
1514	Drop Box Inlet Type 5E	EACH	2
1726	Safety Box Inlet - 18 in SDB-1	EACH	2
1987	Delineator for Guardrail B/W	EACH	61
2159	Temp Ditch	LF	4,356
2160	Clean Temp Ditch	LF	2,178
2223	Granular Embankment	CUYD	20
2351	Guardrail - Steel W Beam - S Face	LF	6,025
2367	End Treatment Type 1	EACH	14
2369	End Treatment Type 2A	EACH	8
2381	Remove Guardrail	LF	6,640
2403	Remove Concrete Masonry	CUYD	3.8
2483	Channel Lining CL II	TON	514
2562	Temporary Signs	SQFT	470
2569	Demobilization	LS	1
26175EC	Roadside Regrading	LF	7,375
2625	Remove Headwall	EACH	3
2650	Maintain & Control Traffic	LS	1
2671	Portable Changeable Message Sign	EACH	2
2676	Mobilization For Milling & Text	LS	1
2677	Asphalt Pave Milling & Texturing	TON	125
2690	Safeloading	CUYD	12
2697	Edgeline Rumble Strips	LF	2,434
2701	Temporary Silt Fence	LF	4,356
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
3000	Precast Conc Box Sec (4'x3')	LF	8
5950	Erosion Control Blanket	SQYD	5,000
5952	Temp Mulch	SQYD	19,457

Item	Description	Unit	Quantity
5953	Temporary Seeding and Protection	SQYD	14,520
5963	Initial Fertilizer	TON	1
5964	Maintenance Fertilizer	TON	2
5985	Seeding and Protection	SQYD	29,040.00
5992	Agricultural Limestone	TON	18
6406	SBM Alum Sheet Signs 0.080 in	SQFT	193.79
6407	SBM Alum Sheet Signs 0.125 in	SQFT	11.12
6410	Steel Post - Type 1	LF	309
6490	Class A Concrete for Signs	CU YD	0.75
6510	Pave Striping - Temp Paint - 4 in	LF	17,424
6568	Pave Marking - Thermo Stop Bar - 24 in	LF	12
6572	Pave Marking - Dotted Lane Exten	LF	28
6574	Pave Marking - Thermo Curv Arrow	EACH	2
6575	Pave Marking - Thermo Comb Arrow	EACH	2
8001	Structure Excavation Common	CUYD	28
8003	Foundation Preparation	LS	1
8103	Concrete Class D Mod	CUYD	0.55
20191ED	Object Marker TY 3	EACH	14
21289ED	Longitudinal Edge Key	LF	950
21373ND	Remove Signs	EACH	19
21596ND	GMSS Type D	EACH	3
22520EN	Pave Marking - Thermo Yield Bar - 36 IN	LF	30
24631EC	Barcode Sign Inventory	EACH	46
24695ED	Box Culvert Headwall (4'x3')	EACH	1
24814EC	Pipeline Inspection		101
24970EC	Asphalt Material for Tack Non-Tracking	TON	1.6
24995EC	Pave Striping - Spray Thermo - 6 in W	LF	17,704
24996EC	Pave Striping - Spray Thermo - 6 in Y	LF	16,869
26134ED	Sloped and Mitered Headwall - 36 in	EACH	3

PROPOSED SUPERELEVATION IMPROVEMENTS

Curve No.	Begin Station	Begin Milepoint	End Station	End Milepoint	Approx. Pavement Width	Average Existing Superelevation		Proposed Superelevation	Runoff Length	Runout Length	Leveling & Wedging (ton)	Asph. Surface 1.25" (ton)	Edge Key (Ton)	Longitudinal Edge Key (LF)	Tack Coat (Ton)
						Left	Right								
1	7+25	0.137	11+25	0.213	24	0.5%	2.0%	4.0%	102	51	165	76	23	400	0.6
4	28+25	0.535	31+25	0.592	27	3.2%	1.0%	4.0%	102	51	80	48	23	300	0.6
8	66+75	1.264	69+25	1.312	27	1.4%	5.1%	4.0%	102	51	48	40	23	250	0.4
									TOTAL		**293**	**164**	**69**	**950**	**1.6**

PROPOSED PAVEMENT REPAIRS

Offset	Begin Station	Begin Milepoint	End Station	End Milepoint	Width	4" DGA (Ton)	Asphalt Base 9.00" (Ton)	Asphalt Base 3.00" (Ton)	Asphalt Surface 1.25" (Ton)	4" Agg. For Entr. (Ton)	Mill & Text 1.25" (Ton)	Notes
LT	11+25	0.213	11+84	0.224	4		1.0		2.0		2.0	Pipe
LT	16+00	0.303			24	2.5		2.0	1.0			Entrance
LT	21+80	0.413			Varies							Multiple Entr.
LT	28+83	0.546	29+83	0.565	4		1.0		4.0	12.0	4.0	Pipe
LT	31+01	0.587	32+01	0.606	4		1.0		4.0		4.0	Pipe
RT	36+79	0.697	37+79	0.716	4		2.0		4.0		4.0	Pipe
LT	52+23	0.989	53+23	1.008	4		1.0		4.0		4.0	Pipe
LT	56+00	1.061			18	2.0		1.5	0.6			Entrance
LT/RT	65+14	1.234	66+14	1.253	24		6.0		19.0		19.0	Pipe
LT/RT	70+44	1.334	71+44	1.353	24		6.0		19.0		19.0	Pipe
				TOTAL		**4.5**	**18.0**	**3.5**	**57.6**	**12.0**	**56.0**	

Item	Description	Unit	Quantity
1	DGA	TON	4.5
68	Aggregate for Entrances	TON	12.0
190	Leveling & Wedging PG 64-22	TON	293.0
212	CL2 Asph Base 1.00D PG64-22	TON	21.5
307	CL2 Asph Surf 0.38B PG64-22	TON	221.6
2676	Mobilization for Mill & Text	LS	1.0
2677	Asphalt Pave Milling & Texturing	TON	125.0
21289ED	Longitudinal Edge Key	LF	950.0
24970EC	Asphalt Material for Tack Non-Tracking	TON	1.6

NOTES

1. Quantities carried over to the General Summary.
2. Locations and quantities are approximate.
3. Final locations will be determined by the Engineer in the field.
4. Edge Key (TON) included in bid item 2677 - Asphalt Pave Milling & Texturing
5. Final Advisory Speeds to be determined by the Engineer after paving operations.

PIPE REPLACEMENT & EXTENSION SUMMARY

Mile Point	Station	Existing					Proposed																						Comments
		Pipe Size, Type	Left Hdwl	Right Hdwl	Skew	Length (LF)	Remove Pipe (LF)[3]		Pipe Extension Length (LF)		Remove Headwall (Each)		Remove Drop Box (Each)	Safeload Pipe (CY)	Class A Concrete for Intermediate Anchor/Collar (CU YD)[4]	Culvert Pipe 15" (LF)	Culvert Pipe 18" (LF)	Culvert Pipe 24" (LF)	Culvert Pipe 36" (LF)	Entr. Pipe 15" (LF)	Headwall or Drainage Box		Roadside Regrading (LF)(Note 4)		Ditching (LF) (Perpndclr to Rdwy)		Channel Lining Cl II (TON)		
							Left	Right	Left	Right	Left	Right									Left	Right	Left	Right	Left	Right	Left	Right	
0.21	11+34	15" CMP	---	---	0°	36	5	---	4	---	---	---	---	---	---	4	---	---		---	DBI TY. 5E	---	100	---	---	---	---	---	Construct with superelevation improvements. Clean Pipe
0.30	15+59	N/A	---	---	0°	52	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---	---	Clean Pipe
0.30	16+00	15" Entr.	---	---	---	39	39	---	---	---	---	---	---	---	---	---	---	---	---	39	---	---	---	---	---		---	---	See Paving Summary for Asphalt Entr. Qty's.
0.41	21+80	15" Entr.	---	---	---	Multiple Sections	120	---	---	---	---	---	---	---	---	---	---	---	---	155	---	---	---	---	---		---	---	See Paving Summary for DGA Entrance Qty's.
0.56	29+33	18" Metal	---	STD.	0°	44	4	---	4	---	---	---	---	---	---	---	4	---	---	---	SDB-1	---	100	---	---	---	---	---	Clean Pipe
0.60	31+51	24" RCP	---	STD.	0°	39	7	---	4	---	---	---	---	---	---	---	---	4	---	---	DBI TY. 5E	---	100	---	---	---	---	---	Clean Pipe
0.71	37+29	4'x3' RCBC	CONC.	CONC.	0°30'	27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	See Culvert Extension Detail Sheet for Qty's. Qty's. carried over to Gen. Sum.
0.77	40+75	18" RCP	---	STD.	0°	40	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	Clean Pipe
1.00	52+73	18" RCP	---	---	3°	49	5	---	4	---	---	---	---	---	---	---	4	---	---	---	SDB-1	---	100	---	---	---	---	---	Clean Pipe
1.06	56+00	15" Entr.	---	---	---	40	40	---	---	---	---	---	---	---	---	---	---	---	---	40	---	---	---	---	---	---	---	---	See Paving Summary for Asphalt Entr. Qty's.
1.11	58+70	18" VCP	STD.	STD.	3°	29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	Clean Pipe
1.24	65+64	24" VCP	STD.	STD.	24°	32	---	---	---	---	1	1	---	6	---	---	---	---	45	---	DBI TY. 2	Sloped & Mitered Conc.	100	100	---	---	---	5	Replace Pipe and Repair Pavement
1.24	65+68	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4	---	DBI TY. 2	---	---	---	---	---	---	---	
1.34	70+94	24" VCP	STD.	---	0°	45	---	---	---	---	1	---	---	6	---	---	---	---	56	---	Sloped & Mitered Conc.	Sloped & Mitered Conc.	100	100	---	---	---	6	Replace Pipe and Repair Pavement
					TOTALS:		220 LF				3 EA		0 EA	12 CU YD	0.00 CU YD	4 LF	8 LF	4 LF	105 EA	234 EA					0 LF		11 TON		

Item	Description	Unit	Quantity
440	Entrance Pipe - 15 IN	LF	234
461	Culvert Pipe - 15 IN	LF	4
462	Culvert Pipe - 18 IN	LF	8
464	Culvert Pipe - 24 IN	LF	4
468	Culvert Pipe - 36 IN	LF	105
1310	Remove Pipe	LF	220
1493	Drop Box Inlet Type 2	Each	2
1514	Drop Box Inlet Type 5E	Each	2
1726	Safety Box Inlet - 18 In SDB-1	Each	2
2483	Channel Lining Class II	Ton	11
2625	Remove Headwall	Each	3
2690	Safeloading	CY	12
26134ED	SLOPED AND MITERED HEADWALL-36 IN	Each	3

NOTES:

1. These Pipe and Drainage Item quantities and locations are approximate and are intended to provide a basis for bid. Final locations, flow line elevations, grate elevations, and quantities will be determined by the contractor and approved by the engineer in the field.
2. Clearing and grubbing necessary to install drainage items, as directed by the Engineer, will be considered part of Site Preparation, which is incidental to the Contract.
3. See Standard Drawing RDX-060-03 for Intermediate Anchor details. Intermediate anchors shall be incidental to the construction of new pipe.
4. These locations of Roadside Regrading are already accounted for in the Roadside Regrading Summary and are NOT duplicated in the PROJECT TOTALS. All
5. Quantities were carried over to the General Summary.

GUARDRAIL SUMMARY

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

Proposed Guardrail to be Constructed										Existing Guardrail to be Removed					
Side of Road	Proposed BEGINNING Treatment	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint	Proposed ENDING Treatment	Proposed Length (LF)	Number of Radius Rail	Remarks	Side of Road	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint	Existing Length (LF)
RT	Type 1	3+37.5	0.064	24+62.5	0.466	Type 1	2,025.00		Close gap in guardrail. Type 1 end treatments shall be Trinity SoftStop System.	RT	3+37.5	0.064	23+50.0	0.445	2,012.50
										RT	23+90.0	0.453	24+65.0	0.467	75.00
LT	Type 2A	24+71.0	0.468	25+33.5	0.480	Type 1	12.50		Type 1 end treatments shall be Trinity SoftStop System.	LT	24+71.0	0.468	25+33.5	0.480	62.50
RT	Type 1	25+25.0	0.478	31+00.0	0.587	Type 1	475.00		Close two gaps in guardrail. Type 1 end treatments shall be Trinity SoftStop System.	RT	25+25.0	0.478	25+75.0	0.488	50.00
										RT	26+12.5	0.495	27+62.5	0.523	150.00
										RT	28+05.0	0.531	31+05.0	0.588	300.00
RT	Type 2A	31+25.0	0.592	31+56.0	0.598	Type 2A	50.00	4		RT	31+25.0	0.592	31+56.0	0.598	50.00
RT	Type 1	31+75.0	0.601	33+00.0	0.625	Type 2A	75.00		Remove steel pipe in front of guardraill at Sta. 31+75. Type 1 end treatments shall be Trinity SoftStop System.	RT	31+75.0	0.601	33+00.0	0.625	137.50
RT	Type 1	33+75.0	0.639	36+25.0	0.687	Type 1	150.00		Type 1 end treatments shall be Trinity SoftStop System.	RT	33+75.0	0.639	36+25.0	0.687	250.00
									Box Culvert Extension	RT	37+10.0	0.703	37+42.0	0.709	37.50
RT	Type 1	42+00.0	0.795	47+50.0	0.900	Type 1	450.00		Type 1 end treatments shall be Trinity SoftStop System.	RT	42+00.0	0.795	47+50.0	0.900	550.00
RT	Type 1	49+87.5	0.945	56+25.0	1.065	Type 1	537.50		Type 1 end treatments shall be Trinity SoftStop System.	RT	49+87.5	0.945	56+25.0	1.065	637.50
RT	Type 1	61+75.0	1.170	63+75.0	1.207	Type 1	100.00		Type 1 end treatments shall be Trinity SoftStop System.	RT	61+85.0	1.171	63+72.5	1.207	187.50
LT	Type 2A	63+50.0	1.203	63+90.0	1.210	Type 2A	50.00	4	7' Posts	LT	63+50.0	1.203	63+90.0	1.210	50.00
RT	Type 2A	64+00.0	1.212	85+00.0	1.610	Connect to Existing	2,100.00		Close gap in guardrail.	RT	64+05.0	1.213	64+50.0	1.222	45.00
										RT	64+55.0	1.223	85+00.0	1.610	2,045.00
LT	Type 2A	84+75.0	1.605						Replace end treatment only						

Summary of Items						
Guardrail-Steel W Beam-S Face	6,025.00	LF		Delineator for Guardrail B/W	61	EACH
Remove Guardrail	6,640.00	LF		GR Connector to Bridge End Type A	0	EACH
End Treatment Type 1	14	EACH		GR Connector to Bridge End Type A-1	0	EACH
End Treatment Type 2A	8	EACH		GR Connector to Bridge End Type C	0	EACH
End Treatment Type 3	0	EACH		Object Marker Ty 3	14	EACH
End Treatment Type 4A	0	EACH		DGA	0	TONS
End Treatment Type 7	0	EACH		Asphalt Seal Coat	0.00	TONS
Terminal Section No. 1	0	EACH		Asphalt Seal Aggregate	0.00	TONS
Guardrail-Steel W Beam-S Face A	0	LF		Guardrail-Bridge Case 1	0	LF

NOTES

1. These items, quantities, and locations are approximate and are
2. Final locations and quantities will be determined by the contractor and approved by the engineer in the field.
3. All quantities were carried over to the General Summary.
4. No deductions for approach roads where made to these quantities.

PROPOSED PAVEMENT MARKINGS - CENTERLINE

Begin MP	Begin Station	End MP	End Station	Description	6" Thermo (LF)
0.013	00+68	0.682	36+00	Solid Double	7064
0.682	36+00	0.777	41+00	Solid Left, Broken Right	625
0.777	41+00	0.852	45+00	Solid Double	800
0.852	45+00	0.947	50+00	Solid Right, Broken Left	625
0.947	50+00	1.650	87+12	Solid Double	7424
				TOTAL	**16,538**

PROPOSED PAVEMENT MARKINGS - EDGELINE

Begin MP	Begin Station	End MP	End Station	Description	6" Thermo White (LF)		Dotted Lane Ext (LF)	6" Thermo Yellow (LF)		Edgeline Rumble Strip (LF)	
					Left	Right		Left	Right	Left	Right
0.000	00+00	1.650	87+12	Solid Single White	8,712	8,712	---	---	---	---	---
0.000	00+00	0.030	01+60	Solid Single Yellow - Slip Ln.	---	---	---	---	225	---	---
0.001	00+04	0.030	01+60	Solid Single White	---	156	---	---	---	---	---
0.003	00+16	0.027	01+40	Solid Single White	124	---	---	---	---	---	---
0.008	00+44	0.013	00+68	Solid Single Yellow - Slip Ln.	---	---	---	106	---	---	---
0.027	01+40	0.047	02+50	Dotted White	---	---	28	---	---	---	---
0.137	07+25	0.224	11+84	Superelev. Improvement	---	---	---	---	---	459	350
0.147	07+75	0.199	10+50	Superelev. Improvement	---	---	---	---	---	---	275
0.535	28+25	0.606	32+00	Superelev. Improvement	---	---	---	---	---	200	300
0.697	36+79	0.716	37+79	Pipe	---	---	---	---	---	---	100
0.989	52+23	1.008	53+23	Pipe	---	---	---	---	---	100	---
1.234	65+14	1.253	66+14	Pipe	---	---	---	---	---	100	100
1.264	66+75	1.312	69+25	Superelev. Improvement	---	---	---	---	---	250	---
1.334	70+44	1.353	71+44	Pipe	---	---	---	---	---	100	100
				TOTAL	**8,836**	**8,868**	**28**	**106**	**225**	**1,209**	**1,225**

PROPOSED PAVEMENT MARKINGS - THERMO

MP	Station	Offset	Description	24" Stop Bar (LF)	36" Yield Bar (LF)	Thermo Curve Arrow (EA)	Thermo Combo Arrow (EA)
0.009	000+45	LT	Slip Lane Yield Bar		16		
0.011	000+60	LT	Right Arrow			1	
0.013	000+68	LT		12			
0.020	001+08	LT	Through - Left Combo Arrow				1
0.024	001+27	LT	Right Arrow			1	
0.030	001+57	RT	Slip Lane Yield Bar		14		
0.036	001+88	LT	Through - Left Combo Arrow				1
			TOTAL	**12**	**30**	**2**	**2**

Item	Description	Unit	Quantity
2697	Edgeline Rumble Strips	LF	2,434
6510	Pave Striping-Temp Paint-4 in	LF	17,424
6568	Pave Marking-Thermo Stop Bar-24 in	LF	12
6572	Pave Marking - Dotted Lane Exten	LF	28
6574	Pave Marking - Thermo Curv Arrow	EA	2
6575	Pave Marking - Thermo Comb Arrow	EA	2
22520EN	Pave Marking - Thermo Yield Bar - 36 in	LF	30
24995EC	Pave Striping-Thermo-6 In W	LF	17,704
24996EC	Pave Striping-Thermo-6 In Y	LF	16,869

NOTES

1. These items, quantities, and locations are approximate and are intended to provide a basis for bid.
2. Final locations and quantities will be determined by the contractor and approved by the engineer in the field.
3. All quantities were carried over to the General Summary.
4. No deductions for approach roads where made to these quantities.

Roadside Regrading Summary — Pike County — KY 80

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

LOCATION					Length (LF)	Estimated Excavation Volume** (CU YD)	Estimated Embankment Volume** (CU YD)	Roadside Regrading Detail Sheet Figure Ref.*	Include DGA Wedge? (Yes/No)	DGA (TONS)	Asphalt Seal Coat (TON)	Asphalt Seal Aggregate (TON)	Channel Line Ditch, Fill Slope or Cut Slope? (Yes/No)	Channel Lining Class II (TONS)	Geotex. Fabric CL II (SQ YD)	Remarks
Side of Road	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint												
LT	5+00	0.095	15+00	0.284	1,000	148	0	Figure 7	NO				NO			
LT	16+20	0.307	19+85	0.376	365	68	0	Figure 7	NO				NO			
LT	20+30	0.384	21+75	0.412	145	27	0	Figure 7	NO				NO			
LT	23+25	0.440	24+05	0.455	80	15	0	Figure 7	NO				NO			
LT	26+00	0.492	55+85	1.058	2,985	553	0	Figure 7	NO				NO			
RT	28+25	0.535	31+25	0.592	300	0	56	Figure 1	NO				NO			
RT	37+00	0.701	37+50	0.710	50	0	104	Figure 3	NO				NO			
LT	56+40	1.068	60+00	1.136	360	67	7	Figure 7	NO				NO			
LT	64+10	1.214	85+00	1.610	2,090	387	1,548	Figure 9	NO				NO			

Summary of Items

Roadside Regrading	7,375	LF		Asphalt Seal Coat	0	TONS		Channel Lining Class II	0	TONS
DGA	0	TONS		Asphalt Seal Aggregate	0	TONS		Geotextile Fabric Type IV	0	SQ YD

Sign Summary — Pike County — KY 80

SIGN LOCATION										SHEETING											
Assembly ID	Side of Road	Approx Offset (ft)	Approx Station	Approx. Mile Point	Facing Traffic Traveling	MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	Text/ Symbol Color	Background Color	Sheeting Type	SBM Alum Sheet Signs 0.080 IN (SQ FT)	SBM Alum Sheet Signs 0.125 IN (SQ FT)	Installation Type	Bracing Req'd	# of Sign Posts	Estimated Length of 2" Post (ft)	Estimated Length of 2-1/2" Post (ft)	2-1/4" Stiffener Req'd (incdntl to post)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
1	PLAN	5	0+00	0.000	WB	M3-4	West		24 x 12	Black	White	XI	2.00		Type D	Yes	1		16	Yes	16	1
					WB	M1-4A	US Route Sign (3 digit)	"460"	30 x 24	Black	White	XI	5.00									1
					WB	M1-5	State Route Sign (1 or 2	"80"	24 x 24	Black	White	XI	4.00									1
					WB	M6-1L	Left Arrow		24 x 12	Black	White	XI	2.00									1
					WB	M3-2	East		24 x 12	Black	White	XI	2.00									1
					WB	M1-4A	US Route Sign (3 digit)	"460"	30 x 24	Black	White	XI	5.00									1
					WB	M6-1R	Right Arrow		24 x 12	Black	White	XI	2.00									1
2	RT	5	0+00	0.000	NB	M3-2	East		24 x 12	Black	White	XI	2.00		Type D	Yes	1		14	Yes	14	1
					NB	M1-4A	US Route Sign (3 digit)	"460"	30 x 24	Black	White	XI	5.00									1
					NB	M6-2L	Upward Left Diagonal Arrow		21 x 15	Black	White	XI	2.19									1
					NB	M3-2	East		24 x 12	Black	White	XI	2.00									1
					NB	M1-5	State Route Sign (1 or 2 digit)	"80"	24 x 24	Black	White	XI	4.00									1
					NB	M6-2R	Upward Right Diagonal Arrow		21 x 15	Black	White	XI	2.19									1
3	LT	5	0+39	0.007	WB	R1-2	Yield	SLIP LANE	36 x 36 x 36	White	Red	XI	3.90		Stnd w/ Soil Plate		1	13			13	1
					SB	R5-1A	Wrong Way	SLIP LANE	36 x 24	White	Red	XI	6.00									1
4	LT	5	0+54	0.010	WB	R1-1	Stop		36 x 36	White	Red	XI	9.00		Stnd w/ Soil Plate		1	13			13	1
5	LT	5	0+68	0.013	WB	R1-2	Yield	SLIP LANE	36 x 36 x 36	White	Red	XI	3.90		Stnd w/ Soil Plate		1	13			13	1
					SB	R5-1	Do Not Enter	SLIP LANE	30 x 30	White	Red	XI	6.25									1
6	RT	5	1+07	0.020	EB	R1-2	Yield		36 x 36 x 36	White	Red	XI	3.90		Stnd w/ Soil Plate		1	13			13	1
					WB	R5-1A	Wrong Way		36 x 24	White	Red	XI	6.00									1
7	RT	5	1+22	0.023	EB	R1-2	Yield		36 x 36 x 36	White	Red	XI	3.90		Stnd w/ Soil Plate		1	13			13	1
					WB	R5-1	Do Not Enter		30 x 30	White	Red	XI	6.25									1
8	LT	5	3+15	0.060	WB	M3-4	West		24 x 12	Black	White	XI	2.00		Type D	Yes	1		16	Yes	16	1
				0.000	WB	M1-4A	US Route Sign (3 digit)	"460"	30 x 24	Black	White	XI	5.00									1
				0.000	WB	M1-5	State Route Sign (1 or 2 digit)	"80"	24 x 24	Black	White	XI	4.00									1
				0.000	WB	M5-1L	Advance Left Turn Arrow		21 x 15	Black	White	XI	2.19									1
				0.000	WB	M3-2	East		24 x 12	Black	White	XI	2.00									1
				0.000	WB	M1-4A	US Route Sign (3 digit)	"460"	30 x 24	Black	White	XI	5.00									1
				0.000	WB	M6-2R	Upward Right Diagonal Arrow		21 x 15	Black	White	XI	2.19									1
9	RT	5	3+39	0.064	EB	M3-2	East		24 x 12	Black	White	XI	2.00		Stnd w/ Soil Plate		1	13			13	1
					EB	M1-5	State Route Sign (1 or 2 digit)	"80"	24 x 24	Black	White	XI	4.00									1
10	LT	5	5+15	0.098	WB	W3-1	Stop Ahead		30 x 30	Red & Black	Yellow	XI	6.25		Stnd w/ Soil Plate		1	14			14	1
11	RT	5	6+60	0.125	EB	W8-5	Slippery When Wet		30 x 30	Black	Yellow	XI	6.25		Stnd w/ Soil Plate		1	15			15	1
12	LT	5	7+15	0.135	WB	M2-1	Junction		21 x 15	Black	White	XI	2.19		Stnd w/ Soil Plate		1	13			13	1
					WB	M1-4A	US Route Sign (3 digit)	"460"	30 x 24	Black	White	XI	5.00									1
13	RT	5	16+16	0.306	EB	S3-1	School Bus Stop Ahead		36 x 36	Black	FL Yellow-Green	XI	9.00		Stnd w/ Soil Plate		1	14			14	1
14	LT	5	31+56	0.598	WB	S3-1	School Bus Stop Ahead		36 x 36	Black	FL Yellow-Green	XI	9.00		Stnd w/ Soil Plate		1	14			14	1
15	RT	5	35+22	0.667	EB	W8-6	Truck Crossing	"TRUCK ENTRANCE"	36 x 36	Black	Yellow	XI	9.00		Stnd w/ Soil Plate		1	15			15	1
16	RT	5	35+22	0.667	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56	Stnd w/ Soil Plate		1	15			15	1
17	RT	5	35+22	0.667	EB	W14-3	No Passing Zone		48 x 48 x 36	Black	Yellow	XI		5.56	Stnd w/ Soil Plate		1	15			15	1
18	RT	5	52+89	1.002	EB	D10-1	Mile Marker (1 digit)	"1"	10 x 18	White	Green	XI	1.25		Stnd w/ Soil Plate		1	12			12	1
					WB	D10-1	Mile Marker (1 digit)	"1"	10 x 18	White	Green	XI	1.25									1
19	RT	5	55+48	1.051	EB	W8-14	Fallen Rocks	"FALLEN ROCK ZONE"	30 x 30	Black	Yellow	XI	6.25		Stnd w/ Soil Plate		1	15			15	1
20	RT	5	92+00	1.742	EB	S3-1	School Bus Stop Ahead		36 x 36	Black	FL Yellow-Green	XI	9.00		Stnd w/ Soil Plate		1	15			15	1
21	RT	5	94+90	1.797	EB	W2-2L	Side Road Left		30 x 30	Black	Yellow	XI	6.25		Stnd w/ Soil Plate		1	14			14	1
22	LT	5	101+50	1.922	WB	W2-2R	Side Road Right		30 x 30	Black	Yellow	XI	6.25		Stnd w/ Soil Plate		1	14			14	1

Summary of Items

SBM Alum Sheet Signs 0.080 INCH	193.79	SQ FT
SBM Alum Sheet Signs 0.125 INCH	11.12	SQ FT
Barcode Sign Inventory	46	EACH

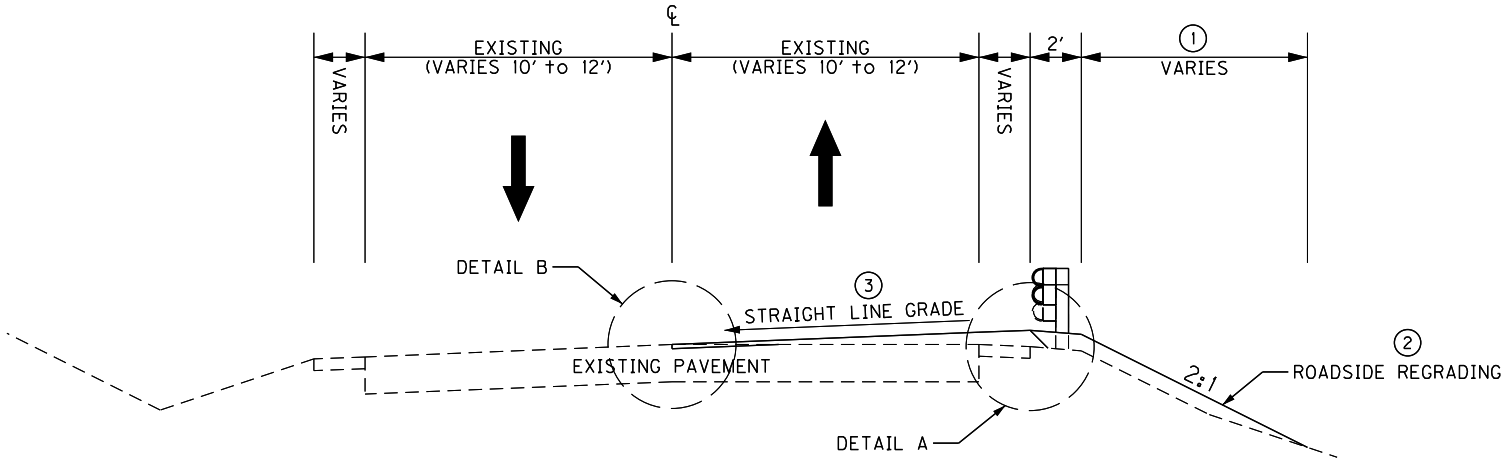
Summary of Items

Steel Post - Type 1	309	LF
GMSS Type D	3	EACH
GMSS Type D (Surface Mount)	0	EACH
Class A Concrete for Signs	0.75	CU YD

COUNTY OF	ITEM NO.
PIKE	12-9014.00

TYPICAL SECTIONS

SUPERELEVATION IMPROVEMENT – ONE LANE



KY 80
FILL SECTION

GENERAL NOTES

1. SEE CROSS-SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDER.
2. PAID FOR UNDER THE BID ITEM "ROADSIDE REGRADING." SEE THE ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS FOR MORE INFORMATION.
3. SEE PROPOSED SUPERELEVATION IMPROVEMENT SUMMARY FOR PROPOSED SLOPES. DEPTH OF LEVELING & WEDGING VARIES AS REQUIRED TO OBTAIN DESIRED SUPERELEVATION RATE. PROPOSED SUPERELEVATION RATE MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO REMAIN ON RIGHT-OF-WAY OR AVOID A SENSITIVE OBSTRUCTION.

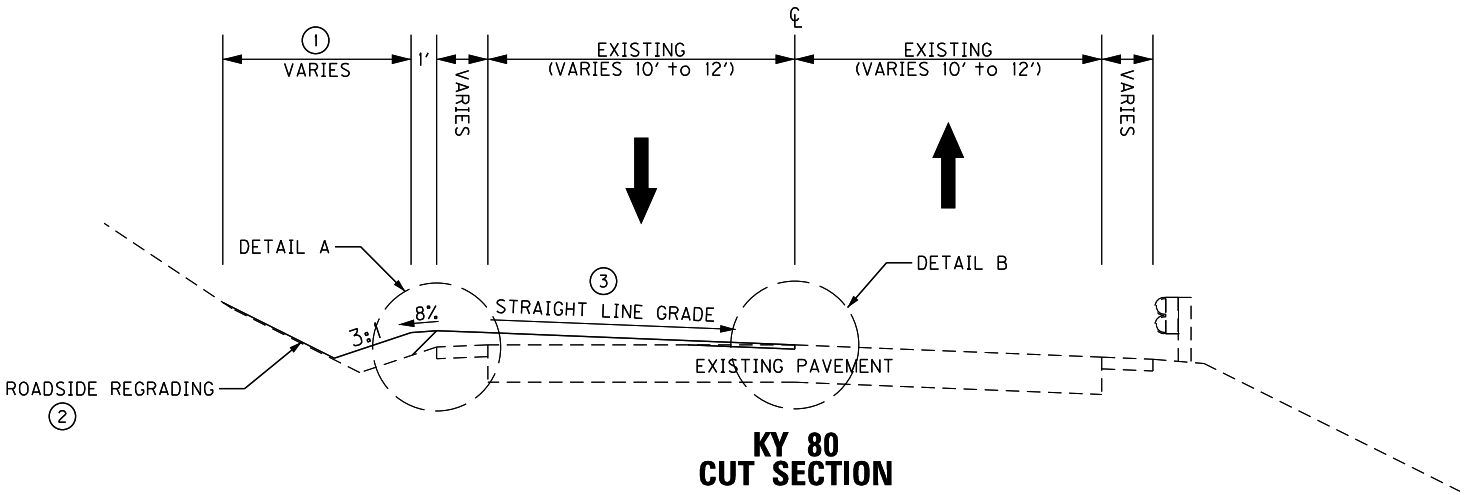
N.T.S.

TYPICAL SECTIONS

COUNTY OF	ITEM NO.
PIKE	12-9014.00

TYPICAL SECTIONS

SUPERELEVATION IMPROVEMENT – ONE LANE



KY 80
CUT SECTION

GENERAL NOTES

(1) SEE CROSS-SECTIONS FOR SLOPES OUTSIDE THE LIMITS OF THE SHOULDER.

(2) PAID FOR UNDER THE BID ITEM "ROADSIDE REGRADING." SEE THE ROADSIDE REGRADING AND EMBANKMENT BENCHING DETAILS FOR MORE INFORMATION.

(3) SEE PROPOSED SUPERELEVATION IMPROVEMENT SUMMARY FOR PROPOSED SLOPES. DEPTH OF LEVELING & WEDGING VARIES AS REQUIRED TO OBTAIN DESIRED SUPERELEVATION RATE. PROPOSED SUPERELEVATION RATE MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO REMAIN ON RIGHT-OF-WAY OR AVOID A SENSITIVE OBSTRUCTION.

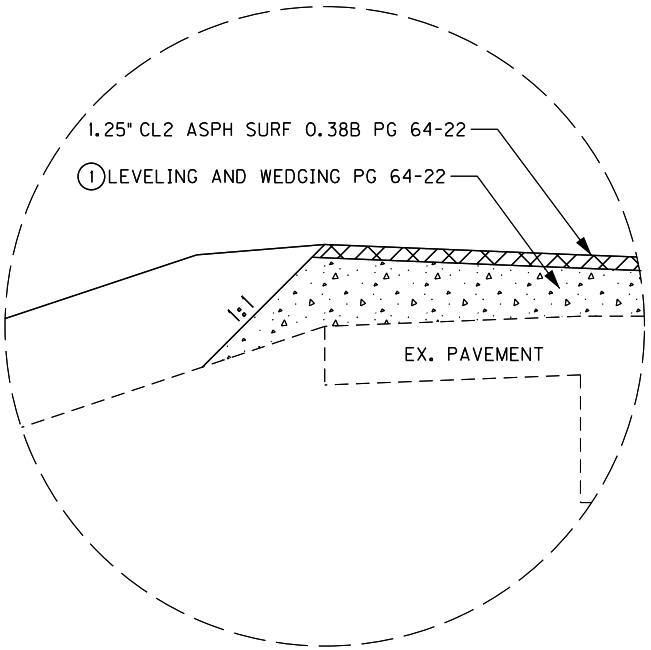
N.T.S.

TYPICAL SECTIONS

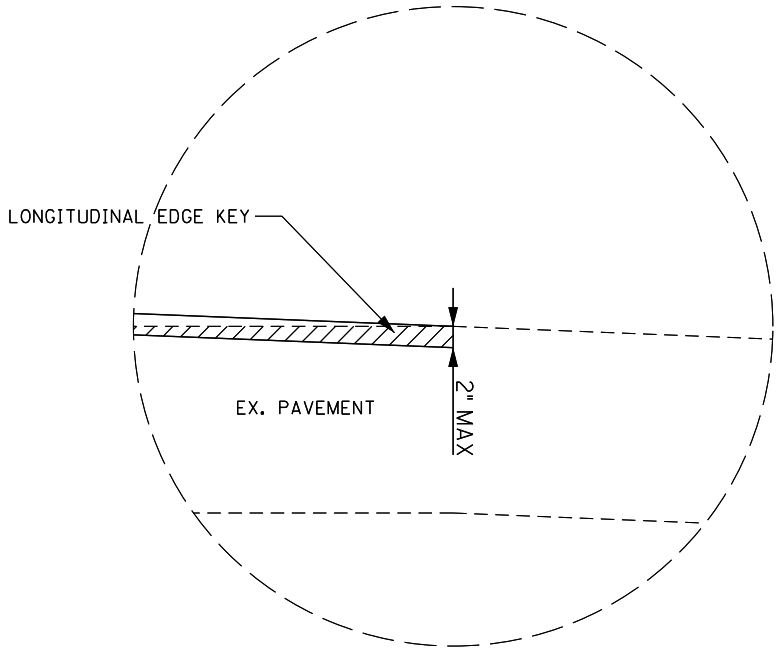
COUNTY OF	ITEM NO.
PIKE	12-9014.00

TYPICAL SECTIONS

SUPERELEVATION IMPROVEMENT



DETAIL "A"



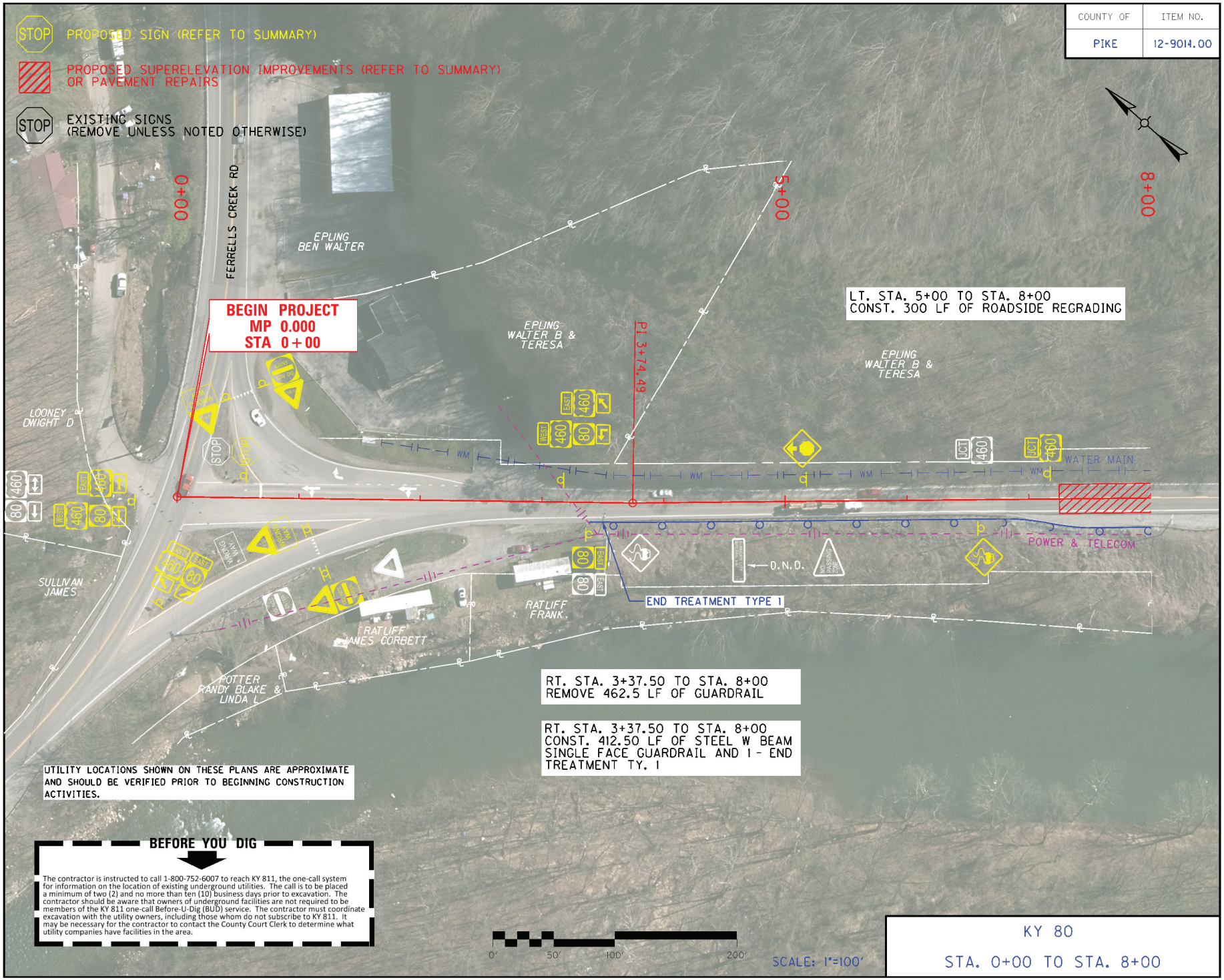
DETAIL "B"

GENERAL NOTES

(1) LEVELING AND WEDGING CONSTRUCTED IN MULTIPLE LAYERS AS DETERMINED IN THE STAKING NOTE.

N.T.S.

TYPICAL SECTIONS


STOP PROPOSED SIGN (REFER TO SUMMARY)
PROPOSED SUPERELEVATION IMPROVEMENTS (REFER TO SUMMARY) OR PAVEMENT REPAIRS
STOP EXISTING SIGNS (REMOVE UNLESS NOTED OTHERWISE)
COUNTY OF
PIKE
ITEM NO.
12-9014.00
0+00
5+00
8+00
FERRELLS CREEK RD
EPLING BEN WALTER
BEGIN PROJECT
MP 0.000
STA 0+00
EPLING WALTER B & TERESA
PI 3+74.49
LT. STA. 5+00 TO STA. 8+00
CONST. 300 LF OF ROADSIDE REGRADING
LOONEY DWIGHT D
WM
WATER MAIN
POWER & TELECOM
D.N.D.
END TREATMENT TYPE 1
SULLIVAN JAMES
RATLIFF FRANK.
RATLIFF JAMES CORBETT
POTTER RANDY BLAKE & LINDA L
RT. STA. 3+37.50 TO STA. 8+00
REMOVE 462.5 LF OF GUARDRAIL
RT. STA. 3+37.50 TO STA. 8+00
CONST. 412.50 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL AND 1 - END TREATMENT TY. 1
UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND SHOULD BE VERIFIED PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.
BEFORE YOU DIG
The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.
0' 50' 100' 200'
SCALE: 1"=100'
KY 80
STA. 0+00 TO STA. 8+00

COUNTY OF	ITEM NO.
PIKE	12-9014.00

STOP PROPOSED SIGN (REFER TO SUMMARY)

PROPOSED SUPERELEVATION IMPROVEMENTS (REFER TO SUMMARY) OR PAVEMENT REPAIRS

STOP EXISTING SIGNS (REMOVE UNLESS NOTED OTHERWISE)

CURVE 1 SUPERELEVATION	
BEGIN RUNOUT	7+53
BEGIN RUNOFF	8+04
FULL SUPER 4.0%	8+96 to 10+78
END RUNOFF	11+70
END RUNOUT	Transition to C2

LT. STA. 8+00 TO STA. 15+00
CONST. 700 LF OF ROADSIDE REGRADING

LT. STA. 16+20 TO STA. 17+00
CONST. 80 LF OF ROADSIDE REGRADING

8+00
10+00
15+00
17+00

C1
C2

EPLING WALTER B & TERESA
JUSTICE TOMMY & LINDA
DAMRON DENNIS & DEBORAH
BELCHER KILGORE MICHELE ANN
BELCHER ERNEST

PI 9+86.95
PI 14+02.73

CONST. DBI TY. 5E (NO APRON) ON EX. 15" CMP
CLEAN EX. PIPE UNK. SIZE
REPLACE 15" ENTR. PIPE

WATER MAIN
POWER & TELECOM

S38° 42'16"E
S29° 40'11"E

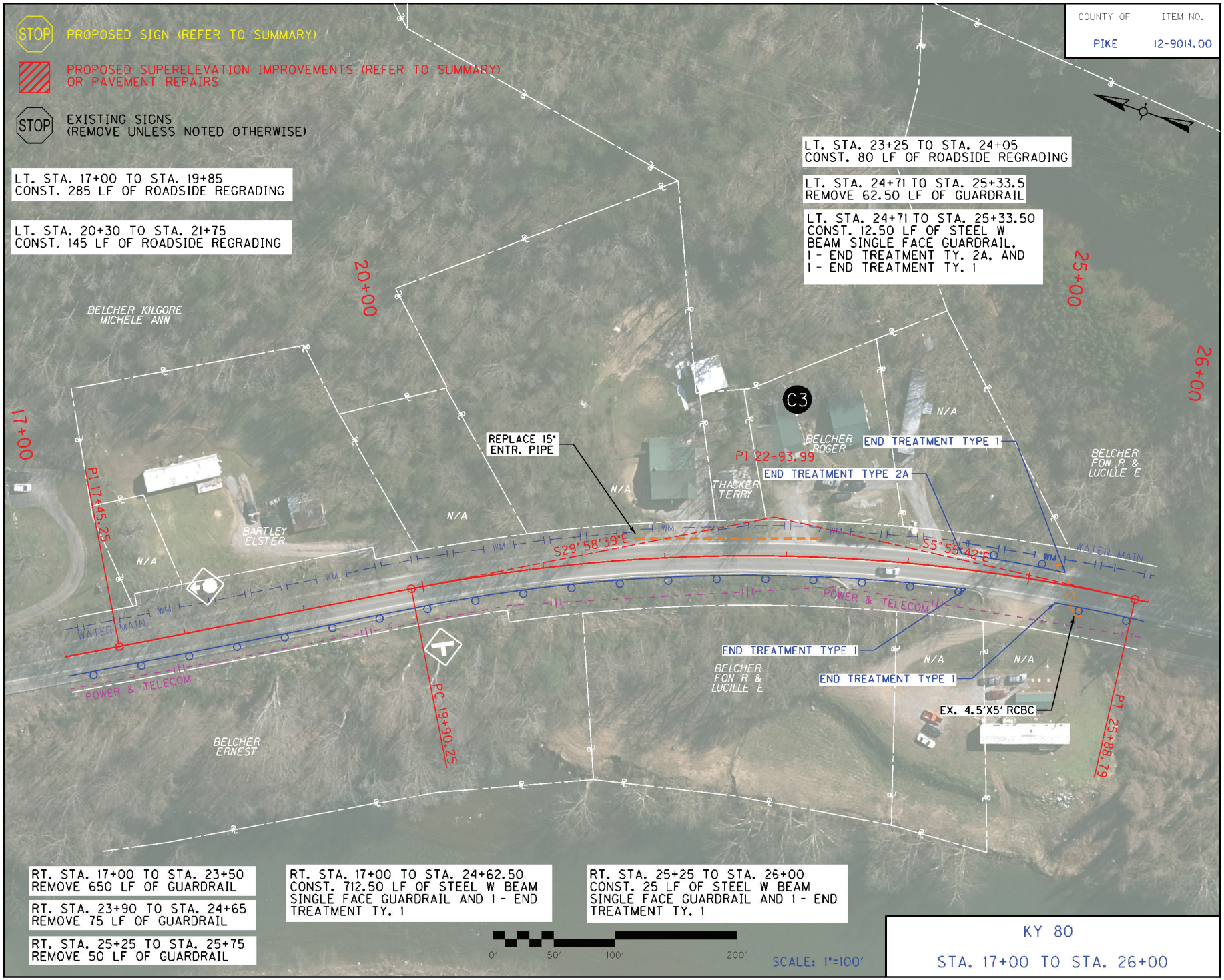
PC 8+65.35
PT 11+08.47
PC 12+73.96
PT 15+30.98

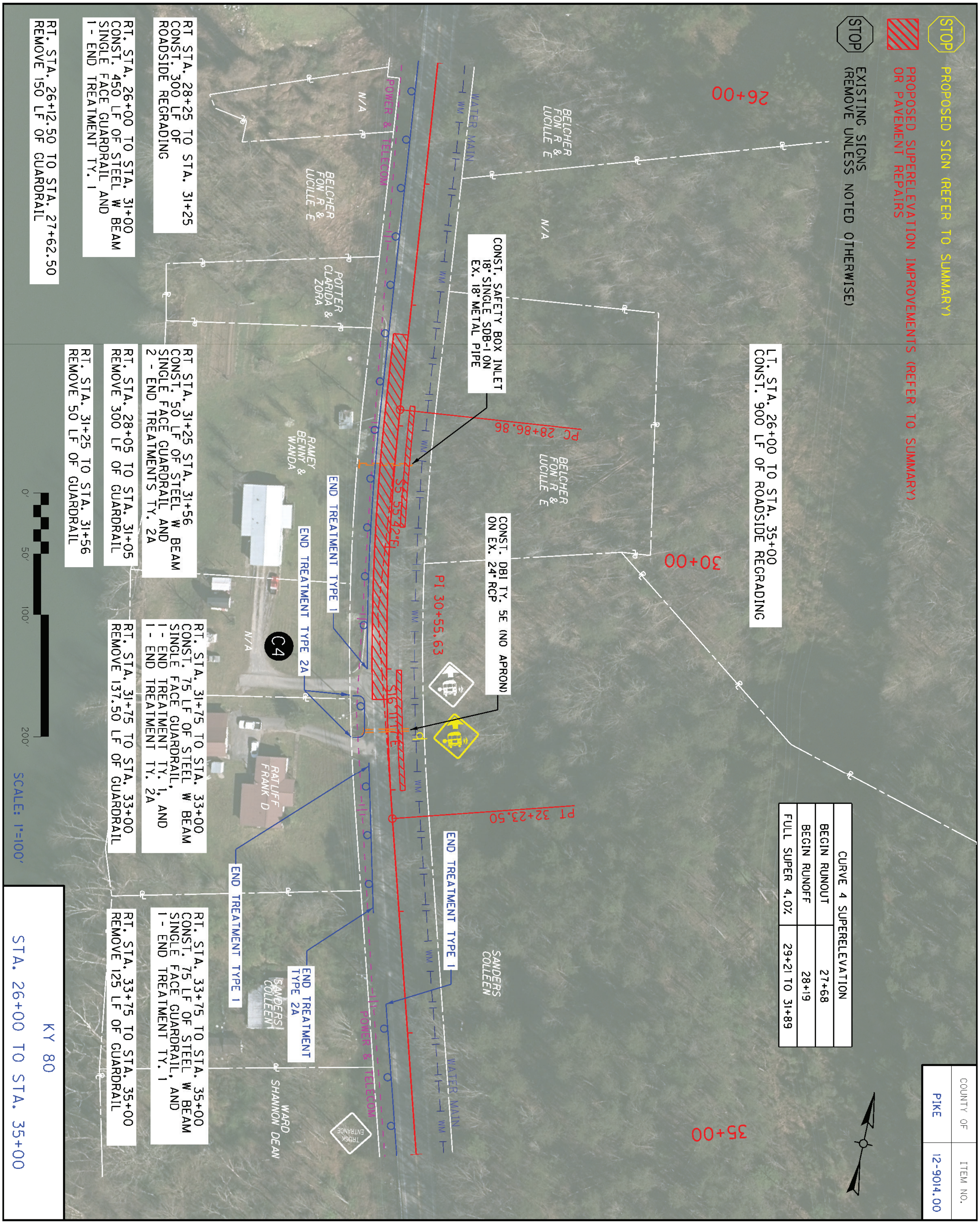
RT. STA. 8+00 TO STA. 17+00
CONST. 900 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL

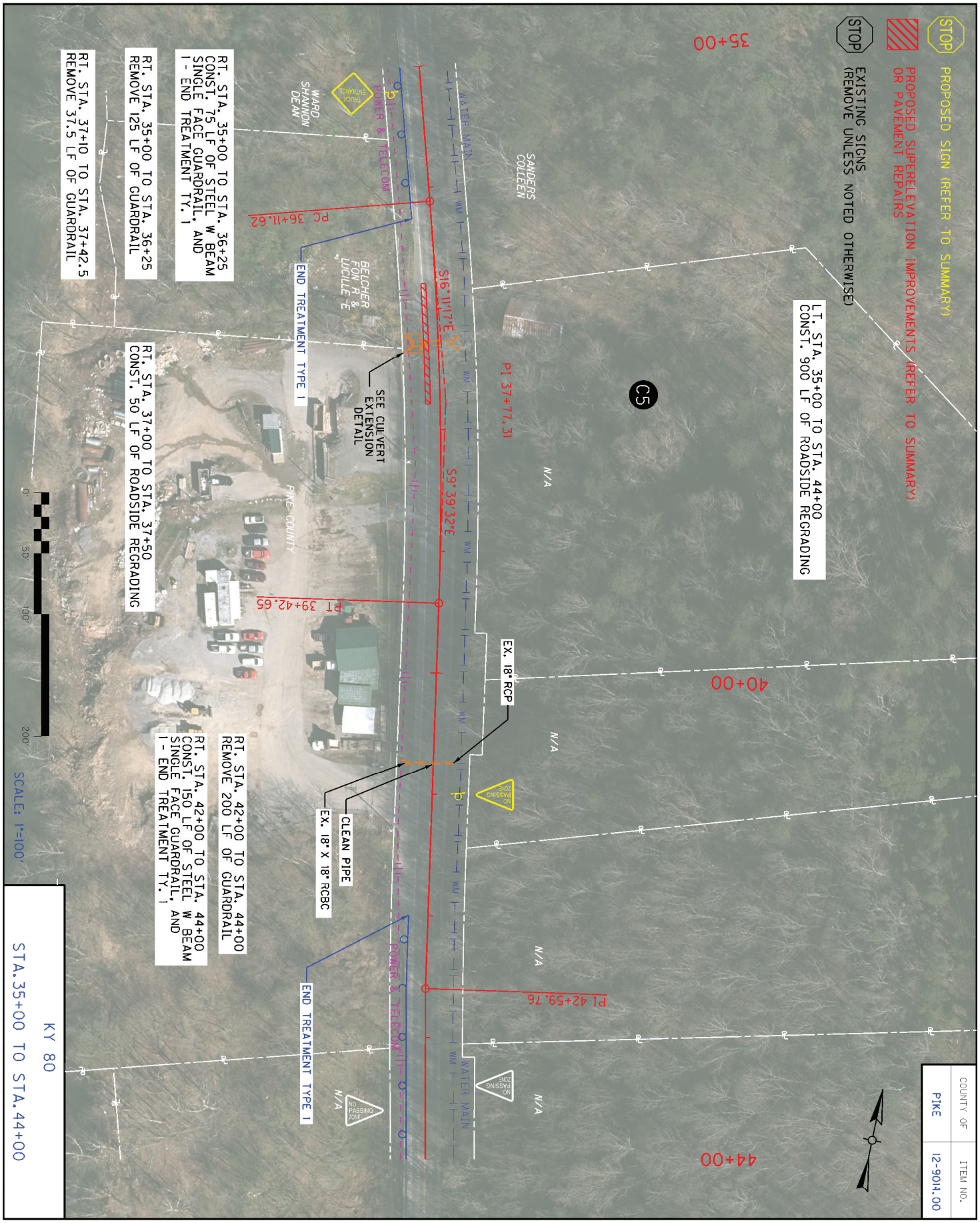
RT. STA. 8+00 TO STA. 17+00
REMOVE 900 LF OF GUARDRAIL

0' 50' 100' 200'
SCALE: 1"=100'

KY 80
STA. 8+00 TO STA. 17+00


STOP PROPOSED SIGN (REFER TO SUMMARY)
PROPOSED SUPERELEVATION IMPROVEMENTS (REFER TO SUMMARY) OR PAVEMENT REPAIRS
STOP EXISTING SIGNS (REMOVE UNLESS NOTED OTHERWISE)
COUNTY OF PIKE
ITEM NO. 12-9014.00
LT. STA. 17+00 TO STA. 19+85
CONST. 285 LF OF ROADSIDE REGRADING
LT. STA. 20+30 TO STA. 21+75
CONST. 145 LF OF ROADSIDE REGRADING
LT. STA. 23+25 TO STA. 24+05
CONST. 80 LF OF ROADSIDE REGRADING
LT. STA. 24+71 TO STA. 25+33.5
REMOVE 62.50 LF OF GUARDRAIL
LT. STA. 24+71 TO STA. 25+33.50
CONST. 12.50 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL,
1 - END TREATMENT TY. 2A, AND
1 - END TREATMENT TY. 1
17+00
20+00
25+00
26+00
BELCHER KILGORE MICHELE ANN
BARTLEY ELSTER
BELCHER ERNEST
THACKER TERRY
BELCHER ROGER
BELCHER FON R & LUCILLE E
N/A
REPLACE 15" ENTR. PIPE
END TREATMENT TYPE 1
END TREATMENT TYPE 2A
END TREATMENT TYPE 1
END TREATMENT TYPE 1
PI 17+45.25
PI 22+93.99
PC 19+90.25
PT 25+88.79
S29° 58' 39"E
S5° 55' 42"E
WATER MAIN
POWER & TELECOM
EX. 4.5'X5' RCBC
RT. STA. 17+00 TO STA. 23+50
REMOVE 650 LF OF GUARDRAIL
RT. STA. 23+90 TO STA. 24+65
REMOVE 75 LF OF GUARDRAIL
RT. STA. 25+25 TO STA. 25+75
REMOVE 50 LF OF GUARDRAIL
RT. STA. 17+00 TO STA. 24+62.50
CONST. 712.50 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL AND 1 - END TREATMENT TY. 1
RT. STA. 25+25 TO STA. 26+00
CONST. 25 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL AND 1 - END TREATMENT TY. 1
0' 50' 100' 200'
SCALE: 1"=100'
KY 80
STA. 17+00 TO STA. 26+00


PROPOSED SIGN (REFER TO SUMMARY)
PROPOSED SUPERELEVATION IMPROVEMENTS (REFER TO SUMMARY) OR PAVEMENT REPAIRS
STOP
EXISTING SIGNS (REMOVE UNLESS NOTED OTHERWISE)
26+00
30+00
35+00
BELCHER FON R & LUCILLE E
N/A
WATER MAIN
POWER & TELECOM
POTTER CLARIDA & ZORA
RAMEY BENNY & WANDA
RATLIFF FRANK D
SANDERS COLLEEN
WARD SHANNON DEAN
CONST. SAFETY BOX INLET 18" SINGLE SDB-1 ON EX. 18" METAL PIPE
PC 28+86.86
PI 30+55.63
PT 32+23.50
LT. STA. 26+00 TO STA. 35+00 CONST. 900 LF OF ROADSIDE REGRADING
CONST. DBI TY. 5E (NO APRON) ON EX. 24" RCP
END TREATMENT TYPE 1
END TREATMENT TYPE 2A
C4
RT. STA. 28+25 TO STA. 31+25 CONST. 300 LF OF ROADSIDE REGRADING
RT. STA. 26+00 TO STA. 31+00 CONST. 450 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL AND 1 - END TREATMENT TY. 1
RT. STA. 26+12.50 TO STA. 27+62.50 REMOVE 150 LF OF GUARDRAIL
RT. STA. 31+25 STA. 31+56 CONST. 50 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL AND 2 - END TREATMENTS TY. 2A
RT. STA. 28+05 TO STA. 31+05 REMOVE 300 LF OF GUARDRAIL
RT. STA. 31+25 TO STA. 31+56 REMOVE 50 LF OF GUARDRAIL
RT. STA. 31+75 TO STA. 33+00 CONST. 75 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL, 1 - END TREATMENT TY. 1, AND 1 - END TREATMENT TY. 2A
RT. STA. 31+75 TO STA. 33+00 REMOVE 137.50 LF OF GUARDRAIL
RT. STA. 33+75 TO STA. 35+00 CONST. 75 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL, AND 1 - END TREATMENT TY. 1
RT. STA. 33+75 TO STA. 35+00 REMOVE 125 LF OF GUARDRAIL
TRUCK ENTRANCE
CURVE 4 SUPERELEVATION
BEGIN RUNOUT 27+68
BEGIN RUNOFF 28+19
FULL SUPER 4.0% 29+21 TO 31+89
0' 50' 100' 200'
SCALE: 1"=100'
COUNTY OF PIKE
ITEM NO. 12-9014.00
KY 80
STA. 26+00 TO STA. 35+00


STOP
PROPOSED SIGN (REFER TO SUMMARY)
PROPOSED SUPERELEVATION IMPROVEMENTS (REFER TO SUMMARY)
OR PAVEMENT REPAIRS
STOP
EXISTING SIGNS
(REMOVE UNLESS NOTED OTHERWISE)
LT. STA. 35+00 TO STA. 44+00
CONST. 900 LF OF ROADSIDE REGRADING
RT. STA. 35+00 TO STA. 36+25
CONST. 75 LF OF STEEL W BEAM
SINGLE FACE GUARDRAIL, AND
1 - END TREATMENT TY. 1
RT. STA. 35+00 TO STA. 36+25
REMOVE 125 LF OF GUARDRAIL
RT. STA. 37+10 TO STA. 37+42.5
REMOVE 37.5 LF OF GUARDRAIL
RT. STA. 37+00 TO STA. 37+50
CONST. 50 LF OF ROADSIDE REGRADING
RT. STA. 42+00 TO STA. 44+00
REMOVE 200 LF OF GUARDRAIL
RT. STA. 42+00 TO STA. 44+00
CONST. 150 LF OF STEEL W BEAM
SINGLE FACE GUARDRAIL, AND
1 - END TREATMENT TY. 1
35+00
40+00
44+00
PC 36+11.62
PI 37+77.31
PT 39+42.65
PI 42+59.76
S16°11'17"E
S9°39'32"E
C5
WATER MAIN
SANDERS COLLEEN
WARD SHANNON DEAN
BELCHER FON A & LUCILLE E
POWER & TELECOM
END TREATMENT TYPE 1
SEE CULVERT EXTENSION DETAIL
PIKE COUNTY
EX. 18" RCP
EX. 18" X 18" RCBC
CLEAN PIPE
NO PASSING ZONE
N/A
0'
50'
100'
200'
SCALE: 1"=100'
COUNTY OF
PIKE
ITEM NO.
12-9014.00
KY 80
STA. 35+00 TO STA. 44+00

COUNTY OF	ITEM NO.
PIKE	12-9014.00

STOP PROPOSED SIGN (REFER TO SUMMARY)

PROPOSED SUPERELEVATION IMPROVEMENTS (REFER TO SUMMARY) OR PAVEMENT REPAIRS

STOP EXISTING SIGNS (REMOVE UNLESS NOTED OTHERWISE)

LT. STA. 44+00 TO STA. 53+00
CONST. 900 LF OF ROADSIDE REGRADING

44+00

45+00

50+00

53+00

PI 47+58.11

PC 49+45.91

PT 52+71.91

PI 51+09.85

C6

MILEPOINT 1
STA. 52 + 80

CONST. SAFETY BOX INLET - 18" SINGLE SDB-1 ON EX. 18" RCP

S13° 35'11"E

S28° 35'20"E

WATER MAIN

WM

POWER & TELECOM

END TREATMENT TYPE 1

END TREATMENT TYPE 1

N/A

BELCHER
CAMILIA JOANNE

POTTER
RANDY KEVIN
& CRYSTAL

RT. STA. 44+00 TO STA. 47+50
CONST. 300 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL AND 1 - END TREATMENT TY. 1

RT. STA. 44+00 TO STA. 47+50
REMOVE 350 LF OF GUARDRAIL

RT. STA. 49+87.5 TO STA. 53+00
CONST. 262.5 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL, AND 1 - END TREATMENT TY. 1

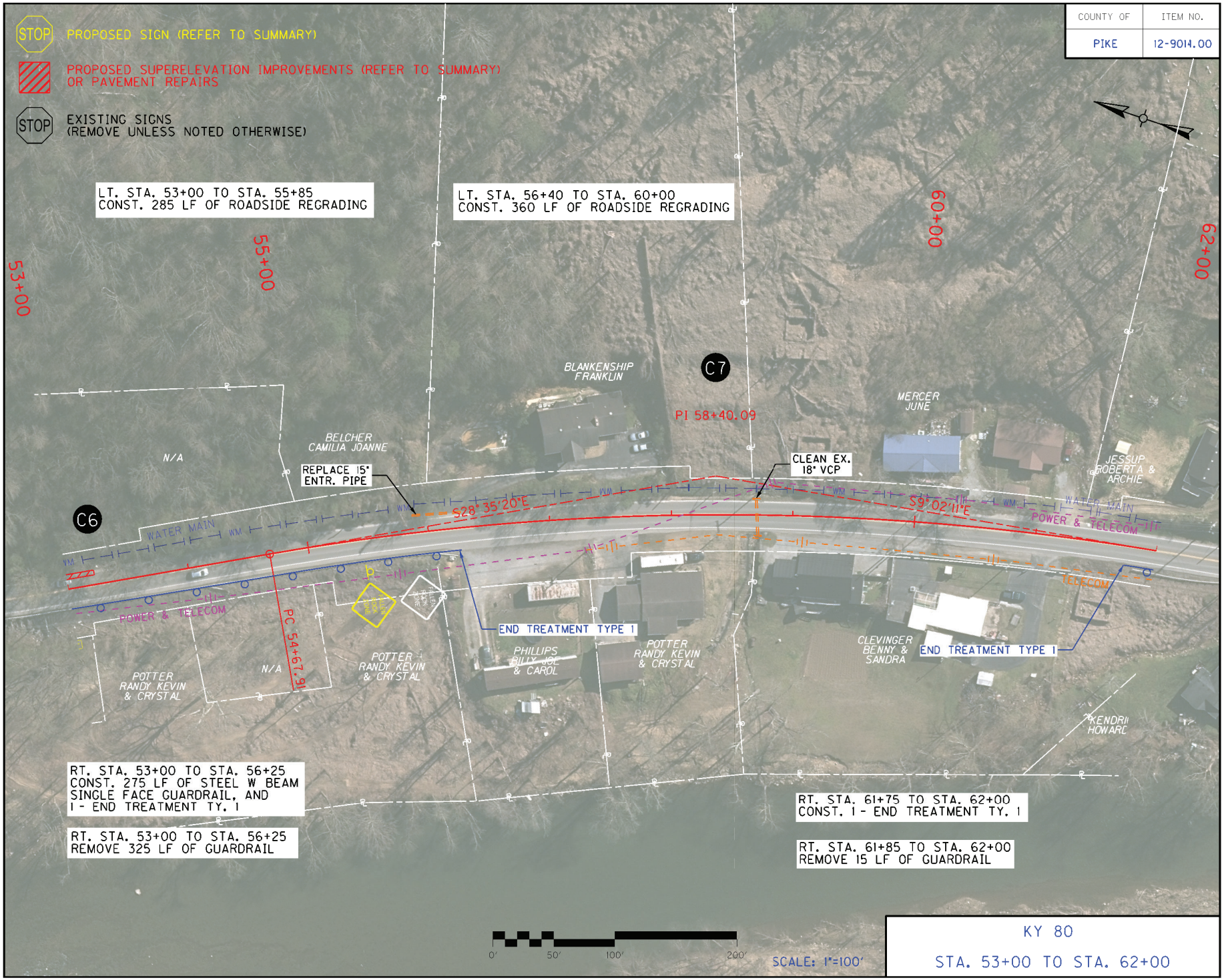
RT. STA. 49+87.5 TO STA. 53+00
REMOVE 312.5 LF OF GUARDRAIL

0' 50' 100' 200'

SCALE: 1"=100'

KY 80

STA. 44+00 TO STA. 53+00


STOP PROPOSED SIGN (REFER TO SUMMARY)
PROPOSED SUPERELEVATION IMPROVEMENTS (REFER TO SUMMARY) OR PAVEMENT REPAIRS
STOP EXISTING SIGNS (REMOVE UNLESS NOTED OTHERWISE)
COUNTY OF
PIKE
ITEM NO.
12-9014.00
LT. STA. 53+00 TO STA. 55+85
CONST. 285 LF OF ROADSIDE REGRADING
LT. STA. 56+40 TO STA. 60+00
CONST. 360 LF OF ROADSIDE REGRADING
53+00
55+00
60+00
62+00
C6
C7
PI 58+40.09
BLANKENSHIP FRANKLIN
MERCER JUNE
BELCHER CAMILIA JOANNE
N/A
REPLACE 15" ENTR. PIPE
CLEAN EX. 18" VCP
JESSUP ROBERT A & ARCHIE
S28° 35' 20"E
S9° 02' 11"E
WATER MAIN
POWER & TELECOM
TELECOM
PC 54+67.91
END TREATMENT TYPE 1
POTTER RANDY KEVIN & CRYSTAL
PHILLIPS BILLY JOE & CAROL
CLEVINGER BENNY & SANDRA
KENDRI HOWARC
RT. STA. 53+00 TO STA. 56+25
CONST. 275 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL, AND 1 - END TREATMENT TY. 1
RT. STA. 53+00 TO STA. 56+25
REMOVE 325 LF OF GUARDRAIL
RT. STA. 61+75 TO STA. 62+00
CONST. 1 - END TREATMENT TY. 1
RT. STA. 61+85 TO STA. 62+00
REMOVE 15 LF OF GUARDRAIL
0' 50' 100' 200'
SCALE: 1"=100'
KY 80
STA. 53+00 TO STA. 62+00

COUNTY OF	ITEM NO.
PIKE	12-9014.00

STOP PROPOSED SIGN (REFER TO SUMMARY)

PROPOSED SUPERELEVATION IMPROVEMENTS (REFER TO SUMMARY) OR PAVEMENT REPAIRS

STOP EXISTING SIGNS (REMOVE UNLESS NOTED OTHERWISE)

CURVE 8 SUPERELEVATION	
BEGIN RUNOUT	64+01
BEGIN RUNOFF	64+52
FULL SUPER 4.0%	65+54 TO 67+58
END RUNOFF	68+60
END RUNOUT	69+11

62+00

65+00

70+00

71+00

LT. STA. 63+50 TO STA. 63+90
REMOVE 50 LF OF GUARDRAIL

LT. STA. 63+50 TO STA. 63+90
CONST. 50 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL (7' POSTS) & 2 - ENTREATMENTS TY. 2A

LT. STA. 64+10 TO STA. 71+00
CONST. 690 LF OF ROADSIDE REGRADING

C8

CONST. 2 - DBI TY. 2 (NO APRON)
1 - HEADWALL (SLOPED & MITERED CONC - FOR 36 INCH PIPE) ON NEW 36" PIPE.

PI 63+60.73

JESSUP ROBERTA & ARCHIE

END TREATMENT TYPE 2A

PI 66+56.24

ROWE ANITA H & LESLIE H

PC 70+91.19

POWER & TELECOM

WATER MAIN

WM

S9°21'57"E

S3°14'17"E

TELECOM

EX. ?'X9' RCBC

END TREATMENT TYPE 2A

END TREATMENT TYPE 1

KENDRICK HOWARD T

PT 62+05.03

PC 65+19.74

PT 67+92.47

CONST. 2 - HEADWALL (SLOPED & MITERED CONCRETE - FOR 36 INCH PIPE) ON NEW 36" PIPE

RT. STA. 64+00 TO STA. 71+00
CONST. 700 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL AND
1 - END TREATMENT TY. 2A

RT. STA. 64+05 TO STA. 64+50
REMOVE 45 LF OF GUARDRAIL

RT. STA. 64+55 TO STA. 71+00
REMOVE 645 LF OF GUARDRAIL

RT. STA. 62+00 TO STA. 63+75
CONST. 100 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL AND
1 - END TREATMENT TY. 1

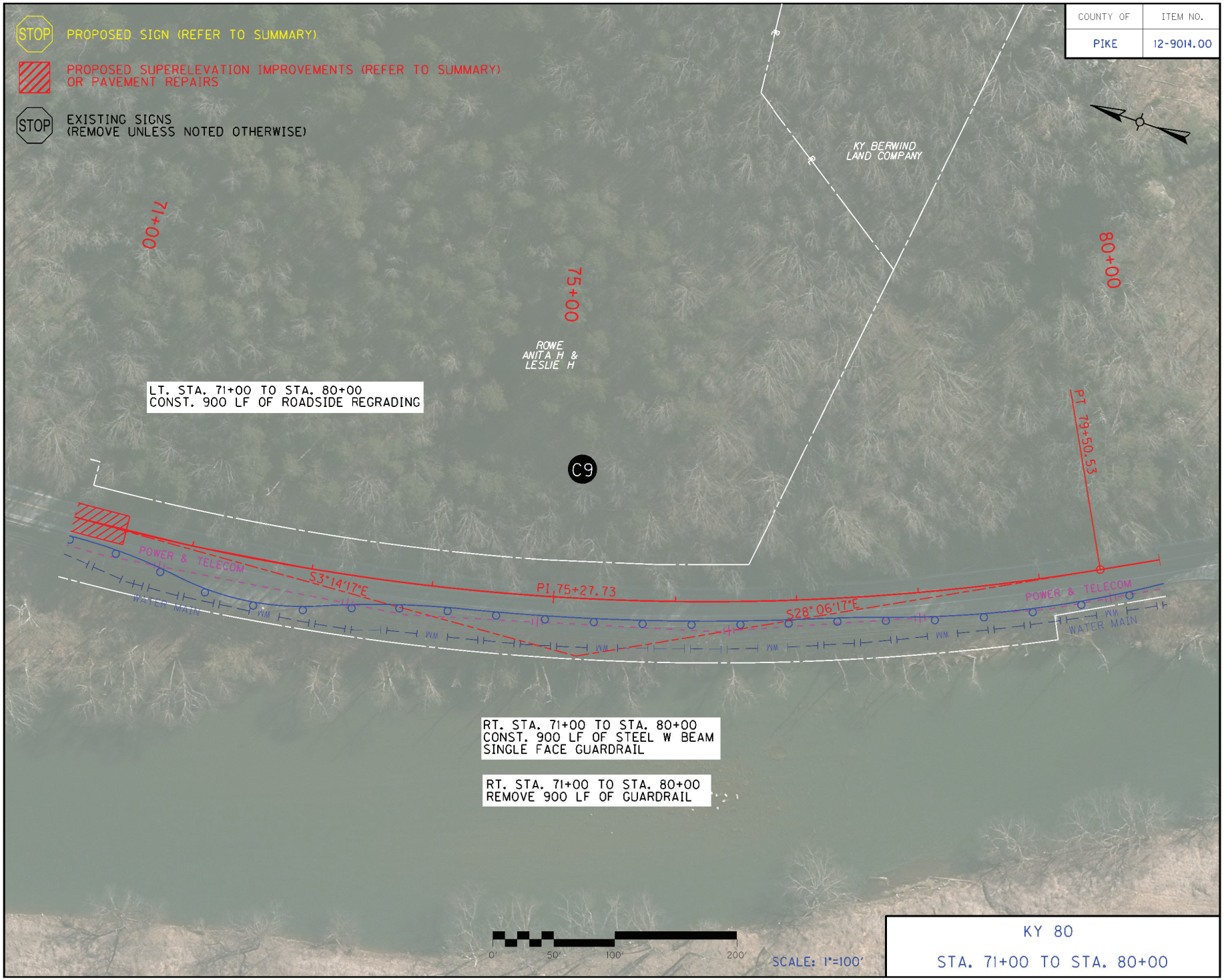
RT. STA. 62+00 TO STA. 63+72.5
REMOVE 172.5 LF OF GUARDRAIL

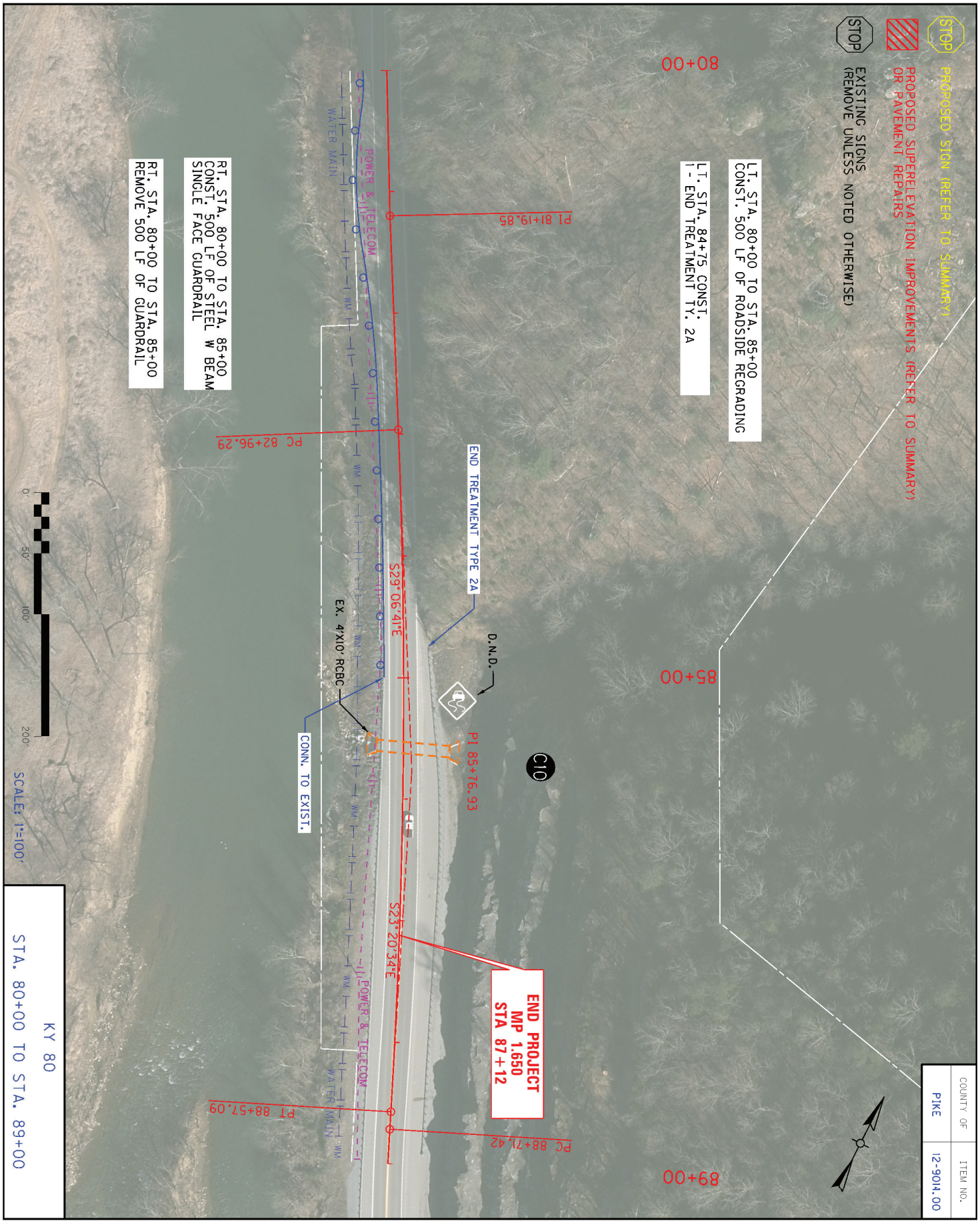
0' 50' 100' 200'

SCALE: 1"=100'

KY 80

STA. 62+00 TO STA. 71+00


STOP
PROPOSED SIGN (REFER TO SUMMARY)
PROPOSED SUPERELEVATION IMPROVEMENTS (REFER TO SUMMARY) OR PAVEMENT REPAIRS
STOP
EXISTING SIGNS (REMOVE UNLESS NOTED OTHERWISE)
COUNTY OF
ITEM NO.
PIKE
12-9014.00
KY BERWIND LAND COMPANY
71+00
75+00
80+00
ROWE ANITA H & LESLIE H
LT. STA. 71+00 TO STA. 80+00
CONST. 900 LF OF ROADSIDE REGRADING
C9
PT 79+50.53
POWER & TELECOM
S3°14'17"E
PI 75+27.73
S28°06'17"E
POWER & TELECOM
WATER MAIN
WM
WATER MAIN
RT. STA. 71+00 TO STA. 80+00
CONST. 900 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL
RT. STA. 71+00 TO STA. 80+00
REMOVE 900 LF OF GUARDRAIL
0'
50'
100'
200'
SCALE: 1"=100'
KY 80
STA. 71+00 TO STA. 80+00


PROPOSED SIGN (REFER TO SUMMARY)
PROPOSED SUPERELEVATION IMPROVEMENTS (REFER TO SUMMARY) OR PAVEMENT REPAIRS
EXISTING SIGNS (REMOVE UNLESS NOTED OTHERWISE)
LT. STA. 80+00 TO STA. 85+00 CONST. 500 LF OF ROADSIDE REGRADING
LT. STA. 84+75 CONST. 1 - END TREATMENT TY. 2A
RT. STA. 80+00 TO STA. 85+00 CONST. 500 LF OF STEEL W BEAM SINGLE FACE GUARDRAIL
RT. STA. 80+00 TO STA. 85+00 REMOVE 500 LF OF GUARDRAIL
80+00
85+00
89+00
PI 81+19.85
PC 82+96.29
END TREATMENT TYPE 2A
D.N.D.
S29°06'41"E
PI 85+76.93
S23°20'34"E
EX. 4'X10' RCBC
CONN. TO EXIST.
C10
END PROJECT
MP 1.650
STA 87+12
PT 88+57.09
PC 88+71.42
WATER MAIN
POWER & TELECOM
WM
0'
50'
100'
200'
SCALE: 1"=100'
COUNTY OF
PIKE
ITEM NO.
12-9014.00
KY 80
STA. 80+00 TO STA. 89+00

COUNTY OF	ITEM NO.
PIKE	12-9014

QUANTITIES

GRANULAR EMBANKMENT - 20 CUYD
REMOVE CONCRETE MASONRY - 3.8 CUYD
CHANNEL LINING - CLASS II - 3 TON
PRECAST CON BOX SECT (4'x3') - 8 LF
STRUCTURE EXCAVATION COMMON - 28 CU YDS
FOUNDATION PREPARATION - 1 LS
CONCRETE - CLASS D MOD - 0.55 CUYD
BOX CULVERT HEADWALL (4'x3') - 1 EACH

℄ 37+29 = +00.46
℄ SURVEY = 0+00

0+20 -0+00 0+20 0+40

PAVEMENT REPAIR (SEE PLANS)

PIKE COUNTY

F.L. 757.90

℄

2 LF SPLICE

℄ CULVERT
I.E. 759.06

EX. 4' X 3' RCBC

89°29'41"

O.E. 758.15

EX. R/W

FON & LUCILLE BELCHER
JONATHAN BELCHER
CAMILLA BELCHER

REMOVE G/R (SEE PLANS)

CONTRACTOR SHALL VERIFY SITE CONDITIONS &
EXISTING CULVERT DIMENSIONS PRIOR TO BIDDING.

BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND SHOULD BE VERIFIED PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.

LOW WIRE
ELEV. UNKNOWN

770

REBUILD PAVEMENT
(SEE PIPE EXT. PAVEMENT
REPAIR DETAIL)

CONST. 8 LF OF 4'X3' PRECAST
CONCRETE BOX CULVERT
DESIGNED FOR KYHL-93 LOADING

8%

2:1

2 LF SPLICE

ELEV. 757.90

EX. 4' X 3' RCBC

760

EX. R/W

O.E. 758.15

CL II CHANNEL LINING - 3 TON

I.E. 759.06

EX. WATER LINE
ELEV. UNKNOWN

REMOVE 3.8 CUYD
OF CONCRETE MASONRY

3' GRANULAR EMB. MIN. - 20 CUYD

CONST. 4'X3' BOX
CULVERT HEADWALL

750

PRECAST BOX CULVERT
SHALL CONFORM TO SECTION 611
PRECAST REINFORCED CONCRETE
BOX CULVERT SECTIONS OF
THE CURENT VERSION OF
THE STANDARD SPECIFICATIONS

CONST. PER STANDARD DRAWINGS:

RDD-040-05
RDH-1000-02
RDH-1100-02
RDH-1200-02
RDH-1300-03
RDI-100-05
RDI-120-04
RDX-300-04

37+29

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

30 40

-40 -30 -20 -10 0 10 20

SCALE: 1"=

KY 80 CULVERT EXTENSION

STA. 37+29

COUNTY OF	ITEM NO.
PIKE	12-9014.00

BEFORE YOU DIG

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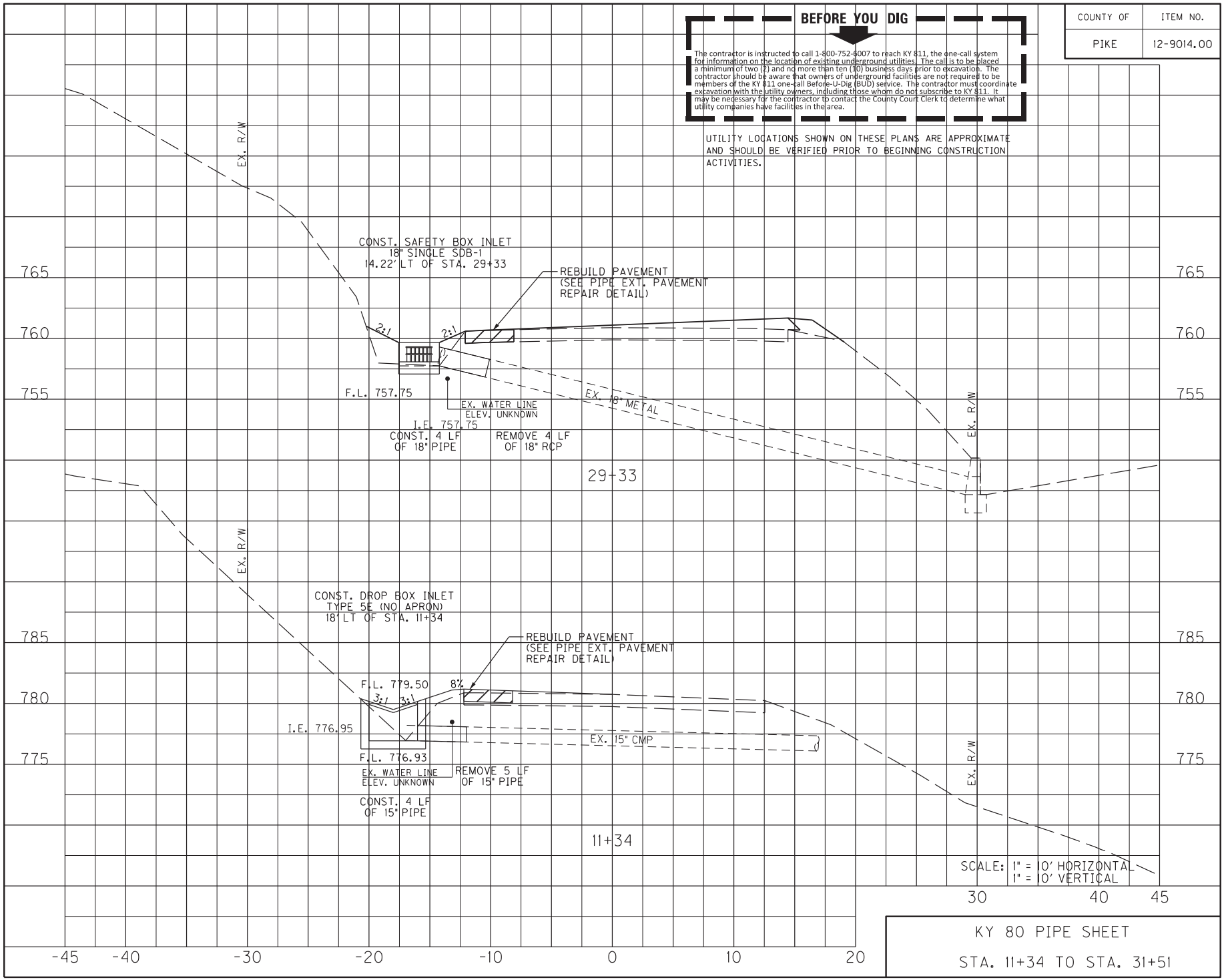
UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND SHOULD BE VERIFIED PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.



KY 80 PIPE SHEET

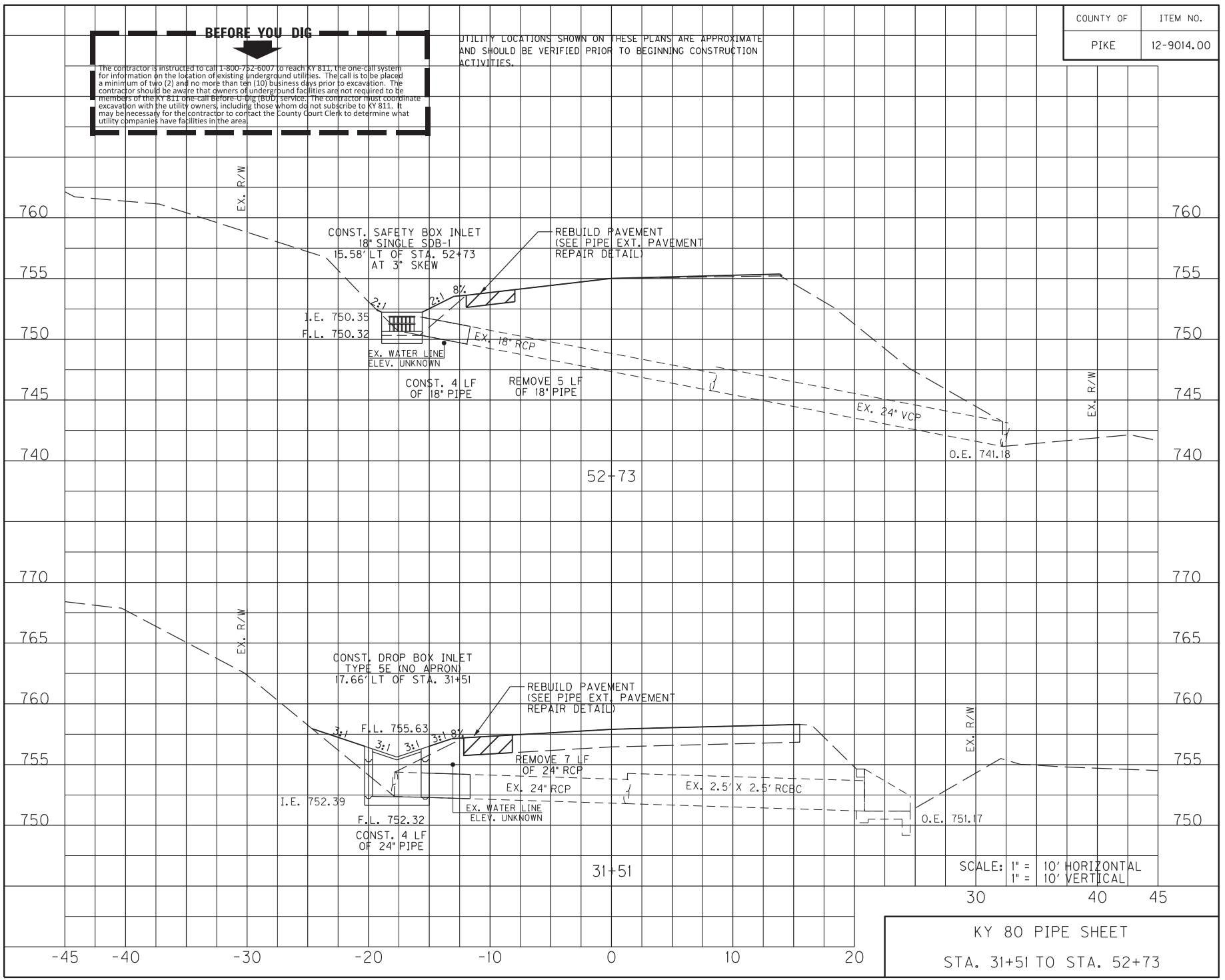
STA. 11+34 TO STA. 31+51

COUNTY OF	ITEM NO.
PIKE	12-9014.00

BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND SHOULD BE VERIFIED PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.



SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

KY 80 PIPE SHEET

STA. 31+51 TO STA. 52+73

COUNTY OF	ITEM NO.
PIKE	12-9014.00

BEFORE YOU DIG

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UTILITY LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND SHOULD BE VERIFIED PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.

CONST. DROP BOX INLET
TYPE 2 (ND APRON)
20.10' LT OF STA. 65+68
AT 24° SKEW

EX. R/W

T.C. 770.63

3:1

REBUILD PAVEMENT
(SEE CULVERT PIPE
REPLACEMENT DETAIL)

EX. WATER LINE
ELEV. UNKNOWN

F.L. 765.00

CONST. 4 LF
OF 36" PIPE

65+68

CONST. DROP BOX INLET
TYPE 2 (ND APRON)
20.10' LT OF STA. 65+64
AT 24° SKEW

CONST. HEADWALL (SLOPED
& MITERED CONCRETE -
FOR 24 INCH PIPE)
26.50' RT OF STA. 65+64
AT 24° SKEW

CONST. 6 LF OF
OUTLET DITCH WITH
5 TONS CI II CHANNEL LINING

1.5:1

36" CULVERT PIPE
So=0.032 FT/FT

O.E. 763.60

F.L. 765.00
I.E. 763.28

EX. 24" VCP

REMOVE EX.
HEADWALL

CONST. 45 LF
OF 36" PIPE

SAFELOAD 6 CY
OF 24" PIPE

O.E. 756.39

REMOVE EX.
HEADWALL

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

65+64

KY 80 PIPE SHEET

STA. 65+64 TO STA. 65+68

COUNTY OF	ITEM NO.
PIKE	12-9014.00

BEFORE YOU DIG

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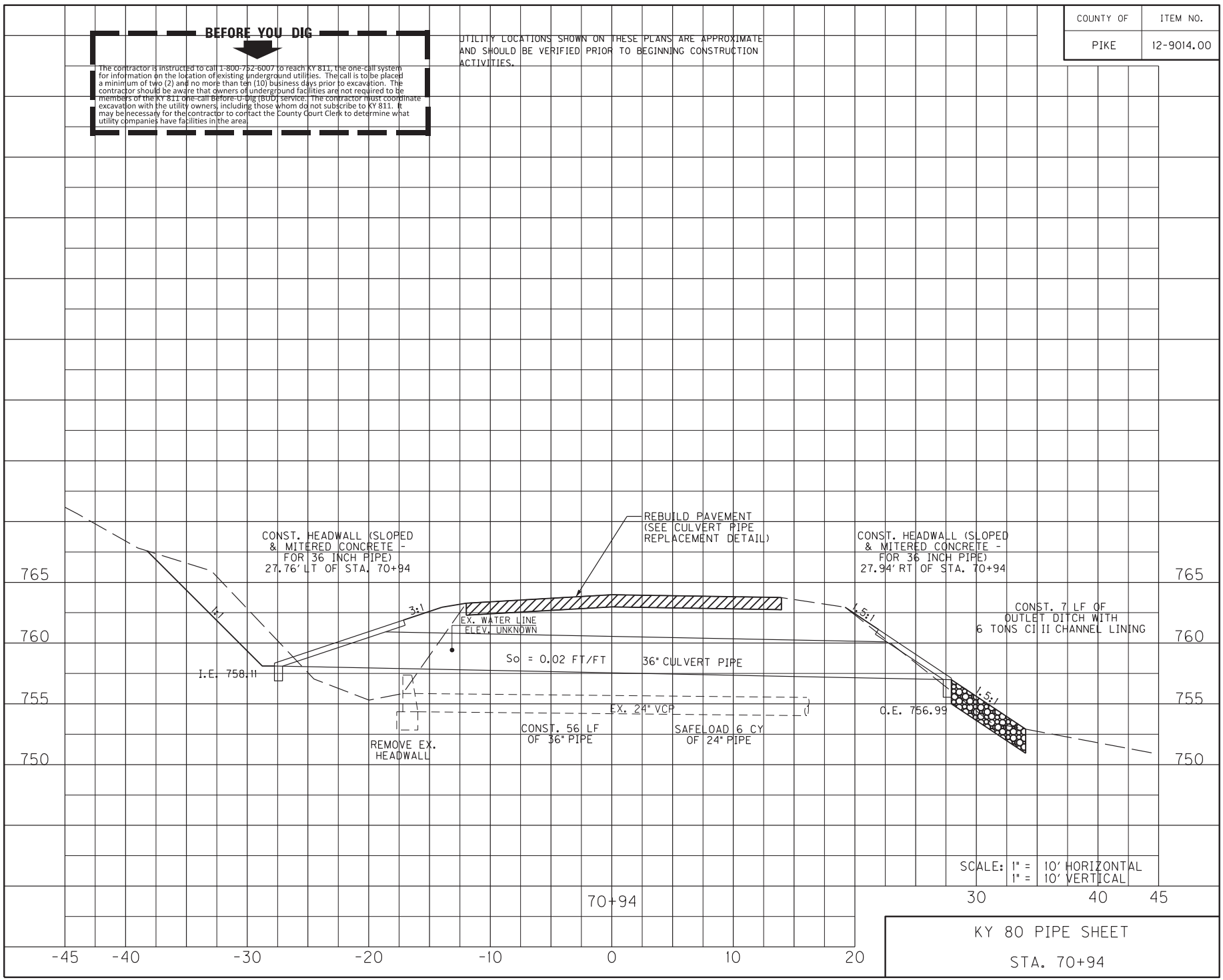
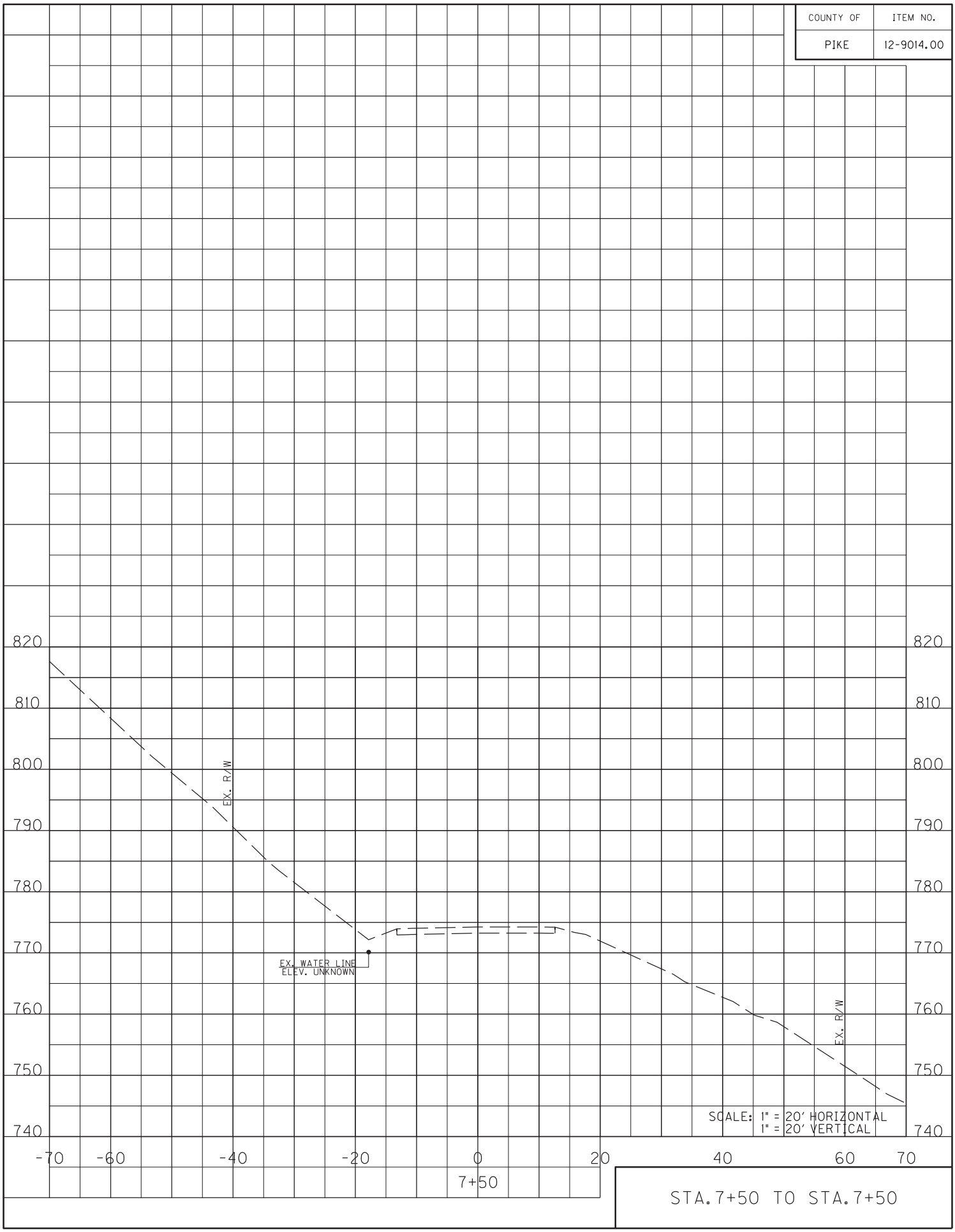


KY 80 PIPE SHEET

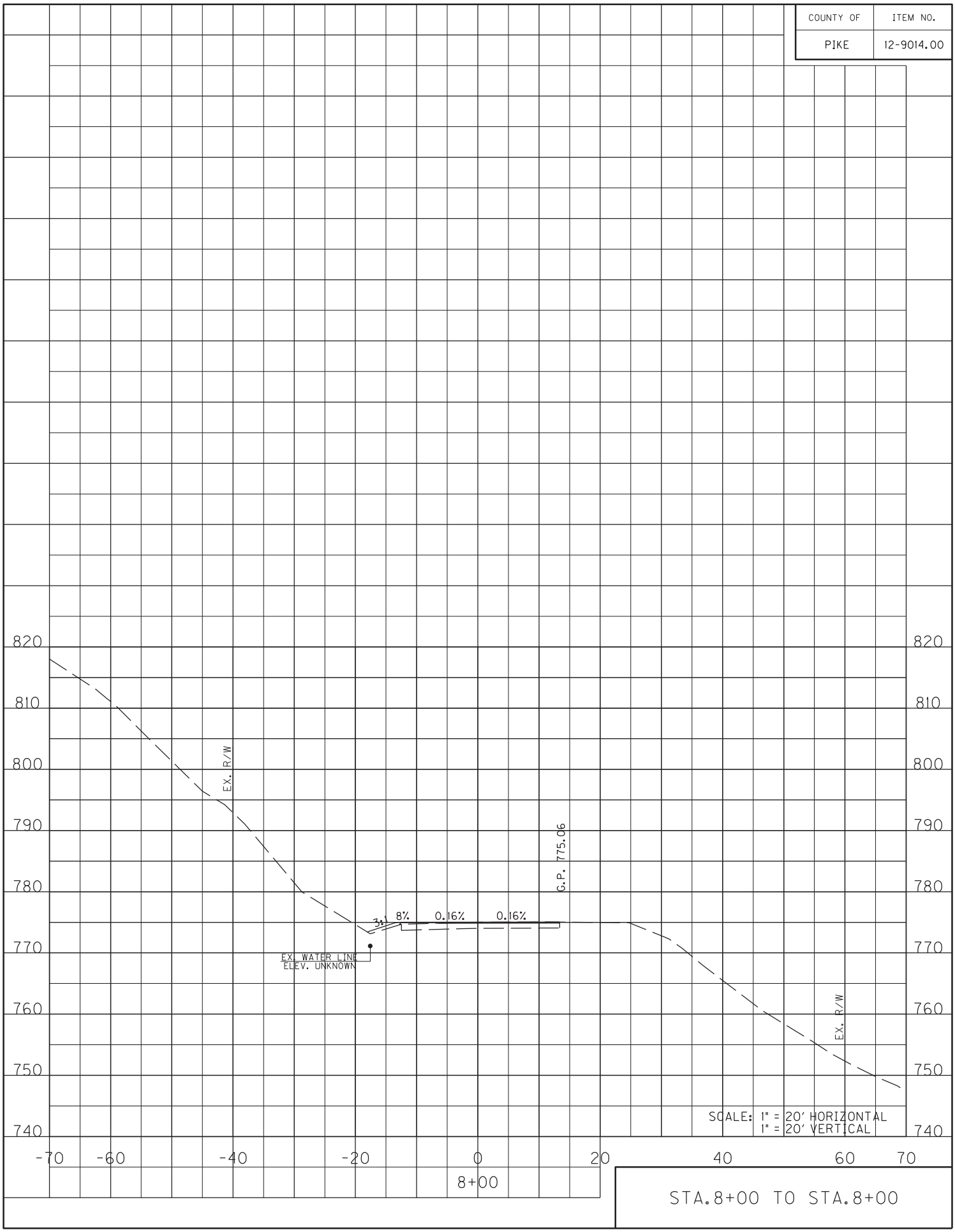
STA. 70+94

COUNTY OF	ITEM NO.
PIKE	12-9014.00



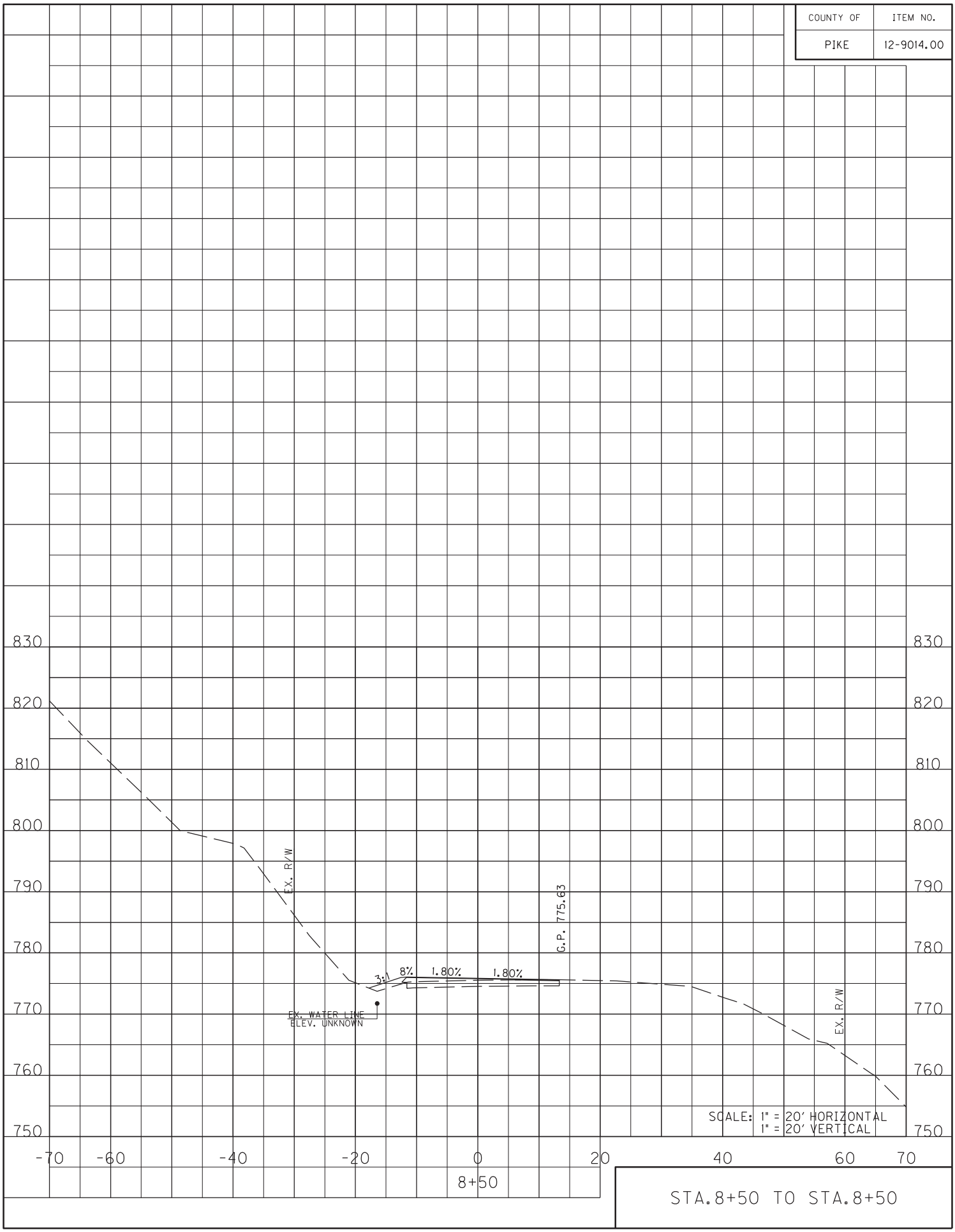
STA. 7+50 TO STA. 7+50

COUNTY OF	ITEM NO.
PIKE	12-9014.00



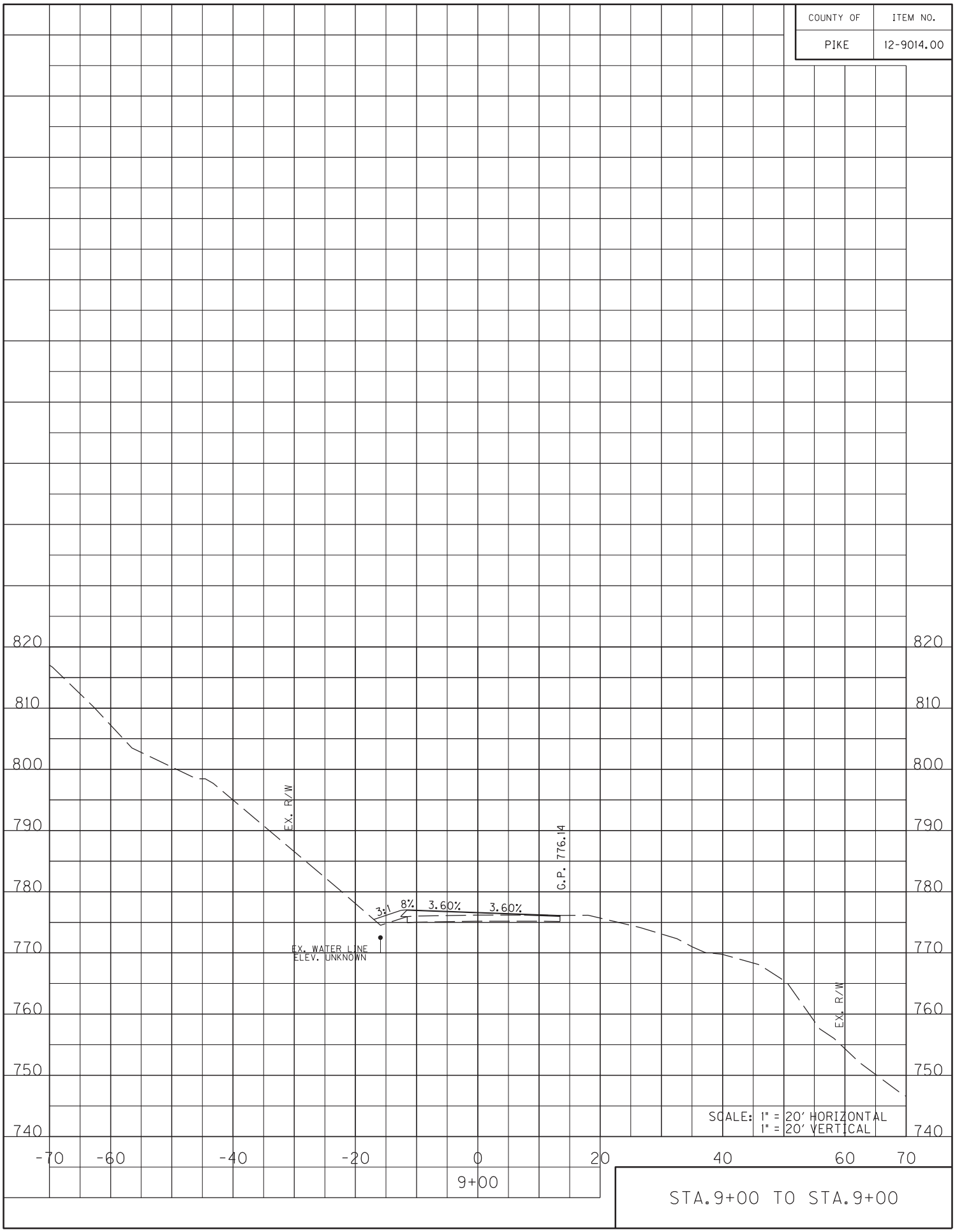
STA.8+00 TO STA.8+00

COUNTY OF	ITEM NO.
PIKE	12-9014.00



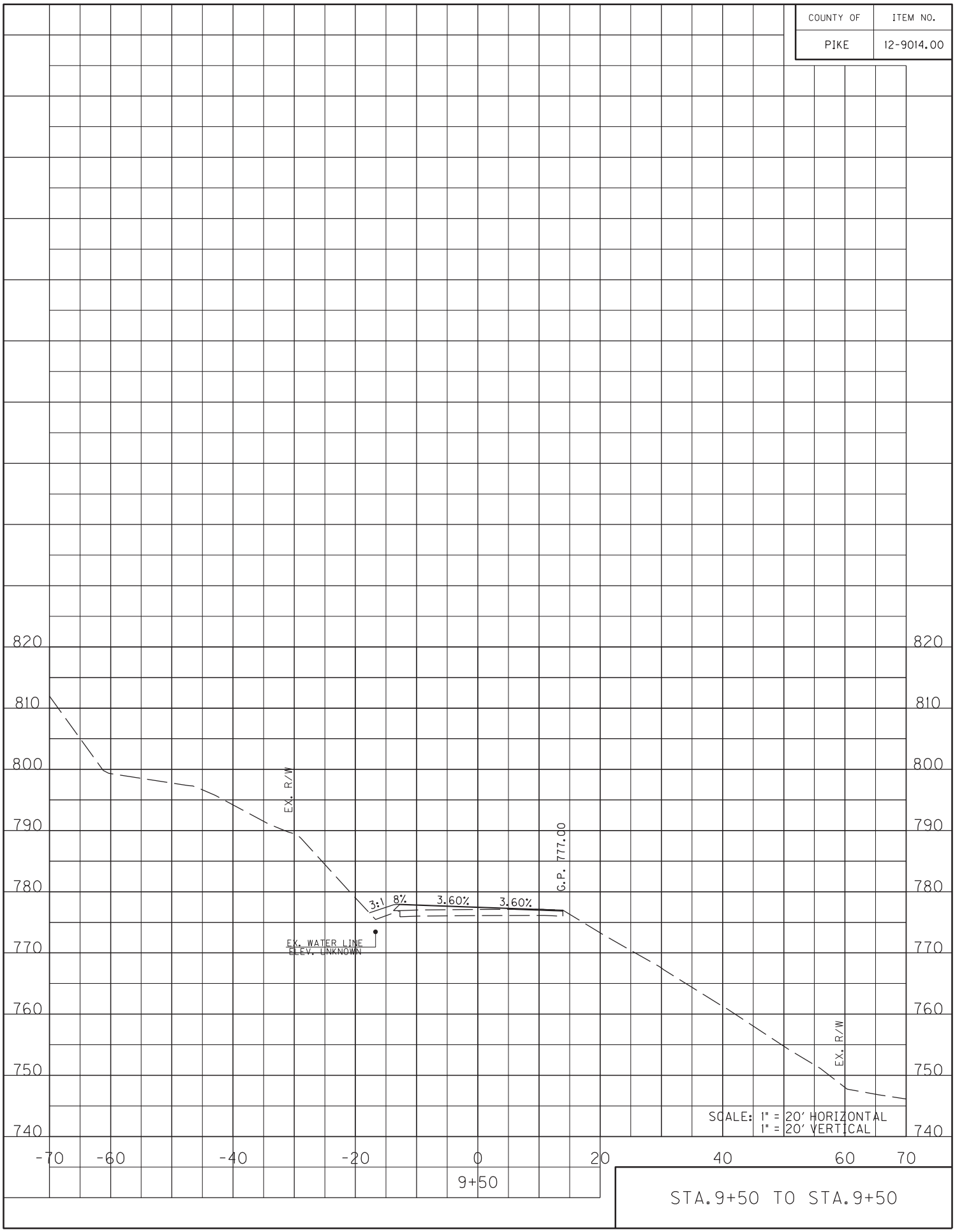
STA.8+50 TO STA.8+50

COUNTY OF	ITEM NO.
PIKE	12-9014.00



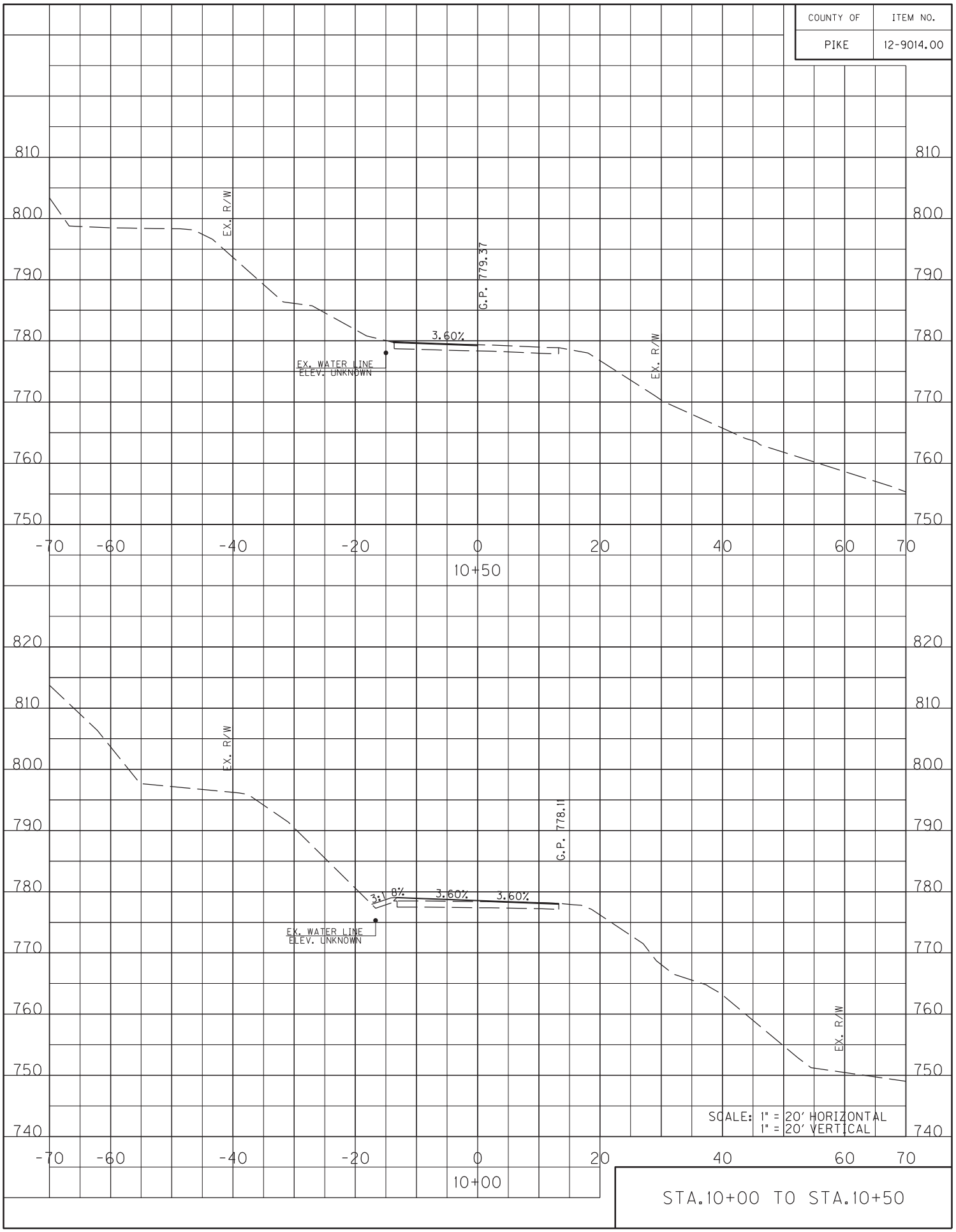
STA.9+00 TO STA.9+00

COUNTY OF	ITEM NO.
PIKE	12-9014.00



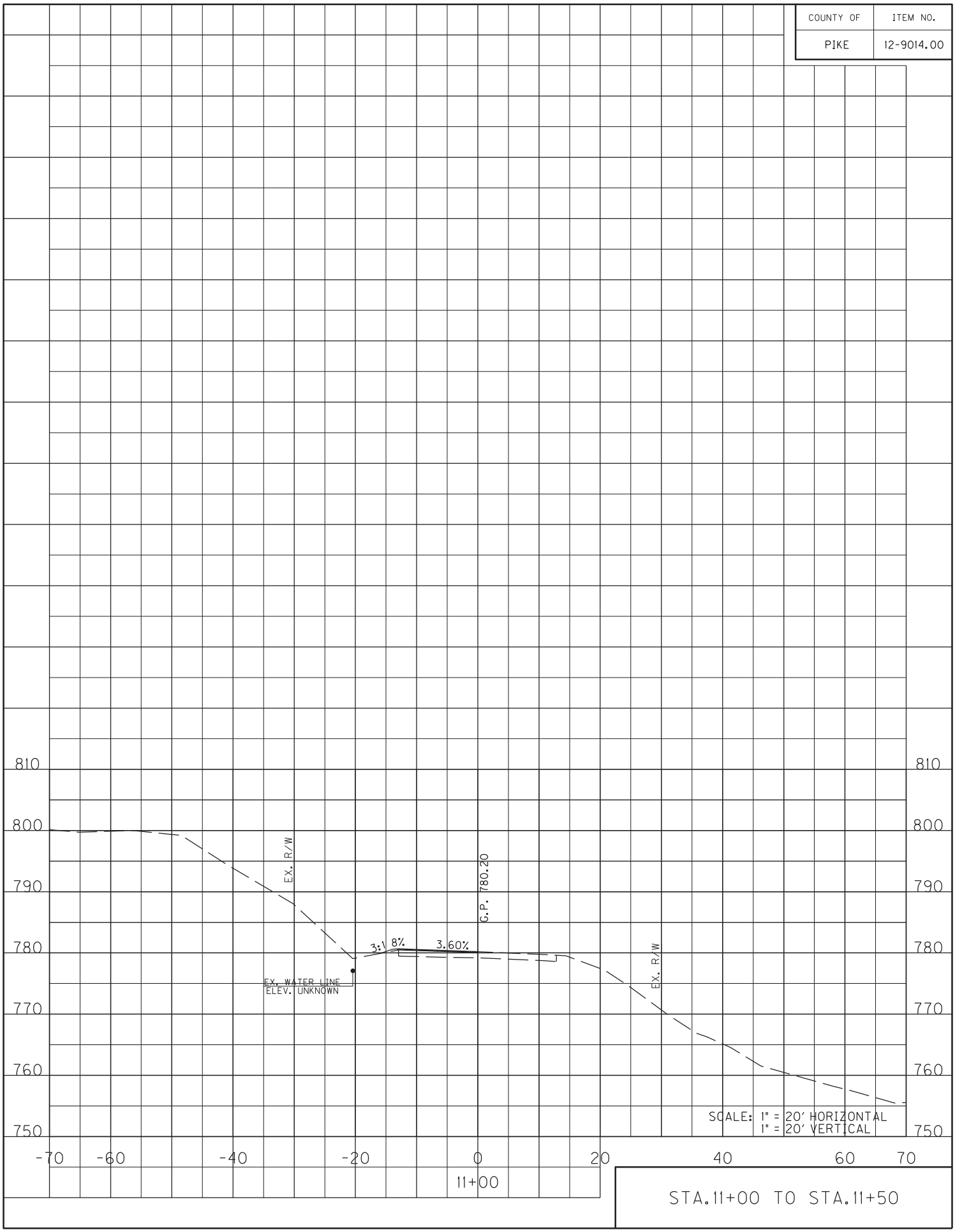
STA.9+50 TO STA.9+50

COUNTY OF	ITEM NO.
PIKE	12-9014.00



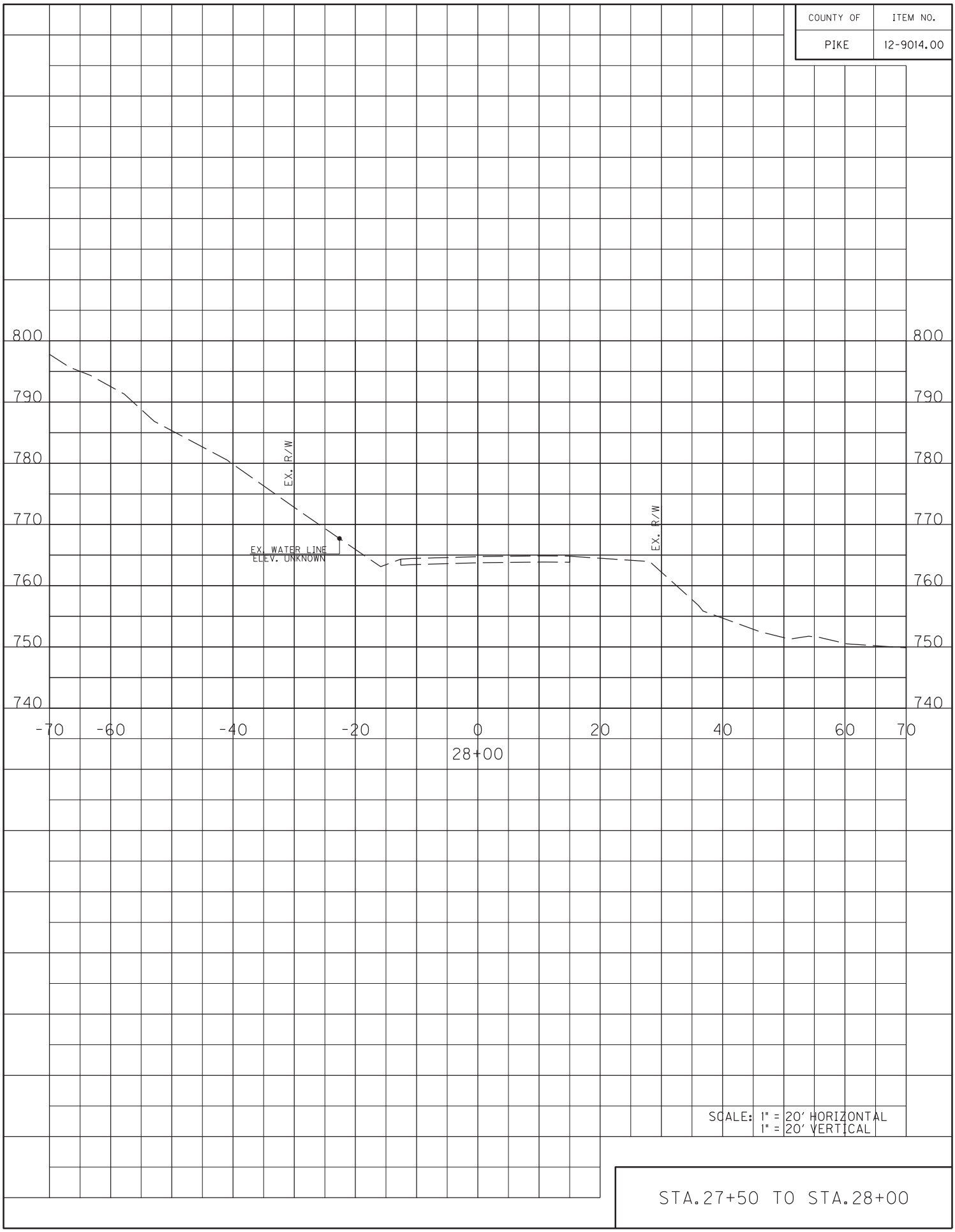
STA.10+00 TO STA.10+50

COUNTY OF	ITEM NO.
PIKE	12-9014.00



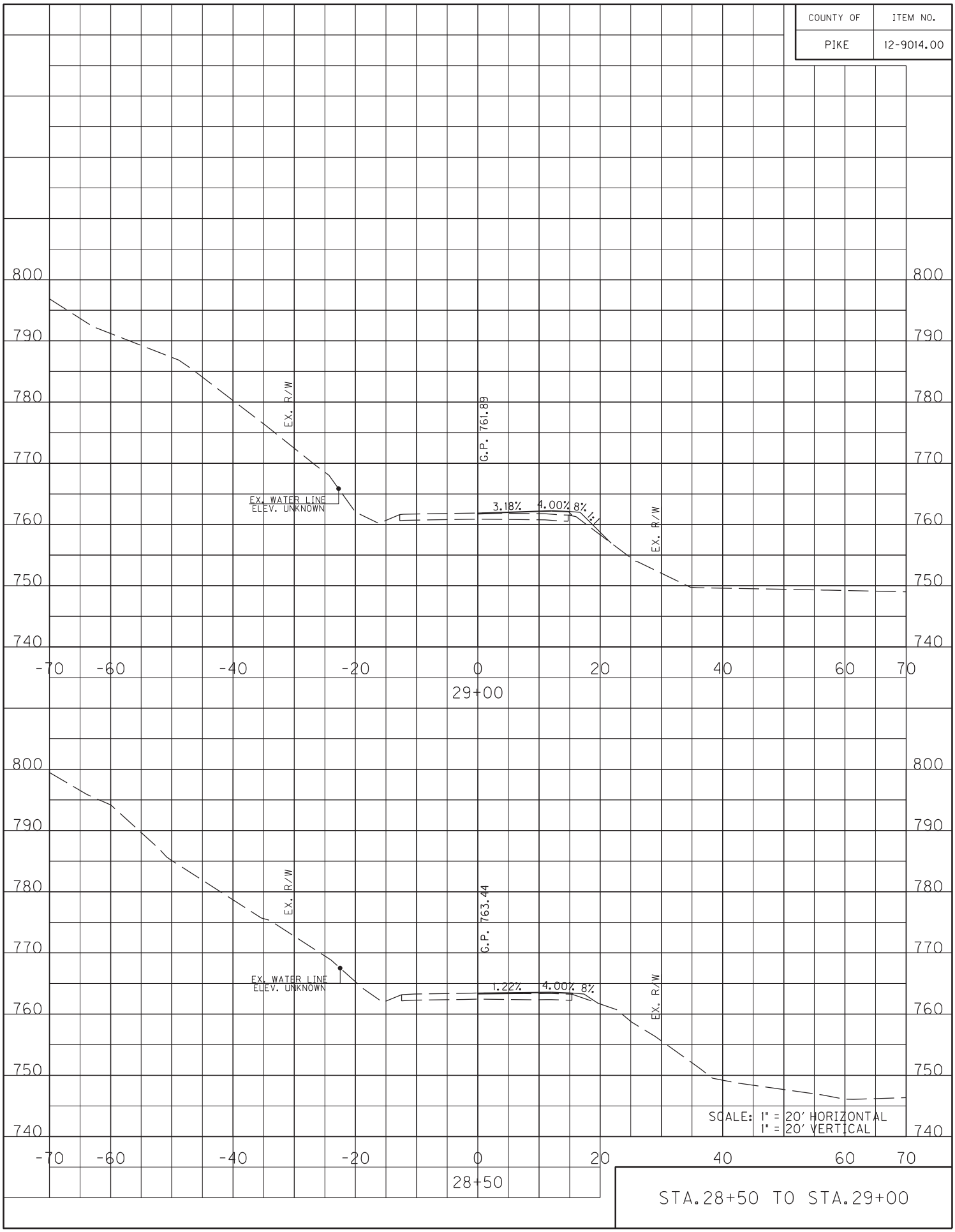
STA.11+00 TO STA.11+50

COUNTY OF	ITEM NO.
PIKE	12-9014.00

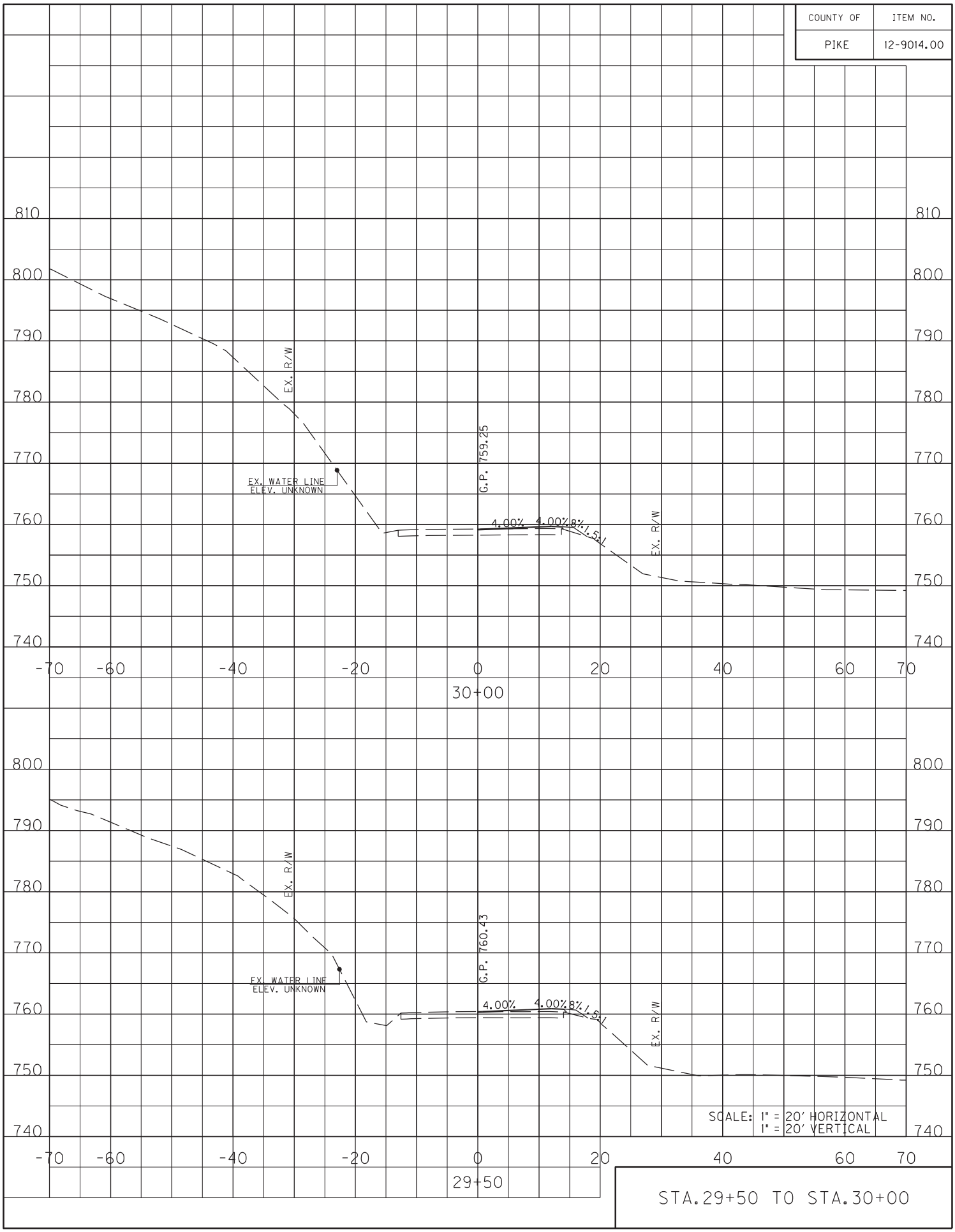


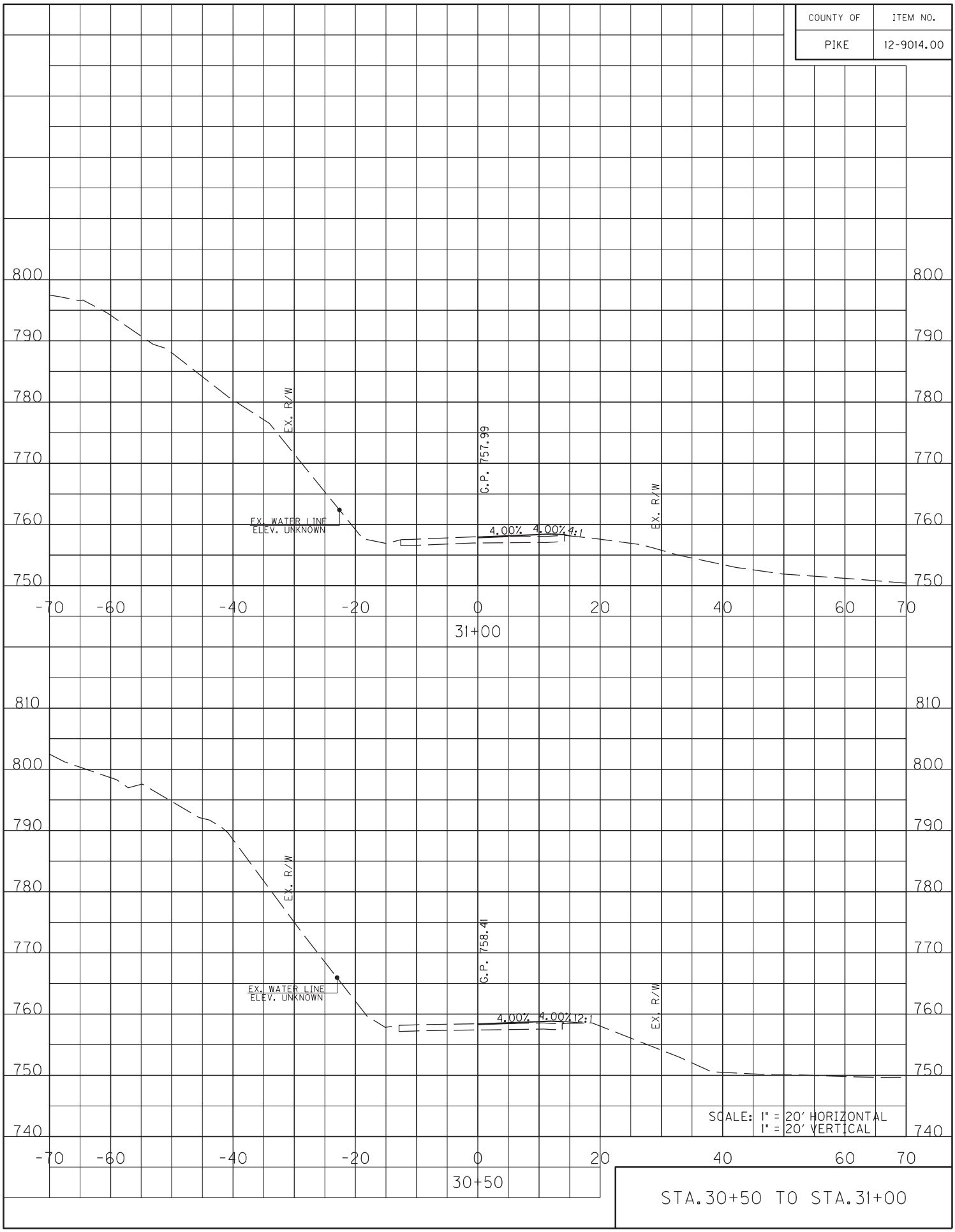
STA.27+50 TO STA.28+00

COUNTY OF	ITEM NO.
PIKE	12-9014.00

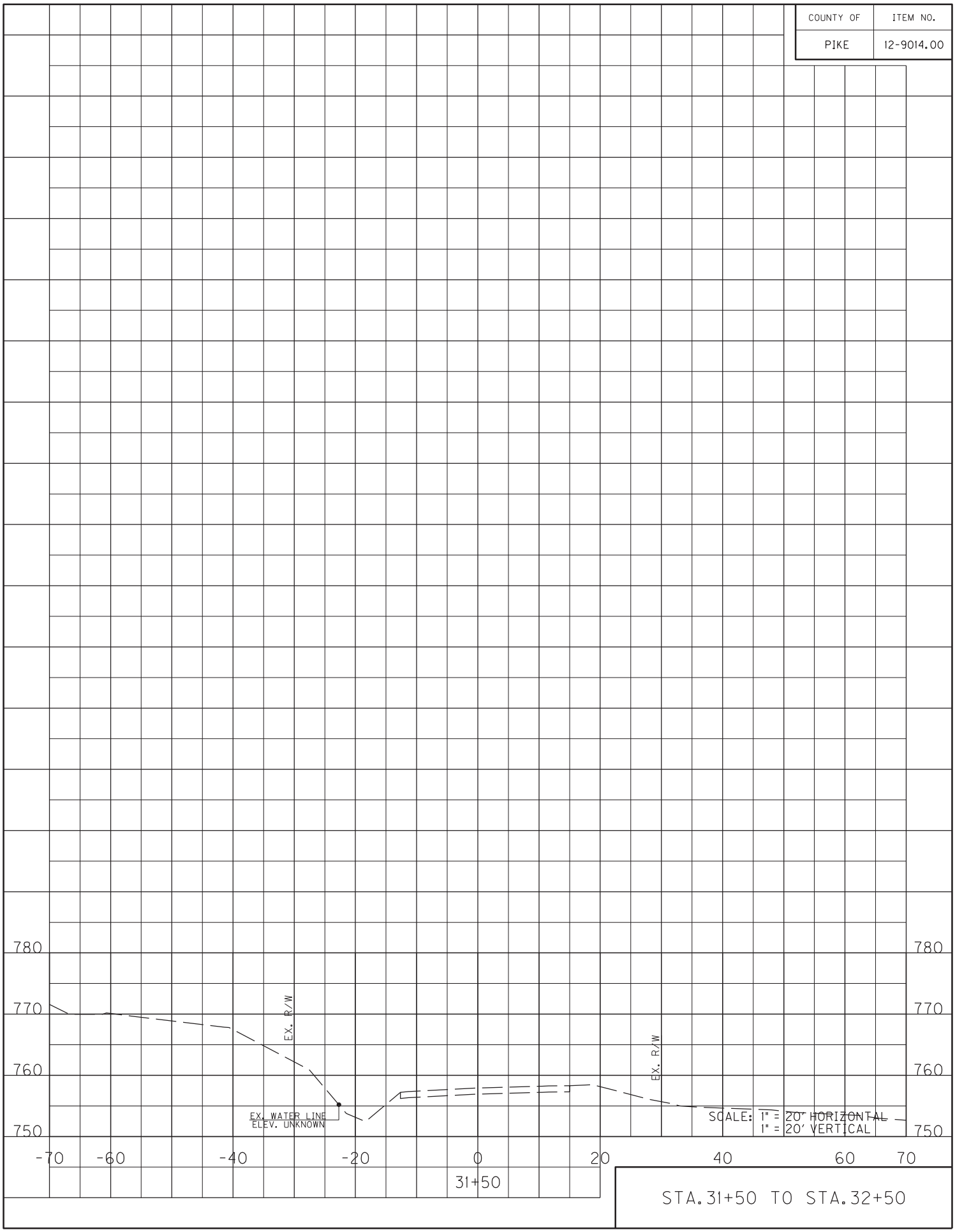


STA.28+50 TO STA.29+00


COUNTY OF
ITEM NO.
PIKE
12-9014.00
810
800
790
780
770
760
750
740
-70
-60
-40
-20
0
20
40
60
70
30+00
EX. R/W
EX. WATER LINE
ELEV. UNKNOWN
G.P. 759.25
4.00%
4.00%
8%
1.5:1
EX. R/W
29+50
G.P. 760.43
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
STA.29+50 TO STA.30+00

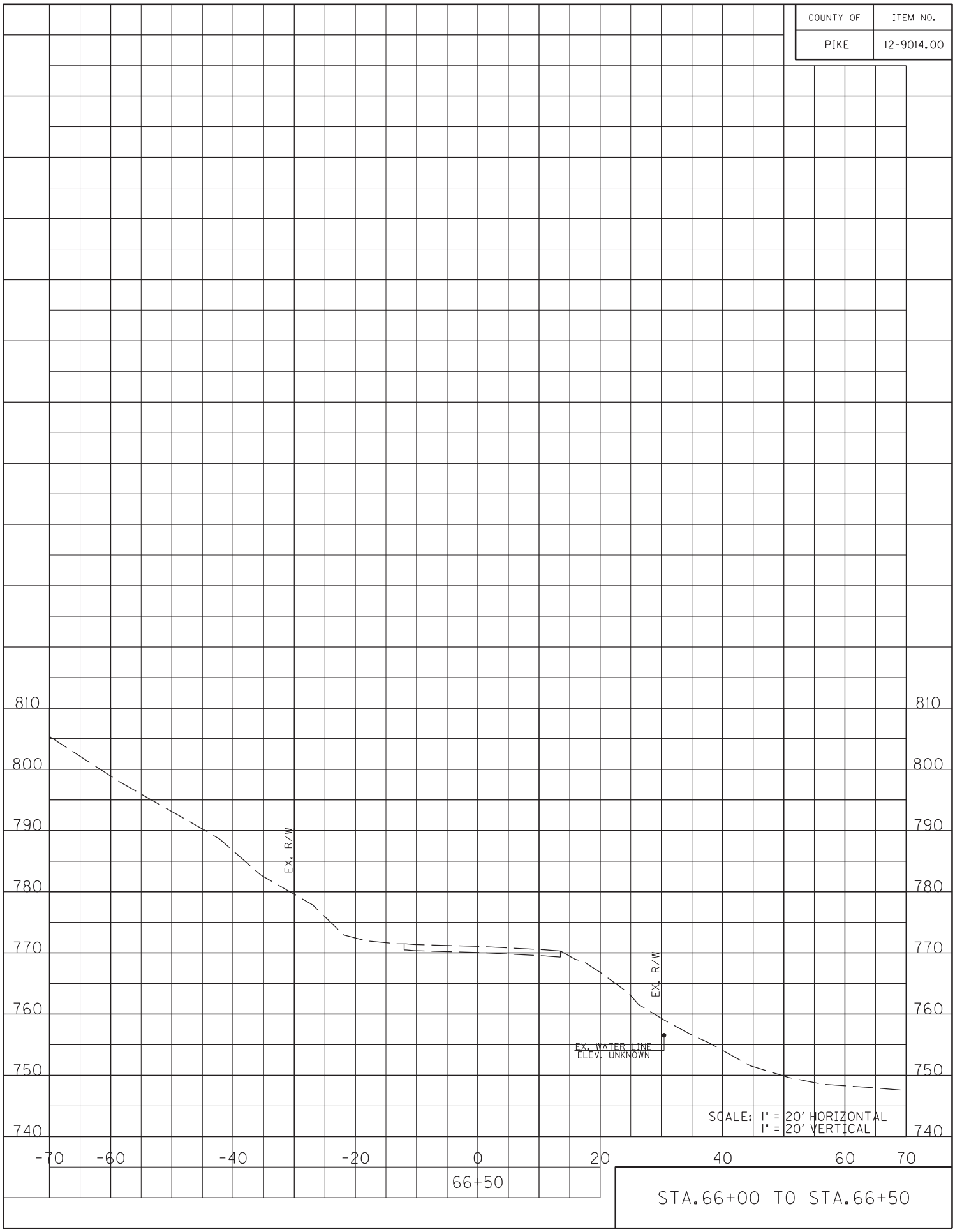

COUNTY OF
ITEM NO.
PIKE
12-9014.00
800
790
780
770
760
750
EX. R/W
G.P. 757.99
EX. R/W
EX. WATER LINE
ELEV. UNKNOWN
4.00%
4.00%
4:1
-70
-60
-40
-20
0
20
40
60
70
31+00
810
800
790
780
770
760
750
740
EX. R/W
G.P. 758.41
EX. R/W
EX. WATER LINE
ELEV. UNKNOWN
4.00%
4.00%
12:1
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
30+50
STA. 30+50 TO STA. 31+00

COUNTY OF	ITEM NO.
PIKE	12-9014.00



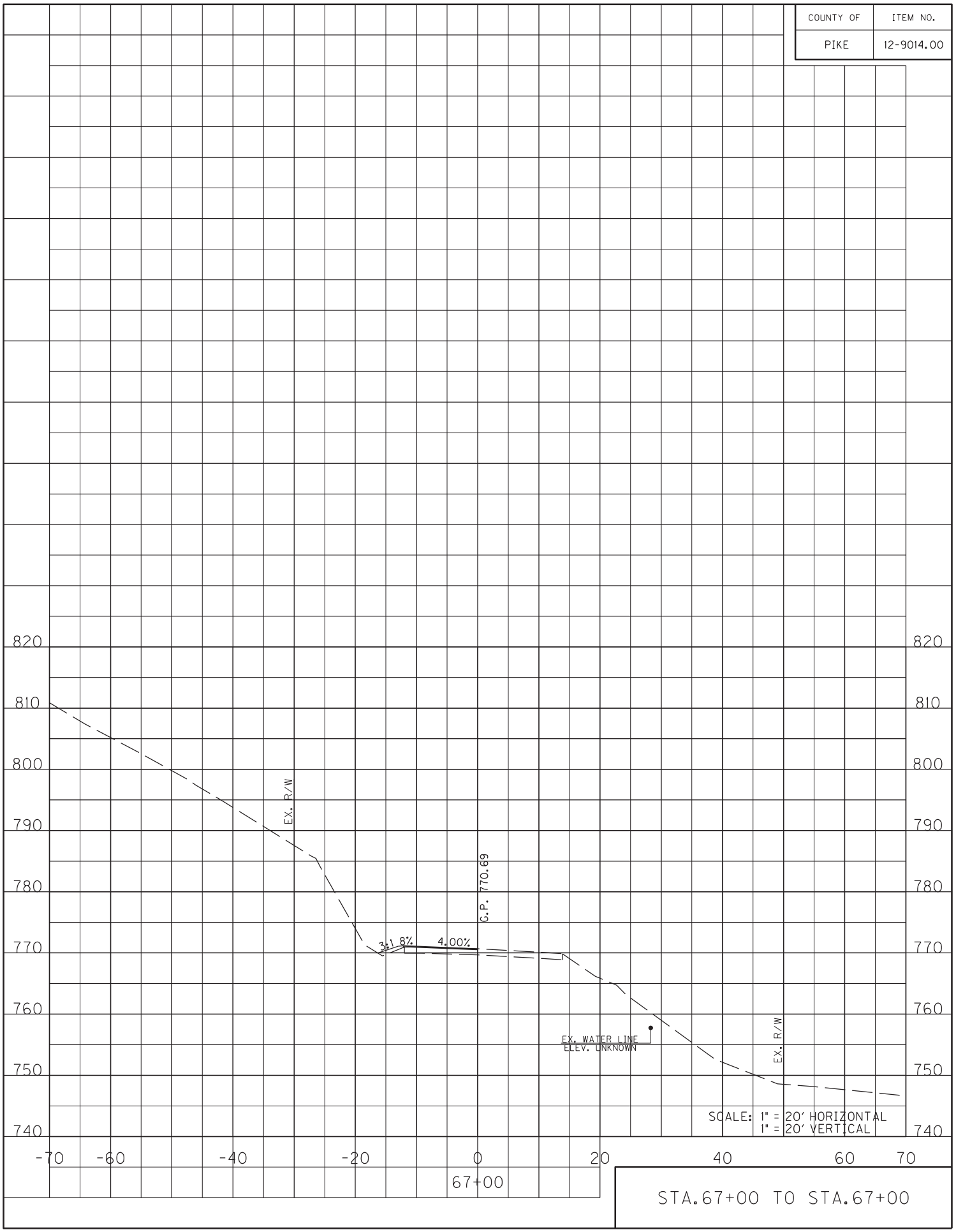
STA. 31+50 TO STA. 32+50

COUNTY OF	ITEM NO.
PIKE	12-9014.00



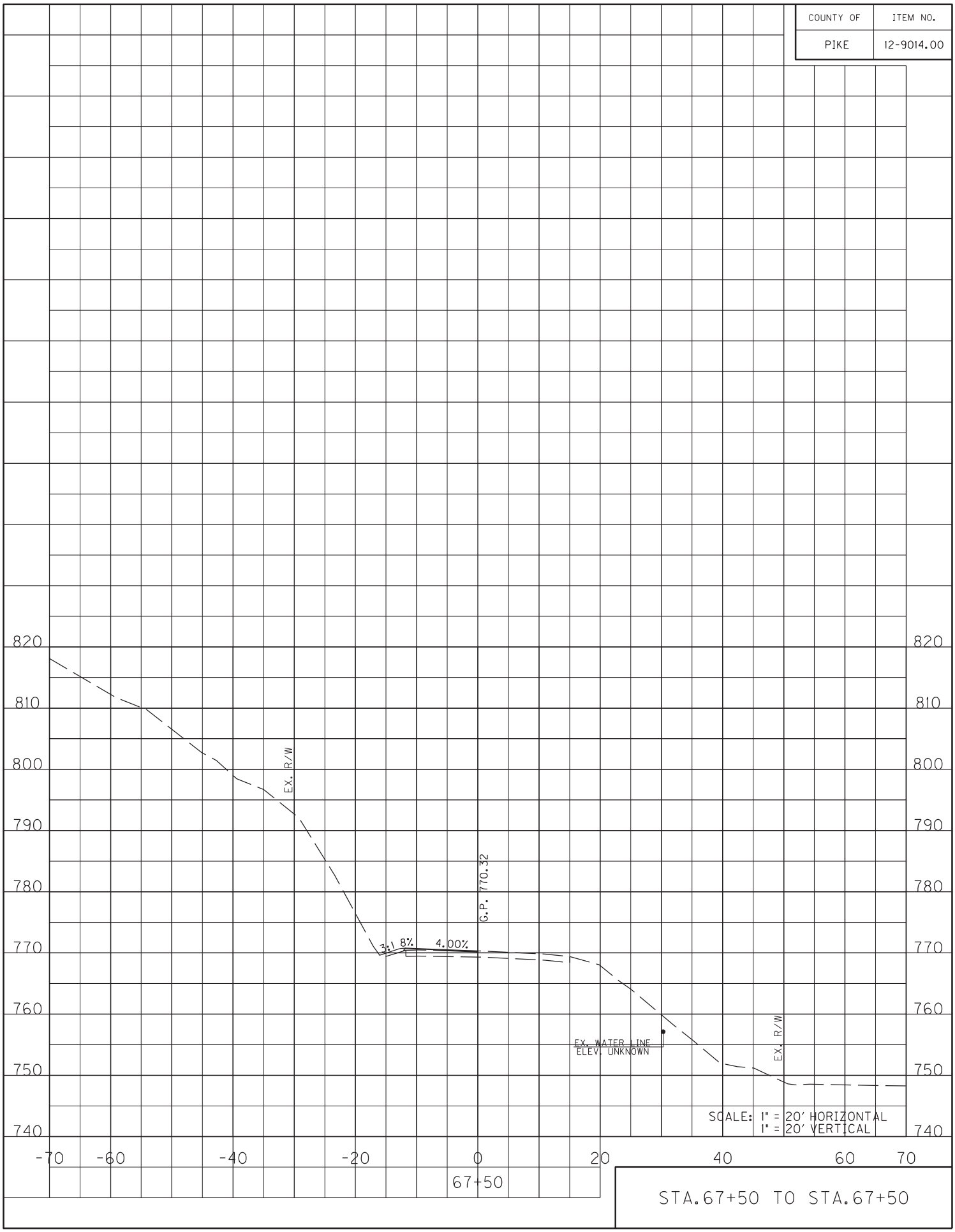
STA.66+00 TO STA.66+50

COUNTY OF	ITEM NO.
PIKE	12-9014.00

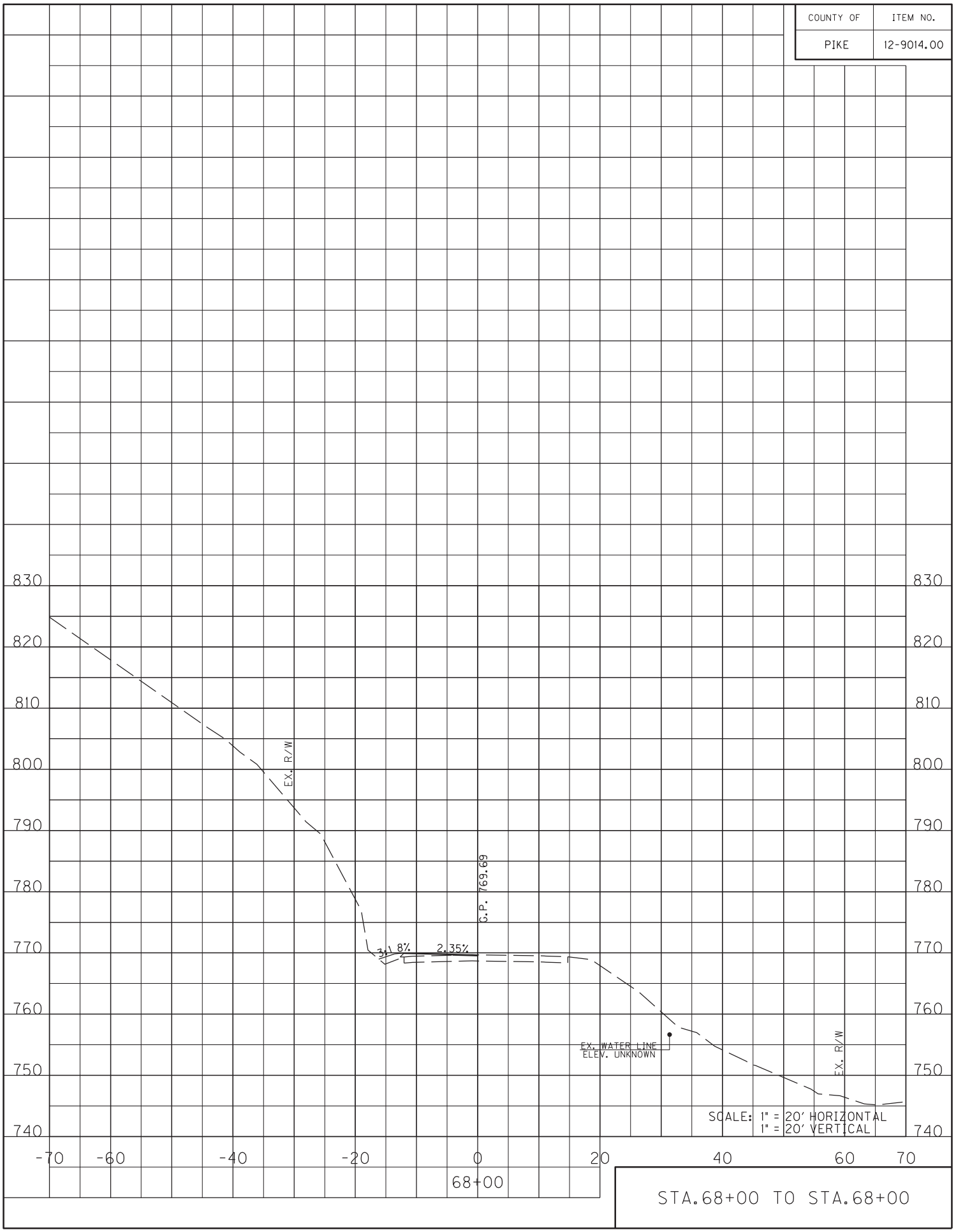


STA.67+00 TO STA.67+00

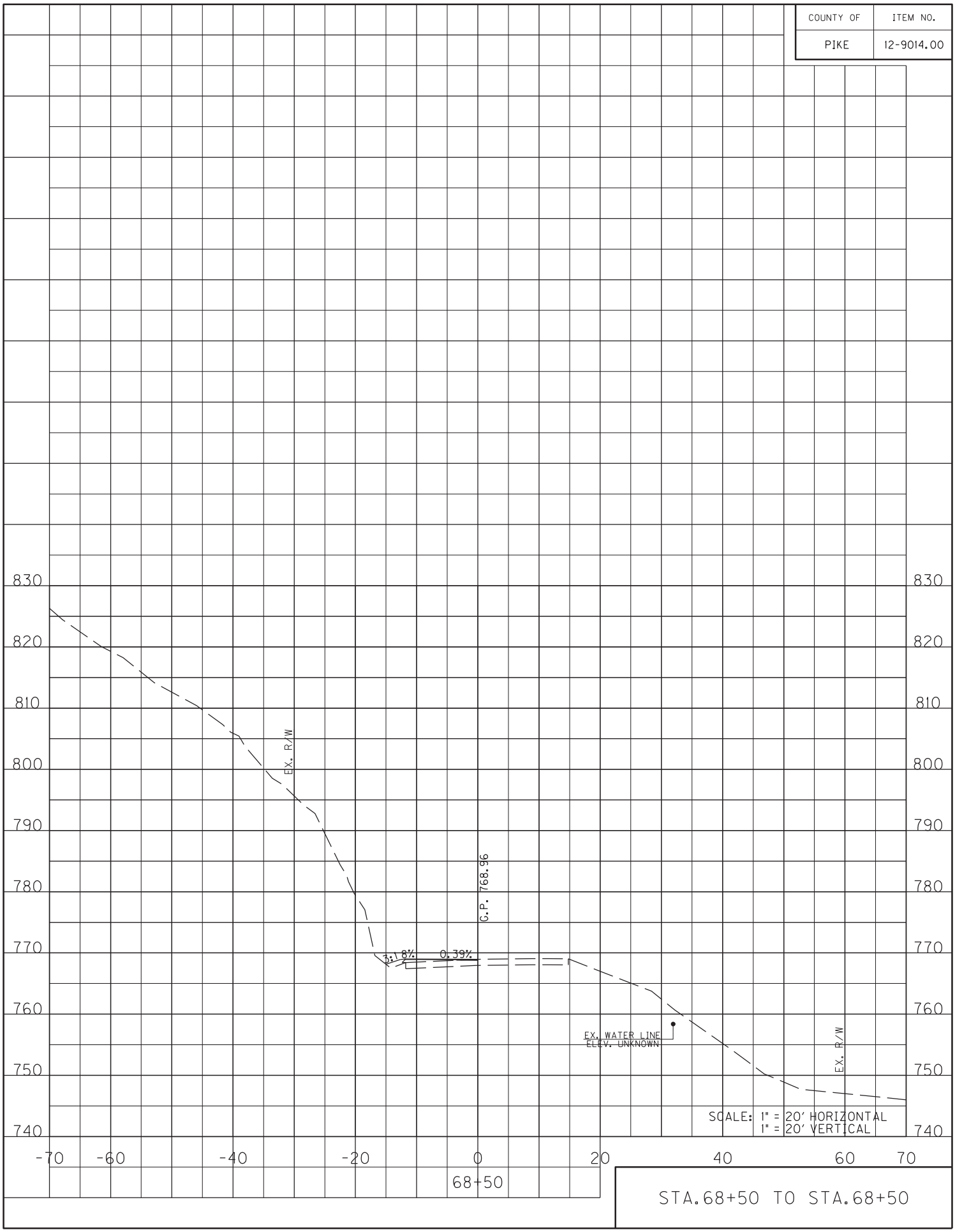
COUNTY OF	ITEM NO.
PIKE	12-9014.00



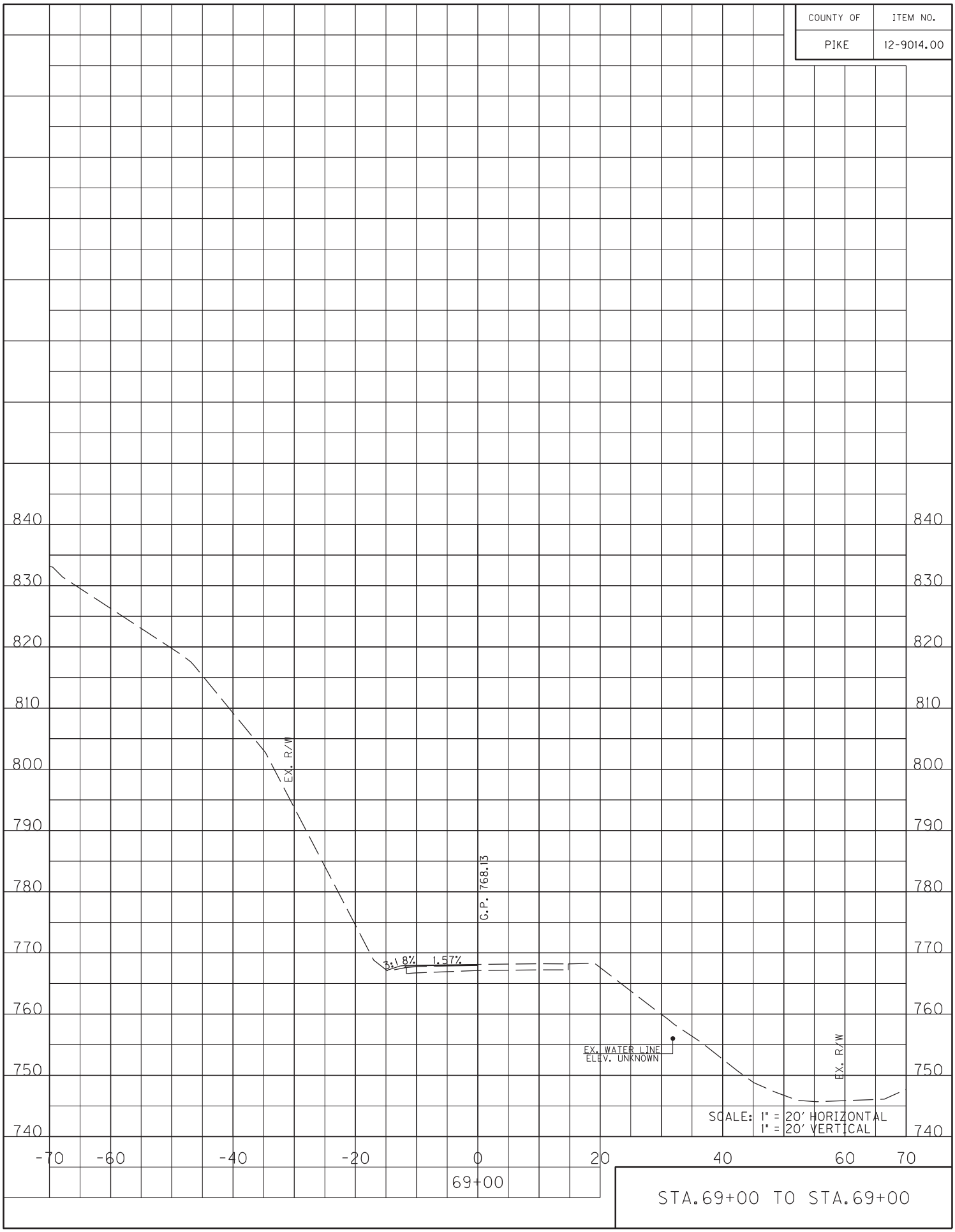
STA.67+50 TO STA.67+50


COUNTY OF
ITEM NO.
PIKE
12-9014.00
830
820
810
800
790
780
770
760
750
740
EX. R/W
C.P. 769.69
3:1
8%
2.35%
EX. WATER LINE
ELEV. UNKNOWN
EX. R/W
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
-70
-60
-40
-20
0
68+00
20
40
60
70
STA.68+00 TO STA.68+00

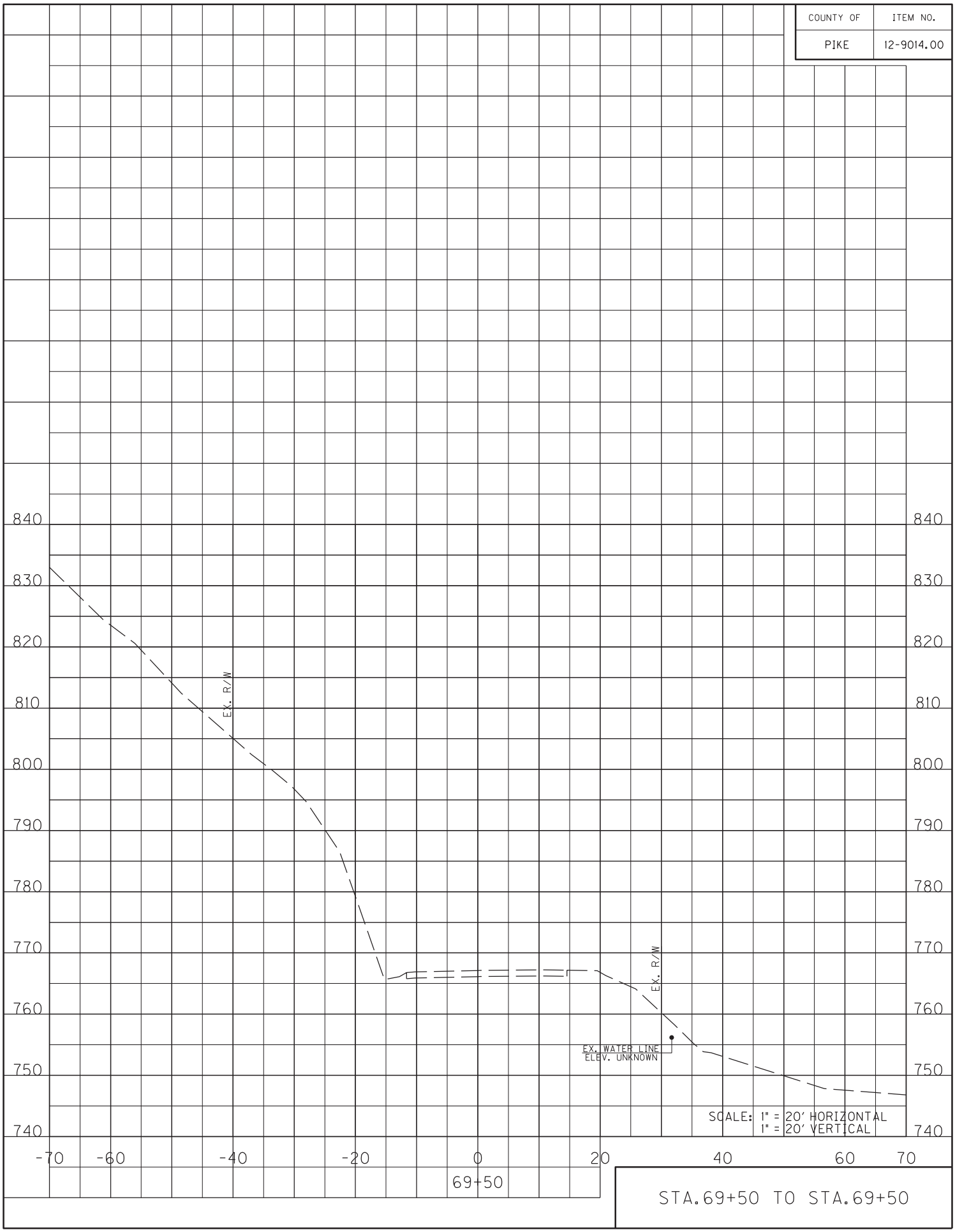
COUNTY OF	ITEM NO.
PIKE	12-9014.00



STA.68+50 TO STA.68+50

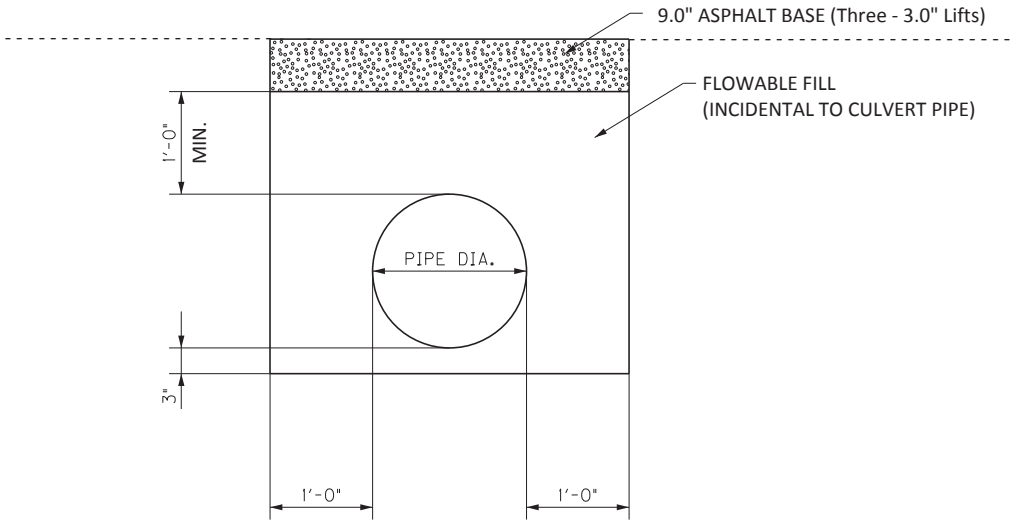

COUNTY OF
ITEM NO.
PIKE
12-9014.00
840
830
820
810
800
790
780
770
760
750
740
EX. R/W
G.P. 768.13
3.18%
1.57%
EX. WATER LINE
ELEV. UNKNOWN
EX. R/W
SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL
-70
-60
-40
-20
0
20
40
60
70
69+00
STA.69+00 TO STA.69+00

COUNTY OF	ITEM NO.
PIKE	12-9014.00



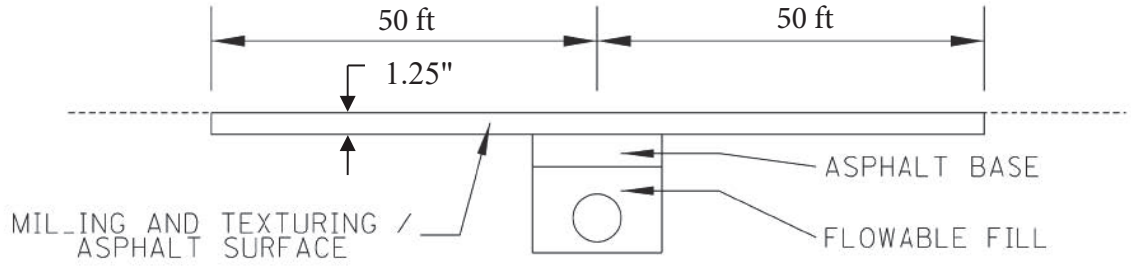
STA.69+50 TO STA.69+50

CULVERT PIPE REPLACEMENT DETAIL



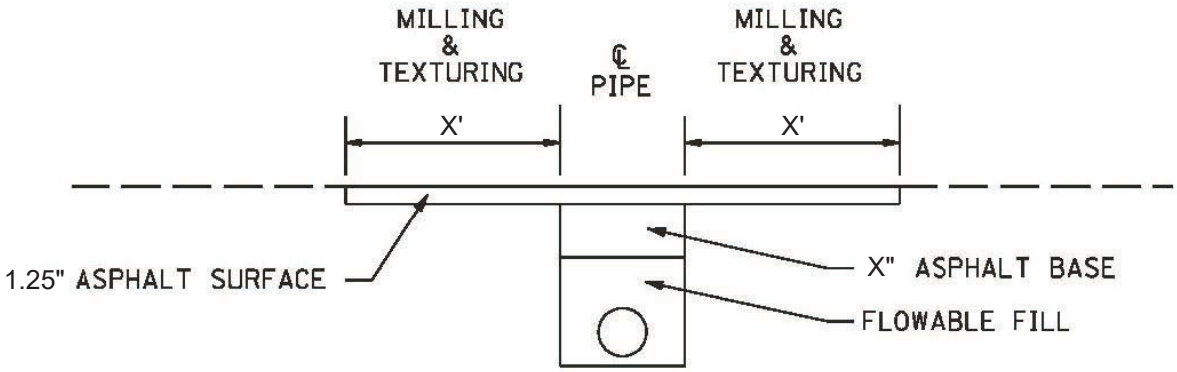
CULVERT PIPE REPLACEMENTS - INITIAL BACKFILL

Culvert Pipe Replacements shall be constructed according to the Initial Backfill Detail shown above, or as directed by the Engineer. Allow the asphalt base to be exposed to traffic a minimum of 14 days to allow for settlement. After the 14 day waiting period, mill and inlay 1.25 inches of asphalt surface according to the detail below.

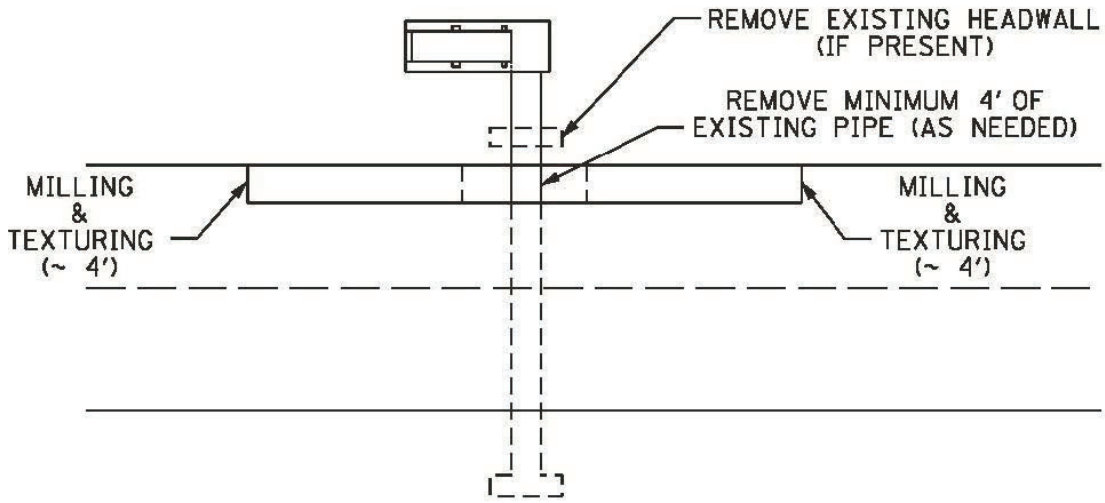


PIPE PAVING DETAIL

FOR PIPE EXTENSIONS WHERE THE REMOVAL OF A PORTION OF THE EXISTING PIPE WILL REQUIRE PAVING OPERATIONS

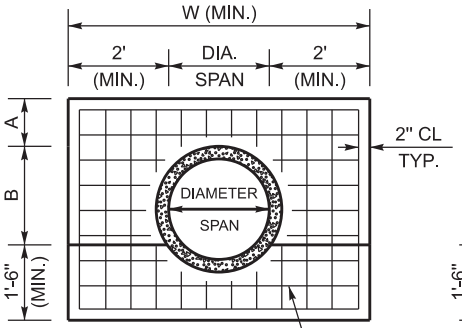


CROSS SECTION VIEW

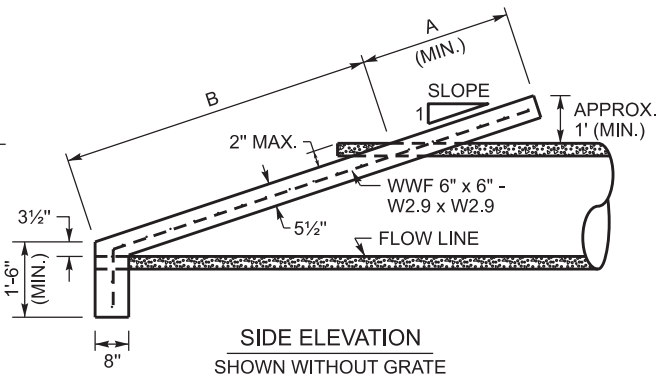


PLAN VIEW

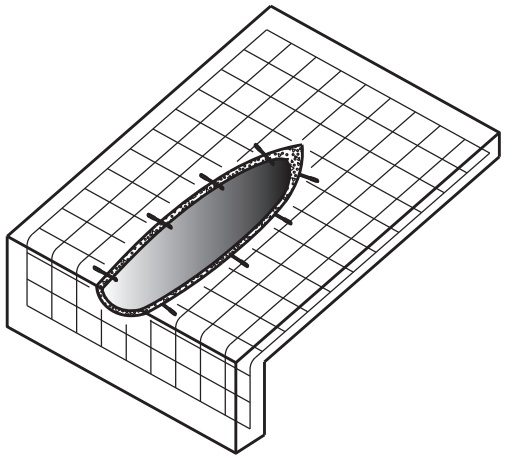
Allow asphalt base to be exposed to traffic a minimum of 14 days to allow for settlement. After the 14 day waiting period, mill and inlay 1.25 inches of asphalt surface according to the detail above.



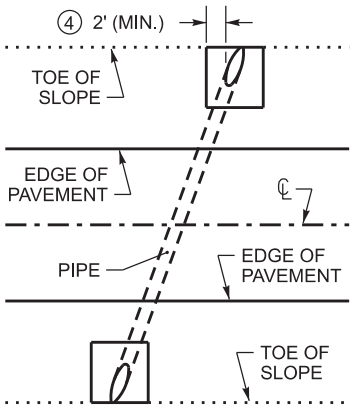
END ELEVATION
SHOWN WITH WOVEN WIRE REINFORCEMENT



SIDE ELEVATION
SHOWN WITHOUT GRATE



ISOMETRIC VIEW
SHOWN WITH WOVEN WIRE REINFORCEMENT AND WEDGE ANCHORS



PLAN VIEW
SHOWN WHEN THE PIPE IS ON A SKEW ④

~ NOTES ~

1. FOR PIPES THAT RECEIVE THE SLOPED & MITERED CONCRETE HEADWALL, THE PIPE LENGTH SHALL BE MEASURED TO THE FURTHEST POINT ALONG THE MITERED END OF THE PIPE.
2. THE EMBANKMENT FILL MATERIAL IS TO BE PLACED, COMPACTED, AND GRADED AROUND THE PIPE BEFORE THE CONCRETE SLOPE PAVING IS PLACED. THE INTENT IS FOR THE SLOPED & MITERED HEADWALL TO MATCH THE FINAL EMBANKMENT SLOPE.
3. THE PIPE SHALL BE MITERED AFTER THE CONCRETE SLOPE PAVING HAS BEEN PLACED AND SUFFICIENTLY CURED. THE PIPE SHOULD BE MITERED AS CLOSE TO FLUSH WITH THE SLOPE PAVING AS POSSIBLE, AND NO HIGHER THAN 2" ABOVE THE SLOPE PAVING. HAND FINISHING AND/OR CUTTING MAY BE NECESSARY.

④ WHEN THE PIPE IS ON A SKEW, INSTALL THE HEADWALL AND MITER THE PIPE SO THAT THE CONCRETE SLOPE PAVING IS PERPENDICULAR TO THE ROADWAY. FOR HEADWALLS ON SKEWED PIPES, THE HEADWALL WIDTH, W, SHALL BE WIDENED, AS NEEDED, SO THAT THE OUTSIDE EDGE OF THE CONCRETE SLOPE PAVING IS A MINIMUM OF 2' FROM THE OUTER MOST EDGE OF THE PIPE.

5. THE DIMENSION 'A' IS BASED ON THE FINAL GRADED SLOPE. THE DIMENSION 'B' IS BASED ON CIRCULAR REINFORCED CONCRETE PIPE AT 0° SKEW FOR THE LISTED SLOPE. THE DIMENSION 'W' IS BASED ON THE DIAMETER, OR SPAN, OF THE PIPE. THE FINAL HEADWALL DIMENSIONS AND CONCRETE QUANTITIES MAY VARY BASED ON THE FINAL GRADED SLOPE, PIPE SKEW, AND/OR TYPE OF PIPE.
6. WOVEN WIRE REINFORCEMENT (WWF 6"x6" - W2.9xW2.9) IS REQUIRED FOR THE SLOPE PAVING AND TOE WALL. UTILIZE 2" CLEARANCE FROM ALL EDGES.
7. DIMENSIONS AND CONCRETE QUANTITIES SHOWN ARE FOR ONE (1) HEADWALL, INSTALLED ON A PIPE WITH SKEW = 0°.
8. AFTER THE PIPE HAS BEEN MITERED, ANCHOR THE PIPE TO THE CONCRETE SLOPE PAVING BY CORE DRILLING AND INSTALLING 1/2" DIAMETER x 7" LENGTH STEEL WEDGE ANCHORS (3" MINIMUM EMBEDMENT) ON 18" CENTERS ALONG THE SIDES OF THE PIPE. HOLE SIZE & DEPTH, TORQUE, & INSTALLATION PROCEDURES PER RECOMMENDATION OF ANCHOR MANUFACTURE. NOTE: STEEL WEDGE ANCHORS ARE NOT REQUIRED FOR REINFORCED CONCRETE PIPE.

⑨ THE FOLLOWING SITUATIONS REQUIRE A HEADWALL WITH A GRATE:
-24" DIAMETER PIPE ON GREATER THAN 30° SKEW
-30" DIAMETER PIPE ON GREATER THAN 15° SKEW
-PIPE WITH GREATER THAN 30" DIAMETER.
-ELLIPTICAL PIPE GREATER THAN 24" EQUIVALENT DIAMETER
SEE SHEET 2 FOR GRATE DETAILS

10. ALL BOLTS AND HARDWARE SHALL BE RUST RESISTANT: ZINC PLATED, STAINLESS STEEL, OR STEEL THAT HAS BEEN GALVANIZED IN ACCORDANCE WITH AASHTO M 232.

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

PIPE SIZE	3:1 SLOPE				4:1 SLOPE				6:1 SLOPE				GRATE REQUIRED
	A	B	W	CU. YDS. CONCRETE	A	B	W	CU. YDS. CONCRETE	A	B	W	CU. YDS. CONCRETE	
15"	3'	3'-7½"	5'-3"	0.79	4'	4'-8¾"	5'-3"	0.97	6'	6'-11¾"	5'-3"	1.35	NO
18"	3'	4'-5¾"	5'-6"	0.89	4'	5'-10"	5'-6"	1.10	6'	8'-7¼"	5'-6"	1.54	NO
24"	3'	6'-2½"	6'-0"	1.11	4'	8'-1"	6'-0"	1.38	6'	11'-11"	6'-0"	1.93	SEE ⑨
30"	3'	7'-10¾"	6'-6"	1.33	4'	10'-3¾"	6'-6"	1.67	6'	15'-2½"	6'-6"	2.35	SEE ⑨

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

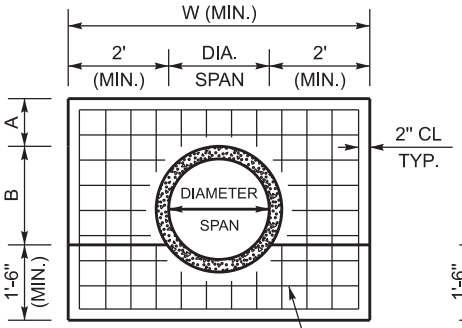
BID ITEM AND UNIT TO BID FOR PIPES BETWEEN 15 - 42 INCHES: SLOPED & MITERED HEADWALL - _ IN EACH
BID ITEM AND UNIT TO BID FOR PIPES LARGER THAN 42 INCHES: HEADWALL (SLOPED & MITERED FOR _ INCH PIPE) EACH

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

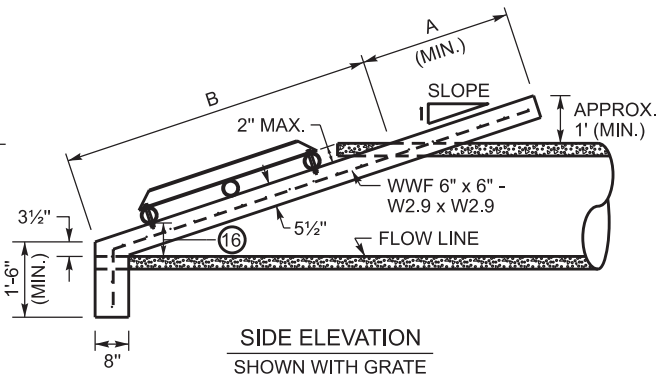
NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS

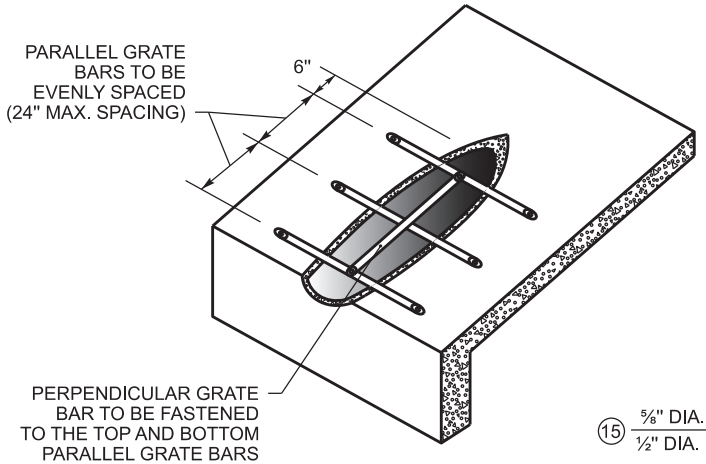
SLOPED & MITERED CONCRETE HEADWALL (SHEET 1 OF 2)



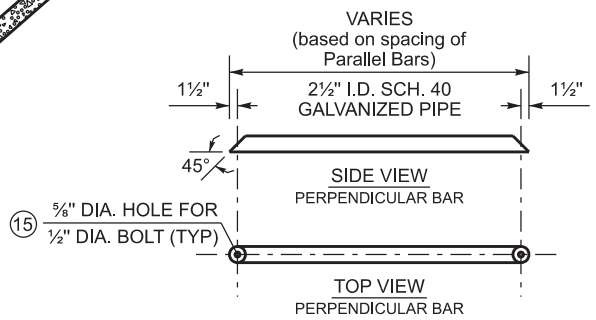
END ELEVATION
SHOWN WITH WOVEN WIRE REINFORCEMENT

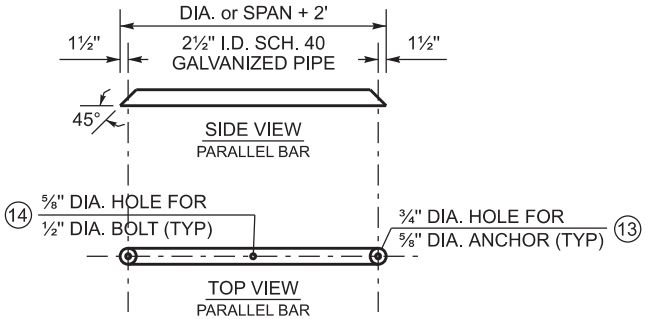


SIDE ELEVATION
SHOWN WITH GRATE



ISOMETRIC VIEW
SHOWING HEADWALL WITH GRATE





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

~ NOTES ~

SEE SHEET 1 FOR NOTES 1 THRU 8

9. THE FOLLOWING SITUATIONS REQUIRE A HEADWALL WITH A GRATE:
-24" DIAMETER PIPE ON GREATER THAN 30° SKEW
-30" DIAMETER PIPE ON GREATER THAN 15° SKEW
-PIPE WITH GREATER THAN 30" DIAMETER.
-ELLIPTICAL PIPE GREATER THAN 24" EQUIVALENT DIAMETER
10. ALL BOLTS AND HARDWARE SHALL BE RUST RESISTANT: ZINC PLATED, STAINLESS STEEL, OR STEEL THAT HAS BEEN GALVANIZED IN ACCORDANCE WITH AASHTO M 232.
11. THE PIPE USED TO CONSTRUCT THE GRATE SHALL BE STEEL, SCHEDULE 40, CONFORMING TO ASTM A53, AND GALVANIZED IN ACCORDANCE WITH AASHTO M 111 AFTER FABRICATION.
12. ANY RAW METAL EXPOSED BY FIELD CUTTING AND/OR DRILLING SHALL BE TREATED WITH A COLD GALVANIZING COMPOUND.
⑬ FASTEN PARALLEL BARS TO HEADWALL WITH ⅝" DIA. x 4½" LENGTH STEEL WEDGE ANCHORS, MINIMUM EMBEDMENT = 2¾" HOLE SIZE AND DEPTH, TORQUE, & INSTALLATION PROCEDURES PER RECOMMENDATION OF ANCHOR MANUFACTURE.
⑭ CENTER BOLT HOLE SHALL ONLY BE DRILLED IN THE TOP AND BOTTOM PARALLEL BARS.
⑮ FASTEN THE PERPENDICULAR BAR TO THE TOP AND BOTTOM PARALLEL BARS WITH ½" DIA. x 4" LENGTH HEX HEAD BOLTS, HEX HEAD NUTS, & FLAT WASHERS.
⑯ THE BOTTOM PARALLEL BAR IS TO BE PLACED SO THAT IT IS APPROX. 6" ABOVE THE FLOWLINE OF THE PIPE.

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

PIPE SIZE	3:1 SLOPE				4:1 SLOPE				6:1 SLOPE				GRATE REQUIRED
	A	B	W	CU. YDS. CONCRETE	A	B	W	CU. YDS. CONCRETE	A	B	W	CU. YDS. CONCRETE	
36"	3'	9'-7½"	7'-0"	1.57	4'	12'-6½"	7'-0"	1.98	6'	18'-6"	7'-0"	2.80	YES
42"	3'	11'-4"	7'-6"	1.83	4'	14'-9¼"	7'-6"	2.31	6'	21'-9½"	7'-6"	3.27	YES
48"	3'	12'-11"	8'-0"	2.07	4'	16'-10"	8'-0"	2.40	6'	24'-10"	8'-0"	3.33	YES

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

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

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

NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS

SLOPED & MITERED CONCRETE HEADWALL (SHEET 2 OF 2)

FIGURE 1

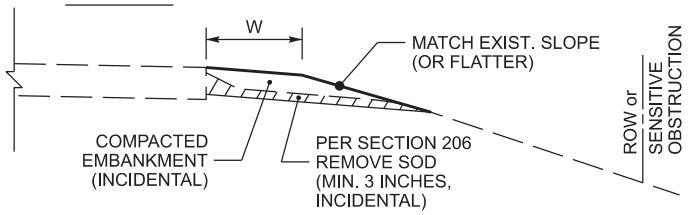


FIGURE 2

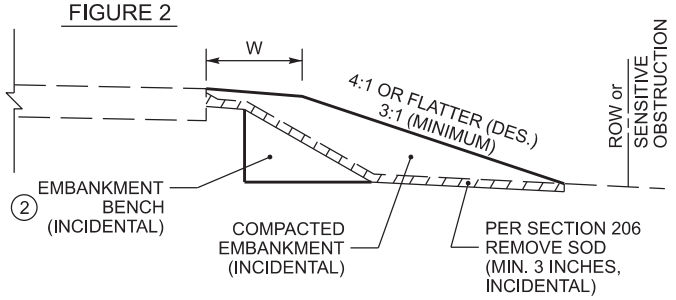


FIGURE 3

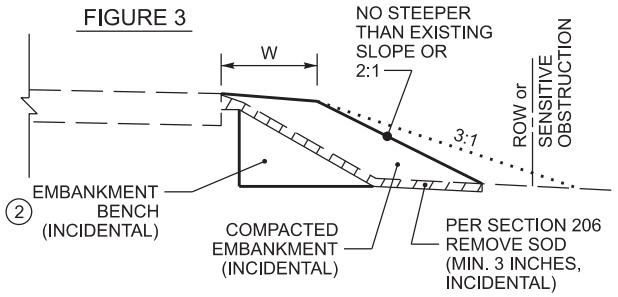


FIGURE 4

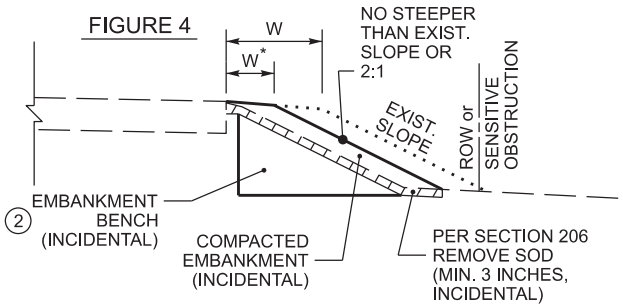


FIGURE 5

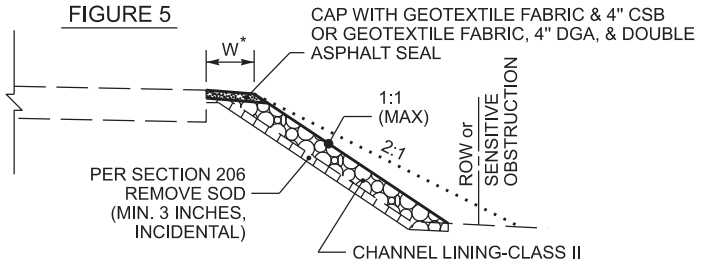
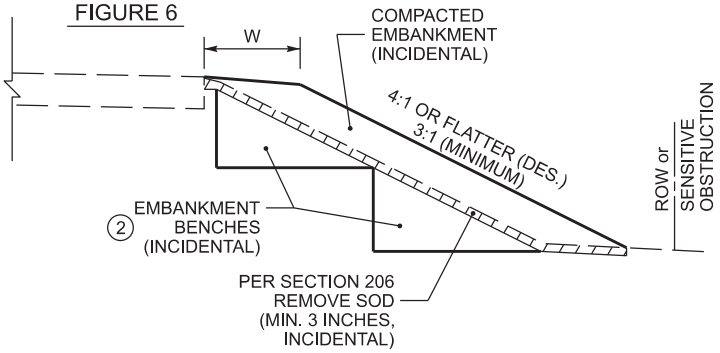


FIGURE 6



~ NOTES ~

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

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

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

3. AS SHOWN IN FIGURE 1, IN SOME SITUATIONS, MINOR SHOULDERING, WITH MINIMAL ADDITIONAL EARTH MATERIAL, MAY BE ALL THAT IS REQUIRED TO RESHAPE THE EARTH SHOULDER TO THE PROPOSED WIDTH AND BRING IT FLUSH WITH THE EDGE OF PAVEMENT.

4. AS SHOWN IN FIGURE 2, MOST SITUATIONS WILL REQUIRE ADDITIONAL EARTH MATERIAL TO ACHIEVE THE PROPOSED EARTH SHOULDER WIDTH. IT IS DESIRED THAT THE RESULTING FILL SLOPE BE INSTALLED AS FLAT AS POSSIBLE AND REMAIN WITHIN THE RIGHT-OF-WAY AND/OR AVOID SENSITIVE OBSTRUCTIONS.

5. AS SHOWN IN FIGURE 3, IF A 3:1 FILL SLOPE WILL RESULT IN THE TOE OF SLOPE EXTENDING BEYOND THE RIGHT-OF-WAY OR IMPACT A SENSITIVE OBSTRUCTION, THEN THE FILL SLOPE MAY BE INSTALLED STEEPER THAN 3:1, BUT NO STEEPER THAN THE EXISTING FILL SLOPE, OR A 2:1, WHICHEVER IS FLATTER.

6. AS SHOWN IN FIGURE 4, IF MATCHING THE EXISTING FILL SLOPE OR INSTALLING A 2:1 FILL SLOPE (WHICHEVER IS FLATTER) STILL RESULTS IN THE TOE OF SLOPE EXTENDING BEYOND THE RIGHT-OF-WAY OR STILL IMPACTS A SENSITIVE OBSTRUCTION, THEN THE PROPOSED EARTH SHOULDER WIDTH MAY BE REDUCED SO THAT THE RESULTING TOE OF SLOPE WILL REMAIN WITHIN THE RIGHT-OF-WAY AND/OR NOT IMPACT THE SENSITIVE OBSTRUCTION.

7. AS SHOWN IN FIGURE 5, IF THE EXISTING FILL SLOPE IS STEEPER THAN 2:1 AND THERE IS NOT ENOUGH SPACE TO INSTALL A 2:1 FILL SLOPE WITHOUT EXTENDING BEYOND THE RIGHT-OF-WAY AND/OR IMPACTING A SENSITIVE OBSTRUCTION, THEN CLASS II CHANNEL LINING MAY BE INSTALLED ALONG THE STEEP EXISTING SLOPE IN ORDER TO ESTABLISH A WIDTH OF AGGREGATE SHOULDER. THESE LOCATIONS WILL BE NOTED ELSEWHERE IN THE PROPOSAL AS SLOPE PROTECTION. THE CHANNEL LINING IS TO BE CAPPED WITH GEOTEXTILE FABRIC CLASS 1 AND 4" OF CRUSHED STONE BASE OR 4" OF DGA WITH DOUBLE ASPHALT SEAL COAT.

8. AS SHOWN IN FIGURE 6, AS THE HEIGHT OF THE FILL INCREASES, MULTIPLE EMBANKMENT BENCHES MAY BE REQUIRED.

SEE SHEET 2 FOR NOTES 9 THRU 13

NOT TO SCALE

KENTUCKY
DEPARTMENT OF HIGHWAYS

ROADSIDE REGRADING
AND EMBANKMENT DETAILS
(SHEET 1 OF 2)

FIGURE 7

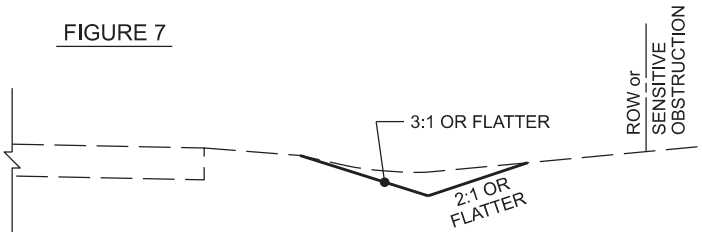


FIGURE 8

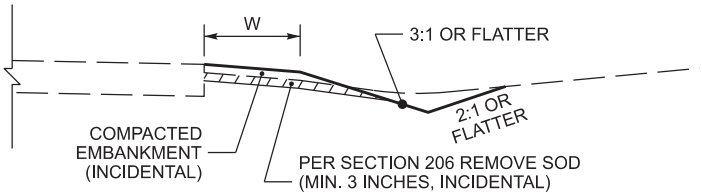


FIGURE 9

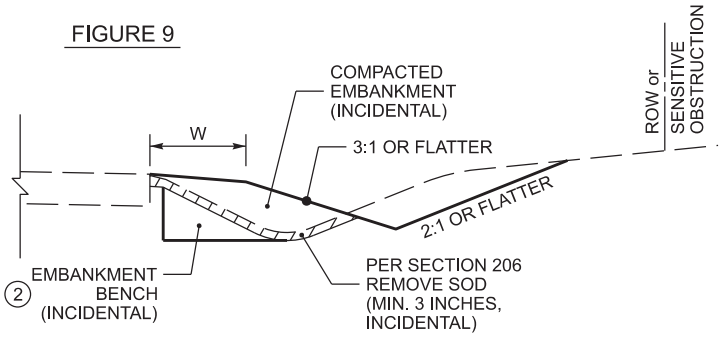


FIGURE 10

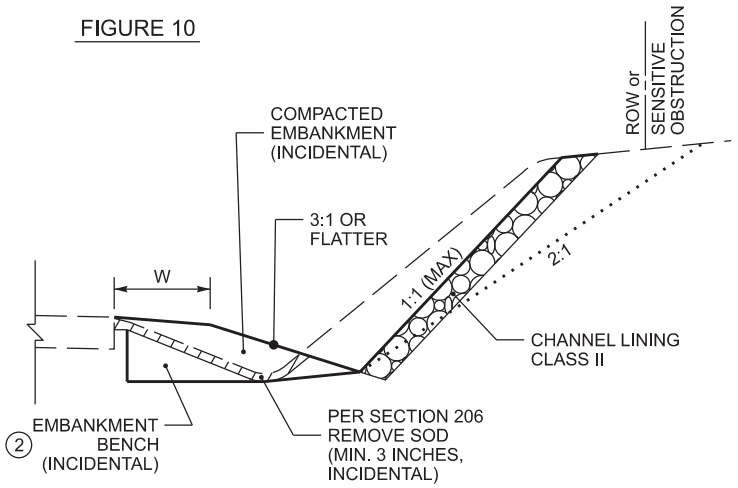
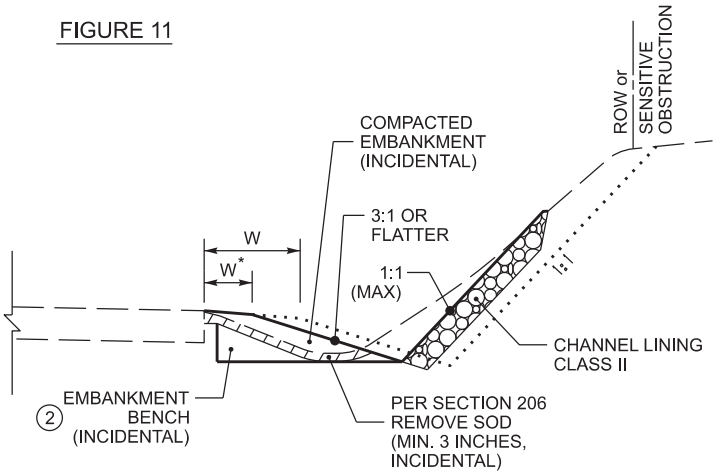


FIGURE 11



~ NOTES ~

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

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

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

SEE SHEET 1 FOR NOTES 3. THRU 8.

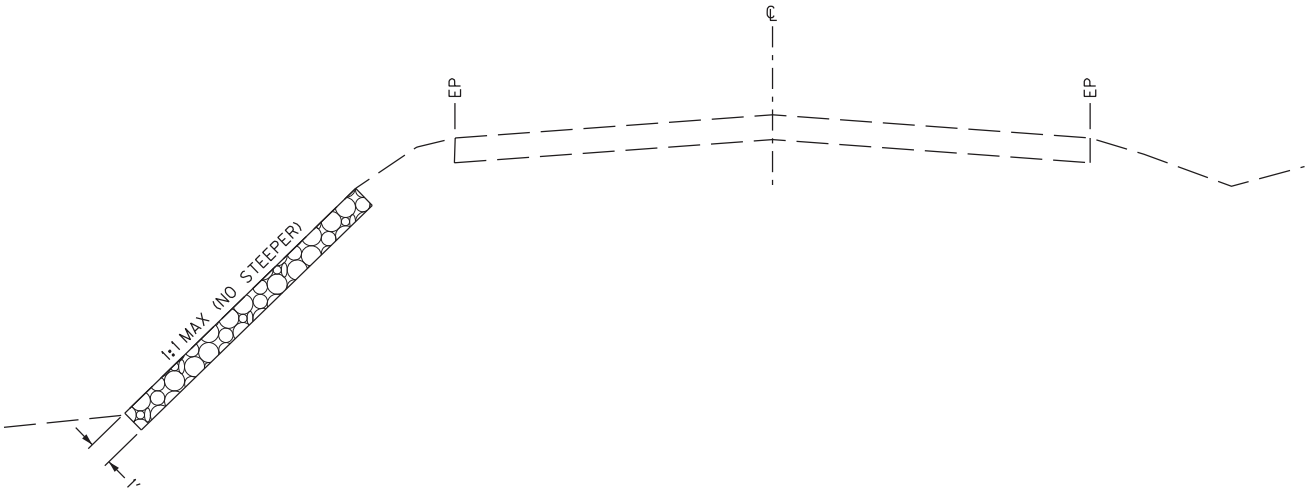
9. AS SHOWN IN FIGURE 7, IN SOME SITUATIONS, ALL THAT MAY BE REQUIRED IS TO CLEAN OUT THE EXISTING DITCH AND RESHAPE IT TO THE PROPOSED DIMENIONS. THE MATERIAL EXCAVATED FROM THE DITCH MAY BE RE-USED ELSEWHERE ON THE PROJECT, PROVIDED THE ENGINEER DETERMINES THE MATERIAL REMOVED FROM THE DITCH IS SUITABLE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

NOT TO SCALE

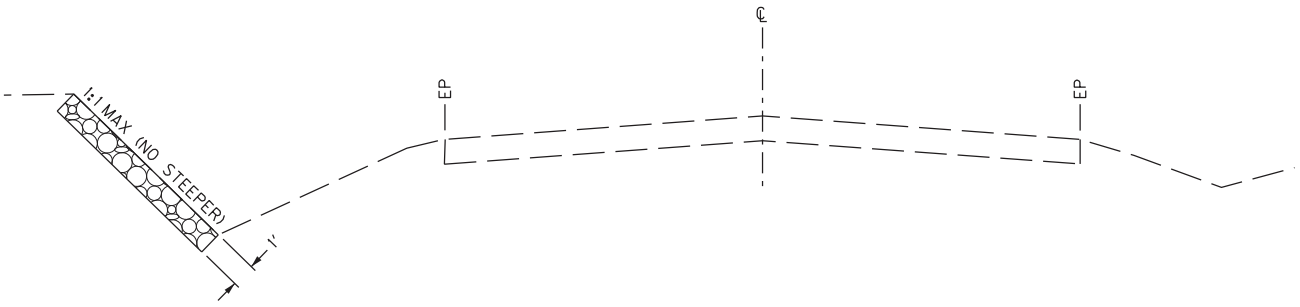
KENTUCKY
DEPARTMENT OF HIGHWAYS

ROADSIDE REGRADING AND EMBANKMENT DETAILS (SHEET 2 OF 2)

COUNTY OF	ITEM NO.	SHEET NO.



PROTECTION DETAIL FOR EMBANKMENT FILL SLOPE



PROTECTION DETAIL FOR DITCH BACKSLOPE

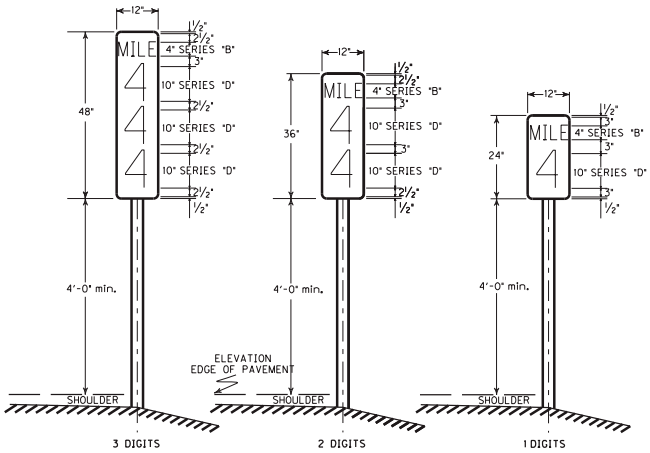
NOTES:

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

SLOPE PROTECTION DETAILS

COUNTY OF	ITEM NO.	SHEET NO.

MILEPOST MARKERS



TYPICAL SIGN PANEL DIMENSIONS AND MILEPOST LOCATIONS

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

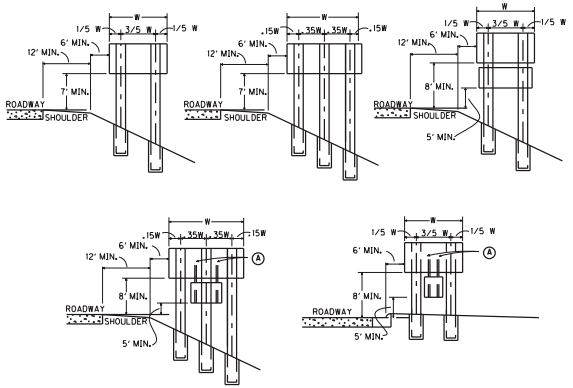
MILE POST NUMBER	STATION NUMBER * ____ BOUND LANE (S)

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:

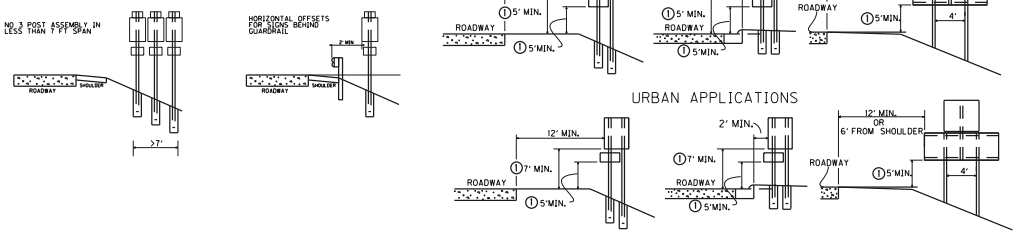
901 WEST MAIN STREET
LOUISVILLE, KY 40202
502-587-6624
270-307-7456

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.

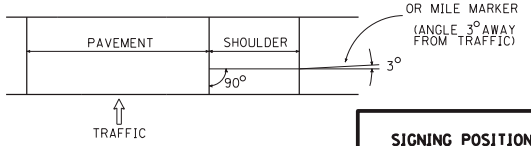
SHEETING SIGNS



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.

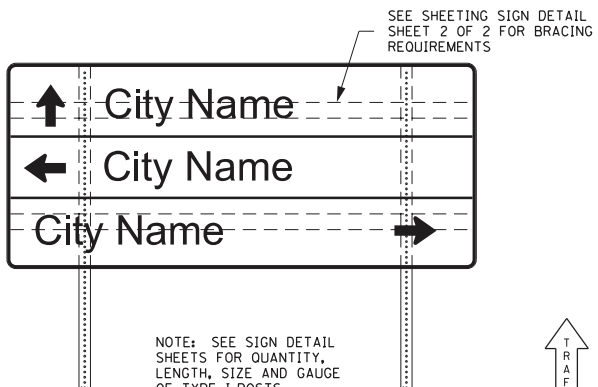
① NOT TO EXCEED 8' IN URBAN AREAS AND 6' IN RURAL AREAS UNLESS SPECIFIED BY THE ENGINEER

ORIENTATION ANGLE



SIGNING POSITIONING DETAIL SHEET

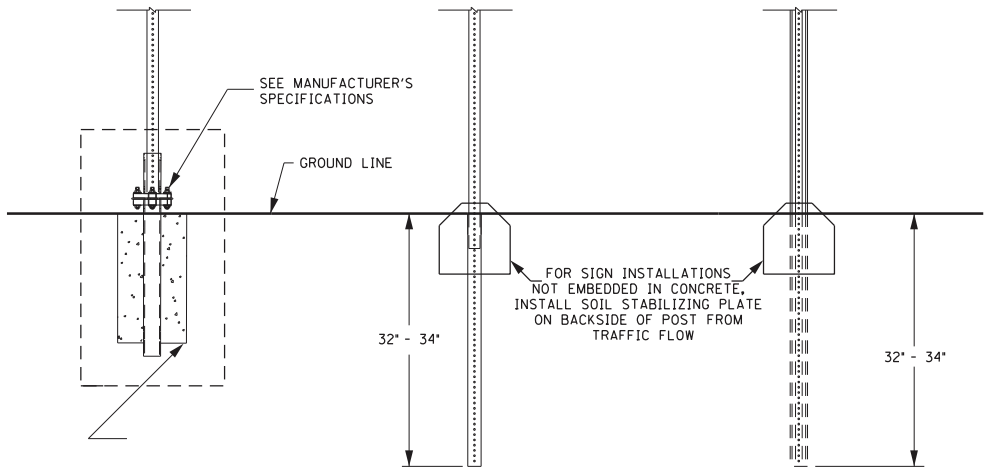
COUNTY OF	ITEM NO.	SHEET NO.



PLAN VIEW
NOT TO SCALE

PLAN VIEW
NOT TO SCALE

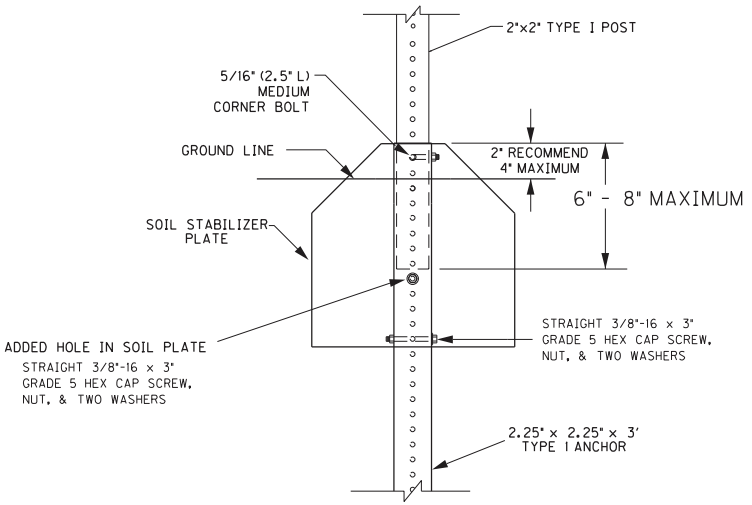
TRAFFIC FLOW



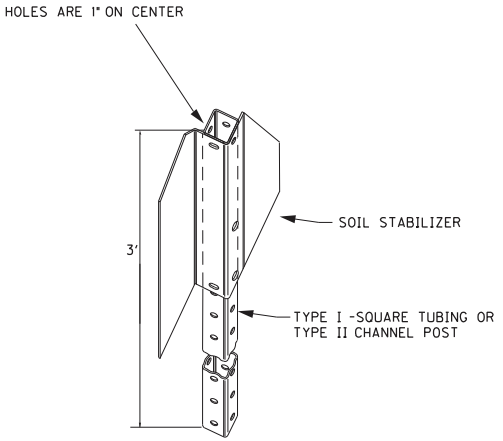
TYPE I
SQUARE TUBING POST
WITH TYPE "D" SUPPORT

TYPE I
SQUARE TUBING POST
WITH SOIL STABILIZER

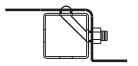
TYPE II
CHANNEL POST
WITH SOIL STABILIZER



SOIL STABILIZER DETAIL
FOR TYPE I POST



SOIL STABILIZER DETAIL



PLAN VIEW
NOT TO SCALE

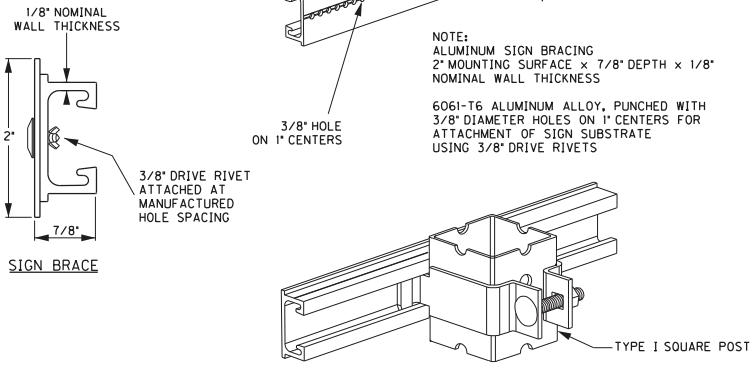
TRAFFIC FLOW

NOT TO SCALE

SHEETING SIGN DETAIL
SHEET 1 OF 2

COUNTY OF	ITEM NO.	SHEET NO.

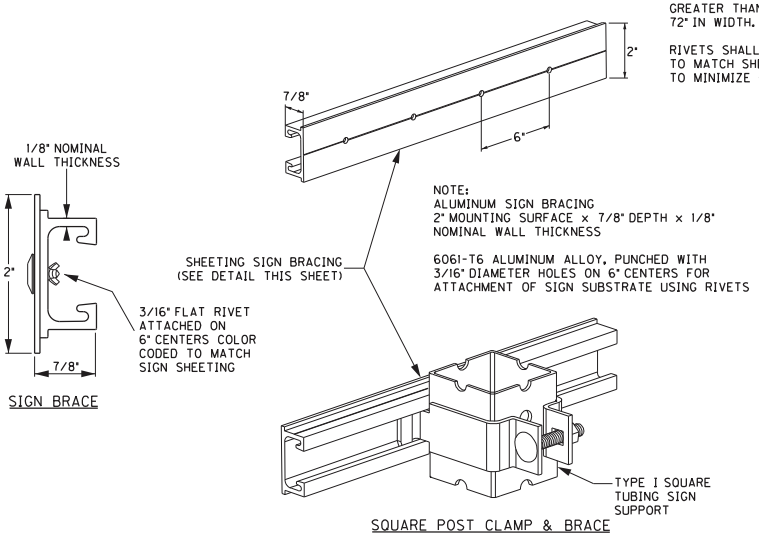
FOR ATTACHMENT OF SIGNS
LESS THAN 72" IN WIDTH
USING MANUFACTURED 3/8" HOLES
ACCORDING TO 2004 STANDARD
HIGHWAY SIGNS BLANK
STANDARDS
PGS 7-1 THRU 7-6



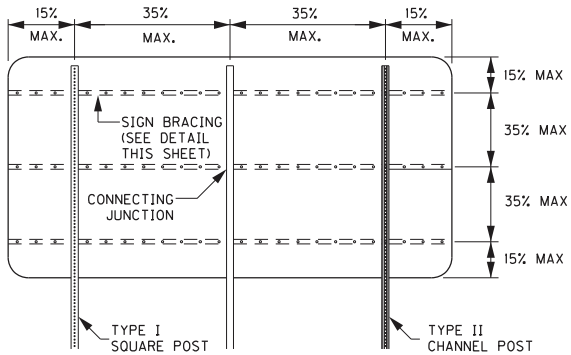
SQUARE POST CLAMP & BRACE

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

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



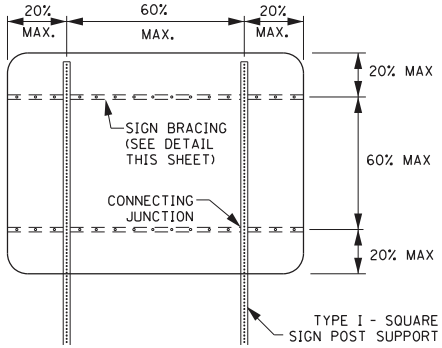
SQUARE POST CLAMP & BRACE



3 POST - BRACING DIAGRAM

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

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



2 POST - BRACING DIAGRAM

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

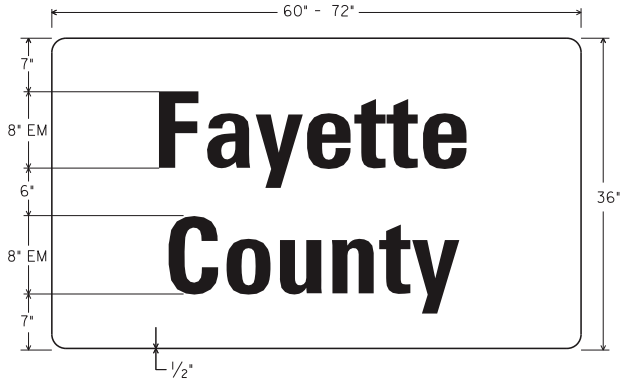
NOT TO SCALE

SHEETING SIGN DETAIL

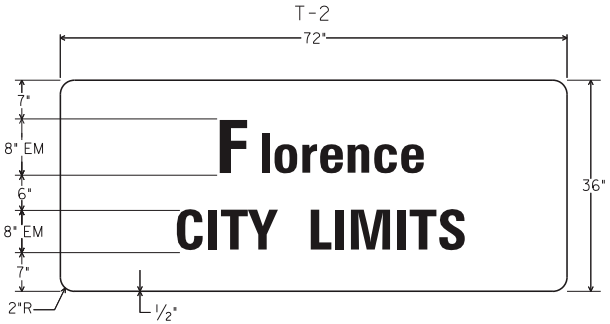
SHEET 2 OF 2

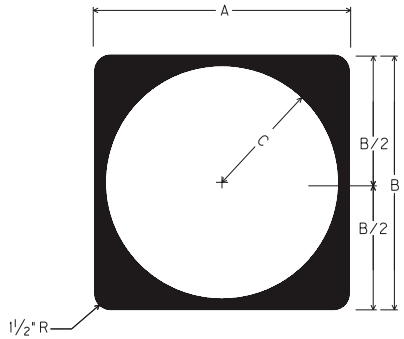
COUNTY OF	ITEM NO.	SHEET NO.

T-1

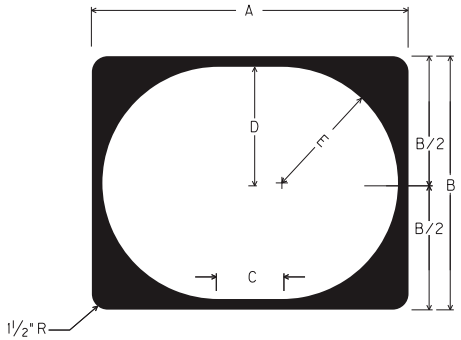


T-2





M1-5 (1 OR 2 DIGIT)



M1-5 (3 OR 4 DIGIT)

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

	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

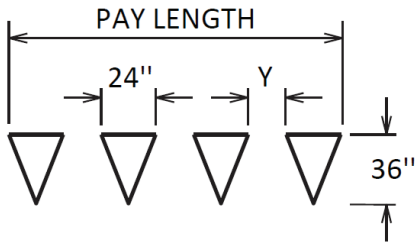
S-1

NOT TO SCALE

TYPICAL SIGNS

YIELD BAR PAVEMENT MARKING DETAIL

YIELD BAR DETAILS



NOTE: SPACING (Y) BETWEEN
TRIANGLES SHOULD BE 3'' - 12''

Triangles should be evenly spaced. The spacing (Y) between triangles will depend on the width of the lane the yield bar is for. Unless otherwise directed by the Engineer, space the triangles according to the lane width as follows:

Lane Width	# of Triangles	Spacing (Y)
9’	4	4”
10’	4	8”
11’	5	3”
12’	5	6”
13’	5	9”
14’	6	4”
15’	6	7”
16’	7	4”

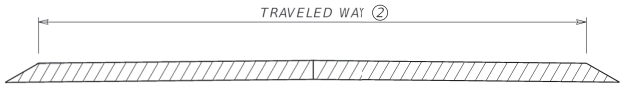
In the event of larger lane widths, install triangles on equal spacing, as close to the 3” minimum as possible.

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

The Department will measure Yield Bars in Linear Feet. The measurement will include the void space between triangles. See Section 717.04 for additional measurement information.

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

Code	Pay Item	Pay Unit
22520EN	Pave Marking-Thermo Yield Bar-36 Inch	Linear Foot
26165ES717	Pave Mark TY 1 Tape Yield Bar-36 Inch	Linear Foot



TWO LANE ROADWAY
PAVEMENT CROSS-SECTION

TRAVELED WAY (2)	TYPE OF PAVEMENT STRIPING	NON-STATE PRIMARY ROUTES				STATE PRIMARY ROUTES	
		< 1000 ADT		>= 1000 ADT		ANY ADT	
		WIDTH	MATERIAL	WIDTH	MATERIAL	WIDTH	MATERIAL*
< 16' (4)	EDGELINE STRIPES ONLY	4"	PAINT	4"	PAINT	6"	THERMO (ASHPALT) TYPE I TAPE (CONCRETE)
16' TO < 20'	EDGELINE STRIPES ONLY OR CENTERLINE STRIPE ONLY	4"	PAINT	4"	PAINT	6"	THERMO (ASHPALT) TYPE I TAPE (CONCRETE)
>=20' (3)	CENTERLINE AND EDGELINE STRIPES	4" (5)	PAINT	6"	PAINT	6"	THERMO (ASHPALT) TYPE I TAPE (CONCRETE)

*OTHER DURABLE NON-WATERBORNE MARKINGS MAY BE USED WITH APPROVAL FROM THE DIVISION OF TRAFFIC OPERATIONS.

~ NOTES ~

1. INSTALL PAVEMENT STRIPING ON TWO LANE, TWO WAY ROADWAYS AS DETAILED IN THE ABOVE TABLE AND IN ACCORDANCE WITH THE PAVEMENT MARKINGS AND DELINEATION CHAPTER OF THE TRAFFIC OPERATIONS GUIDANCE MANUAL. CONTACT THE DIVISION OF TRAFFIC OPERATIONS FOR ADDITIONAL GUIDANCE IF NECESSARY.

(2) THE TRAVELED WAY IS THE PORTION OF ROADWAY FOR THE MOVEMENT OF VEHICLES, EXCLUSIVE OF THE SHOULDERS.

(3) ON TWO LANE, TWO WAY ROADWAYS THAT HAVE A TOTAL PAVEMENT WIDTH (W) THAT IS 20 FT OR GREATER, BUT LESS THAN 22 FT, EDGELINE RUMBLE STRIPS ARE NOT A STANDARD APPLICATION, BUT THEY MAY BE INSTALLED. THE DIVISION OF TRAFFIC OPERATIONS IS AVAILABLE TO ASSIST WITH THE DETERMINATION OF WHETHER OR NOT TO INSTALL EDGELINE RUMBLE STRIPS ON PAVEMENT WIDTHS LESS THAN 22 FT, AS WELL AS THE DIMENSION AND PLACEMENT DETAILS OF THE RUMBLE STRIPS AND PAVEMENT STRIPING.

ON TWO LANE, TWO WAY ROADWAYS THAT HAVE A TOTAL PAVEMENT WIDTH (W) THAT IS 22 FT OR GREATER, BUT LESS THAN 34 FT, INSTALL PAVEMENT STRIPING AS DETAILED IN THE ABOVE TABLE AND IN CONJUNCTION WITH CENTERLINE AND EDGELINE RUMBLE STRIPS AS DETAILED ON TPR-120 .

ON TWO LANE, TWO WAY ROADWAYS THAT HAVE A TOTAL PAVEMENT WIDTH (W) THAT IS 34 FT OR GREATER, INSTALL PAVEMENT STRIPING AS DETAILED IN THE ABOVE TABLE AND IN CONJUCTION WITH CENTERLINE AND SHOULDER RUMBLE STRIPS AS DETAILED ON TPR-125.

(4) EDGELINES MAY BE OMITTED FROM ROADWAYS WITH A TRAVELED WAY WIDTH LESS THAN 15 FEET WITH THE APPROVAL OF THE DIVISION OF TRAFFIC OPERATIONS.

(5) EDGELINES MAY BE OMITTED ON NON-STATE PRIMARY ROUTES WITH A TRAVELED WAY WIDTH GREATER THAN OR EQUAL TO 20 FEET AND AN ADT LESS THAN 1,000.

6. EDGELINES MAY BE OMITTED, BASED ON ENGINEERING JUDGMENT, IN AREAS WHERE THE PAVEMENT EDGE IS DELINEATED BY PHYSICAL OBJECTS SUCH AS CURBS, PARKING SPACES, OR OTHER MARKINGS. EDGELINES SHOULD BE INSTALLED ON ROADWAYS WITH CURB AND GUTTER IF THE POSTED SPEED LIMIT IS 45 MPH OR GREATER.

DRAWING NOT TO SCALE

USE WITH CUR. STD. DWGS. TPR-120 & TPR-125

SUBMITTED _____ DIVISION DIRECTOR 06-09-21 DATE

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

DRAWING TITLE: SEPIA 017 - PAVEMENT STRIPING DETAILS FOR TWO LANE TWO WAY ROADWAYS

ITEM NO. 12-9014.00 COUNTY OF PIKE
SHEET NO.

OpenRoads Designer v10.16.0.80 USER: cwillmerdinger DATE PLOTTED: 8/7/2015 9:53:17 AM FILE NAME: C:\PWWORK\KYTC_CWILLMERDINGER\D1859968\SEPIA017.DGN

GUARDRAIL DELIVERY VERIFICATION SHEET

Contract Id: _____ **Contractor: _____**

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

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

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

Printed Section Engineer's Representative_____ & Date_____

Signature Section Engineer's Representative_____& Date_____

Printed Contractor's Representative_____& Date_____

Signature Contractor's Representative_____& Date_____

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

Printed Bailey Bridge Yard Representative_____ & Date_____

Signature Bailey Bridge Yard Representative_____& Date_____

Printed Contractor's Representative_____& Date_____

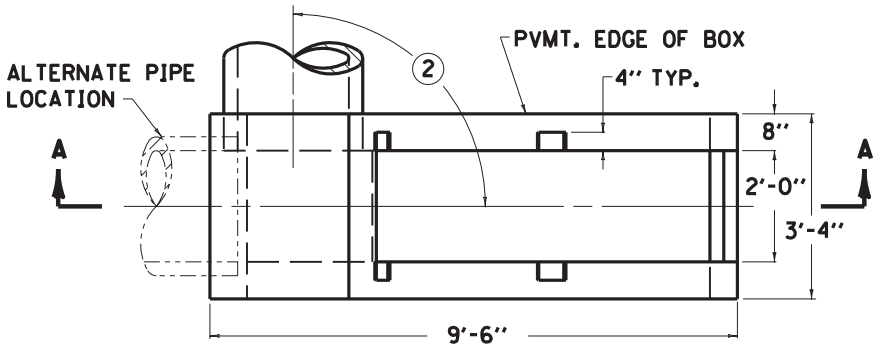
Signature Contractor's Representative_____& Date_____

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

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

COUNTY OF	ITEM NO.	SHEET NO.

PIKE COUNTY
FD04 098 0080 000-002



PLAN VIEW

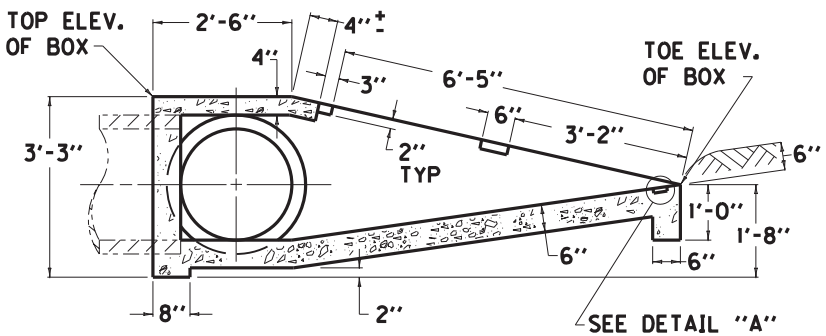
NOTES

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

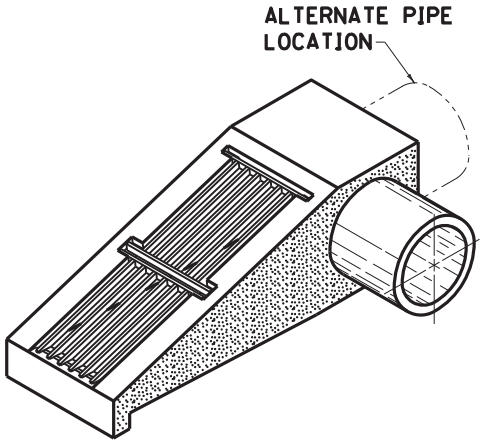
THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.

(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.

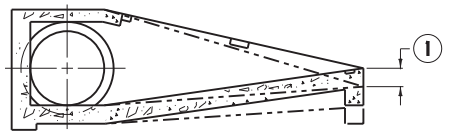


SECTION A-A

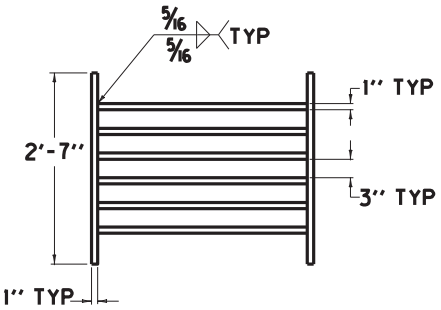


ISOMETRIC VIEW

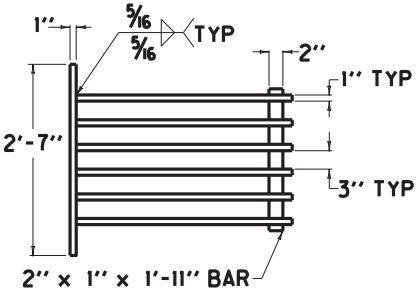
APPROXIMATE QUANTITIES			
CLASS "A" CONC.	GRATE	LBS. STRUCTURAL STEEL	
CUBIC YARDS	NUMBER	EACH GRATE	TOTAL POUNDS
1.44	1	145	298
	2	153	



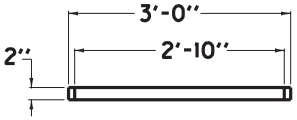
SECTIONAL VIEW



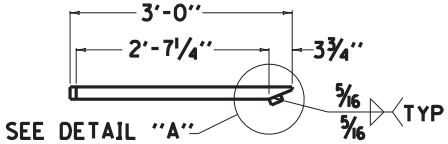
GRATE NO. 1
PLAN VIEW



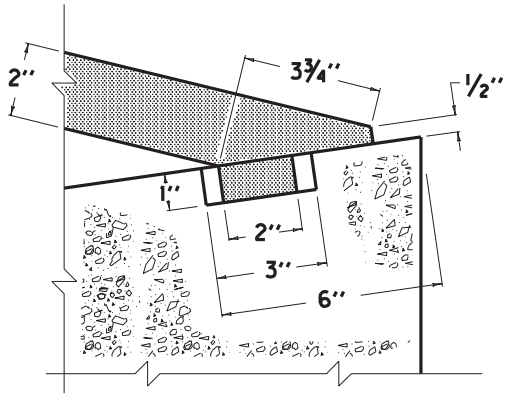
GRATE NO. 2
PLAN VIEW



GRATE NO. 1
SIDE ELEVATION



GRATE NO. 2
SIDE ELEVATION



DETAIL "A"

KENTUCKY
DEPARTMENT OF HIGHWAYS

SAFETY TYPE BOX INLET (18" OR 24")

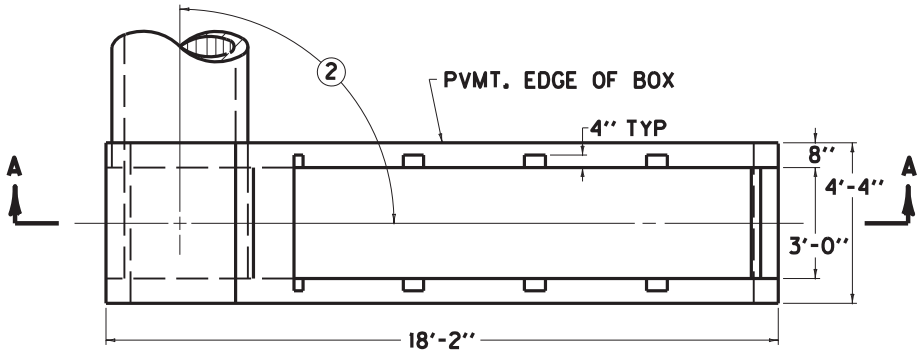
APPROVED _____ PROJECT ENGINEER

06-04-2008
DATE

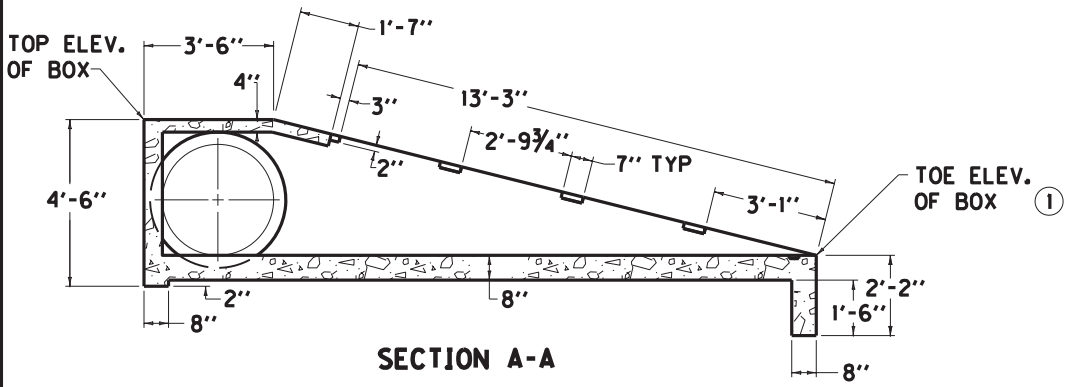
Contract ID: 234105
Page 112 of 196

COUNTY OF	ITEM NO.	SHEET NO.

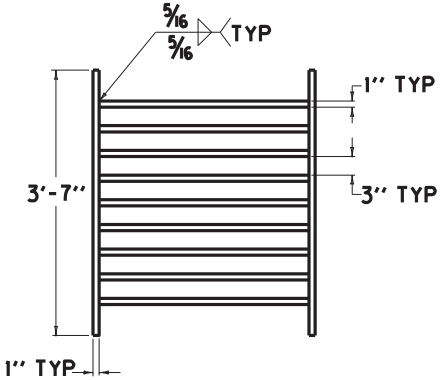
PIKE COUNTY
FED 04 098 0080 000-0021



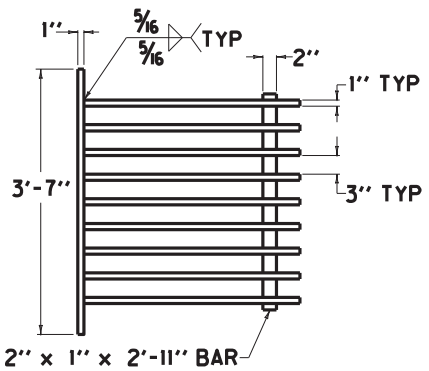
PLAN VIEW



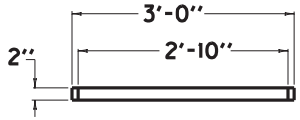
SECTION A-A



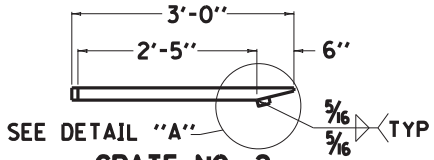
GRATE NO. 1
PLAN VIEW



GRATE NO. 2
PLAN VIEW



GRATE NO. 1
SIDE ELEVATION



GRATE NO. 2
SIDE ELEVATION

NOTES

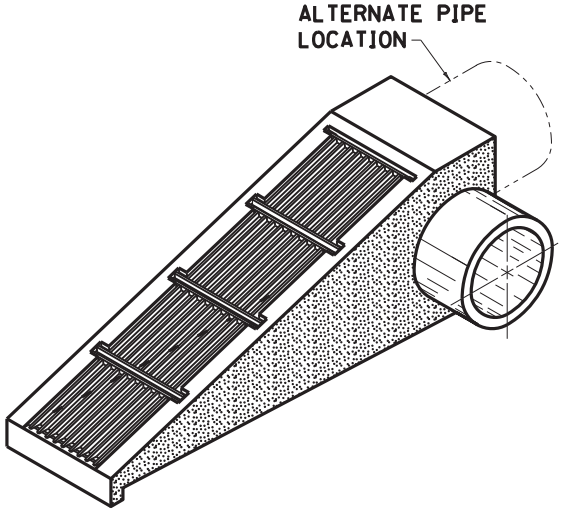
ITEM CODE	BID ITEM	UNIT
23044NS710	SAFETY BOX INLET-36 INCH SDB-1	EACH

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.

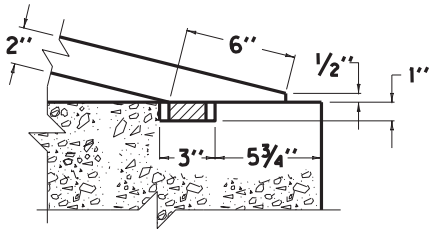
1. TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.
2. SKEW OF BOX SHALL VARY TO FIT EXISTING FIELD CONDITIONS.
3. ALL QUANTITIES ARE FOR ONE HEADWALL.

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

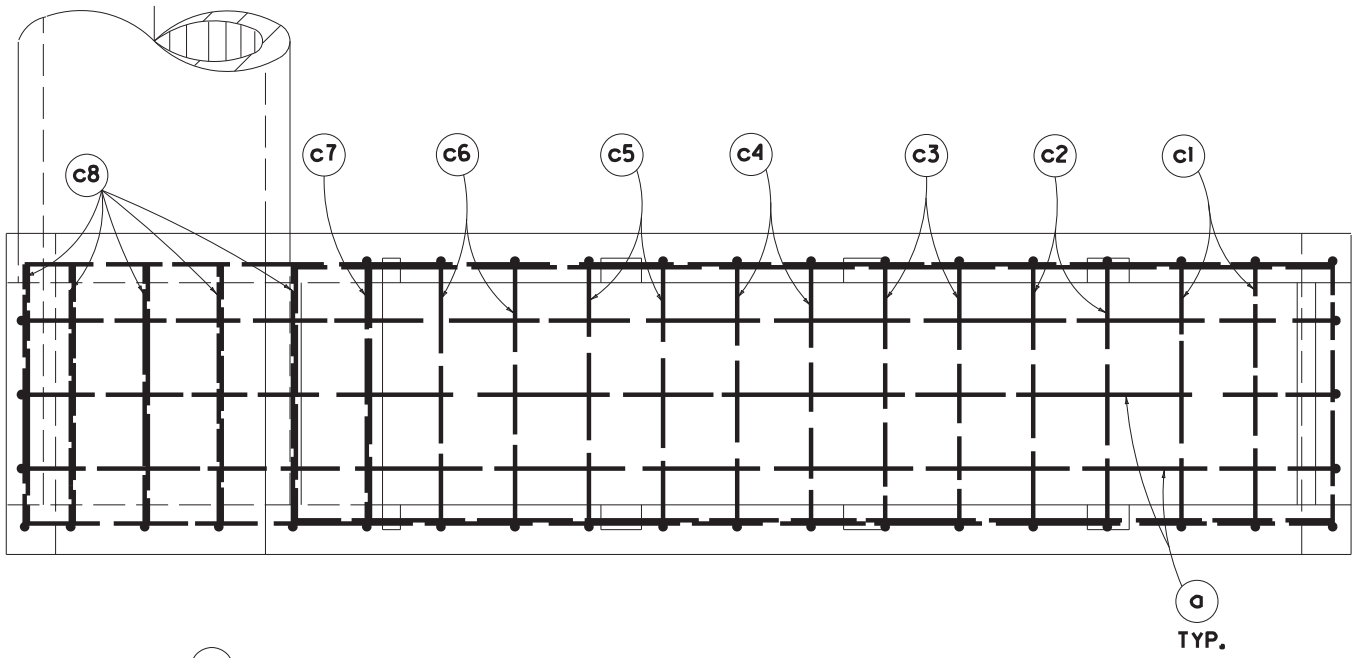
KENTUCKY
DEPARTMENT OF HIGHWAYS

SAFETY TYPE BOX INLET (36")

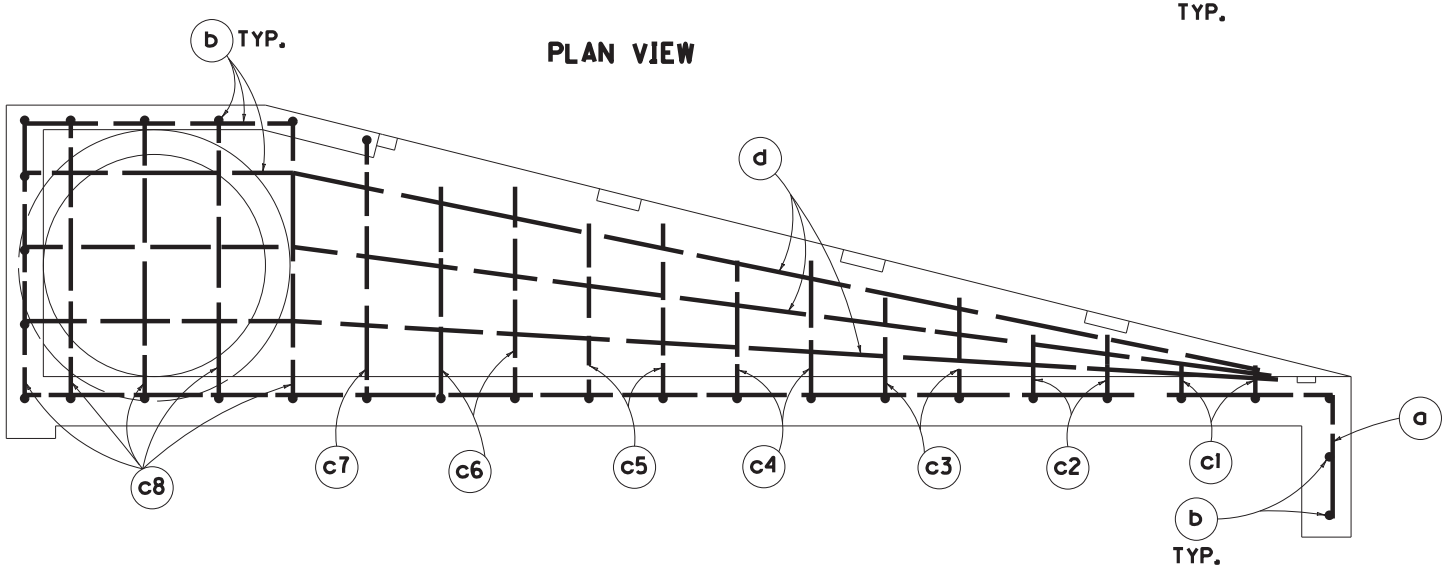
APPROVED _____ PROJECT ENGINEER 06-04-2008 DATE

Contract ID: 234105
Page 173 of 196

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

PIKE COUNTY
FED 04 098 0080 000-003

Contract ID: 234105
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PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2019* and *Standard Drawings, Edition of 2020.*

SUPPLEMENTAL SPECIFICATIONS

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

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

SPECIAL NOTE FOR BARCODE LABEL ON PERMANENT SIGNS

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

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

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

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

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

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

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

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

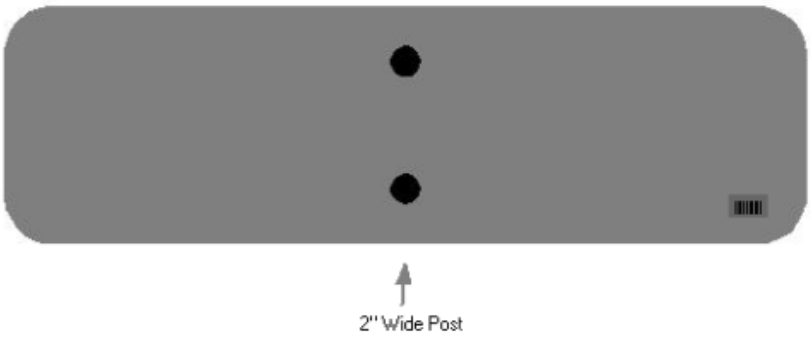
The installation of the permanent sign will be measured in accordance to Section 715.

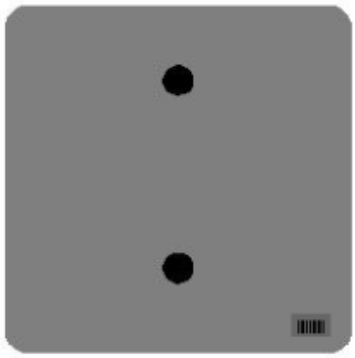
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24631EC	Barcode Sign Inventory	Each

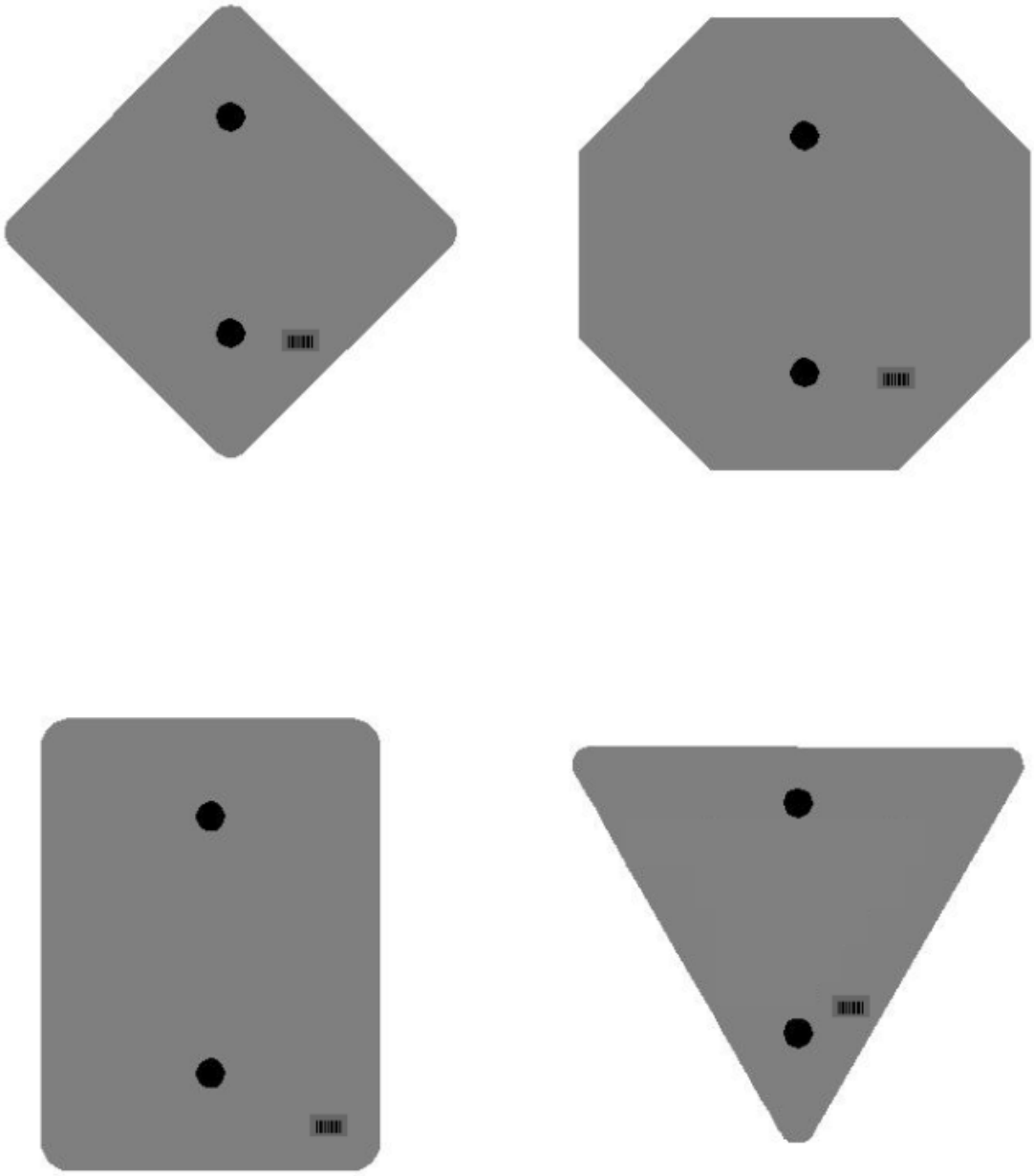
The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment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

One Sign Post

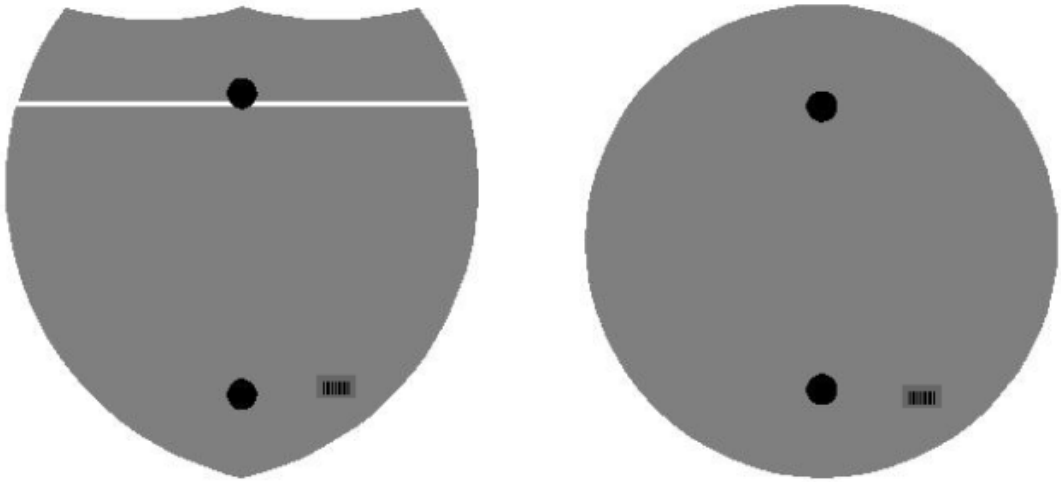


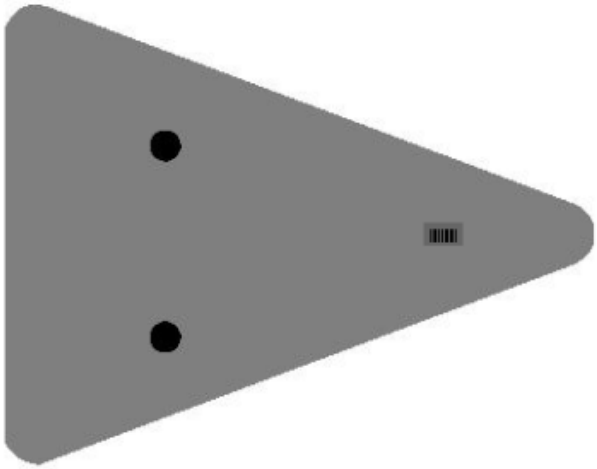


One Sign Post

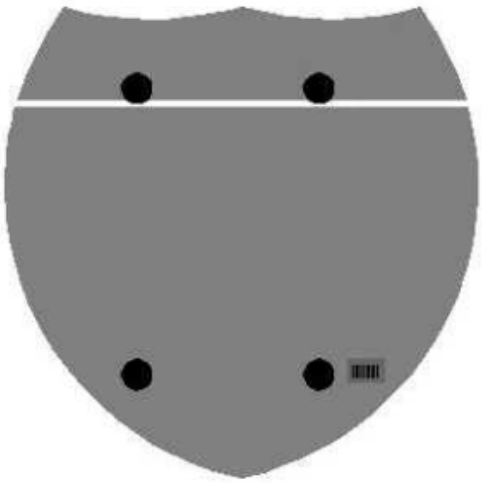


One Sign Post

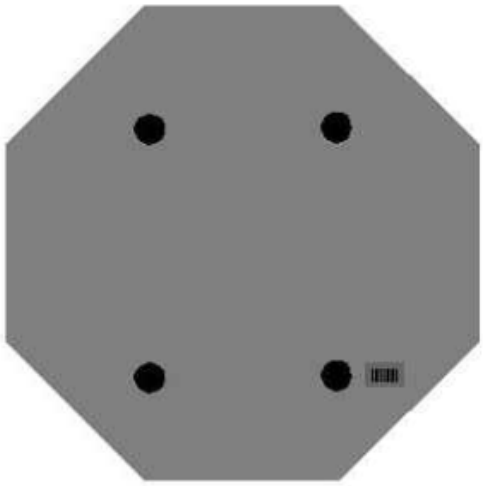




Double Sign Post

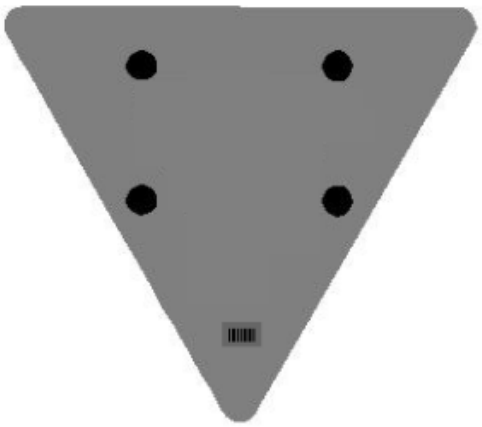


Interstate
Shield



48" Stop

2 Post Signs



2020 STANDARD DRAWINGS THAT APPLY

ROADWAY
~ BARRIERS ~

TYPICAL BARRIER INSTALLATIONS

TYPICAL GUARDRAIL INSTALLATIONS RBI-001-12
TYPICAL GUARDRAIL INSTALLATIONS RBI-002-07
TYPICAL INSTALLATION FOR GUARDRAIL END TREATMENT TYPE 2A RBI-003-09
INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1 ..... RBI-004-06

GUARDRAIL HARDWARE

STEEL BEAM GUARDRAIL (W-BEAM) RBR-001-13
GUARDRAIL COMPONENTS RBR-005-11
GUARDRAIL TERMINAL SECTIONS RBR-010-06
STEEL GUARDRAIL POSTS RBR-015-06
TIMBER GUARDRAIL POSTS RBR-016-05
GUARDRAIL SYSTEM TRANSITION RBR-018
GUARDRAIL END TREATMENT TYPE 1 ..... RBR-020-07
GUARDRAIL END TREATMENT TYPE 2A RBR-025-06
DELINEATORS FOR GUARDRAIL RBR-005-01

~ DRAINAGE ~

BOX INLETS AND OUTLETS

DROP BOXES

DROP BOX INLET TYPE 2 ..... RDB-002-12
DROP BOX INLET TYPE 5A-5B-5C-5D-5E & 5F RDB-005-09

PAVED DITCHES, FLUME INLETS AND CHANNEL LININGS

CHANNEL LINING CLASS II AND III RDD-040-05

PIPE AND BOX CULVERT HEADWALLS

PRECAST BOX CULVERT HEADWALLS - 0° SKEW (BOX RISE LESS THAN 6’-0) (LAYOUT & STEEL PAT.) .. RDH-1000-02
DIMENSIONS 3’x2’ – 6’x6’ HEADWALLS PRECAST BOX CULVERT 0° SKEW RDH-1100-02
QUANTITIES 3’x2’ – 12’x12’ HEADWALLS PRECAST BOX CULVERT 0° SKEW RDH-1200-02
BILL OF REINFORCEMENT 3’x2’ – 7’x4’ HEADWALLS PRECAST BOX CULVERTS 0° SKEW RDH-1300-03

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-020-10
PIPE BEDDING FOR CULVERTS, ENTRANCE, AND STORM SEWER, REINFORCED CONC. PIPE RDI-021-01
PIPE BEDDING, TRENCH CONDITION RDI-025-06
PIPE BEDDING, TRENCH CONDITION, REINFORCED CONC. PIPE RDI-026-01
COATINGS, LININGS AND PAVINGS FOR NON-STRUCTURAL PLATE PIPE RDI-035-02

Standard Drawings That Apply
Page 2 of 3

EROSION CONTROL BLANKET SLOPE INSTALLATION....RDI-040-01
EROSION CONTROL BLANKET CHANNEL INSTALLATION....RDI-041-01
FILL HEIGHTS FOR PRECAST REINFORCED CONCRETE BOX CULVERTS....RDI-100-05
BEDDING FOR PRECAST BOX CULVERTS, SEWERS, STORM DRAINS, AND THEIR COMBINATIONS....RDI-120-04

MISCELLANEOUS DRAINAGE

INTERMEDIATE AND END ANCHORS FOR CIRCULAR PIPE.... RDX-060-04
INTERMEDIATE AND END ANCHORS FOR NON-CIRCULAR PIPE.... RDX-065-04
TEMPORARY SILT FENCE.... RDX-210-03
SILT TRAP - TYPE A.... RDX-220-05
SILT TRAP - TYPE B.... RDX-225-01
SILT TRAP - TYPE C.... RDX-230-01
PRECAST BOX CULVERT EXTENSION.... RDX-300-04

~ GENERAL ~

CURVE WIDENING AND SUPERELEVATION

CURVE WIDENING AND SUPERELEVATION TRANSITIONS....RGS-001-07

MISCELLANEOUS STANDARDS

MISCELLANEOUS STANDARDS.... RGX-001-06
TYPICAL EMBANKMENT FOUNDATION BENCHES.... RGX-010-04
TYPE D BREAKAWAY SIGN SUPPORT.... RGX-065-02
ONE POINT PROCTER FAMILY OF CURVES.... RGX-200-01

~ PAVEMENT ~

MEDIANS, CURBS, APPROACHES, ENTRANCES, ETC.

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

TRAFFIC

~ PERMANENT ~

MARKERS

PAVEMENT STRIPING DETAILS FOR TWO LANE TWO WAY ROADWAYS.... Sepia 017
TYPICAL MARKINGS FOR TURN LANES PAGE 1.... TPM-206
TYPICAL MARKINGS FOR TURN LANES PAGE 2.... TPM-207

RUMBLE STRIPS

SHOULDER & EDGELINE RUMBLE STRIPS PLACEMENT DETAILS.... TPR-115
EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS.... TPR-120

~ TEMPORARY ~

TRAFFIC CONTROL

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

Standard Drawings That Apply
Page 3 of 3

DEVICES

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

STRIPING OPERATIONS

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

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

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

I. APPLICATION

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

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

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

II. NONDISCRIMINATION OF EMPLOYEES

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

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

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

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

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

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

Revised: January 25, 2017

EXECUTIVE BRANCH CODE OF ETHICS

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

KRS 11A.040 (7) provides:

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

KRS 11A.040 (9) states:

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

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

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

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

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

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, 1025 Capital Center Drive, Suite 104, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: May 23, 2022

Kentucky Equal Employment Opportunity Act of 1978

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

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

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

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

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

EMPLOYEE RIGHTS
UNDER THE FAIR LABOR STANDARDS ACT

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

FEDERAL MINIMUM WAGE
$7.25 PER HOUR
BEGINNING JULY 24, 2009

OVERTIME PAY

At least 1½ times your regular rate of pay for all hours worked over 40 in a workweek.

CHILD LABOR

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

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

No more than

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

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

TIP CREDIT

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

ENFORCEMENT

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

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

ADDITIONAL INFORMATION

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

For additional information:

1-866-4-USWAGE

(1-866-487-9243) TTY: 1-877-889-5627

WHD U.S. Wage and Hour Division

WWW.WAGEHOUR.DOL.GOV

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

WHD Publication 1088 (Revised July 2009)

PART IV

INSURANCE

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

PART V

BID ITEMS

234105

PROPOSAL BID ITEMS

Report Date 12/27/22

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	4.50	TON		$	
0020	00068		AGGREGATE FOR ENTRANCES	12.00	TON		$	
0030	00190		LEVELING & WEDGING PG64-22	293.00	TON		$	
0040	00212		CL2 ASPH BASE 1.00D PG64-22	21.50	TON		$	
0050	00307		CL2 ASPH SURF 0.38B PG64-22	221.60	TON		$	
0060	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		$	
0070	02677		ASPHALT PAVE MILLING & TEXTURING	125.00	TON		$	
0080	24970EC		ASPHALT MATERIAL FOR TACK NON-TRACKING	1.60	TON		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0090	02159		TEMP DITCH	4,356.00	LF		$	
0100	02160		CLEAN TEMP DITCH	2,178.00	LF		$	
0110	02483		CHANNEL LINING CLASS II	514.00	TON		$	
0120	02650		MAINTAIN & CONTROL TRAFFIC (PIKE KY 80)	1.00	LS		$	
0130	02697		EDGELINE RUMBLE STRIPS	2,434.00	LF		$	
0140	02701		TEMP SILT FENCE	4,356.00	LF		$	
0150	02703		SILT TRAP TYPE A	6.00	EACH		$	
0160	02704		SILT TRAP TYPE B	6.00	EACH		$	
0170	02705		SILT TRAP TYPE C	6.00	EACH		$	
0180	02706		CLEAN SILT TRAP TYPE A	6.00	EACH		$	
0190	02707		CLEAN SILT TRAP TYPE B	6.00	EACH		$	
0200	02708		CLEAN SILT TRAP TYPE C	6.00	EACH		$	
0210	02726		STAKING (PIKE KY 80)	1.00	LS		$	
0220	05950		EROSION CONTROL BLANKET	5,000.00	SQYD		$	
0230	05952		TEMP MULCH	19,457.00	SQYD		$	
0240	05953		TEMP SEEDING AND PROTECTION	14,520.00	SQYD		$	
0250	05963		INITIAL FERTILIZER	1.00	TON		$	
0260	05964		MAINTENANCE FERTILIZER	2.00	TON		$	
0270	05985		SEEDING AND PROTECTION	29,040.00	SQYD		$	
0280	05992		AGRICULTURAL LIMESTONE	18.00	TON		$	
0290	06510		PAVE STRIPING-TEMP PAINT-4 IN	17,424.00	LF		$	
0300	06568		PAVE MARKING-THERMO STOP BAR-24IN	12.00	LF		$	
0310	06572		PAVE MARKING-DOTTED LANE EXTEN	28.00	LF		$	
0320	06574		PAVE MARKING-THERMO CURV ARROW	2.00	EACH		$	
0330	06575		PAVE MARKING-THERMO COMB ARROW	2.00	EACH		$	
0340	20191ED		OBJECT MARKER TY 3	14.00	EACH		$	
0350	21289ED		LONGITUDINAL EDGE KEY	950.00	LF		$	
0360	22520EN		PAVE MARKING-THERMO YIELD BAR-36 IN	30.00	LF		$	
0370	24995EC		PAVE STRIPING-SPRAY THERMO-6 IN W	17,704.00	LF		$	
0380	24996EC		PAVE STRIPING-SPRAY THERMO-6 IN Y	16,869.00	LF		$	
0390	26175EC		ROADSIDE REGRADING	7,375.00	LF		$	

234105

PROPOSAL BID ITEMS

Report Date 12/27/22

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0400	00440		ENTRANCE PIPE-15 IN	234.00	LF		$	
0410	00461		CULVERT PIPE-15 IN	4.00	LF		$	
0420	00462		CULVERT PIPE-18 IN	8.00	LF		$	
0430	00464		CULVERT PIPE-24 IN	4.00	LF		$	
0440	00468		CULVERT PIPE-36 IN	105.00	LF		$	
0450	01310		REMOVE PIPE	220.00	LF		$	
0460	01493		DROP BOX INLET TYPE 2	2.00	EACH		$	
0470	01514		DROP BOX INLET TYPE 5E	2.00	EACH		$	
0480	01726		SAFETY BOX INLET-18 IN SDB-1	2.00	EACH		$	
0490	02223		GRANULAR EMBANKMENT	20.00	CUYD		$	
0500	02403		REMOVE CONCRETE MASONRY	3.80	CUYD		$	
0510	02625		REMOVE HEADWALL	3.00	EACH		$	
0520	02690		SAFELOADING	12.00	CUYD		$	
0530	03000		PRECAST CONC BOX SECT (4' X 3')	8.00	LF		$	
0540	08001		STRUCTURE EXCAVATION-COMMON	28.00	CUYD		$	
0550	08003		FOUNDATION PREPARATION (STA. 37+29)	1.00	LS		$	
0560	08103		CONCRETE-CLASS D MOD	.55	CUYD		$	
0570	24695ED		BOX CULVERT HEADWALL (4' x 3')	1.00	EACH		$	
0580	24814EC		PIPELINE INSPECTION	101.00	LF		$	
0590	26134ED		SLOPED AND MITERED HEADWALL-36 IN	3.00	EACH		$	

Section: 0004 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0600	02562		TEMPORARY SIGNS	470.00	SQFT		$	
0610	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		$	
0620	06406		SBM ALUM SHEET SIGNS .080 IN	193.79	SQFT		$	
0630	06407		SBM ALUM SHEET SIGNS .125 IN	11.12	SQFT		$	
0640	06410		STEEL POST TYPE 1	309.00	LF		$	
0650	06490		CLASS A CONCRETE FOR SIGNS	.75	CUYD		$	
0660	21373ND		REMOVE SIGN	19.00	EACH		$	
0670	21596ND		GMSS TYPE D	3.00	EACH		$	
0680	24631EC		BARCODE SIGN INVENTORY	46.00	EACH		$	

Section: 0005 - GUARDRAIL

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0690	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	61.00	EACH		$	
0700	02351		GUARDRAIL-STEEL W BEAM-S FACE	6,025.00	LF		$	
0710	02367		GUARDRAIL END TREATMENT TYPE 1	14.00	EACH		$	
0720	02369		GUARDRAIL END TREATMENT TYPE 2A	8.00	EACH		$	

PROPOSAL BID ITEMS

234105

Report Date 12/27/22

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0730	02381		REMOVE GUARDRAIL	6,640.00	LF		$	

Section: 0006 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0740	02569		DEMOBILIZATION	1.00	LS		$	