CALL NO. 328

CONTRACT ID. 224405

JESSAMINE COUNTY

FED/STATE PROJECT NUMBER FD04 057 0169 011-017

DESCRIPTION KEENE ROAD (KY 169)

WORK TYPE ASPHALT SURFACE WITH GRADE & DRAIN

PRIMARY COMPLETION DATE 10/15/2023

LETTING DATE: December 08,2022

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

NO PLANS ASSOCIATED WITH THIS PROJECT.

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

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PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 07

CONTRACT ID - 224405

FD04 057 0169 011-017

COUNTY - JESSAMINE

PCN - 0705701692201
FD04 057 0169 011-017

KEENE ROAD (KY 169) (MP 11.978) FROM US 27 EXTENDING 4.555 NORTHWEST TO KY 1267 (MP 16.555), A DISTANCE OF 04.58 MILES.ASPHALT SURFACE WITH GRADE & DRAIN SYP NO. 07-09014.00.

GEOGRAPHIC COORDINATES LATITUDE 37:55:21.00 LONGITUDE 84:36:59.00

ADT 6,700

COMPLETION DATE(S):

COMPLETED BY 10/15/2023 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

SURFACING AREAS

Thin Lay Surface from US 27 to US 68

The Department estimates the mainline surfacing width to be 22-82 feet.

The Department estimates the total mainline area to be surfaced to be 46,167 square yards.

1.5” Surface at Paddock Drive

The Department estimates the mainline surfacing width to be 25 feet.

The Department estimates the total mainline area to be surfaced to be 4,826 square yards.

1.25” Resurface from US 68 to KY 1267

The Department estimates the mainline surfacing width to be 22-42 feet.

The Department estimates the total mainline area to be surfaced to be 25,460 square yards.

ASPHALT MIXTURE

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

DGA BASE

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

FUEL AND ASPHALT PAY ADJUSTMENT

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

OPTION A

Be advised that the Department will accept compaction of asphalt mixtures furnished for driving lanes and ramps, at 1 inch (25mm) or greater, on this project according to OPTION A in accordance with Section 402 and Section 403 of the current Standard Specifications. The Department will require joint cores as described in Section 402.03.02 for surface mixtures only. The Department will accept compaction of all other asphalt mixtures according to OPTION B.

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

The Bid Items for this Highway Safety Improvement Project are located on the Plan Sheets, Typical Sections, Pipe Sheets, and as summarized in the Project Improvement Summary Sheets.

CAUTION

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

BUY AMERICA REQUIREMENT

Federal Funds were used for the design phase 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 beginning station number, which is STA 633+75 at the back of radius of US 27, and corresponds to Milepoint 12.00 along KY 169. **NOTE**: The existing mile marker signs may not correspond to the proposed work locations.

LIDAR

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

ON-SITE INSPECTION

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

RIGHT OF WAY LIMITS

The Department has not established the exact limits of the Right-of-Way. Unless a consent and release 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. In the event that private improvements (i.e. fences, buildings, etc.) encroach upon the Right-of-Way, the contractor shall notify the Engineer and limit work activities in order to NOT disturb the improvements. If they become necessary, the Department will secure consent and releases from property owners through the Engineer. Be responsible for all encroachments onto private lands.

CONTROL

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

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

DESCRIPTION OF WORK

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

Pavement Widening. Areas have been identified along the route for widening the pavement. Work will include trenching the existing roadside, placing asphalt, longitudinal edge keys, and regrading the roadside, as shown on the Typical Sections. Perform this work at the locations identified elsewhere in the Proposal, or the locations as directed by the Engineer. Refer to the Special Note for Shoulder Milling/Trenching for more information.

After the shoulders are milled/trenched, backfill with DGA and/or Asphalt Base according to the applicable Typical Sections. After placing the last lift of Asphalt Base, do not mill and/or construct the proposed new Asphalt Surface until a minimum of 14 calendar days have elapsed to allow for settlement. After the 14 calendar day waiting period, and/or when the Engineer determines the Asphalt Base has sufficiently stabilized, begin milling and/or resurfacing operations. Prior to milling and/or constructing the new Asphalt Surface, level and wedge any settlement of the pavement widening areas.

Pavement Resurfacing. The existing roadway is to be resurfaced according to the Typical Sections. Resurfacing includes thinlay asphalt surface overylay, 1.5" asphalt surface overlay, and 1.25" asphalt surface overlay. Other items that may be associated with the pavement resurfacing include: removal of existing pavement by milling and texturing, construction of edge keys, fine milling, installation of rumble strips, and application of pavement markings. Refer to the Rumble Strip Summary and Standard Drawings for recommended placement of rumble strips.

Fine milling is included for the edge keys of the thinlay asphalt overylay. Existing thermoplastic markings are to be milled up and are incidental to placement of proposed thermoplastic markings. Refer to the Fine Milling Summary and Special Note for Thermoplastic Pavement Markings Removal for more information.

Left Turn Lane at Paddock Drive. Construct a left turn lane on KY 169 at Paddock Drive. Works involves clearing and grubbing, roadway excavation, shoulder milling and trenching, widening pavement up to 11', RCBC extension, placing asphalt, regrading the roadside, relocating the median on Paddock Drive, entrance pipe replacement, and entrance paving. Refer to the Left Turn Lane at Paddock Drive detail sheets for more information.

Install 12" Encasement Pipe, 6" Water Main, and Gate Valves near Paddock Drive for City of Nicholasville. Refer to the Waterline Relocation Plan Sheet, Waterline Relocation Summary Sheet, and City of Nicholasville Specification sheets for more information.

Remove and Relocation Sign Assembly is for the relocation and installation of the existing Stop Sign and Paddock Drive sign assembly. **NOTE:** The Department will consider all signs attached to one or more connected posts as a single sign assembly. The Department will measure and pay for "Remove and

Relocate Sign Assembly" as each sign assembly removed and relocated; NOT each individual sign removed and relocated.

Cross Slopes Improvements. There are multiple curves where the existing cross slopes are being improved. The Cross Slope Improvements are set up and quantified for the Contractor to utilize Leveling & Wedging in order to achieve the desired cross slopes at the identified location(s). The Engineer will make the final determination as to which Leveling & Wedging mix design will be required at each cross slope improvement area, as well as the appropriate lift thicknesses and number of lifts based on the existing conditions encountered at the time of construction. Refer to the Typical Sections, Paddock Drive Detail Sheets, Paddock Drive Cross Slopes for more information. After the cross slope improvements have been constructed, the entire route will be overlaid with a surface course. As a result of the cross slope improvements and surfacing operations, the roadside shoulders, fill slopes, and/or ditches will have to be modified to match the final pavement elevations and tie in with the existing ground lines. A quantity of Roadside Regrading has been estimated for regrading the roadside.

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

Permanent Striping and Rumble Strips. Following construction activities, pave stripe the entire project length with THERMO-6 IN striping. Refer to the Striping Summary and Plans for striping configuration. Install edgeline rumble strips and centerline rumble strips as noted on Rumble Strip Summary.

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

Entrance Pipe Replacement & Entrance Paving. Due to areas of existing ditch line being re-shaped and relocated further from the edge of pavement, there are areas throughout the project where the existing entrance pipe will have to be removed and replaced to line up with the new ditch line. Refer to the

Entrance Detail within the Typical Sections for details on this work item. See the Entrance Pipe and Entrance Paving Summary for the locations and bid items/quantities associated with the entrance pipe replacements. The existing driveway surface is noted on the summary sheet and is to be replaced with like-kind surfacing. The Engineer will make the final determination as to the locations and quantities required to complete the work based on the existing conditions encountered during construction. Refer to the Special Note for Pipe Replacements / Extensions for more information on this item of work.

Pipe Replacements & Extensions. There are locations throughout the project where culvert pipes are being extended or replaced. Locations and estimated quantities are noted on the Drainage Summary. For pipe extensions where the existing pipe is RCP, remove the existing headwall and first section of existing RCP attached to the headwall (approx. 3-4' ft). Other items that may be included with the pipe extensions/replacements include culvert headwalls, sloped & mitered concrete headwalls, safety box inlets, fittings, channel lining, erosion control blanket, asphalt pavement quantities, etc. Refer to the Special Note for Pipe Replacements/Extensions for more information on this item of work.

Sloped & Mitered Concrete Headwalls. Sloped & Mitered Concrete Headwalls shall be constructed as shown on the detail sheets titled: SLOPED & MITERED CONCRETE HEADWALL DETAILS. This headwall is intended to combine the benefits of a pipe headwall with the advantages of safety and adaptability by allowing the headwall to be custom fit to the surrounding embankment. The Drainage Summary identifies which pipe ends are to receive the Sloped & Mitered Concrete Headwalls. The identified pipe ends shall have the headwall installed and the pipe mitered at a slope that matches the final embankment slopes at each location. <u>If the pipe is on a skew, install the headwall and miter the pipe so that the concrete slope paving of the new headwall is perpendicular to the roadway</u>. In other words the embankment slope should <u>not</u> be warped to fit the skew of the pipe; the headwall should be installed and the pipe should be mitered to match the final embankment slope, so that the roadside fill slope is fairly consistent prior to the pipe, at the pipe, and beyond the pipe, and does not create an excessive bulge in the embankment. When completed the edges of the Sloped & Mitered Concrete Headwall should be flush with the surrounding ground line. Payment at the Contract unit price Each shall be full compensation for furnishing all labor, materials, equipment, and incidentals necessary to install the headwall and miter the pipe.

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

Fittings. There are quantities of fittings included in the contract to construct at the pipe improvement locations. This is so the new pipe can be securely connected to the existing pipe. The fittings shall be constructed as shown on the Pipe Fittings Adapter Detail Sheet. Refer to the General Summary, Pipe Drainage Summary, and Entrance Pipe Summary for locations, sizes, and for more information regarding proposed Fittings.

Channel Lining. A quantity of 120 Tons of Channel Lining Class II has been included for use at the locations indicated on the Summaries. An additional 100 Tons of Channel Lining Class II has been included in the contract for potential use around drop box inlets, safety box inlets, inlets and outlets of pipes, along areas of regraded ditch line and/or fill slope, and other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of Channel Lining throughout this project. The Engineer will make the final determination as to the needed quantities and placement of Channel Lining.

Erosion Control Blanket. A quantity of 500 square yards of Erosion Control Blanket has been included in the contract for potential use along areas of regraded shoulders, ditch lines, fills slopes and/or back slopes, inlets and outlets of pipes, and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of Erosion Control Blanket throughout this project. The Engineer will make the final determination as to the quantities and placement of Erosion Control Blanket.

Special Seeding Crown Vetch. A quantity of 500 square yards of Special Seeding Crown Vetch has been included in the contract for potential use along areas of inlets and outlets of pipe and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine the location and best use of Special Seeding Crown Vetch throughout this project. The Engineer will make the final determination as to the quantities and placement of Special Seeding Crown Vetch.

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

Sta. 719+61 to Sta. 719+89 Double 12'x8' RCBC: Remove existing bridge railing as remove concrete masonry. Remove existing earth shoulder as Roadside Regrading and place full depth pavement. Install proposed guardrail and transition to Rail System Side Mounted MGS along the limits of the double barrel culvert. Refer to the Plan Sheet, Guardrail Summary Sheet, and Standard Drawing BHS-011 for more information.

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

Reinforced Concrete Box Culvert Extensions. There is one location within the project where existing reinforced concrete box culvert is being extended. Location and estimated quantities are noted on the Drainage Summary. Refer to the Structure Plans, Special Note for Box Culvert Extensions, and Left Turn at Paddock Construction Plans for more details and information on this item of work.

Removal of Existing Signing and Installation of Proposed Signing. A quantity of 1 each of "Remove Sign" has been included for removal of existing signs along the corridor, as identified in the Signing Summary. An estimated quantity of new signing and sign post is included on the Signing Summary. The Contractor and Engineer will work with the District Traffic Section to determine the final signing layout and sign types prior to installation of the proposed signing. Refer to the Special Note for Signing and the Special Note for Signage for more details concerning the procedures for determining and staking the final layout and installation of the signing.

Reflective Sign Post Panel. Install reflective sign post panels as noted in the Reflective Sign Post Panel Summary to Type 1 Posts. Refer to the Special Note for Signing for more information.

Remove, Store & Reinstall Signs. A quantity of 4 each of "Remove-Store and Reinstall Sign" has been included on the Signing Summary for signs that are to be adjusted due to the pavement widen. An additional quantity of 10 each of "Remove-Store and Reinstall Sign" has been included in the contract for existing sheet signs that may obstruct or interfere with proposed construction activities. Do not remove an existing sign

until just prior to working in the vicinity of the sign. Reinstall the sign as soon as possible once the construction activities in the vicinity of the sign has reached a stage that the sign will no longer be an obstruction or interfere with the work. The intent is for the sign to be "down" the minimum length of time necessary.

Temporary Striping. A quantity of 100,000 linear feet of Pave Striping – Temp Paint – 4 in has been included in the contract for potential use along the project, and any other areas as directed by the Engineer. The Contractor and Engineer should work together to determine any locations throughout the project requiring temporary pavement striping. The Engineer will make the final determination as to the quantities and placement of temporary pavement striping.

SPECIAL NOTE FOR STAKING

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

1. Contrary to Section 201, perform items 1-3 usually performed by the Engineer.
2. Verify the dimensions, type, and quantities of the culvert pipes, entrance pipes, and/or box culverts as listed and detailed in the proposal, and determine flow line elevations and slopes necessary to provide positive drainage. Revise as necessary to accommodate the existing site conditions; to provide proper alignment of the drainage structures with existing and/or proposed ditches, stream channels, swales, and the roadway lines and grades; and to ensure positive drainage upon completion of the work.
3. Using the proposed pavement superelevation rates, runout, and runoff lengths and cross sections, determine the necessary changes in pavement edge elevation along the curves and the transitions leading into and out of the curve to achieve the proposed superelevation improvements. The intent to provide a consistent superelevation throughout the curves and smooth transitions into and out of the curves. Once the proposed changes in pavement edge elevations are determined and prior to starting paving operations, verify the proposed roadside re-grading along the curve can be constructed so that the new roadside is flush with the new pavement edge elevation and the new toe of slope, or top of cut, will remain within the existing Right-of-Way and/or not impact a sensitive obstruction. If necessary, and with the approval of the Engineer, reduce the proposed superelevation rate of a curve if the new edge of pavement elevation will cause the new roadside grading to extend beyond the Right-of-Way and/or impact a sensitive obstruction. Alternatively, with the approval of the Engineer and to the extent allowable by the “Roadside Regrading and Embankment Benching Details” and/or the Special Note for Roadside Regrading, the Contractor may be allowed to adjust the roadside grading so the proposed roadside re-grading will remain within the existing Right-of-Way and/or not impact a sensitive obstruction. After the final proposed changes in pavement edge elevations are determined and before paving operations begin, submit to the Engineer and obtain approval for the number of asphalt lifts, each asphalt lift’s thickness, and the asphalt mix type of each lift the contractor plans to use to achieve the superelevation improvement. 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 construction of the KY 169 left turn lane at Paddock Drive, superelevation improvements, and the drainage improvements. For the left turn lane construction, as built information will consist of right-of-way information, roadway information, and a record of the final pavement cross slopes every 50 feet. 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. Using paint marks on the pavement, and/or any other means approved by the Engineer, the Contractor shall layout and pre-mark the proposed Shoulder Milling / Trenching pavement widths according to the Typical Sections segments (1’ pavement widening each side, 2’ pavement widening one side, end widen, etc.). Obtain approval of the pre-marked layout from the Engineer prior to beginning shoulder milling and trenching

operations.

Once the proposed changes in pavement edge elevations are determined and prior to starting paving operations, verify the proposed roadside re-grading along the corridor can be constructed so that the new roadside is flush with the new pavement edge elevation and the new toe of slope, or top of cut, will remain within the existing Right-of-Way and/or not impact a sensitive obstruction. 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 roadside grading so the proposed roadside re-grading will remain within the existing Right-of-Way and/or not impact a sensitive obstruction. After the final proposed changes in pavement edge elevations are determined and before paving operations begin, submit to the Engineer and obtain approval for the number of asphalt lifts, each asphalt lift's thickness, and the asphalt mix type of each lift the contractor plans to use. Ensure positive drainage upon completion of the work.

8. Prior to incorporating into the work, obtain the Engineers approval of all revisions determined by the Contractor.
9. 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, 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. DGA. Furnish Dense Graded Aggregate as per Section 805.

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

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

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

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

H. Crushed Stone Base. Furnish Crushed Stone Base as per Section 805.

III. CONSTRUCTION METHODS

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

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

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

D. Staking. See the Special Note for Staking.

E. 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. DGA Wedge & Chip Seal. Some, or possibly all, areas of Roadside Regrading may be set up to receive a DGA Wedge & Chip Seal after the Roadside Regrading operations are complete. Other areas of Roadside Regrading may NOT be set up to receive the DGA Wedge & Chip Seal. See the Summary Sheets and/or Plan Sheets for the approximate locations to receive the DGA Wedge & Chip Seal. The Engineer will determine the exact limits of the DGA Wedge & Chip Seal at the time of construction. Construct and compact the DGA as required by Section 302. Place Chip Seal over the entire width of the DGA Wedge. See the Special Note for Double Asphalt Seal Coat for the Chip Seal requirements.

H. Channel Lining. Install Class II Channel Lining along any sections of ditches, 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.

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

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

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

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

M. Control. Perform all work under the absolute control of the Department. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces, and to permit public utility companies and others to do work during the

construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department will not honor any claims for money or time extension created by the operations of such other parties.

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

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

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

IV. METHOD OF MEASUREMENT

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

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

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

D. Staking. See Special Note for Staking.

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

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

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

J. Geotextile Fabric, Class 1. When listed as bid items, Geotextile Fabric, Class 1 shall be measured according to Section 214.04.

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

V. BASIS OF PAYMENT

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

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

C. Staking. See Special Note for Staking.

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

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

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

H. Geotextile Fabric, 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 SHOULDER MILLING/TRENCHING

Trench shoulders as shown on the Typical Section. The Engineer may eliminate locations along the route from shoulder trenching (e.g. road approaches, turn lanes, entrances, etc.). For entrances and road approaches, the Engineer will determine whether to omit the trenching or continue the trenching across the entrance or approach. DO NOT trench across entrances or road approaches without the Engineer's approval. If trenching is achieved by means other than milling, saw cut the pavement 16.5 inches deep along Section 1 Pavement Widen from Begin to US 68 and 6 inches deep along Section 2 Pavement Widen from US 68 to End to create a smooth edge prior to excavating the shoulder trench. Excavate the material from the shoulder and maintain the proposed cross-slope as shown on the Typical Sections. The intent is to mill, or excavate, the entire trench so that the proposed shoulder slope is retained at the end of the paving operation. Reshape and compact excavated material from the trench on the outside edge of the newly paved shoulder as shown on the Typical Section.

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

Accept payment at the contract unit price per square yard for SHOULDER MILLING/TRENCHING (SECTION 1) and SHOULDER MILLING/TRENCHING (SECTION 2) as full compensation for all labor, materials, equipment, and incidentals for excavating the shoulder trench and reuse and/or disposal of the excavated material.

SPECIAL NOTE

For Tree Removal

Jessamine County
PERFORM LOW-COST SAFETY IMPROVEMENTS ON KY 169 FROM MP 11.978 TO MP 16.555 IN JESSAMINE COUNTY.
Item No. 07-9014

NO CLEARING OF TREES 5 INCHES OR GREATER (DIAMETER BREAST HEIGHT) FROM **APRIL 1 THROUGH OCTOBER 14.**

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

Special Note for 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 roadside grading as directed by the Engineer. Stockpile suitable materials for incorporation into the work as approved by the Engineer. Be responsible for all excavation (common, roadway, structure, solid rock, and unclassified) required for foundation preparation, toe walls, and all other excavation required for the box culvert extensions. Excavate rock in channel as required to allow for construction of foundation and construction of box culvert extensions. Be responsible for all embankment, embankment in place, and borrow required for backfilling the box culvert extension, constructing widened roadway and shoulder transitions, and all other embankment required to complete the work. Provide positive drainage of slopes and ditches at all times during and upon completion of construction. Waste all removed materials not incorporated into the work at sites off the right of way obtained by the Contractor at no additional cost to the Department (see the Special Provision for Waste and Borrow Sites). Perform all excavation and removal of obstructions only as approved or directed by the Engineer.

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

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

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

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

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

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

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

H. 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 roadside regrading and/or ditching areas according to Section 209.03.B.

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

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

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

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

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

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

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

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

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

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

IV. MEASUREMENT

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

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

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

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

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

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

F. Concrete-Class A. See Section 601.04.

G. Steel Reinforcement. See Section 602.04.

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

V. PAYMENT

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

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

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

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

D. Concrete-Class A. See Section 601.05.

E. Steel Reinforcement. See Section 602.05.

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

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 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. describing and/or detailing 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 aluminum sheet 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 sign posts shall be of sufficient lengths so that a single, continuous length of sign post extends 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 on the plans and/or summaries, fabricate Reflective Sign Post Panels from .080 gauge aluminum alloy 5052-H38 or 6061-T6, in accordance with ASTM B-209 and to the size(s) specified. Prepare the side of the aluminum sheet to receive the retroreflective background material according to the recommendations of the sheeting and retroreflective material manufacturer(s). 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)

Reflective Sign Post Panels shall be 2 inches wide and will typically have a height of 60 inches for rural installations and typically have a height of 84 inches for urban installations. There will be certain instances where a proposed Reflective Sign Post Panel will have a height dimension less than 60

inches; typically, this will be when the bottom of the bottom-most sign is mounted lower than the standard 5 ft minimum mounting height (e.g. 3 ft or 4 ft mount heights). In those cases, the height of the Reflective Sign Post Panel is expected to closely match (within 1-2 inches) the distance between the top of the anchor or support to the bottom edge of the bottom-most sign. Reflective Sign Post Panels 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.

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. Use bracing as indicated on the plans, summaries, and/or standard signing detail sheets, and/or when directed by the Engineer and/or District Traffic Engineer.

All sign posts shall be attached to anchors 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. Remove & Relocate Sheet Signs. When listed on the plans and/or summaries, and/or as directed by the Engineer and/or District Traffic Engineer, remove the specified existing sheet sign(s) from the existing post(s) and reinstall on a new sign post. Once the specified existing sheet sign(s) have been removed and relocated, and if the existing sign post(s) are no longer needed to support other existing signs, removal of the existing sign post(s) will be paid under the bid item REMOVE SIGN. If any of the existing hardware components (bracing, brackets, bolts, rivets, etc.) are found to have pre-existing damage or are damaged during the Contractor's removal and reinstallation efforts, the Contractor shall provide the necessary replacement hardware for proper re-installation of the sheet sign. These components shall be incidental to the bid item REMOVE AND RELOCATE SHEET SIGNS.

Prior to removing and reinstalling a sheet sign, the Contractor shall first review the existing sheet sign for damage. It is the Contractor's responsibility to notify the Engineer of any existing sheet sign damage prior to removal and relocation of the sheet sign, so that it can be documented that the existing sheet sign had pre-existing damage. If the Contractor does not make the Engineer aware of pre-existing damage prior to detaching the sheet sign from its existing post, the Department will assume the damage was the result of the Contractor's removal and reinstallation efforts. The Contractor shall replace any sheet signs that are damaged during the removal and reinstallation efforts. Replacement of sheet signs damaged by the Contractor shall be incidental to the bid item REMOVE AND RELOCATE SHEET SIGNS.

If the existing sheet sign is found to have pre-existing damage, the Department will provide the Contractor with a new sheet sign to replace the sheet sign with pre-existing damage. Detaching the

existing, damaged sheet sign from the existing post and attaching the new, Department-provided sheet sign to the new sign post shall be incidental the bid item REMOVE AND RELOCATE SHEET SIGNS.

F. Remove & Relocate Sign Assemblies. When listed on the plans and/or summaries, and/or as directed by the Engineer and/or District Traffic Engineer, remove the specified existing sign assemblies from the existing location and reinstall in a new location. The Department will consider all signs attached to one or more connected posts as a single sign assembly, no matter how many signs are attached to the existing sign assembly. If any of the existing hardware components (bracing, brackets, bolts, rivets, etc.) are found to have pre-existing damage or are damaged during the Contractor's removal and reinstallation efforts, the Contractor shall provide the necessary replacement hardware for proper re-installation of the sign assembly. These components shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

Prior to removing and relocating a sign assembly, the Contractor shall review the existing sign(s) and sign post(s) for damage. It is the Contractor's responsibility to notify the Engineer of any sign or sign post damage prior to removal and relocation of the sign assembly, so that it can be documented that the existing sign and/or sign post had pre-existing damage. If the Contractor does not make the Department aware of pre-existing damage prior to removing a sign assembly from its existing location, the Department will assume the damage was the result of the Contractor's removal and reinstallation efforts. The Contractor shall replace any components of a sign assembly that are damaged during removal and relocation. Replacement of any components damaged by the Contractor shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

If an existing sign that is part of a sign assembly to be removed and relocated is found to have pre-existing damage, the Department will provide the Contractor with a new sign to replace the sign with pre-existing damage. Detaching the existing, damaged sign from the existing post and attaching the new, Department-provided sign to the relocated existing post shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

If an existing sign assembly that is to be removed and relocated is found to not have an existing soil stabilizer plate, or if the soil stabilizer plate and/or anchor is damaged during removal, then a new soil stabilizer plate and/or anchor shall be provided by the Contractor and shall be incidental to the bid item REMOVE AND RELOCATE SIGN ASSEMBLY.

If an existing sign assembly that is being relocated is not currently mounted on a Type D breakaway sign support, but the plans and/or summaries indicate, or wind load standards dictate, a Type D breakaway sign support or a Type D Surface Mount is required, provide and install the specified Type D support as part of the removal and reinstallation efforts. Type D breakaway sign supports shall be paid under the bid item GMSS TYPE D and Type D Surface Mount supports shall be paid under the bid item GMSS TYPE D (SURFACE MOUNT).

If an existing sign that is being relocated is found to have pre-existing damage to one or more of the sign post, the Department will <u>NOT</u> utilize the bid item REMOVE AND RELOCATE SIGN ASSEMBLY for removing and relocating such a sign assembly. Instead, the Department will require the Contractor to install a new sign post(s) at the new location, and pay for the new post(s) under the bid item STEEL POST TYPE I. Detaching the existing sign(s) from the existing, damaged post(s) and attaching the

existing sign(s) to the new sign post(s) shall be incidental to the bid item STEEL POST TYPE I. Any hardware that is needed to complete the installation shall also be incidental to the bid item STEEL POST TYPE I. Removal of the existing damaged post(s) and any other sign components not needed will be paid under the bid item REMOVE SIGN.

G. 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.

H. 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.

I. 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.

J. 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.

K. 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.

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 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 and Reflective Sign Post Panels. 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 breakaway 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. Remove & Relocate Sheet Signs. The Department will measure sheet signs removed from an existing sign post and reinstalled on a new sign post as Each sheet sign removed and reinstalled. as indicated in the contract documents, or as directed by the Engineer. The new sign post shall be measured as indicated in paragraph D. of this section.

L. Remove & Relocate Sign Assemblies. The Department will consider all signs attached to one or more connected posts as a single sign assembly. When the contract documents indicate that an existing sign assembly is to be removed from its existing location and reinstalled in a new location, the Department will measure and pay for "Remove and Relocate Sign Assembly" as each sign assembly removed and relocated; NOT each individual sign removed and relocated.

M. 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 and Reflective Sign Post Panels. 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 plans/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 plans/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. Remove & Relocate Sheet Signs. The Department will make payment for the completed and accepted quantities under the bid item REMOVE AND RELOCATE SHEET SIGNS. Any hardware that is needed to complete the removal and reinstallation shall be incidental. The Department will consider payment full compensation for all work and incidentals necessary to remove and reinstall the existing sheet signs as indicated on the plans, summaries, and/or as directed by the Engineer.

I. Remove & Relocate Sign Assemblies. The Department will make payment for the completed and accepted quantities under the bid item REMOVE AND RELOCATE SIGN ASSEMBLY. Any hardware that is needed to complete the removal and reinstallation shall be incidental. The Department will consider payment full compensation for all work and incidentals necessary to remove and reinstall the existing sign assembly as indicated on the plans, summaries, and/or as directed by the Engineer

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

SPECIAL NOTE FOR APPROACHES AND BACK OF RADIUS

It will be the responsibility of the Contractor to surface all approaching roadways to the back of radius, as determined by the Engineer. No additional compensation will be made for this surfacing, but will be incidental to the paving bid items included on the Paving Summary.

SPECIAL NOTE FOR FINE MILLING

Perform Fine Milling at areas outlined in the Typical Sections and as directed by the Engineer.

A. Equipment. Provide a cold milling machine with a fine tooth milling drum and an electronic grade control system. The tool spacing of the drum shall not exceed 3/8 inch. The machine shall be equipped with a grade control system capable of determining a mean value from a minimum of three grade sensors. The sensors shall span a minimum length of 20 feet longitudinally. The drum must be capable of producing a macrotexture measurement greater than or equal to 9.5 inches as described in C. Testing.

B. Construction. The milling machine shall be operated as a speed and drum revolution per minute such that the macrotexture measurement is greater than or equal to 9.5 inches as described in C. Testing and the milled pavement profile does not vary longitudinally more than ¼ inch from a 16' straight edge. Maintain the milling drum such that the cross-slope does not vary more than 1/8 inch from a 10 foot straightedge. Milling shall be performed so that the cross-slope breaks between driving lanes and shoulders remain at their existing locations. Depth of milling shall be set so as to remove rutting, rumble strips, and profile errors. Contractor will take possession of all millings from milling operations. The milled surface shall be swept clean of all loose material after milling and prior to resurfacing. Prior to resurfacing, allow traffic to drive on the milled surface for a minimum of 5 days to permit the removal of fine dust from the milled surface.

C. Testing. Testing shall be performed to determine the macrotexture of the milled pavement surface at a random location chosen in accordance with Kentucky Method KM 64-113-14. Test area shall be cleaned with a stiff wire and/or soft bristle brush and protected with a wind screen as necessary. Pour 200 mL of Type 1 glass beads (meeting AASHTO M247) from a height of 4 inches or less onto the milled pavement surface. Using a round plexiglass disk (8 inches in diameter x ½ inch thick) with a round handle, place gently on the pile of beads and spread in a slow circular motion to disperse the beads in a circular area and create a defined crest around the perimeter. Continue spreading until the beads are well dispersed and the disk rides on top of the high points of the milled pavement surface. Measure the diameter of the pile in inches at 0 degrees, 45 degrees, 90 degrees and 135 degrees. Determine the macrotexture measurement in inches by adding the four measurements and dividing by four. Frequency of testing shall be a minimum of once daily and additional testing will be performed as determined necessary by the project engineer.

D. Measurement. The Department will measure Fine Milling in Sq. Yds. of surface milled.

E. Payment. Payment at the contract unit price per Sq. Yd. of Asphalt Pavement Milling and Texturing (Fine Milling) shall be full compensation for all equipment, labor, materials, and incidentals necessary to complete the operations described herein.

SPECIAL NOTE FOR POLISH-RESISTANT AGGREGATE IN NO 4 THINLAY ASPHALT MIXTURES

Contrary to Section 409.03.03 of the *Standards and Specifications*, for 4.75mm asphalt mixtures requiring Class D aggregate, recycled asphalt pavement (RAP) shall not exceed 15% of cold feed percentage, and the use of recycled asphalt shingles (RAS) is prohibited.

Contrary to Section 402 of the *Standards and Specifications*, Warm Mix Asphalt (WMA) will not be permitted for all 4.75mm asphalt mixtures.

Contrary to Section 403.03.01 the NO 4 surface mixtures, do not place the mixture between September 30 and May 1 unless requested in writing and approved by the engineer.

SPECIAL NOTE FOR THERMOPLASTIC PAVEMENT MARKINGS REMOVAL

Remove existing Thermoplastic Pavement Markings just prior to placement of the Overlay as directed by the Engineer. The Department will not measure removal of the Thermoplastic Pavement Markings, but shall be incidental to the thermoplastic bid items being placed.

Special Note for Completion Date & Liquidated Damages

I. COMPLETION DATE

The ultimate fixed completion date for this project will be October 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 and/or shoulder 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.

Trees and/or bushes that are **5 inches** or greater (diameter at breast height) shall not be cut or trimmed between **April 1st and October 14th**. Any trees and/or bushes that are cut or trimmed between **April 1st and October 14th** will NOT receive payment at the contract unit price. Furthermore, failure to adhere to these restrictions shall result in Liquidated Damages in the amount of **$392** per affected tree. Activities that are a part of this contract that do not involve the initial trimming and/or cutting of trees and/or bushes will be permitted under the ultimate fixed completion date.

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

SPECIAL NOTE FOR NON-TRACKING TACK COAT

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

2. MATERIALS, EQUIPMENT, AND PERSONNEL.

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

2.1.1 Provide a tack conforming to the following material requirements:

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

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

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

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

3. CONSTRUCTION.

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

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

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

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

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

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

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

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

Revised: May 23, 2022

COORDINATION OF WORK WITH OTHER CONTRACTS

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

1-3193 Coordination Contracts
01/02/2012

SPECIAL NOTE FOR DOUBLE ASPHALT SEAL COAT

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

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

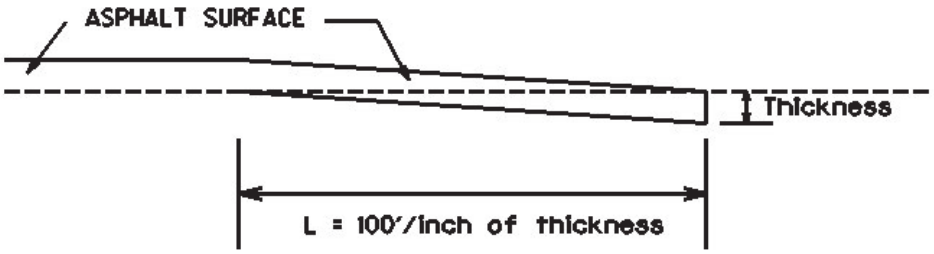
1-3215 Double Asphalt Seal Coat
01/02/2012

SPECIAL NOTE FOR EDGE KEY

FOR USE FROM BEGIN OF PROJECT TO US 68

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 square yards for **Fine Milling**, 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 = 0.75 Inches

L = 75 LF

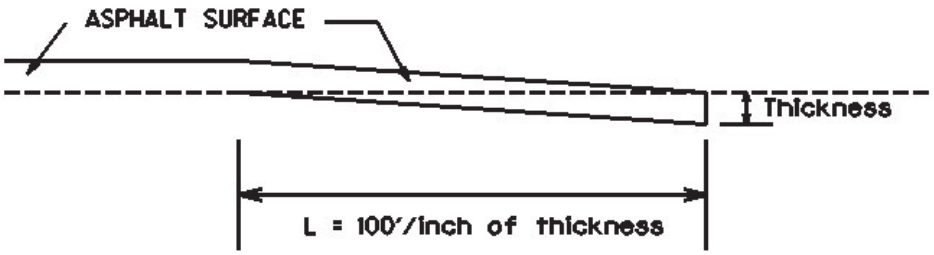
L= Length of Edge Key

SPECIAL NOTE FOR EDGE KEY

FOR USE FROM US 68 TO END OF PROJECT

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 NOTES FOR BASE FAILURE REPAIR

Repair locations listed on the summary are approximate only. The Engineer will determine actual repair locations and dimensions at the time of construction. Prior to milling and/or resurfacing, saw cut the existing pavement, asphalt surface, base, DGA, and PCC pavement (if present). Excavate to an approximate depth of 10.5 inches below the existing pavement surface level. Use all possible care to avoid damaging existing culvert pipes and any existing underground utilities. Repair or restore any damaged items at no additional cost to the Department. Waste all removed materials off the Right of Way at sites obtained by the Contractor at no additional cost to the Department. See the Special Provision for Waste and Borrow Sites.

On the same day trench is excavated, backfill the excavated area with 4 inches of Crushed Limestone Size No. 23, wrapped on the bottom and sides in Class 2 Geotextile Fabric, and 10.5 inches of Class 2 Asphalt Base 1.00D PG64-22, in 3.5 inch maximum courses, up to the existing pavement surface. Wrap Crushed Limestone Size No. 23 on all sides under earth shoulder. Compact the asphalt base to the proper compaction as required by Section 403. Seal the asphalt base with leveling and wedging. Perform all base failure repairs in such a manner that removal and replacement are completed on the same day. Do this work as one of the Contractor's first operations in order to allow further compaction by traffic. Do not mill or place new asphalt surface over repaired base failure areas until a minimum of 14 calendar days have elapsed after placement of the final course of asphalt base. After the 14 calendar day waiting period, and/or when the Engineer determines the base failure repair areas have sufficiently stabilized, begin milling and/or resurfacing operations. Prior to milling and/or constructing the new asphalt surface, level and wedge any settlement of the repair areas.

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

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

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

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

1-3725 Typical Section Dimensions
01/02/2012

TRAFFIC CONTROL PLAN
JESSAMINE COUNTY
KY 169
ITEM NO. 7-9014.00

TRAFFIC CONTROL GENERAL

Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic" as set forth in the Standard and Supplemental Specifications and the Standard and Sepia Drawings, current editions, unless otherwise provided in these notes. The lump sum bid price to "Maintain and Control Traffic" shall also include, but is not limited to, the following items and operations:

A. All labor and materials necessary for construction and maintenance of traffic control devices and markings.
B. All flag persons and traffic control devices such as, but not limited to, flashers, barricades and vertical panels, plastic drums (steel drums will not be permitted), and cones, necessary for the control and protection of vehicular and pedestrian traffic as specified in these notes, the proposal, the Manual on Uniform Traffic Control Devices (MUTCD) current edition, or the Engineer.

Contrary to Section 106.01, furnish new, or used in like new condition, traffic control devices at the beginning of the work and maintain 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 when no longer needed. Traffic control devices will conform to current MUTCD.

PROJECT PHASING & CONSTRUCTION PROCEDURES

No lane closures will be allowed on the following dates:

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
Christmas Holiday	3 pm Friday, December 22, 2023 – 8 pm Monday, December 25, 2023
New Year's Day Holiday	7 am Saturday, December 30, 2023 – 8 pm Monday, January 1, 2024
Easter Weekend	3 pm Friday, March 29, 2024 – 8 pm Sunday, March 31, 2024
Memorial Day Weekend	3 pm Friday, May 24, 2024 – 8 pm Monday, May 27, 2024
Independence Day	7 am Thursday, July 4, 2024 – 8 pm Sunday, July 7, 2024
Labor Day Weekend	3 pm Friday, August 30, 2024 – 8 pm Monday, September 2, 2024

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

The Contractor shall maintain a two-lane traveled way with a minimum lane width of 10 feet. However, during working hours, alternating one-way traffic may be allowed at the discretion of the Engineer, provided adequate signing and flag persons are in place. When maintaining alternating one-way traffic provide a minimum clear lane width of 10 feet; however, provide for the passage of vehicles of up to 16 feet in width. If traffic should be stopped due to construction operations, and a school bus or emergency vehicle on an official run arrives on the scene, make provisions for the passage of the school bus or emergency vehicle as quickly as possible.

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

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

The Contractor shall 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 residential or farm entrance is blocked to the minimum length of time required for actual operations, do not extend the time for the Contractor's convenience, and in no case allow the blockage to exceed 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.

LANE AND SHOULDER CLOSURES

When the road is open to through traffic, do not leave lane closures in place during non-working hours. Maintain lane closures only during hours of actual operations. Reduce lane closures to a shoulder closure, or remove as appropriate, when active operations do not require a lane closure. The Engineer will permit shoulder closures during non-working hours; however do not park equipment or store materials on a closed shoulder during non-working hours. The Engineer may designate days and hours when lane and/or shoulder closures will not be allowed.

Provide a minimum distance of 1 mile between lane closures when closing lanes to traffic in more than one location.

Contrary to Section 112.04.17, lane closures, whether long term or short term, will not be measured for payment and will be incidental to the bid item "Maintain and Control Traffic".

TEMPORARY SIGNS

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

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

PORTABLE CHANGEABLE MESSAGE SIGNS

Provide portable changeable message sign (PCMS) at least two weeks prior to construction at the locations approved by the Engineer. The messages required to be provided will be designated by the Engineer. The PCMS will be in operation at all times. In the event of damage or mechanical/electrical failure, the contractor will repair or replace the PCMS immediately. The Department will not take possession of the signs upon completion of the work. The Department will measure for payment the maximum number of PCMS in concurrent use at the same time on a single day on all sections of the contract. PCMS will be paid for once, no matter how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for damaged changeable message signs directed by the Engineer to be replaced due to poor condition or readability will not be measured for payment.

BARRICADES

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

PAVEMENT MARKINGS

If there is to be a deviation from the existing striping plan, the Engineer will furnish the Contractor a striping plan prior to placement of final surface course. Removal of pavement markings will be by water blasting process to the satisfaction of the Engineer. Place temporary and permanent striping in accordance with Section 112 with following exception for Temporary Striping:

> If the Contractor's operations or phasing requires temporary markings that must subsequently be removed from the final surface course or existing surface to remain in place, 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 is expected to cross in a lane change situation with an elevation difference greater than 1 ½". Place Warning signs (MUTC 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 unsurfaced 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" – Not protection required. Warning signs should be placed in advance and throughout the drop-off area.
>
> 2" to 4" – Place plastic drums, vertical panels, or barricades every 50 feet. During daylight working hours only, the Engineer will allow the Contractor to use cones in lieu of plastic drums, panels, and barricades. Spacing of devices on tapered sections shall be in accordance with MUTCD, current edition. When work is not active in the drop-off area, wedge the drop-off with DGA or asphalt mixture for leveling and wedging with 1:1 or flatter slope in daylight hours, or 3:1 or flatter slope during nighttime hours.
>
> Greater than 4" – Positive separation or wedge with a 3:1 or flatter slope. If there is five feet or more distance between the edge of pavement and drop-off, then drums, panels, or barricades may be used. If the drop-off is greater than 12 inches, positive separation is strongly encouraged. If concrete barriers are used, special reflective devices or steady burn lights should be used for overnight installations. Barricades may be used if the drop-off is greater than 12 inches.

USE AND PLACEMENT OF CHANGEABLE MESSAGE SIGNS

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

Application

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

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

CMS should not be used for:

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

Messages

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

- Visible for at least ½ mile under ideal daytime and nighttime conditions
- Legible from all lanes a minimum of 650 feet
- Entire message readable twice while traveling at the posted speed
- No more than two message panels should be used (three panels may be used on roadways where vehicles are traveling less than 45 mph). A panel is the message that fits on the face of the sign without flipping or scrolling.
- Each panel should convey a single thought; short and concise
- Do not use two unrelated panels on a sign
- Do not use the sign for two unrelated messages
- Should not scroll text horizontally or vertically
- Should not contain both the words left and right
- Use standardized abbreviations and messages
- Should be accurate and timely
- Avoid filler/unnecessary words and periods (hazardous, a, an, the)
- Avoid use of speed limits
- Use words (not numbers) for dates

Placement

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

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

Standard Abbreviations

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

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

Standard Abbreviations (cont)

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

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

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

Typical Messages

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

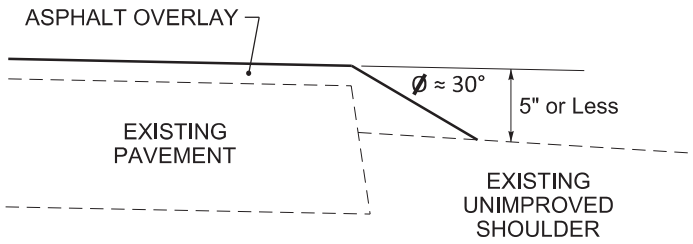
Reason/Problem	Action
ACCIDENT	ALL TRAFFIC EXIT RT
ACCIDENT/XX MILES	AVOID DELAY USE XX
XX ROAD CLOSED	CONSIDER ALT ROUTE
XX EXIT CLOSED	DETOUR
BRIDGE CLOSED	DETOUR XX MILES
BRIDGE/(SLIPPERY, ICE, ETC.)	DO NOT PASS
CENTER/LANE/CLOSED	EXPECT DELAYS
DELAY(S), MAJOR/DELAYS	FOLLOW ALT ROUTE
DEBRIS AHEAD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

Typical Messages (cont)

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

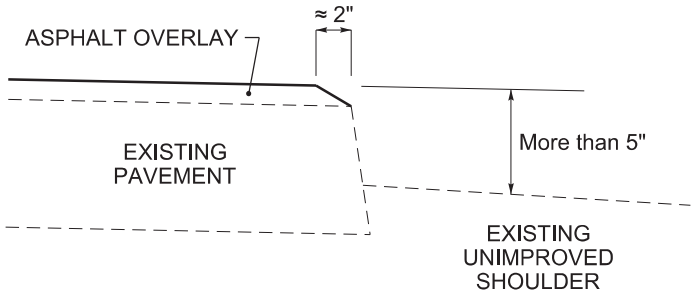
DURABLE PAVEMENT EDGE DETAIL

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



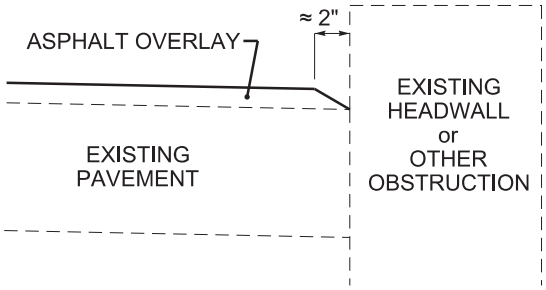
DURABLE PAVEMENT EDGE DETAIL

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



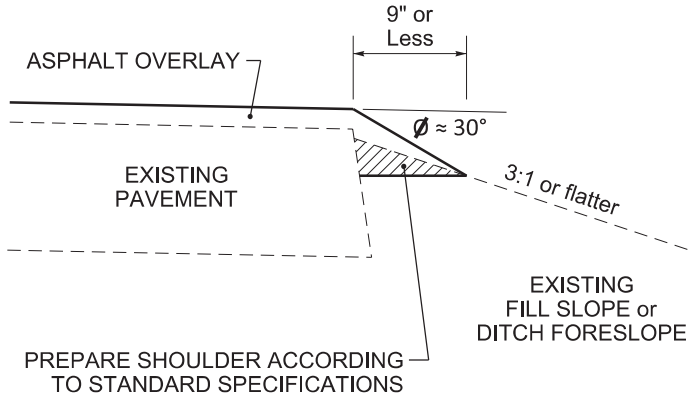
DURABLE PAVEMENT EDGE DETAIL

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



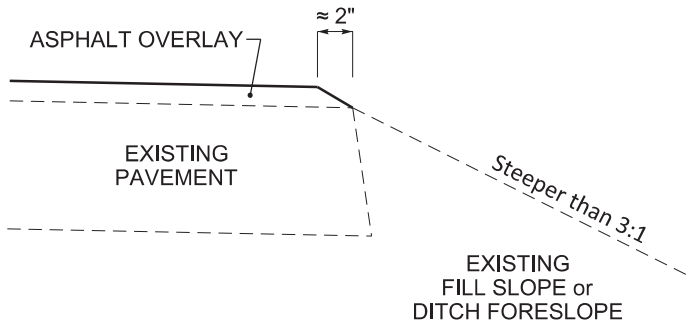
DURABLE PAVEMENT EDGE DETAIL

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



DURABLE PAVEMENT EDGE DETAIL

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



NOTES

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

DRAWING NOT TO SCALE

DURABLE PAVEMENT EDGE DETAILS

SPECIAL NOTE FOR TRAFFIC SIGNAL LOOP DETECTORS

1.0 DESCRIPTION. Be advised that there are existing traffic signal loop detectors within the construction limits of this project. Except as specified herein, perform traffic signal loop replacement in accordance with the Department's Standard/Supplemental Specifications, Special Provisions, Special Notes, and Standard/Sepia Drawings, current editions and as directed by the Engineer. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for replacement of traffic signal loop installation(s) and all other work specified as part of this contract.

1.1 Pre-bid Requirements. Conform to Subsection 723.03.17

2.0 MATERIALS. Except as specified herein, furnish materials in accordance with Subsection 732.02 and Section 835. Provide for materials to be sampled and tested 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 this Special Note.

2.1 Maintain and Control Traffic. See Traffic Control Plan.

2.2 Sand. Furnish natural sand meeting the requirements of Subsection 804.04.01.

2.3 Seeding. Furnish Seed Mix Type I.

2.4 Loop Saw Slot and Fill. Furnish loop sealant, backer rod, and non-shrink grout according to the Saw Slot Detail.

2.5 Junction Boxes. Furnish junction box type B, #57 aggregate, and geotextile filter type IV according to junction box detail.

2.6 Cable No. 14/1 Pair (Lead-in). Furnish cable that is specified in Section 835. Cable shall be ran splice free. This shall include splice kits to connect to the loop wire.

2.7 Conduit. Furnish and install appropriate conduit from transitions to the roadway, junction boxes and poles. See details below.

3.0 CONSTRUCTION. Except as specified herein, install and test Traffic Signal Loop Detectors in accordance with Section 723 and the drawings.

3.1 Testing. Conform to Subsection 723.03.17 (A)

3.2 Coordination. Conform to Subsection723.03.17 (B)

3.3 Connection. Conform to Subsection 723.03.17 (C)

3.4 Maintain and Control Traffic. See Traffic Control Plan.

3.5 Milling. Conform to Subsection 723.03.17 (F)

3.6 Loop Saw Slot and Fill. Conform to Subsection 723.03.13 (A).

3.7 Backfilling and Disturbed Areas. Conform to Subsection 723.03.11.

3.8 Removal. Conform to Subsection 723.03.16.

3.9 Property/Roadway Damage. Conform to Subsection 723.03.17 (J).

3.10 Right-of-Way Limits. Conform to Subsection 723.03.17 (K).

3.11 Utility Clearance. Conform to Subsection 716.03.01.

3.12 Control. 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 permit other contractors, state forces, 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 each other's work will be reduced to a minimum. The Contractor agrees to make no claims against the Department for additional compensation due to delays or other conditions 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 ensure the completion of the work in general harmony and in a satisfactory manner, and the Engineer's decision shall be final and binding upon the Contractor.

3.13 Bore and Jack. Conform to Subsection 723.03.06 (I).

3.14 Open Cut Roadway. Conform to Subsection 723.03.06 (I).

4.0 MEASUREMENT. See Subsection 723.04 for bid item notes. Additional bid items include the following:

4.1 Loop Test. The Department will measure the quantity as each individual unit loop tested. The Department will not measure disconnection, reconnection, traffic control, re-splicing per specifications, before and after testing per note above, and any associated hardware for payment and will consider them incidental to this item of work.

4.2 Remove Signal Equipment. The department will measure the quantity by each. The department will not measure backfilling and the disposal or transportation of equipment and materials associated with any structural or electrical component of the signal system including, but not limited to pole bases, poles, junction boxes, cabinets, and wood poles for payment and will consider them incidental to this item of work.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities of listed items according to Subsection 723.05 in addition to the following:

Code	Pay Item	Pay Unit
Conduit 1"	4792	Linear Foot
PVC Conduit – 1 ¼ inch – sch 80	24900EC	Linear Foot

Traffic Signal Loop Detectors
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PVC Conduit – 2 inch – sch 80	24901EC	Linear Foot
Conduit 2”	4795	Linear Foot
Electrical Junction Box type B	4811	Each
Loop Test	24963ED	Each
Trenching and Backfilling	4820	Linear Foot
Loop Wire	4830	Linear Foot
Cable-No. 14/1 Pair	4850	Linear Foot[1]
Loop Saw Slot and Fill	4895	Linear Foot[1]
Bore and Jack Conduit	21543EN	Linear Foot[3]
Open Cut Roadway	4821	Linear Foot[3]
Remove Signal Equipment	24955ED	each

The Department will consider payment as full compensation for all work required under these notes and the Standard Specifications.
Contrary to section 723:
SUBSECTION: 03.13 Loop Installation.
REVISION: Replace first sentence note with the following:
twist unshielded loop wire (imsa 51-7) with 3 to 5 turns from the start of homerun to the inside conduit, junction box, cabinet, or pole. Twist unshielded loop wires (imsa 51-7) with 3 to 5 turns per foot from the start of the homerun to the junction box, cabinet, or pole. Slot can be widen to .5" to .625" to help with the installation of the twisted wire.

Traffic Signal Loop Detectors
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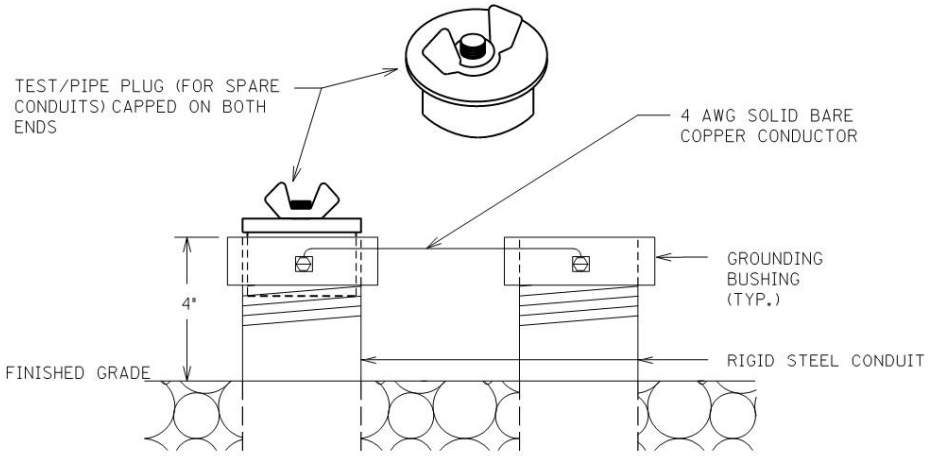

TEST/PIPE PLUG(FOR SPARE CONDUITS) AND GROUNDING DETAIL

Traffic Signal Loop Detectors
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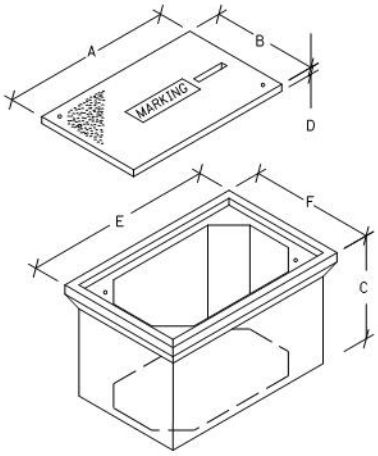
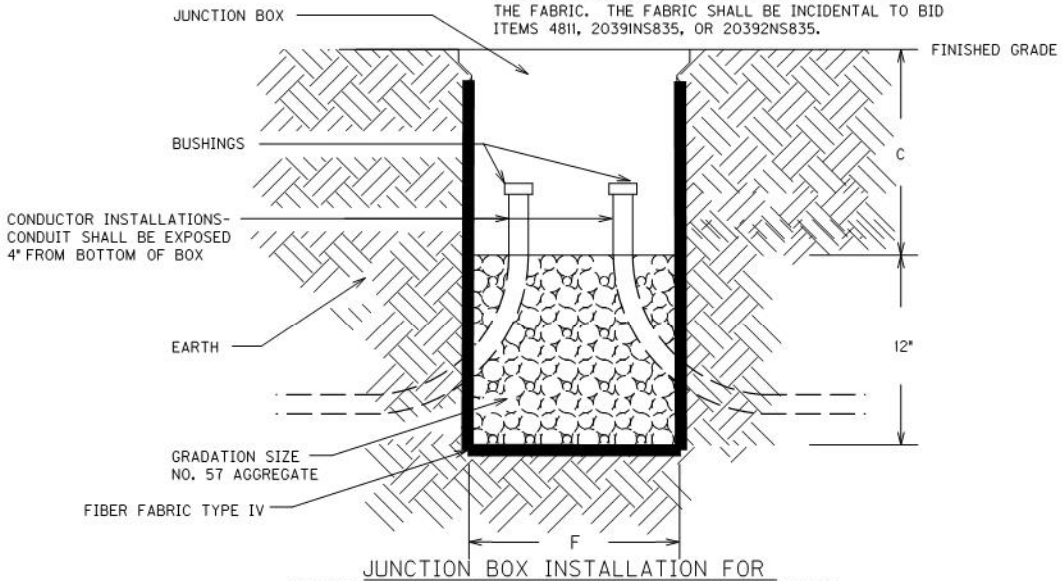


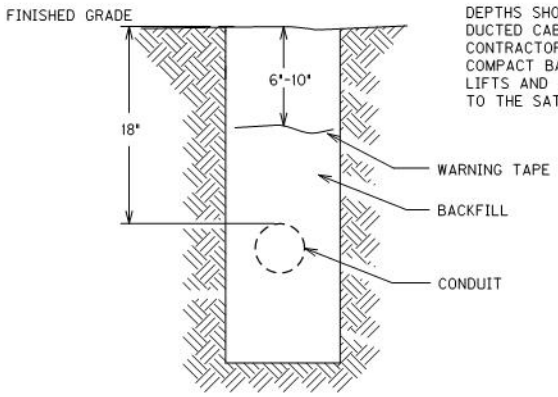
JUNCTION BOX DIMENSIONS (NOMINAL)						
	A	B	C	D	E	F
TYPE A	23"	14"	27"	2"	25"	15"
TYPE B	18"	11"	12"	1¾" *	20"	13"
TYPE C	36"	24"	30"	3"	38"	26"

* MINIMUM
NOTE: STACKABLE BOXES ARE PERMITTED

BEFORE THE INSTALLATION OF THE #57 AGGREGATE AND JUNCTION BOX, THE CONTRACTOR SHALL INSTALL GEOTEXTILE FILTER FABRIC TYPE IV IN THE HOLE. THE FABRIC SHALL EXTEND TO JUST BELOW THE LIP OF THE JUNCTION BOX AND SHALL BE CONTINUOUSLY ADHERED TO THE EXTERIOR OF THE BOX WITH ADHESIVE. ANY LOCATIONS WHERE CONDUITS ENTER THE BOX, THE FABRIC SHALL BE 'X CUT' ONLY AS MUCH AS NECESSARY TO ALLOW PASSAGE OF EACH INDIVIDUAL CONDUIT THROUGH THE FABRIC. THE FABRIC SHALL BE INCIDENTAL TO BID ITEMS 4811, 2039INS835, OR 20392NS835.



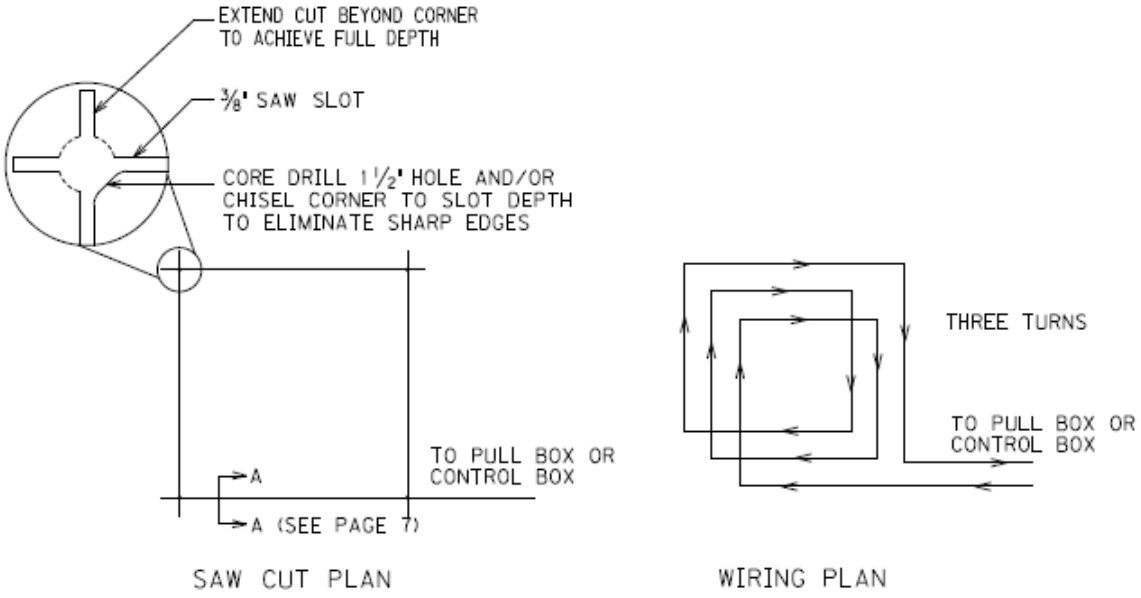
JUNCTION BOX INSTALLATION FOR
CONVENTIONAL LIGHTING OR TRAFFIC SIGNALS



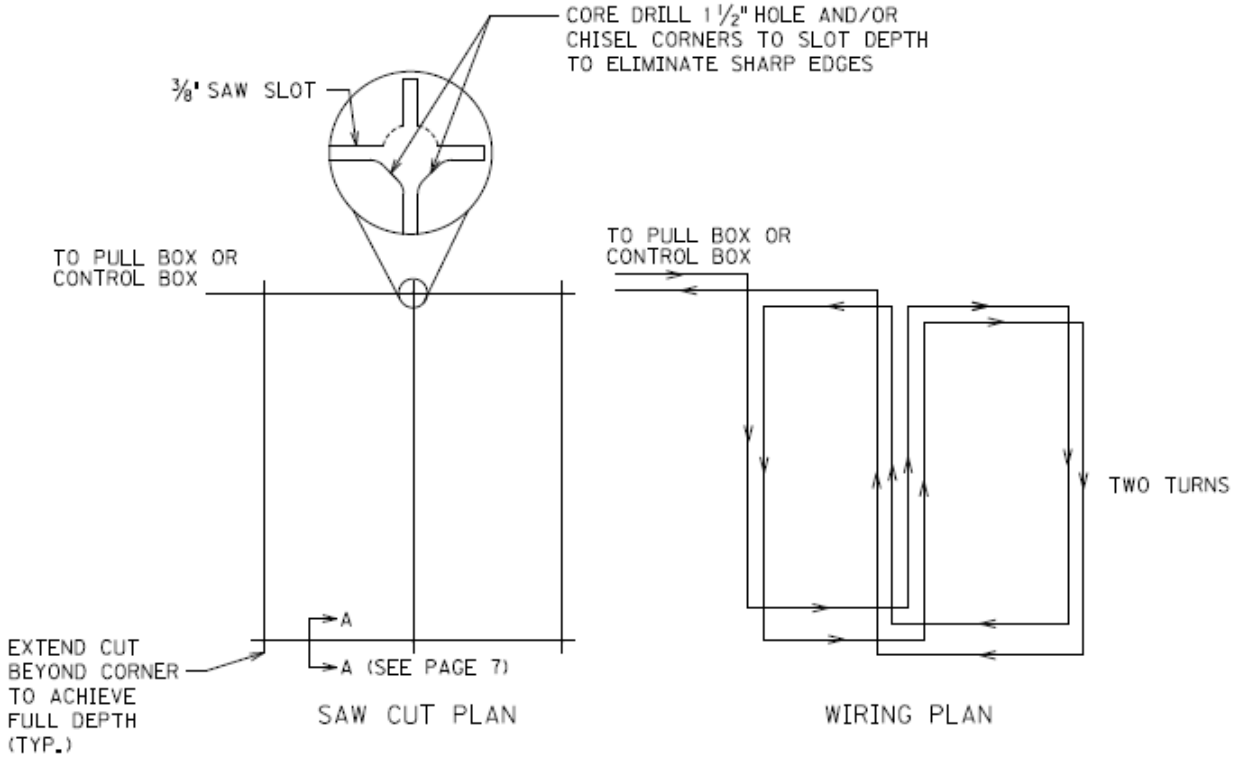
DEPTHS SHOWN FOR CONDUIT AND DUCTED CABLE ARE MINIMUMS. CONTRACTOR SHALL PLACE AND COMPACT BACKFILL IN 9" MAXIMUM LIFTS AND RETORE DISTURBED AREA TO THE SATISFACTION OF THE ENGINEER.

CONDUIT AND WARNING TAPE TRENCH

Traffic Signal Loop Detectors
Page 6 of 9

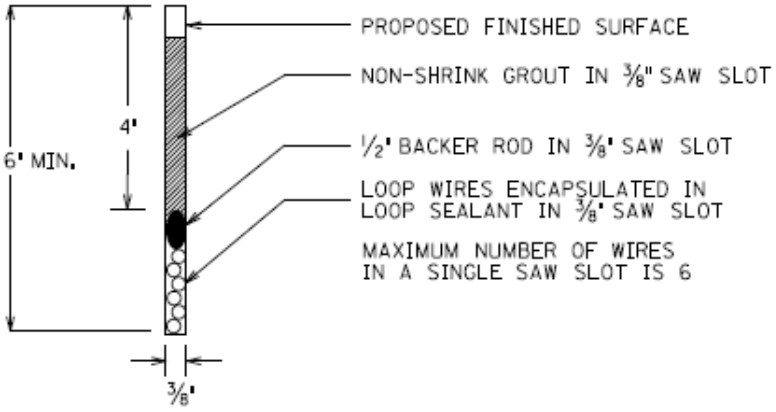


6'X6' LOOP

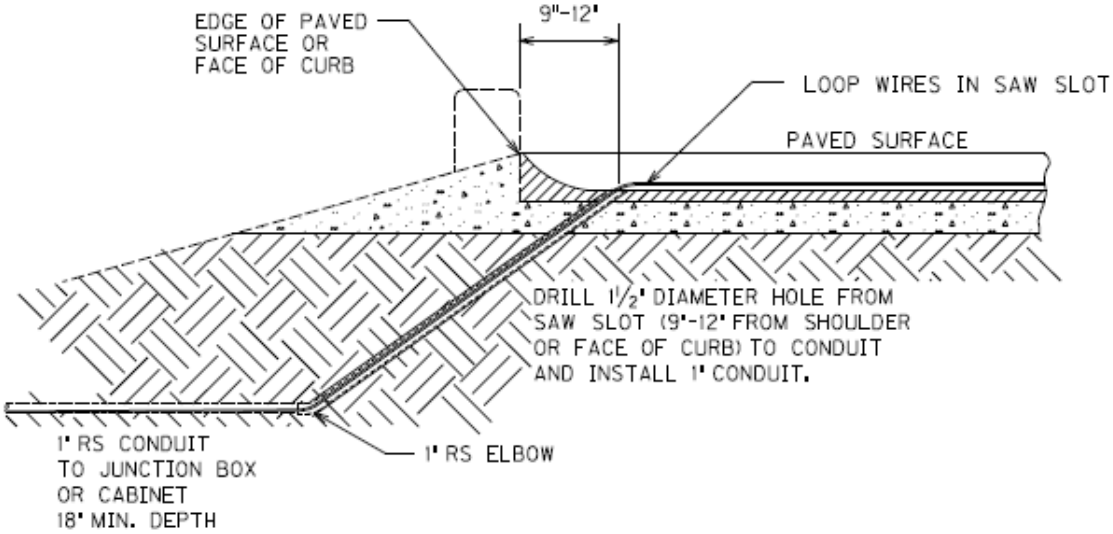


6'X30' QUADRAPOLE LOOP

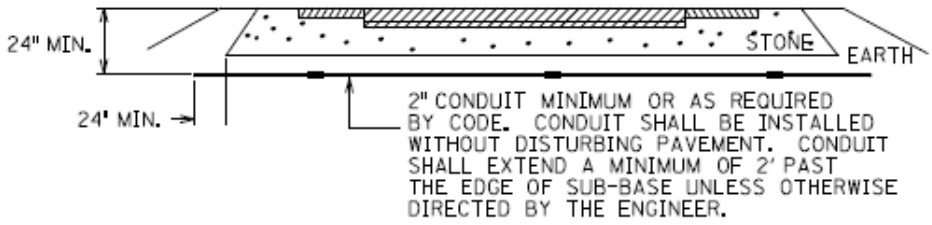
Traffic Signal Loop Detectors
Page 7 of 9



SECTION A-A (SAW SLOT DETAIL)

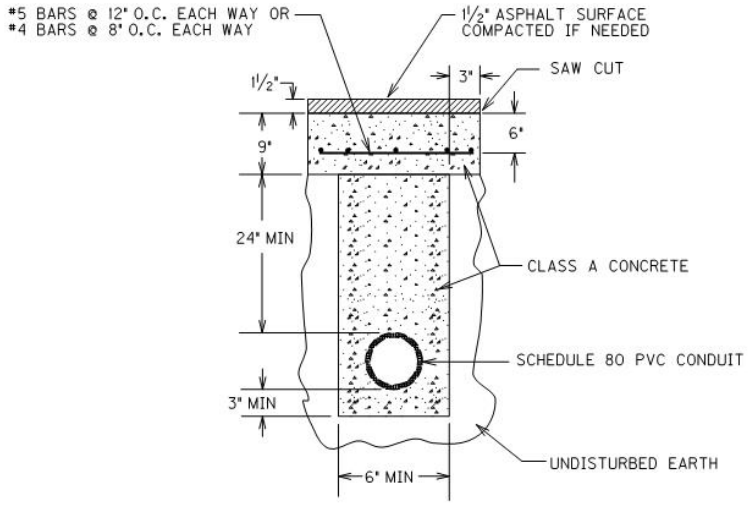


SAW SLOT EDGE OF PAVEMENT TRANSITION

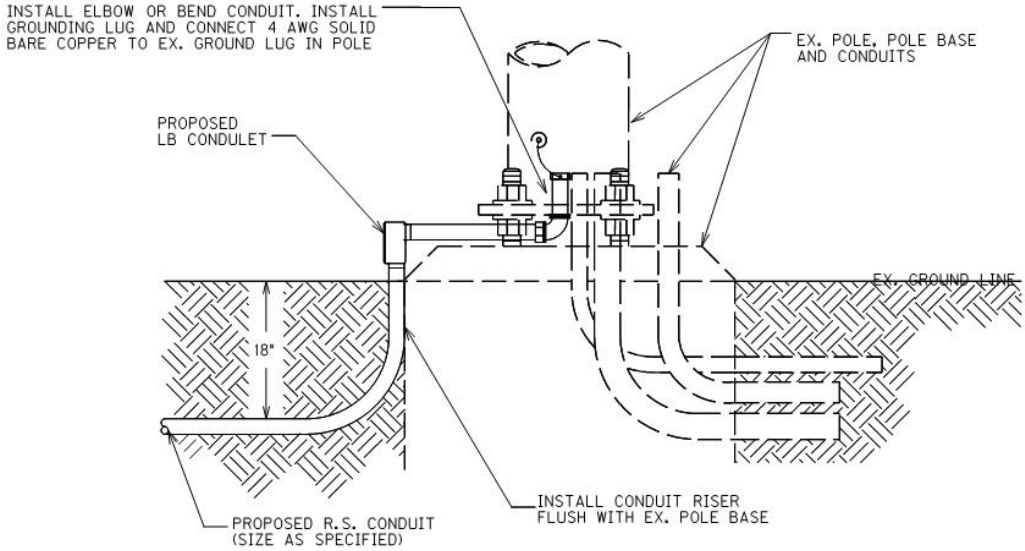


CONDUIT UNDER EXISTING PAVEMENT DETAIL

Traffic Signal Loop Detectors
Page 8 of 9

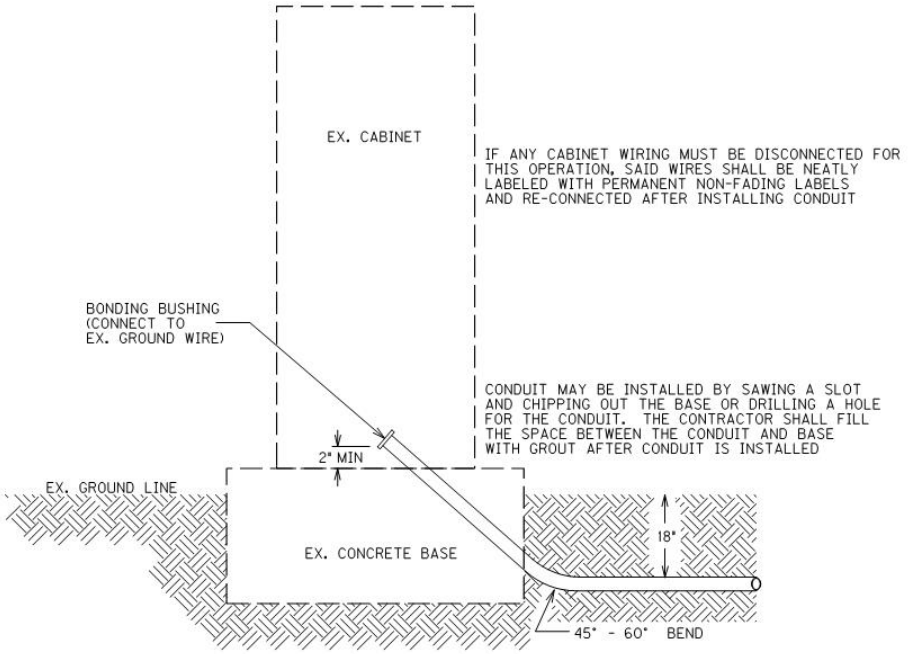


OPEN CUT PAVEMENT DETAIL



CONDUIT INSTALLATION IN EX. POLE BASE

Traffic Signal Loop Detectors
Page 9 of 9



CONDUIT INSTALLATION IN EX. CABINET BASE

Update: 4-5-2022

Special Note for Bridge Demolition, Renovation and Asbestos Abatement

If the project includes any bridge demolition or renovation, the successful bidder is required to notify Kentucky Division for Air Quality (KDAQ) via filing of form (DEP 7036) a minimum of 10 working days prior to commencement of any bridge demolition or renovation work.

Any available information regarding possible asbestos containing materials (ACM) on or within bridges to be affected by the project has been included in the bid documents. These are to be included with the Contractor's notification filed with the KDAQ. If not included in the bid documents, the Department will provide that information to the successful bidder for inclusion in the KDAQ notice as soon as possible. If there are no documents stating otherwise, the bidders should assume there are no asbestos containing materials that will in any way affect the work.

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
transportation.ky.gov

Andy Beshear
GOVERNOR

Jim Gray
SECRETARY

Asbestos Inspection Report

To: Tyler Reynolds

District: Central Office

Date: August 30, 2022

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Jessamine 07-9014.00

Structure ID: Jessamine 07-0169

Structure Location: KY-169 (Keene Road) over Jessamine Creek

Sample Description: There were no suspect materials present on this structure.

Inspection Date: August 29, 2022

Results and Recommendations

There were no suspect materials observed during this inspection; No samples collected.

*** It is recommended that this report accompany the 10-Day Notice of Intent for Demolition (Notification Form DEP 7036) which is to be submitted to the Kentucky Division of Air Quality prior to abatement, demolition, or renovation of any building or structure in the Commonwealth.

ENVIRONMENTAL TRAINING CONCEPTS, INC

P.O Box 99603 Louisville, KY 40269

(502)640-2951

Certification Number: ETC-AIR-031522-00137

O'Dail Lawson

has on 03-15-2022, attended and successfully completed the requirements and passed the examination with a score of 70% of better on the entitled course.

ASBESTOS INSPECTOR REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the Commonwealth of Kentucky, the Indiana Department of Environmental Management, Tennessee Department of Environment & Conservation and The Arkansas Department of Environmental Quality. The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 1220 KY Mills Drive, Louisville, KY

Name – Training Manager

Expiration Date: 03-15-2023

Name - Instructor

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)
7-9014.00	Jessamine	12FO FD52 057 1075601R	HSIP 5191 (013)

PROJECT DESCRIPTION

Low cost safety inprovements on KY 169 from MP 11.978 to MP 16.555 in Jessamine County.

☐ **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	4	EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired			
Signed Deed	4		
Condemnation	0		
Signed ROE	0		

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

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Cecil Smith
Signature		Signature	Digitally signed by Cecil D. Smith Date: 2022.10.18 11:38:02 -04'00'
Date		Date	10/18/2022

Right of Way Director		FHWA	
Printed Name		Printed Name	
Signature	2022.10.18 13:24:19 -04'00'	Signature	No Signature Required as per FHWA-KYTC Current Stewardship Agreement
Date		Date	

UTILITIES AND RAIL CERTIFICATION NOTE

Jessamine County
FD04 057 0169 012-017
Safety Improvements along KY 169
Item No. 7-9014.00

GENERAL PROJECT NOTE ON UTILITY PROTECTION

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

For all projects under 2000 Linear feet which require a normal excavation locate request pursuant to KRS 367.4901-4917, the awarded contractor shall field mark the proposed excavation or construction boundaries of the project (also called white lining) using the procedure set forth in KRS 367.4909(9)(k). 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.

Please 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 activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs. The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

UTILITIES AND RAIL CERTIFICATION NOTE

Jessamine County
FD04 057 0169 012-017
Safety Improvements along KY 169
Item No. 7-9014.00

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

List all applicable utilities whose facilities are present and are not to be disturbed during construction activities. List Utility Type, Utility Size, Utility Location for each.

- **POWER POLE / OVERHEAD ELECTRIC / OVERHEAD TELEPHONE / OVERHEAD FIBER AND COMMUNICATIONS**
  Power Poles are located on both left and right sides throughout project limits. Utility owners include Bluegrass Energy, Charter, LG&E/Kentucky Utilities and Windstream.
- **VARIOUS WATER MAINS**
  6" water mains are located on the right side throughout project limits. Towards the end of the job near KY 1267, the waterline switches to the left side. Utility owners include City of Nicholasville Water & Sewer and Jessamine Elkhorn Water District.
- **GAS MAIN**
  Delta Natural Gas and LG&E/Kentucky Utilities both have gas mains running parallel along KY 169. 4" gas main runs on the right side from the beginning of the project to just north of Paddock Road.

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

Charter: Relocating underground cable at Paddock Drive
Bluegrass Energy: Relocating pole at Paddock Drive
Windstream: Removing pole and connecting to relocated Bluegrass Energy pole
Kentucky Utilities and Windstream: Relocating various power poles between US-68 and KY-1267.
Charter, Bluegrass Energy, Windstream, and KU utilities were cleared by October 13, 2022

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

N/A

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

City of Nicholasville Water: Install 12" Encasement Pipe, 6" Water Main, and Gate Valves near Paddock Dr

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

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

UTILITIES AND RAIL CERTIFICATION NOTE

Jessamine County
FD04 057 0169 012-017
Safety Improvements along KY 169
Item No. 7-9014.00

UNDERGROUND FACILITY DAMAGE PROTECTION – BEFORE YOU DIG

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

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

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

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

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

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

UTILITIES AND RAIL CERTIFICATION NOTE

Jessamine County
FD04 057 0169 012-017
Safety Improvements along KY 169
Item No. 7-9014.00

AREA UTILITIES CONTACT LIST

Utility Company/Agency	Contact Name	Contact Information
1. AT&T	Don Garr	(502) 741-8374 drgarr@hughes.net
2. Bluegrass Energy	Tanya Reed	(859) 621-4764 tanyar@bgenergy.com
3. City of Nicholasville Water & Sewer	Tim Cross	(859) 885-9473 tim.cross@nicholasville.com
4. Delta Natural Gas	Brian Sidwell	(859) 744-6171 bsidwell@deltagas.com
5. Jessamine Elkhorn Water District	Richard Decker	(859) 881-0589 richard.decker17@gmail.com
6. Kentucky Utilities	Rodney Brock	(859) 983-7672 rodney.brock@lge-ku.com
7. TWC/Spectrum/Charter	John Kelly Oram	(859) 519-3434 john.oram@charter.com
8. Windstream	Steve Johnson	(859) 321-2035 steve.johnson@windstream.com

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

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

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

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

PROTECTION OF EXISTING UTILITIES

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

PREQUALIFIED UTILITY CONTRACTORS

Some utility owners may require contractors that perform relocation work on their respective facilities as a part of the road contract be prequalified or preapproved by the utility owner. **Utility contractors may be added via addendum if KYTC is instructed to do so by the utility owner. Potential contractors must seek prequalification from the utility owner. Any revisions must be sent from the utility owner to KYTC a minimum of one week prior to bid opening.** Those utility owners with a prequalification or preapproval requirement are as follows:

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

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

When the list of approved subcontractors for the utility work is not provided in these general notes, the utility work can be completed by the prime contractor. If the prime contractor chooses to subcontract the

work, the subcontractor shall be prequalified with the KYTC Division of Construction Procurement in the work type of "Utilities" (I33). Those who would like to become prequalified may contact the Division of Construction Procurement at (502) 564-3500. Please Note: it could take up to 30 calendar days for prequalification to be approved. The prequalification does not have to be approved prior to the bid but must be approved before the subcontract will be approved by KYTC and the work can be performed.

CONTRACT ADMINISTRATION RELATIVE TO UTILITY WORK

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

SUBMITTALS AND CORRESPONDENCE

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

ENGINEER

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

INSPECTOR OR RESIDENT PROJECT REPRESENTATIVE

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

NOTICE TO UTILITY OWNERS OF THE START OF WORK

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

UTILITY SHUTDOWNS

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

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

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

CUSTOMER SERVICE AND LATERAL ABANDONMENTS

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

STATIONS AND DISTANCES

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

RESTORATION

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

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

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

MATERIAL

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

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

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

SECURITY OF SUPPLIED MATERIALS

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

Standard Water Bid Item Descriptions

W AIR RELEASE VALVE This bid item description shall apply to all air release valve installations of every size except those defined as "Special". This item shall include the air release valve, main to valve connecting line or piping, manhole, vault, structure, access casting or doors, tapping the main, labor, equipment, excavation, proper backfill and restoration required to install the air release valve at the location shown on the plans or as directed in accordance with the specifications and standard drawings complete and ready for use. All air release/vacuum valves on a project shall be paid under one bid item regardless of size. No separate pay items will be established for size variations. Only in the case of the uniqueness of a particular air release valve would a separate bid item be established. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

BOLLARDS This item is for payment for furnishing and installing protective guard posts at above ground utility installations. A bollard may consist of, but not limited to, a steel post set in concrete or any other substantial post material. This item shall include all labor, equipment, and materials needed for complete installation of the bollard as specified by the utility owner specifications and plans. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

NOTE: A bid code for this item has been established in standard roadway bid items and shall be used for payment of this item. The bid code is 21341ND

W CAP EXISTING MAIN This item shall include the specified cap, concrete blocking and/or mechanical anchoring, labor, equipment, excavation, backfill, and restoration required to install the cap at the location shown on the plans or as directed in accordance with the specifications. This item is not to be paid on new main installations. This pay item is only to be paid to cap existing mains. Caps on new mains are incidental to the new main. Any and all caps on existing mains shall be paid under one bid item included in the contract regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W DIRECTIONAL BORE Payment under this item is made whenever the plans or specifications specifically show directional boring is to be utilized in order to minimize the impact of open cut for the installation of water main under streets, creeks, and etc. Payment under this item shall include the specified bore pipe, labor, and equipment. No separate payment shall be made for bore pipe installed in the bore whether used as a carrier pipe or an encasement of a separate carrier pipe. This item shall also include pipe anchors at each end of the bore when specified to prevent the creep or contraction of the bore pipe. Carrier pipe installed within a bore pipe shall be paid separately under pipe items. Payment under this item shall not be size specific and no separate bid items will be established for size variations. The bore pipe sizes to be included under this item shall be as shown on the plans and/or in the specifications. Any and all directional bores in each contract shall be paid under one directional bore bid item included in the contract regardless of size. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W ENCASEMENT CONCRETE Includes all labor, equipment, excavation, concrete, reinforcing steel, backfill, restoration, and etc., to construct the concrete encasement of the water main as shown on the plans, and in accordance with the specifications and standard drawings. Payment under this item shall be in addition to the carrier pipe as paid under separate bid items. Carrier pipe is not included in this bid item. Any and all concrete encasement shall be paid under one bid item included in the contract regardless of the size of the carrier pipe or the volume of concrete or steel reinforcement as specified in the plans and specifications. No separate bid items will be established for size variations. Measurement of pay quantity shall be from end of concrete to end of concrete. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W ENCASEMENT STEEL BORED This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, labor, and equipment to bore and install the encasement in accordance with the plans and specifications, complete and ready for use. The size shall be the measured internal diameter of the encasement pipe. The sizes of encasement to be paid under the size ranges specified in the bid items shall be as follows:

Range 1 = All encasement sizes greater than 2 inches to and including 6 inches
Range 2 = All encasement sizes greater than 6 inches to and including 10 inches
Range 3 = All encasement sizes greater than 10 inches to and including 14 inches
Range 4 = All encasement sizes greater than 14 inches to and including 18 inches
Range 5 = All encasement sizes greater than 18 inches to and including 24 inches
Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately; but, shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W ENCASEMENT STEEL OPEN CUT This item shall include the steel encasement pipe size as specified on the plans and in the specifications, casing spacers, end seals, labor, and equipment to open cut and install the encasement in accordance with the plans and specifications, complete and ready for use. The size shall be the measured internal diameter of the encasement pipe. The size encasement to be paid under the size ranges specified in the bid items shall be as follows:

Range 1 = All encasement sizes greater than 2 inches to and including 6 inches
Range 2 = All encasement sizes greater than 6 inches to and including 10 inches
Range 3 = All encasement sizes greater than 10 inches to and including 14 inches
Range 4 = All encasement sizes greater than 14 inches to and including 18 inches
Range 5 = All encasement sizes greater than 18 inches to and including 24 inches
Range 6 = All encasement sizes greater than 24 inches

(Encasement sizes of 2 inches internal diameter or less shall not be paid separately; but, shall be considered incidental to the carrier pipe.) Payment under this bid item shall not include the carrier pipe. Carrier pipe shall be paid under a separate bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W FIRE HYDRANT ADJUST Includes all labor, equipment, excavation, materials, and backfill to adjust the existing fire hydrant using the fire hydrant manufacturer's extension kit for adjustments of 18" or less. Adjustments greater than 18" require anchoring couplings and vertical bends to adjust to grade. The Contractor will supply and install all anchor couplings, bends, fire hydrant extension, concrete blocking, restoration, granular drainage material, etc, needed to adjust the fire hydrant complete and ready for use as shown on the plans, and in accordance with the specifications and standard drawings. This also includes allowing for the utility owner inspector to inspect the existing fire hydrant prior to adjusting, contractor returning unusable fire hydrants to the utility owner warehouse and picking up a replacement hydrant. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete and ready for use.

W FIRE HYDRANT ASSEMBLY Includes all labor, equipment, new fire hydrant, isolating valve and valve box, concrete pad around valve box (when specified in specifications or plans), piping, anchoring tee, anchoring couplings, fire hydrant extension, excavation, concrete blocking, granular drainage material, backfill, and restoration, to install a new fire hydrant assembly as indicated on plans and on standard drawings compete and ready for use. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W FIRE HYDRANT RELOCATE This item includes all labor and equipment to remove the existing fire hydrant from its existing location and reinstalling at a new location. This item shall include a new isolating valve and valve box, concrete pad around valve box (when required in specifications or plans), new piping, new anchoring tee, anchoring couplings, fire hydrant extensions, concrete blocking, restoration, granular drainage material, excavation, and backfill as indicated on plans, specifications, and on standard drawings compete and ready for use. This item shall also include allowing for utility owner inspector to inspect the existing fire hydrant prior to reuse, contractor returning unusable fire hydrants to the utility owner warehouse and picking up a replacement hydrant for use, if the existing fire hydrant is determined unfit for reuse. No additional payment will be made for rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W FIRE HYDRANT REMOVE This bid item includes removal of an abandoned fire hydrant, isolating valve, and valve box to the satisfaction of the engineer. The removed fire hydrant, isolating valve and valve box shall become the property of the contractor for his disposal as salvage or scrap. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W FLUSH HYDRANT ASSEMBLY This item shall include the flushing hydrant assembly, service line, tapping the main, labor, equipment, excavation, backfill, and restoration required to install the flush hydrant at the location shown on the plans and in accordance with the specifications and standard drawings, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W FLUSHING ASSEMBLY This item shall include the flushing device assembly, service line, meter box and lid, tapping the main, labor, equipment, excavation, backfill, and restoration required to install the

flushing device at the location shown on the plans and in accordance with the specifications and standard drawings, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W LEAK DETECTION METER This item is for payment for installation of a water meter at main valve locations where shown on the plans for detection of water main leaks. The meter shall be of the size and type specified in the plans or specifications. This item shall include all labor, equipment, meter, meter box or vault, connecting pipes between main and meter, main taps, tapping saddles, casting, yoke, and any other associated material needed for installation of a functioning water meter in accordance with the plans and specifications, complete and ready for use. No separate payment will be made under any other contract item for connecting pipe or main taps. Any and all leak detection meters shall be paid under one bid item included in the contract regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete and ready for use.

W LINE MARKER This item is for payment for furnishing and installing a water utility line marker as specified by the utility owner specifications and plans. A line marker may consist of a post or monument of whatever materials specified and shall include markings and/or signage on same as specified by plans or specifications. This item shall include all labor, equipment, and materials needed for complete installation of the marker. This item shall be paid EACH (EA) when complete.

W MAIN POINT RELOCATE This item is intended for payment for horizontal and/or vertical relocation of a short length of an existing main at the locations shown on the plans. This bid item is to be used to relocate an existing water main at point locations such as to clear a conflict at a proposed drainage structure, pipe or any other similar short relocation situation, and where the existing pipe material is to be reused. The contractor shall provide any additional pipe or fitting material needed to complete the work as shown on the plans and specifications. The materials provided shall be of the same type and specification as those that exist. Substitution of alternative materials shall be approved by the engineer in advance on a case by case basis. New polyethylene wrap is to be provided (if wrap exists or is specified in the specifications to be used). If it is necessary that the pipe be disassembled for relay, payment under this item shall also include replacement of joint gaskets as needed. Bedding and backfill shall be provided and performed the same as with any other pipe installation as detailed in the plans and specifications. Payment under this item shall be for each location requiring an existing main to be relocated horizontally or vertically regardless of pipe size or relocation length. No separate pay items will be established for pipe size variations or relocation segment length variations. Water Main Relocate shall not be paid on a linear feet basis; but, shall be Paid EACH (EA) at each location when complete and placed in service. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

W METER This item is for payment for installation of all standard water meters of all sizes 2 inches ID or less as specified on the plans. This item shall include all labor, equipment, meter, meter box, casting, yoke, and any other associated material needed for installation of a functioning water meter in accordance with the plans and specifications, complete and ready for use. This item shall include connections to the new or existing water service line. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W METER ADJUST This item includes all labor, equipment, excavation, materials, backfill, restoration, and etc., to adjust the meter casting to finished grade (whatever size exists) at the location shown on the plans or as directed in accordance with the specifications and standard drawings complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W METER RELOCATE This item includes all labor, equipment, excavation, additional fittings, disinfection, testing, restoration, and etc., to relocate the existing water meter (whatever size exists), meter yoke, meter box, casting, and etc., from its old location to the location shown on the plans or as directed, in accordance with the specifications and standard drawings complete and ready for use. The new service pipe (if required) will be paid under short side or long side service bid items. Any and all meter relocations of 2 inches or less shall be paid under one bid item included in the contract regardless of size. Each individual relocation shall be paid individually under this item; however, no separate bid items will be established for meter size variations of 2 inches ID or less. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W METER VAULT SIZE RANGE 1 OR 2 This item is for payment for installation of an underground structure for housing of a larger water meter, fittings, and valves as required by the plans and specifications. This item shall include all labor, equipment, excavation, concrete, manhole castings or access doors, the specified meter(s) valve(s), all piping, and fitting materials associated with installing a functioning meter and vault in accordance with the plans, standard drawings, and specifications, complete and ready for use. The size shall be the measured internal diameter of the meter and piping to be installed. The size meter vault to be paid under size 1 or 2 shall be as follows:

Size Range 1 = All meter and piping sizes greater than 2 inches up to and including 6 inches
Size Range 2 = All meter and piping sizes greater than 6 inches

This item shall be paid EACH (EA) when complete. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

W METER/FIRE SERVICE COMBO VAULT This item is for payment for installation of an underground structure for housing of a water meter and fire service piping, fittings, and valves as required by the plans and specifications. This item shall include all labor, equipment, excavation, concrete, manhole castings or access doors, the specified meter(s), valve(s), all piping, and fitting materials associated with installing a functioning meter and fire service vault in accordance with the plans and specifications, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W METER WITH PRESSURE REDUCING VALVE (PRV) This item is for payment for installation of all standard water meters with pressure reducing valves (PRV) of all sizes 2 inches ID or less as specified on the plans. This item shall include all labor, equipment, meter, PRV, meter box, casting, yoke, and any other associated material needed for installation of a functioning water meter with PRV in accordance with the plans and specifications, complete and ready for use. This item shall include connections to the new or existing water service line. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced.

This item shall be paid EACH (EA) when complete.

W PIPE This description shall apply to all PVC, ductile iron, and polyethylene/plastic pipe bid items of every size and type to be used as water main, except those bid items defined as "Special". This item includes the pipe specified by the plans and specifications, all fittings (including, but not limited to, bends, tees, reducers, plugs, and caps), tracing wire with test boxes (if required by specification), polyethylene wrap (when specified), labor, equipment, excavation, bedding, restoration, testing, sanitizing, backfill, and etc., required to install the specified new pipe and new fittings at the locations shown on the plans, or as directed, in accordance with the specifications and standard drawings complete and ready for use. No additional payment will be made for rock excavation. This bid item includes material and placement of flowable fill under existing and proposed pavement, and wherever else specified on the plans or in the specifications. This item shall include all temporary and permanent materials and equipment required to pressure test and sanitize mains including, but not limited to, pressurization pumps, hoses, tubing, gauges, main taps, saddles, temporary main end caps or plugs and blocking, main end taps for flushing, chlorine liquids or tablets for sanitizing, water for testing/sanitizing and flushing (when not supplied by the utility), chlorine neutralization equipment and materials, and any other items needed to accomplish pressure testing and sanitizing the main installation. This item shall also include pipe anchors, at each end of polyethylene pipe runs when specified to prevent the creep or contraction of the pipe. Measurement of quantities under this item shall be through fittings, encasements, and directional bores (only when a separate carrier pipe is specified within the directional bore pipe). Measurements shall be further defined to be to the center of tie-in where new pipe contacts existing pipe at the center of connecting fittings, to the outside face of vault or structure walls, or to the point of main termination at dead ends. No separate payment will be made under pipe items when the directional bore pipe is the carrier pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W PLUG EXISTING MAIN This item shall include the specified plug, concrete blocking and/or anchoring, labor, equipment, excavation, backfill, and restoration required to install the plug in an existing in-service main that is to remain at the location shown on the plans or as directed in accordance with the specifications. Any and all plugs on all existing in-service mains shall be paid under one bid item included in the contract regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

NOTE: This utility bid item is not to be paid on new main installations or abandoned mains. This pay item is to plug existing in-service mains only. Plugs on new mains are incidental to the new main just like all other fittings.

NOTE: Plugging of existing abandon mains shall be performed and paid in accordance with Section 708.03.05 of KYTC Standard Specifications For Road And Bridge Construction and paid using Bid Code 01314 Plug Pipe.

W PRESSURE REDUCING VALVE This description shall apply to all pressure reducing valves (PRV) of every size required in the plans and specifications except those bid items defined as "Special". Payment under this description is to be for PRVs being installed with new main. This item includes the PRV as specified in the plans and specifications, polyethylene wrap (if required by specification), labor, equipment, excavation, anchoring (if any), pit or vault, backfill, restoration, testing, disinfection, and etc., required to install the specified PRV at the location shown on the plans in accordance with the specifications and standard drawings complete and ready for use. If required on plans and/or proposed adjoining DIP is restrained, PRVs shall be restrained. PRV restraint shall be considered incidental to the

PRV and adjoining pipe. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W PUMP STATION This item is for payment for installation of pumps and an above or below ground structure for housing of the pumps. This item shall include all pumps, piping, fittings, valves, electrical components, building materials, concrete, any other appurtenances, labor, equipment, excavation, and backfill, to complete the pump station installation as required by the plans, standard drawings, and specifications, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LUMP SUM (LS) when complete.

W REMOVE TRANSITE (AC) PIPE This item shall include all labor, equipment, and materials needed for removal and disposal of the pipe as hazardous material. All work shall be performed by trained and certified personnel in accordance with all environmental laws and regulations.
Any and all transite AC pipe removed shall be paid under one bid item included in the contract regardless of size. No separate bid items will be established for size variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid LINEAR FEET (LF) when complete.

W SERVICE LONG SIDE This bid item description shall apply to all service line installations of every size bid up to and including 2 inch inside diameter, except those service bid items defined as "Special". This item includes the specified piping material, main tap, tapping saddle (if required), and corporation stop materials, coupling for connecting the new piping to the surviving existing piping, encasement of 2 inches or less internal diameter (if required by plan or specification), labor, equipment, excavation, backfill, testing, disinfection, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and ready for use. This bid item is to pay for service installations where the ends of the service connection are on opposite sides of the public roadway and the service line crosses the centerline of the public roadway as shown on the plans. The length of the service line is not to be specified. Payment under this item shall not be restricted by a minimum or maximum length. The contractor shall draw his own conclusions as to the length of piping that may be needed. Payment under this item shall include boring, jacking, or excavating across the public roadway for placement. Placement of a service across a private residential or commercial entrance alone shall not be reason to make payment under this item. Private or commercial entrances shall not be considered a public roadway in defining payment under this item. This pay item does not include installation or relocation of meters. Meters will be paid separately. No additional payment will be made for rock excavation or for special bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W SERVICE SHORT SIDE This bid item description shall apply to all service line installations of every size up to and including 2 inch internal diameter, except those service bid items defined as "Special". This item includes installation of the specified piping material of the size specified on plans, encasement of 2 inches or less internal diameter (if required by plan or specification), main tap, tapping saddle (if required), corporation stop, coupling for connecting the new piping to the surviving existing piping, labor, equipment, excavation, backfill, testing, disinfection, and restoration, at the locations shown on the plans or as directed, in accordance with the specifications and standard drawings, complete and

ready for use. This bid item is to pay for service installations were both ends of the service connection are on the same side of the public roadway, or when an existing service crossing a public roadway will remain and is being extended, reconnected, or relocated with all work on one side of the public roadway centerline as shown on the plans. The length of the service line is not to be specified and shall not be restricted to any minimum or maximum length. Payment shall be made under this item even if the service crosses a private residential or commercial entrance; but, not a public roadway.
Private or commercial entrances shall not be considered a public roadway in defining payment under this item. The contractor shall draw his own conclusions as to the length of piping that may be needed. This pay item does not include installation or relocation of meters. Meters will be paid separately. No additional payment will be made for rock excavation or for bedding required in rock excavation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W SERVICE RELOCATE This item is for the relocation of an existing water service line where a meter is not involved, and where an existing service line can easily be adjusted by excavating alongside and moving the line horizontally and/or vertically a short distance without cutting the service line to avoid conflicts with road construction. This item shall include excavation, labor, equipment, bedding, and backfill to relocate the line in accordance with the plans and specifications complete and ready for use. Payment under this item shall be for each location requiring relocation. Payment shall be made under this item regardless of service size or relocation length. No separate pay items will be established for size or length variation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W STRUCTURE ABANDONMENT This item is to be used to pay for abandonment of larger above or below ground water structures such as meter vaults, fire pits, pump stations, tanks, and etc. Payment under this time shall not be limited to size or scope; however structures with connecting pipes of 2 inches or less shall not be paid under this item; but, shall be considered incidental to water construction, (i.e., abandonment of standard water meters up to and including 2 inches would not be paid under this item). Payment under this item shall include all labor, equipment, and compacted fill or flowable fill for abandonment of the structure in place and restoration complete. No separate bid items will be established for size or structure variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W STRUCTURE REMOVAL This item is to be used to pay for removal of larger above or below ground water structures such as meter vaults, fire pits, pump stations, tanks, and etc. Payment under this time shall not be limited to size or scope; however structures with connecting pipes of 2 inches or less shall not be paid under this item; but, shall be considered incidental to water construction, (i.e., removal of standard water meters up to and including 2 inches would not be paid under this item). Payment under this item shall include all labor, equipment, and compacted backfill for removal of the structure and restoration complete. No separate bid items will be established for size or structure variations. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W TAPPING SLEVE AND VALVE SIZE 1 OR 2 This item shall include the specified tapping sleeve, valve, valve box, concrete pad around valve box (when required in specifications or plans), labor, and equipment to install the specified tapping sleeve and valve, complete and ready for use in accordance with

the plans and specifications. The size shall be the measured internal diameter of the live pipe to be tapped. The size tapping sleeve and valve to be paid under sizes 1 or 2 shall be as follows:

Size 1 = All live tapped main sizes up to and including 8 inches
Size 2 = All live tapped main sizes greater than 8 inches

Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W TIE-IN This bid description shall be used for all main tie-in bid items of every size except those defined as "Special". This item includes all labor, equipment, excavation, fittings, sleeves, reducers, couplings, blocking, anchoring, restoration, disinfection, testing and backfill required to make the water main tie-in as shown on the plans, and in accordance with the specifications complete and ready for use. Pipe for tie-ins shall be paid under separate bid items. This item shall be paid EACH (EA) when complete.

W VALVE This description shall apply to all valves of every size required in the plans and specifications except those bid items defined as "Special". Payment under this description is to be for gate or butterfly valves being installed with new main. This item includes the valve as specified in the plans and specifications, polyethylene wrap (if required by specification), labor, equipment, excavation, anchoring (if any), valve box and valve stem extensions, backfill, concrete pad around valve box (if required by specification), restoration, testing, disinfection, and etc., required to install the specified valve at the location shown on the plans in accordance with the specifications and standard drawings complete and ready for use. If required on plans and/or proposed adjoining DIP is restrained, valves shall be restrained. Valve restraint shall be considered incidental to the valve and adjoining pipe. This description does not apply to cut-in valves. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE ANCHOR EXISTING This bid item is intended to pay for installation of restraint hardware on an existing valve where no restraint exists to hold the valve in place to facilitate tie-ins and other procedures where restraint is prudent. This work shall be performed in accordance with water specifications and plans. This bid item shall include all labor equipment, excavation, materials and backfill to complete restraint of the designated valve, regardless of size, at the location shown on the plans, complete and ready for use. Materials to be provided may include, but is not limited to, retainer glands, lugs, threaded rod, concrete, reinforcing steel or any other material needed to complete the restraint. Should the associated valve box require removal to complete the restraint, the contractor shall reinstall the existing valve box, the cost of which shall be considered incidental to this bid item. No separate bid items are being provided for size variations. All sizes shall be paid under one bid item. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE BOX ADJUST Includes all labor, equipment, valve box and valve stem extensions (if required), excavation, backfill, concrete pad around valve box (when specified in specifications or plans), restoration, and etc., to adjust the top of the box to finished grade complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE CUT-IN This bid description is for new cut-in valve installations of all sizes where installation is accomplished by cutting out a section of existing main. This item shall include cutting the existing pipe, supplying the specified valve, couplings or sleeves, valve box, concrete pad around valve box (when required in specifications or plans), labor, equipment, and materials to install the valve at the locations shown on the plans, or as directed by the engineer, complete and ready for use. Any pipe required for installation shall be cut from that pipe removed or supplied new by the contractor. No separate payment will be made for pipe required for cut-in valve installation. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

W VALVE VAULT This item is for payment for installation of an underground structure for housing of specific valve(s) as required by the plans and specifications. This item shall include all labor, equipment, excavation, concrete, manhole castings or doors, the specified valve(s), all piping, and fitting materials associated with installing a functioning valve vault in accordance with the plans, standard drawing, and specifications, complete and ready for use. Please refer to the Utility Company's Specifications. If the Company does not have specifications, KYTC's Specifications shall be referenced. This item shall be paid EACH (EA) when complete.

GENERAL SPECIFICATIONS
FOR THE CONSTRUCTION OF
WATER FACILITIES, SEWERAGE FACILITIES,
STREETS, AND STORM DRAINAGE FACILITIES
CITY OF NICHOLASVILLE, KENTUCKY

September 25, 1991
Rev. December 2011
Rev. July 2013
Rev. March 2020

Note: These specifications must be used in conjunction with Subdivision Regulations for the City of Nicholasville.

TITLE:	General Specifications for the Construction of Water Facilities, Sewerage Facilities, Streets, and Storm Drainage Facilities, City of Nicholasville, Kentucky.
DATE:	September 25, 1991 (Rev. December 2011, July, 2013, March 2020)
REGIONAL PLANNING AGENCY:	Bluegrass Area Development District
STATE PLANNING AGENCY:	Kentucky Department for Local Government
SOURCE OF COPIES:	Nicholasville Planning Commission City Hall Nicholasville, Kentucky 40356
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ABSTRACT: These specifications represent a revision of the 1980 General Specifications for the City of Nicholasville, to incorporate changes adopted by the City Commission since that date, and to include revisions recommended by a Technical Review Committee composed of engineers, contractors, attorneys, and businessmen. These specifications are intended to assist not only the Planning Commission and Zoning Enforcement Officer, but also residents of Nicholasville in providing a minimum design standard and a vehicle for assurance of adequate construction of water facilities, sewerage facilities, streets, and storm drainage facilities.

CONTENTS

SECTION IV - STORM DRAINAGE FACILITIES

STANDARD DRAWINGS

SECTION I
WATER FACILITIES

Section I-1. GENERAL

Specifications given hereafter outline the minimum standards for materials, installation methods, testing procedures, and inspections required by the City of Nicholasville for the construction of water distribution mains, customer services, and other appurtenances necessary to provide adequate fire protection and maintenance operations.

Section I-2. SCOPE

The scope of these specifications is to set forth the policies of the City of Nicholasville regarding construction of potable water related facilities. Design of the facilities covered herein must be performed by and carry the seal and signature of a qualified registered Professional Engineer.

Section I-3. DISTRIBUTION MAINS

(1) Definition - Distribution mains are those pipes 6 inches and larger in size used to transport large volumes of potable water to small areas.

(2) Design - This section is given to set forth minimum design standards for water distribution mains. These are the minimum requirements acceptable to the City of Nicholasville, but are not given as a substitute for design by a qualified Professional Engineer.

(a) Pipe Sizes - Distribution mains shall be designed in accordance with all requirements of the Commonwealth of Kentucky Department for Environmental Protection, Division of Water. Pipes for domestic flow only shall be sized to provide a minimum residual pressure of 30 pounds per square inch (psi) at any meter considering a peak flow condition of 2 gallons per minute (gpm) draw off occurring simultaneously at each meter. The pipe shall be large enough to provide 1,000 gpm fire flow with 20 psi residual pressure from any fire hydrant. All distribution mains that are more than 500 feet long shall be looped to eliminate dead-end lines. Distribution mains that are looped and distribution mains that are designed for future extension shall be 8 inches or larger in size. A fire hydrant or a flushing hydrant (minimum 2-1/2 inch diameter outlet) shall be provided at the end of dead-end lines for flushing purposes. The City of Nicholasville shall provide the Design Engineer with flow and pressure data at a fire hydrant near each proposed connection to the City's water main. The Design Engineer shall provide the City with design data showing that the requirements listed herein have been met.

(Adopted: 03/19/20 Ordinance 003-2020)

(b) Valving - Gate valves of the same size as the distribution main shall be installed in the lines at each intersection and in such a manner that only the customers on one street between intersections will be without service whenever line repair or servicing is required. Additional valves shall be installed such that the distance between gate valves on distribution mains shall not exceed 1,000 feet.

(3) Materials - Water distribution mains may be constructed only of the following materials and to the specifications given hereafter:

(a) Ductile Iron Pressure Pipe - Ductile Iron Pipe shall be centrifugally cast iron pipe with rubber "Push Joints". Pipe and fittings shall be designed in accordance with American Waterworks Association Standards A-21.1, C151 and C110. Pipe shall be full "enamelined" and given a bituminous coating. Pipe shall be Fastite, Boltite, or Tyton.

(b) PVC Pressure Pipe - PVC plastic pressure pipe shall be PVC 1120 manufactured of Class 12454-A or Class 12454-B resin material with a hydrostatic-design-basis (HDB) rating of 4,000 psi at 73.4 degrees F (23 degrees C). PVC pipe must be NSF approved and bear the NSF seal. The pipe shall be designed, manufactured, and tested in conformance to the latest revision of the American Waterworks Association designation AWWA C900 and each length of pipe shall be so labeled. Each length of pipe shall be furnished and labeled to show that the outside diameter (O.D.) is equal to that for ductile iron and cast iron pipe. The pipe shall have a standard dimensional ratio (SDR) of 18 and 14 for Class 150 and 200 respectively. Pipe joints shall be rubber gasket push-on joints either constructed integrally with the pipe or as a separate coupling constructed of the same material and to the same pressure specifications as the pipe. SDR 14 Class 200 pipe shall be used if the static and/or working pressure is expected to exceed 100 pounds per square inch (psi).

(Adopted: 07-18-02 Ordinance 418-2002)

(4) Installation - All water lines shall be installed so as to have a minimum cover of 30 inches above the top of the pipe. Distribution mains shall be laid at least 10 feet horizontally from any existing or proposed sewer. The distance shall be measured edge to edge. In cases where it is not practical to maintain a 10 foot separation, the distribution main may be laid on an undisturbed shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer. This deviation will not be allowed for force mains. Distribution mains crossing sewers shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. At crossings, one full length of water pipe shall be located so both joints will be as far from the sewer as possible. Special structural support for the water and sewer pipes may be required. No connections shall be made to the City's water distribution system until the City specifically authorizes the connections.

(a) Trenching - The walls of all excavations shall be vertical from the bottom of the excavation to a minimum of 1 foot above the top of the pipe. If necessary, the trench walls may be sloped from a point 1 foot above the pipe to the original ground line. Trench width at the top of the pipe shall not be less than 1 foot plus the outside diameter of the pipe, and shall not be greater than 2 feet plus the outside diameter of the pipe.

(b) Bedding and Backfill - The pipe shall be bedded on at least 8 inches of No. 9 or No. 11 crushed stone, and shall be backfilled with No. 9 or No. 11 crushed stone for a minimum of 10 inches above the top of the pipe. Backfill above this cushion shall not contain pieces of rock larger than Six (6) inches in any dimension. When the trench excavation is

within a street (i.e. back of curb to back of curb), then the entire trench shall be backfilled to subgrade with No. 57 or No. 68 crushed stone from the top of the initial 18 inches bedding/backfill .

(Adopted: 03/19/20 Ordinance 003-2020)

(c) Detectable Marking Tape - A continuous, detectable underground metalized mylar water line marking tape shall be placed directly above all water mains, 12 to 18 inches below finished grade, prior to final backfill of the trench. The marking tape shall be 2 inches wide minimum, blue in color, and shall bear a continuous printed inscription stating "CAUTION WATER LINE BURIED BELOW". The tape shall have integral wires, foil backing, or other means to enable detection by a metal detector when the tape is buried up to 3 feet deep. The metallic core shall be encased in a protective jacket or provided with other means to protect it from corrosion. Detectable marking tape shall be as manufactured by Lineguard, Inc., Wheaton, IL 60187, or equal.

(Adopted: 04-12-2001 Ordinance 364-2001)

Section I-4. FITTINGS

Fittings are defined as those items which are installed in a pipeline to change direction and include all bends, tees, crosses, and wyes necessary to provide a smooth transition from one direction to another.

(1) Materials - Fittings used in the construction of distribution mains shall be bituminous coated ductile iron mechanical joint and shall be fully cement mortar lined.

(2) Thrust Blocks - Thrust blocks shall be constructed at each fitting to adequately resist the thrust developed at each fitting. Each block shall be constructed of portland cement concrete with a compressive strength of not less than 3,000 psi at 27 days. No block shall be constructed to dimensions less than those given on the STANDARD DRAWINGS when the bearing surface is original undisturbed solid material. Whenever adequate bearing surfaces are not available, then the dimensions of the block must be increased to adequately resist the maximum thrust.

Section I-5. GATE VALVES AND BOXES

(1) VALVES - All gate valves shall be AWWA, Class C valves or Resilient Seat valves and designed for a minimum water working pressure of not less than 200 psi and shall be given a shop test to successfully withstand a hydrostatic test of 300 psi. AWWA gate valves shall be iron body, fully bronze-mounted, double disc, parallel seated, with bell ends so as to be directly connected to pipe with rubber ring joints. Resilient Seat gate valves shall be iron body with bell ends so as to be directly connected to pipe with rubber ring joints, and shall meet all applicable AWWA standards. Valves shall open counter-clockwise. Valves shall have the interior thoroughly cleaned and shall be inspected in both the opened and closed positions just prior to installation. Valves shall be as manufactured by Mueller Co., Decatur, Ill., Any deviation from this valve shall be noted and specifically approved.

(Adopted: 03/19/20 Ordinance 003-2020)

(2) VALVE BOXES - All valves in paved areas shall have adjustable two-piece cast iron valve

boxes and covers suitable for 24 to 36 inch pipe cover. Valves located outside paved areas may have 6 inch diameter PVC boxes with cast iron or aluminum castings specifically designed to be fastened to the top of the PVC for the covers. Covers shall be cast iron and stamped "WATER". The tops of valve boxes located outside paved areas shall be set at finish grade in a minimum 18 inch square concrete slab. All aluminum surfaces that will be in contact with concrete shall receive a bitumastic coating prior to placing the concrete. Earth shall be thoroughly tamped under the concrete slab. Valve boxes, castings, and lids shall be as manufactured by Tyler Pipe, Tyler, Texas, or equal as approved by the City or their authorized representative.

Section I-6. FIRE HYDRANTS

Fire hydrants within the Nicholasville city limits shall be located on lines 6 inches or larger in size, and shall meet the minimum flow and pressure requirements of 1,000 gpm at 20 psi residual pressure. Fire hydrants shall be installed at all street intersections, and at other places as necessary to provide a spacing not to exceed 500 feet between the hydrants as measured along public right-of-way. Additional fire hydrants shall be installed in multi-family residential, commercial, and industrial areas so that buildings are not located more than 250 feet from a hydrant, and so that buildings requiring a sprinkler system are not located more than 150 feet from a hydrant. All fire hydrants shall be installed such that nozzles face roadway. Fire hydrants shall be rodded to the mechanical joint using stainless steel rodding, or mechanical joint anchor fittings to restrain the hydrant and valve to the water main in addition to the required concrete kicker. Per detail the hydrant valve shall be located at the main. Upon installation, and prior to acceptance by the City of Nicholasville for operation and maintenance, each fire hydrant shall be flow tested and certified by a licensed professional engineer to meet the minimum flow and pressure requirements.

(Adopted: 03/19/20 Ordinance 003-2020)

Fire hydrants outside the Nicholasville city limits shall be located on lines 6 inches or larger in size, and shall meet the minimum flow and pressure requirements of 250 gpm at 20 psi residual pressure. If the minimum flow and pressure requirements can be met, fire hydrants shall be installed at all street intersections, and at other places as necessary to provide a spacing not to exceed 500 feet between the hydrants as measured along public right-of-way. Additional fire hydrants shall be installed outside of public right-of-way in other places requested by the City of Nicholasville. Fire hydrants shall be installed on the opposite side of the street from the water main as shown on the STANDARD DRAWINGS, unless stainless steel rodding, or mechanical joint anchor fittings are used to restrain the hydrant and valve to the water main. Upon installation, and prior to acceptance by the City of Nicholasville for operation and maintenance, each fire hydrant shall be flow tested and certified by a licensed professional engineer to meet the minimum flow and pressure requirements.

All fire hydrants shall be of the compression type, with cast iron body, fully bronze-mounted, have a mechanical joint 6" shoe, suitable for a working pressure of 200 psi and shall be in accordance with the latest specifications of the AWWA. Hydrants located within the Nicholasville city limits shall have two pumper nozzles, and hydrants located outside the Nicholasville city limits shall have two hose nozzles.

Fire hydrants shall be constructed in a manner permitting withdrawal of internal working parts without disturbing barrel of casing. Hydrants shall be provided with sliding frost cases or a porous fill around barrel. Valve, when shut, shall be reasonably tight if upper portion of barrel should be broken off. Valve opening shall be at least 5-1/4 inches in diameter. There shall be no chattering under any conditions of operation. Each hydrant shall be shop tested to a hydrostatic pressure of 300 psi with valve in both opened and closed position. Hydrants shall open counter clockwise. The direction of opening shall be cast in the head of the hydrant. Hydrants shall be painted with one coat of red lead and two finishing coats of Hydrant Enamel, fire department red, in color.

Fire hydrants shall have bell ends for receiving rubber rings for direct joining to pipe and shall be as manufactured by Mueller Co., Decatur, Illinois, Super Centurion 200, 2-way catalog number A-425 for hydrants located within the Nicholasville city limits and Super Centurion 200, 2-way catalog number A-422 for hydrants located outside the Nicholasville city limits.

(Adopted: 04-12-07 Ordinance 645-2007)

Section I-7. FLUSHING HYDRANTS

Fire hydrants shall be used at the end of all lines 6 inches or larger for the purpose of flushing. Flushing hydrants shall be installed at the end of dead-end distribution mains smaller than 6 inches.

Flushing hydrants shall be Mainguard #78 as mfg. by Kupferle, St. Louis, Mo., or equal as approved by the City or their authorized representative.

(Adopted: 03/19/20 Ordinance 003-2020)

Section I-8. SERVICES

This part of these specifications includes all necessary construction and supplies required to bring the water from the distribution main to the customers side of the meter. Services shall include the service saddle, corporation stop, copper pipe service line, meter yoke, and meter vault.

(1) Service Saddles - Service saddles shall be brass, AWWA taper CC threads as manufactured by Mueller, Decatur, ILL, or The Ford Meter Box Company, Inc., Wabash, Indiana or Smith-Blair, Inc., South San Francisco, CA.

(Adopted: 03/19/20 Ordinance 003-2020)

(2) Corporation Stops - Corporation stops shall be brass, AWWA taper CC threads as manufactured by The Ford Meter Box Company, Inc., Wabash, Indiana or Mueller Co., Decatur, Ill.

(3) Service Lines - Service Lines shall not be connected any closer than 24" to a bell/fitting joint to of main and service connects shall be spaced a minimum of 24" apart. Service Lines up to and including the 1 inch size shall be the type "k" copper. Service lines larger than 1 inch shall be Copper, Brass, Ductile Iron or PVC meeting the material and installation

requirement listed for Distribution Mains. In the event that elbows are needed, copper or threaded brass will be required, and plans must be approved by the appropriate utility prior to installation. If PVC pipe is used in service connections, glued joints will not be permitted, and connections to corporation stops and meter setters must be by compression/male adapter fittings. Copper service lines installed under public streets shall be encased in 3 inch PVC pipe or conduit extended from back of curb to back of curb. The service line shall be installed so as to have a minimum cover of 30 inches in a straight line perpendicular to the centerline of the street and shall be of the specified material from the distribution main to the meter vault. Service lines shall extend a minimum of 24 inches beyond the meter setters on the customers' side of the meter, and into the individual properties where they shall be capped. Joints, if required, will not be permitted at closer intervals than 10 feet. Joints for copper pipe shall not be located under streets. If a joint is required for a copper service line, it shall be made by using a brass compression fitting. All service lines shall be installed with a corporate stop. Service lines installed by the customer on his side of the meter can be material of his choosing so long as the material complies with State requirements. The size of the service line shall not be less than that given in Table I for the number of equivalent residual units.

(Adopted: 07-02-09 Ordinance 739-2009)

TABLE I

MINIMUM SIZES OF WATER SERVICE LINES NOT EXCEEDING 100 FT. IN LENGTH

No. Residential Equivalent Units	Size of Service Line
1	3/4"
2	1"
3-6	1-1/4"
7-12	1-1/2"
13-16	2"
26-50	2-1/2"
Over 50	3"

(4) Meter Setters - Meter Setters for 3/4" services shall be AWWA 5/8" X 3/4" with brace eye, cutoff, check valve at the meter outlet, and all-purpose fittings (brass). Meter setters for 1" services shall have brace eyes, cutoff, check valve at the meter outlet, and all-purpose fittings (brass). Meter setters for 1-1/2" and 2" services shall be for 1-1/2" and 2" flanged meters and shall have brace eyes, key valve inlets, angle check valve outlets, bypass, and female iron pipe inlets and outlets. It shall be necessary to contact the appropriate utility for the type of meter setter to be used for services larger than 2". All meter setters shall be as manufactured by the Ford Meter Box Company, Inc., Wabash, Indiana or Mueller Co., Decatur, Ill. The riser height shall be sufficient to place the meter within 24 inches of the meter vault lid.

(5) Meter Vaults

(a) Boxes - The boxes for meter vaults shall be polyethylene with an inside diameter of 18 inches for 3/4" single services, 24 inches for 1" and duplex services, 30 inches for 1-1/2" services, and 36 inches for 2" services. It shall be necessary to contact the appropriate utility for the type of meter vault to be used for services larger than 2". Extension rings shall be required for all boxes larger than 18 inches in diameter.

(b) Cover and Lid - The cover and lid shall be cast iron with standard pentagon bolt as manufactured by the Ford Meter Box Company, Inc., Wabash, Indiana, Catalog No. C32 or equal if located outside of the City of Nicholasville service territory; Catalog No. C32-T with one 1-3/4" hole for single 3/4" services within the City of Nicholasville service territory; and Catalog No. C32-TT with two 1-3/4" holes for double meter settings within the City of Nicholasville service territory. Cast iron flat top covers and lids shall be, used only at locations specifically approved by the City of Nicholasville for replacements of existing covers and lids and shall be as manufactured by Vestal MFG, Sweetwater, Tennessee.

(6) Location of Meter Vaults

(a) Residential - Water service lines and meter vaults shall be installed at the approximate mid-point of each front property line at finish grade utilizing a single meter setting for single family dwellings and a double meter setting for duplexes for lots with street frontages greater than 50 feet. Double meter settings may be installed on common side lot lines for townhouses if the location complies with the approved Development Plan lots with street frontages of 50 feet or less.

(b) Commercial and Industrial - It shall be necessary to contact the appropriate utility for the location of meter vaults and water service lines on commercial and industrial lots.

(c) Meter vaults shall be installed a minimum of 4 feet horizontally from the distribution main but shall not extend more than 10 feet beyond the street right-of-way. They shall not be located and/or installed in parking lots, driveways or sidewalks. They shall be located on house side of main.

(Adopted: 03/19/20 Ordinance 003-2020)
(Adopted: 03-30-00 Ordinance 330-2000)

Section I-9. SPECIAL CONNECTIONS

This section of these specifications outlines the policies of the City of Nicholasville, Kentucky, in regard to special connections.

(1) Fire Protection Service - When it is necessary for any customer to have full line flow for fire protection purposes, there shall be installed in the line a device known as a "Detector Check Valve" with a metered by-pass. A detailed drawing of the Detector Check Valve Vault shall be submitted to the City for review and approval prior to installation. The metered by-pass

shall be of sufficient size to carry normal usage without activating the "Detector Check Valve". The Detector Check Valve shall be as manufactured by the Kennedy Valve Manufacturing Company Figure Number 1371 Model Number B-2 or equal as approved by the City. Owners that install or upgrade fire suppression systems that require a fire department connection (FDC) shall install a 5 inch “Storz”(tm) fitting with cover attached to a 30 degree down turn on the fire departments connection outlet fitting. The distance from the ground to the bottom edge of the fitting shall be no less than 24 inches or no more than 30 inches. All FDC's shall be located at least 15 feet away from the structure, unless the installation of a new sprinkler system or substantial upgrade of a sprinkler system is in an existing building and a remote FDC away from the building is not possible. The FDC shall not be obstructed in any way that would hinder access or operation from a fire department apparatus. If the FDC is in an un-curbed vehicle accessible area, it shall be protected by brightly colored traffic bollards engineered to protect it from vehicular traffic. The owner and/or operator during renovation or new installation shall install or upgrade the system to include Double Check Valves installed within the sprinkler pit after the Post Indicator Valve (PIV) line. All PIV installations or upgrades shall be electronically monitored and painted bright red with the indicator sight glass facing the roadway and/or FDC. All FDC and PIV installations shall have a marker affixed on or near the device that clearly indicates the property or area that the device serves. A fire hydrant meeting City of Nicholasville specifications shall be installed or located within 50 feet of the FDC and shall be located within 10 feet of a paved surface roadway capable of access by and of supporting a fire apparatus. **(Adopted: 09-20-07 Ordinance 674-2007)**

(2) Other Special Connections - All other requests for special connections shall be made to the City in writing explaining the type of connection and the purpose for which it will be used. The City will then consult its engineer for recommendations regarding the requested special connection.

Section I-10. TESTING AND STERILIZATION

This section includes the minimum requirements for testing and sterilization of the completed project. The Developer and/or Contractor shall notify the City at least 24 hours prior to any testing. The water distribution systems shall not be placed into service until written test results for all tests are furnished to the City of Nicholasville.

(Adopted: 03/19/20 Ordinance 003-2020)

(1) Testing - All lines shall be laid, joints completed, fittings and valves installed, service lines and meter yokes installed and the system backfilled prior to testing. Each section of the system shall be subjected to a pressure of not less than 150 psi for Class 150 pipe and 200 psi for Class 200 pipe. The entire section shall be subjected to and maintained at the pressures indicated above for a period of 24 hours. Allowable leakage for any section shall be calculated in proportion to the amounts of each length of pipe used within the section being tested. Should any test of sections of pipe line disclose leakage per mile greater than the specified limit, the defective part or parts shall be located and repaired until leakage is within specified limits. No section will be accepted until leakage, when tested as indicated above, meets the following requirements of Table II.

TABLE II
ALLOWABLE LEAKAGE

Length of Pipe	Allowable Leakage Per 24 Hours Per Inch Nominal Pipe Diameter Per Mile
3' - 3"	25 gallons
6' - 6"	20 gallons
10'	15 gallons
13'	15 gallons
16'	13 gallons
18'	13 gallons
20'	12 gallons

(2) Sterilization - All extensions to existing water distribution systems shall be thoroughly disinfected before being placed into service, by the use of chlorine or chlorine compounds in such amounts as to produce a concentration of at least 50 ppm and a residual of at least 25 ppm at the end of 24 hours and followed by a thorough flushing. Samples shall be taken at the beginning and end of the 24 hour period, and certified test results including sample locations shall be furnished to the City of Nicholasville. Table III (See Page 12) gives the theoretical amount of HTH to produce 50 ppm of chlorine in pipe. Cl2 solution must be injected through a hydrant or corporation stop. Granular HTH can not be distributed through the new pipe during installation. It must be injected through corporation and/or hydrant.

(Adopted: 03/19/20 Ordinance 003-2020)

(3) Bacteriological Tests - Bacteriological samples shall be taken by a certified tester and shall be submitted for each extension to existing water distribution system after disinfection and flushing. A core zone which includes up to the first 1/2 mile shall be established. Two samples shall be taken from the core zone. Additionally, one sample per mile for each mile of new distribution line shall be taken. New water distribution lines shall not be placed into service until the proper number of representative bacteriological samples taken at the specified points are examined and are shown to be negative. Each sample shall include the sample location, and notification of the analytical results shall be furnished to the City of Nicholasville.

TABLE III
AMOUNT OF HTH REQUIRED TO PRODUCE 50 PARTS PER MILLION OF CHLORINE IN PIPE
CHLORINE IN PIPE

Normal Pipe Size	Contents in 100 Ft. Section			Amount of HTH required per 100 ft. length to give 50 ppm available chlorine			Length of pipe in which one ounce of HTH will produce 50 ppm available $C1^2$
	Cu. Ft.	Lbs.	Gals.	Ounces (approx.)	Pounds	Tablespoons Level	
4	8.75	545	65.5	5/8	0.039	2	168.0
6	19.65	1,225	147.0	1-3/8	0.087	4	71.9
8	34.90	2,180	261.0	2-1/2	0.159	7-1/3	39.4
10	54.55	3,405	408.0	3-7/8	0.244	11-1/3	25.6
12	78.55	4,905	587.0	5-5/8	0.350	16-1/3	17.9

Section I-11. EROSION AND SEDIMENTATION CONTROLS

Temporary erosion and sedimentation controls shall be erected and maintained for all disturbed and/or regraded areas during construction, and until final controls become effective. Erosion and sedimentation controls shall be detailed on the Construction Plans.

(1) Erosion Control - Erosion controls include, but are not limited to, interceptor ditches, seeding, mulching, watering, and reseeding on all disturbed surfaces including regraded areas, borrow areas, stockpiles, and waste areas. Areas disturbed on the construction site which will not be redisturbed within a 60 day period, shall be seeded to produce a temporary cover of grass. Fertilizer (10-10-10, or equivalent) shall be broadcast uniformly on the areas to be seeded at a rate of 400 pounds per acre. The mixture of seeding shall be 30 pounds of tall fescue and 20 pounds of ryegrass per acre. Seed shall be broadcast evenly over the areas to be seeded, and cultipacked or otherwise pressed into the soil. Seed and fertilizer may be mixed together and applied after the soil has been prepared. After the seed has been sown, the areas so seeded shall be mulched with straw at a rate of approximately one bale per 2,000 square feet (approximately 1 inch loose depth).

(2) Sedimentation Control - Sedimentation controls include, but are not limited to, silt fences, staked straw bales, silt dams, and silt traps. Silt control measures shall be used to prevent off-site siltation, and silt shall be removed periodically as required.

Section I-12. APPROVALS

This section provides information related to the various approvals that are required prior to start of construction and prior to acceptance by the City of Nicholasville of the completed project.

(1) State Approval - Four sets of plans carrying the seal and signature of a registered Professional Engineer for the proposed construction, along with a copy of a letter from the City of Nicholasville, or appropriate utility, stating that the project is being reviewed and water will be supplied, must be submitted to the Commonwealth of Kentucky Department for Environmental Protection, Division of Water, for their review and approval. No construction shall take place prior to approval from the Commonwealth of Kentucky. Upon completion of the construction, the City shall certify to the Department for Environmental Protection, Division of Water that the water supply facilities were constructed and tested in accordance with the approved plans, specifications, and stipulations listed in the Division of Water approval letter.

(2) Planning Commission Approval - Two sets of the water distribution plans shall be submitted to the Planning Commission Staff Office for review. The Planning Commission's review will be to verify that the project complies with the requirements of the Nicholasville Subdivision Regulations and General Specifications, and that the proposed construction integrates satisfactorily into the City's distribution system. After the review, eight sets of the plans shall be submitted for written approval. At least one set shall contain the original seal and signature of a registered Professional Engineer on each sheet. Prior to the Planning Commission's approval of the Construction Plans for the water distribution system, the Developer shall make available to the City a copy of the approval letter from the

Commonwealth of Kentucky. Construction shall not begin until the Planning Commission has issued written approval of the plans. Upon completion of the construction, the Developer shall make a written request to the Planning Commission Staff Office for a detailed inspection by the City for acceptance of the public facilities.

(3) Changes - The Developer's Engineer may make minor changes to the approved plans if written notification of the changes is given to the Planning Commission Staff Office, if such changes meet the requirements of the Nicholasville Subdivision Regulations and General Specifications, and if the changes do not violate any City or State regulation. Any changes from the approved plans that are not in compliance with the regulations must be approved by the Commonwealth of Kentucky Department for Environmental Protection, Division of Water, and by the Planning Commission prior to making the proposed changes.

(4) As-built Drawings - After the completion of the construction, the Developer shall submit six sets of prints and one set of reproducible mylars to the City for the As-Built System. The As-Built Drawings shall consist of the Construction Plans with notations of changes shown.

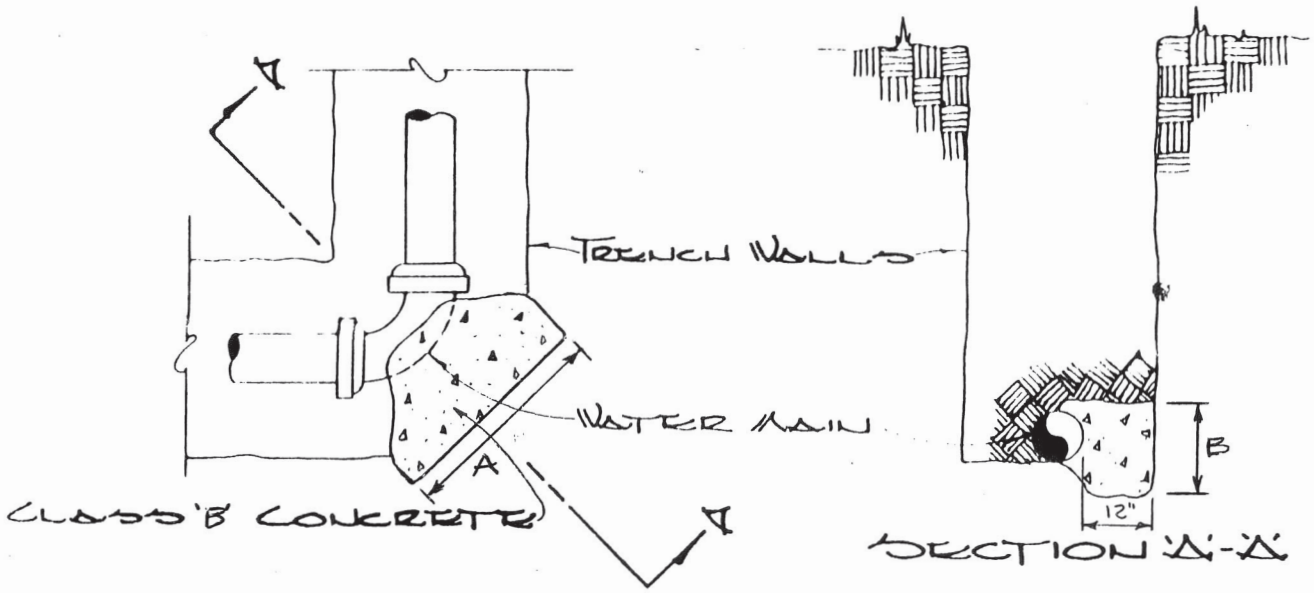
Section I-13. INSPECTION

All water system construction shall be inspected by the City's authorized representative before covering to insure that the construction progresses in compliance with the approved plans and specifications; however, small area spot coverings of the water line prior to inspection are acceptable to prevent flotation. The City's authorized representative shall have the right to require any part of the water system covered prior to inspection, to be uncovered prior to approval. The Developer and/or Contractor shall provide ready access to the construction site for inspection by City representatives throughout the construction period. If a City representative determines that the construction is not in compliance with the approved plans or specifications, he shall notify the Contractor and the Developer. The City's authorized representative shall have the right to stop the construction until the deficiencies are corrected.

Section I-14. PENALTIES

Failure to construct the improvements in accordance with approved plans and specifications, and the regulations contained herein (including violations of conditions or safeguards established in connection with approval) shall constitute a misdemeanor. Any person who so violates these requirements shall upon conviction thereof be fined not less than one hundred dollars ($100.00) but not more than five hundred dollars ($500.00) for each conviction. Each day of violation shall constitute a separate offense.

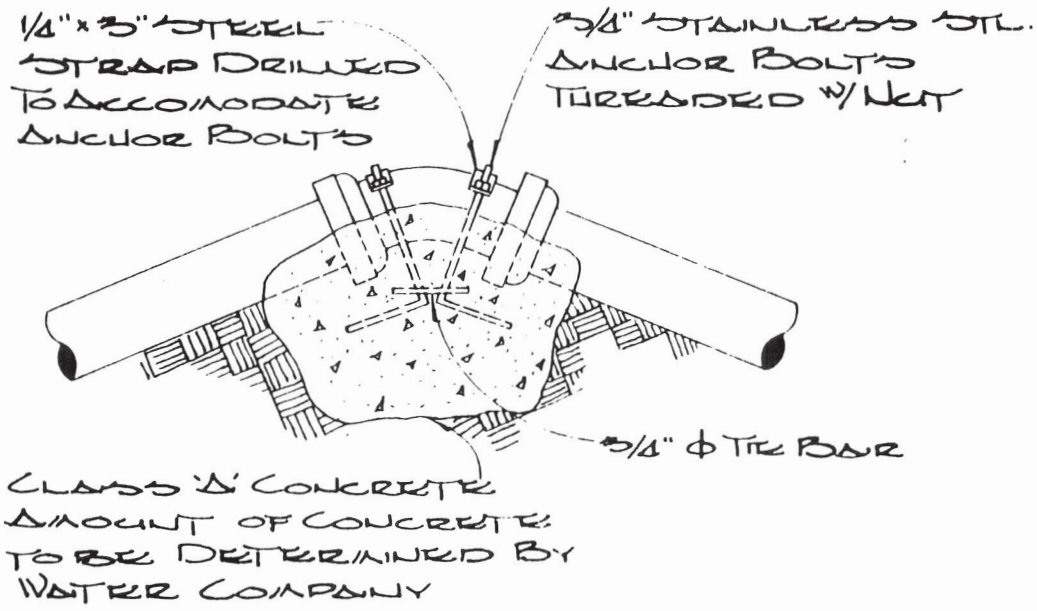
The Owner or Developer of any subdivision and any engineer, contractor, builder, agent, employees or other person who commits, participates in, assists in, or maintains such violation may each be found guilty of a separate offense and suffer the penalties herein provided. Nothing herein contained shall prevent the City from taking such other lawful action as is necessary to prevent or remedy any violation.



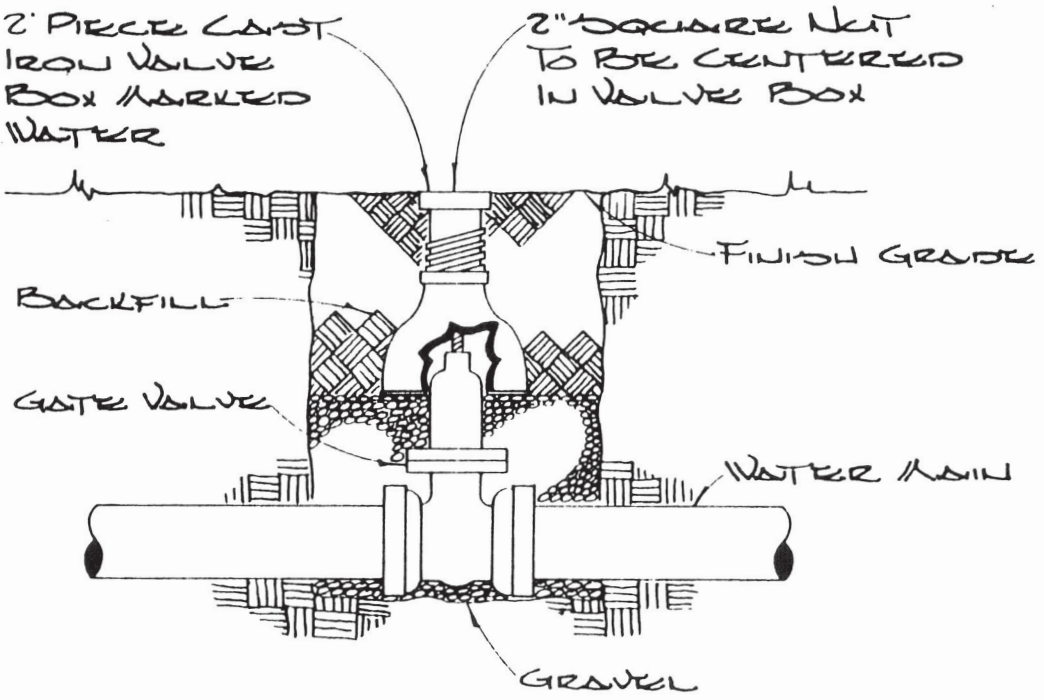
THRUST BLOCK PLAN & SECTION

THRUST BLOCK SCHEDULE

PIPE SIZE	90° BEND		45° BEND		22½° BEND		11½° BEND		TEE	
	A	B	A	B	A	B	A	B	A	B
4"	2'-0"	1'-0"	2'-0"	1'-0"	2'-0"	1'-0"	2'-0"	1'-0"	2'-0"	1'-6"
6"	2'-0"	1'-0"	2'-0"	1'-0"	2'-0"	1'-0"	2'-0"	1'-0"	3'-0"	1'-6"
8"	3'-0"	1'-0"	2'-0"	1'-0"	2'-0"	1'-0"	2'-0"	1'-0"	3'-0"	2'-0"
10"	3'-0"	1'-0"	2'-0"	1'-6"	2'-0"	1'-0"	2'-0"	1'-0"	4'-0"	2'-0"
12"	3'-6"	2'-0"	2'-0"	2'-0"	2'-0"	1'-0"	2'-0"	1'-0"	5'-0"	3'-0"



ANCHOR BLOCKS



TYPICAL GATE VALVE SETTING

N O T I C E

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
NATIONWIDE #14 PERMIT AUTHORIZATION
KENTUCKY DIVISION OF WATER 401 WQC

10-26-2022

PROJECT: Jessamine County, Item No. 7-9014
Perform low cost safety improvements on KY 169 from mile point 11.978 to mile point 16.555.

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

Station 679+19	Extend a 24 inch culvert. The channel change will impact an **ephemeral** stream a U.T. of Jessamine Creek. The project will have impacts below the normal high water mark. The estimated area of impact is **4 linear feet** and **0.0005 acres**.
Station 685+32	Extend a 8 ft. X 5ft. Reinforced concrete box culvert The channel change will impact a **intermittent** stream a U.T. Jessamine Creek. The project will have impacts below the normal high water mark. The estimated area of impact is **14 linear feet** and **0.003 acres**.

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

In order for this authorization to be valid, the attached conditions must be followed. The

contractor shall post a copy of this Nationwide Approval in a conspicuous location at the project site for the duration of construction and comply with the general conditions as required.

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

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

General Certification--Nationwide Permit # 14
Linear Transportation Projects

This General Certification is issued **December 18, 2020**, 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 General Certification and all General Certifications of Nationwide Permits (NWP), the term 'surface water' is defined pursuant to 401 KAR Chapter 10, Section 1(72): 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.

As required by 40 CFR Part 121 – State Certification of Activities Requiring a Federal License or Permit, all conditions include a statement explaining why the condition is necessary to assure that any discharge authorized under the general permit will comply with water quality requirements and a citation to federal, state, or tribal law that authorizes the condition. The statements and citations are included with each condition. The statements are written entirely at the end of the certification under the section *Statements of Necessity*.

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, 303, 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 conditions in this certification are met. Activities that do not meet the conditions of this General Certification require an Individual Section 401 Water Quality Certification.

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1. Activities occurring within surface waters assessed by the Kentucky Division of Water as designated Outstanding State Resource Waters, National Resource Waters, Cold Water Aquatic Habitat, Exceptional Waters, or identified as candidate Outstanding State Resource Waters or candidate Exceptional Waters are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(1), Section 1(2), & Section 1(3); and 401 KAR 10:031, Section 4(2) & Section 8]

2. Activities impacting surface waters assessed by the Kentucky Division of Water as impaired for warm water or cold water aquatic habitat where the parameter or source is related to habitat* are not authorized under this General Certification and require an Individual Certification. [Statement B and citations KRS 224.70-110 and 401 KAR 10:031, Section 2 & Section 4]

   *These include waters impaired by the parameter 'habitat assessment', 'combined biota/habitat bioassessment' or any parameter from the parameter group 'habitat alterations, and/or waters where the parameter identified as a cause of impairment has a source from the source group 'habitat impacts'.

3. Activities impacting surface waters assessed by the Kentucky Division of Water as full support for warm water or cold water aquatic habitat are not authorized under this General Certification and require an Individual Certification. [Statements A and B and citations KRS 224.70-110 and 401 KAR 10:031, Section 2 & Section 4]

4. The activity will not occur within surface waters identified as perpetually-protected mitigation sites (e.g., deed restriction or conservation easement). [Statement C and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3); and 40 C.F.R. 230.97]

5. Activities with cumulative temporary and permanent impacts greater than 1/2 acre of wetland or 300 linear feet of surface waters are not authorized under this General Certification and require an Individual Certification. This General Certification shall not apply to projects where multiple Nationwide Permits are issued for individual crossings which are part of a single, larger transportation projects. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

6. For complete linear transportation projects, all impacts shall not exceed a cumulative length of 500 linear feet within each Hydrologic Unit Code (HUC) 14. [401 KAR 10:030 and 401 KAR 10:031]

7. Stream realignment greater than 100 feet is not authorized under this General Certification and require and Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

8. Surface water impacts covered under this General 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 (KAWQP). [Statements A and F and citations KRS 224.71-145(1), 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

9. Any crossings must be constructed in a manner that does not impede natural water flow. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

10. The use of creek rock for bank stabilization; grouted rip-rap; unformed, poured grout; unformed, poured concrete; poured asphalt; or asphalt pieces is not authorized under this General Certification and requires an Individual Certification. Poured concrete or grout will be authorized under this General Certification when contained by tightly sealed forms or cells. Equipment shall not discharge waste washwater into surface waters at any time without adequate wastewater treatments. [Statement A and citations 401 KAR 10:030, Section 1(3)(b) & 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

11. New stormwater detention/ retention basins constructed in surface waters or modifications to stormwater detention/ retention basins resulting in the reduction in reach or that cause impairment of flow of surface waters are not authorized under this General Certification and require an Individual Certification. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

12. Erosion and sedimentation pollution control plans and Best Management Practices (BMPs) 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. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

13. 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, 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. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

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14. Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering surface waters. [Statements A and D and citations. [KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

15. Removal of riparian vegetation shall be limited to that necessary for equipment access. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

16. To the maximum extent practicable, all in-stream work under this certification shall be performed under low-flow conditions [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

17. Heavy equipment (e.g., bulldozers, backhoes, and draglines), 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. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

18. 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. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

19. If domestic water supply intakes are located downstream that may be affected by increased turbidity and suspended solids, the permittee shall notify the operator when such work will be done prior to construction. [Statement E and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

20. 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 Kentucky Division of Water shall be notified immediately by calling (800) 928-2380. [Statement A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

21. The Kentucky Division of Water requires submission of a formal application for any federal applicant that is not required to submit a Preconstruction Notification that would typically be required of any non-federal applicant. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

22. The Kentucky Division of Water may require submission of a formal application for an Individual Certification for any project that has been determined to likely have a significant adverse effect upon water quality or degrade surface waters so that existing uses of the water body or downstream waters are precluded. [Statement A and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

23. If the final issued General Permit for Nationwide Permit 14 Linear Transportation Projects changes significantly, the Division of Water may opt to deny certification for this permit. [Statements A and D and citations KRS 224.70-110, 401 KAR 10:030, Section 1(3)(b) & Section 1(4)(b); and 401 KAR 10:031, Section 2 & Section 4]

Statements of Necessity:

A. This condition is necessary to protect waters categorized under the anti-degradation policy to protect the designated and existing uses and to maintain the associated water quality criteria necessary to protect these water resources.

B. This condition is necessary to protect existing uses and the level of water quality necessary to protect those existing uses shall be assured in impaired water.

C. This condition is necessary for long-term protection of compensatory mitigation sites.

D. This condition is necessary to provide for the prevention, abatement, and control of all water pollution and to conserve water resources for legitimate uses, safeguard from pollution the uncontaminated waters, prevent the creation of any new pollution, and abate any existing pollution.

E. This condition is necessary to protect domestic water supply use.

F. This condition is necessary to evaluate, develop, and improve best-management practices in conservation plans, compliance plans, and forest stewardship management plans; establish statewide and regional agriculture water quality plans; and otherwise promote soil and water conservation activities that protect surface waters from the adverse impacts of agriculture operations within the Commonwealth.

Violation of Kentucky state water quality standards may result in civil penalties and remediation actions.

For assistance contact the Kentucky Division of Water, Water Quality Certification Section by email (401WQC@ky.gov) or by phone (502)-564-3410.

2021 Nationwide Permit Summary

US Army Corps of Engineers
Louisville District ®

Issued: **February 25, 2022**
Expires: **March 14, 2026**

No. 14. Linear Transportation Projects

(NWP Final Rule, 86 FR 73522)

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

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

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

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

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

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

Note 3: For NWP 14 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b)(4) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, ''District Engineer's Decision.'' The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United

States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Structures and Fills. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct

management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district

engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties. (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must

include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district

engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA section 401, a CWA section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA section 401, the proposed discharge is not

authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____
_____
(Transferee)

_____
_____
(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. Activities Affecting Structures or Works Built by the United States. If an

NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. Pre-Construction Notification. (a) *Timing*. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification*: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many

wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification*: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination*: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

D. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no

work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

E. Further Information

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

F. Nationwide Permit Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term "discharge" means any discharge of dredged or fill material into waters of the United States.

Ecological reference: A model used to plan and design an aquatic habitat and riparian area restoration, enhancement, or establishment activity under NWP 27. An ecological reference may be based on the structure, functions, and dynamics of an aquatic habitat type or a riparian area type that currently exists in the region where the proposed NWP 27 activity is located. Alternatively, an ecological reference may be based on a conceptual model for the aquatic habitat type or riparian area type to be restored, enhanced, or established as a result of the proposed NWP 27 activity. An ecological reference takes into account the range of variation of the aquatic habitat type or riparian area type in the region.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for an NWP; it is not

a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has surface water flowing continuously year-round during a typical year.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of

the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized jurisdictional stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a jurisdictional wetland that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a "water of the United States." If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

2021 KENTUCKY REGIONAL GENERAL CONDITIONS

These regional conditions are in addition to, but do not supersede, the requirements in the Federal Register (See volume 86, date January 13, 2021, pp 2867-2874 for the text of Section C, General Conditions).

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 3 (Maintenance)
   NWP 4 (Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities)
   NWP 5 (Scientific Measurement Devices)
   NWP 6 (Survey Activities)
   NWP 12 (Oil or Natural Gas Pipeline Activities)
   NWP 13 (Bank Stabilization)
   NWP 14 (Linear Transportation Projects)
   NWP 15 (U.S. Coast Guard Approved Bridges)
   NWP 16 (Return Water from Upland Contained Disposal Areas)
   NWP 17 (Hydropower Projects)
   NWP 18 (Minor Discharges)
   NWP 19 (Minor Dredging)
   NWP 20 (Response Operations for Oil or Hazardous Substances)
   NWP 22 (Removal of Vessels)
   NWP 23 (Approved Categorical Exclusions)
   NWP 25 (Structural Discharges)
   NWP 30 (Moist Soil Management for Wildlife)
   NWP 32 (Completed Enforcement Actions)
   NWP 33 (Temporary Construction, Access, and Dewatering)
   NWP 36 (Boat Ramps)
   NWP 41 (Reshaping Existing Drainage Ditches)
   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. In addition to the notification and agency coordination requirements in the NWPs, for impacts greater than 0.25 acres in all "waters of the U.S." for the NWPs listed below, a PCN will be required to the Corps. The Corps will coordinate with the appropriate resource agencies (see attached list) on these NWPs:

NWP 3 (Maintenance)
NWP 14 (Linear Transportation Projects)

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

(a) New road alignments or realignments are limited to a permanent loss of 500 linear feet of intermittent or perennial stream length or the stream bed acreages listed in the table below at each crossing. Road crossings with permanent losses greater than 500 linear feet of intermittent or perennial stream or the stream bed acreages listed in the table below associated with new alignments or realignments will be evaluated as an individual permit (i.e., a Letter of Permission or Standard Permit).

Table of Acreages at Varying Stream Widths for 500 Linear Feet of Impact	
Stream Width (Feet)	Acres of Stream at Varying Widths for 500 Linear Feet of Stream
1	0.011
2	0.023
3	0.034
4	0.046
5	0.057
6	0.069
7	0.080
8	0.092
9	0.103
10	0.115

(b) In addition to the notification requirements contained in NWP 14, the permittee must submit a PCN to the district engineer prior to commencing the activity for the permanent loss of greater than 300 linear feet of stream bed or the stream bed acreages listed in the table below. (See General Condition 32 and the definition of "loss of waters of the United States" in the Nationwide Permits for further information.)

Table of Acreages at Varying Stream Widths for 300 Linear Feet of Impact	
Stream Width (Feet)	Acres of Stream at Varying Widths for 300 Linear Feet of Stream
1	0.007
2	0.014
3	0.021
4	0.028
5	0.034
6	0.041
7	0.048
8	0.055
9	0.062
10	0.069

4. Notification in accordance with General Condition 32 is required to the Corps for all activities located in the following Section 10 waterways, to include the portion of their tributaries below the Ordinary High Water Mark or navigation pool, or otherwise subject to inundation, by the Section 10 waterway:

- Mississippi River
- Ohio River
- Licking River
- Kentucky River
- Salt River
- Green River
- Cumberland River
- Tennessee River
- Big Sandy River (from mouth to Louisa, KY)

5. 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).

6. 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 (See volume 86, date January 13, 2021, pp 2867-2874 for the text of Section C, General Conditions).

COORDINATING RESOURCE AGENCIES

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

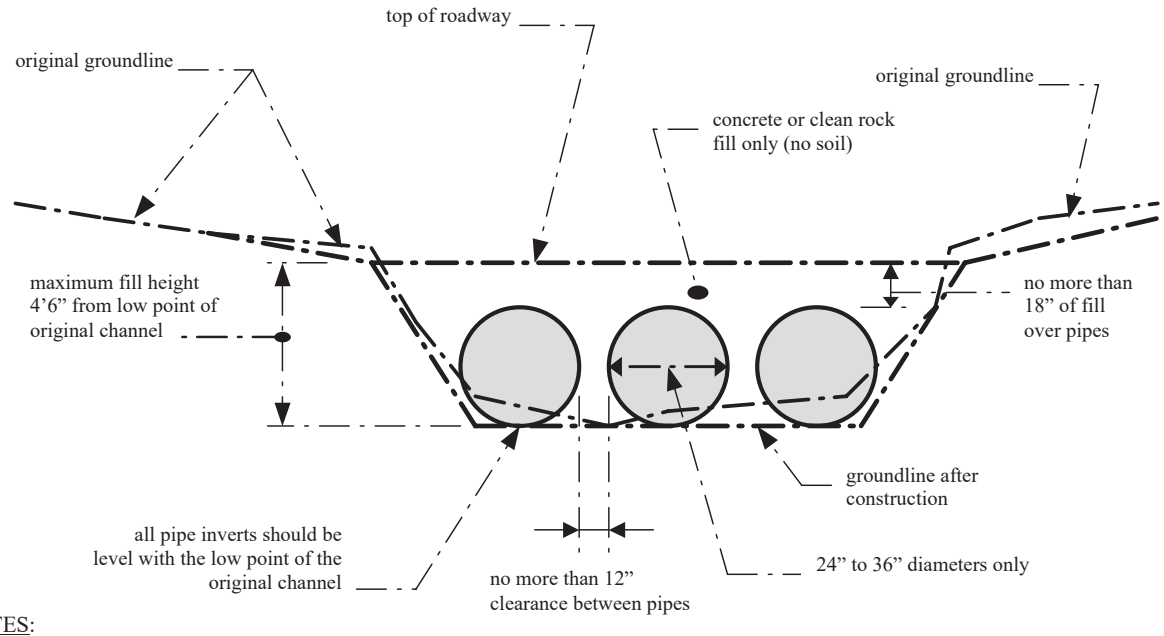
Supervisor
U.S. Fish & Wildlife Service
JC Watts Federal Building, Room 265
330 West Broadway
Frankfort, Kentucky 40601

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

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

Kentucky Transportation Cabinet

Highway District 07

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 169 in Jessamine County

Project: CID 22-4405

Revised 3/4/2016

Project information

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

1. Owner – Kentucky Transportation Cabinet, District 07
2. Resident Engineer: (2)
3. Contractor name: (2)
   Address: (2)

   Phone number: (2)
   Contact: (2)
   Contractors agent responsible for compliance with the KPDES permit requirements (3):
4. Project Control Number: (2)
5. Route (Address): KY 169 (Keene Rd)
6. Latitude/Longitude (project mid-point): 37° 55’ 21”, -84° 36’ 59”
7. County (project mid-point): Jessamine
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

A. Site description:

1. Nature of Construction Activity (from letting project description): Perform low cost safety improvements, construct left turn lane into Paddock Drive, and resurface KY 169.

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

3. Projected volume of material to be moved: 32,514 LF Ditching & Shouldering

4. Estimate of total project area (acres): 13.1

5. Estimate of area to be disturbed (acres): 9.1

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: Jessamine Creek, East Fork Clear Creek, Cave Spring Creek

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

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

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

B. Sediment and Erosion Control Measures:

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

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

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

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

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

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

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

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

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

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

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

C. Other Control Measures

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

2. Waste Materials

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

3. Hazardous Waste

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

4. Spill Prevention

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

➢ **Good Housekeeping:**

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

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

➢ **Hazardous Products:**

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

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

The following product-specific practices will be followed onsite:

➢ **Petroleum Products:**

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

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

KYTC BMP Plan for Project CID 22-4405

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 CID 22-4405

_____ 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 CID 22-4405

Contractor and Resident Engineer Plan certification

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

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

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

Resident Engineer and Contractor Certification:

(2) Resident Engineer signature

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

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

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

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

CID 22-4403
Fayette County
Highway Safety Improvement Project along KY-353
from MP 1.372 – 10.153
Item No.: 7-9015.00

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

eForm Submittal ID: 264756

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:(✓)
	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 7	Kelly	MI	Baker

Mailing Address:(*)	City:(*)	State:(*)	Zip:(*)
800 Newtown Court	Lexington	Kentucky	40511

eMail Address:(*)	Business Phone:(*)	Alternate Phone:
KellyA.Baker@ky.gov	8592462354	Phone

SECTION II -- GENERAL SITE LOCATION INFORMATION

Project Name:(*)	Status of Owner/Operator(*)	SIC Code(*)
Project 224403	State Government	1611 Highway and Street Const

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

Site Physical Address:(*)
KY-353

City:(*)	State:(*)	Zip:(*)
Lexington	Kentucky	40511

County:(*)	Latitude(decimal degrees)(*)DMS to DD Converter (https://www.fcc.gov/media/radio/dms-decimal)	Longitude(decimal degrees)(*)
Fayette	38.144544	-84.413621

SECTION III -- SPECIFIC SITE ACTIVITY INFORMATION

Project Description:(*)
Highway Safety Improvement Program consisting of various improvements such as Trenching, Asphalt Paving, Pipe Extension, Slope Improvements, Guardrail, Ditching &

a. For single projects provide the following information

Total Number of Acres in Project:(✓)	Total Number of Acres Disturbed:(✓)
70.8	47.8
Anticipated Start Date:(✓)	Anticipated Completion Date:(✓)

b. For common plans of development provide the following information

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

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

	Company Name	
+		

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

Discharge Point(s):

	Unnamed Tributary?	Latitude	Longitude	Receiving Water Name	
1	No	38.105900	-84.105900	North Elkhorn Creek	Delete
2	Yes	38.208200	-84.391700	Goose Creek	Delete
3	Yes	38.208300	-84.391800	Goose Creek	Delete
4	Yes	38.205000	-84.393100	Goose Creek	Delete
5	Yes	38.205100	-84.393200	Goose Creek	Delete
6	Yes	38.202100	-84.394500	Goose Creek	Delete
7	Yes	38.202100	-84.394600	Goose Creek	Delete
8	Yes	38.199500	-84.395500	Goose Creek	Delete
9	Yes	38.205100	-84.395700	Goose Creek	Delete
10	Yes	38.197200	-84.396600	Goose Creek	Delete

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

Name of MS4:

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

	Latitude	Longitude	
+			

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

Will the project require construction activities in a water body or the riparian zone?: (*)	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:(*) First Name	M.I.: MI	Last Name:(*) Last Name	Company Name:(*) Company Name
Mailing Address:(*) Mailing Address	City:(*) City	State:(*)	Zip:(*) Zip
eMail Address:(*) eMail Address	Business Phone:(*) Phone	Alternate Phone: Phone	

SECTION VIII -- ATTACHMENTS

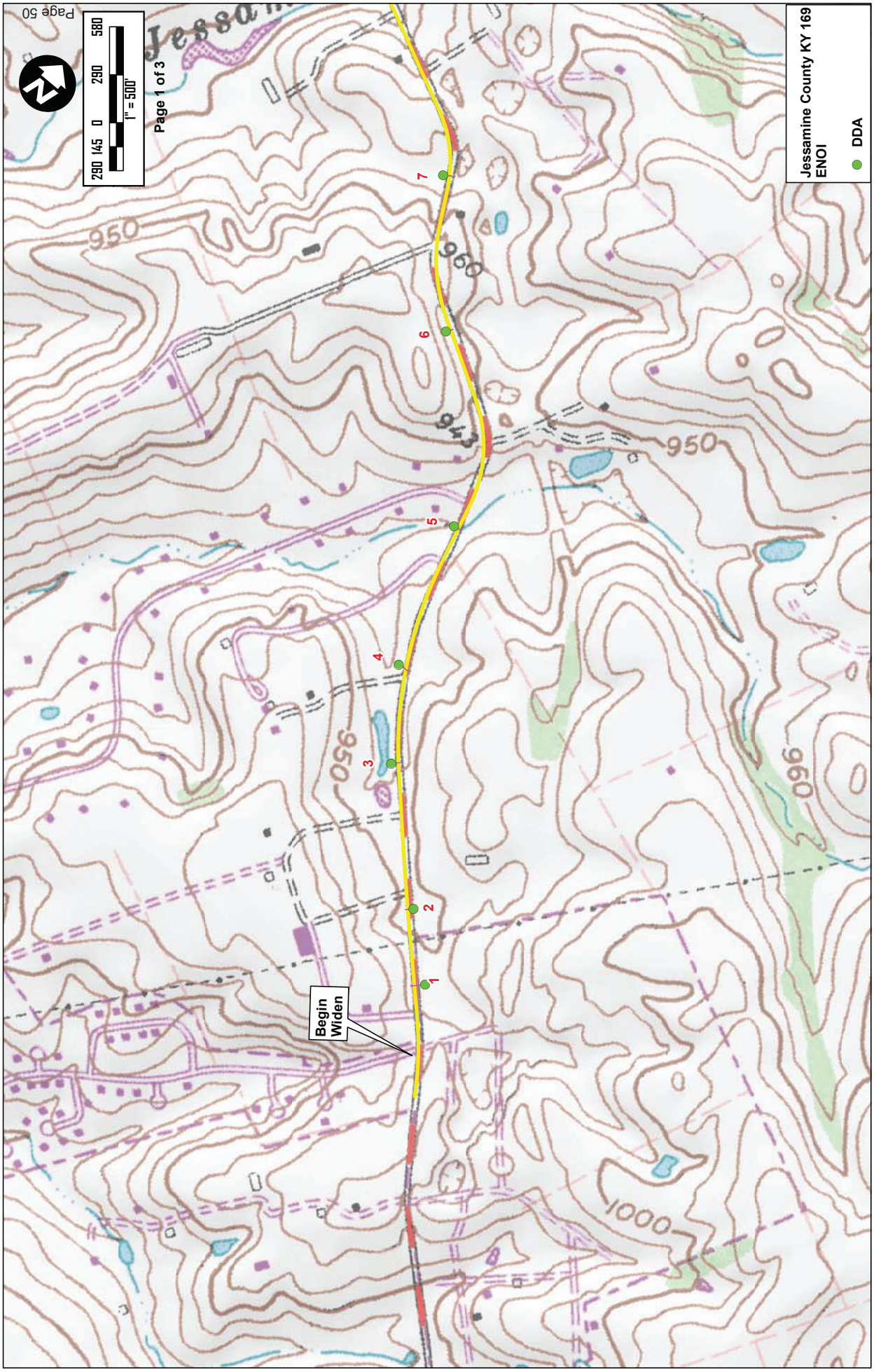
Facility Location Map:(*)	Upload file
Supplemental Information:	Upload file

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:(*) Signature		Title:(*) Title	
First Name:(*) First Name	M.I.: MI	Last Name:(*) Last Name	
eMail Address:(*) eMail Address	Business Phone:(*) Phone	Alternate Phone: Phone	Signature Date:(*) Date

Click to Save Values for Future Retrieval | Click to Submit to EEC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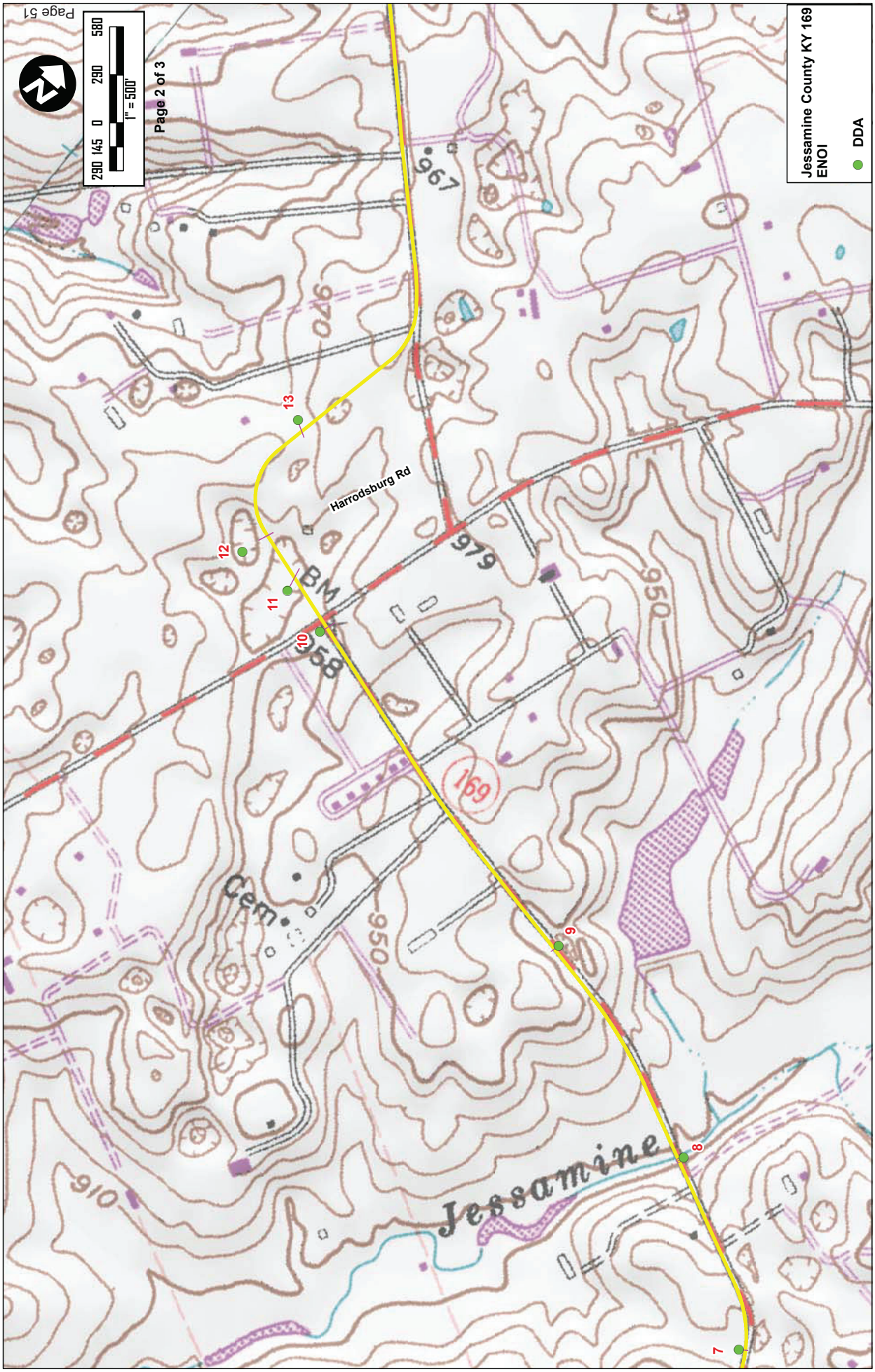
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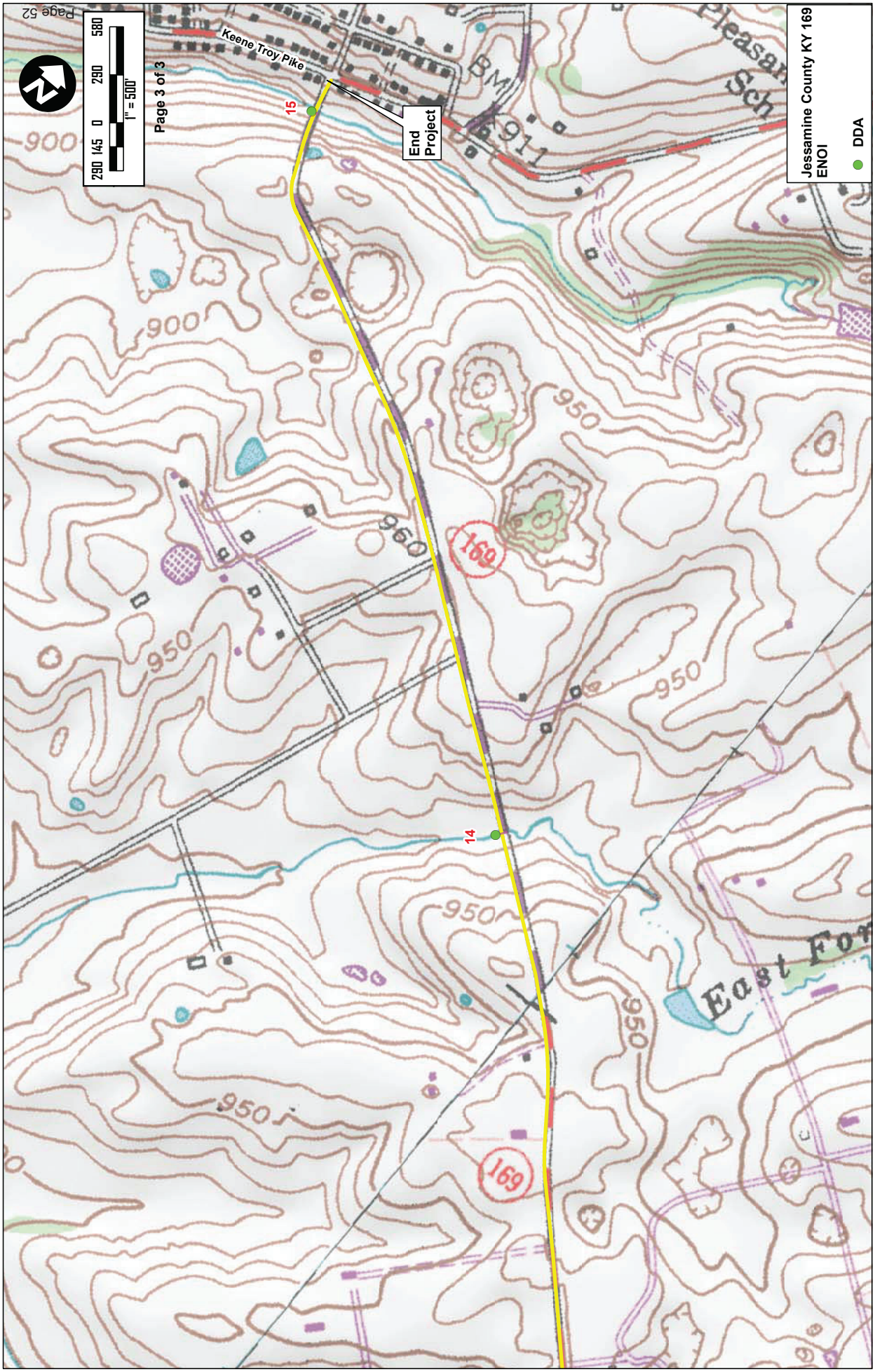
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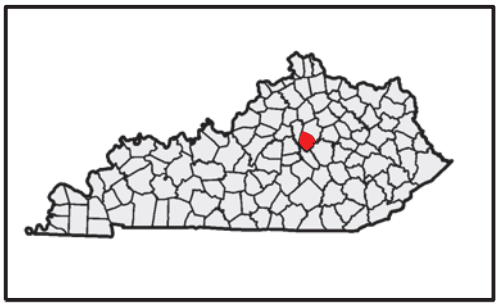
COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00



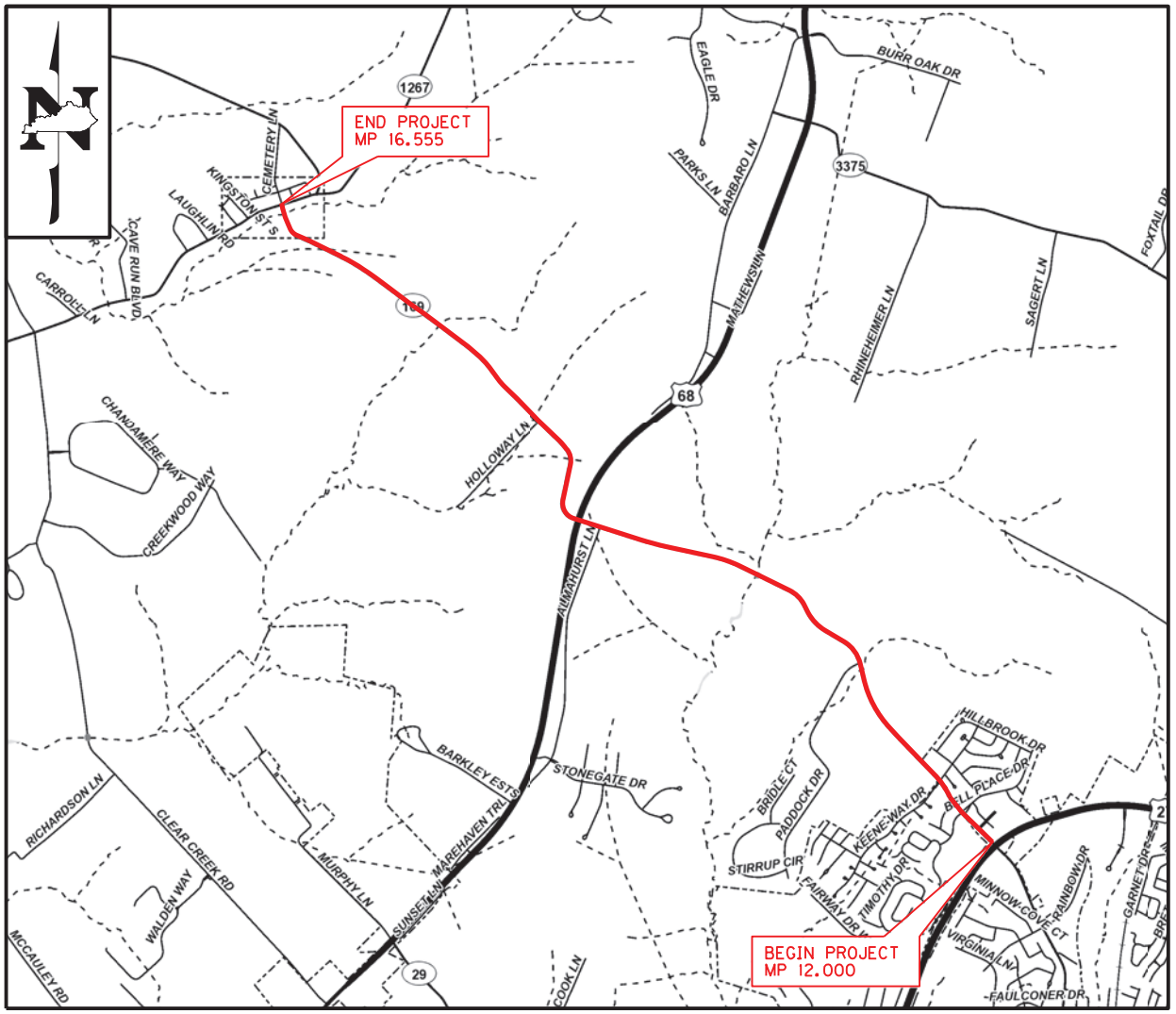
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

PLANS OF
PROPOSED PROJECT

JESSAMINE COUNTY

KY 169

KENTUCKY TRANSPORTATION CABINET



JESSAMINE COUNTY - KY 169
MILEPOST 12.000 TO 16.555
ITEM NO. 7-9014.00
GENERAL SUMMARY
SHEET 1 OF 3

ITEM NUMBER	ITEM	UNIT	QUANTITY
1	DGA BASE (1) (5)	TON	7,873
80	CRUSHED AGGREGATE SIZE NO 23 (4)	TON	60
100	ASPHALT SEAL AGGREGATE (1)	TON	89.8
103	ASPHALT SEAL COAT (1)	TON	11.5
190	LEVELING & WEDGING PG64-22 (1) (3) (4) (5)	TON	607
212	CL2 ASPH BASE 1.00D PG64-22 (1) (4) (5)	TON	1,514
214	CL3 ASPH BASE 1.00D PG64-22 (1) (3) (5)	TON	3,479
301	CL2 ASPH SURF 0.38D PG64-22 (1) (5)	TON	1,761
388	CL3 ASPH SURF 0.38B PG64-22 (1) (5)	TON	451
440	ENTRANCE PIPE-15 IN (5)	LF	157
441	ENTRANCE PIPE-18 IN (5)	LF	92
462	CULVERT PIPE-18 IN (3)	LF	27
464	CULVERT PIPE-24 IN (3)	LF	8
1310	REMOVE PIPE (3) (5)	LF	264
1433	SLOPED BOX OUTLET TYP 1-18 IN (5)	EACH	1
1726	SAFETY BOX INLET-18 IN SDB-1 (5)	EACH	1
1728	SAFETY BOX INLET-18 IN DBL SDB-5 (3)	EACH	2
1729	SAFETY BOX INLET-24 IN DBL SDB-5 (3)	EACH	1
1820	LIP CURB AND GUTTER (12)	LF	116
1987	DELINEATOR FOR GUARDRAIL (B/W) (2)	EACH	50
2159	TEMPORARY DITCH	LF	12,025
2160	CLEAN TEMPORARY DITCH	LF	6,013
2200	ROADWAY EXCAVATION (12)	CY	1,183
2351	GUARDRAIL- STEEL W BEAM FACE-S FACE (2)	LF	2,292.5
2360	GUARDRAIL TERMINAL SECTION NO 1 (2)	EACH	6
2367	GUARDRAIL END TREATMENT TYPE 1 (2)	EACH	7
2381	REMOVE GUARDRAIL (2)	LF	3,225
2391	GUARDRAIL END TREATMENT TYPE 4A (2)	EACH	3
2403	REMOVE CONCRETE MASONRY (2)	CY	2.2
2429	RIGHT-OF-WAY MONUMENT TYPE 1 (12)	EACH	9
2483	CHANNEL LINING CLASS II (3) (5) (7) (A)	TON	220
2545	CLEARING AND GRUBBING (12) (B)	LS	1
2562	TEMPORARY SIGNS	SQFT	210
2569	DEMOBILIZATION	LS	1
2625	REMOVE HEADWALL (3)	EACH	2
2650	MAINTAIN & CONTROL TRAFFIC	LS	1
2671	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2
2676	MOBILIZATION FOR MILL & TEXT	LS	1
2677	ASPHALT PAVE MILLING & TEXTURING (1) (5)	TON	314

(1) CARRIED OVER FROM THE PAVING SUMMARY
(2) CARRIED OVER FROM THE GUARDRAIL SUMMARY
(3) CARRIED OVER FROM THE PIPE DRAINAGE/RCBC SUMMARY
(4) CARRIED OVER FROM THE PAVEMENT FAILURE REPAIR SUMMARY
(5) CARRIED OVER FROM THE ENTRANCE PIPE SUMMARY
(7) CARRIED OVER FROM THE ROADSIDE REGRADING SUMMARY
(12) CARRIED OVER FROM THE PADDOCK DRIVE GENERAL SUMMARY
(A) INCLUDES 100 TON AT THE DISCRETION OF THE ENGINEER
(B) APPROXIMATELY 0.7 ACRES

JESSAMINE COUNTY - KY 169
MILEPOST 12.000 TO 16.555
ITEM NO. 7-9014.00
GENERAL SUMMARY
SHEET 2 OF 3

ITEM NUMBER	ITEM	UNIT	QUANTITY
2697	EDGELINE RUMBLE STRIPS (10)	LF	38,642
2701	TEMPORARY SILT FENCE	LF	12,025
2703	SILT TRAP TYPE A	EACH	9
2704	SILT TRAP TYPE B	EACH	9
2705	SILT TRAP TYPE C	EACH	9
2706	CLEAN SILT TRAP TYPE A	EACH	9
2707	CLEAN SILT TRAP TYPE B	EACH	9
2708	CLEAN SILT TRAP TYPE C	EACH	9
2726	STAKING	LS	1
4792	CONDUIT-1 IN (RIGID STEEL) (11)	LF	20
4811	ELECTRICAL JUNCTION BOX TYPE B (11)	EACH	1
4820	TRENCHING AND BACKFILLING (11)	LF	20
4830	LOOP WIRE (11)	LF	668
4844	CABLE-NO. 14/5C (11)	LF	450
4850	CABLE-NO. 14/1 PAIR (11)	LF	800
4895	LOOP SAW SLOT AND FILL (11)	LF	224
5950	EROSION CONTROL BLANKET	SQYD	500
5952	TEMPORARY MULCH	SQYD	29,268
5953	TEMP SEEDING AND PROTECTION	SQYD	21,951
5963	INITIAL FERTILIZER	TON	1.37
5964	MAINTENANCE FERTILIZER	TON	2.29
5985	SEEDING AND PROTECTION	SQYD	43,762
5989	SPECIAL SEEDING CROWN VETCH	SQYD	500
5992	AGRICULTURAL LIMESTONE	TON	27.44
6406	SBM ALUM SHEET SIGNS .080 IN (8)	SQFT	108.5
6407	SBM ALUM SHEET SIGNS .125 IN (13)	SQFT	65
6410	STEEL POST TYPE 1 (8)	LF	318
6510	PAVE STRIPING-TEMP PAINT-4 IN	LF	100,000
6542	PAVE STRIPING-THERMO-6 IN W (6)	LF	51,234
6543	PAVE STRIPING-THERMO-6 IN Y (6)	LF	45,951
6546	PAVE STRIPING-THERMO-12 IN W (6)	LF	144
6565	PAVE MARKING-THERMO X-WALK-6 IN (6)	LF	532
6568	PAVE MARKING-THERMO STOP BAR-24 IN (6)	LF	214
6569	PAVE MARKING-THERMO CROSS-HATCH (YELLOW) (6)	SQFT	383
6569	PAVE MARKING-THERMO CROSS-HATCH (WHITE) (6)	SQFT	60
6573	PAVE MARKING-THERMO STR ARROW (6)	EACH	2
6574	PAVE MARKING-THERMO CURVE ARROW (6)	EACH	73
6575	PAVE MARKING-THERMO COMB ARROW (6)	EACH	11
6578	PAVE MARKING-THERMO MERGE ARROW (6)	EACH	3
6600	REMOVE PAVEMENT MARKER TYPE V (6)	EACH	53

(6) CARRIED OVER FROM THE STRIPING SUMMARY
(8) CARRIED OVER FROM THE SIGN SUMMARY
(10) CARRIED OVER FROM THE RUMBLE STRIP SUMMARY
(11) CARRIED OVER FROM THE TRAFFIC LOOP SUMMARY
(13) CARRIED OVER FROM THE REFLECTIVE SIGN POST PANEL SUMMARY

JESSAMINE COUNTY - KY 169
MILEPOST 12.000 TO 16.555
ITEM NO. 7-9014.00
GENERAL SUMMARY
SHEET 3 OF 3

ITEM NUMBER	ITEM		UNIT	QUANTITY
8002	STRUCTURE EXCAVATION - ROCK	(3)	CUYD	13
8003	FOUNDATION PREPARATION (MP 12.98)	(3)	LS	1
8100	CLASS A CONCRETE	(3)	CY	72
8150	STEEL REINFORCEMENT	(3)	LBS	5,176
14003	W CAP EXISTING MAIN	(12)	EACH	2
14008	W ENCASEMENT STEEL BORED RANGE 3	(12)	LF	65
14059	W PIPE PVC 06 INCH	(12)	LF	96
14094	W TIE-IN 06 INCH	(12)	EACH	2
14117	W VALVE CUT-IN 06 INCH	(12)	EACH	2
10020NS	FUEL ADJUSTMENT		DOLL	17,878
10030NS	ASPHALT ADJUSTMENT		DOLL	37,790
20191ED	OBJECT MARKER TY 3	(2)	EACH	10
20188NS835	INSTALL LED SIGNAL - 3 SECTION	(9)	EACH	13
20458ES403	CENTERLINE RUMBLE STRIPS	(10)	LF	8,757
20748ED	SHOULDER MILLING/TRENCHING (SECTION 1)	(1)	SQYD	3,865
20748ED	SHOULDER MILLING/TRENCHING (SECTION 2)	(1)	SQYD	3,729
21134ND	REMOVE-STORE AND REINSTALL SIGN	(8)	EACH	12
21289ED	LONGITUDINAL EDGE KEY	(1)	LF	17,400
21373ND	REMOVE SIGN	(8)	EACH	1
21417ES717	PAVE MARK THERMO CONE CAP-SOLID YELLOW	(6)	SQFT	75
21819NN	FITTINGS (18" RCP TO PROPOSED 18" CULVERT PIPE)	(3)	EACH	3
21819NN	FITTINGS (24" RCP TO PROPOSED 24" CULVERT PIPE)	(3)	EACH	1
22400NN	REMOVE AND RELOCATE SIGN ASSEMBLY	(8) (12)	EACH	6
23307EC	CL3 ASPH SURF NO.4B PG64-22	(1)	TON	1,854
23497EC	REMOVE CULVERT PIPE HEADWALL	(5)	EACH	2
24631EC	BARCODE SIGN INVENTORY	(8)	EACH	32
24900EC	PVC CONDUIT-1 1/4 IN-SCHEDULE 80	(11)	LF	25
24901EC	PVC CONDUIT-2 IN-SCHEDULE 80	(11)	LF	20
24955ED	REMOVE SIGNAL EQUIPMENT	(9)	EACH	1
24963ED	LOOP TEST	(11)	EACH	2
24964EC	FINE MILLING	(1)	SQYD	4,034
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	(1)	TON	40.8
25017ED	RAIL SYSTEM SIDE MOUNTED MGS	(2)	LF	56
26131ED	SLOPED AND MITERED HEADWALL-18 IN	(3)	EACH	1
26175EC	ROADSIDE REGRADING	(1)	LF	32,514

(1) CARRIED OVER FROM THE PAVING SUMMARY
(2) CARRIED OVER FROM THE GUARDRAIL SUMMARY
(3) CARRIED OVER FROM THE PIPE DRAINAGE/RCBC SUMMARY
(5) CARRIED OVER FROM THE ENTRANCE PIPE SUMMARY
(6) CARRIED OVER FROM THE STRIPING SUMMARY
(8) CARRIED OVER FROM THE SIGN SUMMARY
(9) CARRIED OVER FROM THE SIGNAL SUMMARY
(10) CARRIED OVER FROM THE RUMBLE STRIP SUMMARY
(11) CARRIED OVER FROM THE TRAFFIC LOOP SUMMARY
(12) CARRIED OVER FROM THE PADDOCK DRIVE GENERAL SUMMARY

JESSAMINE COUNTY - KY 169
ITEM NO. 7-9014.00
KY 169 LEFT TURN LANE @ PADDOCK DRIVE

ITEM NUMBER	ITEM	UNIT	QUANTITY
1	DGA BASE (1) (3)	TON	1,680
100	ASPHALT SEAL AGGREGATE (1)	TON	8.7
100	ASPHALT SEAL COAT (1)	TON	1.7
190	LEVELING & WEDGING PG64-22 (1) (3)	TON	229
214	CL3 ASPH BASE 1.00D PG64-22 (1) (3)	TON	958
388	CL3 ASPH SURF 0.38B PG64-22 (1) (3)	TON	451
440	ENTRANCE PIPE-15 IN (3)	LF	41
441	ENTRANCE PIPE-18 IN (3)	LF	92
1310	REMOVE PIPE (3)	LF	132
1433	SLOPED BOX OUTLET TYPE 1-18 IN (3)	EACH	1
1726	SAFETY BOX INLET-18 IN SDB-1 (3)	EACH	1
1820	LIP CURB AND GUTTER	LF	116
2200	ROADWAY EXCAVATION (A)	CUYD	1,183
2429	RIGHT-OF-WAY MONUMENT TYPE 1	EACH	9
2483	CHANNEL LINING CLASS II (2) (3)	TON	86
2545	CLEARING AND GRUBBING (B)	LS	1
2625	REMOVE HEADWALL (2)	EACH	2
2677	ASPHALT PAVE MILLING & TEXTURING (1) (3)	TON	96
8002	STRUCTURE EXCAVATION - ROCK (2)	CUYD	13
8003	FOUNDATION PREPARATION (MP 12.98) (2)	LS	1
8100	CONCRETE-CLASS A (2)	CUYD	65
8150	STEEL REINFORCEMENT (2)	LB	9,490
14003	W CAP EXISTING MAIN	EACH	2
14008	W ENCASEMENT STEEL BORED RANGE 3	LF	65
14059	W PIPE PVC 06 INCH	LF	96
14094	W TIE-IN 06 INCH	EACH	2
14117	W VALVE CUT-IN 06 INCH	EACH	2
20748ED	SHOULDER MILLING/TRENCHING (SECTION 1) (1)	SQYD	581
21289ED	LONGITUDINAL EDGE KEY (1)	LF	2,616
22400NN	REMOVE AND RELOCATE SIGN ASSEMBLY	EACH	1
23497EC	REMOVE CULVERT PIPE HEADWALL (3)	EACH	2
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING (1)	TON	3.7

REFER TO STRIPING SUMMARY, SIGNING SUMMARY, REFLECTIVE SIGN POST PANEL SUMMARY, AND RUMBLE STRIP SUMMARY FOR THOSE ASSOCIATED QUANTITIES

(1) CARRIED OVER FROM THE PAVING SUMMARY

(2) CARRIED OVER FROM THE DRAINAGE (RCBC EXTENSION) SUMMARY

(3) CARRIED OVER FROM THE ENTRANCE PIPE AND ENTRANCE PAVING SUMMARY

(A) ESTIMATE FOR EARTHWORK CALCULATIONS FOR DESIGN ONLY. THE CONTRACTOR IS ADVISED THAT THE EARTHWORK CALCULATIONS SHOWN ARE FOR INFORMATION ONLY. ASSUMPTIONS FOR SHRINKAGE AND SWELL FACTORS ARE THE CONTRACTOR'S RESPONSIBILITY.
(EXCAVATION QUANTITY LISTED, EMBANKMENT ESTIMATED AT 717 CU YD)

(B) APPROXIMATELY 0.7 ACRES

JESSAMINE COUNTY - KY 169
MILEPOST 12.000 TO 16.555
ITEM NO. 7-9014.00
PAVING SUMMARY (PAGE 1 OF 2)
BEGIN PROJECT TO US 68

		THIN LAY ONLY (BACK OF RADIUS US 27 TO BEGIN WIDEN)	PAVE WIDEN AND THIN LAY	LEFT TURN AT PADDOCK DRIVE	PAVE WIDEN AND THIN LAY	PAVE WIDEN (ONE SIDE) AND THIN LAY	PAVE WIDEN AND THIN LAY	PAVE WIDEN AND THIN LAY (12'X8' DBL RCBC)	PAVE WIDEN AND THIN LAY	THIN LAY ONLY (END WIDEN TO BACK OF RADIUS US 68)	TOTAL SECTION 1
BEGIN STATION TYPICAL SECTION		**633+75**	**659+25**	**679+39**	**692+47**	**708+95**	**713+55**	**719+61**	**719+89**	**748+00**	
END STATION TYPICAL SECTION		**659+25**	**679+39**	**692+47**	**708+95**	**713+55**	**719+61**	**719+89**	**748+00**	**763+35**	
PAVING AREAS											
ITEM		**SY**									
0.75"	CL3 ASPH SURF NO.4B PG64-22	17,301	5,818		4,761	1,329	1,751	90	8,121	7,018	46,167
FINE MILLING (1)		3,017								1,017	4,034
1.50"	CL3 ASPH SURF 0.38B PG64-22			4,826							4,826
3.5"	CL3 ASPH BASE 1.00D PG64-22		1,343	END AREAS	1,099	229	404	19	1,874		4,968
3.5"	CL3 ASPH BASE 1.00D PG64-22		1,026	END AREAS	839	184	309	14	1,432		3,804
3.5"	CL3 ASPH BASE 1.00D PG64-22		1,156	END AREAS	946	203	348	16	1,614		4,283
6.0"	DGA BASE (FULL DEPTH)		END AREAS	END AREAS	END AREAS	END AREAS	END AREAS		END AREAS		(2)
ASPHALT SEAL AGGREGATE			1,790	1,163	1,465	409	539		2,499		7,890
ASPHALT SEAL COAT			1,790	1,163	1,465	409	539		2,499		7,890
ASPHALT MATERIAL FOR TACK NON-TRACKING		17,301	8,895	8,929	7,279	1,881	2,677	90	12,415	7,018	66,482
SHOULDER MILLING / TRENCHING (SECTION 1)			895	581	732	127	269	12	1,249		3,865
PAVING SUMMARY											
ITEM NUMBER	**ITEM**	**TON**									
23307EC	CL3 ASPH SURF NO.4B PG64-22	714	241		197	55	45	4	308	290	1,854
388	CL3 ASPH SURF 0.38B PG64-22			399							399
214	CL3 ASPH BASE 1.00D PG64-22		680	908	557	118	205	12	948		3,428
1	DGA BASE		1,714	1,650	1,530	267	433		2,225		7,819
2677	ASPHALT PAVE MILLING AND TEXTURING			87 (4)							87
190	LEVELING & WEDGING PG64-22		37 (3)	226 (4)	30 (3)		9 (3)	1 (3)	49 (3)		351
100	ASPHALT SEAL AGGREGATE		22.4	8.7	18.3	5.1	5.6		29.7		89.8
103	ASPHALT SEAL COAT		2.7	1.7	2.2	0.6	0.7		3.6		11.5
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	7.3	3.7	3.7	3.1	0.8	0.9	0.04	5.0	2.9	27.4
		SQ YD									
24964EC	FINE MILLING	3,017								1,017	4,034
20748ED	SHOULDER MILLING/TRENCHING (SECTION 1)		895	581	732	127	269	12	1,249		3,865
		LF									
21289ED	LONGITUDINAL EDGE KEY		4,028	2,616	3,296	570	1,212	56	5,622		17,400
26175EC	ROADSIDE REGRADING		4,028		3,296	920	1,212	56	5,622		15,134

(1) CARRIED OVER FROM FINE MILLING SUMMARY
(2) CALCULATED USING AVERAGE END AREAS
(3) QUANTITY INCLUDED FOR USE IN AREAS OF SETTLEMENT FOLLOWING 14 DAYS OF CURING OF ASPHALT BASE FOR PAVEMENT WIDENING PRIOR TO ASPHALT OVERLAY
(4) QUANTITY INCLUDED FOR USE IN ADJUSTING CROSS SLOPES ALONG LEFT TURN LANE CONSTRUCTION LIMITS. SEE ADJUST CROSS SLOPE TYPICAL SECTION AND CROSS SECTIONS.

All asphalt mixtures estimated at 110 lbs per SY per inch of depth unless otherwise noted. DGA base estimated at 115 lbs per SY per inch of depth.
Seal Coat: First course estimated at 3.2 lbs per SY and second course estiamted at 2.8 lbs per SY. Seal Aggregate: First course estimated at 30 lbs per SY and second course estimated at 20 lbs per SY.

JESSAMINE COUNTY - KY 169
MILEPOST 12.000 TO 16.555
ITEM NO. 7-9014.00
PAVING SUMMARY (PAGE 2 OF 2)
US 68 TO END OF PROJECT

		OVERLAY (BACK OF RADIUS US 68 TO BEGIN WIDEN)	PAVE WIDEN OVERLAY	OVERLAY (PREVIOUSLY WIDENED AT RCBC)	PAVE WIDEN OVERLAY	PAVE WIDEN MILL AND INLAY	MILL AND INLAY (END WIDEN TO BACK OF RADIUS KY 1267)	TOTAL SECTION 2
BEGIN STATION TYPICAL SECTION		**764+75**	**783+10**	**824+50**	**827+50**	**862+50**	**870+00**	
END STATION TYPICAL SECTION		**783+10**	**824+50**	**827+50**	**862+50**	**870+00**	**873+25**	
PAVING AREAS								
ITEM					**SY**			
1.25"	CL2 ASPH SURF 0.38D PG64-22	5,148	9,200	800	7,778	1,667	867	25,460
3.0"	CL2 ASPH BASE 1.00D PG64-22		1,936		1,637	351		3,924
3.0"	CL2 ASPH BASE 1.00D PG64-22		2,166		1,831	392		4,389
1.25"	ASPHALT PAVE MILLING & TEXTURING	509				1,500	867	2,876
ASPHALT MATERIAL FOR TACK NON-TRACKING		5,148	12,382	800	10,468	2,243	867	31,908
SHOULDER MILLING / TRENCHING (SECTION 2)			1,840		1,556	333		3,729
PAVING SUMMARY								
ITEM NUMBER	**ITEM**				**TON**			
301	CL2 ASPH SURF 0.38D PG64-22	354	633	55	535	115	60	1,752
212	CL2 ASPH BASE 1.00D PG64-22		678		574	123		1,375
2677	ASPHALT PAVE MILLING AND TEXTURING	35 (3)				123 (2)	60	218
190	LEVELING AND WEDGING PG64-22 (1)		51		43	129 (2)		223
24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	2.2	5.2	0.3	4.4	0.9	0.4	13.4
					SQ YD			
20748ED	SHOULDER MILLING / TRENCHING (SECTION 2)		1,840		1,556	333		3,729
					LF			
26175EC	ROADSIDE REGRADING		8,280	600	7,000	1,500		17,380

(1) QUANTITY INCLUDED FOR USE IN AREAS OF SETTLEMENT FOLLOWING 14 DAYS OF CURING OF ASPHALT BASE FOR PAVEMENT WIDENING PRIOR TO ASPHALT OVERLAY

(2) STA. 863+83 TO STA. 868+82: 20 TONS ASPHALT MILLING AND TEXTURING AND 120 TONS LEVELING & WEDGING INCLUDED TO ADJUST CROSS SLOPE

(3) QUANTITY FOR EDGE KEY AT BEGIN OVERLAY BACK OF RADIUS OF US 68

All asphalt mixtures estimated at 110 lbs per SY per inch of depth unless otherwise noted. DGA base estimated at 115 lbs per SY per inch of depth.

Jessamine County - KY 169
Fine Milling Summary
Item No. 7-9014.00

Total	4034

Station	Milepoint	Comment	Length (FT)	Width (FT)	SQ YD
633+75	12.00	Along KY 169 @ Begin Overlay	75	72	600
637+97	12.08	Lowes Approach	75	54	450
638+15	12.09	Bellaire Dr Entrance	75	22	183
638+55	12.09	Bellaire Dr Exit	75	22	183
643+10	12.18	Bell Place Dr Entrance	75	20	167
643+83	12.19	Bell Place Dr Exit	75	20	167
643+58	12.19	Keene Crossing	75	68	567
652+62	12.36	Keene Way Dr	75	44	367
653+00	12.37	N Keene Way Dr	75	40	333
758+60	14.37	Almahurst Way	75	22	183
763+35	14.46	Along KY 169 @ End Overlay	75	100	833

Begin Overlay - Remove Thermo Pavement Markings		
Description	**Quantity**	
Ex. Stop Bars	132 LF	**INCIDENTAL TO PROPOSED PAVEMENT MARKINGS**
Ex. Curve Arrows	41 EACH	
Ex. Thru Arrows	2 EACH	
End Overlay - Remove Thermo Pavement Markings		
Description	**Quantity**	
Ex. Stop Bars	44 LF	
Ex. Curve Arrows	3 EACH	
Ex. Combo Arrows	3 EACH	
Ex. Merge Arrows	3 EACH	

Roadside Regrading Summary — JESSAMINE County — KY 169

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.*	Target Fill Slope	Include DGA Wedge? (Yes/No)	DGA (TONS)	Asphalt Seal Coat (TON)	Asphalt Seal Aggregate (TON)	Channel Line Ditch, Fill Slope or Cut Slope? (Yes/No)	Channel Lining Class II (TONS)	Geotex. Fabric Type IV (SQ YD)	Remarks
Side of Road	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint													
RT	659+25	12.486	662+50	12.547	325	0	53	Figure 1	4 : 1	Refer to the Paving Summary and Typical Section for Full Depth DGA Shoulder information.				No			Sta. 659+25 Begin Pavement Widen Section 1
LT	659+25	12.486	667+05	12.634	780	107	49	Figure 9	3 : 1					No			
RT	662+50	12.547	679+39	12.867	1,689	175	216	Figure 9	3 : 1					No			Sta. 679+39 to Sta. 692+47 Roadway Excavation / Embankment for Left Turn at Paddock Drive See Cross Sections
LT	667+05	12.634	678+29	12.846	1,124	0	182	Figure 1	4 : 1					No			
LT	678+29	12.846	679+39	12.867	110	14	7	Figure 7	4 : 1					No			
REFER TO PADDOCK DRIVE CROSS SECTIONS FOR EXCAVATION AND EMBANKMENT QUANTITIES.																	
LT	692+47	13.115	705+42	13.360	1,295	114	44	Figure 9	3 : 1	Refer to the Paving Summary and Typical Section for Full Depth DGA Shoulder information.				No			
RT	692+47	13.115	705+71	13.366	1,324	125	109	Figure 9	4 : 1					No			
RT	705+71	13.366	709+75	13.442	404	0	33	Figure 1	4 : 1					No			
LT	705+42	13.360	709+91	13.445	449	56	61	Figure 9	2.5 : 1					No			
RT	709+75	13.442	718+52	13.608	877	116	29	Figure 9	3 : 1					No			
LT	709+91	13.445	712+44	13.493	253	0	3	Figure 9	3 : 1					No			
LT	712+44	13.493	720+10	13.638	766	100	26	Figure 9	3 : 1					No			
RT	718+52	13.608	727+23	13.773	871	0	172	Figure 1	3 : 1					Yes - Fill Slope	34		Sta. 719+00 to Sta. 721+00 - To be used to at discretion of Engineer along the Existing Bridge Railing side slope
LT	720+10	13.638	723+63	13.705	353	0	57	Figure 1	4 : 1					No			
LT	723+63	13.705	748+00	14.167	2,437	320	83	Figure 9	3 : 1					No			Sta. 748+00 End Pavement Widen Section 1
RT	727+23	13.773	728+79	13.803	156	0	47	Figure 3	2 : 1					No			
RT	728+79	13.803	748+00	14.167	1,921	339	63	Figure 9	3 : 1					No			
RT	783+10	14.831	800+82	15.167	1,772	65	58	Figure 9	3 : 1	No				No			Sta. 783+10 Begin Pavement Widen Section 2
LT	783+10	14.831	799+30	15.138	1,620	212	55	Figure 7	4 : 1	No				No			
LT	799+30	15.138	815+98	15.454	1,668	219	57	Figure 9	3 : 1	No				No			
RT	800+82	15.167	804+52	15.237	370	0	43	Figure 1	3 : 1	No				No			
RT	804+52	15.237	822+17	15.571	1,765	239	56	Figure 9	3 : 1	No				No			
LT	815+97	15.454	824+57	15.617	860	113	29	Figure 9	2.5 : 1	No				No			
RT	822+17	15.571	827+14	15.666	497	0	106	Figure 2	3 : 1	No				No			
LT	824+57	15.617	828+39	15.689	382	0	82	Figure 1	3 : 1	No				No			
RT	827+14	15.666	842+43	15.955	1,529	133	104	Figure 9	4 : 1	No				No			
LT	828+39	15.689	833+37	15.784	498	0	32	Figure 9	2.5 : 1	No				No			
LT	833+37	15.784	861+33	16.313	2,796	0	373	Figure 2	3 : 1	No				No			
RT	842+43	15.955	854+93	16.192	1,250	155	41	Figure 7	4 : 1	No				No			
RT	854+93	16.192	862+13	16.328	720	95	24	Figure 9	3 : 1	No				No			
LT	861+33	16.313	865+33	16.389	400	0	5	Figure 2	3 : 1	No				No			
RT	862+13	16.328	864+11	16.366	198	0	32	Figure 1	4 : 1	No				No			
RT	864+11	16.366	870+00	16.477	589	9	11	Figure 9	3 : 1	No				No			Sta. 870+00 End Pavement Widen Section 2
LT	865+33	16.389	870+00	16.477	467	7	9	Figure 9	3 : 1	No				No			
						2,714	2,349										

Summary of Items

Roadside Regrading	32,514	LF		Channel Lining Class II	34	TONS

JESSAMINE - KY 169
MILEPOST 12.000 TO 16.555
ITEM NO. 7-9014.00

PAVEMENT FAILURE REPAIR IMPROVEMENTS

STATION			OFFSET	LENGTH (FT)	WIDTH (FT)	DEPTH (IN)	CRUSHED AGGREGATE SIZE NO 23	LEVELING & WEDGING PG64-22	CL2 ASPH BASE 1.00D PG64-22
UNIT TO BID							**TON**	**TON**	**TON**
ITEM CODE							80	190	212
827+80	TO	828+91	LT	111	9	10.5	26	13	55
867+55	TO	869+00	LT	145	9	10.5	34	16	72
PAVEMENT FAILURE REPAIR IMPROVEMENTS TOTAL:							60	29 (1)	127 (1)

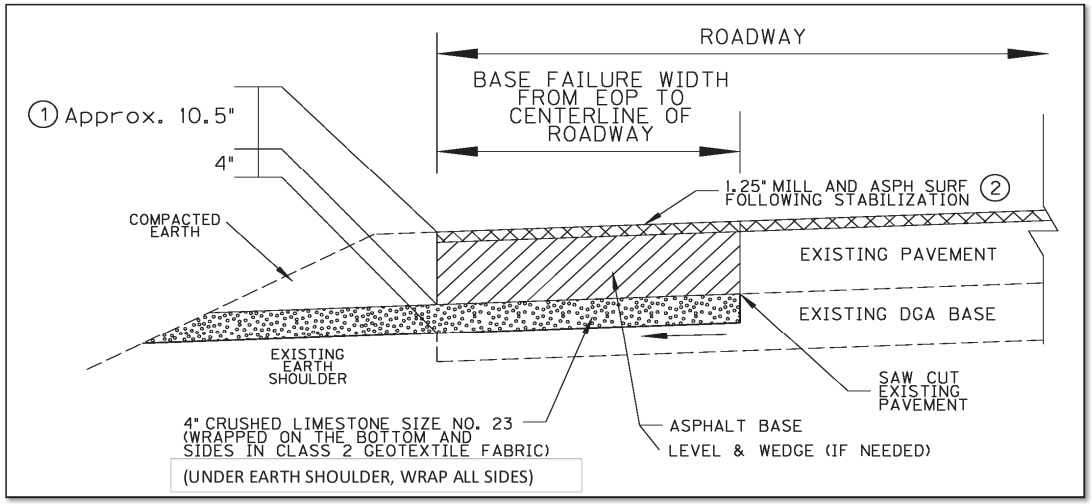
NOTES:

THESE NUMBERS ARE FOR ESTIMATE PURPOSES ONLY. ACTUAL LOCATIONS AND QUANTITIES WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. REFER TO THE SPECIAL NOTE FOR BASE FAILURE REPAIR FOR MORE INFORMATION.

(1) PLACE ASPHALT BASE UP TO EXISTING PAVEMENT SURFACE. COMPACT ASPHALT BASE. SEAL ASPHALT BASE WITH LEVELING & WEDGING. ALLOW BASE FAILURE REPAIR TO CURE MINIMUM OF 14 CALENDAR DAYS. ONCE ENGINEER DETERMINES BASE FAILURE AREA HAS SUFFICIENTLY STABILIZED, BEGIN MILLING AND RESURFACING OPERATIONS. PRIOR TO MILLING, LEVEL AND WEDGE ANY SETTLEMENT OF THE REPAIR AREAS.

(2) 1.25" ASPHALT PAVE MILLING & TEXTURING AND ASPHALT SURFACE HAS BEEN INCLUDED ON THE PAVING SUMMARY AS PART OF THE SECTION 2 PAVE WIDEN AND INLAY TYPICAL.

PAVEMENT FAILURE REPAIR CROSS SECTION DETAIL



Guardrail Summary — Jessamine County — KY 169

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

Proposed Guardrail to be Constructed										Existing Guardrail to be Removed					
Side of Road	Proposed BEGINNING Treatment	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint	Proposed ENDING Treatment	Proposed Length (LF)	Number of Radius Rail	Remarks	Side of Road	Approx. BEGIN Station	Approx. BEGIN Milepoint	Approx. END Station	Approx. END Milepoint	Existing Length (LF)
LT	Type 1	718+27	13.604	719+61	13.629		87.50		Transition to Railing System Side Mounted MGS	LT	718+27	13.604	719+89	13.634	162.50
LT		719+61	13.629	719+89	13.634		28.00		Remove existing Bridge Railing and Install Railing System Side Mounted MGS Standard Drawing BHS-011	Remove Existing Bridge Railing. See Remove Concrete Masonry quantity below.					
LT		719+89	13.634	721+31	13.661	Type 1	100.00		Transition from Railing System Side Mounted MGS	LT	719+89	13.634	721+31	13.661	150.00
RT	Terminal Section 1	718+63	13.610	719+61	13.629		103.75	1	Transition to Railing System Side Mounted MGS	RT	718+63	13.610	719+89	13.634	137.50
RT		719+61	13.629	719+89	13.634		28.00		Remove existing Bridge Railing and Install Railing System Side Mounted MGS Standard Drawing BHS-011	Remove Existing Bridge Railing. See Remove Concrete Masonry quantity below.					
RT		719+89	13.634	721+37	13.662	Type 1	100.00		Transition from Railing System Side Mounted MGS	RT	719+89	13.634	721+37	13.662	150.00
									Remove Only	LT	749+46	14.194	753+80	14.277	437.50
RT	Type 4A	749+77	14.200	753+44	14.270	Type 1	287.50			RT	749+77	14.200	753+44	14.270	375.00
LT	Type 1	821+87	15.566	827+52	15.673	Type 1	475.00			LT	821+87	15.566	827+52	15.673	575.00
RT	Terminal Section 1	824+97	15.624	829+45	15.709	Type 1	403.75	1		RT	824+97	15.624	829+45	15.709	450.00
RT	Type 4A	867+88	16.437	869+83	16.474	Terminal Section 1	170.00	2		RT	867+88	16.437	869+83	16.474	200.00
LT	Type 4A	869+42	16.466	872+49	16.524	Terminal Section 1	278.75	1		LT	869+42	16.466	872+49	16.524	312.50
RT	Terminal Section 1	870+03	16.478	872+73	16.529	Terminal Section 1	286.25	3		RT	870+03	16.478	872+73	16.529	275.00

Summary of Items					
Guardrail-Steel W Beam-S Face	2,292.50	LF	Delineator for Guardrail B/W	50	EACH
Remove Guardrail	3,225.00	LF	Terminal Section No. 1	6	EACH
End Treatment Type 1	7	EACH	Object Marker TY 3	10	EACH
End Treatment Type 4A	3	EACH	Rail System Side Mounted MGS	56	LF

Existing Bridge Rail Removal Summary					
Side of Road	Approx. Begin Station	Approx. Begin Milepoint	Approx. End Station	Approx. End Milepoint	Remove Concrete Masonry (CUYD)
LT	719+61	13.629	719+89	13.634	1.10
RT	719+61	13.629	719+89	13.634	1.10

JESSAMINE COUNTY - KY 169
MILEPOST 12.000 TO 16.555
ITEM NO. 7-9014.00
DRAINAGE SUMMARY (PIPE AND RCBC EXTENSIONS)

PIPE EXTENSIONS

STATION NUMBER MILE POINT	CULVERT PIPE (1)			MISCELLANEOUS (1)				PAVING (3)		REMARKS
	CULVERT PIPE-18 IN	CULVERT PIPE-24 IN	REMOVE PIPE	SAFETY BOX INLET-18 IN DBL SDB-5	SAFETY BOX INLET-24 IN DBL SDB-5	SLOPED & MITERED HEADWALL-18 IN	(2) FITTINGS	CL3 ASPH BASE 1.00D PG64-22	LEVELING & WEDGING PG64-22	
ITEM CODE	462	464	1310	1728	1729	26131ED	21819NN	214	190	
UNIT TO BID	LF			EACH				TON		
661+64 MP 12.53	8		4	1			1			EXTEND LEFT SIDE - INLET
670+53 MP 12.70	7		4	1			1	0.9	0.1	EXTEND RIGHT SIDE - INLET
676+19 MP 12.81		8	4		1		1	0.9	0.1	EXTEND RIGHT SIDE - INLET
734+63 MP 13.91	12		4			1	1			EXTEND RIGHT SIDE - OUTLET
PROJECT TOTALS	**27**	**8**	**16**	**2**	**1**	**1**	**4**	**1.8**	**0.2**	**PROJECT TOTALS**

NOTES:

(1) THE CONTRACTOR SHALL FIELD VERIFY TYPES AND DIMENSIONS PRIOR TO ORDERING.

(2) FITTINGS HAVE BEEN INCLUDED FOR ALL PIPE EXTENSIONS. SEE THE GENERAL SUMMARY FOR FITTINGS LISTED BY SIZE.

(3) SEE PIPE PAVING DETAIL FOR PAVING OPERATIONS. PLACE ASPHALT BASE UP TO EXISTING PAVEMENT SURFACE. EXPOSE TO TRAFFIC FOR 14 DAYS. LEVEL AND WEDGE ANY SETTLEMENT PRIOR TO SURFACE OVERLAY.

RCBC EXTENSIONS

STATION NUMBER MILE POINT	(1) CULVERT SIZE	EXTENSION LENGTH - LEFT	EXTENSION LENGTH - RIGHT	RCBC (2)			MISCELLANEOUS			REMARKS
				FOUNDATION PREPARATION	CONCRETE-CLASS A	STEEL REINFORCEMENT	CHANNEL LINING CLASS II	REMOVE HEADWALL	STRUTURE EXCAVATION - ROCK	
ITEM CODE				8003	8100	8150	2483	2625	8002	
UNIT TO BID				LS	CY	LB	TONS	EACH	CUYD	
685+32 MP 12.98	8'x5'	14'	5'	1	72	5176	33	2	13	SEE RCBC EXTENSION DETAIL SHEETS PADDOCK DRIVE PLANS STA. 15+45
PROJECT TOTALS		**14'**	**5'**	**1**	**72**	**5,176**	**33**	**2**	**13**	**PROJECT TOTALS**

NOTES:

(1) THE CONTRACTOR SHALL FIELD VERIFY TYPES AND DIMENSIONS PRIOR TO ORDERING.
(2) SEE CULVERT DETAIL SHEETS.

JESSAMINE COUNTY - KY 169
MILEPOST 12.000 TO 16.555
ITEM NO. 7-9014.00
ENTRANCE PIPE AND ENTRANCE PAVING SUMMARY

STATION	MILE POINT	OFFSET	ENTRANCE PAVEMENT TYPE	ENTRANCE PIPE							ENTRANCE PAVING							REMARKS
				ENTRANCE PIPE-15 IN	ENTRANCE PIPE-18 IN	REMOVE PIPE	SLOPED BOX OUTLET TYPE 1-18 IN	SAFETY BOX INLET-18 IN SDB-1	CHANNEL LINING CLASS II	REMOVE CULVERT PIPE HEADWALL	DGA BASE	LEVELING & WEDGING PG 64-22	CL2 ASPH BASE 1.00D PG64-22 (3)	CL3 ASPH BASE 1.00D PG64-22 (2)	CL2 ASPH SURF 0.38D PG64-22 (3)	CL3 ASPH SURF 0.38B PG64-22 (2)	ASPHALT PAVE MILLING & TEXTURING (4)	
BID ITEM				**440**	**441**	**1310**	**1433**	**1726**	**2483**	**23497EC**	**1**	**190**	**212**	**214**	**301**	**388**	**2677**	
UNITS				**LF**			**EACH**	**EACH**	**TON**	**EACH**	**TON**							
682+93	12.93	LT	ASPHALT	41		40					10.1			4.8		4.0		Left Turn Lane @ Paddock Drive Improvements Plans (Sta. 13+03)
686+91	13.01	LT	ASPHALT		92	92	1	1	52.8 (1)	2	19.9	2.7		45.0		44.0	9.0	(4) PADDOCK DRIVE: Left Turn Lane @ Paddock Drive Improvements Plans (Sta. 17+00)
690+53	13.08	RT	ASPHALT													4.0		Left Turn Lane @ Paddock Drive Improvements Plans (Sta. 20+63) - PAVING ONLY
849+31	16.09	RT	ASPHALT	31		31					7.5		3.6		2.7			Replace Entrance Pipe Due to 1' Pavement Widening
850+80	16.11	RT	ASPHALT	56		56					8.7		4.2		3.1			Replace Entrance Pipe Due to 1' Pavement Widening
852+50	16.15	RT	ASPHALT	29		29					8.2		3.9		2.9			Replace Entrance Pipe Due to 1' Pavement Widening
			TOTALS:	**157**	**92**	**248**	**1**	**1**	**52.8**	**2**	**54.4**	**2.7**	**11.7**	**49.8**	**8.7**	**52.0**	**9.0**	**PROJECT TOTALS**

NOTE:

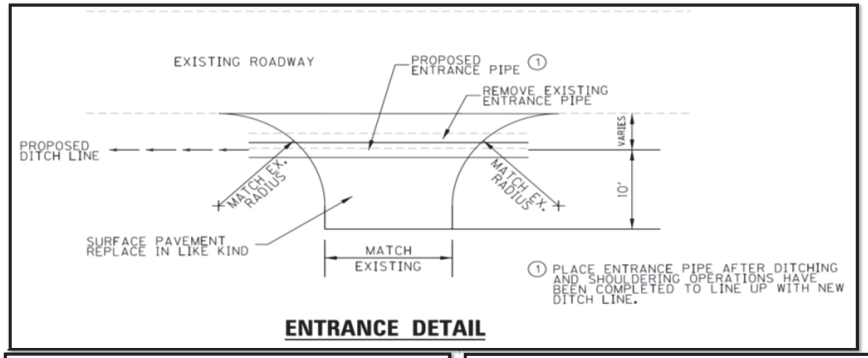
THESE NUMBERS ARE FOR ESTIMATE PURPOSES ONLY. ACTUAL LOCATIONS AND QUANTITIES WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

(1) TO BE USED ALONG THE SPECIAL DITCH FROM STA. 18+00 (STA. 687+88) TO ENT PIPE INLET AND FROM ENT PIPE OUTLET TO RCBC OUTLET

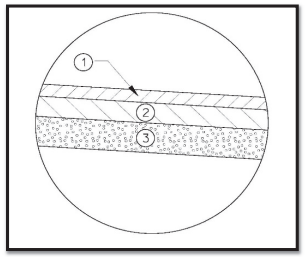
(2) SECTION 1 (BEGIN OF PROJECT TO US 68) PAVEMENT

(3) SECTION 2 (US 68 TO END OF PROJECT) PAVEMENT

(4) INCLUDES QUANTITY FOR PADDOCK DRIVE FULL DEPTH PAVEMENT FOR ADJUSTED RADIUS AND REPLACEMENT OF REMOVED MEDIAN. INCLUDES QUANTITY FOR SURFACE, LEVEL & WEDGE, AND EDGE KEY FOR PROPOSED GRADE TIE IN. INCLUDES QUANTITY FOR ASPHALT SURFACE TO BACK OF RELOCATED MEDIAN. SEE PADDOCK DRIVE TYPICAL SECTION FOR MORE INFORMATION.



ENTRANCE DETAIL



ENTRANCE PAVING
WITHIN PADDOCK DRIVE
CONSTRUCTION LIMITS

ASPHALT ENTRANCE

(1) 1.50" CL3 ASPH SURF 0.38B PG64-22
(2) 2.00" CL3 ASPH BASE 1.00D PG64-22
(3) 4.00" DGA

PADDOCK DRIVE ENTRANCE PIPE REPLACEMENT DETAIL

(1) 1.50" CL3 ASPH SURF 0.38B PG64-22
(2) 3.50" CL3 ASPH BASE 1.00D PG64-22
(3) 4.00" DGA

SEE PADDOCK DRIVE ROW PLAN SET FOR MORE INFORMATION.

SECTION 2 ENTRANCE PAVING
US 68 TO END OF PROJECT

ASPHALT ENTRANCE

(1) 1.25" CL2 ASPH SURF 0.38D PG64-22
(2) 2.00" CL2 ASPH BASE 1.00D PG64-22
(3) 4.00" DGA

7-9014.00

JESSAMINE COUNTY - KY 169 - MP 12.00 TO 16.55

RUMBLE STRIP SUMMARY

EDGE LINE RUMBLE STRIP SUMMARY

Begin		End		Side	Length (LF)	PAVEMENT MARKING	Comments
Station	Mile Point	Station	Mile Point				
656+45	12.43	686+28	12.43	Left	2983	Edgeline Rumble Strip	END RUMBLE AT PADDOCK DRIVE
687+46	13.02	748+00	14.17	Left	6054	Edgeline Rumble Strip	END RUMBLE AT END PAVEMENT WIDEN SECTION 1
656+45	12.43	748+00	14.17	Right	9155	Edgeline Rumble Strip	END RUMBLE AT END PAVEMENT WIDEN SECTION 1
771+00	14.60	873+25	14.60	Left	10225	Edgeline Rumble Strip	Along Section 2
771+00	14.60	873+25	16.54	Right	10225	Edgeline Rumble Strip	Along Section 2

NOTE: Following surfacing operations, install white Edge Line Rumble Strips according to the notes, details, and plans shown elsewhere in this proposal. Refer to Standard Drawing No. TPR-115 Shoulder & Edgeline Rumble Strip Placement Details and Standard Drawing No. TPR-120 Edgeline Rumble Strip Details Two Lane Roadway for more information.

CENTER LINE RUMBLE STRIP SUMMARY

Begin		End		Side	Length (LF)	PAVEMENT MARKING	Comments
Station	Mile Point	Station	Mile Point				
659+25	12.49	686+28	13.00	Center	2703	Centerline Rumble Strip	Begin Pavement Widen to Paddock Drive Left Turn
687+46	13.02	748+00	14.17	Center	6054	Centerline Rumble Strip	Paddock Drive to End Pavement Widen

NOTE: Following surfacing operations, install yellow Center Line Rumble Strips according to the notes, details, and plans shown elsewhere in this proposal. Refer to Standard Drawing No. TPR-100 Centerline Rumble Strips Placement Details and Standard Drawing No. TPR-110 Centerline Rumble Strips 6 Inch Striping for more information.

Summary	Totals
Edgeline Rumble Strip	38,642 LF
Centerline Rumble Strip	8,757 LF

JESSAMINE COUNTY
ITEM NO. 7-9014.00
KY 169: US 27 INTERSECTION TO BEGIN PAVEMENT WIDEN
STRIPING / PAVEMENT MARKING SUMMARY PAGE 1 OF 6

STRIPING					
BEGIN		END		LENGTH	LF
STATION	OFFSET	STATION	OFFSET		
KY 169 (BETWEEN US 27 AND BELLAIRE DRIVE)					
6" Single Solid White Line (PAVE STRIPING-THERMO-6 IN W)					
633+75	12' RIGHT	635+00	12' RIGHT	125	125
635+00	12' RIGHT	636+24	24' RIGHT	124	124
636+24	24' RIGHT	637+57	24' RIGHT	133	133
636+24	12' RIGHT	637+57	12' RIGHT	133	133
633+75	0'	637+57	0'	382	382
633+75	24' LEFT	637+57	24' LEFT	382	382
633+75	36' LEFT	635+77	36' LEFT	202	202
633+75	48' LEFT	635+77	48' LEFT	202	202
635+77	48' LEFT	636+98	36' LEFT	121	121
636+98	36' LEFT	637+57	36' LEFT	59	59
6" Double Solid Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
633+75	12' LEFT	637+57	12' LEFT	382	764
LOWES ENTRANCE					
6" Single Solid White Line (PAVE STRIPING-THERMO-6 IN W)					
638+22	106' LEFT	638+22	75' LEFT	31	31
638+10	106' LEFT	638+10	75' LEFT	31	31
6" Double Solid Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
638+34	106' LEFT	638+34	75' LEFT	31	62
KY 169 (BETWEEN BELLAIRE DRIVE AND KEENE CROSSING)					
6" Single Solid White Line (PAVE STRIPING-THERMO-6 IN W)					
639+04	12' RIGHT	640+50	12' RIGHT	146	146
640+50	12' RIGHT	641+60	21' RIGHT	110	110
641+60	21' RIGHT	642+65	21' RIGHT	105	105
641+60	12' RIGHT	643+04	12' RIGHT	144	144
641+33	0'	643+22	0'	189	189
639+04	22' LEFT	640+38	22' LEFT	134	134
639+04	34' LEFT	642+22	30' LEFT	318	318
639+04	46' LEFT	642+23	42' LEFT	319	319
642+23	42' LEFT	643+17	28' LEFT	94	94
643+17	28' LEFT	643+58	44' LEFT	46	46
6" Double Solid Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
639+04	0'	640+38	0'	134	268
640+38	0'	641+21	12' LEFT	83	166
641+21	12' LEFT	643+22	12' LEFT	201	402

JESSAMINE COUNTY
ITEM NO. 7-9014.00
KY 169: US 27 INTERSECTION TO BEGIN PAVEMENT WIDEN
STRIPING / PAVEMENT MARKING SUMMARY PAGE 2 OF 6

STRIPING					
BEGIN		END		LENGTH	LF
STATION	OFFSET	STATION	OFFSET		
KY 169 (BETWEEN KEENE CROSSING AND KEENE WAY DRIVE)					
6" Single Solid White Line (PAVE STRIPING-THERMO-6 IN W)					
644+23	20' RIGHT	644+49	12' RIGHT	26	26
644+49	12' RIGHT	650+29	12' RIGHT	580	580
650+29	12' RIGHT	651+37	24' RIGHT	108	108
651+37	24' RIGHT	652+35	24' RIGHT	98	98
651+35	12' RIGHT	652+65	12' RIGHT	130	130
649+30	0'	652+45	0'	315	315
644+23	12' LEFT	647+12	12' LEFT	289	289
644+23	24' LEFT	647+62	24' LEFT	339	339
644+23	36' LEFT	647+62	36' LEFT	339	339
647+62	36' LEFT	649+30	24' LEFT	168	168
649+30	24' LEFT	651+91	24' LEFT	261	261
6" Double Solid Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
644+23	0'	647+12	0'	289	578
647+12	0'	649+30	12' LEFT	218	436
649+30	12' LEFT	652+45	12' LEFT	315	630
KY 169 (BETWEEN KEENE WAY DRIVE AND BEGIN PAVEMENT WIDEN)					
6" Single Solid White Line (PAVE STRIPING-THERMO-6 IN W)					
653+67	12' RIGHT	659+25	12' RIGHT	558	558
653+16	12' LEFT	654+30	12' LEFT	114	114
653+16	24' LEFT	653+98	24' LEFT	82	82
653+16	36' LEFT	653+98	36' LEFT	82	82
653+98	36' LEFT	654+99	21' LEFT	101	101
654+99	21' LEFT	659+25	12' LEFT	426	426
6" Double Solid Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
653+16	0'	659+25	0'	609	1218
654+30	0'	654+99	10' LEFT	69	138
654+99	10' LEFT	658+70	0'	371	742
639+04	10' LEFT	640+38	10' LEFT	134	268
640+38	10' LEFT	641+21	20' LEFT	83	166
641+21	20' LEFT	643+22	12' LEFT	201	402

JESSAMINE COUNTY
ITEM NO. 7-9014.00
KY 169: US 27 INTERSECTION TO BEGIN PAVEMENT WIDEN
STRIPING / PAVEMENT MARKING SUMMARY PAGE 3 OF 6

PAVEMENT MARKING - *THERMO ARROWS*

STATION	OFFSET	DESCRIPTION	EACH	
KY 169 WESTBOUND (BETWEEN US 27 AND BELLAIRE DRIVE)				
636+23 TO 637+17	18' RIGHT	KY 169 WB RIGHT TURN LANE ONTO BELAIRE DR	ARROW	3
633+55 TO 637+17	6' LEFT	KY 169 WB LEFT TURN LANE INTO LOWES	ARROW	6
KY 169 EASTBOUND (BETWEEN US 27 AND BELLAIRE DRIVE)				
633+95 TO 635+90	42' LEFT	KY 169 EB RIGHT TURN LANE ONTO US 27	ARROW	4
633+95 TO 637+25	18' LEFT	KY 169 EB LEFT TURN LANE ONTO US 27	ARROW	6
633+95	30' LEFT	KY 169 EB THRU LANE ONTO US 27	ARROW	1
LOWES ENTRANCE				
638+05	91' LEFT	LOWES ENTRANCE RIGHT TURN LANE	ARROW	1
638+18	91' LEFT	LOWES ENTRANCE THRU LANE	ARROW	1
638+29	91' LEFT	LOWES ENTRANCE LEFT TURN LANE	ARROW	1
KY 169 WESTBOUND (BETWEEN BELLAIRE DRIVE AND KEENE CROSSING)				
641+60 TO 642+65	16' RIGHT	KY 169 WB RIGHT TURN LANE ONTO BELL PL DR	ARROW	3
641+32 TO 642+82	6' LEFT	KY 169 WB LEFT TURN LANE ONTO KEENE CROSSING	ARROW	3
KY 169 EASTBOUND (BETWEEN BELLAIRE DRIVE AND KEENE CROSSING)				
639+45 TO 642+20	36' TO 39' LEFT	KY 169 EB RIGHT TURN LANE INTO LOWES	ARROW	5
639+45 TO 640+25	18' LEFT	KY 169 EB LEFT TURN LANE ONTO BELL PL DR	ARROW	3
KY 169 WESTBOUND (BETWEEN KEENE CROSSING AND KEENE WAY DRIVE)				
651+35 TO 652+05	18' RIGHT	KY 169 WB RIGHT TURN LANE ONTO KEENE WAY DRIVE	ARROW	2
649+30 TO 652+05	6' LEFT	KY 169 WB LEFT TURN LANE ONTO KEENE WAY DRIVE	ARROW	5
KY 169 EASTBOUND (BETWEEN KEENE CROSSING AND KEENE WAY DRIVE)				
644+62 TO 647+62	30' LEFT	KY 169 EB RIGHT TURN LANE ONTO KEENE WAY DRIVE	ARROW	5
644+62 TO 647+03	6' LEFT	KY 169 EB LEFT TURN LANE ONTO KEENE WAY DRIVE	ARROW	5
KY 169 EASTBOUND (BETWEEN KEENE WAY DRIVE AND BEGIN PAVEMENT WIDEN)				
653+56 TO 653+93	30' LEFT	KY 169 EB RIGHT TURN LANE ONTO KEENE WAY DRIVE	ARROW	2
653+56 TO 654+30	6' LEFT	KY 169 EB LEFT TURN LANE ONTO KEENE WAY DRIVE	ARROW	2

PAVEMENT MARKING - *THERMO STOP BAR - 24 IN*

STATION	OFFSET	DESCRIPTION	LF
638+00	75' LEFT	24" STOP BAR - LOWES ENTRANCE	35
638+40	46' RIGHT	24" STOP BAR - BELLAIRE DRIVE	20
639+04	0' to 46' LEFT	24" STOP BAR - KY 169 EASTBOUND AT BELLAIRE DRIVE	36
637+58	0' to 24' RIGHT	24" STOP BAR - KY 169 WESTBOUND AT BELLAIRE DRIVE	36

PAVE MARKING - *THERMO CROSS HATCH (ISLAND CROSS HATCH) (X = 1' , Y = 10')*

STATION	OFFSET	DESCRIPTION	SQFT
219+75	55' LEFT	KY 169 MEDIAN BETWEEN BELLAIRE DR AND KEENE CROSSING	230

PAVE MARKING - *THERMO CONE CAP*

STATION	OFFSET	DESCRIPTION	SQFT
639+04	0'	KY 169 MEDIAN BETWEEN BELLAIRE DR AND KEENE CROSSING	27

CROSS WALK - PAVE MARKING *THERMO X-WALK 6 IN*

BEGIN		END		LENGTH	LF
STATION	OFFSET	STATION	OFFSET		
BELLAIRE DRIVE					
637+83	36' RIGHT	638+71	36' RIGHT	88	176
638+73	65' LEFT	638+68	36' RIGHT	101	202
637+96	65' LEFT	638+73	65' LEFT	77	154

JESSAMINE COUNTY
KY 169: BEGIN PAVEMENT WIDEN TO PADDOCK DRIVE & PADDOCK DRIVE
ITEM NO. 7-9014.00
STRIPING / PAVEMENT MARKING SUMMARY PAGE 4 OF 6

STRIPING					
BEGIN		END		LENGTH	LF
STATION	OFFSET	STATION	OFFSET		
KY 169 (BEGIN PAVEMENT WIDEN TO BEGIN PADDOCK DRIVE LEFT TURN LANE)					
6" Single Solid White Line (PAVE STRIPING-THERMO-6 IN W)					
659+25	12' RIGHT	679+39	12' RIGHT	2014	2014
659+25	12' LEFT	679+39	12' LEFT	2014	2014
6" Double Solid Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
659+25	0'	661+44	0'	219	438
670+99	0'	679+39	0'	840	1680
6" Solid and Dashed Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
661+44	0'	670+99	0'	31	38.75
KY 169 (BEGIN PADDOCK DRIVE LEFT TURN LANE TO END PADDOCK DRIVE LEFT TURN LANE)					
6" Single Solid White Line (PAVE STRIPING-THERMO-6 IN W)					
9+50	12' LEFT	+60	23' LEFT	753	753
9+50	12' RIGHT	22+58	12' RIGHT	1308	1308
15+20	0'	16+80	0'	160	160
+60	25' RIGHT	19+80	17.5' LEFT	262	262
17+30	22' LEFT	18+78	19' LEFT	148	148
19+80	17.5' LEFT	22+58	12' LEFT	262	262
6" Double Solid Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
9+50	0'	14+20	0'	470	940
9+50	0'	15+20	11' LEFT	570	1140
14+20	0'	15+20	11' LEFT	100	200
15+20	11' LEFT	16+80	11' LEFT	160	320
17+30	11' LEFT	23+35	0'	605	1210
17+30	0'	23+35	0'	605	1210

PAVE MARKING - *THERMO CONE CAP*			
STATION	OFFSET	DESCRIPTION	SQFT
17+24	0'	MEDIAN NOSE AT PADDOCK (YELLOW)	48

PAVE MARKING - *THERMO CROSS HATCH (ISLAND CROSS HATCH) (X = 2' , Y = 20')*			
STATION	OFFSET	DESCRIPTION	SQFT
17+30 TO 23+35	0'-11' LEFT	MEDIAN AT PADDOCK (YELLOW)	153

PAVEMENT MARKING - *THERMO ARROWS*				
STATION	OFFSET	DESCRIPTION	EACH	
KY 169 WESTBOUND AT PADDOCK DRIVE				
15+20 TO 16+39	4' LEFT	KY 169 WB LEFT TURN LANE ONTO PADDOCK	ARROW	3
KY 169 EASTBOUND AT PADDOCK DRIVE				
17+70 TO 18+78	25' LEFT	KY 169 EB RIGHT TURN LANE ONTO PADDOCK	ARROW	3

PAVEMENT MARKING - *THERMO STOP BAR - 24 IN*			
STATION	OFFSET	DESCRIPTION	LF
16+88	36' LEFT	24" STOP BAR - PADDOCK	18

JESSAMINE COUNTY
KY 169: PADDOCK DRIVE TO US 68
ITEM NO. 7-9014.00
STRIPING / PAVEMENT MARKING SUMMARY PAGE 5 OF 6

STRIPING					
BEGIN		END		LENGTH	LF
STATION	OFFSET	STATION	OFFSET		
KY 169 (END PADDOCK DRIVE LEFT TURN LANE TO END PAVEMENT WIDEN)					
6" Single Solid White Line (PAVE STRIPING-THERMO-6 IN W)					
692+47	12' LEFT	748+00	12' LEFT	5553	5553
692+47	12' RIGHT	708+95	12' RIGHT	1648	1648
708+95	12' RIGHT	709+50	14' RIGHT	55	55
709+50	14' RIGHT	713+00	14' RIGHT	350	350
713+00	14' RIGHT	713+55	12' RIGHT	55	55
713+55	12' RIGHT	748+00	12' RIGHT	3445	3445
6" Double Solid Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
692+47	0'	708+95	0'	1648	3296
708+95	0'	709+50	2' RIGHT	55	110
709+50	2' RIGHT	713+00	2' RIGHT	350	700
713+00	2' RIGHT	713+55	0'	55	110
719+02	0	722+23	0'	321	642
730+38	0	748+00	0'	1762	3524
6" Solid and Dashed Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
713+55	0'	719+02	0'	547	683.75
722+23	0'	730+38	0'	815	1018.75
KY 169 (END PAVEMENT WIDEN TO US 68 INTERSECTION)					
6" Single Solid White Line (PAVE STRIPING-THERMO-6 IN W)					
748+00	12' LEFT	758+72	54' LEFT	1074	1074
748+00	12' RIGHT	758+03	12' RIGHT	1003	1003
758+03	12' RIGHT	759+34	25.5' RIGHT	131	131
758+72	55' LEFT	763+35	46.5' LEFT	495	495
759+34	25.5' RIGHT	762+84	26' RIGHT	350	350
759+34	13' RIGHT	763+35	12.5' RIGHT	401	401
6" Double Solid Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
748+00	0'	758+50	0'	1050	2100
758+78	0'	763+35	0'	457	914
6" Dotted White Line (PAVE STRIPING-THERMO-6 IN W)					
758+22	10' LEFT	763+35	11.5' LEFT	513	128.25
Remove Pavement Marker Type V					
749+00	0'	763+35	0'	EACH (ALONG DBL YEL)	39
759+34	12' RIGHT	763+35	12' TO 30' RIGHT	EACH (ALONG WHITE)	14

PAVEMENT MARKING - *THERMO STOP BAR - 24 IN*			
STATION	OFFSET	DESCRIPTION	LF
758+64	35' LEFT	24" STOP BAR - ALMAHURST WAY	15
763+35	0'	24" STOP BAR - KY 169 WESTBOUND AT US 68	26

PAVE STRIPING THERMO-*12 IN WHITE (FLUSH MEDIAN OUTLINE)*			
STATION	OFFSET	DESCRIPTION	LF
762+84-763+37	26' RIGHT TO 54' RIGHT	ISLAND AT US 68 INTERSECTION	144

PAVE MARKING - *THERMO CROSS HATCH (ISLAND CROSS HATCH) (X = 2' , Y = 20')*			
STATION	OFFSET	DESCRIPTION	SQFT
763+37	26' LEFT	ISLAND AT US 68 INTERSECTION	60

PAVEMENT MARKING - *THERMO ARROWS*				
STATION	OFFSET	DESCRIPTION	EACH	
KY 169 EASTBOUND AT US 68				
757+47 TO 761+45	18' LEFT - 19' LEFT	KY 169 WB LANE DROP	MERGE ARROW	3
KY 169 WESTBOUND AT US 68				
759+33 TO 762+94	17' RIGHT	KY 169 WB RIGHT TURN LANE ONTO US 68	ARROW	6
759+33 TO 762+94	8' TO 9' RIGHT	KY 169 WB THRU/LEFT TURN LANE ONTO US 68	COMBO ARROW	6

JESSAMINE COUNTY
KY 169: SECTION 2 - US 68 TO KY 1267
ITEM NO. 7-9014.00
STRIPING / PAVEMENT MARKING SUMMARY PAGE 6 OF 6

STRIPING					
BEGIN		END		LENGTH	LF
STATION	OFFSET	STATION	OFFSET		
KY 169 (US 68 TO BEGIN PAVEMENT WIDEN)					
6" Single Solid White Line (PAVE STRIPING-THERMO-6 IN W)					
764+78	37.5' RIGHT	783+10	10' RIGHT	1832	1832
764+78	11' LEFT	768+26	11' LEFT	348	348
764+78	20' LEFT	765+15	12' LEFT	37	37
764+78	28' LEFT	783+10	10' LEFT	1832	1832
6" Double Solid Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
764+78	0'	783+10	0'	1832	3664
KY 169 (BEGIN PAVE WIDEN AND RESURFACE TO KY 1267)					
6" Single Solid White Line (PAVE STRIPING-THERMO-6 IN W)					
783+10	10' RIGHT	873+25	10' RIGHT	9015	9015
783+10	10' LEFT	873+25	10' LEFT	9015	9015
6" Double Solid Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
783+10	0'	787+44	0'	434	868
805+17	0'	870+00	2' RIGHT	6483	12966
6" Solid and Dashed Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
787+44	0'	793+69	0'	625	781.25
796+48	0'	805+17	0'	869	1086.25
6" Dashed Yellow Line (PAVE STRIPING-THERMO-6 IN Y)					
793+69	0'	796+48	0'	279	69.75

PAVEMENT MARKING - THERMO STOP BAR - 24 IN			
STATION	OFFSET	DESCRIPTION	LF
764+76	0'	24" STOP BAR - KY 169 EASTBOUND AT US 68	28

PAVEMENT MARKING - THERMO ARROWS				
STATION	OFFSET	DESCRIPTION	EACH	
KY 169 EASTBOUND AT US 68				
765+18 TO 768+24	14' LEFT	KY 169 EB RIGHT TURN LANE ONTO US 68	ARROW	5
765+18 TO 768+24	7' RIGHT	KY 169 EB THRU/LEFT TURN LANE ONTO US 68	COBMO ARROW	5

STRIPING / PAVEMENT MARKING SUMMARY			
BID ITEM	DESCRIPTION	UNIT	QUANTITY
6542	PAVE STRIPING-THERMO-6 IN W	LF	51,234
6543	PAVE STRIPING-THERMO-6 IN Y	LF	45,951
6546	PAVE STRIPING-THERMO-12 IN W	LF	144
6565	PAVE MARKING-THERMO X-WALK-6 IN	LF	532
6568	PAVE MARKING-THERMO STOP BAR-24 IN	LF	214
6569	PAVE MARKING-THERMO CROSS-HATCH (YELLOW)	SQFT	383
6569	PAVE MARKING-THERMO CROSS-HATCH (WHITE)	SQFT	60
6573	PAVE MARKING-THERMO STR ARROW	EACH	2
6574	PAVE MARKING-THERMO CURV ARROW	EACH	73
6575	PAVE MARKING-THERMO COMB ARROW	EACH	11
6578	PAVE MARKING-THERMO MERGE ARROW	EACH	3
6600	REMOVE PAVEMENT MARKER TYPE V	EACH	53
21417ES717	PAVE MARK THERMO CONE CAP-SOLID YELLOW	SQFT	75

Sign Summary — Jessamine County — KY 169

SIGN LOCATION					MUTCD Code	Sign Description	Sign Text / Remarks	Sign Dimensions (in x in)	SHEETING			SBM Alum Sheet Signs 0.080 IN (SQ FT)	SBM Alum Sheet Signs 0.125 IN (SQ FT)	Installation Type	Bracing Req'd	# of Sign Posts	Estimated Length of 2" Post (ft)	Estimated Length of 2-1/2" Post (ft)	2-1/4" Stiffener Req'd (incdntl to post)	TOTAL Estimated Sign Post Length (LF)	Barcode Sign Inv. (EACH)
Assembly ID	Side of Road	Approx Station	Approx. Mile Point	Facing Traffic Traveling					Text/ Symbol Color	Background Color	Sheeting Type										
S3	LT	672+40	12.735	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1
S4	LT	673+44	12.755	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1
S5	LT	674+52	12.775	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1
S6	LT	675+72	12.798	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1
S7	LT	676+90	12.820	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1
S8	LT	677+86	12.838	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1
S9	LT	679+09	12.862	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1
S10	RT	684+00	12.955	WB	W2-2L	Side Road Left		30 x 30	Black	Yellow	XI	6.25		Stnd w/ Soil Plate		1	14			14	1
S18	LT	698+87	13.236	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1
S19	LT	700+05	13.259	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1
S20	LT	701+10	13.278	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1
S21	LT	702+23	13.300	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1
S22	LT	703+55	13.325	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1
S23	LT	704+65	13.346	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1
S28	LT	716+14	13.563	WB	W13-1P	XX MPH (Advisory Speed)	35 MPH	18 x 18	Black	FL Yellow	XI	2.25		Stnd w/ Soil Plate		1	13			13	1
S47	LT	866+10	16.403	WB	W1-6R	Right One-Direction Lrg Arrow		48 x 24	Black	FL Yellow	XI	8.00		Stnd w/ Soil Plate		1	13			13	1
S49	LT	866+86	16.418	EB	W1-6L	Left One-Direction Lrg Arrow		48 x 24	Black	FL Yellow	XI	8.00		Stnd w/ Soil Plate		1	13			13	1
S50	LT	867+41	16.428	EB	W1-8R	Right Chevron		18 x 24	Black	FL Yellow	XI	3.00		Stnd w/ Soil Plate		1	13			13	1
				WB	W1-8L	Left Chevron		18 x 24	Black	FL Yellow	XI	3.00									1

Remove Store and Reinstall Sign		
Assembly ID	STATION	# of Sign Assemblies
S17	696+45 - LT	1
S30	722+15 - RT	1
	Total	2

Summary of Items		
SBM Alum Sheet Signs 0.080 INCH	108.50	SQ FT
Barcode Sign Inventory	32	EACH
Remove Sign	1	EACH

Remove Sign	Number of Assemblies
S44 - STA. 833+53 - LT	1

Remove and Relocate Sign Assembly		
Assembly ID	STATION	# of Sign Assemblies
S1	661+17 - LT	1
S31	722+60 - RT	1
S33	759+50 - LT	1
S33A	757+52 - LT	1
S34	761+39 - LT	1

Summary of Items		
Steel Post - Type 1	318	LF
Remove And Relocate Sign Assembly	5	EACH
Remove-Store And Reinstall Sign	12	EACH

An additional 10 signs has been inlcuded in the contract for existing sheet signs that may obstruct or interfere with proposed construction activities. See General Note for more information.

Reflective Sign Post Panel Summary

KY 169 - Jessamine County

SIGN LOCATION					Sign Dimensions (in x in)	Background Color	Sheeting Type	# of Sign Panels	SBM Alum Sheet Signs 0.125 IN (SQ FT)
Assembly ID	Side of Road	Approx Station	Approx. Mile Point	Facing Traffic Traveling					
S1	RT	661+16	12.522	EB	2 x 60	FL Yellow	XI	1	0.83
S3	LT	672+40	12.735	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S4	LT	673+44	12.755	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S5	LT	674+52	12.775	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S6	LT	675+72	12.798	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S7	LT	676+90	12.820	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S8	LT	677+86	12.838	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S9	LT	679+09	12.862	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S10	RT	684+00	12.955	WB	2 x 60	FL Yellow	XI	1	0.83
S11	RT	687+17	13.015	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S12	RT	688+37	13.037	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S13	RT	689+57	13.060	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S14	RT	690+82	13.084	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S15	RT	691+91	13.104	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S16	RT	693+10	13.127	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S17	LT	696+47	13.191	EB	2 x 60	FL Yellow	XI	1	0.83
S18	LT	698+87	13.236	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S19	LT	700+05	13.259	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S20	LT	701+10	13.278	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S21	LT	702+23	13.300	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S22	LT	703+55	13.325	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S23	LT	704+65	13.346	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S24	RT	707+46	13.399	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S25	RT	708+65	13.421	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S26	RT	709+84	13.444	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S27	LT	712+41	13.493	EB	2 x 60	FL Yellow	XI	1	0.83
S29	LT	716+14	13.563	WB	2 x 60	FL Yellow	XI	1	0.83
S30	RT	722+14	13.677	EB	2 x 60	FL Yellow	XI	1	0.83
S31	RT	722+14	13.677	WB	2 x 60	FL Yellow	XI	1	0.83
S32	RT	759+16	14.378	WB	2 x 60	FL Yellow	XI	1	0.83
S33	LT	759+51	14.385	EB	2 x 60	FL Yellow	XI	1	0.83
S34	LT	761+40	14.420	EB	2 x 60	FL Yellow	XI	1	0.83
S35	LT	768+77	14.560	EB	2 x 60	FL Yellow	XI	1	0.83
S36	LT	772+00	14.621	EB	2 x 60	FL Yellow	XI	1	0.83
S37	RT	780+05	14.774	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S38	RT	781+22	14.796	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S39	RT	782+40	14.818	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S40	RT	783+56	14.840	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S41	RT	784+77	14.863	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S42	LT	787+18	14.909	EB	2 x 60	FL Yellow	XI	1	0.83
S43	RT	793+55	15.029	EB	2 x 60	FL Yellow	XI	1	0.83
S45	RT	862+76	16.340	WB	2 x 60	FL Yellow	XI	1	0.83
S46	LT	865+70	16.396	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S47	LT	866+10	16.403	WB	2 x 60	FL Yellow	XI	1	0.83
S48	LT	866+49	16.411	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S49	LT	866+86	16.418	EB	2 x 60	FL Yellow	XI	1	0.83
S50	LT	867+41	16.428	EB / WB	2 x 60	FL Yellow	XI	2	1.67
S51	LT	869+84	16.474	EB	2 x 60	FL Yellow	XI	1	0.83

NOTES:

Install Yellow Reflective Sign Post Panel on existing post or proposed post if new sign.
Install Yellow Reflective Panel on each side of steel post for W 1-8 Chevron Assemblies

Refer to the Special Note for Signing for more information.

Reflective Sign Post Panel

SUMMARY OF ITEMS		
SBM Alum Sheet Signs 0.125 INCH	65	SQ FT

JESSAMINE COUNTY
TRAFFIC SIGNAL WIRING AND CONDUIT SUMMARY
ITEM NO. 7-9014.00
SUMMARY FOR LOOPS AND SUPPLEMENTAL SIGNAL WIRING

INTERSECTION	SAW, SLOT AND FILL LF	LOOP WIRE LF	CONDUIT 1 INCH LF	PVC CONDUIT 1 1/4 INCH LF	PVC CONDUIT 2 INCH LF	CABLE NO 14/5C LF	CABLE NO. 14 LF	JUNCTION TYPE B EA	Trenching and Backfilling LF	Loop Test EA	NOTES
KY 169 @ US 68											
LOOPS - KY 169 SB (PHASE 8)	224	668	20	25	10		800	1	20	2	2 - 6X30 STOP BAR LOOP
WIRING - 5C AND 6C					10	450					

1. Quantities are for estimating purposes only. The Contractor shall field measure and inspect items to verify quantities.
2. Test existing loops following resurface. If successful, do not disturb existing loops or junction box.
3. 10 LF of PVC CONDUIT-2 IN has been included if existing conduit does not have capacity for proposed supplemental signal head wiring.

	SAW, SLOT AND FILL LF	LOOP WIRE LF	CONDUIT 1 INCH LF	PVC CONDUIT 1 1/4 INCH LF	PVC CONDUIT 2 INCH LF	CABLE NO 14/5C LF	CABLE NO. 14 LF	JUNCTION TYPE B EA	Trenching and Backfilling LF	Loop Test EA
Grand Total	224	668	20	25	20	450	800	1	20	2

Signal Head Replacements for: US 68 @ KY 169

REPLACE EXISTING SIGNAL HEADS

SIGNAL HEAD NUMBER	NORTHING*	EASTING*	DESCRIPTION
8A	3861445.02	5248295.069	3 Section with Reflective Backplate
8B	3861436.593	5248292.267	3 Section with Reflective Backplate
5C	3861387.432	5248275.92	Pole Mounted Supplemental 3 Section with Reflective Backplate
5B	3861527.652	5248283.517	3 Section with Reflective Backplate
5A	3861531.731	5248272.217	3 Section with Reflective Backplate
2	3861535.809	5248260.917	3 Section Arrow with Reflective Backplate
1A	3861408.729	5248200.875	3 Section Arrow with Reflective Backplate
1B	3861412.006	5248189.328	3 Section Arrow with Reflective Backplate
6A	3861415.283	5248177.781	3 Section with Reflective Backplate
6B	3861418.56	5248166.234	3 Section with Reflective Backplate
6C	3861568.577	5248170.139	Pole Mounted Supplemental 3 Section with Reflective Backplate
4B	3861503.002	5248150.232	3 Section with Reflective Backplate
4A	3861494.993	5248147.801	3 Section with Reflective Backplate

* NORTHINGS/EASTINGS ARE APPROXIMATE AND ARE FOR INFORMATION ONLY. ALIGN SIGNAL HEADS WITH EXISTING SPAN WIRES AND DRIVING LANES.

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

SIGNAL HEAD REPLACEMENTS

ALL QUANTITIES ARE CARRIED OVER TO GENERAL SUMMARY

Signal Heads For EB US 68

Signal Head	Red Ball	Red Arrow	Yellow Ball	Yellow Arrow	Green Ball	Green Arrow
3 Section Arrow with Reflective Backplate (2)		1		1		1
3 Section with Reflective Backplate (5A)	1		1		1	
3 Section with Reflective Backplate (5B)	1		1		1	
Pole Mounted Supplemental 3 Section with Reflective Backplate (5C)	1		1		1	
Totals	**3**	**1**	**3**	**1**	**3**	**1**

Signal Heads For WB US 68

Signal Head	Red Ball	Red Arrow	Yellow Ball	Yellow Arrow	Green Ball	Green Arrow
3 Section Arrow with Reflective Backplate (1A)		1		1		1
3 Section Arrow with Reflective Backplate (1B)		1		1		1
3 Section with Reflective Backplate (6A)	1		1		1	
3 Section with Reflective Backplate (6B)	1		1		1	
Pole Mounted Supplemental 3 Section with Reflective Backplate (6C)	1		1		1	
Totals	**3**	**2**	**3**	**2**	**3**	**2**

Signal Heads For NB KY 169

Signal Head	Red Ball	Red Arrow	Yellow Ball	Yellow Arrow	Green Ball	Green Arrow
3 Section Arrow with Reflective Backplate (4A)	1		1		1	
3 Section Arrow with Reflective Backplate (4B)	1		1		1	
Totals	**2**	**0**	**2**	**0**	**2**	**0**

Signal Heads For SB KY 169

Signal Head	Red Ball	Red Arrow	Yellow Ball	Yellow Arrow	Green Ball	Green Arrow
3 Section Arrow with Reflective Backplate (8A)	1		1		1	
3 Section Arrow with Reflective Backplate (8B)	1		1		1	
Totals	**2**	**0**	**2**	**0**	**2**	**0**

Tim Tharpe - Director

Division of Traffic Operations

Phone (502) 564-3020
FAX (502) 564-7759

PROJECT MATERIALS RELEASE FORM FOR SIGNALS AND LIGHTING

Note: Email form with signatures to KYTC's warehouse (kim.stamper@ky.gov) at least two (2) days prior to arrival for pickup. Ensure Contractor's delivery driver has a copy of form with signatures. Failure to do either may result in long delays or refusal to distribute materials upon arrival.

Item Number: **2-9013.00**

County: **Jessamine**

Description: **US 68 @ KY 169 Reflective Backplates and Supplemental Signal Head**

Signals		
13	T-02-0009	Siemen 3 Section, 12 inch Signal
13	T-02-0032	Siemen 3 Section Backplate
3	T-02-0300	LED Module 12" Red Arrow
3	T-02-0310	LED Module 12" Yellow Arrow
3	T-02-0320	LED Module 12" Green Arrow
10	T-02-0330	LED Module 12" Red
10	T-02-0340	LED Module 12" Yellow
10	T-02-0350	LED Module 12" Green

REQUIRED

Electrical Contractor Name _____

Electrical Contractor Supervisor _____ Contact number for Supervisor _____

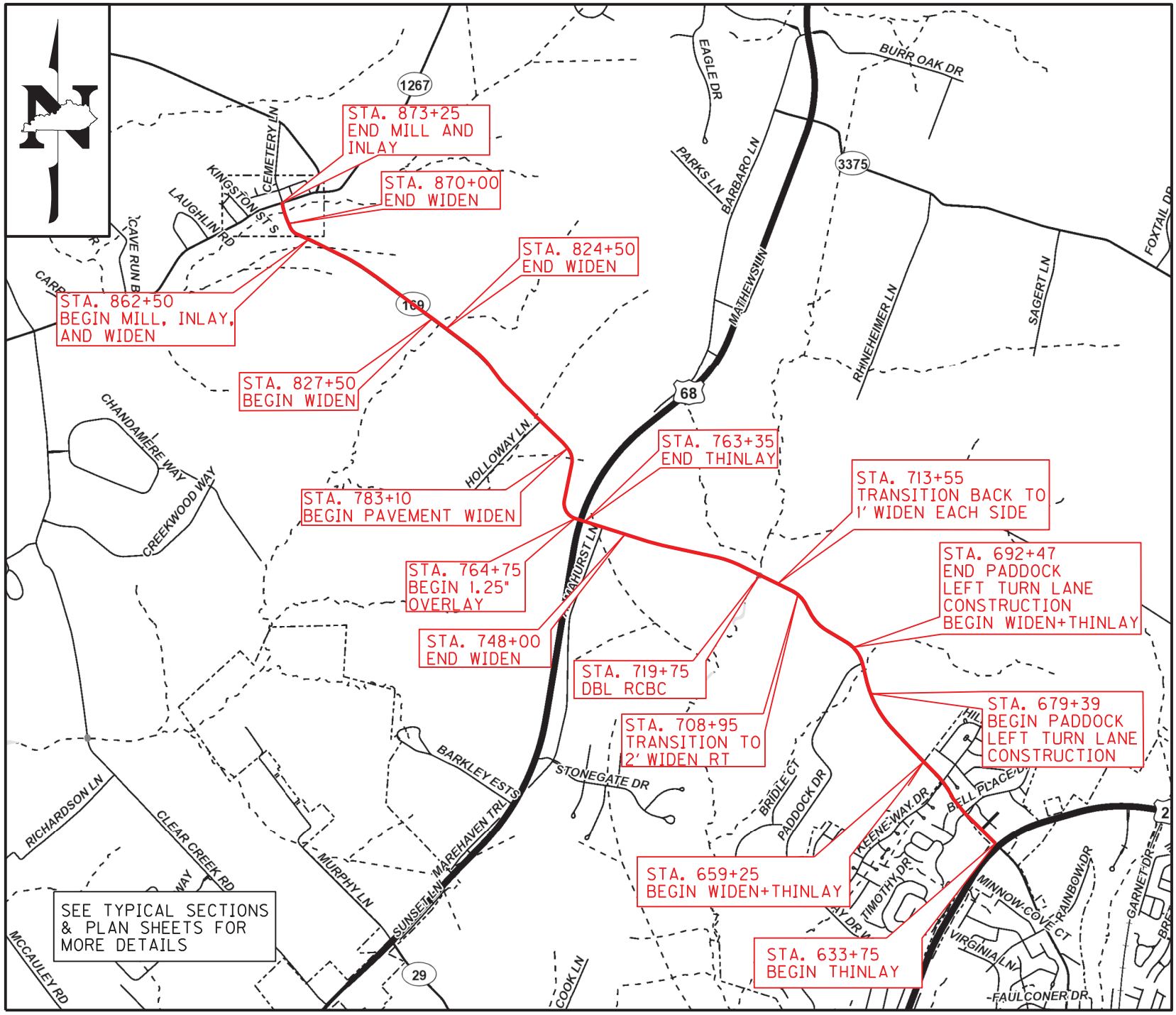
Project Engineer _____ Contact number for Project Engineer _____

Project Engineer attests that the mentioned contractor is the actual electrical contractor on this project

Signature of Project Engineer or Designee _____

COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00

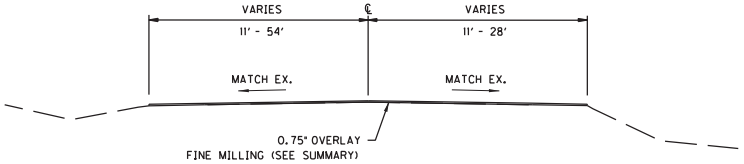
TYPICAL SECTION LAYOUT MAP



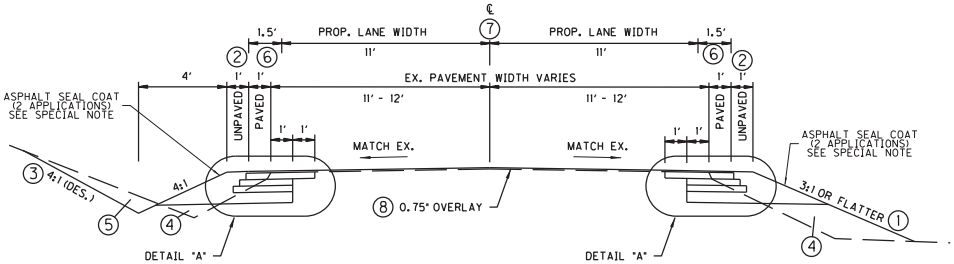
COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00

TYPICAL SECTIONS

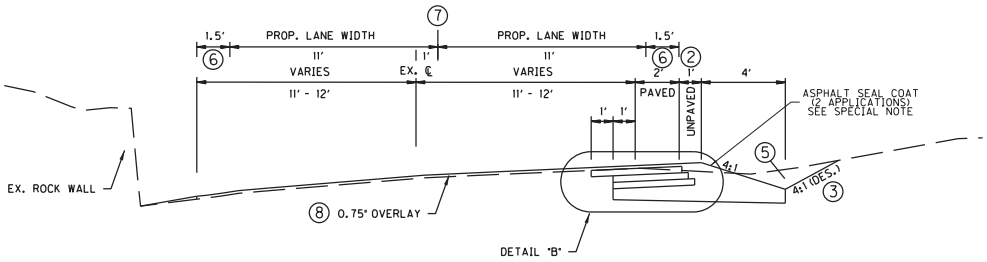
BEGIN PROJECT TO US 68



STA. 633+75 TO STA. 659+25 (BACK OF RADIUS US 27 TO BEGIN WIDEN) ⑥
STA. 748+00 TO STA. 763+35 (END WIDEN TO US 68)

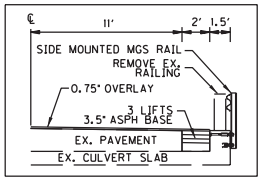


STA. 659+25 TO STA. 679+39
STA. 679+39 TO STA. 692+47 (SEE LEFT TURN LANE – PADDOCK DRIVE TYPICAL SECTION)
STA. 692+47 TO STA. 708+95
STA. 713+55 TO STA. 719+61
STA. 719+61 TO STA. 719+89 (EX. 12'X8' DBL RCBC DETAIL)
STA. 719+89 TO STA. 748+00

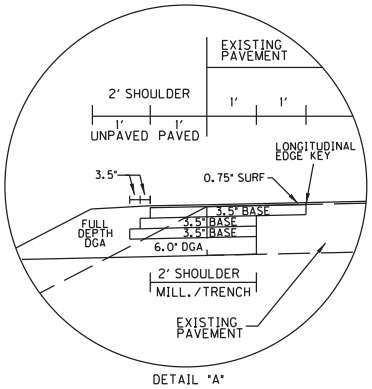


STA. 708+95 TO STA. 709+50 – TRANSITION FROM 1' WIDEN EACH SIDE TO 2' WIDEN ONE SIDE
STA. 709+50 TO STA. 713+00
STA. 713+00 TO STA. 713+55 – TRANSITION FROM 2' WIDEN ONE SIDE TO 1' WIDEN EACH SIDE

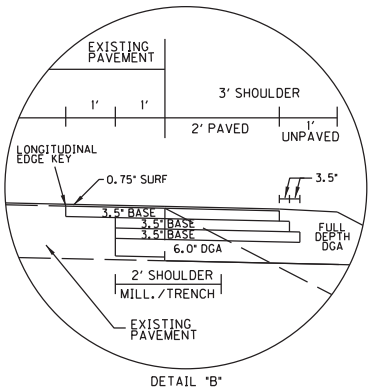
① 3:1 OR FLATTER IS DESIRABLE. LOCATIONS THAT ARE LIMITED DUE TO RIGHT-OF-WAY, UTILITY POLES, TREES, FENCES, OR OTHER SENSITIVE OBSTRUCTIONS MAY REQUIRE EMBANKMENT BUT ONLY OUT TO THE EDGE OF THE RIGHT-OF-WAY OR SENSITIVE OBSTRUCTION(S). (SLOPE MAY BE STEEPER THAN 3:1)



EX. 12'X8' DBL RCBC DETAIL



DETAIL "A"



DETAIL "B"

② A 1' PAVEMENT WIDENING AND EARTH SHOULDER FOR EACH SIDE (2' PAVEMENT WIDENING AND 1' EARTH SHOULDER FOR ONE SIDE) IS DESIRABLE BUT EARTH SHOULDER MAY HAVE TO BE ELIMINATED IN ORDER TO REMAIN ON RIGHT-OF-WAY OR AVOID A SENSITIVE OBSTRUCTION.

③ FLATTEN DITCH BACKSLOPE WHEN POSSIBLE TO REMAIN IN RIGHT-OF-WAY. IN AREAS WHERE THE BACKSLOPE MUST REMAIN STEEP, THE ENGINEER MAY DETERMINE THAT CHANNEL LINING NEEDS TO BE INSTALLED TO STABILIZE THE BACKSLOPE.

④ COMPACTED EMBANKMENT (INCIDENTAL TO ROADSIDE REGRADING). CONTRACTOR SHALL PROPERLY BENCH INTO EXISTING SLOPE AND APPLY PROPER COMPACTION. COMPACT MATERIAL ACCORDING TO STANDARD SPECIFICATIONS (SECT. 206). FINAL PAYMENT WILL BE PAID AS LF OF ROADSIDE REGRADING AND INCLUDE ALL WORK NECESSARY TO PERFORM WORK. SHOULDER EMBANKMENT MATERIAL SHALL BE SUITABLE FOR VEGETATION GROWTH. LOCATIONS THAT ARE LIMITED DUE TO R/W, UTILITY POLES, TREES, FENCES, OR OTHER SENSITIVE OBSTRUCTIONS MAY REQUIRE EMBANKMENT BUT ONLY OUT TO THE EDGE OF R/W OR SENSITIVE OBSTRUCTION(S). (SLOPE MAY BE STEEPER THAN 3:1)

⑤ EXCAVATION TO ACHIEVE THE PROPOSED DITCHES IS INCIDENTAL TO THE BID ITEM ROADSIDE REGRADING.

⑥ EDGELINE RUMBLE STRIPS (ELRS) TO BE INSTALLED FOLLOWING PROPOSED PAVEMENT WIDENING AND THIN LAY SURFACE. BEGIN EDGELINE RUMBLE ON KY 169 AT APPROX. STA. 656+45 WHERE 55 MPH SPEED LIMIT BEGINS. REFER TO RUMBLE STRIP SUMMARY FOR LIMITS.

⑦ CENTERLINE RUMBLE STRIPS (CLRS) TO BE INSTALLED FOLLOWING PROPOSED PAVEMENT WIDENING AND THIN LAY SURFACE. REFER TO RUMBLE STRIP SUMMARY FOR LIMITS.

⑧ PLACE ASPH BASE UP TO EXISTING PAVEMENT SURFACE. COMPACT ASPHALT BASE. ALLOW ASPHALT BASE TO CURE MINIMUM OF 14 CALENDAR DAYS. ONCE ENGINEER DETERMINES PAVEMENT WIDEN HAS SUFFICIENTLY STABILIZED, BEGIN RESURFACING OPERATIONS. PRIOR TO ASPHALT OVERLAY, LEVEL AND WEDGE ANY SETTLEMENT OF THE REPAIR AREAS.

THIN LAY SURFACE

0.75" SURF — 0.75" DEPTH CLASS 3 ASPHALT SURFACE NO. 4B PG 64-22

PAVEMENT WIDENING

16.5" BASE —
- 3.5" DEPTH CL 3 ASPH BASE 1.00D PG 64-22
- 3.5" DEPTH CL 3 ASPH BASE 1.00D PG 64-22
- 3.5" DEPTH CL 3 ASPH BASE 1.00D PG 64-22
- 6" DGA BASE

NOT TO SCALE

KY 169

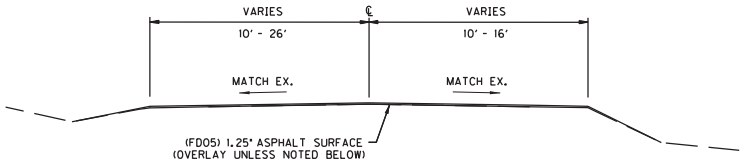
TYPICAL SECTIONS

PAVEMENT WIDENING AND THIN LAY SURFACE - SECTION 1

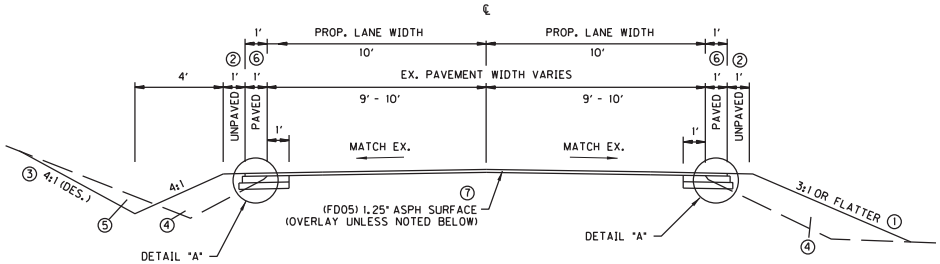
COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00

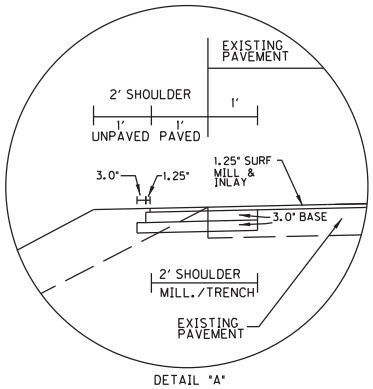
TYPICAL SECTIONS

US 68 TO END PROJECT



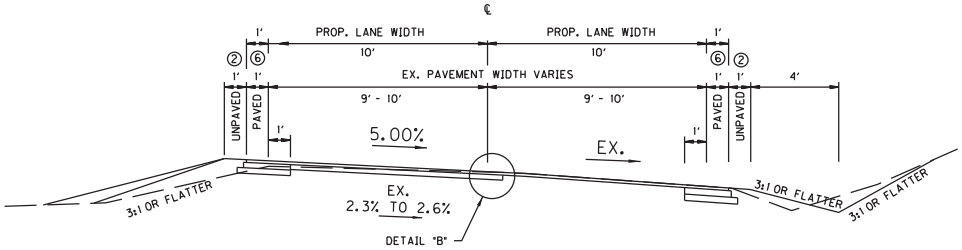
STA. 764+75 TO STA. 783+10 (US 68 TO BEGIN WIDEN) ⑥
STA. 824+50 TO STA. 827+50 (PREVIOUSLY WIDENED AT RCBC) ⑥
STA. 870+00 TO STA. 873+25 (END WIDEN TO BACK OF RADIUS KY 1267) (NOTE: MILL 1.25" AND INLAY) ⑥

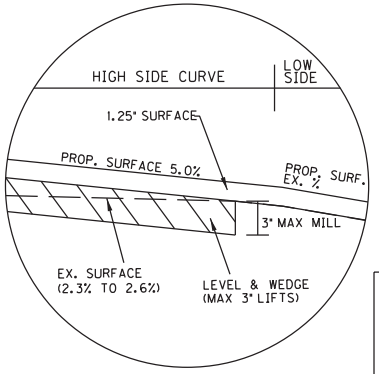




DETAIL "A"

STA. 783+10 TO STA. 824+50
STA. 827+50 TO STA. 862+50
STA. 862+50 TO STA. 870+00
(NOTE: BEGIN MILL 1.25" AND INLAY TO MILL UP EX. HIGH FRICTION SURFACE)





DETAIL "B"

STA. 863+82 TO STA. 868+82
(ADJUST CROSS SLOPE HIGH SIDE OF CURVE)

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

② A 1' PAVEMENT WIDENING AND EARTH SHOULDER FOR EACH SIDE IS DESIRABLE BUT MAY HAVE TO BE ELIMINATED IN ORDER TO REMAIN ON RIGHT-OF-WAY OR AVOID A SENSITIVE OBSTRUCTION.

③ FLATTEN DITCH BACKSLOPE WHEN POSSIBLE TO REMAIN IN RIGHT-OF-WAY. IN AREAS WHERE THE BACKSLOPE MUST REMAIN STEEP, THE ENGINEER MAY DETERMINE THAT CHANNEL LINING NEEDS TO BE INSTALLED TO STABILIZE THE BACKSLOPE.

④ COMPACTED EMBANKMENT (INCIDENTAL TO ROADSIDE REGRADING). CONTRACTOR SHALL PROPERLY BENCH INTO EXISTING SLOPE AND APPLY PROPER COMPACTION. COMPACT MATERIAL ACCORDING TO STANDARD SPECIFICATIONS (SECT. 206). FINAL PAYMENT WILL BE PAID AS LF OF ROADSIDE REGRADING AND INCLUDE ALL WORK NECESSARY TO PERFORM WORK. SHOULDER EMBANKMENT MATERIAL SHALL BE SUITABLE FOR VEGETATION GROWTH. LOCATIONS THAT ARE LIMITED DUE TO R/W, UTILITY POLES, TREES, FENCES, OR OTHER SENSITIVE OBSTRUCTIONS MAY REQUIRE EMBANKMENT BUT ONLY OUT TO THE EDGE OF R/W OR SENSITIVE OBSTRUCTION(S). (SLOPE MAY BE STEEPER THAN 3:1)

⑤ EXCAVATION TO ACHIEVE THE PROPOSED DITCHES IS INCIDENTAL TO THE BID ITEM ROADSIDE REGRADING.

⑥ EDGELINE RUMBLE STRIPS (ELRS) TO BE INSTALLED FOLLOWING PROPOSED PAVEMENT WIDENING AND RESURFACE. BEGIN EDGELINE RUMBLE STRIPS AT STA. 771+00.

⑦ PLACE ASPH BASE UP TO EXISTING PAVEMENT SURFACE. COMPACT ASPHALT BASE. ALLOW ASPHALT BASE TO CURE MINIMUM OF 14 CALENDAR DAYS. ONCE ENGINEER DETERMINES PAVEMENT WIDEN HAS SUFFICIENTLY STABILIZED, BEGIN ASPHALT OVERLAY OR MILLING AND RESURFACING OPERATIONS. PRIOR TO OVERLAY / MILLING, LEVEL AND WEDGE ANY SETTLEMENT OF THE REPAIR AREAS.

PAVEMENT WIDENING AND RESURFACE

1.25" SURFACE	1.25" DEPTH CLASS 2 ASPHALT SURFACE 0.38D PG 64-22
6" BASE	3.0" DEPTH CLASS 2 ASPHALT BASE 1.00D PG 64-22 3.0" DEPTH CLASS 2 ASPHALT BASE 1.00D PG 64-22

NOT TO SCALE

KY 169
TYPICAL SECTIONS
PAVEMENT WIDENING AND RESURFACE - SECTION 2

COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00

TYPICAL SECTIONS

BASE FAILURE REPAIR DETAILS

STA. 827+80 TO STA. 828+91 (LT) SURFACE OVERLAY

STA. 867+55 TO STA. 869+00 (LT) SURFACE MILL AND INLAY

REFER TO THE SPECIAL NOTE FOR BASE FAILURE REPAIRS FOR MORE INFORMATION

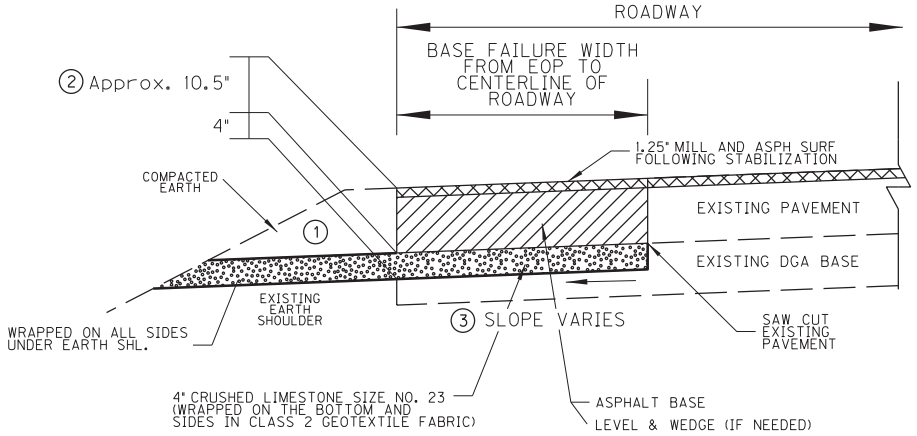
(1) DEPTH OF EXCAVATION AND REPAIR LIMITS AS DIRECTED BY THE ENGINEER.

IF EXCAVATION DEPTH IS BELOW EXISTING DGA BASE, EXTEND CRUSHED LIMESTONE AGGREGATE TO EXISTING SIDESLOPE FOR DRAINAGE.

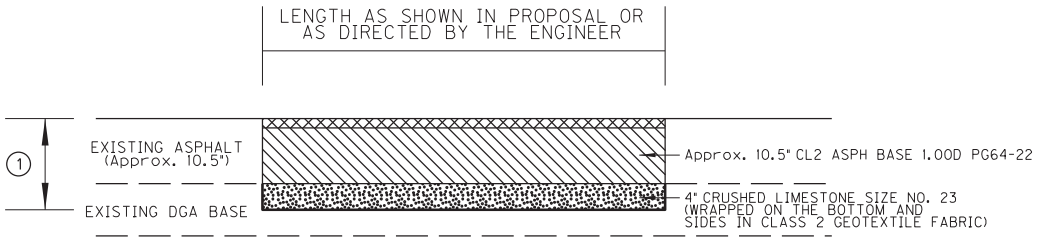
IF EXISTING ASPHALT BASE LAYER IS DEEPER THAN 10.5", CRUSHED AGGREGATE IS TO BE OMITTED. CONSTRUCT CRUSHED AGGREGATE IF IN DGA BASE LAYER.

(2) PLACE ASPH BASE UP TO EXISTING PAVEMENT SURFACE. COMPACT ASPHALT BASE. SEAL ASPHALT BASE WITH LEVELING & WEDGING. ALLOW BASE FAILURE REPAIR TO CURE MINIMUM OF 14 CALENDAR DAYS. ONCE ENGINEER DETERMINES BASE FAILURE AREA HAS SUFFICIENTLY STABILIZED, BEGIN MILLING AND RESURFACING OPERATIONS. PRIOR TO MILLING, LEVEL AND WEDGE ANY SETTLEMENT OF THE REPAIR AREAS.

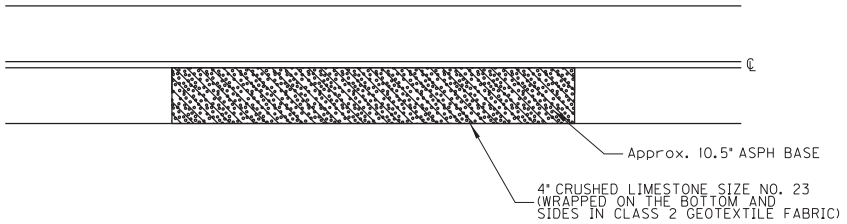
(3) AT SUPERELEVATED LOCATIONS, THE CRUSHED AGGREGATE LAYER WILL BE SLOPED AWAY FROM THE CENTERLINE TO AVOID TRAPPING WATER AT THE CENTERLINE OF THE ROADWAY. LOCATIONS TO BE DETERMINED BY THE ENGINEER.



BASE FAILURE PROFILE VIEW



BASE FAILURE TOP VIEW



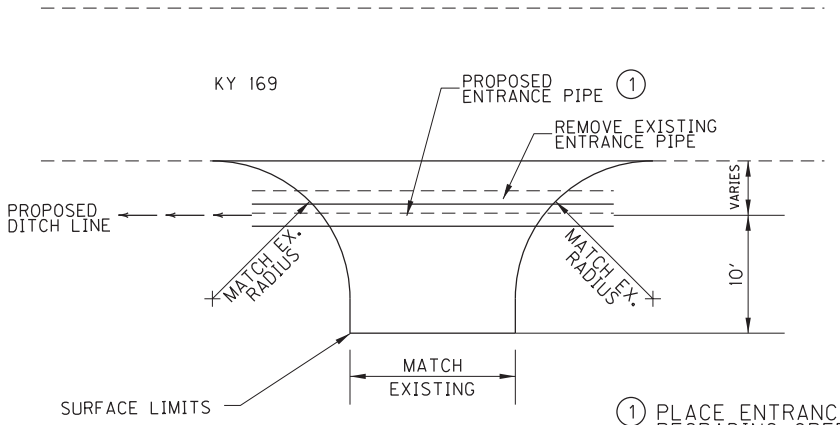
NOT TO SCALE

KY 169
TYPICAL SECTIONS
BASE FAILURE REPAIR DETAILS

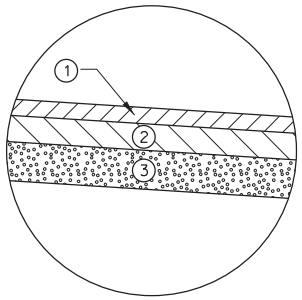
COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00

TYPICAL SECTIONS

ENTRANCE PAVING DETAILS



1 PLACE ENTRANCE PIPE AFTER ROADSIDE REGRADING OPERATIONS HAVE BEEN COMPLETED TO LINE UP WITH NEW DITCH LINE. DO NOT DISTURB EX. ENT PIPE AS NOTED IN PLANS.



SECTION 1 ENTRANCE PAVING
BEGIN OF PROJECT TO US 68
(WITHIN LIMITS OF PADDOCK DRIVE LEFT TURN)

STA. 682+93 (STA. 13+03) - LEFT (REPLACE ENT PIPE)
STA. 686+91 (STA. 17+00) - LEFT (PADDOCK DRIVE PAVING)
STA. 690+53 (STA. 20+63) - RIGHT (DND ENT PIPE)

PADDOCK DRIVE ENTRANCE PIPE REPLACEMENT DETAIL

1. 1.50" CL3 ASPH SURF 0.38B PG64-22
2. 3.50" CL3 ASPH BASE 1.00D PG64-22
3. 4.00" DGA

SEE PADDOCK DRIVE ROW PLAN SET FOR MORE INFORMATION.

ASPHALT ENTRANCE

1. 1.50" CL3 ASPH SURF 0.38B PG64-22
2. 2.00" CL3 ASPH BASE 1.00D PG64-22
3. 4.00" DGA

SECTION 2 ENTRANCE PAVING
US 68 TO END OF PROJECT

STA. 849+31 - RIGHT (REPLACE ENT PIPE)
STA. 850+80 - RIGHT (REPLACE ENT PIPE)
STA. 852+50 - RIGHT (REPLACE ENT PIPE)

ASPHALT ENTRANCE

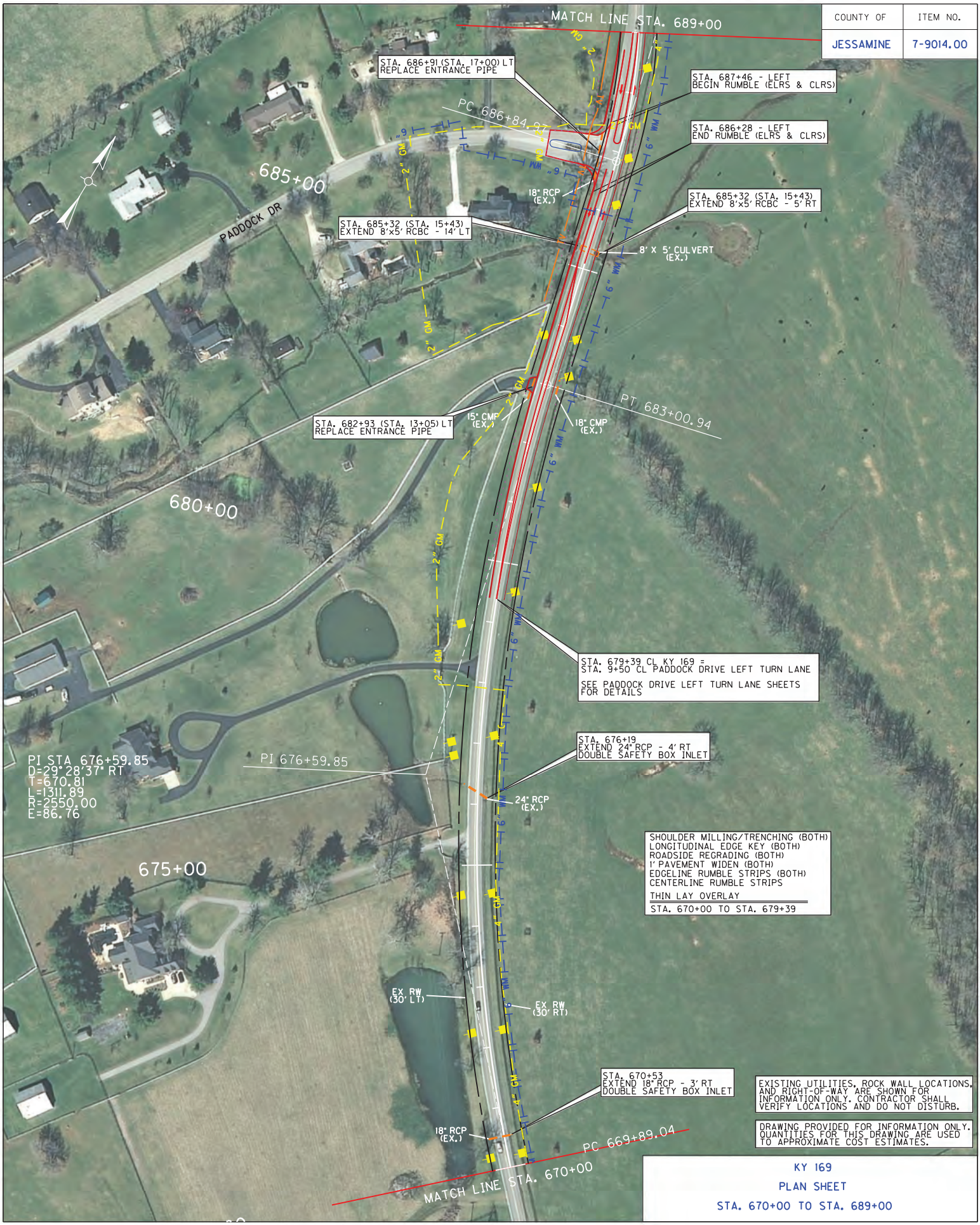
1. 1.25" CL2 ASPH SURF 0.38D PG64-22
2. 2.00" CL2 ASPH BASE 1.00D PG64-22
3. 4.00" DGA

NOT TO SCALE

KY 169
TYPICAL SECTIONS
ENTRANCE PAVING DETAILS


COUNTY OF
ITEM NO.
JESSAMINE
7-9014.00
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
MATCH LINE STA. 652+00
PC 651+03.58
650+00
PI 650+28.71
THINLAY ASPHALT OVERLAY
633+75 TO STA. 652+00
PT 647+12.52
645+00
PI 645+18.23
KEENE CROSSING DR
BELL PL DR
PC 643+22.33
FINE MILLING (EDGE KEY)
ALIGN. | STATION | SQ YD
KY 169 | *633+75 | 600
LOWES | 637+97 | 450
BELLAIRE (IN) | 638+15 | 183
BELLAIRE (OUT) | 638+55 | 183
BELL PL DR (IN) | 643+10 | 167
BELL PL DR (OUT) | 643+83 | 167
KEENE CROSSING | 643+58 | 567
* BEGIN OVERLAY OF ASPHALT PAVEMENT
REMOVE EX. THERMO PAVEMENT MARKINGS PRIOR TO OVERLAY
640+00
BELLAIRE DR
LOWES
KY 169
BEGIN THIN OVERLAY
STA. 633+75
635+00
POB 633+55.13
US 27
KY 169
PLAN SHEET
P.O.B. TO STA. 652+00


COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
EXISTING UTILITIES, ROCK WALL LOCATIONS, AND RIGHT-OF-WAY ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL VERIFY LOCATIONS AND DO NOT DISTURB.
670+00
MATCH LINE STA. 670+00
SHOULDER MILLING/TRENCHING (BOTH)
LONGITUDINAL EDGE KEY (BOTH)
ROADSIDE REGRADING (BOTH)
1' PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
CENTERLINE RUMBLE STRIPS
THIN LAY OVERLAY
STA. 659+25 TO STA. 670+00
15" CMP (EX.)
PT 666+92.06
BEGIN EDGE LINE RUMBLE STRIPS
STA. 656+45 LT & RT
WHERE 55MPH SPEED LIMIT BEGINS
665+00
18" RCP (EX.)
EX RW (30' LT)
EX RW 30' RT
PI STA 663+48.16
D=1°34'35" RT
T=343.95
L=687.85
R=25000.00
E=2.37
PI 663+48.16
STA. 661+64
EXTEND 18" RCP - 4' LT
DOUBLE SAFETY BOX INLET
18" RCP (EX.)
660+00
PC 660+04.21
BEGIN PAVEMENT WIDEN AND THIN LAY OVERLAY STA. 659+25
18" RCP (EX.)
THINLAY ASPHALT OVERLAY
652+00 TO STA. 659+25
655+00
PT 654+99.18
15" CMP (EX.)
FINE MILLING (EDGE KEY)
ALIGN. | STATION | SQ YD
KEENE WAY DR | 652+62 | 367
N KEENE WAY | 653+00 | 333
REMOVE EX. THERMO PAVEMENT MARKINGS PRIOR TO OVERLAY
N KEENE WAY DR
PI 653+02.03
PI STA 653+02.02
D=11°19'59" LT
T=198.45
L=395.60
R=2000.00
E=9.82
KEENE WAY DR
MATCH LINE STA. 652+00
KY 169
PLAN SHEET
652+00 TO STA. 670+00


MATCH LINE STA. 689+00
COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
STA. 686+91 (STA. 17+00) LT
REPLACE ENTRANCE PIPE
STA. 687+46 - LEFT
BEGIN RUMBLE (ELRS & CLRS)
PC 686+84.97
STA. 686+28 - LEFT
END RUMBLE (ELRS & CLRS)
685+00
PADDOCK DR
18" RCP
(EX.)
STA. 685+32 (STA. 15+43)
EXTEND 8'x5' RCBC - 14' LT
STA. 685+32 (STA. 15+43)
EXTEND 8'x5' RCBC - 5' RT
8' X 5' CULVERT
(EX.)
PT 683+00.94
STA. 682+93 (STA. 13+05) LT
REPLACE ENTRANCE PIPE
15" CMP
(EX.)
18" CMP
(EX.)
680+00
STA. 679+39 CL KY 169 =
STA. 9+50 CL PADDOCK DRIVE LEFT TURN LANE
SEE PADDOCK DRIVE LEFT TURN LANE SHEETS
FOR DETAILS
PI STA 676+59.85
D=29°28'37" RT
T=670.81
L=1311.89
R=2550.00
E=86.76
PI 676+59.85
STA. 676+19
EXTEND 24" RCP - 4' RT
DOUBLE SAFETY BOX INLET
24" RCP
(EX.)
675+00
SHOULDER MILLING/TRENCHING (BOTH)
LONGITUDINAL EDGE KEY (BOTH)
ROADSIDE REGRADING (BOTH)
1' PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
CENTERLINE RUMBLE STRIPS
THIN LAY OVERLAY
STA. 670+00 TO STA. 679+39
EX. RW
(30' LT)
EX RW
(30' RT)
STA. 670+53
EXTEND 18" RCP - 3' RT
DOUBLE SAFETY BOX INLET
EXISTING UTILITIES, ROCK WALL LOCATIONS, AND RIGHT-OF-WAY ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL VERIFY LOCATIONS AND DO NOT DISTURB.
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
18" RCP
(EX.)
PC 669+89.04
MATCH LINE STA. 670+00
KY 169
PLAN SHEET
STA. 670+00 TO STA. 689+00


COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
MATCH LINE STA. 708+00
PC 706+74.77
18" RCP (EX.)
15" CMP (EX.)
PT 704+47.21
705+00
15" CMP (EX.)
PI STA 701+65.19
D=31° 36'14" RT
T=297.16
L=579.17
R=1050.00
E=41.24
PI 701+65.20
PC 698+68.04
700+00
18" RCP (EX.)
EX RW (30' RT)
EX RW (30' LT)
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
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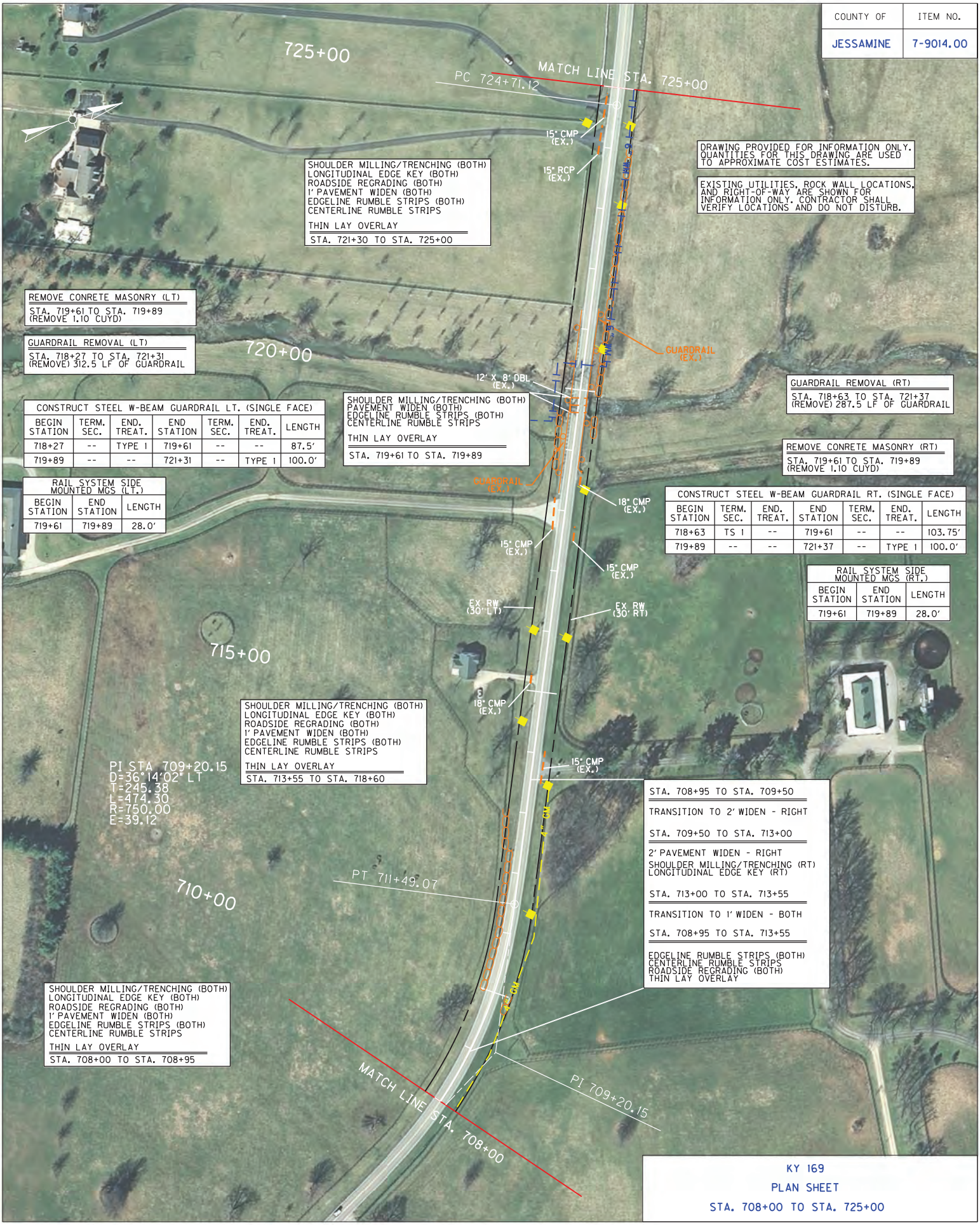
SHOULDER MILLING/TRENCHING (BOTH)
LONGITUDINAL EDGE KEY (BOTH)
ROADSIDE REGRADING (BOTH)
1' PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
CENTERLINE RUMBLE STRIPS
THIN LAY OVERLAY
STA. 692+47 TO STA. 708+00
STA. 692+47 ℄ KY 169 =
STA. 22+58 ℄ PADDOCK DRIVE LEFT TURN LANE
SEE PADDOCK DRIVE LEFT TURN LANE SHEETS FOR DETAILS
PT 693+45.79
695+00
STA. 690+53 (STA. 21+41) RT
REPAVE ENTRANCE ONLY
PI 690+34.26
15" CMP (EX.)
PI STA 690+34.26
D=45° 53'36" LT
T=349.29
L=660.82
R=825.00
E=70.89
690+00
MATCH LINE STA. 689+00
KY 169
PLAN SHEET
STA. 689+00 TO STA. 708+00


COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
725+00
MATCH LINE STA. 725+00
PC 724+71.12
15" CMP (EX.)
15" RCP (EX.)
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SHOULDER MILLING/TRENCHING (BOTH)
LONGITUDINAL EDGE KEY (BOTH)
ROADSIDE REGRADING (BOTH)
1' PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
CENTERLINE RUMBLE STRIPS
THIN LAY OVERLAY
STA. 721+30 TO STA. 725+00
REMOVE CONRETE MASONRY (LT)
STA. 719+61 TO STA. 719+89
(REMOVE 1.10 CUYD)
GUARDRAIL REMOVAL (LT)
STA. 718+27 TO STA. 721+31
(REMOVE) 312.5 LF OF GUARDRAIL
720+00
GUARDRAIL (EX.)
12' X 8' DBL (EX.)
GUARDRAIL REMOVAL (RT)
STA. 718+63 TO STA. 721+37
(REMOVE) 287.5 LF OF GUARDRAIL
REMOVE CONRETE MASONRY (RT)
STA. 719+61 TO STA. 719+89
(REMOVE 1.10 CUYD)
CONSTRUCT STEEL W-BEAM GUARDRAIL LT. (SINGLE FACE)
BEGIN STATION | TERM. SEC. | END. TREAT. | END STATION | TERM. SEC. | END. TREAT. | LENGTH
718+27 | -- | TYPE 1 | 719+61 | -- | -- | 87.5'
719+89 | -- | -- | 721+31 | -- | TYPE 1 | 100.0'
SHOULDER MILLING/TRENCHING (BOTH)
PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
CENTERLINE RUMBLE STRIPS
THIN LAY OVERLAY
STA. 719+61 TO STA. 719+89
GUARDRAIL (EX.)
18" CMP (EX.)
CONSTRUCT STEEL W-BEAM GUARDRAIL RT. (SINGLE FACE)
BEGIN STATION | TERM. SEC. | END. TREAT. | END STATION | TERM. SEC. | END. TREAT. | LENGTH
718+63 | TS 1 | -- | 719+61 | -- | -- | 103.75'
719+89 | -- | -- | 721+37 | -- | TYPE 1 | 100.0'
RAIL SYSTEM SIDE MOUNTED MGS (LT.)
BEGIN STATION | END STATION | LENGTH
719+61 | 719+89 | 28.0'
15" CMP (EX.)
15" CMP (EX.)
RAIL SYSTEM SIDE MOUNTED MGS (RT.)
BEGIN STATION | END STATION | LENGTH
719+61 | 719+89 | 28.0'
EX RW (30' LT)
EX RW (30' RT)
715+00
18" CMP (EX.)
SHOULDER MILLING/TRENCHING (BOTH)
LONGITUDINAL EDGE KEY (BOTH)
ROADSIDE REGRADING (BOTH)
1' PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
CENTERLINE RUMBLE STRIPS
THIN LAY OVERLAY
STA. 713+55 TO STA. 718+60
15" CMP (EX.)
PI STA 709+20.15
D=36°14'02" LT
T=245.38
L=474.30
R=750.00
E=39.12
STA. 708+95 TO STA. 709+50
TRANSITION TO 2' WIDEN - RIGHT
STA. 709+50 TO STA. 713+00
2' PAVEMENT WIDEN - RIGHT
SHOULDER MILLING/TRENCHING (RT)
LONGITUDINAL EDGE KEY (RT)
STA. 713+00 TO STA. 713+55
TRANSITION TO 1' WIDEN - BOTH
STA. 708+95 TO STA. 713+55
EDGELINE RUMBLE STRIPS (BOTH)
CENTERLINE RUMBLE STRIPS
ROADSIDE REGRADING (BOTH)
THIN LAY OVERLAY
PT 711+49.07
710+00
SHOULDER MILLING/TRENCHING (BOTH)
LONGITUDINAL EDGE KEY (BOTH)
ROADSIDE REGRADING (BOTH)
1' PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
CENTERLINE RUMBLE STRIPS
THIN LAY OVERLAY
STA. 708+00 TO STA. 708+95
MATCH LINE STA. 708+00
PI 709+20.15
KY 169
PLAN SHEET
STA. 708+00 TO STA. 725+00


COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
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EXISTING UTILITIES, ROCK WALL LOCATIONS, AND RIGHT-OF-WAY ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL VERIFY LOCATIONS AND DO NOT DISTURB.
MATCH LINE STA. 743+00
PC 742+34.06
740+00
15" CMP (EX.)
Ex RW 30' LT
Ex RW 30' RT
STA. 734+64
EXTEND 18" RCP - 8' LT
SLOPED AND MITERED OUTLET
735+00
18" RCP (EX.)
PT 731+36.60
6" WM
SHOULDER MILLING/TRENCHING (BOTH)
LONGITUDINAL EDGE KEY (BOTH)
ROADSIDE REGRADING (BOTH)
1' PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
CENTERLINE RUMBLE STRIPS
THIN LAY OVERLAY
STA. 725+00 TO STA. 743+00
730+00
15" CMP (EX.)
PI STA 728+05.49
D=13°51'54" LT
T=334.37
L=665.48
R=2750.00
E=20.25
PI 728+05.50
725+00
MATCH LINE STA. 725+00
KY 169
PLAN SHEET
STA. 725+00 TO STA. 743+00


COUNTY OF
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MATCH LINE STA. 761+00
760+00
ALMAHURST WAY
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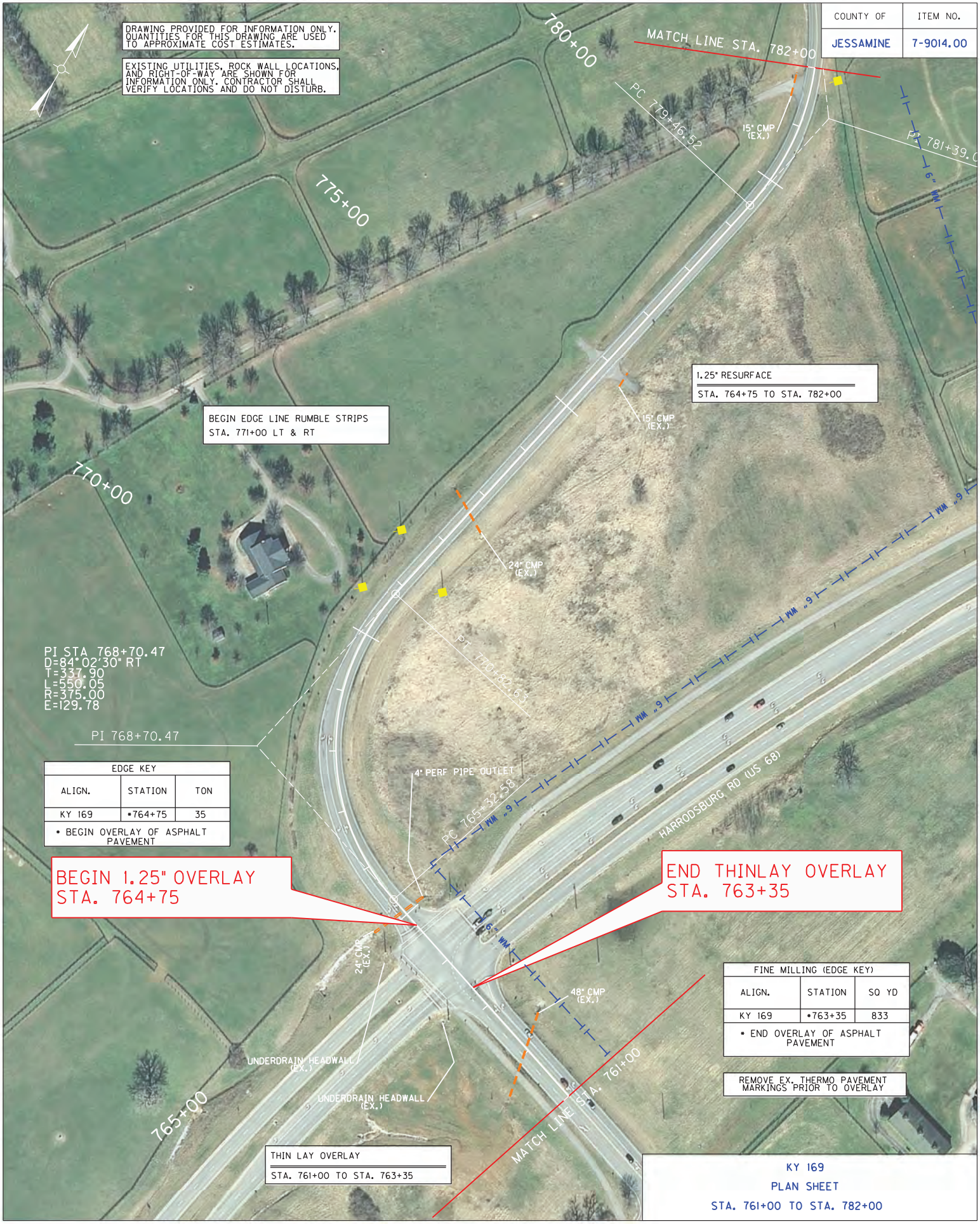
15" RCP (EX.)
6" WM
FINE MILLING (EDGE KEY)
ALIGN. | STATION | SQ YD
ALMAHURST WAY | 758+60 | 183
REMOVE EX. THERMO PAVEMENT MARKINGS PRIOR TO OVERLAY
755+00
THIN LAY OVERLAY
STA. 748+00 TO STA. 761+00
GUARDRAIL (EX.)
GUARDRAIL REMOVAL (LT)
STA. 749+46 TO STA. 753+80
(REMOVE) 437.5 LF OF GUARDRAIL
CONSTRUCT STEEL W-BEAM GUARDRAIL RT. (SINGLE FACE)
BEGIN STATION | TERM. SEC. | END. TREAT. | END STATION | TERM. SEC. | END. TREAT. | LENGTH
749+77 | -- | TYPE 4A | 753+44 | -- | TYPE 1 | 287.5'
750+00
PT 748+96.77
18" CMP (EX.)
15" CMP (EX.)
15" RCP (EX.)
GUARDRAIL REMOVAL (RT)
STA. 749+77 TO STA. 753+44
(REMOVE) 375 LF OF GUARDRAIL
END PAVEMENT WIDEN
STA. 748+00
EX RW (30' LT)
EX RW (30' RT)
PI STA 745+65.66
D=5°25'28" RT
T=331.61
L=662.72
R=7000.00
E=7.85
SHOULDER MILLING/TRENCHING (BOTH)
LONGITUDINAL EDGE KEY (BOTH)
ROADSIDE REGRADING (BOTH)
1' PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
CENTERLINE RUMBLE STRIPS
THIN LAY OVERLAY
STA. 743+00 TO STA. 748+00
PI 745+65.66
745+00
MATCH LINE STA. 743+00
KY 169
PLAN SHEET
STA. 743+00 TO STA. 761+00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COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
780+00
MATCH LINE STA. 782+00
PC 779+46.52
15" CMP (EX.)
PT 781+39.0
775+00
6" WM
1.25" RESURFACE
STA. 764+75 TO STA. 782+00
BEGIN EDGE LINE RUMBLE STRIPS
STA. 771+00 LT & RT
15" CMP (EX.)
770+00
24" CMP (EX.)
PI STA 768+70.47
D=84°02'30" RT
T=337.90
L=550.05
R=375.00
E=129.78
PI 770+82.63
PI 768+70.47
EDGE KEY
ALIGN. | STATION | TON
KY 169 | •764+75 | 35
• BEGIN OVERLAY OF ASPHALT PAVEMENT
4" PERF PIPE OUTLET
PC 765+32.58
WM "9"
HARRODSBURG RD (US 68)
BEGIN 1.25" OVERLAY
STA. 764+75
END THINLAY OVERLAY
STA. 763+35
6" WM
24" CMP (EX.)
48" CMP (EX.)
FINE MILLING (EDGE KEY)
ALIGN. | STATION | SQ YD
KY 169 | •763+35 | 833
• END OVERLAY OF ASPHALT PAVEMENT
REMOVE EX. THERMO PAVEMENT MARKINGS PRIOR TO OVERLAY
UNDERDRAIN HEADWALL (EX.)
UNDERDRAIN HEADWALL (EX.)
765+00
MATCH LINE STA. 761+00
THIN LAY OVERLAY
STA. 761+00 TO STA. 763+35
KY 169
PLAN SHEET
STA. 761+00 TO STA. 782+00


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MATCH LINE STA. 800+00
PI 799+83.41
800+00
795+00
790+00
785+00
HOLLOWAY LN
N47°18'26"W
N36°00'56"W
N37°06'22"W
PI 792+85.08
SHOULDER MILLING/TRENCHING (BOTH)
ROADSIDE REGRADING (BOTH)
1' PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
1.25" RESURFACE
STA. 783+10 TO STA. 800+00
PI STA 784+63.93
D=8°55'34" LT
T=124.88
L=249.26
R=1600.00
E=4.87
PT 785+88.31
PI 784+63.93
BEGIN PAVEMENT WIDEN AND 1.25" OVERLAY STA. 783+10
PC 783+39.05
PT 783+08.04
MATCH LINE STA. 782+00
KY 169
PLAN SHEET
STA. 782+00 TO STA. 800+00


MATCH LINE STA. 818+00
PI 816+83.88
815+00
PT 814+47.26
PI 811+82.51
PI STA 811+82.51
D=13°14'59" LT
T=267.13
L=531.88
R=2300.00
E=15.46
810+00
PC 809+15.38
PT 806+46.93
PI STA 805+24.98
D=9°20'12" RT
T=122.49
L=244.43
R=1500.00
E=4.99
PI 805+24.98
805+00
PC 804+02.49
800+00
MATCH LINE STA. 800+00
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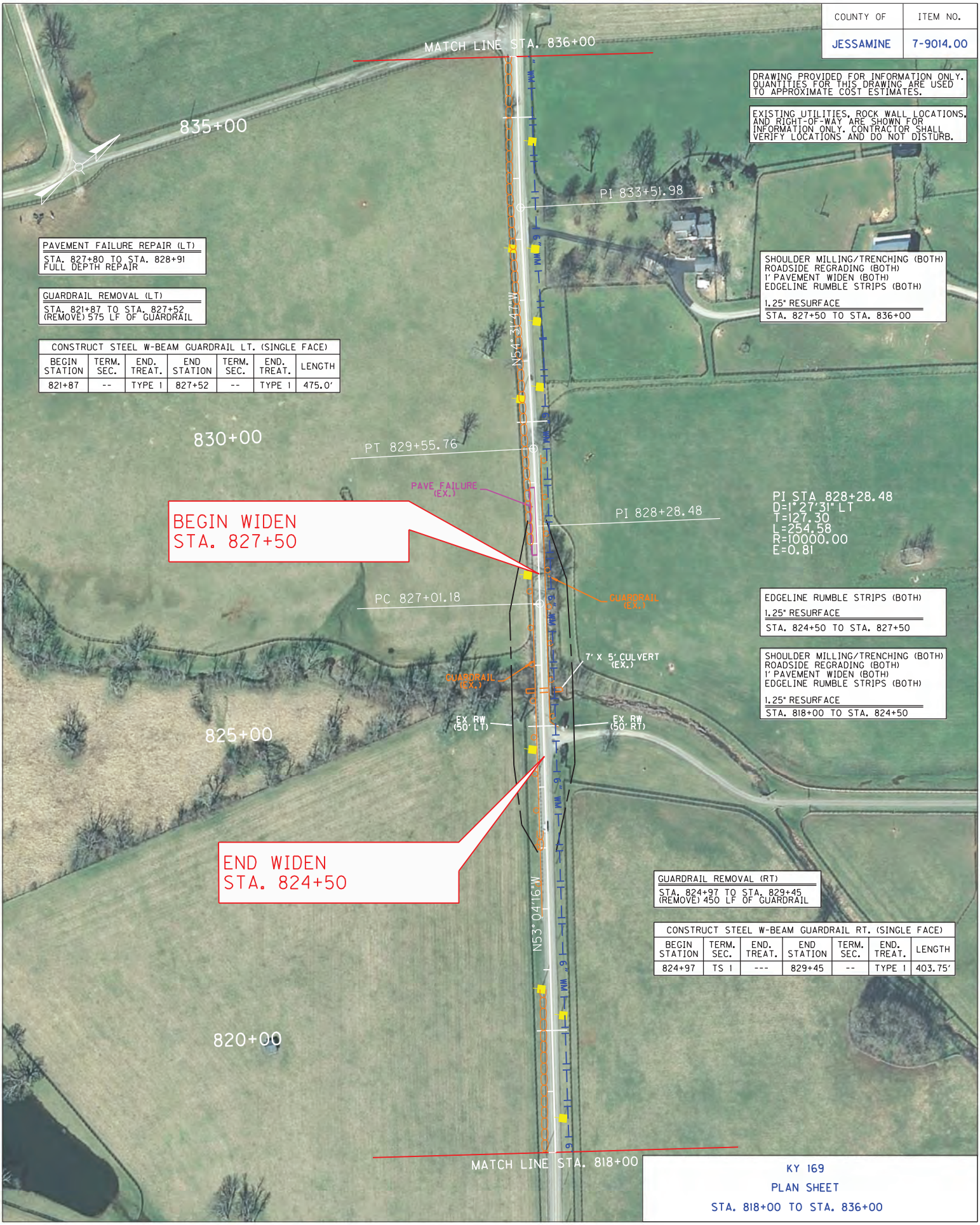
SHOULDER MILLING/TRENCHING (BOTH)
ROADSIDE REGRADING (BOTH)
1' PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
1.25" RESURFACE
STA. 800+00 TO STA. 818+00
KY 169
PLAN SHEET
STA. 800+00 TO STA. 818+00


COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
MATCH LINE STA. 836+00
835+00
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PI 833+51.98
PAVEMENT FAILURE REPAIR (LT)
STA. 827+80 TO STA. 828+91
FULL DEPTH REPAIR
GUARDRAIL REMOVAL (LT)
STA. 821+87 TO STA. 827+52
(REMOVE) 575 LF OF GUARDRAIL
SHOULDER MILLING/TRENCHING (BOTH)
ROADSIDE REGRADING (BOTH)
1' PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
1.25" RESURFACE
STA. 827+50 TO STA. 836+00
N54° 31' 47"W
CONSTRUCT STEEL W-BEAM GUARDRAIL LT. (SINGLE FACE)
BEGIN STATION | TERM. SEC. | END. TREAT. | END STATION | TERM. SEC. | END. TREAT. | LENGTH
821+87 | -- | TYPE 1 | 827+52 | -- | TYPE 1 | 475.0'
830+00
PT 829+55.76
PAVE FAILURE (EX.)
BEGIN WIDEN
STA. 827+50
PI 828+28.48
PI STA 828+28.48
D=1° 27' 31" LT
T=127.30
L=254.58
R=10000.00
E=0.81
PC 827+01.18
GUARDRAIL (EX.)
EDGELINE RUMBLE STRIPS (BOTH)
1.25" RESURFACE
STA. 824+50 TO STA. 827+50
7' X 5' CULVERT (EX.)
GUARDRAIL (EX.)
SHOULDER MILLING/TRENCHING (BOTH)
ROADSIDE REGRADING (BOTH)
1' PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
1.25" RESURFACE
STA. 818+00 TO STA. 824+50
EX RW (50' LT)
EX RW (50' RT)
825+00
END WIDEN
STA. 824+50
GUARDRAIL REMOVAL (RT)
STA. 824+97 TO STA. 829+45
(REMOVE) 450 LF OF GUARDRAIL
N53° 04' 16"W
CONSTRUCT STEEL W-BEAM GUARDRAIL RT. (SINGLE FACE)
BEGIN STATION | TERM. SEC. | END. TREAT. | END STATION | TERM. SEC. | END. TREAT. | LENGTH
824+97 | TS 1 | --- | 829+45 | -- | TYPE 1 | 403.75'
820+00
MATCH LINE STA. 818+00
KY 169
PLAN SHEET
STA. 818+00 TO STA. 836+00


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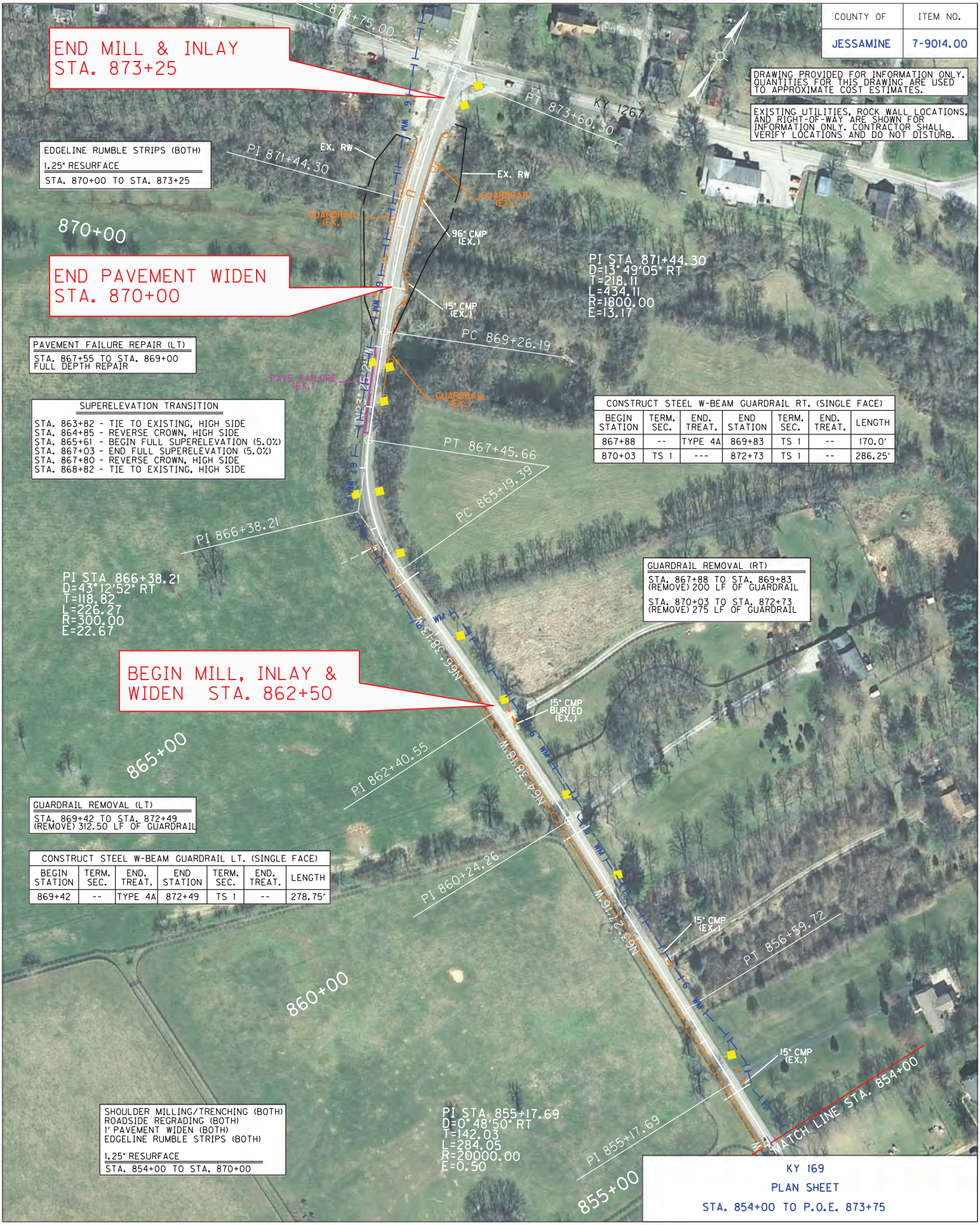
MATCH LINE STA. 854+00
PC 853+75.66
PT 853+30.64
REPLACE ENTRANCE PIPE STA. 852+50 - RIGHT
12" CMP (EX.)
REPLACE ENTRANCE PIPE STA. 850+80 - RIGHT
12" CMP (EX.)
PI 850+36.73
PI STA 850+36.73
D=8°59'59" LT
T=295.12
L=589.03
R=3750.00
E=11.60
REPLACE ENTRANCE PIPE STA. 849+31 - RIGHT
12" CMP (EX.)
850+00
PC 847+41.60
PT 846+00.13
845+00
PI 843+99.60
PI STA 843+99.60
D=2°17'53" LT
T=200.58
L=401.10
R=10000.00
E=2.01
SHOULDER MILLING/TRENCHING (BOTH)
ROADSIDE REGRADING (BOTH)
1' PAVEMENT WIDEN (BOTH)
EDGELINE RUMBLE STRIPS (BOTH)
1.25" RESURFACE
STA. 836+00 TO STA. 854+00
PC 841+99.03
PI 840+21.93
840+00
MATCH LINE STA. 836+00
KY 169
PLAN SHEET
STA. 836+00 TO STA. 854+00

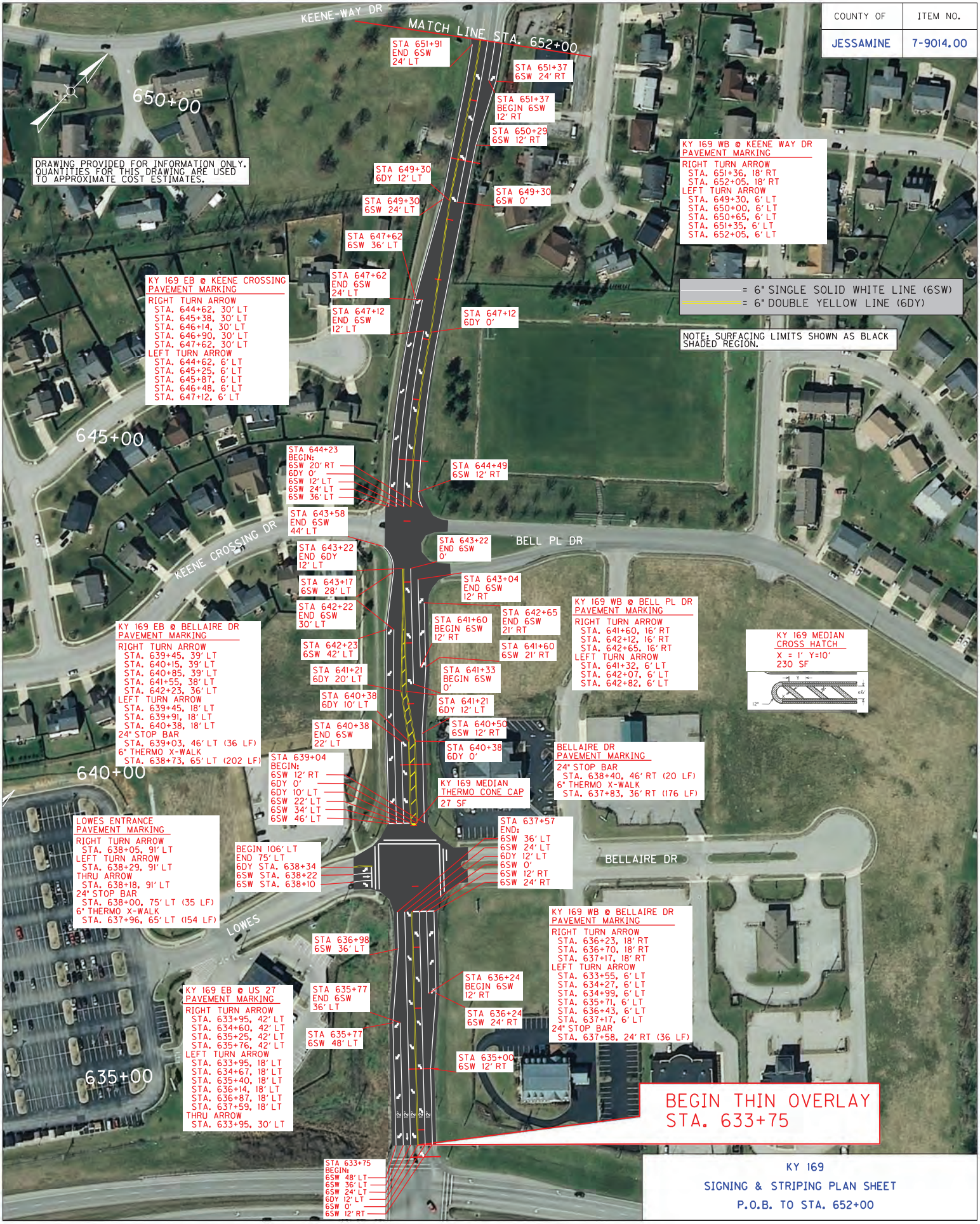


CONSTRUCT STEEL W-BEAM GUARDRAIL RT. (SINGLE FACE)

BEGIN STATION	TERM. SEC.	END. TREAT.	END STATION	TERM. SEC.	END. TREAT.	LENGTH
867+88	--	TYPE 4A	869+83	TS 1	--	170.0'
870+03	TS 1	---	872+73	TS 1	--	286.25'

CONSTRUCT STEEL W-BEAM GUARDRAIL LT. (SINGLE FACE)

BEGIN STATION	TERM. SEC.	END. TREAT.	END STATION	TERM. SEC.	END. TREAT.	LENGTH
869+42	--	TYPE 4A	872+49	TS 1	--	278.75'


KEENE-WAY DR
MATCH LINE STA. 652+00
650+00
645+00
640+00
635+00
KEENE CROSSING DR
BELL PL DR
BELLAIRE DR
LOWES
COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
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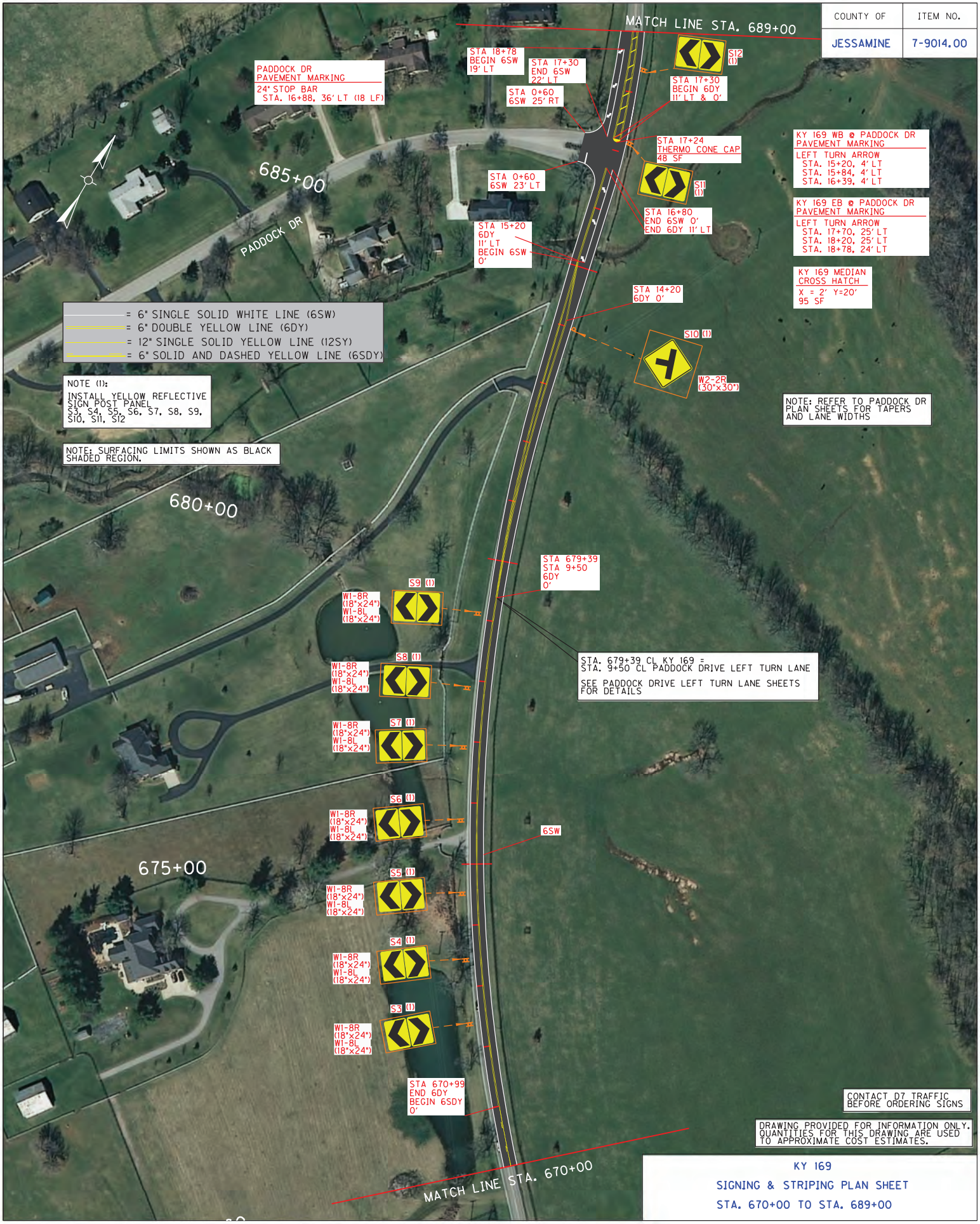
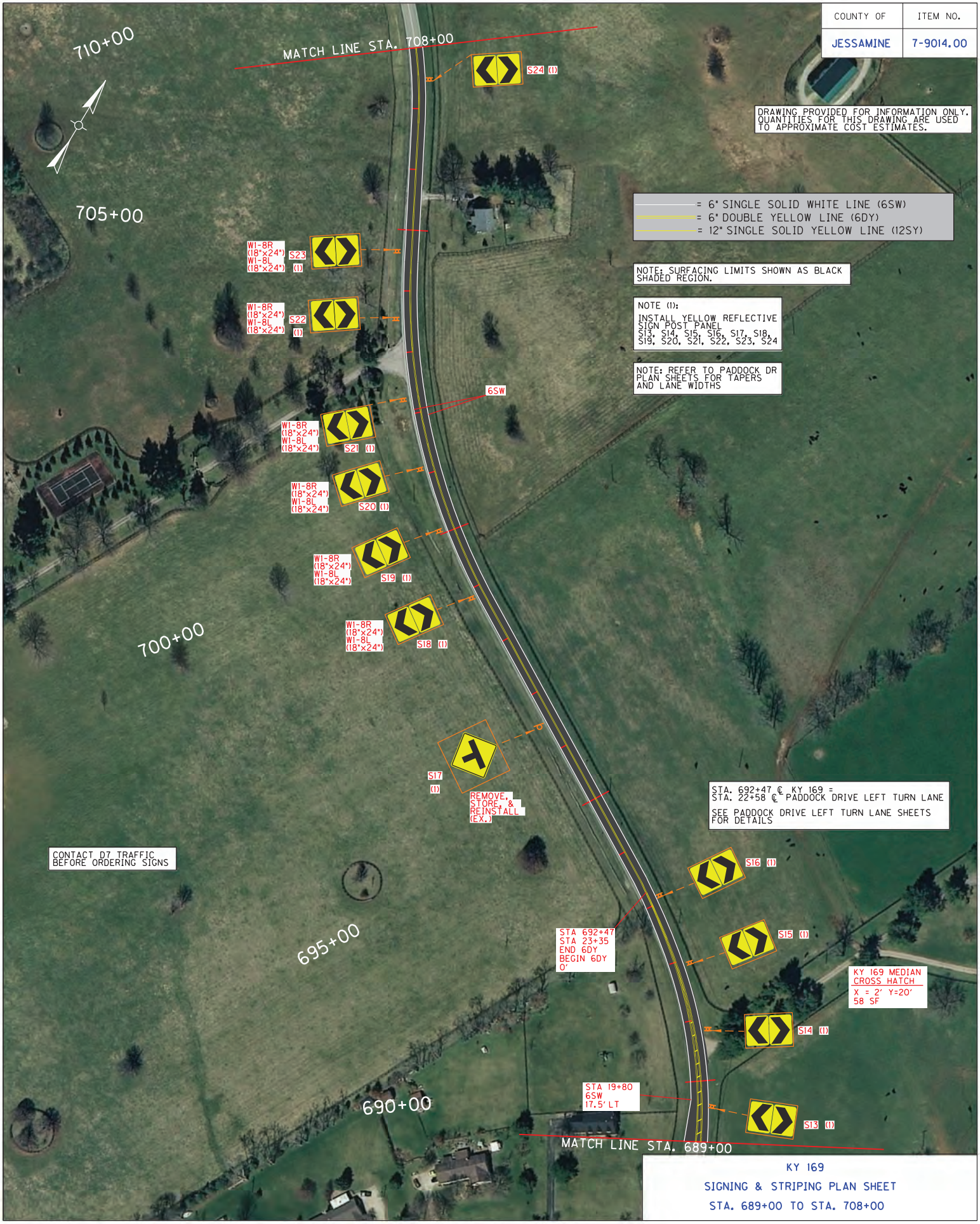
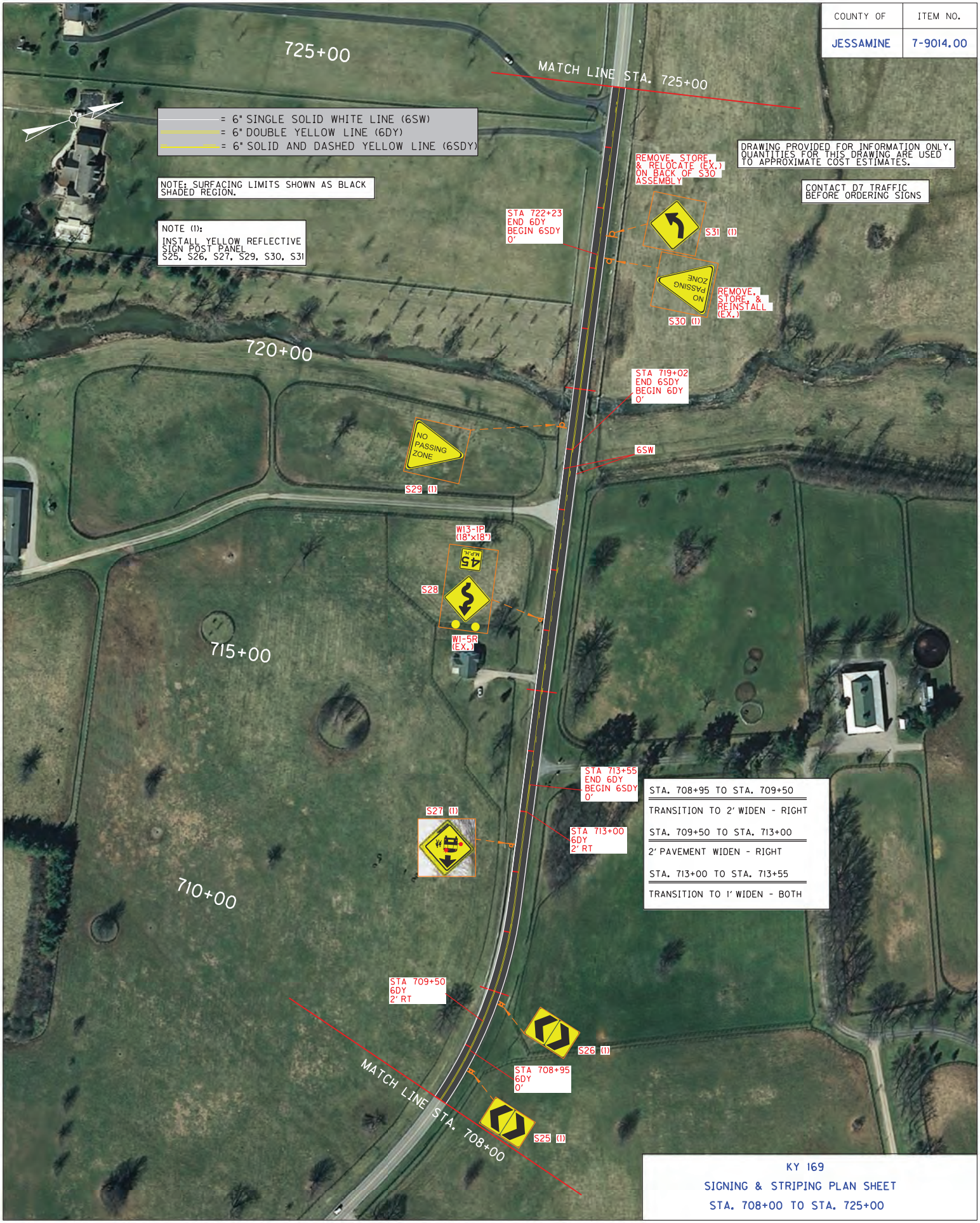
STA 651+91 END 6SW 24' LT
STA 651+37 6SW 24' RT
STA 651+37 BEGIN 6SW 12' RT
STA 650+29 6SW 12' RT
STA 649+30 6DY 12' LT
STA 649+30 6SW 24' LT
STA 649+30 6SW 0'
STA 647+62 6SW 36' LT
STA 647+62 END 6SW 24' LT
STA 647+12 END 6SW 12' LT
STA 647+12 6DY 0'
KY 169 WB @ KEENE WAY DR PAVEMENT MARKING
RIGHT TURN ARROW
STA. 651+36, 18' RT
STA. 652+05, 18' RT
LEFT TURN ARROW
STA. 649+30, 6' LT
STA. 650+00, 6' LT
STA. 650+65, 6' LT
STA. 651+35, 6' LT
STA. 652+05, 6' LT
= 6" SINGLE SOLID WHITE LINE (6SW)
= 6" DOUBLE YELLOW LINE (6DY)
NOTE: SURFACING LIMITS SHOWN AS BLACK SHADED REGION.
KY 169 EB @ KEENE CROSSING PAVEMENT MARKING
RIGHT TURN ARROW
STA. 644+62, 30' LT
STA. 645+38, 30' LT
STA. 646+14, 30' LT
STA. 646+90, 30' LT
STA. 647+62, 30' LT
LEFT TURN ARROW
STA. 644+62, 6' LT
STA. 645+25, 6' LT
STA. 645+87, 6' LT
STA. 646+48, 6' LT
STA. 647+12, 6' LT
STA 644+23 BEGIN: 6SW 20' RT 6DY 0' 6SW 12' LT 6SW 24' LT 6SW 36' LT
STA 644+49 6SW 12' RT
STA 643+58 END 6SW 44' LT
STA 643+22 END 6DY 12' LT
STA 643+22 END 6SW 0'
STA 643+17 6SW 28' LT
STA 643+04 END 6SW 12' RT
STA 642+22 END 6SW 30' LT
STA 642+65 END 6SW 21' RT
STA 641+60 BEGIN 6SW 12' RT
STA 641+60 6SW 21' RT
KY 169 WB @ BELL PL DR PAVEMENT MARKING
RIGHT TURN ARROW
STA. 641+60, 16' RT
STA. 642+12, 16' RT
STA. 642+65, 16' RT
LEFT TURN ARROW
STA. 641+32, 6' LT
STA. 642+07, 6' LT
STA. 642+82, 6' LT
KY 169 MEDIAN CROSS HATCH
X = 1' Y=10'
230 SF
KY 169 EB @ BELLAIRE DR PAVEMENT MARKING
RIGHT TURN ARROW
STA. 639+45, 39' LT
STA. 640+15, 39' LT
STA. 640+85, 39' LT
STA. 641+55, 38' LT
STA. 642+23, 36' LT
LEFT TURN ARROW
STA. 639+45, 18' LT
STA. 639+91, 18' LT
STA. 640+38, 18' LT
24" STOP BAR
STA. 639+03, 46' LT (36 LF)
6" THERMO X-WALK
STA. 638+73, 65' LT (202 LF)
STA 642+23 6SW 42' LT
STA 641+21 6DY 20' LT
STA 641+33 BEGIN 6SW 0'
STA 640+38 6DY 10' LT
STA 641+21 6DY 12' LT
STA 640+38 END 6SW 22' LT
STA 640+50 6SW 12' RT
STA 640+38 6DY 0'
BELLAIRE DR PAVEMENT MARKING
24" STOP BAR
STA. 638+40, 46' RT (20 LF)
6" THERMO X-WALK
STA. 637+83, 36' RT (176 LF)
STA 639+04 BEGIN: 6SW 12' RT 6DY 0' 6DY 10' LT 6SW 22' LT 6SW 34' LT 6SW 46' LT
KY 169 MEDIAN THERMO CONE CAP
27 SF
LOWES ENTRANCE PAVEMENT MARKING
RIGHT TURN ARROW
STA. 638+05, 91' LT
LEFT TURN ARROW
STA. 638+29, 91' LT
THRU ARROW
STA. 638+18, 91' LT
24" STOP BAR
STA. 638+00, 75' LT (35 LF)
6" THERMO X-WALK
STA. 637+96, 65' LT (154 LF)
BEGIN 106' LT END 75' LT 6DY STA. 638+34 6SW STA. 638+22 6SW STA. 638+10
STA 637+57 END: 6SW 36' LT 6SW 24' LT 6DY 12' LT 6SW 0' 6SW 12' RT 6SW 24' RT
KY 169 WB @ BELLAIRE DR PAVEMENT MARKING
RIGHT TURN ARROW
STA. 636+23, 18' RT
STA. 636+70, 18' RT
STA. 637+17, 18' RT
LEFT TURN ARROW
STA. 633+55, 6' LT
STA. 634+27, 6' LT
STA. 634+99, 6' LT
STA. 635+71, 6' LT
STA. 636+43, 6' LT
STA. 637+17, 6' LT
24" STOP BAR
STA. 637+58, 24' RT (36 LF)
STA 636+98 6SW 36' LT
STA 636+24 BEGIN 6SW 12' RT
STA 636+24 6SW 24' RT
KY 169 EB @ US 27 PAVEMENT MARKING
RIGHT TURN ARROW
STA. 633+95, 42' LT
STA. 634+60, 42' LT
STA. 635+25, 42' LT
STA. 635+76, 42' LT
LEFT TURN ARROW
STA. 633+95, 18' LT
STA. 634+67, 18' LT
STA. 635+40, 18' LT
STA. 636+14, 18' LT
STA. 636+87, 18' LT
STA. 637+59, 18' LT
THRU ARROW
STA. 633+95, 30' LT
STA 635+77 END 6SW 36' LT
STA 635+77 6SW 48' LT
STA 635+00 6SW 12' RT
BEGIN THIN OVERLAY
STA. 633+75
STA 633+75 BEGIN: 6SW 48' LT 6SW 36' LT 6SW 24' LT 6DY 12' LT 6SW 0' 6SW 12' RT
KY 169
SIGNING & STRIPING PLAN SHEET
P.O.B. TO STA. 652+00


COUNTY OF
ITEM NO.
JESSAMINE
7-9014.00
670+00
MATCH LINE STA. 670+00
= 6" SINGLE SOLID WHITE LINE (6SW)
= 6" DOUBLE YELLOW LINE (6DY)
= 6" SOLID AND DASHED YELLOW LINE (6SDY)
NOTE: SURFACING LIMITS SHOWN AS BLACK SHADED REGION.
NOTE (1):
INSTALL YELLOW REFLECTIVE SIGN POST PANEL
S1
S2
45 M.P.H.
665+00
6SW
(1) S1
NO PASSING ZONE
REMOVE & RELOCATE SIGN ASSEMBLY (PROP. LOCATION)
STA 661+44
END 6DY
BEGIN 6SDY
0'
BEGIN PAVEMENT WIDEN AND THIN LAY OVERLAY
STA. 659+25
660+00
(1) S1
NO PASSING ZONE
REMOVE & RELOCATE SIGN ASSEMBLY (EX. LOCATION)
STA 658+70
END 6DY
0'
EX. DND
SPEED LIMIT 45
EX. DND
SPEED LIMIT 55
STA 654+99
6DY 10' LT
STA 654+30
6DY 0'
STA 654+99
6SW 21' LT
655+00
STA 654+30
END 6SW
12' LT
KY 169 EB @ KEENE WAY DR
PAVEMENT MARKING
RIGHT TURN ARROW
STA. 653+56, 30' LT
STA. 653+97, 30' LT
LEFT TURN ARROW
STA. 653+56, 6' LT
STA. 654+30, 6' LT
STA 653+93
END 6SW
24' LT
STA 653+98
6SW 36' LT
STA 653+67
BEGIN 6SW
12' RT
STA 653+16
BEGIN:
6DY 0'
6SW 12' LT
6SW 24' LT
6SW 36' LT
STA 652+45
END 6SW
0'
STA 652+65
END 6SW
12' RT
STA 652+45
END 6DY
12' LT
STA 652+35
END 6SW
24' RT
MATCH LINE STA. 652+00
KY 169
SIGNING & STRIPING PLAN SHEET
652+00 TO STA. 670+00

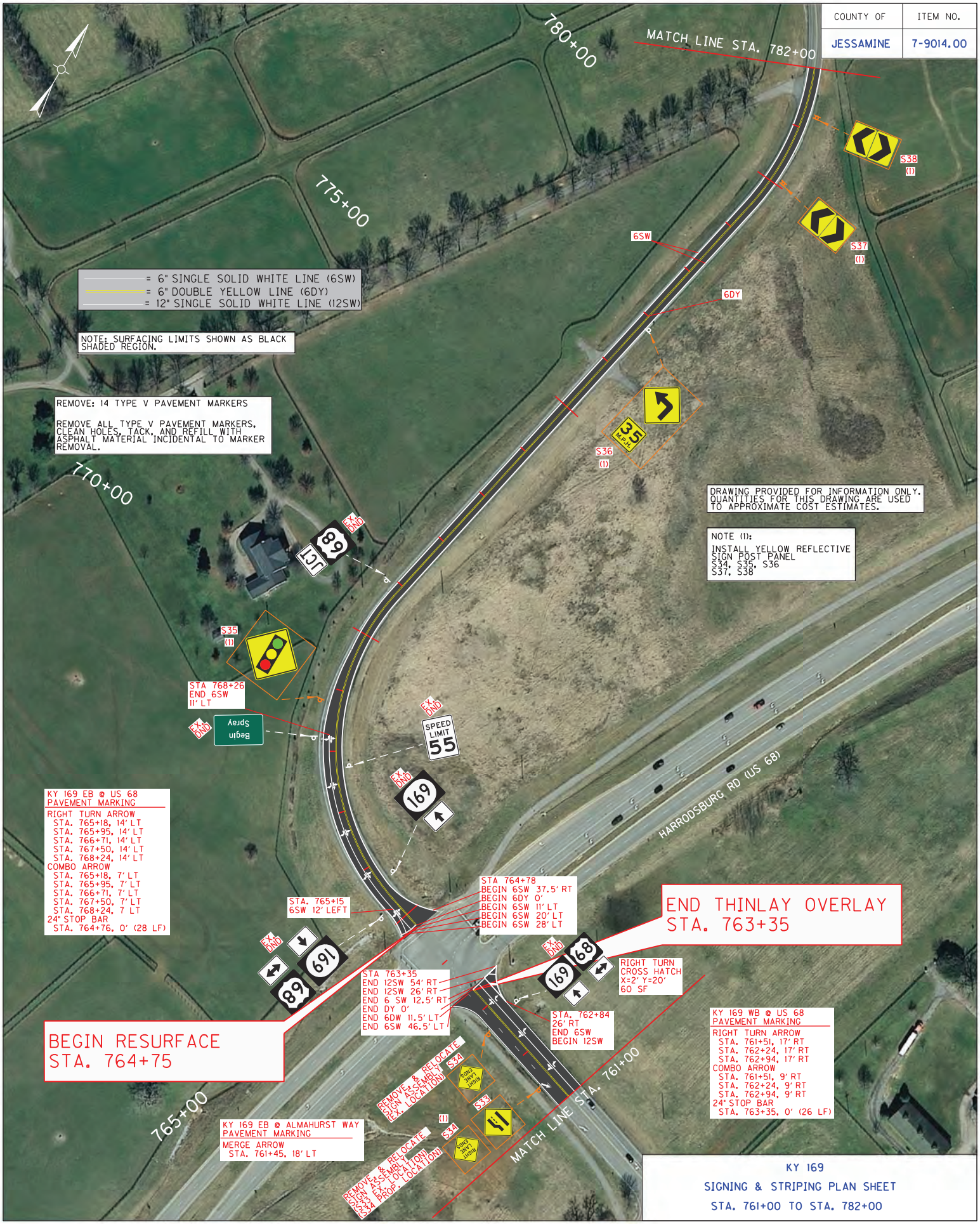

MATCH LINE STA. 689+00
COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
PADDOCK DR
PAVEMENT MARKING
24" STOP BAR
STA. 16+88, 36' LT (18 LF)
685+00
PADDOCK DR
STA 18+78
BEGIN 6SW
19' LT
STA 17+30
END 6SW
22' LT
STA 0+60
6SW 25' RT
STA 17+30
BEGIN 6DY
11' LT & 0'
S12
(1)
STA 17+24
THERMO CONE CAP
48 SF
S11
(1)
STA 0+60
6SW 23' LT
STA 16+80
END 6SW 0'
END 6DY 11' LT
STA 15+20
6DY
11' LT
BEGIN 6SW
0'
KY 169 WB @ PADDOCK DR
PAVEMENT MARKING
LEFT TURN ARROW
STA. 15+20, 4' LT
STA. 15+84, 4' LT
STA. 16+39, 4' LT
KY 169 EB @ PADDOCK DR
PAVEMENT MARKING
LEFT TURN ARROW
STA. 17+70, 25' LT
STA. 18+20, 25' LT
STA. 18+78, 24' LT
KY 169 MEDIAN
CROSS HATCH
X = 2' Y=20'
95 SF
STA 14+20
6DY 0'
S10 (1)
W2-2R
(30"x30")
= 6" SINGLE SOLID WHITE LINE (6SW)
= 6" DOUBLE YELLOW LINE (6DY)
= 12" SINGLE SOLID YELLOW LINE (12SY)
= 6" SOLID AND DASHED YELLOW LINE (6SDY)
NOTE (1):
INSTALL YELLOW REFLECTIVE
SIGN POST PANEL
S3, S4, S5, S6, S7, S8, S9,
S10, S11, S12
NOTE: SURFACING LIMITS SHOWN AS BLACK SHADED REGION.
NOTE: REFER TO PADDOCK DR PLAN SHEETS FOR TAPERS AND LANE WIDTHS
680+00
STA 679+39
STA 9+50
6DY
0'
S9 (1)
W1-8R
(18"x24")
W1-8L
(18"x24")
S8 (1)
W1-8R
(18"x24")
W1-8L
(18"x24")
STA. 679+39 CL KY 169 =
STA. 9+50 CL PADDOCK DRIVE LEFT TURN LANE
SEE PADDOCK DRIVE LEFT TURN LANE SHEETS FOR DETAILS
S7 (1)
W1-8R
(18"x24")
W1-8L
(18"x24")
S6 (1)
W1-8R
(18"x24")
W1-8L
(18"x24")
6SW
675+00
S5 (1)
W1-8R
(18"x24")
W1-8L
(18"x24")
S4 (1)
W1-8R
(18"x24")
W1-8L
(18"x24")
S3 (1)
W1-8R
(18"x24")
W1-8L
(18"x24")
STA 670+99
END 6DY
BEGIN 6SDY
0'
CONTACT D7 TRAFFIC BEFORE ORDERING SIGNS
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
MATCH LINE STA. 670+00
KY 169
SIGNING & STRIPING PLAN SHEET
STA. 670+00 TO STA. 689+00

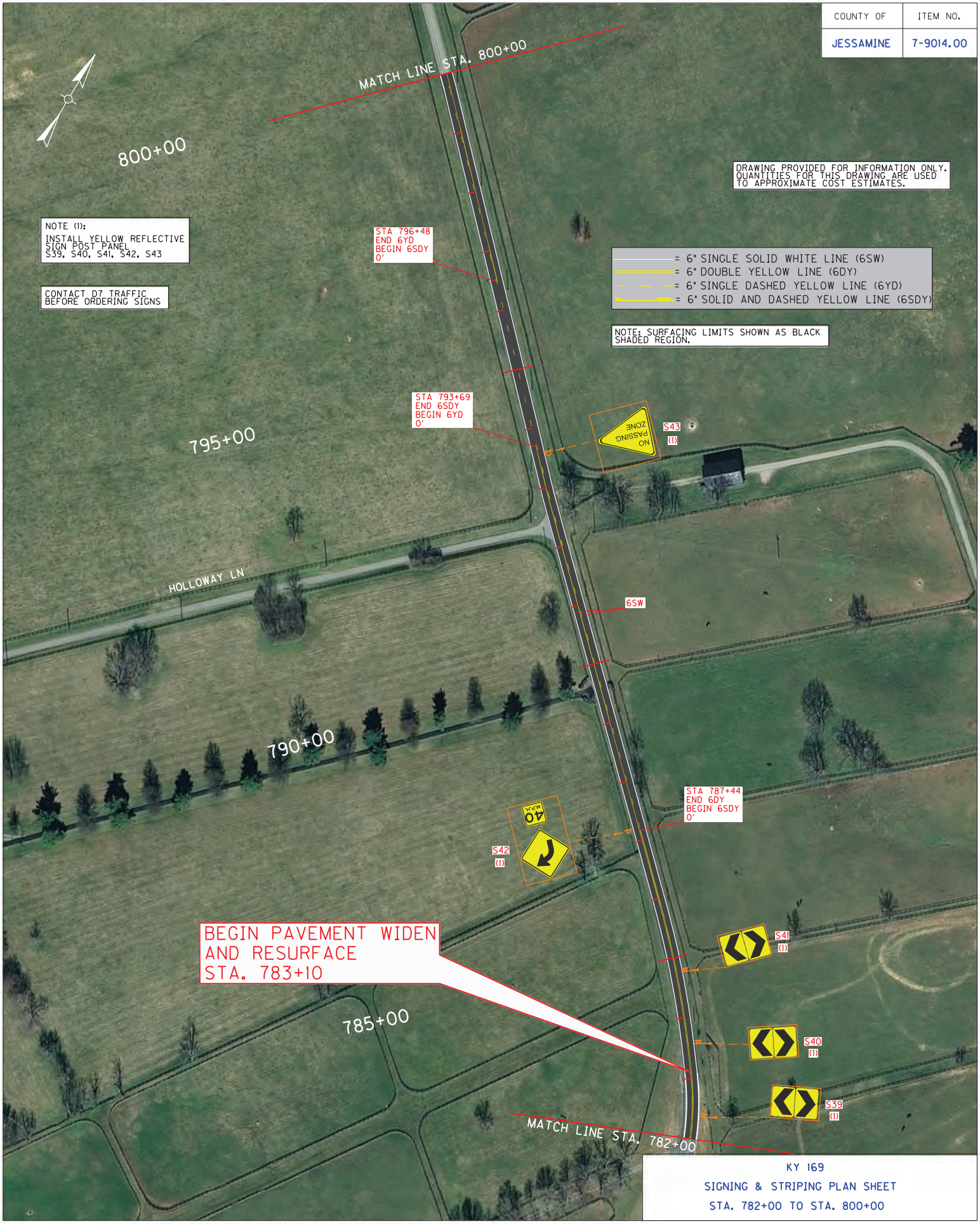

710+00
MATCH LINE STA. 708+00
S24 (1)
705+00
W1-8R (18"x24") W1-8L (18"x24") S23 (1)
W1-8R (18"x24") W1-8L (18"x24") S22 (1)
6SW
W1-8R (18"x24") W1-8L (18"x24") S21 (1)
W1-8R (18"x24") W1-8L (18"x24") S20 (1)
W1-8R (18"x24") W1-8L (18"x24") S19 (1)
700+00
W1-8R (18"x24") W1-8L (18"x24") S18 (1)
S17 (1)
REMOVE, STORE, & REINSTALL (EX.)
CONTACT D7 TRAFFIC BEFORE ORDERING SIGNS
695+00
S16 (1)
STA 692+47
STA 23+35
END 6DY
BEGIN 6DY
0'
S15 (1)
KY 169 MEDIAN CROSS HATCH
X = 2' Y=20'
58 SF
S14 (1)
690+00
STA 19+80
6SW
17.5' LT
S13 (1)
MATCH LINE STA. 689+00
COUNTY OF
ITEM NO.
JESSAMINE
7-9014.00
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
= 6" SINGLE SOLID WHITE LINE (6SW)
= 6" DOUBLE YELLOW LINE (6DY)
= 12" SINGLE SOLID YELLOW LINE (12SY)
NOTE: SURFACING LIMITS SHOWN AS BLACK SHADED REGION.
NOTE (1):
INSTALL YELLOW REFLECTIVE SIGN POST PANEL S13, S14, S15, S16, S17, S18, S19, S20, S21, S22, S23, S24
NOTE: REFER TO PADDOCK DR PLAN SHEETS FOR TAPERS AND LANE WIDTHS
STA. 692+47 ℄ KY 169 =
STA. 22+58 ℄ PADDOCK DRIVE LEFT TURN LANE
SEE PADDOCK DRIVE LEFT TURN LANE SHEETS FOR DETAILS
KY 169
SIGNING & STRIPING PLAN SHEET
STA. 689+00 TO STA. 708+00


COUNTY OF
ITEM NO.
JESSAMINE
7-9014.00
725+00
MATCH LINE STA. 725+00
= 6" SINGLE SOLID WHITE LINE (6SW)
= 6" DOUBLE YELLOW LINE (6DY)
= 6" SOLID AND DASHED YELLOW LINE (6SDY)
NOTE: SURFACING LIMITS SHOWN AS BLACK SHADED REGION.
NOTE (1):
INSTALL YELLOW REFLECTIVE SIGN POST PANEL S25, S26, S27, S29, S30, S31
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
CONTACT D7 TRAFFIC BEFORE ORDERING SIGNS
REMOVE, STORE, & RELOCATE (EX.) ON BACK OF S30 ASSEMBLY
STA 722+23
END 6DY
BEGIN 6SDY
0'
S31 (1)
NO PASSING ZONE
REMOVE, STORE, & REINSTALL (EX.)
S30 (1)
720+00
STA 719+02
END 6SDY
BEGIN 6DY
0'
NO PASSING ZONE
6SW
S29 (1)
W13-1P (18"x18")
45 MPH
S28
W1-5R (EX.)
715+00
STA 713+55
END 6DY
BEGIN 6SDY
0'
STA. 708+95 TO STA. 709+50
TRANSITION TO 2' WIDEN - RIGHT
STA. 709+50 TO STA. 713+00
2' PAVEMENT WIDEN - RIGHT
STA. 713+00 TO STA. 713+55
TRANSITION TO 1' WIDEN - BOTH
S27 (1)
STA 713+00
6DY
2' RT
710+00
STA 709+50
6DY
2' RT
S26 (1)
STA 708+95
6DY
0'
MATCH LINE STA. 708+00
S25 (1)
KY 169
SIGNING & STRIPING PLAN SHEET
STA. 708+00 TO STA. 725+00


MATCH LINE STA. 743+00
740+00
735+00
730+00
725+00
MATCH LINE STA. 725+00
6SW
STA 730+38
END 6SDY
BEGIN 6DY
0'
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
= 6" SINGLE SOLID WHITE LINE (6SW)
= 6" DOUBLE YELLOW LINE (6DY)
= 6" SOLID AND DASHED YELLOW LINE (6SDY)
CONTACT D7 TRAFFIC BEFORE ORDERING SIGNS
NOTE: SURFACING LIMITS SHOWN AS BLACK SHADED REGION.
COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
KY 169
SIGNING & STRIPING PLAN SHEET
STA. 725+00 TO STA. 743+00


COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
MATCH LINE STA. 761+00
760+00
755+00
750+00
745+00
MATCH LINE STA. 743+00
ALMAHURST WAY
REMOVE, & RELOCATE SIGN ASSEMBLY (S33A EX. LOCATION) (S33 PROP. LOCATION)
S33
S33A
(1)
691
SOUTH
STA 758+72 BEGIN 6SW 55' LT
STA 758+55 END 6SW 54' LT
STA 758+22 BEGIN 6DW 10' LT
= 6" SINGLE SOLID WHITE LINE (6SW)
= 6" DOUBLE YELLOW LINE (6DY)
= 6" SINGLE DASHED WHITE LINE (6DW)
NOTE (1):
INSTALL YELLOW REFLECTIVE SIGN POST PANEL S32, S33
REMOVE, & RELOCATE SIGN ASSEMBLY (PROP. LOCATION) S33A
KY 169 EB @ ALMAHURST WAY PAVEMENT MARKING
MERGE ARROW
STA. 757+47, 19' LT
STA. 759+47, 19' LT
24" STOP BAR
STA. 758+64, 35' LT (15 LF)
SPEED LIMIT 55
EX. DND
NOTE: SURFACING LIMITS SHOWN AS BLACK SHADED REGION.
END PAVEMENT WIDEN STA. 748+00
STA 759+34 BEGIN 6SW 13' RT
6SW 25.5' RT
S32
(1)
STA. 758+78 BEGIN 6DY 0'
STA. 758+50 END 6DY 0'
STA. 758+03 6SW 13' RT
JCT
68
EX. DND
6DY
6SW
KY 169 WB @ US 68 PAVEMENT MARKING
RIGHT TURN ARROW
STA. 759+33, 17' RT
STA. 760+06, 17' RT
STA. 760+80, 17' RT
COMBO ARROW
STA. 759+33, 8' RT
STA. 760+06, 8' RT
STA. 760+79, 8' RT
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
CONTACT D7 TRAFFIC BEFORE ORDERING SIGNS
REMOVE: 39 TYPE V PAVEMENT MARKERS
REMOVE ALL TYPE V PAVEMENT MARKERS, CLEAN HOLES, TACK, AND REFILL WITH ASPHALT MATERIAL INCIDENTAL TO MARKER REMOVAL.
KY 169
SIGNING & STRIPING PLAN SHEET
STA. 743+00 TO STA. 761+00


COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
780+00
MATCH LINE STA. 782+00
775+00
= 6" SINGLE SOLID WHITE LINE (6SW)
= 6" DOUBLE YELLOW LINE (6DY)
= 12" SINGLE SOLID WHITE LINE (12SW)
NOTE: SURFACING LIMITS SHOWN AS BLACK SHADED REGION.
REMOVE: 14 TYPE V PAVEMENT MARKERS
REMOVE ALL TYPE V PAVEMENT MARKERS, CLEAN HOLES, TACK, AND REFILL WITH ASPHALT MATERIAL INCIDENTAL TO MARKER REMOVAL.
770+00
6SW
6DY
S38
(1)
S37
(1)
S36
(1)
35 MPH
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
NOTE (1):
INSTALL YELLOW REFLECTIVE SIGN POST PANEL
S34, S35, S36
S37, S38
S35
(1)
STA 768+26
END 6SW
11' LT
Begin Spray
EX DND
SPEED LIMIT 55
169
HARRODSBURG RD (US 68)
KY 169 EB @ US 68
PAVEMENT MARKING
RIGHT TURN ARROW
STA. 765+18, 14' LT
STA. 765+95, 14' LT
STA. 766+71, 14' LT
STA. 767+50, 14' LT
STA. 768+24, 14' LT
COMBO ARROW
STA. 765+18, 7' LT
STA. 765+95, 7' LT
STA. 766+71, 7' LT
STA. 767+50, 7' LT
STA. 768+24, 7' LT
24" STOP BAR
STA. 764+76, 0' (28 LF)
STA 764+78
BEGIN 6SW 37.5' RT
BEGIN 6DY 0'
BEGIN 6SW 11' LT
BEGIN 6SW 20' LT
BEGIN 6SW 28' LT
END THINLAY OVERLAY
STA. 763+35
STA. 765+15
6SW 12' LEFT
691
89
STA 763+35
END 12SW 54' RT
END 12SW 26' RT
END 6 SW 12.5' RT
END DY 0'
END 6DW 11.5' LT
END 6SW 46.5' LT
168
RIGHT TURN CROSS HATCH
X=2' Y=20'
60 SF
STA. 762+84
26' RT
END 6SW
BEGIN 12SW
BEGIN RESURFACE
STA. 764+75
REMOVE & RELOCATE SIGN ASSEMBLY EX. LOCATION
S34
RIGHT LANE ENDS
S33
(1)
761+00
765+00
KY 169 EB @ ALMAHURST WAY
PAVEMENT MARKING
MERGE ARROW
STA. 761+45, 18' LT
REMOVE & RELOCATE SIGN ASSEMBLY EX. LOCATION PROP. LOCATION
S33
S34
MATCH LINE STA. 761+00
KY 169 WB @ US 68
PAVEMENT MARKING
RIGHT TURN ARROW
STA. 761+51, 17' RT
STA. 762+24, 17' RT
STA. 762+94, 17' RT
COMBO ARROW
STA. 761+51, 9' RT
STA. 762+24, 9' RT
STA. 762+94, 9' RT
24" STOP BAR
STA. 763+35, 0' (26 LF)
KY 169
SIGNING & STRIPING PLAN SHEET
STA. 761+00 TO STA. 782+00


COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
MATCH LINE STA. 800+00
800+00
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
NOTE (1):
INSTALL YELLOW REFLECTIVE SIGN POST PANEL S39, S40, S41, S42, S43
CONTACT D7 TRAFFIC BEFORE ORDERING SIGNS
STA 796+48
END 6YD
BEGIN 6SDY
0'
= 6" SINGLE SOLID WHITE LINE (6SW)
= 6" DOUBLE YELLOW LINE (6DY)
= 6" SINGLE DASHED YELLOW LINE (6YD)
= 6" SOLID AND DASHED YELLOW LINE (6SDY)
NOTE: SURFACING LIMITS SHOWN AS BLACK SHADED REGION.
STA 793+69
END 6SDY
BEGIN 6YD
0'
795+00
NO PASSING ZONE
S43
(1)
HOLLOWAY LN
6SW
790+00
STA 787+44
END 6DY
BEGIN 6SDY
0'
40 M.P.H.
S42
(1)
BEGIN PAVEMENT WIDEN AND RESURFACE STA. 783+10
S41
(1)
785+00
S40
(1)
S39
(1)
MATCH LINE STA. 782+00
KY 169
SIGNING & STRIPING PLAN SHEET
STA. 782+00 TO STA. 800+00

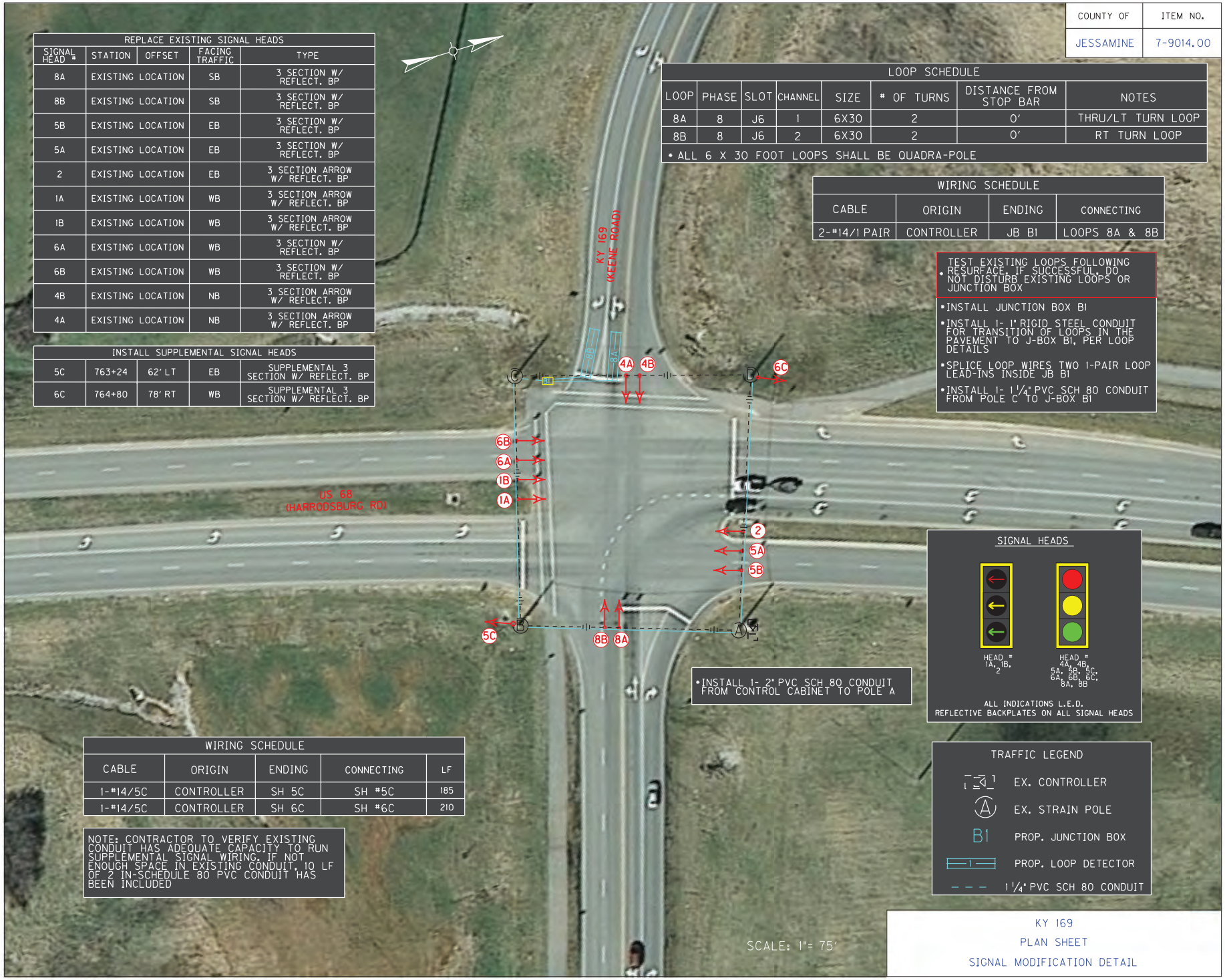

MATCH LINE STA. 818+00
COUNTY OF
ITEM NO.
JESSAMINE
7-9014.00
= 6" SINGLE SOLID WHITE LINE (6SW)
= 6" DOUBLE YELLOW LINE (6DY)
= 6" SOLID AND DASHED YELLOW LINE (6SDY)
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
NOTE: SURFACING LIMITS SHOWN AS BLACK SHADED REGION.
815+00
810+00
6SW
STA 805+17
END 6SDY
BEGIN 6SY
0'
805+00
800+00
MATCH LINE STA. 800+00
KY 169
SIGNING & STRIPING PLAN SHEET
STA. 800+00 TO STA. 818+00


COUNTY OF
ITEM NO.
JESSAMINE
7-9014.00
MATCH LINE STA. 836+00
835+00
REMOVE (EX.)
S44
(1)
NOTE (1):
INSTALL YELLOW REFLECTIVE SIGN POST PANEL S44
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
830+00
BEGIN WIDEN
STA. 827+50
6DY
6SW
825+00
= 6" SINGLE SOLID WHITE LINE (6SW)
= 6" DOUBLE YELLOW LINE (6DY)
NOTE: SURFACING LIMITS SHOWN AS BLACK SHADED REGION.
END WIDEN
STA. 824+50
820+00
MATCH LINE STA. 818+00
KY 169
SIGNING & STRIPING PLAN SHEET
STA. 818+00 TO STA. 836+00


COUNTY OF
ITEM NO.
JESSAMINE
7-9014.00
MATCH LINE STA. 854+00
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
850+00
= 6" SINGLE SOLID WHITE LINE (6SW)
= 6" DOUBLE YELLOW LINE (6DY)
NOTE: SURFACING LIMITS SHOWN AS BLACK SHADED REGION.
6DY
6SW
845+00
840+00
MATCH LINE STA. 836+00
KY 169
SIGNING & STRIPING PLAN SHEET
STA. 836+00 TO STA. 854+00


END RESURFACE
STA. 873+25
EX. DND
STOP
EX. DND
1267
EX. DND
169
EX. DND
691
SOUTH
870+00
S51
(1)
25
M.P.H.
EX. DND
JCT
1267
NOTE (1):
INSTALL YELLOW REFLECTIVE SIGN POST PANEL S45, S46, S47, S48, S49 S50, S51
END PAVEMENT WIDEN
STA. 870+00
DRAWING PROVIDED FOR INFORMATION ONLY. QUANTITIES FOR THIS DRAWING ARE USED TO APPROXIMATE COST ESTIMATES.
CONTACT D7 TRAFFIC BEFORE ORDERING SIGNS
S50 (1)
S49
(1)
S48
(1)
= 6" SINGLE SOLID WHITE LINE (6SW)
= 6" DOUBLE YELLOW LINE (6DY)
NOTE: SURFACING LIMITS SHOWN AS BLACK SHADED REGION.
6DY
S46
(1)
S47 (1)
BEGIN MILL, INLAY & WIDEN STA. 862+50
30
M.P.H.
S45
(1)
865+00
6SW
860+00
MATCH LINE STA. 854+00
855+00
COUNTY OF
JESSAMINE
ITEM NO.
7-9014.00
KY 169
SIGNING & STRIPIING PLAN SHEET
STA. 854+00 TO P.O.E. 873+75

COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00



REPLACE EXISTING SIGNAL HEADS

SIGNAL HEAD #	STATION	OFFSET	FACING TRAFFIC	TYPE
8A	EXISTING LOCATION		SB	3 SECTION W/ REFLECT. BP
8B	EXISTING LOCATION		SB	3 SECTION W/ REFLECT. BP
5B	EXISTING LOCATION		EB	3 SECTION W/ REFLECT. BP
5A	EXISTING LOCATION		EB	3 SECTION W/ REFLECT. BP
2	EXISTING LOCATION		EB	3 SECTION ARROW W/ REFLECT. BP
1A	EXISTING LOCATION		WB	3 SECTION ARROW W/ REFLECT. BP
1B	EXISTING LOCATION		WB	3 SECTION ARROW W/ REFLECT. BP
6A	EXISTING LOCATION		WB	3 SECTION W/ REFLECT. BP
6B	EXISTING LOCATION		WB	3 SECTION W/ REFLECT. BP
4B	EXISTING LOCATION		NB	3 SECTION ARROW W/ REFLECT. BP
4A	EXISTING LOCATION		NB	3 SECTION ARROW W/ REFLECT. BP

INSTALL SUPPLEMENTAL SIGNAL HEADS

5C	763+24	62' LT	EB	SUPPLEMENTAL 3 SECTION W/ REFLECT. BP
6C	764+80	78' RT	WB	SUPPLEMENTAL 3 SECTION W/ REFLECT. BP

LOOP SCHEDULE

LOOP	PHASE	SLOT	CHANNEL	SIZE	# OF TURNS	DISTANCE FROM STOP BAR	NOTES
8A	8	J6	1	6X30	2	0'	THRU/LT TURN LOOP
8B	8	J6	2	6X30	2	0'	RT TURN LOOP

* ALL 6 X 30 FOOT LOOPS SHALL BE QUADRA-POLE

WIRING SCHEDULE

CABLE	ORIGIN	ENDING	CONNECTING
2-#14/1 PAIR	CONTROLLER	JB B1	LOOPS 8A & 8B

- TEST EXISTING LOOPS FOLLOWING RESURFACE. IF SUCCESSFUL, DO NOT DISTURB EXISTING LOOPS OR JUNCTION BOX
- INSTALL JUNCTION BOX B1
- INSTALL 1- 1" RIGID STEEL CONDUIT FOR TRANSITION OF LOOPS IN THE PAVEMENT TO J-BOX B1, PER LOOP DETAILS
- SPLICE LOOP WIRES TWO 1-PAIR LOOP LEAD-INS INSIDE JB B1
- INSTALL 1- 1 1/4" PVC SCH 80 CONDUIT FROM POLE C TO J-BOX B1

- INSTALL 1- 2" PVC SCH 80 CONDUIT FROM CONTROL CABINET TO POLE A

SIGNAL HEADS

HEAD # 1A, 1B, 2

HEAD # 4A, 4B, 5A, 5B, 5C, 6A, 6B, 6C, 8A, 8B

ALL INDICATIONS L.E.D.
REFLECTIVE BACKPLATES ON ALL SIGNAL HEADS

WIRING SCHEDULE

CABLE	ORIGIN	ENDING	CONNECTING	LF
1-#14/5C	CONTROLLER	SH 5C	SH #5C	185
1-#14/5C	CONTROLLER	SH 6C	SH #6C	210

NOTE: CONTRACTOR TO VERIFY EXISTING CONDUIT HAS ADEQUATE CAPACITY TO RUN SUPPLEMENTAL SIGNAL WIRING. IF NOT ENOUGH SPACE IN EXISTING CONDUIT, 10 LF OF 2 IN-SCHEDULE 80 PVC CONDUIT HAS BEEN INCLUDED

TRAFFIC LEGEND

- EX. CONTROLLER
- EX. STRAIN POLE
- B1 PROP. JUNCTION BOX
- PROP. LOOP DETECTOR
- 1 1/4" PVC SCH 80 CONDUIT

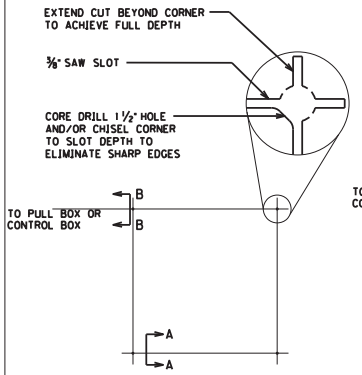
SCALE: 1"= 75'

KY 169
PLAN SHEET
SIGNAL MODIFICATION DETAIL

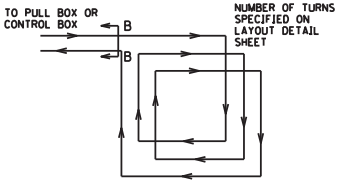
COUNTY OF	ITEM NO.	SHEET NO.

TWIST UNSHIELDED LOOP WIRES (IMSA 51-7) WITH 3 TO 5 TURNS PER FOOT FROM THE START OF THE HOMERUN TO THE JUNCTION BOX, CABINET, OR POLE. SLOT CAN BE WIDEN TO 1/2" to 5/8" TO HELP WITH THE INSTALLATION OF THE TWISTED WIRE.

SECTION B-B (TWIST NOTE)
-FOR CANCELING OUT CROSSTALK

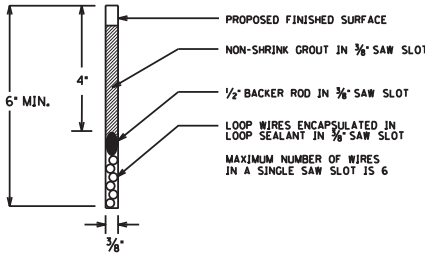


SAW CUT PLAN

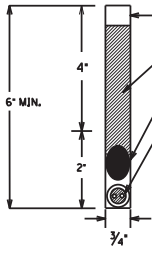


LOOP WIRE PLAN

6'X6' LOOP



SECTION A-A (SAW SLOT DETAIL)



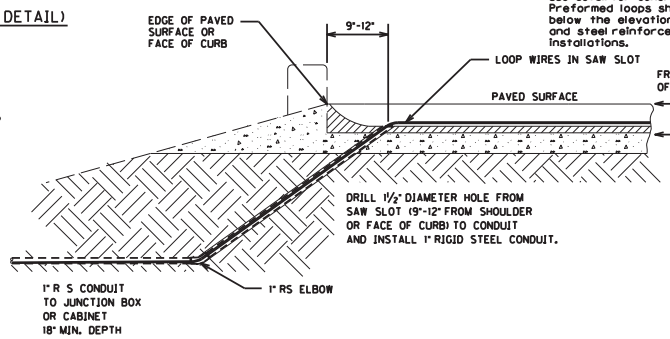
PREFORMED LOOPS SHALL BE CONSTRUCTED WITH 11/16" OR SMALLER HEAVY DUTY REINFORCED RUBBER HOSE (CLASS A OIL RESISANT). THE TEE SHALL BE CONSTRUCTED OF HEAVY DUTY HIGH TEMPERATURE SYNTHETIC RUBBER. STANDARD WIRE SHALL BE WATER RATED "16 THWN OR TFFN.

MAXIMUM NUMBER OF WIRES IN A TUBE PER SLOT IS 4.
MAXIMUM NUMBER OF TUBES PER SLOT IS 1.

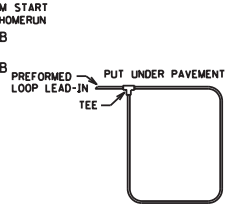
ASPHALT SAW SLOT DETAIL FOR PREFORMED

Use detail for concrete application if concrete is 4" or less. Preformed loops shall not be installed more than twelve inches below the elevation of the final pavement surface. Concrete joints and steel reinforcement shall be located to avoid the preformed loop installations.

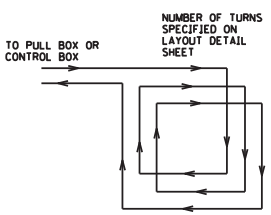
PREFORMED LOOP CROSS SECTION



SAW SLOT EDGE OF PAVEMENT TRANSITION



PREFORMED LOOP DIAGRAM

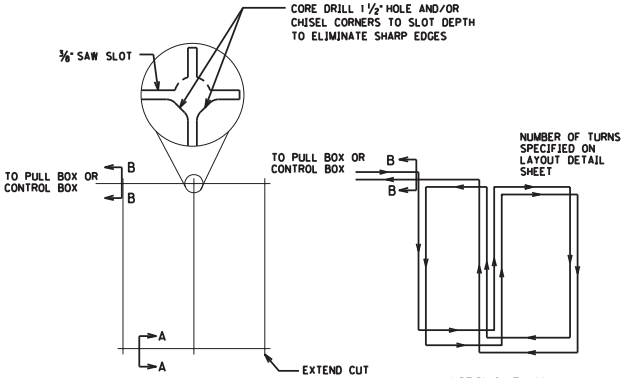


LOOP WIRE PLAN

6'x6' PREFORMED LOOP

CONSTRUCTION DETAILS FOR LOOP SAW SLOT AND FILL BID ITEM:
THE FOLLOWING IS A TYPICAL STEP BY STEP PROCEDURE FOR THE INSTALLATION OF A LOOP.

- CAREFULLY MARK THE SLOT TO BE CUT, PERPENDICULAR TO THE FLOW OF TRAFFIC AND CENTERED IN THE LANE.
- MAKE EACH SAW-CUT ⅜ INCH WIDE AND AT A DEPTH SUCH THAT THE TOP OF THE BACKER ROD IS A MINIMUM OF 4 INCHES BELOW THE SURFACE OF ASPHALT PAVEMENT.
- DRILL A 1½ INCH CORE HOLE AT EACH CORNER AND USE A CHISEL TO SMOOTHE CORNERS TO PREVENT SHARP BENDS IN THE WIRE.
- CLEAN ALL FOREIGN AND LOOSE MATTER OUT OF THE SLOTS, DRILLED CORES, AND WITHIN 1 FOOT ON ALL SIDES OF THE SLOTS USING A HIGH PRESSURE WASHER.
- COMPLETELY DRY THE SLOTS, DRILLED CORES, AND WITHIN 1 FOOT ON ALL SIDES OF THE SLOTS.
- MEASURE 9-12 INCHES FROM THE EDGE OF THE PAVED SURFACE (SHOULDER BREAK OR FACE OF CURB) AND DRILL A 1½ INCH HOLE ON A 45 DEGREE ANGLE TO THE CONDUIT ADJACENT TO THE ROADWAY.
- CLOSELY INSPECT ALL CUTS, CORES, AND SLOTS FOR JAGGED EDGES OR PROTRUSIONS PRIOR TO THE PLACEMENT OF THE WIRE. ALL JAGGED EDGES AND PROTRUSIONS SHALL BE GROUND OR RE-CUT AND CLEANED AGAIN.
- INSTALL 1" RIGID STEEL CONDUIT IN 45 DEGREE DRILLED SLOT. CONNECT CONDUIT TO 1" RIGID STEEL CONDUIT ADJACENT TO THE ROADWAY WITH RIGID STEEL ELBOW.
- PLACE THE LOOP WIRE SPLICE-FREE FROM THE TERMINATION POINT. SEE SECTION B-B NOTE.
- PUSH THE WIRE INTO THE SAW SLOT WITH A BLUNT OBJECT SUCH AS A WOODEN STICK. MAKE SURE THAT THE LOOP WIRE IS PUSHED FULLY TO THE BOTTOM OF THE SAW SLOT. SCREWDRIVERS SHALL NOT BE USED.
- INSTALL DUCT SEALANT TO A MINIMUM OF 1 INCH DEEP INTO THE CORED 1½ INCH HOLE.
- APPLY LOOP SEALANT FROM THE BOTTOM UP AND FULLY ENCAPSULATE THE LOOP WIRES IN THE SAW SLOT. THE WIRE SHOULD NOT BE ABLE TO MOVE WHEN THE SEALANT HAS SET.
- COVER THE ENCAPSULATED LOOP WIRE WITH A CONTINUOUS LAYER OF BACKER ROD ALONG THE ENTIRE LOOP AND HOME RUN SAW SLOTS SUCH THAT NO VOIDS ARE PRESENT BETWEEN THE LOOP SEALANT AND BACKER ROD.
- FINISH FILLING THE SAW CUT WITH NON-SHRINKABLE GROUT PER MANUFACTURER'S INSTRUCTIONS. ALLEVIATE ALL AIR POCKETS AND REFILL LOW SPACES. THERE SHALL BE NO CONCAVE PORTION TO THE GROUT IN THE SAW SLOT. ANY EXCESS GROUT SHALL BE CLEANED FROM THE ROADWAY TO ALLEVIATE TRACKING.
- CLEAN UP THE SITE AND DISPOSE OF ALL WASTE OFF THE PROJECT.
- ENSURE THAT THE GROUT HAS COMPLETELY CURED PRIOR TO SUBJECTING THE LOOP TO TRAFFIC. CURING TIME VARIES WITH TEMPERATURE AND HUMIDITY.

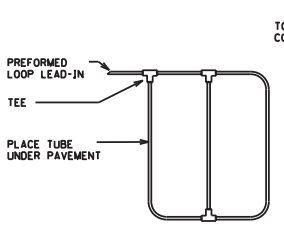


SAW CUT PLAN

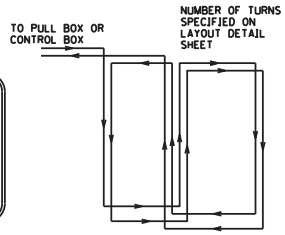
WIRING PLAN

6'X30' QUADRAPOLE LOOP

PREFORMED LOOP LEAD-IN SHALL BE TWISTED WITH THREE TO FIVE TURNS PER FOOT UNTIL TERMINATED AT FIELD CONNECTIONS IN THE CABINET OR CONNECTED TO SHIELDED CABLE.



PREFORMED LOOP DIAGRAM



LOOP WIRE PLAN

6'x30' QUADRAPOLE PREFORMED LOOP

LOOP DETAILS

10/25/2021

COUNTY OF	ITEM NO.	SHEET NO.

NOTES:

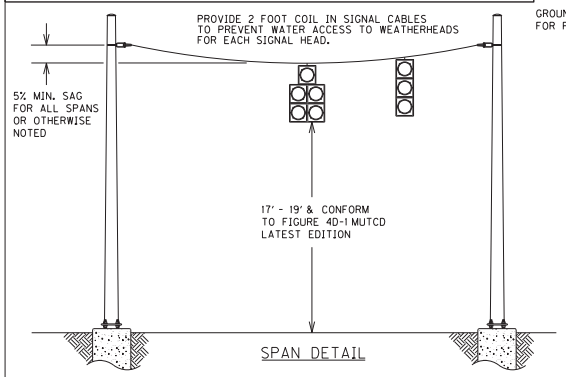
ALL CONDUITS USED FOR THE TELEPHONE, GROUNDING, SPARE, AND SERVICE THAT ARE INSTALLED IN THE POLE BASE ARE INCIDENTAL TO BID ITEM "23157EN". THIS INCLUDES PROVIDING A MINIMUM OF 24 INCHES OF CONDUIT PAST THE EDGE OF THE CONCRETE POLE BASE.

ALL CONDUITS SHALL BE INSTALLED BETWEEN 4 TO 6 INCHES ABOVE THE CONCRETE PAD, AND THEY CANNOT EXCEED THE 6 INCH HEIGHT.

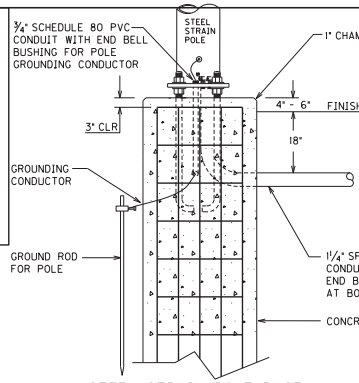
FOR POLE BASE DEPTH SEE CHART IN SECTION 723 OF THE KENTUCKY STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION.

OVERHEAD SERVICE WIRES SHALL BE INSTALLED ON THE EXTERIOR OF THE POLE IN A 1" RIGID STEEL CONDUIT WITH WEATHERHEAD, OR ON THE INSIDE THE STEEL STRAIN POLE IN FLEXIBLE CONDUIT.

UNDERGROUND SERVICE WIRES SHALL BE INSTALLED IN 1" RIGID STEEL CONDUIT AS SHOWN ON THE CONTROLLER CABINET DETAIL SHEET.

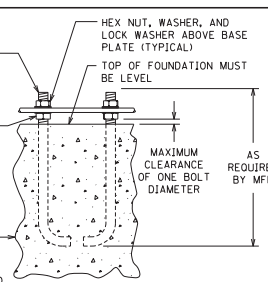


SPAN DETAIL



STEEL STRAIN POLE BASE WITH POLE GROUND DETAIL

NOTE:
THE STEEL STRAIN DOOR SHALL HAVE A 4" BY 6" SHOCK HAZARD WARNING STICKER INSTALL 3" FROM THE TOP OF THE DOOR. THE STICKER SHALL BE METALCRAFT PLY695 PREM STYLEMARK LABEL WITH .007 THICKNESS, WITH UV WHITE POLYCARBONATE MATERIAL, AND WITH MC53FL PRESSURE SENSTIVE ADHESIVE OR APPROVED EQUAL. THIS SHALL BE INCIDENTAL TO THE PROJECT.



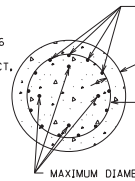
GROUNDING REQUIREMENTS:

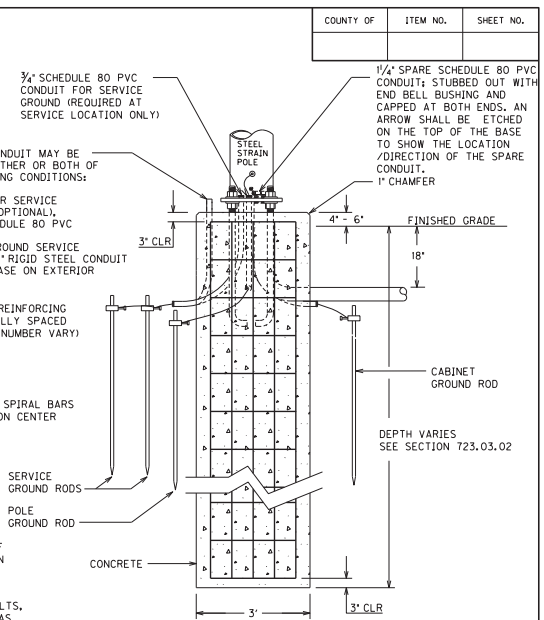
CONTRACTOR SHALL PROVIDE A MINIMUM OF 6 INCHES OF GROUND WIRE FOR TESTING PRIOR TO CONNECTING THE WIRE TO ANY DISCONNECT, CABINET OR POLE.

LEAVE TOP OF GROUND RODS EXPOSED FOR ELECTRICAL INSPECTION.

POLE GROUND - GROUND WIRE SHALL COME FROM THE GROUND ROD THROUGH THE PVC CONDUIT, CONNECTING TO THE POLE AND THEN TO EACH RIGID STEEL GROUNDING BUSHING.

ALL GROUND RODS SHALL BE 24" FROM THE CONCRETE POLE BASE.





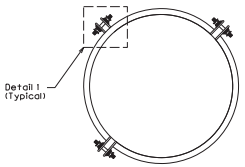
EXTERIOR CONDUIT MAY BE USED FOR EITHER OR BOTH OF THE FOLLOWING CONDITIONS:

FOR EXTERIOR SERVICE GROUNDING (OPTIONAL), USE ¾" SCHEDULE 80 PVC

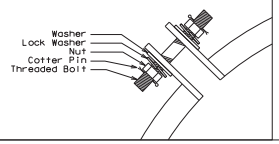
FOR UNDERGROUND SERVICE FEEDS, USE 1" RIGID STEEL CONDUIT TO METER BASE ON EXTERIOR OF POLE

STEEL STRAIN POLE BASE WITH SERVICE, POLE, AND POLE MOUNTED CABINET GROUNDING DETAILS

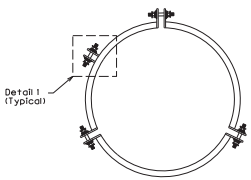
Clamp Assembly Alt. 1



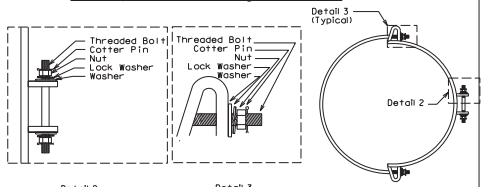
Detail 1



Clamp Assembly Alt. 2



Clamp Assembly Alt. 3



CLAMP ASSEMBLY SPECIFCATIONS

CLAMP ASSEMBLIES MUST BE DESIGNED IN ACCORDANCE TO THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, SIXTH EDITION 2013. ADDITIONAL DESIGN PROVISIONS NOT ADDRESSED IN THE AFOREMENTIONED CODE SHALL BE OBTAINED FROM THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (2002). CLAMP ASSEMBLIES SHALL CONFORM TO SECTION 835.07.01 AND THE DRAWINGS SHOWN ON THIS STANDARD.

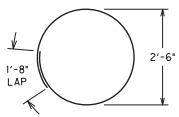
MATERIALS:

CLAMP/CLEVIS- ASTM A36 (GRADE 36)/ASTM A572 (GRADE 50)

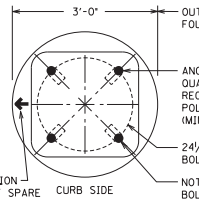
BOLTS (EXCEPT U- BOLTS)- HIGH STRENGTH ASTM A325, ASTM A449, OR ASTM A490

U- BOLTS- MINIMUM ASTM A36

GALVANIZING- ASTM A153



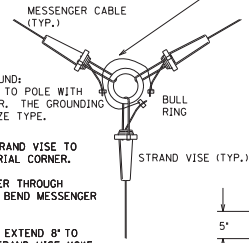
BENDING DETAIL FOR TIE BARS

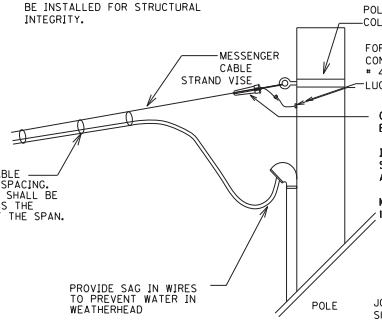


CARVED LOCATION /DIRECTION OF SPARE CONDUIT.

IF ANCHOR BOLTS ARE STRAIGHT NOT BEND, THE METAL TEMPLATE SHALL BE INSTALLED FOR STRUCTURAL INTEGRITY.

FOR EQUIPMENT GROUND:
CONNECT SPAN WIRES WITH # 4AWG BARE COPPER AT BULL RING. THE GROUNDING LUG SHALL BE BRONZE TYPE.





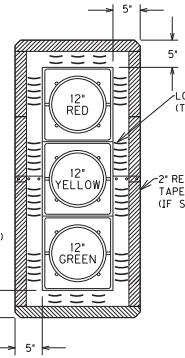
FOR EQUIPMENT GROUND:
CONNECT SPAN WIRE TO POLE WITH # 4AWG BARE COPPER. THE GROUNDING LUG SHALL BE BRONZE TYPE.

CONNECT EACH STRAND VISE TO BULL RING AT AERIAL CORNER.

INSTALL MESSENGER THROUGH STRAND VISE AND BEND MESSENGER AT EXIT POINT.

MESSENGER SHALL EXTEND 8" TO 10" BEYOND THE STRAND VISE YOKE.

DROP BOX AERIAL CORNER DETAIL



BACKPLATE DETAIL

SPAN WIRE DETAIL

SPECIAL NOTE FOR POLE DOOR:
FURNISH A SHOCK HAZARD WARNING STICKER ON DISCONNECT WITH THE FOLLOWING INFORMATION:
VOLTAGE (120 VOLT)
GLOVE CLASS (0)
LIMITED APPROACH BOUNDARY (42 IN)
RESTRICTED APPROACH BOUNDARY (CONTACT)
SEE NFPA 70E FOR ADDITIONAL PPE REQUIRED

JOHNNYBALLS OR STRAIN ISOLATORS SHALL NOT BE USED ON THE ATTACHMENT OF THE SPAN WIRE TO THE POLE.

INSTALL MESSENGER THROUGH STRAND VISE AND BEND MESSENGER AT EXIT POINT.

MESSENGER SHALL EXTEND 8" TO 10" BEYOND THE STRAND VISE YOKE.

THERE SHALL BE A SEPARATE COLLAR USED FOR EACH SPAN.

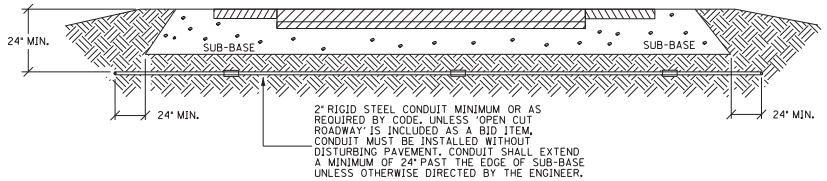
FOR EQUIPMENT GROUND SIGNAL/PED HEADS:
CONNECT GREEN WIRE FROM 5C/7C IMSA CABLE TO CONNECTOR THAT WILL BE INSTALLED UNDER ONE OF THE BOLTS FOR THE TRI STUD ASSEMBLY THAT CONNECTS THE HEADS. WE RECOMMEND BUTTED SEAM CLOSED BARREL FOR THIS CONNECTION.

POLE BASE/SIGNAL HEAD DETAILS

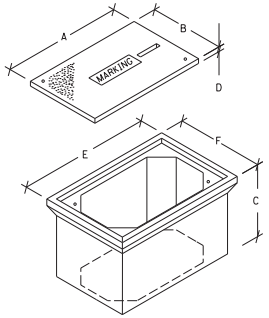
4/15/2021

MicroStation v8.11.9.832 | E-SHEET NAME: | USER: Ted.Swanegar DATE PLOTTED: April 15, 2021 | FILE NAME: G:\PWWORK\TED.SWANEGAR\D1894903\07-POLES (PD).DGN

COUNTY OF	ITEM NO.	SHEET NO.

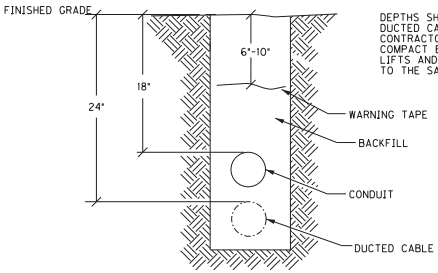


CONDUIT INSTALLATION UNDER EXISTING PAVEMENT DETAIL



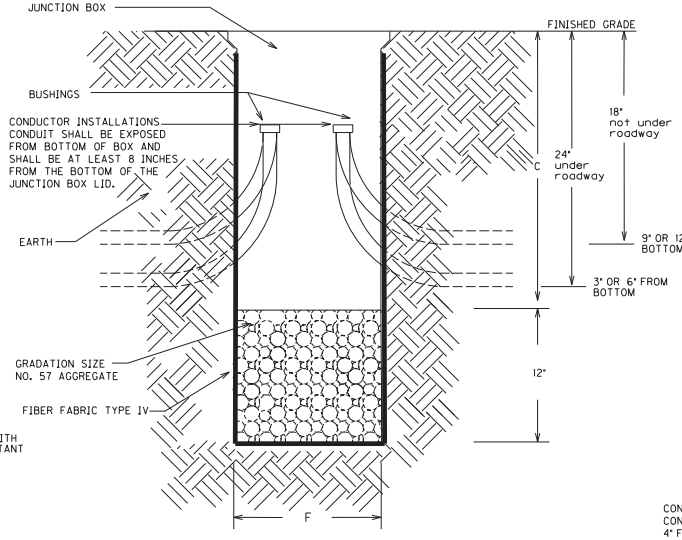
JUNCTION BOX DIMENSIONS (NOMINAL)						
	A	B	C	D	E	F
TYPE A	23"	14"	27"	2"	25"	15"
TYPE B	18"	11"	12"	1¾" *	20"	13"
TYPE C	36"	24"	30"	3"	38"	26"

* MINIMUM
NOTE: STACKABLE BOXES ARE PERMITTED

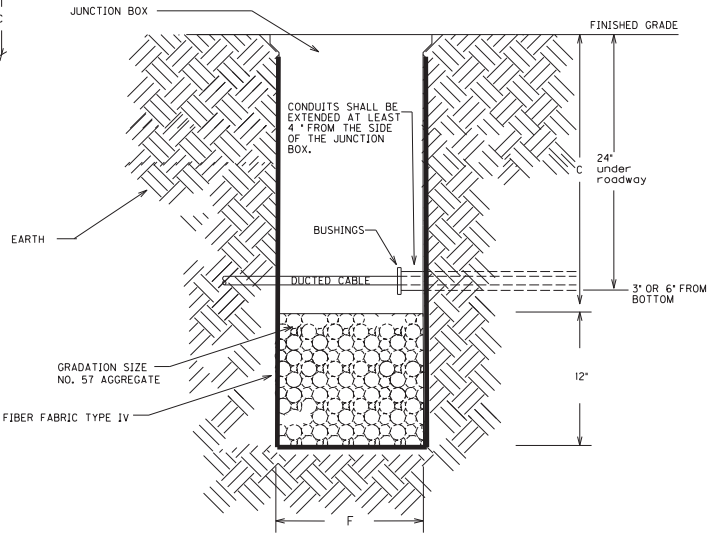


DEPTHS SHOWN FOR CONDUIT AND DUCTED CABLE ARE MINIMUMS. CONTRACTOR SHALL PLACE AND COMPACT BACKFILL IN 9" MAXIMUM LIFTS AND RETORE DISTURBED AREA TO THE SATISFACTION OF THE ENGINEER.

CONDUIT, DUCTED CABLE, AND WARNING TAPE TRENCH

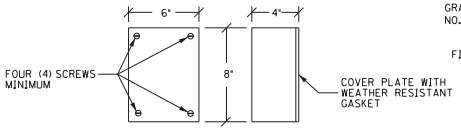


JUNCTION BOX INSTALLATION FOR CONVENTIONAL LIGHTING



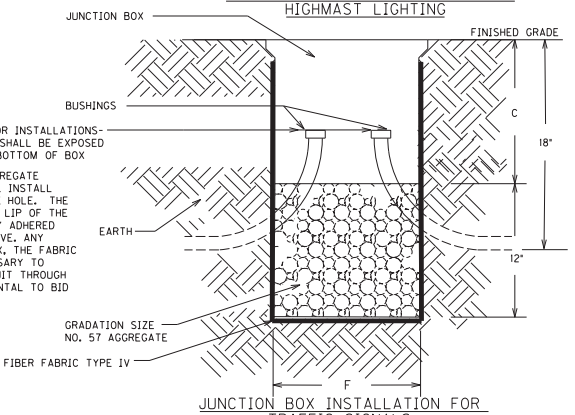
JUNCTION BOX INSTALLATION FOR HIGHMAST LIGHTING

ABOVE GROUND BOX SHALL BE FABRICATED FROM MINIMUM 12 GAUGE STEEL AND GALVANIZED AFTER FABRICATION. BOXES SHALL HAVE NO KNOCKOUTS AND SHALL BE PROVIDED WITH A PLATE COVER WITH A WEATHER RESISTANT GASKET AND A MINIMUM OF FOUR SCREWS FOR ATTACHING THE PLATE COVER TO THE BOX. CABLE CLAMPS SHALL BE PROVIDED FOR CABLES ENTERING AND EXITING THE BOX.

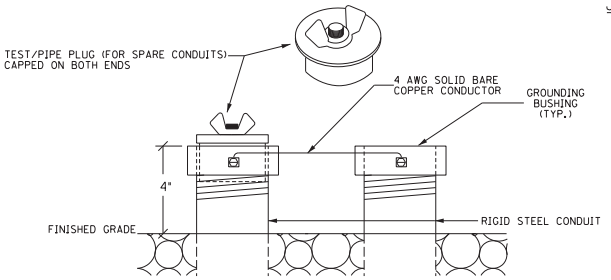


ABOVE GROUND BOX

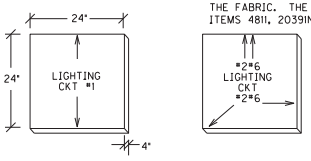
BEFORE THE INSTALLATION OF THE #57 AGGREGATE AND JUNCTION BOX, THE CONTRACTOR SHALL INSTALL GEOTEXTILE FILTER FABRIC TYPE IV IN THE HOLE. THE FABRIC SHALL EXTEND TO JUST BELOW THE LIP OF THE JUNCTION BOX AND SHALL BE CONTINUOUSLY ADHERED TO THE EXTERIOR OF THE BOX WITH ADHESIVE. ANY LOCATIONS WHERE CONDUITS ENTER THE BOX, THE FABRIC SHALL BE 'X CUT' ONLY AS MUCH AS NECESSARY TO ALLOW PASSAGE OF EACH INDIVIDUAL CONDUIT THROUGH THE FABRIC. THE FABRIC SHALL BE INCIDENTAL TO BID ITEMS 4811, 2039INS835, OR 20392NS835.



JUNCTION BOX INSTALLATION FOR TRAFFIC SIGNALS



TEST/PIPE PLUG(FOR SPARE CONDUITS) AND GROUNDING DETAIL



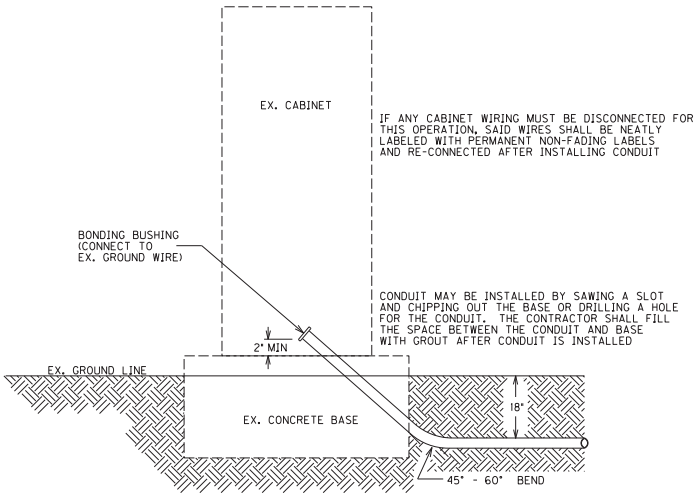
CONCRETE CABLE MARKERS

3/13/2017

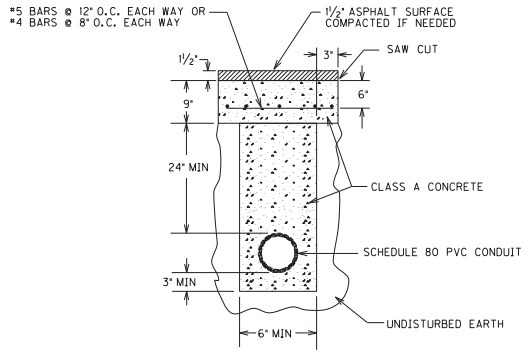
TRAFFIC SIGNAL AND ROADWAY LIGHTING
JUNCTION BOX AND CONDUIT DETAILS

FILE NAME: C:\PWWORK\TED.SWANSEGAR\D0528754\ALL LIGHTING STANDARDS REVISION 3-10-2017.DGN
USER: ted.swansegar
DATE PLOTTED: March 13, 2017
E-SHEET NAME:
MicroStation v8.11.7.443

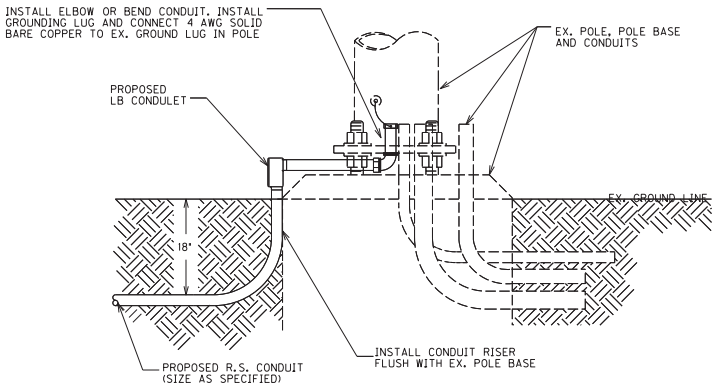
COUNTY OF	ITEM NO.	SHEET NO.



CONDUIT INSTALLATION IN EX. CABINET BASE



OPEN CUT PAVEMENT DETAIL



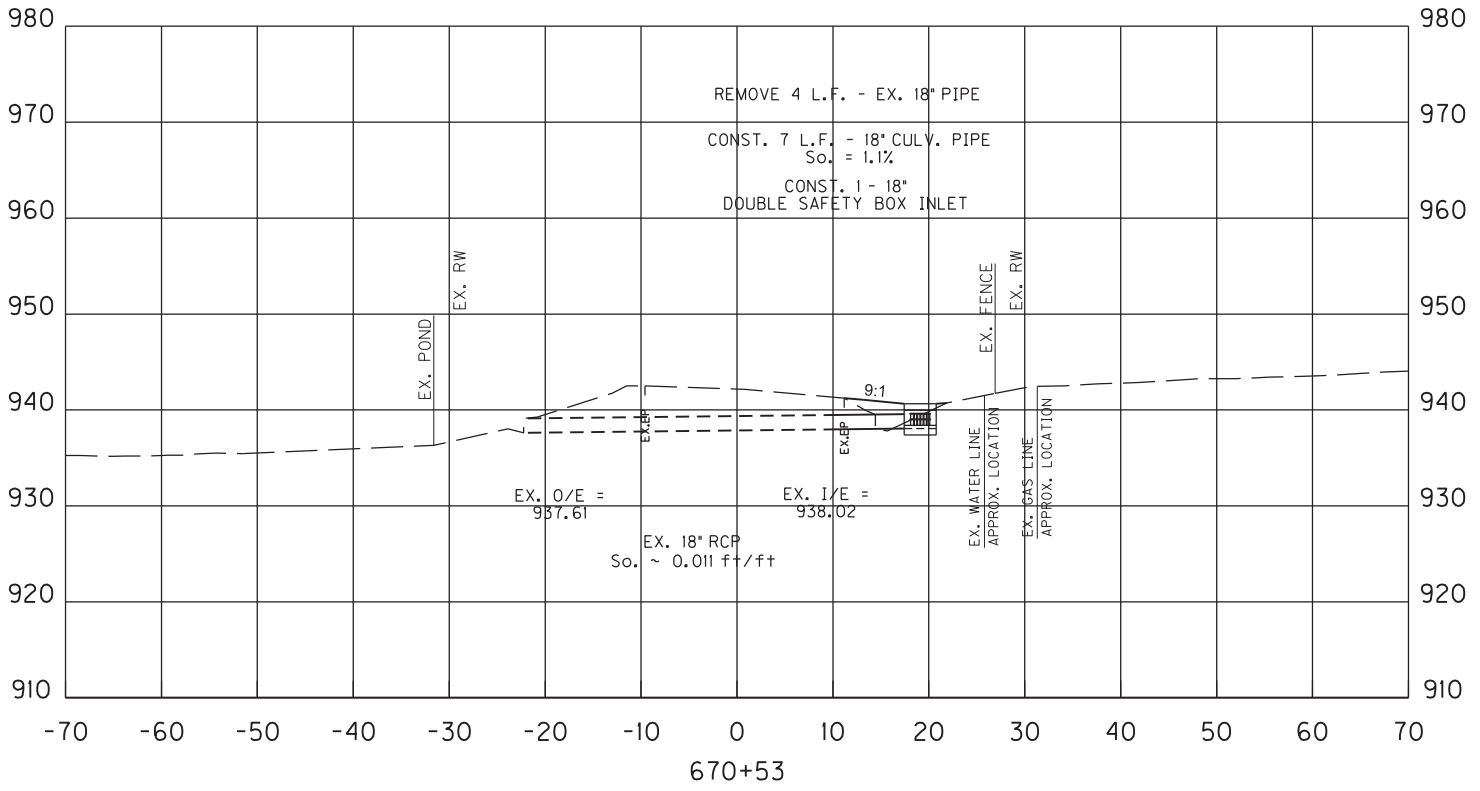
CONDUIT INSTALLATION IN EX. POLE BASE

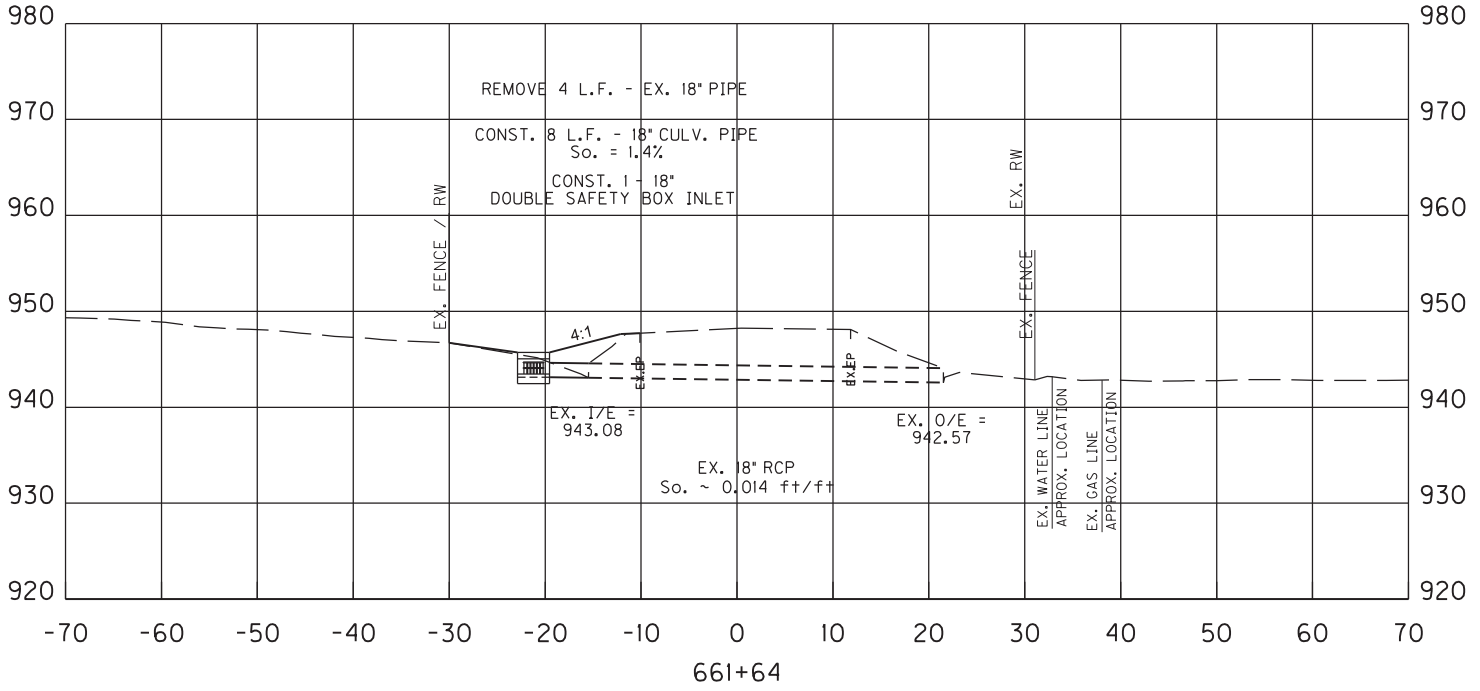
MicroStation v8.11.7.443 | E-SHEET NAME: | USER: ted.swansegar DATE PLOTTED: March 20, 2017 | FILE NAME: C:\PWWORK\TED.SWANSEGAR\DMS28756\10-CONDUIT (SP).DGN

3/10/2017

CONDUIT INSTALLATIONS IN EXISTING LOCATIONS

COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00

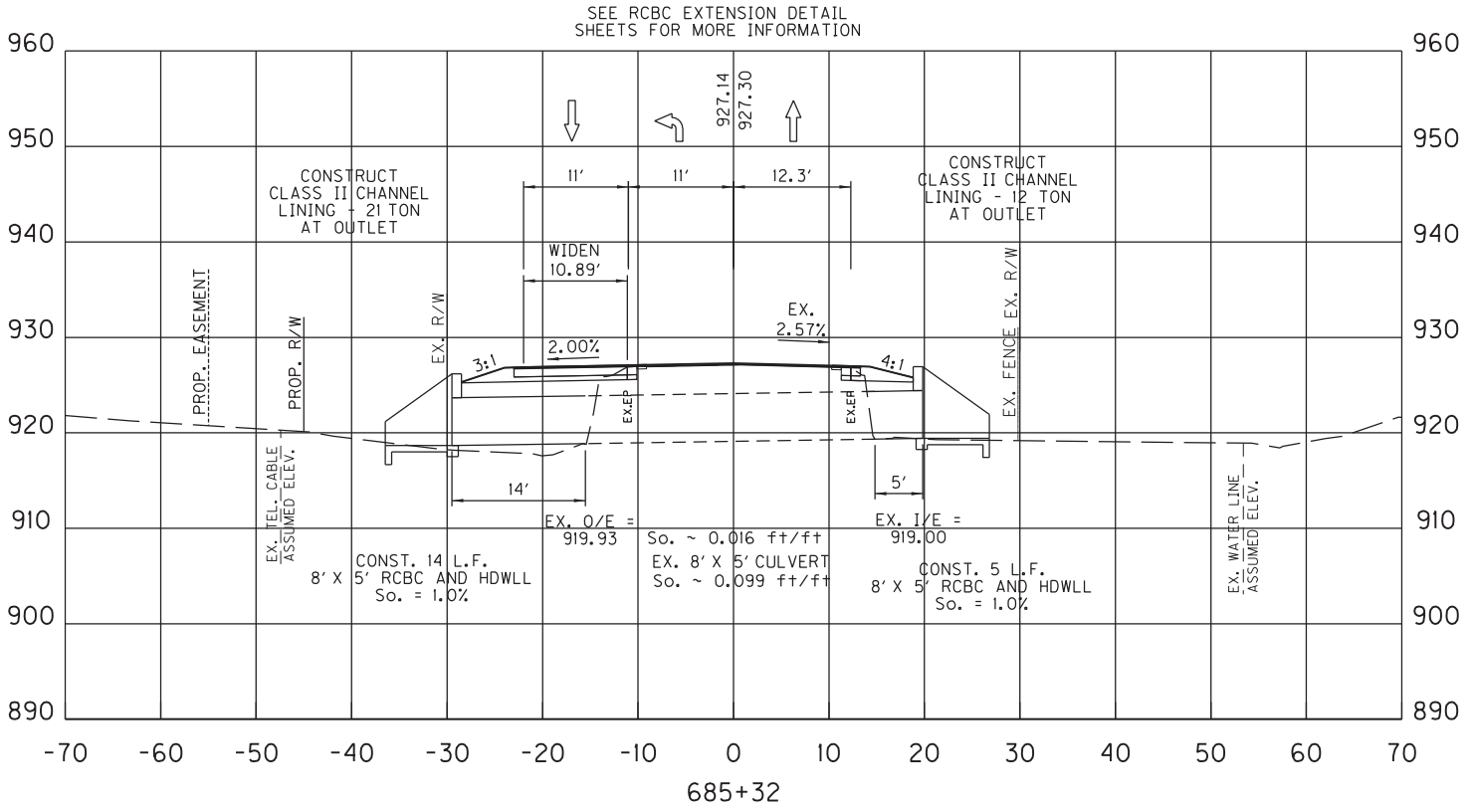


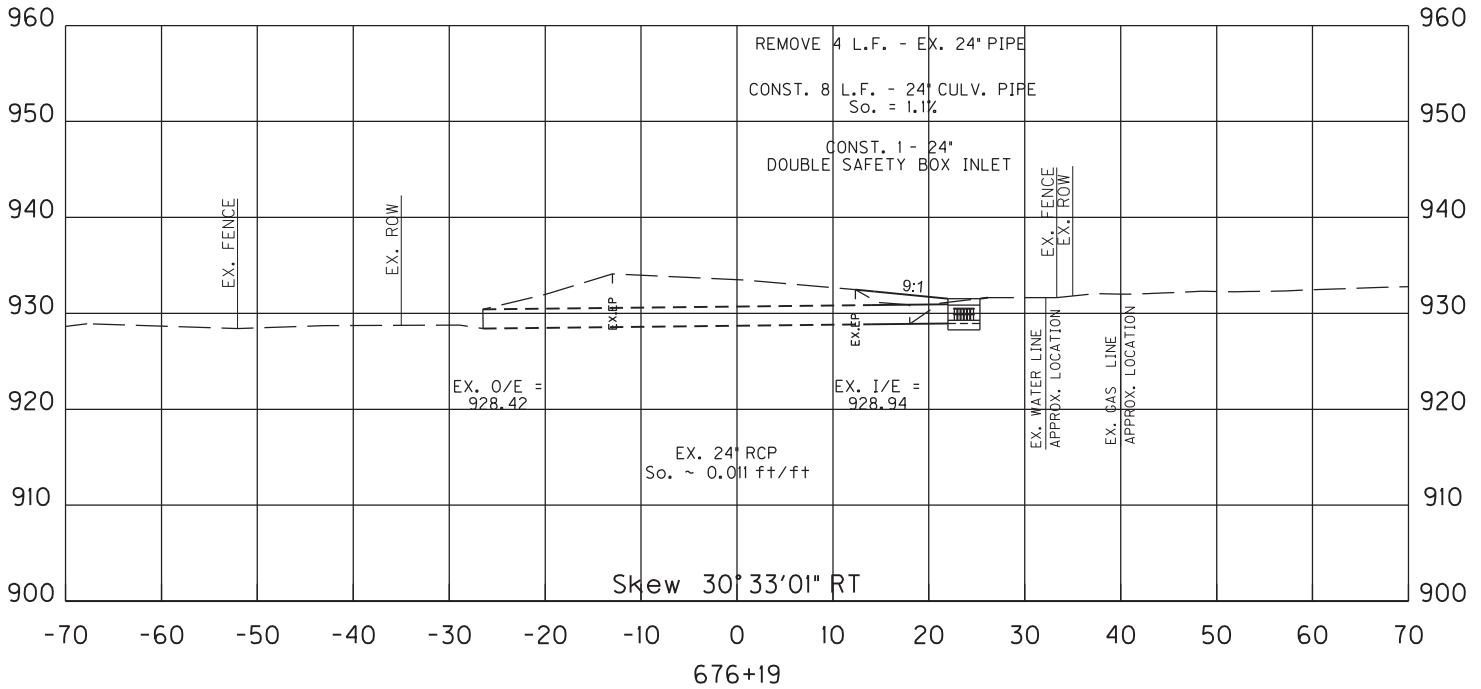


SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL

KY 169
STA. 661+64 & STA. 670+53
PIPE SECTIONS

COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00

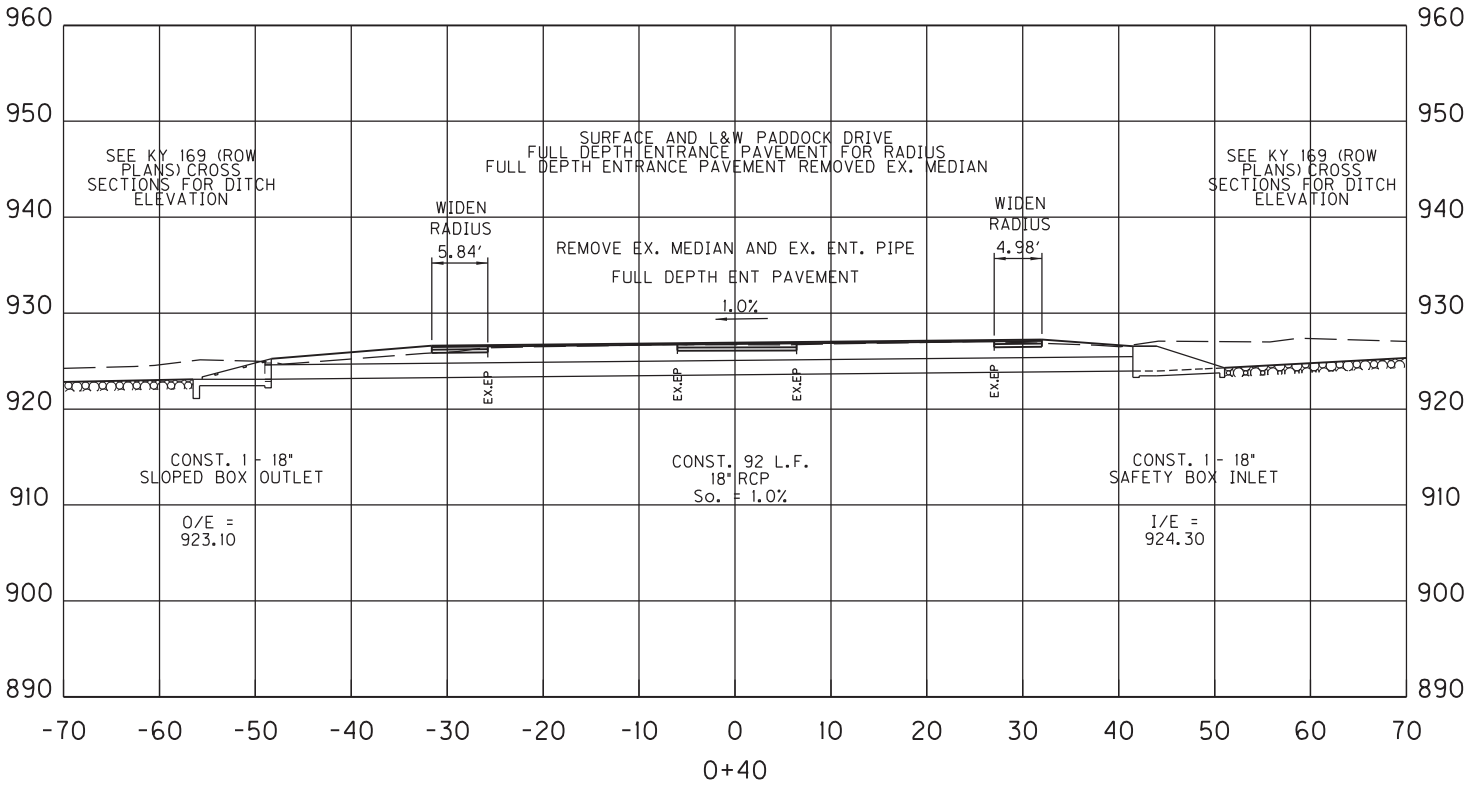


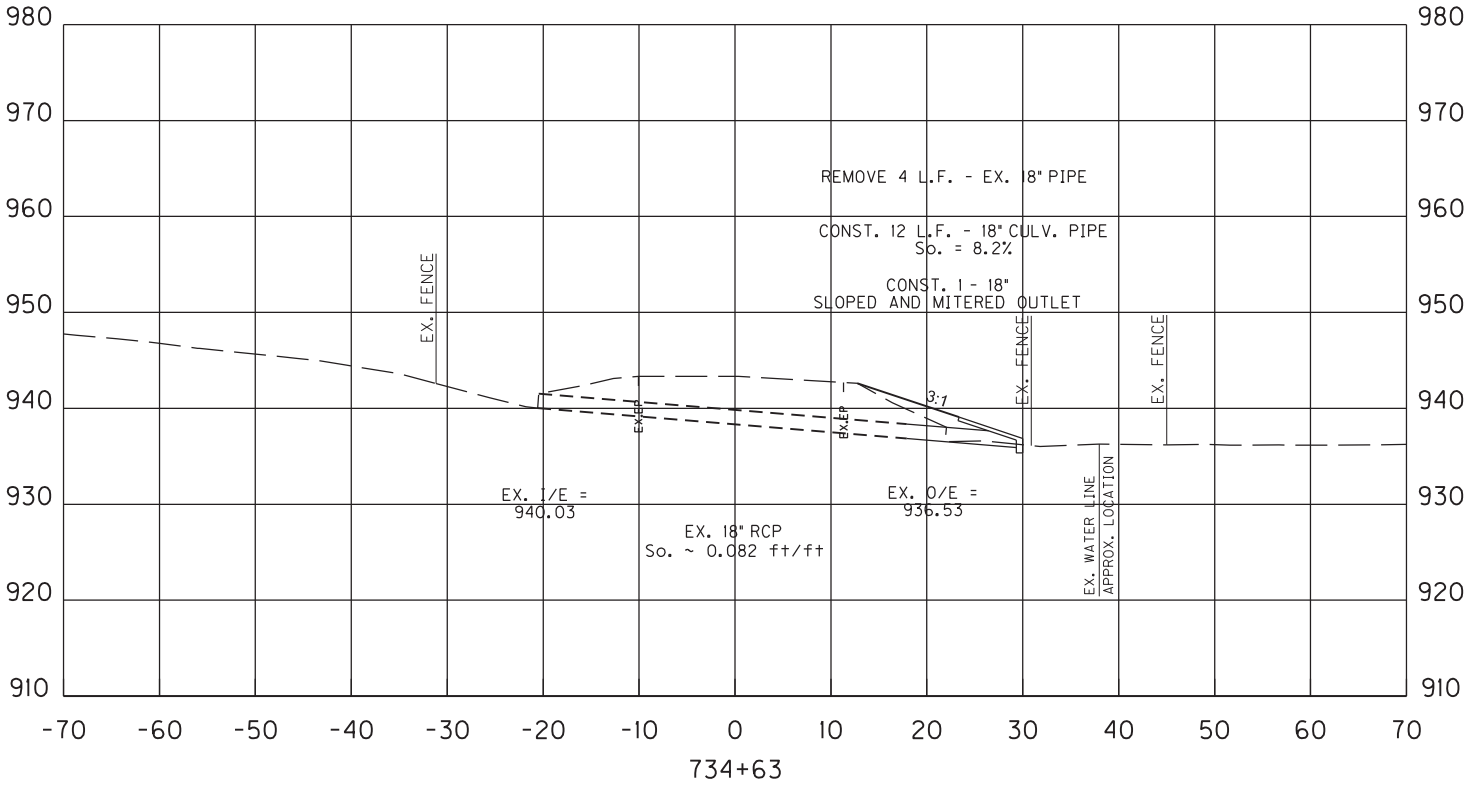


SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL

KY 169
STA. 676+19 & STA. 685+32
PIPE SECTIONS

COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00





SCALE: 1" = 20' HORIZONTAL
1" = 20' VERTICAL

KY 169

KY 169 - STA. 734+63 / PADDOCK ENT. PIPE

PIPE SECTIONS

COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00

JESSAMINE COUNTY
KY 169 OVER STREAM
AT STA. 15+45

GENERAL NOTES:

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

DESIGN LOAD: THIS STRUCTURE IS DESIGNED FOR HL-93 LIVE LOAD INCREASED BY 25%. THE 25% INCREASE IS ARRIVED BY INCREASING THE DESIGN TRUCK OR TANDEM AND THE DESIGN LANE LOAD BY 25%.

DESIGN METHOD: ALL REINFORCED CONCRETE MEMBERS ARE DESIGNED AS SPECIFIED IN THE CURRENT AASHTO SPECIFICATIONS.

CONCRETE: CLASS "A" CONCRETE SHALL BE USED THROUGHOUT.

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

DIMENSIONS: DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 60° FAHRENHEIT. LAYOUT DIMENSIONS ARE HORIZONATAL DIMENSIONS.

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

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

MASONRY COATING: MASONRY COATING WILL NOT BE REQUIRED FOR THIS STRUCTURE.

WEIGHT OF FILL MATERIAL: THE ASSUMED WEIGHT OF FILL MATERIAL IS 120 LBS. PER CUBIC FOOT.

FOOTING PRESSURE: FOUNDATION MATERIALS FOR BARREL AND WING FOOTINGS SHALL RESIST AN ASSUMED MAXIMUM BEARING PRESSURE OF 8000 PSF.

STRUCTURAL ADHESIVES: BOND PROPOSED PLASTIC CONCRETE TO EXISTING HARDENED CONCRETE IN ALL LOCATIONS USING A TYPE V EPOXY RESIN OR OTHER APPROVED STRUCTURAL ADHESIVE AS DETAILED IN SECTION 826 OF THE SPECIFICATIONS. EPOXY GROUT REINFORCING STEEL IN DETAILED LOCATIONS USING A TYPE IV EPOXY MEETING THE REQUIREMENTS OF SECTION 826. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS FOR APPLICATION AND ALL WORK AND MATERIALS ARE INCIDENTAL TO THE UNIT PRICE BID FOR CONCRETE.

SAWCUTTING EXISTING CONCRETE: PRIOR TO REMOVAL OF THE EXISTING CONCRETE MASONRY, CUT THE SURFACE WITH A CONCRETE SAW TO A DEPTH OF ONE INCH TO FACILITATE A NEAT LINE.

REMOVE HEADWALL: REMOVE TOP OF EXISTING WINGS AND PORTIONS OF EXISTING HEADWALLS (IF NECESSARY TO MAINTAIN 6 INCHES BELOW ROADWAY SURFACE) AS DETAILED HEREIN TO LIMITS SHOWN. INCLUDED ALL COSTS TO SAWCUT AND REMOVE CONCRETE MASONRY IN THE UNIT PRICE BID FOR "REMOVE HEADWALL".

CULVERT FOUNDATION: THIS CULVERT HAS BEEN DESIGNED FOR A YIELDING FOUNDATION. ANY ROCKS, BOULDERS, OR LOOSE WATER-SOFTENED SOILS ENCOUNTERED SHALL BE REMOVED AND THE EXCAVATION LIMITS OF THE CULVERT AND WINGWALLS SHALL BE UNDERCUT TO A MINIMUM OF 2½ FEET BELOW THE PROPOSED FLOWLINE OR TO THE TOP OF SOLID ROCK IF IT IS ENCOUNTERED FIRST. THE RESULTING EXCAVATION AREAS SHALL THEN BE BACKFILLED WITH GRANULAR EMBANKMENT, NON-ERODIBLE ONLY, MEETING THE MATERIAL REQUIREMENTS OF SECTION 805 OF THE STANDARD SPECIFICATIONS. CONTRARY TO THE SPECIFICATIONS, THE MAXIMUM SIZE LIMIT FOR GRANULAR EMBANKMENT IS 4 INCHES. PLACE FABRIC-GEOTEXTILE CLASS 1 (STABILIZATION) BETWEEN THE SOIL AND GRANULAR REPLACEMENT. THE GEOTEXTILE FABRIC SHALL BE IN ACCORDANCE WITH SECTIONS 214 AND 843 OF THE STANDARD SPECIFICATIONS. ANY OUTDATED REFERENCES TO FABRIC TYPE IN SECTION 214 SHALL BE IGNORED. ALTERNATIVELY, THE EXCAVATION MAY BE BACKFILLED WITH CLASS B CONCRETE MEETING THE MATERIAL REQUIREMENTS OF SECTION 601 OF THE STANDARD SPECIFICATIONS.

REMOVE PORTIONS OF THE EXISTING STRUCTURE TO PLACE FOUNDATIONS AS DETAILED HEREIN. INCLUDE ALL COSTS FOR THIS REMOVAL AND ALL OTHER ITEMS LISTED IN SUBSECTION 603.04.03 OF THE STANDARD SPECIFICATIONS IN THE LUMP SUM BID FOR "FOUNDATION PREPARATION".

ESTIMATE OF QUANTITIES

BID ITEM CODE	ITEM	UNIT	QUANTITY 15+45
08100	CLASS "A" CONCRETE	Cu Yds	72
08150	STEEL REINFORCEMENT	Lbs	5176
08003	FOUNDATION PREPARATION	LS	1
2625	REMOVE HEADWALL	EACH	2
8002	STRUCTURE EXCAVATION - ROCK	Cu Yds	13

KY 169
CULVERT EXTENSION GENERAL NOTES AND QUANTITIES
SHEET 1 OF 7

COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00

1 FOOTING SHALL BE HORIZONTAL BETWEEN THESE LINES. ELEVATION OF TOP OF FOOTING SHALL BE THE SAME AS ELEVATION OF TOP OF BOTTOM SLAB AT POINT "A".

2 FOOTING SHALL BE HORIZONTAL BETWEEN THESE LINES. ELEVATION OF TOP OF FOOTING SHALL BE THE SAME AS ELEVATION OF TOP OF BOTTOM SLAB AT POINT "B".

3 TOP OF PAVING BETWEEN THESE LINES SHALL BE ON THE SAME SLOPE AS THE CULVERT.

4 TOP OF PAVING BETWEEN THESE LINES SHALL BE THE SAME ELEVATION AS POINT "A".

KY 169
8'×5' CULVERT EXTENSION AT STA. 15+45.00
SHEET 2 OF 7

PLAN

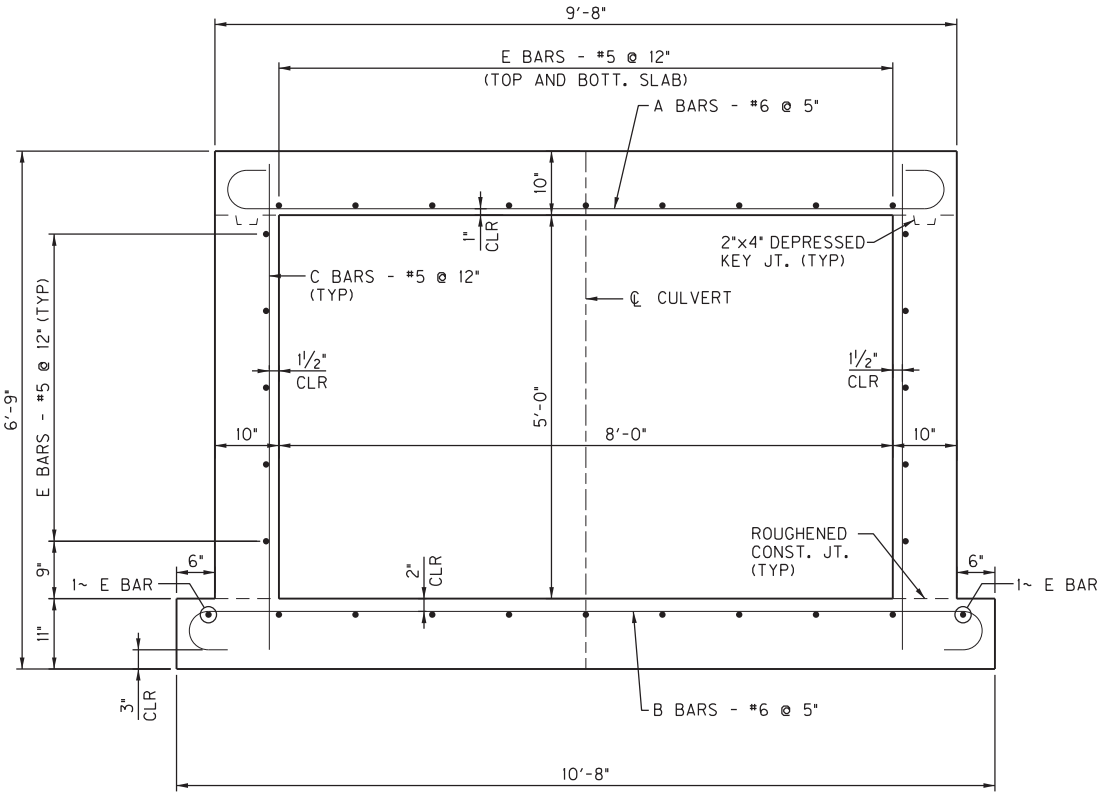
SECTION ALONG CENTERLINE OF CULVERT

INLET PARAPET

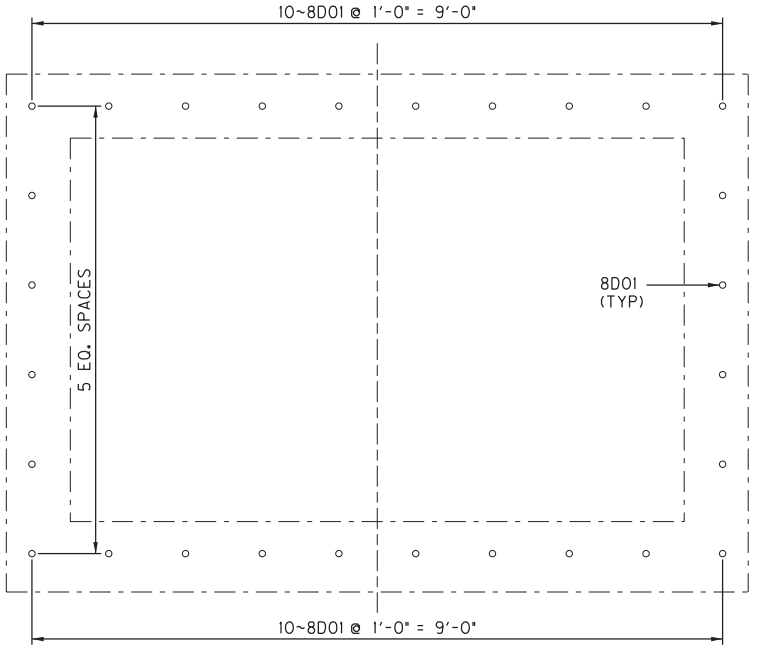
OUTLET PARAPET

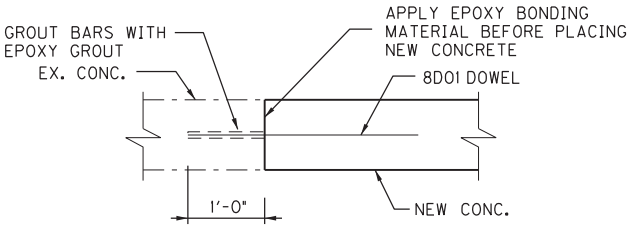
DIMENSIONS SHOWN FOR THIS WING ARE TYPICAL FOR ALL WINGS

COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00



TYPICAL BARREL SECTION





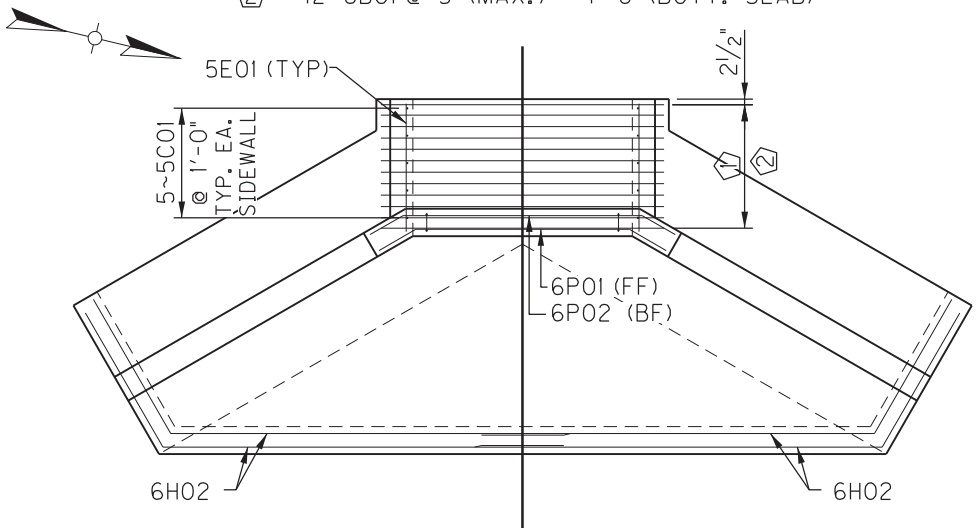
DOWEL DETAILS

NOTE: THE COST OF DRILLING HOLES, GROUTING, AND EPOXY BONDING MATERIAL SHALL BE INCIDENTAL TO THE COST OF CLASS "A" CONCRETE.

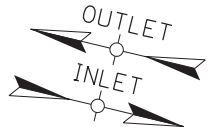
KY 169
8'x5' CULVERT EXTENSION BARREL
SHEET 3 OF 7

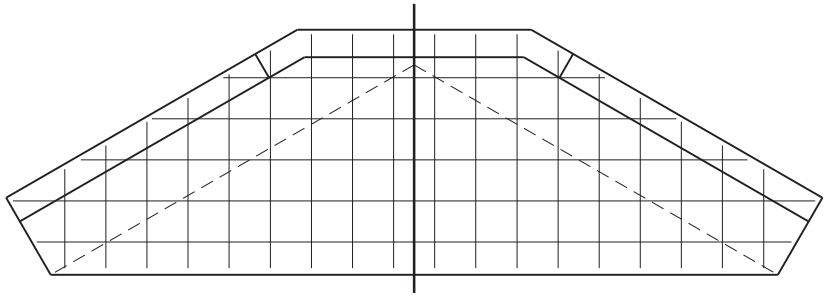
COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00

① 12~6A01 @ 5" (MAX.) = 4'-6" (TOP SLAB)
② 12~6B01 @ 5" (MAX.) = 4'-6" (BOTT. SLAB)



INLET PLAN

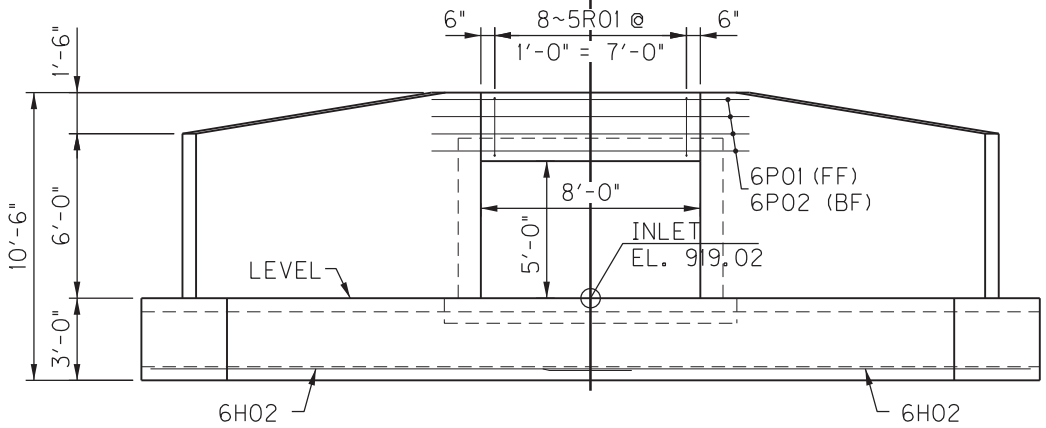




REINFORCEMENT FOR INLET AND OUTLET PAVING
SHALL BE #4 BARS AT 1'-6" SPACING OR WWF 6x6, D7-D7
AND SHALL BE INCIDENTAL TO THE COST OF CLASS "A" CONCRETE.

OUTLET / INLET PAVING

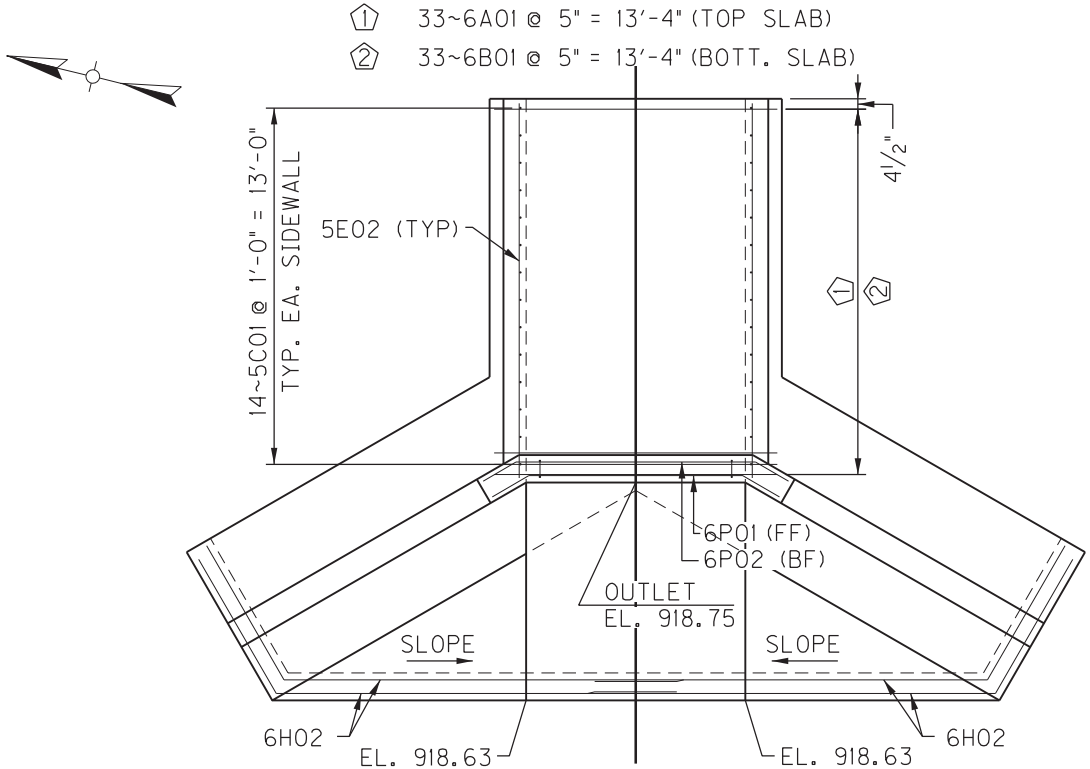
(APRON NOT SHOWN FOR CLARITY)



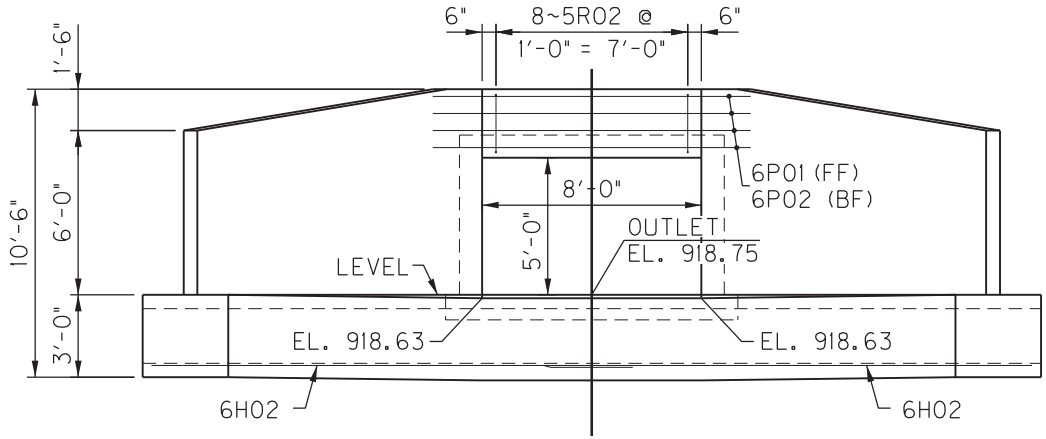
INLET ELEVATION

KY 169
8'x5' CULVERT EXTENSION - INLET DETAILS
SHEET 4 OF 7

COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00



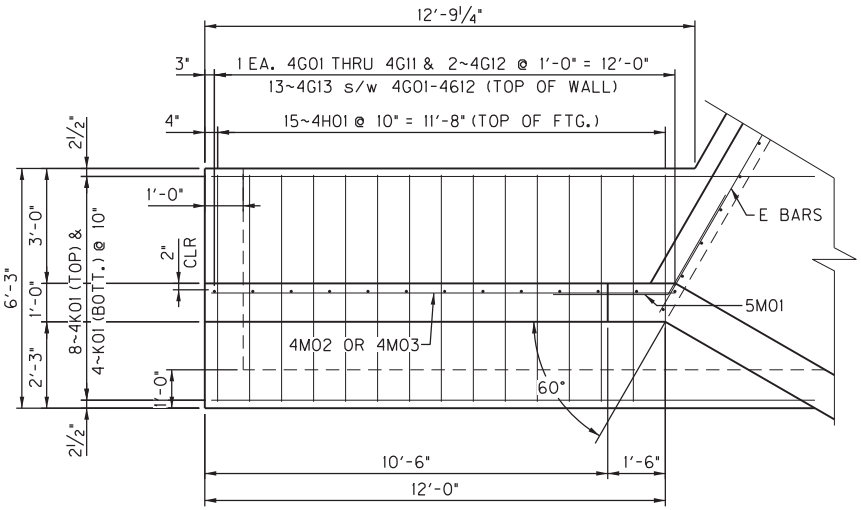
OUTLET PLAN



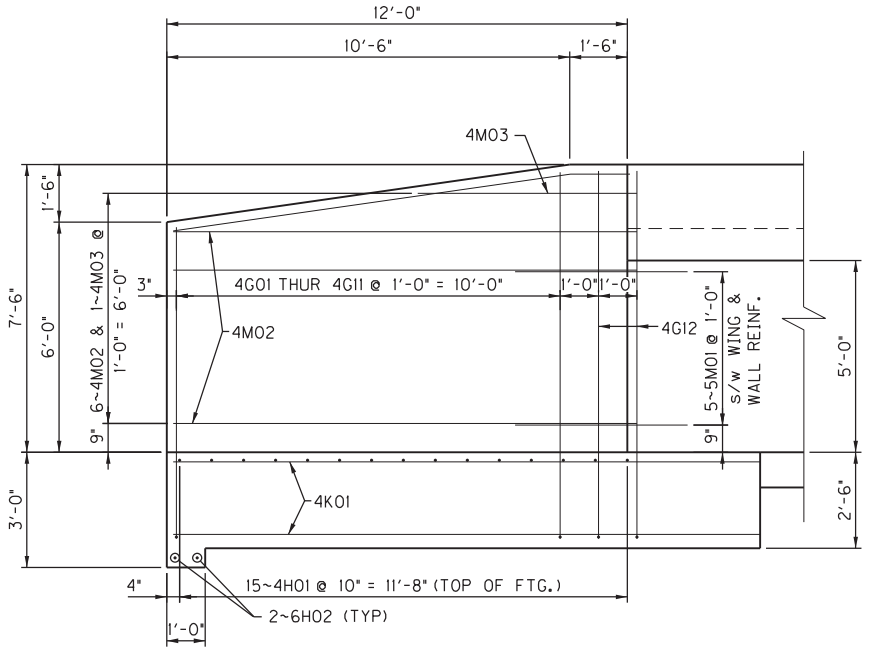
OUTLET ELEVATION

KY 169
8'x5' CULVERT EXTENSION - OUTLET DETAILS
SHEET 5 OF 7

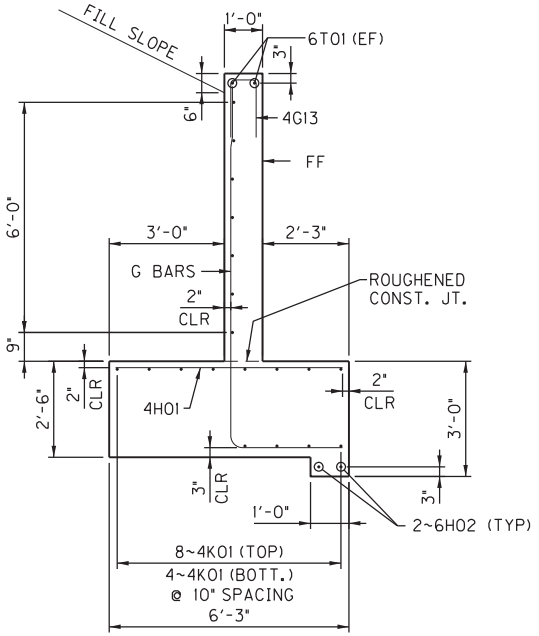
COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00



PLAN



ELEVATION

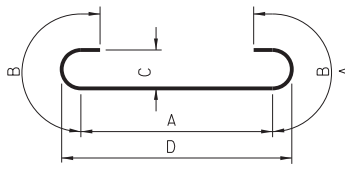


TYPICAL SECTION

KY 169
8'x5' CULVERT EXTENSION WING DETAILS
SHEET 6 OF 7

COUNTY OF	ITEM NO.
JESSAMINE	7-9014.00

MARK	TYPE	NUMBER	SIZE	LENGTH FT	LENGTH IN	LOCATION	BEND DIMENSIONS A ft./in.	B ft./in.	C ft./in.	D ft./in.	E
6A01	1	45	# 6	10	10	TOP SLAB	8'-10"	1'-0"	6"	9'-4"	
6B01	1	45	# 6	11	10	BOTT. SLAB	9'-10"	1'-0"	6"	10'-4"	
5C01	STR.	38	# 5	6	4	SIDEWALLS					
5E01	STR.	30	# 5	4	8	INLET					
5E02	STR.	30	# 5	13	8	OUTLET					
4G01	5	4	# 4	11	0	WINGS	8'-1"	2'-11"			
4G02	5	4	# 4	11	2	WINGS	8'-3"	2'-11"			
4G03	5	4	# 4	11	3	WINGS	8'-4"	2'-11"			
4G04	5	4	# 4	11	5	WINGS	8'-6"	2'-11"			
4G05	5	4	# 4	11	7	WINGS	8'-8"	2'-11"			
4G06	5	4	# 4	11	8	WINGS	8'-9"	2'-11"			
4G07	5	4	# 4	11	10	WINGS	8'-11"	2'-11"			
4G08	5	4	# 4	12	0	WINGS	9'-1"	2'-11"			
4G09	5	4	# 4	12	2	WINGS	9'-3"	2'-11"			
4G10	5	4	# 4	12	3	WINGS	9'-4"	2'-11"			
4G11	5	4	# 4	12	5	WINGS	9'-6"	2'-11"			
4G12	5	8	# 4	12	6	WINGS	9'-7"	2'-11"			
4G13	2	52	# 4	3	8	WINGS	1'-6"	8"			
4H01	STR.	60	# 4	5	11	WINGS					
6H02	8	8	# 6	20	2	APRON	14'-7"	5'-7"	4'-10"	2'-9 1/2"	
4K01	STR.	48	# 4	15	9	WINGS					
5M01	8	20	# 5	6	0	WINGS	3'-0"	3'-0"	2'-7 1/8"	1'-6"	
4M02	STR.	24	# 4	12	1	WINGS					
4M03	STR.	4	# 4	5	8	WINGS					
6P01	6	8	# 6	10	11	PARAPET	7'-10"	1'-6 1/2"	9 1/4"	1'-4"	
6P02	6	8	# 6	11	6	PARAPET	8'-9"	1'-4 1/2"	8 1/4"	1'-2 1/4"	
5R01	11	8	# 5	5	10	PARAPET	2'-3"	9"	6"	1'-8 1/2"	0 5/8"
5R02	12	8	# 5	6	3	PARAPET	2'-3"	9"	6"		
8D01	STR.	56	# 8	3	0	DOWELS					
6T01	8	8	# 6	12	0	WINGS	10'-5"	1'-6 5/8"	2 5/8"	1'-6 1/2"	



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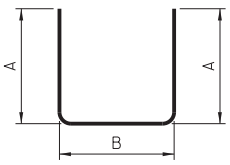

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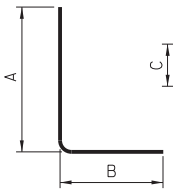

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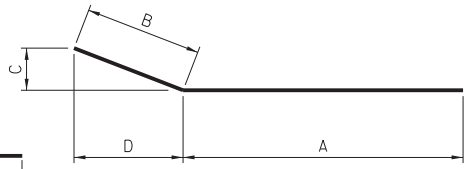

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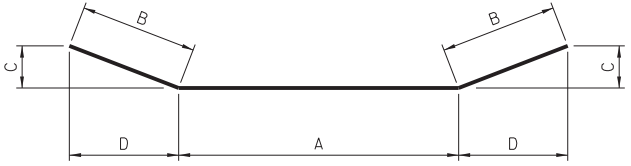

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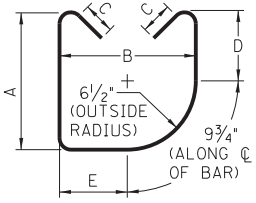

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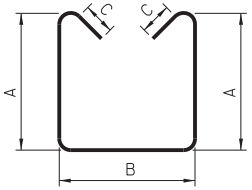


TYPE (12)

KY 169

8'x5' CULVERT EXTENSION BILL OF REINFORCEMENT

SHEET 7 OF 7

COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014.00	R1

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
R1	LAYOUT SHEET
R2	TYPICAL SECTIONS
R3	PLAN AND RIGHT OF WAY PLAN SHEETS
R4	PROFILE SHEETS
R5	RIGHT OF WAY SUMMARY SHEET
R6	RIGHT OF WAY STRIP MAP SHEET
R7	COORDINATE CONTROL SHEET
X1-X14	CROSS SECTION SHEETS

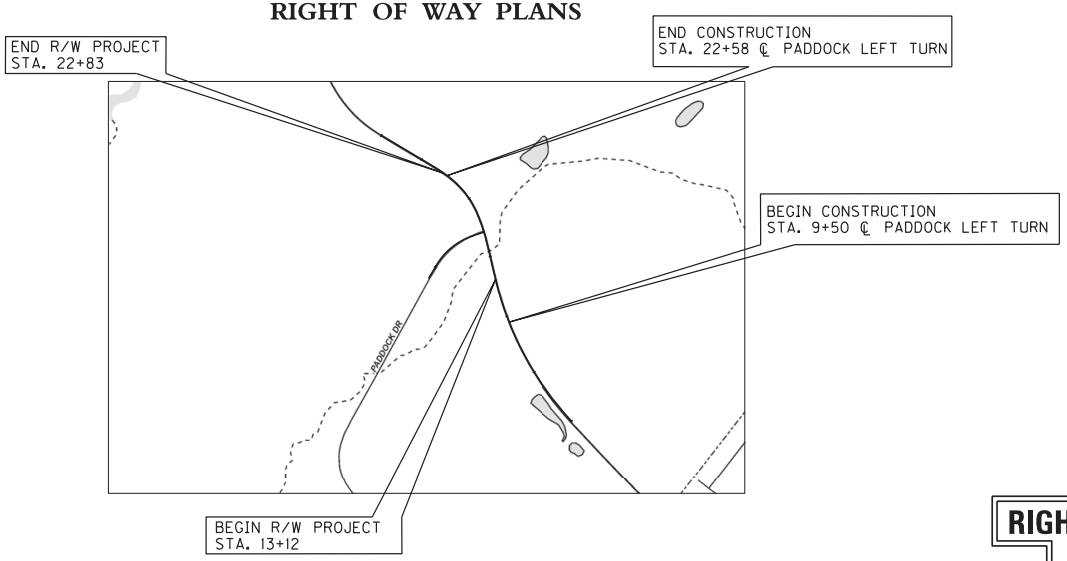
SHEETS NOT INCLUDED IN TOTAL SHEETS

R2A, R2B, R3A

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS

PLANS OF
PROPOSED PROJECT

JESSAMINE COUNTY
KEENE ROAD (KY 169)
RIGHT OF WAY PLANS



RIGHT OF WAY PLANS

LAYOUT MAP

DESIGN CRITERIA

CLASS OF HIGHWAY: MINOR ARTERIAL
TYPE OF TERRAIN:
DESIGN SPEED: 55
REQUIRED NPSD:
REQUIRED PSD:
LEVEL OF SERVICE:
ADT PRESENT (2020): 10658
ADT FUTURE ( ):
DHV:
D %:
T %:

GEOGRAPHIC COORDINATES

LATITUDE 37 DEGREES 54 MINUTES 47 SECONDS NORTH
LONGITUDE -84 DEGREES 35 MINUTES 36 SECONDS WEST

DESIGNED

% RESTRICTED SD:
LEVEL OF SERVICE:
MAX. DISTANCE W/O PASSING:

LENGTH 1308 LIN. FT. .248 MILES	LENGTH LIN. FT. MILES	LENGTH LIN. FT. MILES	LENGTH LIN. FT. MILES
ADDED / DEDUCTED — FOR EQUALITIES LIN. FT. NOT INCLUDED	ADDED / DEDUCTED — FOR EQUALITIES LIN. FT. NOT INCLUDED	ADDED / DEDUCTED — FOR EQUALITIES LIN. FT. NOT INCLUDED	ADDED / DEDUCTED — FOR EQUALITIES LIN. FT. NOT INCLUDED
RAILROAD CROSSINGS NO. LIN. FT.	RAILROAD CROSSINGS NO. LIN. FT.	RAILROAD CROSSINGS NO. LIN. FT.	RAILROAD CROSSINGS NO. LIN. FT.
BRIDGES LIN. FT.	BRIDGES LIN. FT.	BRIDGES LIN. FT.	BRIDGES LIN. FT.

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF

JESSAMINE

ITEM NO. 7-9014.00
PROJECT NUMBER:
LETTING DATE:

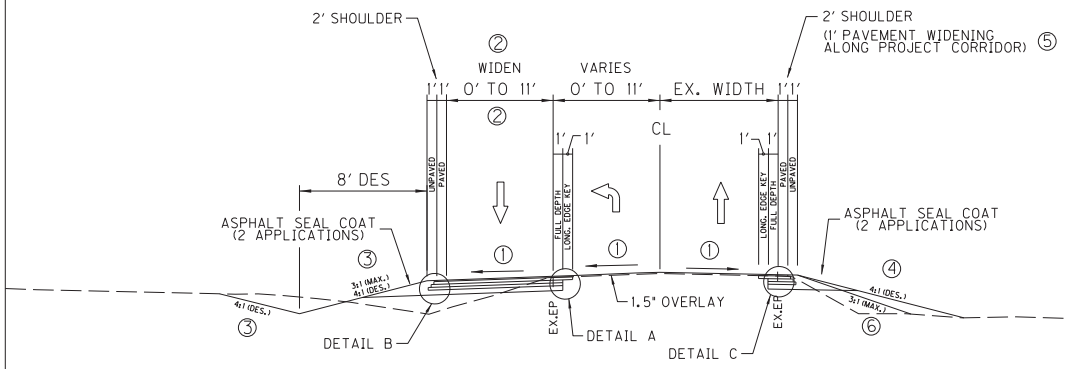
RECOMMENDED BY: _____ PROJECT MANAGER DATE:

PLAN APPROVED BY: _____ STATE HIGHWAY ENGINEER DATE:

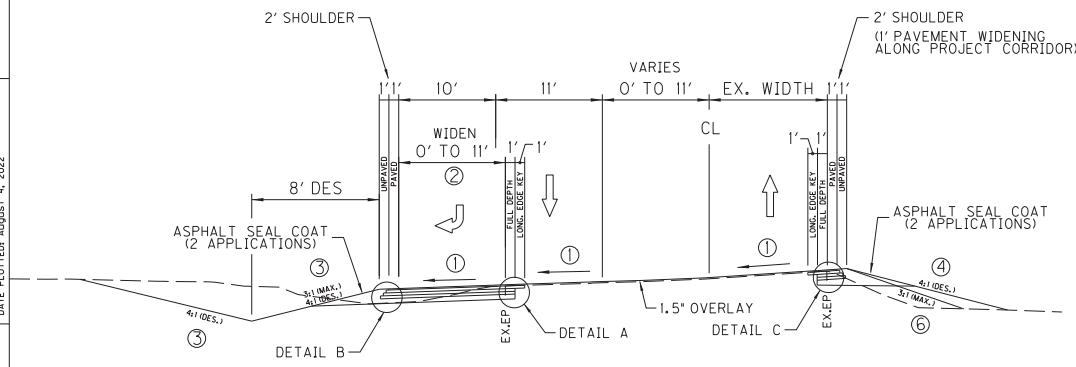
FILE NAME: C:\PW_WORKDIR\ANDREW-B\D0012633\R1_LAYOUT.DGN
USER: andrew-b
DATE PLOTTED: June 18, 2021
E-SHEET NAME:
Power InRoads v8.11.9.397

COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014	R2

KY 169 LEFT TURN LANE INTO PADDOCK DRIVE
ASPHALT WIDENING



STA. 9+50 TO 17+30



STA. 17+30 TO 22+58

① MATCH EXISTING CROSS SLOPES OR ADJUST CROSS SLOPES AS NOTED IN CROSS SECTIONS. LEVELING AND WEDGING, ASPHALT PAVE MILLING & TEXTURING QUANTITIES HAVE BEEN INCLUDED FOR ADJUSTING CROSS SLOPES. REFER TO TYPICAL - ADJUST CROSS SLOPE DETAIL FOR MORE INFORMATION. SEE SECTIONS FOR CROSS SLOPES.

② PAVEMENT IS WIDENED AT 55:1 TAPER. REFER TO CROSS SECTIONS FOR WIDTH OF WIDENING.

③ REFER TO CROSS SECTIONS FOR DITCH SLOPES AND WIDTHS

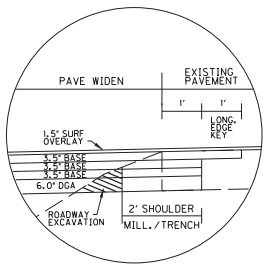
④ 3:1 OR FLATTER IS DESIRABLE. LOCATIONS THAT ARE LIMITED DUE TO RIGHT-OF-WAY, UTILITY POLES, TREES, FENCES, OR OTHER SENSITIVE OBSTRUCTIONS MAY REQUIRE EMBANKMENT BUT ONLY OUT TO THE EDGE OF THE RIGHT-OF-WAY OR SENSITIVE OBSTRUCTION(S). (SLOPE MAY BE STEEPER THAN 3:1)

⑤ A 1' PAVEMENT WIDENING AND EARTH SHOULDER IS DESIRABLE BUT MAY HAVE TO BE ELIMINATED IN ORDER TO REMAIN ON RIGHT-OF-WAY OR AVOID A SENSITIVE OBSTRUCTION.

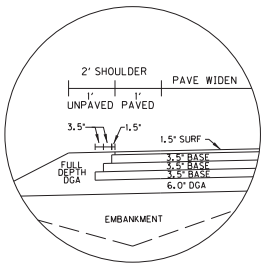
⑥ COMPACTED EMBANKMENT (INCIDENTAL TO ROADWAY EXCAVATION). CONTRACTOR SHALL PROPERLY BENCH INTO EXISTING SLOPE AND APPLY PROPER COMPACTION. COMPACT MATERIAL ACCORDING TO STANDARD SPECIFICATIONS (SECT. 206). FINAL PAYMENT WILL BE PAID AS CY OF EARTHWORK AND INCLUDE ALL WORK NECESSARY TO PERFORM WORK. SHOULDER EMBANKMENT MATERIAL SHALL BE SUITABLE FOR VEGETATION GROWTH. LOCATIONS THAT ARE LIMITED DUE TO R/W, UTILITY POLES, TREES, FENCES, OR OTHER SENSITIVE OBSTRUCTIONS MAY REQUIRE EMBANKMENT BUT ONLY OUT TO THE EDGE OF R/W OR SENSITIVE OBSTRUCTION(S). (SLOPE MAY BE STEEPER THAN 3:1)

PAVEMENT WIDENING

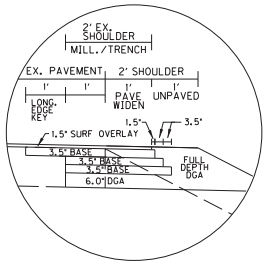
1.5" SURFACE	1.5" DEPTH CLASS 3 ASPHALT SURFACE 0.38B PG 64-22
16.5" BASE	3.5" DEPTH CLASS 3 ASPHALT BASE 1.00D PG 64-22 3.5" DEPTH CLASS 3 ASPHALT BASE 1.00D PG 64-22 3.5" DEPTH CLASS 3 ASPHALT BASE 1.00D PG 64-22 6" DGA BASE



DETAIL "A"



DETAIL "B"



DETAIL "C"

RIGHT OF WAY PLANS

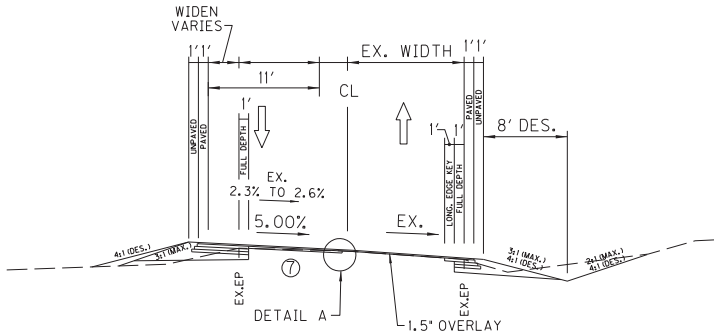
NOT TO SCALE

HSIP - KY 169
LEFT TURN AT PADDOCK DRIVE
TYPICAL SECTIONS

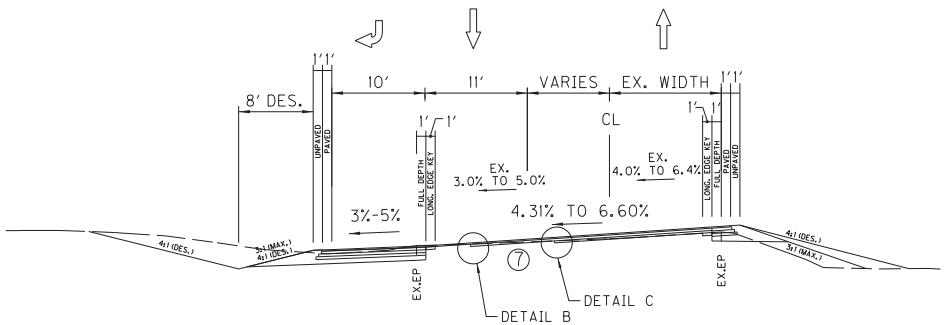
FILE NAME: C:\PW_WORKDIR\ANDREW-B\DMS85740\FINAL_TYPICAL SECTIONS_JESSAMINE KY 169_PADDOCK.DGN
USER: andrew-b
DATE PLOTTED: August 4, 2022
E-SHEET NAME:
Power InRoads v8.11.9.397

COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014	R2A

ADJUST CROSS SLOPE DETAIL



STA. 11+00 TO STA. 13+00
(ADJUST CROSS SLOPE HIGH SIDE OF CURVE)

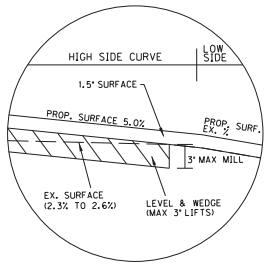


STA. 17+00 TO STA. 19+00
STA. 20+50 TO STA. 21+00
(ADJUST CROSS SLOPE HIGH SIDE AND / OR LOW SIDE OF CURVE)

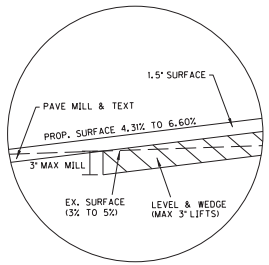
SAME NOTES APPLY FROM TYPICAL SHEET R2.

⑦ ADJUST CROSS SLOPES AS NOTED IN CROSS SECTIONS. LEVELING AND WEDGING, ASPHALT PAVE MILLING & TEXTURING QUANTITIES HAVE BEEN INCLUDED FOR ADJUSTING CROSS SLOPES. SEE SECTIONS FOR CROSS SLOPES.

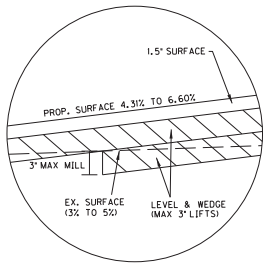
MAXIMUM DEPTH OF MILLING AT LONGITUDINAL EDGE KEY SHALL BE 3". MAXIMUM LEVELING & WEDGING LIFT THICKNESS SHALL BE 3".



DETAIL "A"



DETAIL "B"



DETAIL "C"

RIGHT OF WAY PLANS

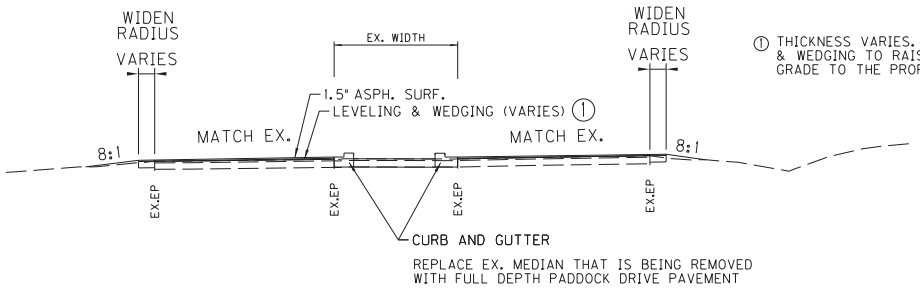
NOT TO SCALE

HSIP - KY 169
LEFT TURN AT PADDOCK DRIVE
TYPICAL SECTIONS

COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014	R2B

ENTRANCE PAVING DETAIL

PADDOCK DRIVE



1 THICKNESS VARIES. USE LEVELING & WEDGING TO RAISE EXISTING GRADE TO THE PROPOSD GRADE.

STA. 0+22 TO STA. 0+95

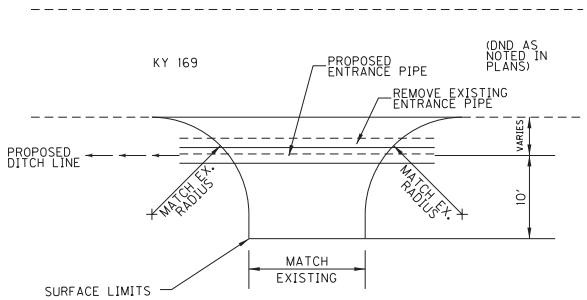
PADDOCK DRIVE - FULL DEPTH PAVEMENT

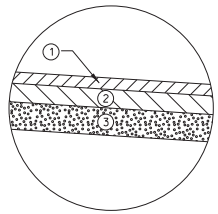
1.5" SURFACE	1.5" DEPTH CLASS 3 ASPHALT SURFACE 0.38B PG 64-22
7.5" BASE	3.5" DEPTH CLASS 3 ASPHALT BASE 1.00D PG 64-22 4" DGA BASE

PADDOCK DRIVE - PROPOSED GRADE TIE IN

1.5" SURFACE	1.5" DEPTH CLASS 3 ASPHALT SURFACE 0.38B PG 64-22
BASE (VARIES)	LEVELING & WEDGING

ENTRANCE - STA. 13+03 - LEFT (REPLACE ENT PIPE)
ENTRANCE - STA. 20+63 - RIGHT (DND ENT PIPE)





ASPHALT ENTRANCE

1. 1.50" CL3 ASPH SURF 0.38B PG64-22
2. 2.00" CL3 ASPH BASE 1.00D PG64-22
3. 4.00" DGA

RIGHT OF WAY PLANS

NOT TO SCALE

HSIP - KY 169
LEFT TURN AT PADDOCK DRIVE
TYPICAL SECTIONS

FILE NAME: C:\PW_WORKDIR\ANDREW-B\DMS85740\FINAL_TYPICAL SECTIONS_JESSAMINE KY 169_PADDOCK.DGN
USER: andrew-b
DATE PLOTTED: October 12, 2021
E-SHEET NAME:
Power InRoads v8.11.9.397

RIGHT OF WAY PLANS

COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014.00	R3

NOTE: LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE AND NOT ALL UTILITIES MAY BE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS WHEN PERFORMING WORK IN THESE AREAS.

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.

STA. 16+70 LEFT 36'
REMOVE & RELOCATE SIGN ASSEMBLY
(STOP SIGN AND PADDOCK DRIVE STREET SIGN)

STA. 17+00 LEFT 60' TO 110'
LIP CURB AND GUTTER - 116 LF
(REMOVAL OF EXISTING CURB & GUTTER INCIDENTAL)

REMOVAL OF TREES, EXISTING FENCE, LANDSCAPED MEDIAN, ETC. WITHIN DISTURBED LIMITS SHALL BE INCIDENTAL TO CLEARING AND GRUBBING.

END CONSTRUCTION
STA. 22+58 ℄ PADDOCK LEFT TURN

END R/W PROJECT
STA. 22+83

BEGIN R/W PROJECT
STA. 13+12

BEGIN CONSTRUCTION
STA. 9+50 ℄ PADDOCK LEFT TURN

PADDOCK DRIVE
S30°28'10"W

PADDOCK DR
PI STA 2+98.49
Δ= 40°43'09"
T= 202.49
L= 387.80
R= 545.67
E= 36.36
e= EX

PI 2+98.49
PT 4+83.79

P 1 CHARLES & JOLENE ASHFORD

P 2 TIMOTHY & AMANDA SHANKS

P 3 JESSAMINE COUNTY FISCAL COURT

P 4 UG-CAM, LLC

KY 169
PI STA 6+70.81
Δ= 29°28'37"
T= 670.81
L= 1311.89
R= 2550.00
E= 86.76
e= See Sections

KY 169
PI STA 17+13.88
Δ= 07°30'33"
T= 78.75
L= 157.27
R= 1200.00
E= 2.58
e= See Sections

KY 169
PI STA 20+96.81
CURVE 1
Δ= 29°37'01"
T= 189.36
L= 370.25
R= 716.25
E= 24.61
e= See Sections

KY 169
PI STA 20+96.81
CURVE 2
Δ= 08°46'02"
T= 88.59
L= 176.83
R= 1155.60
E= 3.39
e= See Sections

KY 169 LEFT TURN LANE DETAIL

KY 169 RIGHT TURN LANE DETAIL

UTILITY CONTACTS:

CHARTER
Kelly Oram
(859)519-3434
John.oram@charter.com

DELTA GAS
Brian Sidwell
(859)744-6171
bsidwell@deltagas.com

CITY OF NICHOLASVILLE
Tim Cross
(859)885-9473
Tim.cross@nicholasville.org

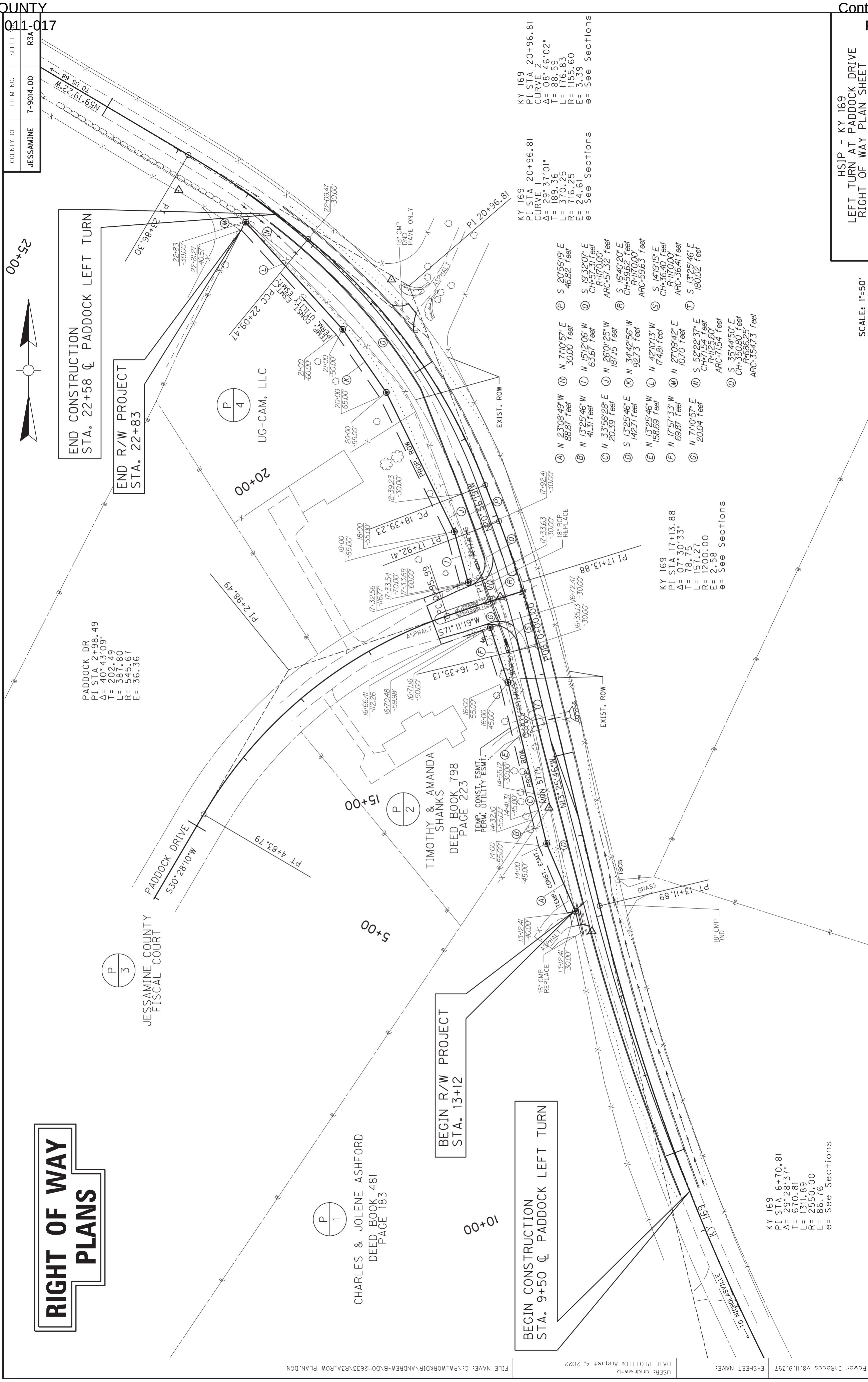
BLUEGRASS ENERGY
Tony Smith
(859)885-2134
tonys@bgenergy.com

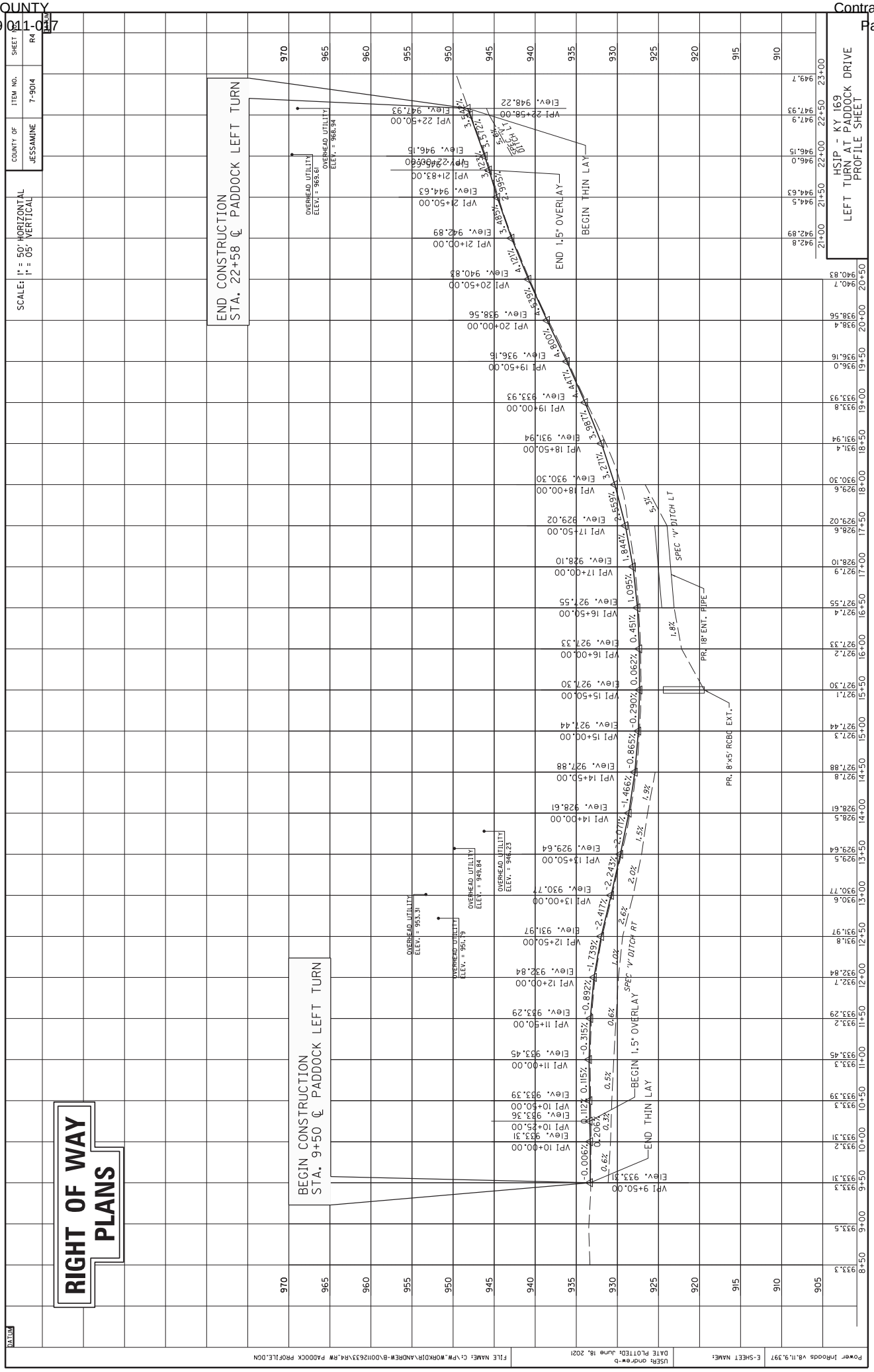
WINDSTREAM
Steve Johnson
(859)357-6209
steve.johnson@windstream.com

SCALE: 1"=50'

HSIP - KY 169
LEFT TURN AT PADDOCK DRIVE
PLAN SHEET

FILE NAME: C:\PW_WORKDIR\ANDREW.BLOOM2633\R3_PLAN.DGN
USER: andrew.b
DATE PLOTTED: August 4, 2022
E-SHEET NAME:
Power InRoads v8.11.9.397


RIGHT OF WAY PLANS
HSIP - KY 169
LEFT TURN AT PADDOCK DRIVE
RIGHT OF WAY PLAN SHEET
SCALE: 1"=50'
COUNTY OF JESSAMINE
ITEM NO. 7-9014.00
SHEET NO. R3A
BEGIN CONSTRUCTION
STA. 9+50 ℄ PADDOCK LEFT TURN
BEGIN R/W PROJECT
STA. 13+12
END CONSTRUCTION
STA. 22+58 ℄ PADDOCK LEFT TURN
END R/W PROJECT
STA. 22+83
CHARLES & JOLENE ASHFORD
DEED BOOK 481
PAGE 183
JESSAMINE COUNTY
FISCAL COURT
TIMOTHY & AMANDA
SHANKS
DEED BOOK 798
PAGE 223
UG-CAM, LLC
PADDOCK DRIVE
KY 169
EXIST. ROW
PROP. ROW
PADDOCK DR
PI STA 2+98.49
KY 169
PI STA 17+13.88
KY 169
PI STA 6+70.81
KY 169
PI STA 20+96.81


RIGHT OF WAY PLANS
COUNTY OF JESSAMINE
ITEM NO. 7-9014
SHEET NO. R4
SCALE: 1" = 50' HORIZONTAL
1" = 05' VERTICAL
HSIP - KY 169
LEFT TURN AT PADDOCK DRIVE
PROFILE SHEET
BEGIN CONSTRUCTION
STA. 9+50 ℄ PADDOCK LEFT TURN
END CONSTRUCTION
STA. 22+58 ℄ PADDOCK LEFT TURN
BEGIN 1.5" OVERLAY
END THIN LAY
BEGIN THIN LAY
END 1.5" OVERLAY
SPEC "V" DITCH RT
SPEC "V" DITCH LT
PR. 18" ENT. PIPE
PR. 8'x5' RCBC EXT.
OVERHEAD UTILITY ELEV. = 968.94
OVERHEAD UTILITY ELEV. = 969.61
OVERHEAD UTILITY ELEV. = 953.31
OVERHEAD UTILITY ELEV. = 949.84
OVERHEAD UTILITY ELEV. = 946.23
OVERHEAD UTILITY ELEV. = 951.19
Power InRoads v8.11.9.397
E-SHEET NAME:
USER: andrew.b
DATE PLOTTED: June 18, 2021
FILE NAME: c:\PW_WORKDIR\ANDREW.B\D0112633\RA_RW PADDOCK PROFILE.DGN

COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014.00	R5

RIGHT OF WAY SUMMARY

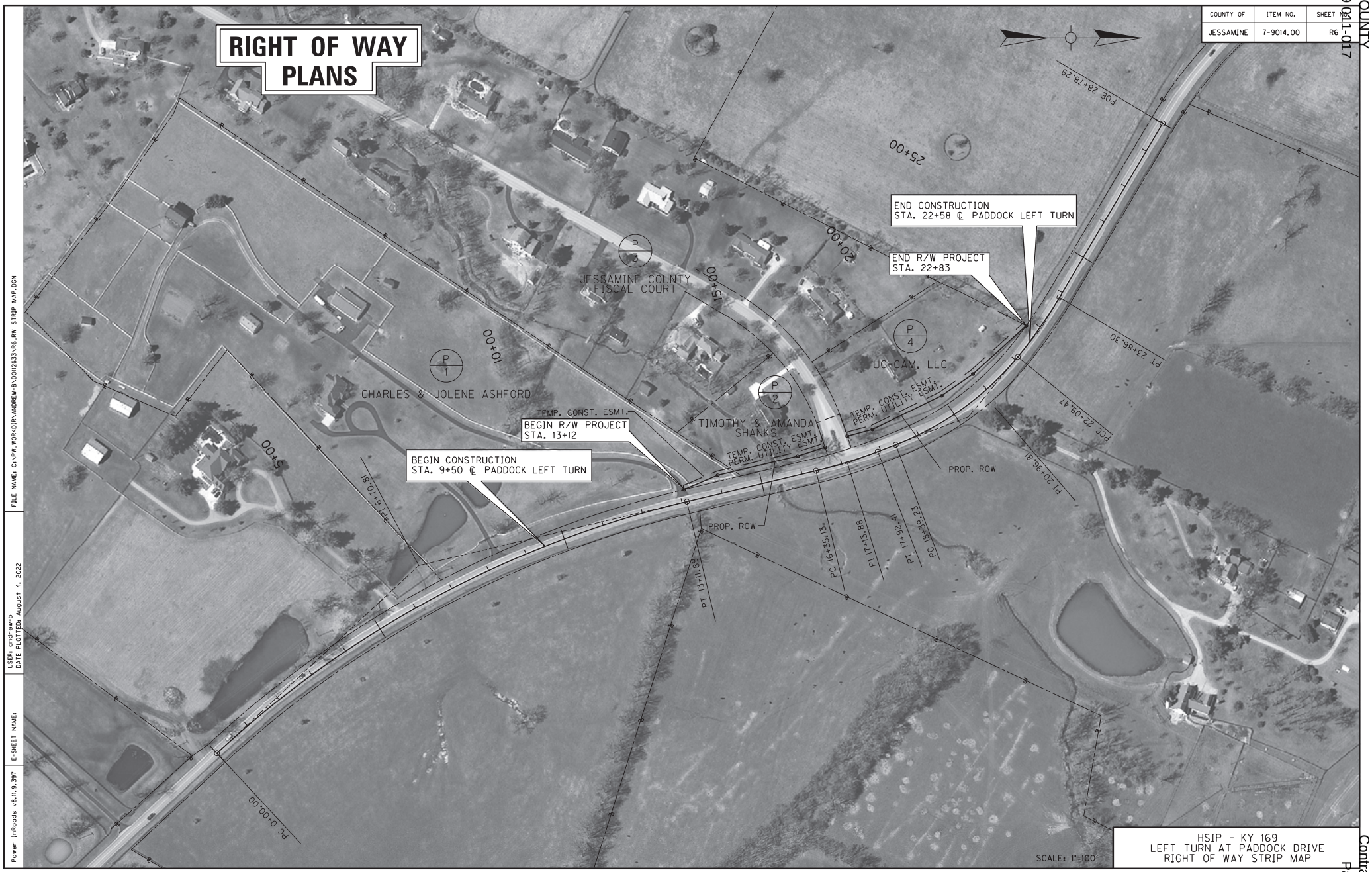
PARCEL NO.	OWNER(S)		TOTAL AREA OF TRACT		PERMANENT R/W ACQUIRED		EASEMENTS		AREA SEVERED				EXCESS PURCHASED		PORTION REMAINING		SEWER SYSTEM TYPE	SEWER SYSTEM AFFECTED BY PROJECT		BUILDINGS ACQUIRED NUMBER				SOURCE OF TITLE	REMARKS*
							PERMANENT	TEMPORARY	LEFT		RIGHT														
			ACRES	SQ. FT.	ACRES	SQ. FT.	SQ. FT.	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.		YES	NO	C	R	F	S		
1	CHARLES & JOLENE ASHFORD	B	18.771	817,647	0.032	1,380		1,243	18.739	816,267															DEED BOOK 481 PAGE 183
2	TIMOTHY & AMANDA SHANKS	B	1.378	60,011	0.081	3,527	2,326	2,326	1.297	56,484															DEED BOOK 798 PAGE 223
3	JESSAMINE COUNTY FISCAL COURT							5,084																	
4	UG-CAM, LLC	B	2.554	111,248	0.271	11,819	5,126	5,126	2.283	99,429															

NOTE: PERMANENT R/W ACQUIRED + AREA SEVERED = TOTAL AREA OF TRACT.

BASIS FOR DETERMINATION OF AREA:
A - DEED
B - P.V.A
C - CALCULATED
D - OTHER

RIGHT OF WAY PLANS

HSIP - KY 169
LEFT TURN AT PADDOCK DRIVE
RIGHT OF WAY SUMMARY



FILE NAME: C:\PW_WORKDIR\ANDREW.BYDON2633\D6_RW STRIP MAP.DGN
USER: andrewb
DATE PLOTTED: August 4, 2022
E-SHEET NAME:
Power InRoads v8.11.9.397

COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014.00	R7

RIGHT OF WAY PLANS

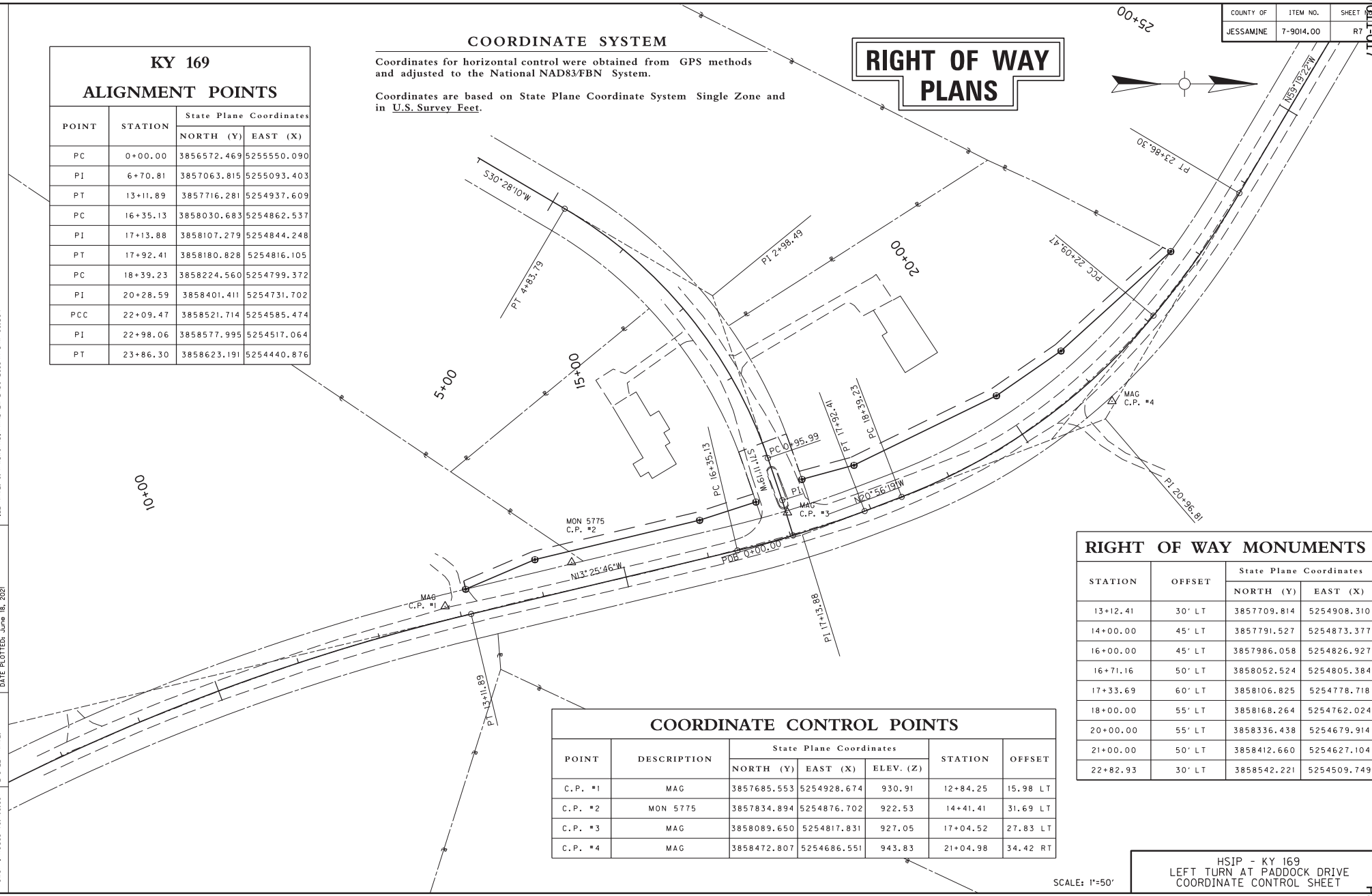
COORDINATE SYSTEM

Coordinates for horizontal control were obtained from GPS methods and adjusted to the National NAD83/FBN System.

Coordinates are based on State Plane Coordinate System Single Zone and in U.S. Survey Feet.

KY 169 ALIGNMENT POINTS

POINT	STATION	State Plane Coordinates	
		NORTH (Y)	EAST (X)
PC	0+00.00	3856572.469	5255550.090
PI	6+70.81	3857063.815	5255093.403
PT	13+11.89	3857716.281	5254937.609
PC	16+35.13	3858030.683	5254862.537
PI	17+13.88	3858107.279	5254844.248
PT	17+92.41	3858180.828	5254816.105
PC	18+39.23	3858224.560	5254799.372
PI	20+28.59	3858401.411	5254731.702
PCC	22+09.47	3858521.714	5254585.474
PI	22+98.06	3858577.995	5254517.064
PT	23+86.30	3858623.191	5254440.876



RIGHT OF WAY MONUMENTS

STATION	OFFSET	State Plane Coordinates	
		NORTH (Y)	EAST (X)
13+12.41	30' LT	3857709.814	5254908.310
14+00.00	45' LT	3857791.527	5254873.377
16+00.00	45' LT	3857986.058	5254826.927
16+71.16	50' LT	3858052.524	5254805.384
17+33.69	60' LT	3858106.825	5254778.718
18+00.00	55' LT	3858168.264	5254762.024
20+00.00	55' LT	3858336.438	5254679.914
21+00.00	50' LT	3858412.660	5254627.104
22+82.93	30' LT	3858542.221	5254509.749

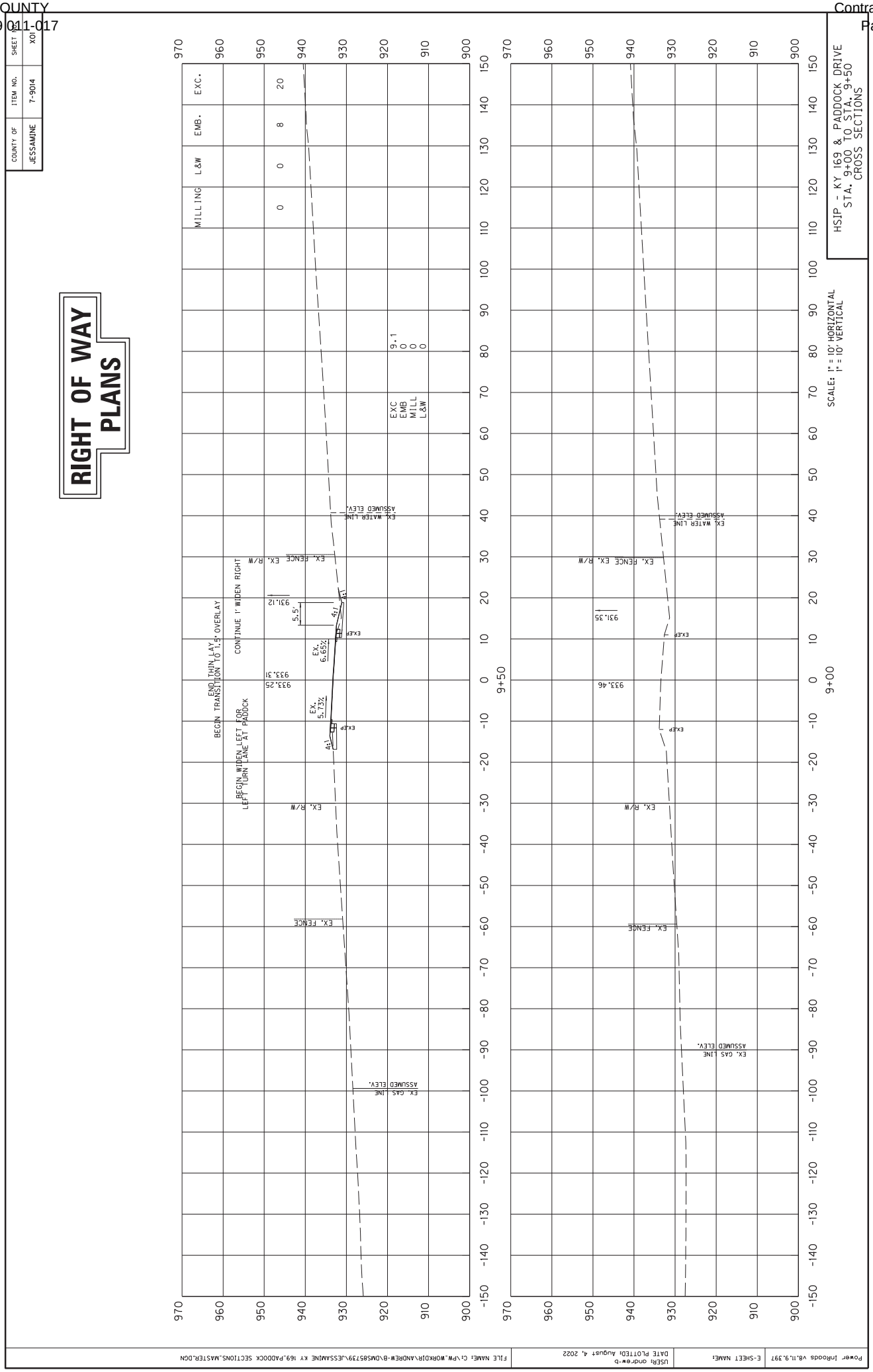
COORDINATE CONTROL POINTS

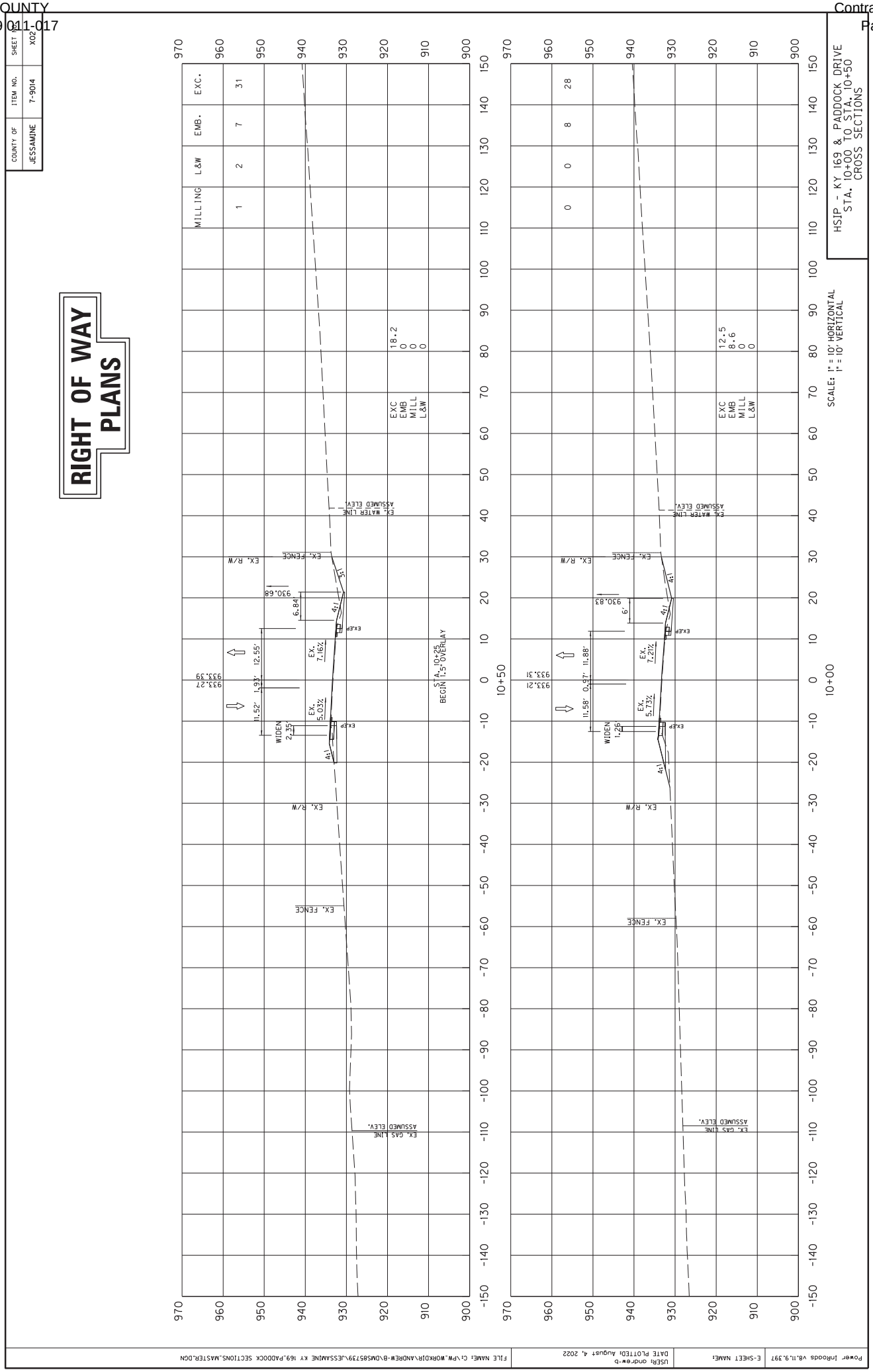
POINT	DESCRIPTION	State Plane Coordinates			STATION	OFFSET
		NORTH (Y)	EAST (X)	ELEV. (Z)		
C.P. #1	MAG	3857685.553	5254928.674	930.91	12+84.25	15.98 LT
C.P. #2	MON 5775	3857834.894	5254876.702	922.53	14+41.41	31.69 LT
C.P. #3	MAG	3858089.650	5254817.831	927.05	17+04.52	27.83 LT
C.P. #4	MAG	3858472.807	5254686.551	943.83	21+04.98	34.42 RT

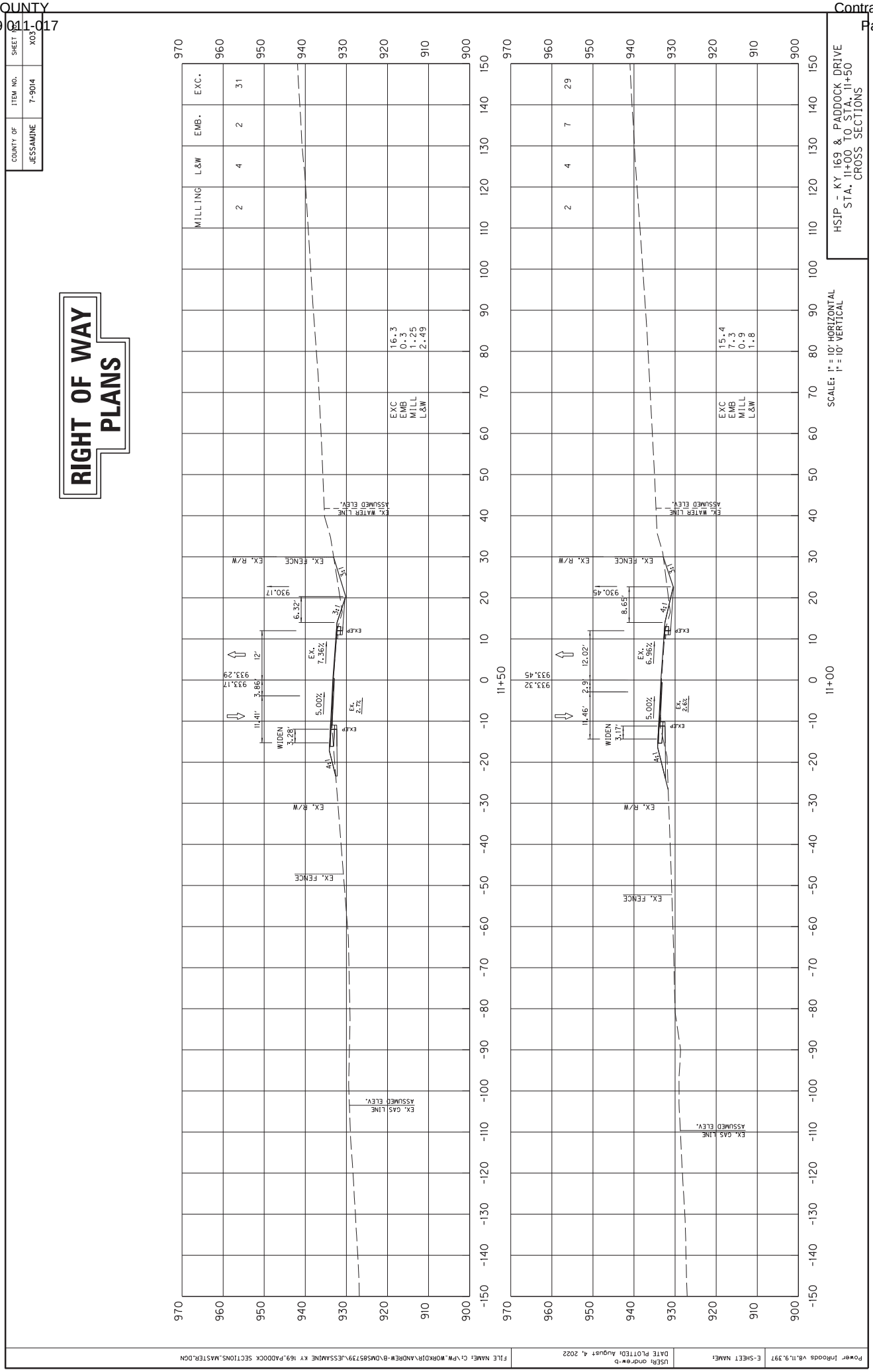
SCALE: 1"=50'

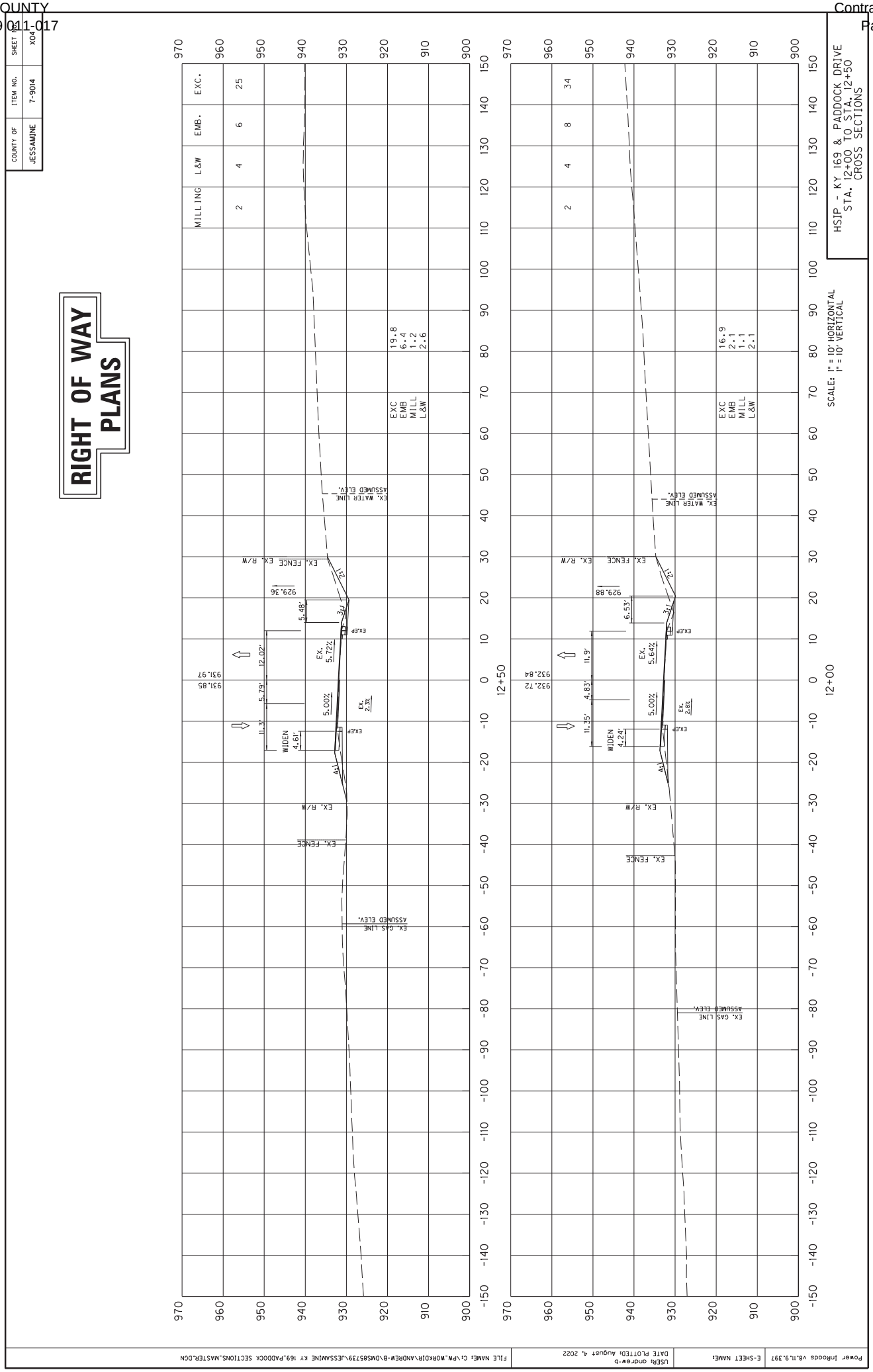
HSIP - KY 169
LEFT TURN AT PADDOCK DRIVE
COORDINATE CONTROL SHEET

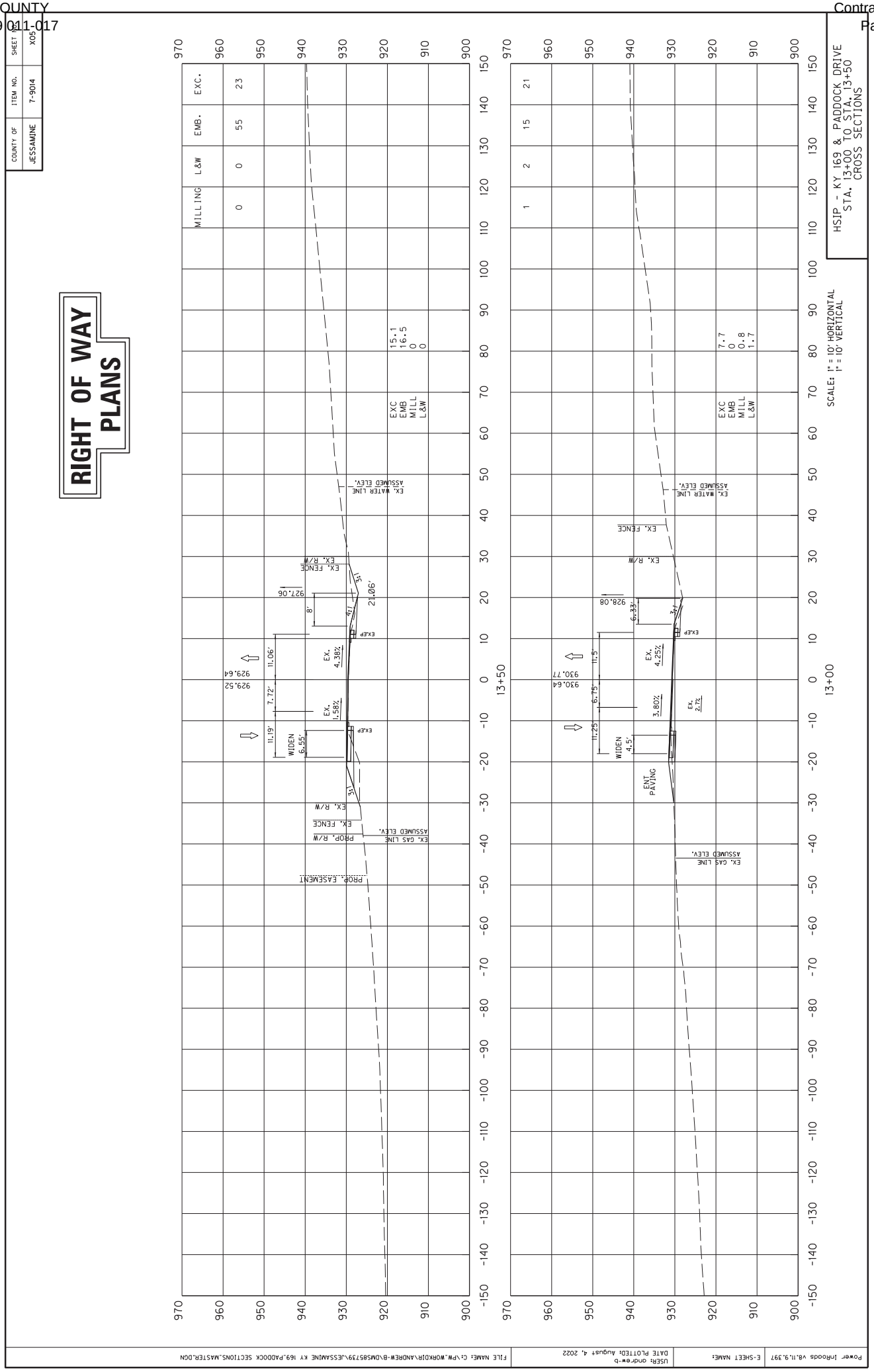
FILE NAME: C:\PW_WORKDIR\ANDREW-B\D0102633\R7_RW CC.DGN
USER: andrew-b
DATE PLOTTED: June 18, 2021
E-SHEET NAME:
Power InRoads v8.11.9.397


COUNTY OF
JESSAMINE
ITEM NO.
7-9014
SHEET NO.
X01
RIGHT OF WAY
PLANS
HSIP - KY 169 & PADDOCK DRIVE
STA. 9+00 TO STA. 9+50
CROSS SECTIONS
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
MILLING
L&W
EMB.
EXC.
EXC
EMB
MILL
L&W
9+50
9+00
BEGIN TRANSITION TO 1.5" OVERLAY
END THIN LAY
CONTINUE 1' WIDEN RIGHT
BEGIN WIDEN LEFT FOR
LEFT TURN LANE AT PADDOCK
EX. R/W
EX. FENCE
EX. WATER LINE
ASSUMED ELEV.
EX. GAS LINE
ASSUMED ELEV.
EX. 6.65%
EX. 5.73%
4:1
5.5'
931.12
933.25
933.31
931.35
933.46
EXEP
Power InRoads V8.11.9.397
E-SHEET NAME:
USER: anderw-b
DATE PLOTTED: August 4, 2022
FILE NAME: C:\PW_WORKDIR\ANDREW-B\DM587739\JESSAMINE KY 169-PADDOCK SECTIONS.MASTER.DGN


RIGHT OF WAY PLANS
COUNTY OF JESSAMINE
ITEM NO. 7-9014
SHEET NO. X02
HSIP - KY 169 & PADDOCK DRIVE
STA. 10+00 TO STA. 10+50
CROSS SECTIONS
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
MILLING 1
L&W 2
EMB. 7
EXC. 31
EXC 18.2
EMB 0
MILL 0
L&W 0
EX. R/W
EX. FENCE
EX. WATER LINE ASSUMED ELEV.
EX. GAS LINE ASSUMED ELEV.
EX. 7.16%
EX. 5.03%
EX. 7.21%
EX. 5.73%
WIDEN 2.35'
WIDEN 1.26'
930.68
933.27
933.39
930.83
933.21
933.31
BEGIN 1.5" OVERLAY
10+50
10+00
MILLING 0
L&W 0
EMB. 8
EXC. 28
EXC 12.5
EMB 8.6
MILL 0
L&W 0
Power InRoads v8.11.9.397
E-SHEET NAME:
USER: anderw-b
DATE PLOTTED: August 4, 2022
FILE NAME: C:\PW_WORKDIR\ANDREW-B\DMS8739\JESSAMINE KY 169_PADDOCK SECTIONS.MASTER.DGN


RIGHT OF WAY PLANS
COUNTY OF JESSAMINE
ITEM NO. 7-9014
SHEET NO. X03
HSIP - KY 169 & PADDOCK DRIVE
STA. 11+00 TO STA. 11+50
CROSS SECTIONS
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
MILLING 2
L&W 4
EMB. 2
EXC. 31
EXC 16.3
EMB 0.3
MILL 1.25
L&W 2.49
EX. WATER LINE ASSUMED ELEV.
EX. FENCE
EX. R/W
EX. GAS LINE ASSUMED ELEV.
930.17
6.32'
3:1
EX.EP
EX. 7.36%
933.17
933.29
12'
3.86'
11.41'
WIDEN 3.28'
5.00%
EX. 2.2%
4:1
11+50
MILLING 2
L&W 4
EMB. 7
EXC. 29
EXC 15.4
EMB 7.3
MILL 0.9
L&W 1.8
930.45
8.65'
EX. 6.96%
933.32
933.45
12.02'
2.9'
11.46'
WIDEN 3.17'
5.00%
EX. 2.8%
11+00
Power Inroads v8.11.9.397
E-SHEET NAME:
USER: andrew.b
DATE PLOTTED: August 4, 2022
FILE NAME: C:\PW_WORKDIR\ANDREW.B\DM587397\ESSAMINE KY 169_PADDOCK SECTIONS_MASTER.DGN


COUNTY OF
JESSAMINE
ITEM NO.
7-9014
SHEET NO.
X04
RIGHT OF WAY
PLANS
HSIP - KY 169 & PADDOCK DRIVE
STA. 12+00 TO STA. 12+50
CROSS SECTIONS
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
MILLING
L&W
EMB.
EXC.
EXC
EMB
MILL
L&W
19.8
6.4
1.2
2.6
16.9
2.1
1.1
2.1
EX. FENCE
EX. R/W
EX. WATER LINE
ASSUMED ELEV.
EX. GAS LINE
ASSUMED ELEV.
929.36
931.97
931.85
932.84
932.72
929.88
EX. 5.72%
EX. 5.64%
5.00%
EX. 2.4%
EX. 2.8%
WIDEN 4.61'
WIDEN 4.24'
12+50
12+00
Power Inroads v8.11.9.397
E-SHEET NAME:
USER: ondrew-b
DATE PLOTTED: August 4, 2022
FILE NAME: C:\PW_WORKDIR\ANDREW-B\DMS8739\JESSAMINE KY 169-PADDOCK SECTIONS.MASTER.DGN

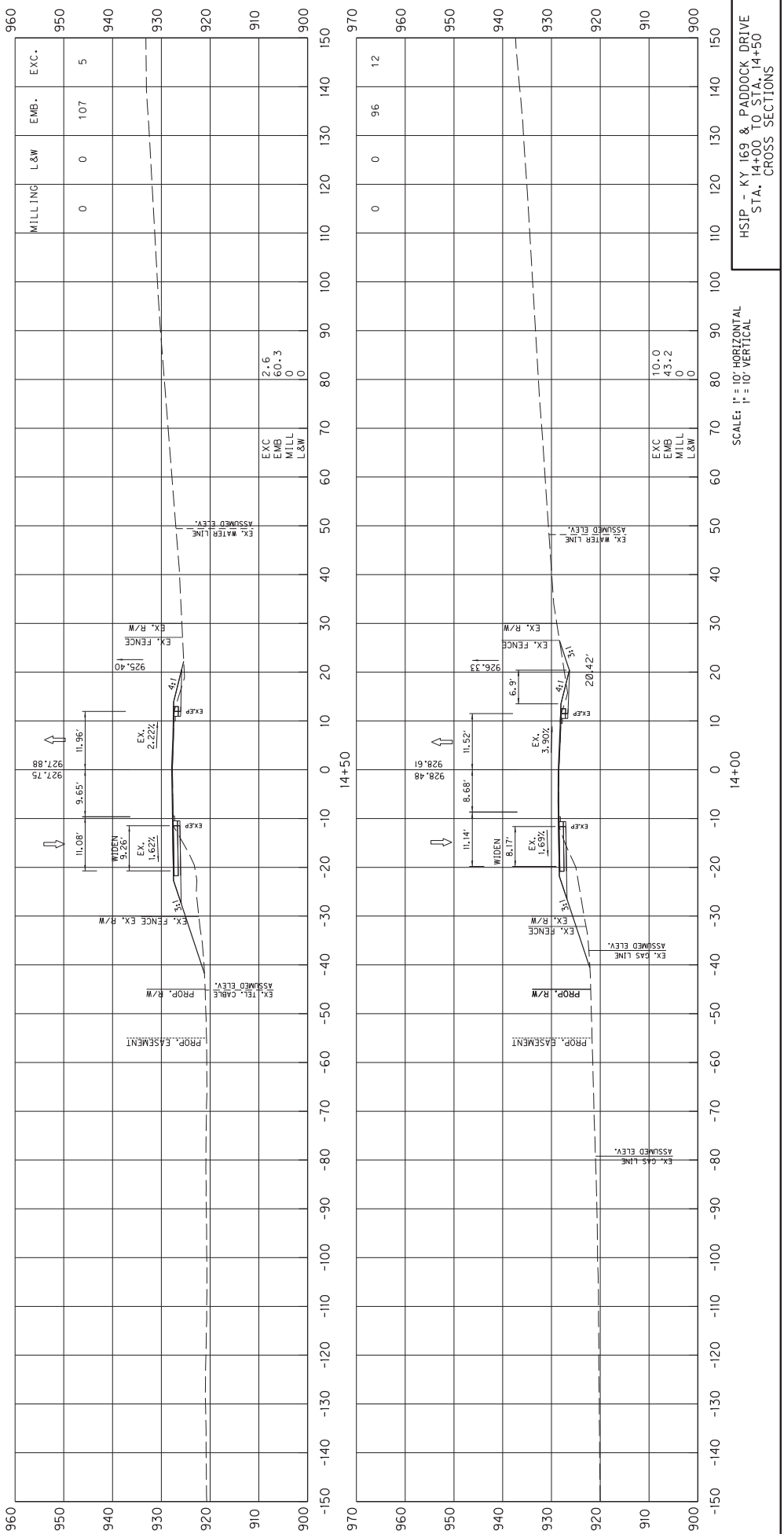

COUNTY OF
JESSAMINE
ITEM NO.
7-9014
SHEET NO.
X05
RIGHT OF WAY
PLANS
HSIP - KY 169 & PADDOCK DRIVE
STA. 13+00 TO STA. 13+50
CROSS SECTIONS
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
MILLING
L&W
EMB.
EXC.
EXC
EMB
MILL
L&W
15.1
16.5
0
0
7.7
0
0.8
1.7
13+50
13+00
EX. WATER LINE
ASSUMED ELEV.
EX. FENCE
EX. R/W
PROP. EASEMENT
PROP. R/W
EX. GAS LINE
ASSUMED ELEV.
927.06
928.08
929.52
929.64
930.64
930.77
21.06'
6.33'
11.06'
7.72'
11.19'
11.5'
6.75'
11.25'
EX.
4.38%
EX.
11.58%
EX.
4.25%
EX.
3.80%
EX.
2.7%
WIDEN
6.55'
WIDEN
4.5'
ENT
PAVING
Power InRoads v8.11.9.397
E-SHEET NAME:
USER: anderw-b
DATE PLOTTED: August 4, 2022
FILE NAME: C:\PW_WORKDIR\ANDREW-B\DM587399\JESSAMINE KY 169-PADDOCK SECTIONS.MASTER.DGN

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-9014	X06

RIGHT OF WAY PLANS

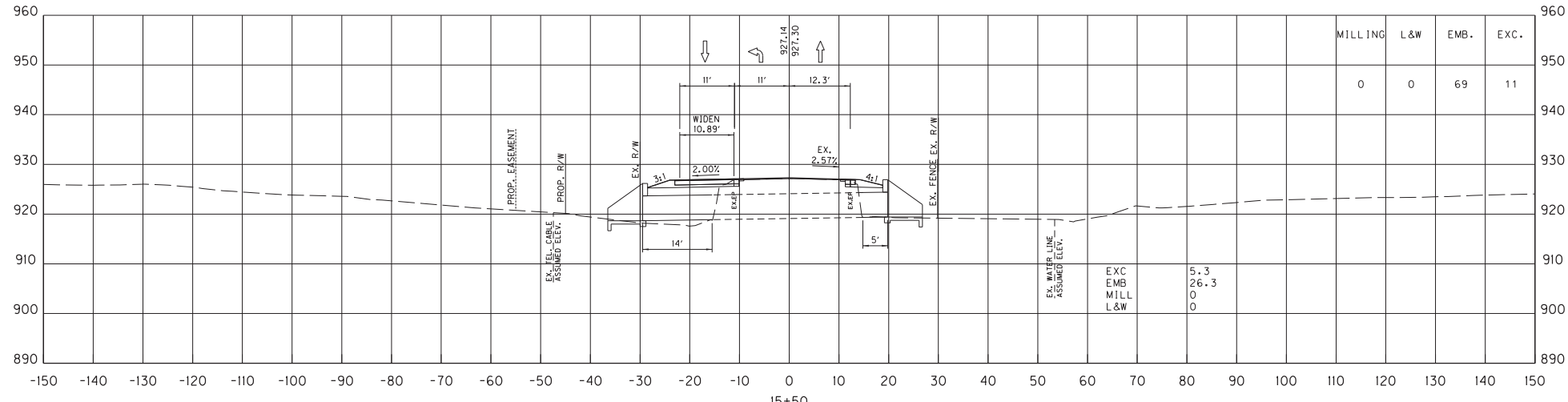
HSIP - KY 169 & PADDOCK DRIVE
STA. 14+00 TO STA. 14+50
CROSS SECTIONS

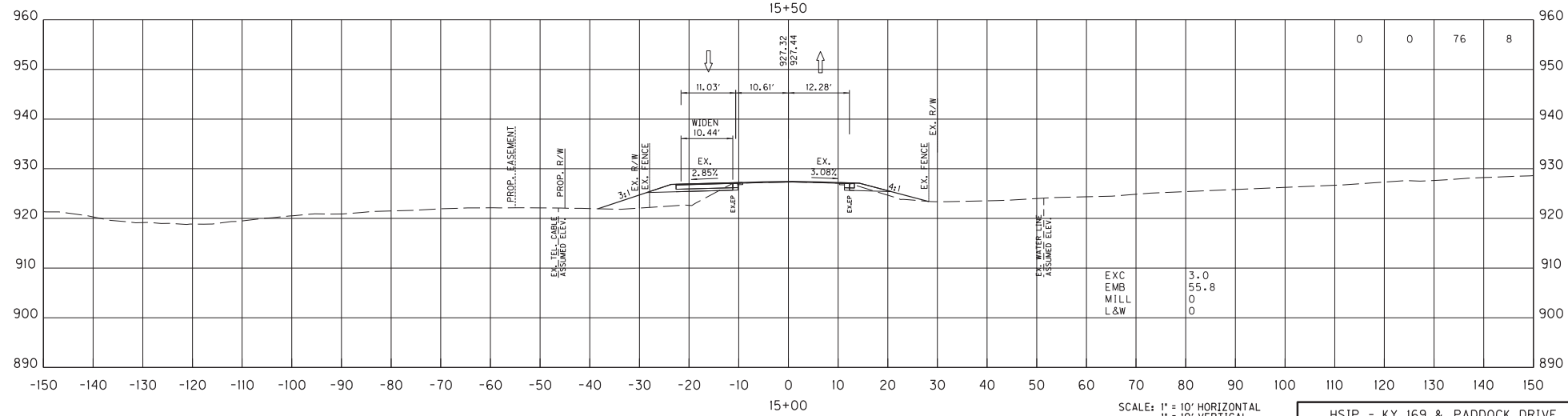
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL



COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014	X07

RIGHT OF WAY PLANS

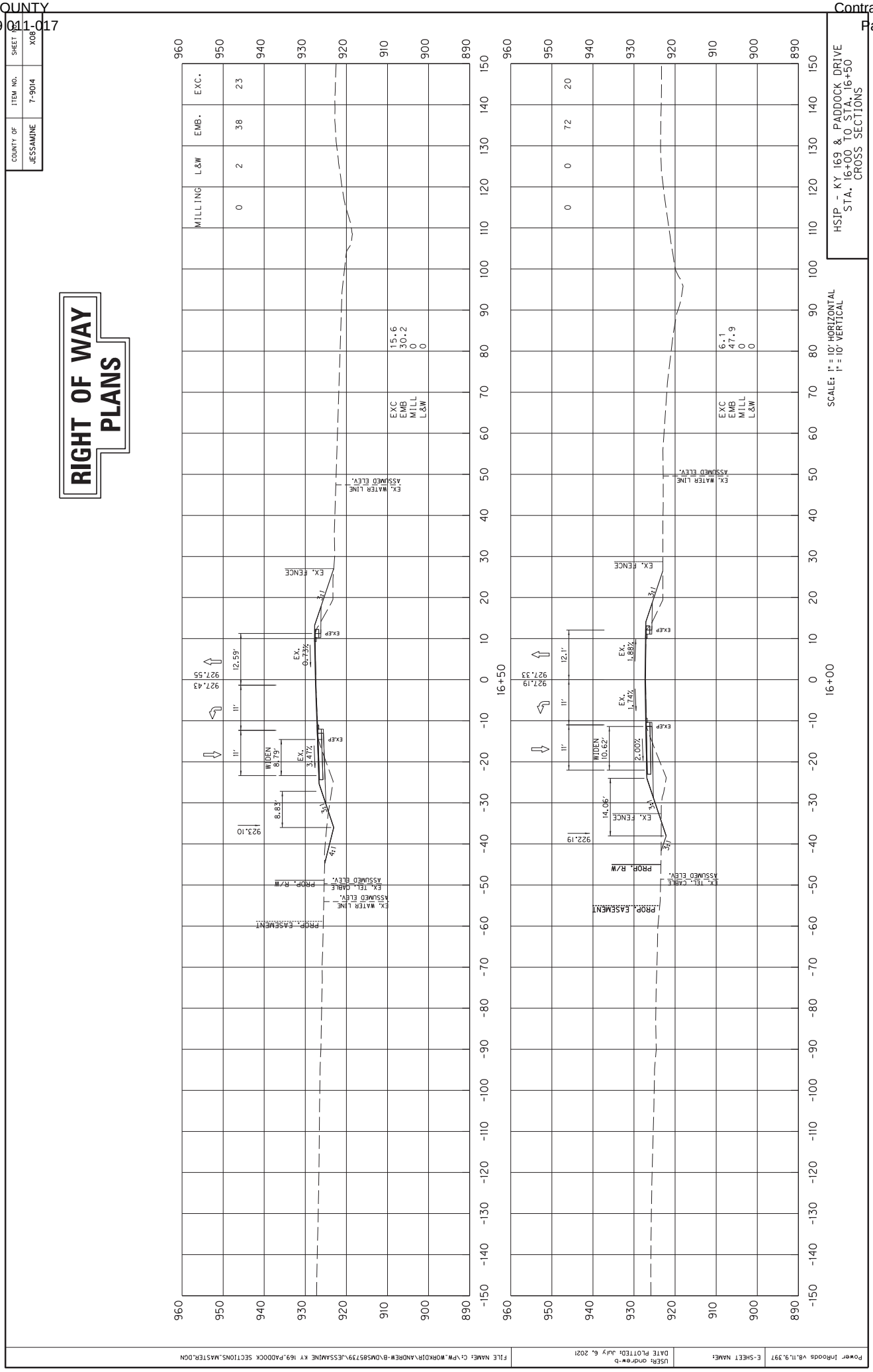




SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

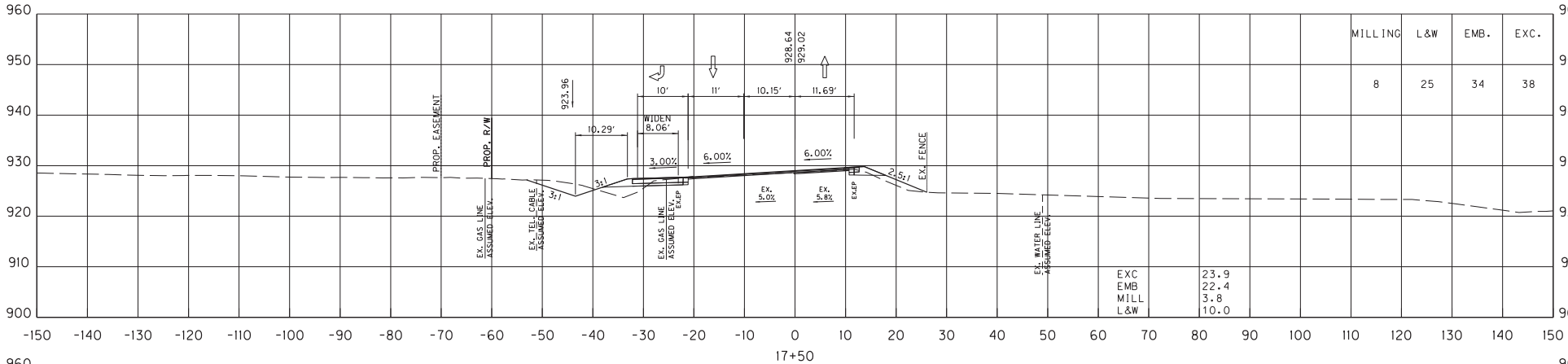
HSIP - KY 169 & PADDOCK DRIVE
STA. 15+00 TO STA. 15+50
CROSS SECTIONS

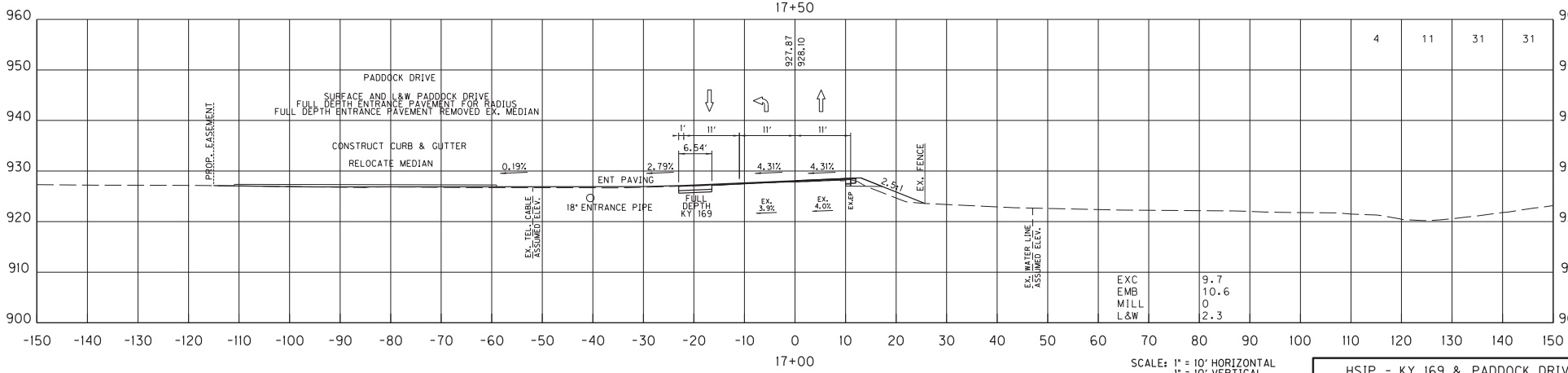
FILE NAME: C:\PW_WORKDIR\ANDREW.BLVDS85739\JESSAMINE KY 169_PADDOCK SECTIONS_MASTER.DGN
USER: andrewb
DATE PLOTTED: July 6, 2021
E-SHEET NAME:
Power InRoads v8.11.9.397


RIGHT OF WAY PLANS
COUNTY OF JESSAMINE
ITEM NO. 7-9014
SHEET NO. X08
HSIP - KY 169 & PADDOCK DRIVE
STA. 16+00 TO STA. 16+50
CROSS SECTIONS
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
MILLING L&W EMB. EXC.
0 2 38 23
0 0 72 20
EXC 15.6
EMB 30.2
MILL 0
L&W 0
EXC 6.1
EMB 47.9
MILL 0
L&W 0
EX. WATER LINE
ASSUMED ELEV.
EX. FENCE
EX. TEL. CABLE
ASSUMED ELEV.
PROP. R/W
PROP. EASEMENT
EX.EP
WIDEN 8.79'
WIDEN 10.62'
EX. 3.47%
EX. 9.79%
EX. 1.74%
EX. 1.88%
2.00%
3:1
4:1
12.59'
11'
8.83'
14.06'
12.1'
923.10
922.19
927.43
927.55
927.19
927.33
16+50
16+00

COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014	X09

RIGHT OF WAY PLANS





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

HSIP - KY 169 & PADDOCK DRIVE
STA. 17+00 TO STA. 17+50
CROSS SECTIONS

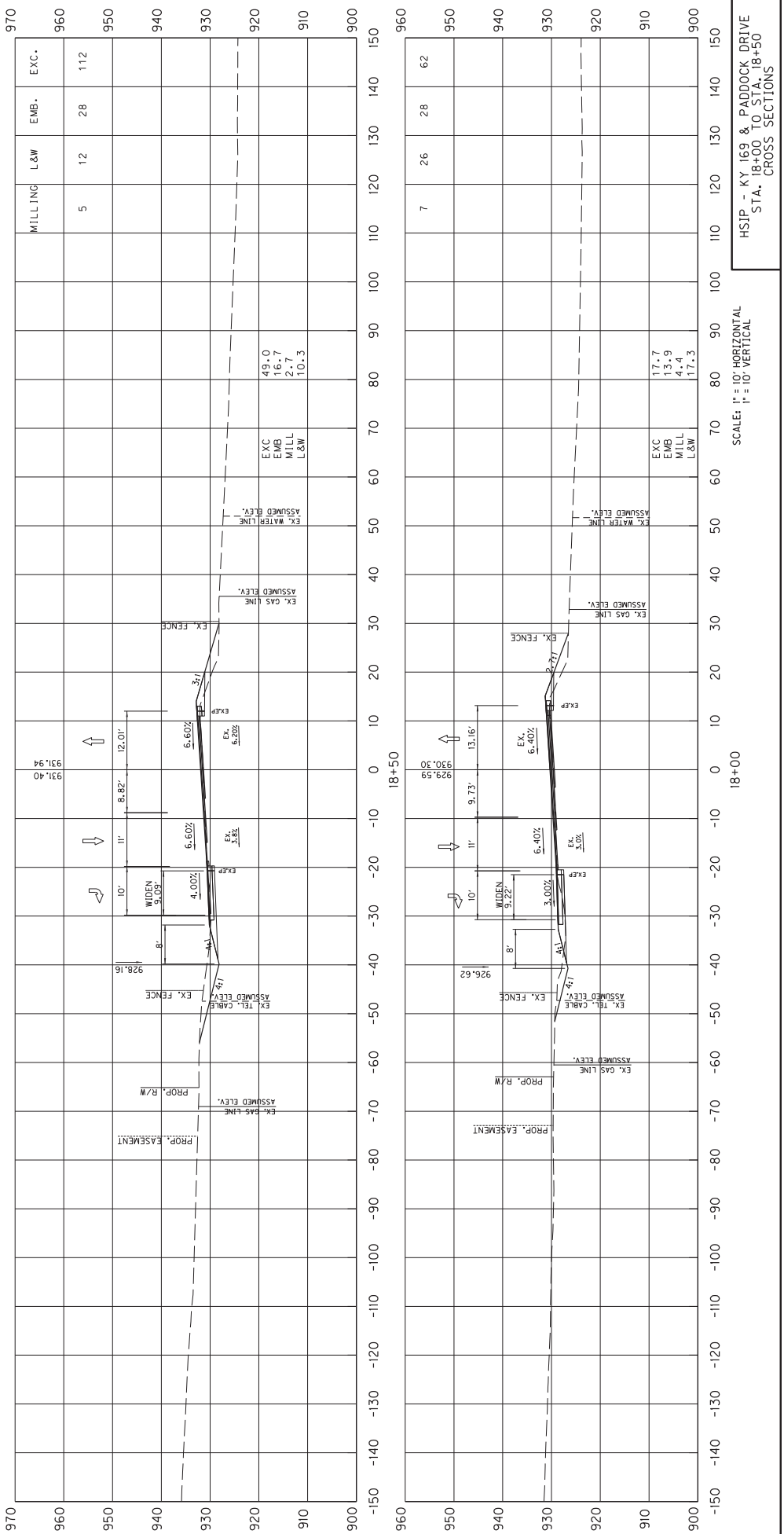
FILE NAME: C:\PW_WORKDIR\ANDREW-B\DMS85739\JESSAMINE KY 169_PADDOCK SECTIONS_MASTER.DGN
USER: andrewb
DATE PLOTTED: August 4, 2022
E-SHEET NAME:
PowerInRoads v8.11.9.397

COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-9014	X10

RIGHT OF WAY PLANS

HSIP - KY 169 & PADDOCK DRIVE
STA. 18+00 TO STA. 18+50
CROSS SECTIONS

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

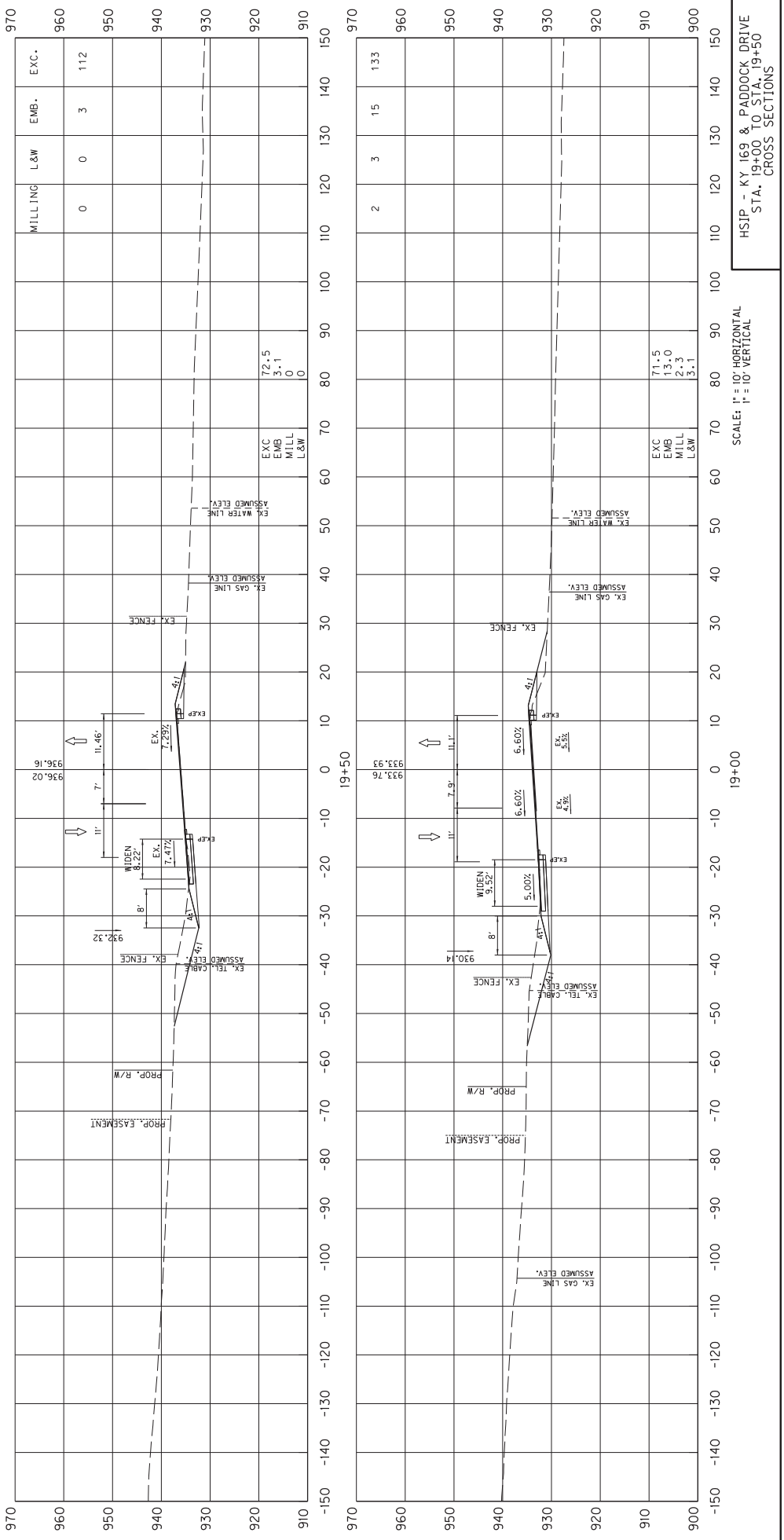


COUNTY OF	ITEM NO.	SHEET NO.
JESSAMINE	7-9014	XII

RIGHT OF WAY PLANS

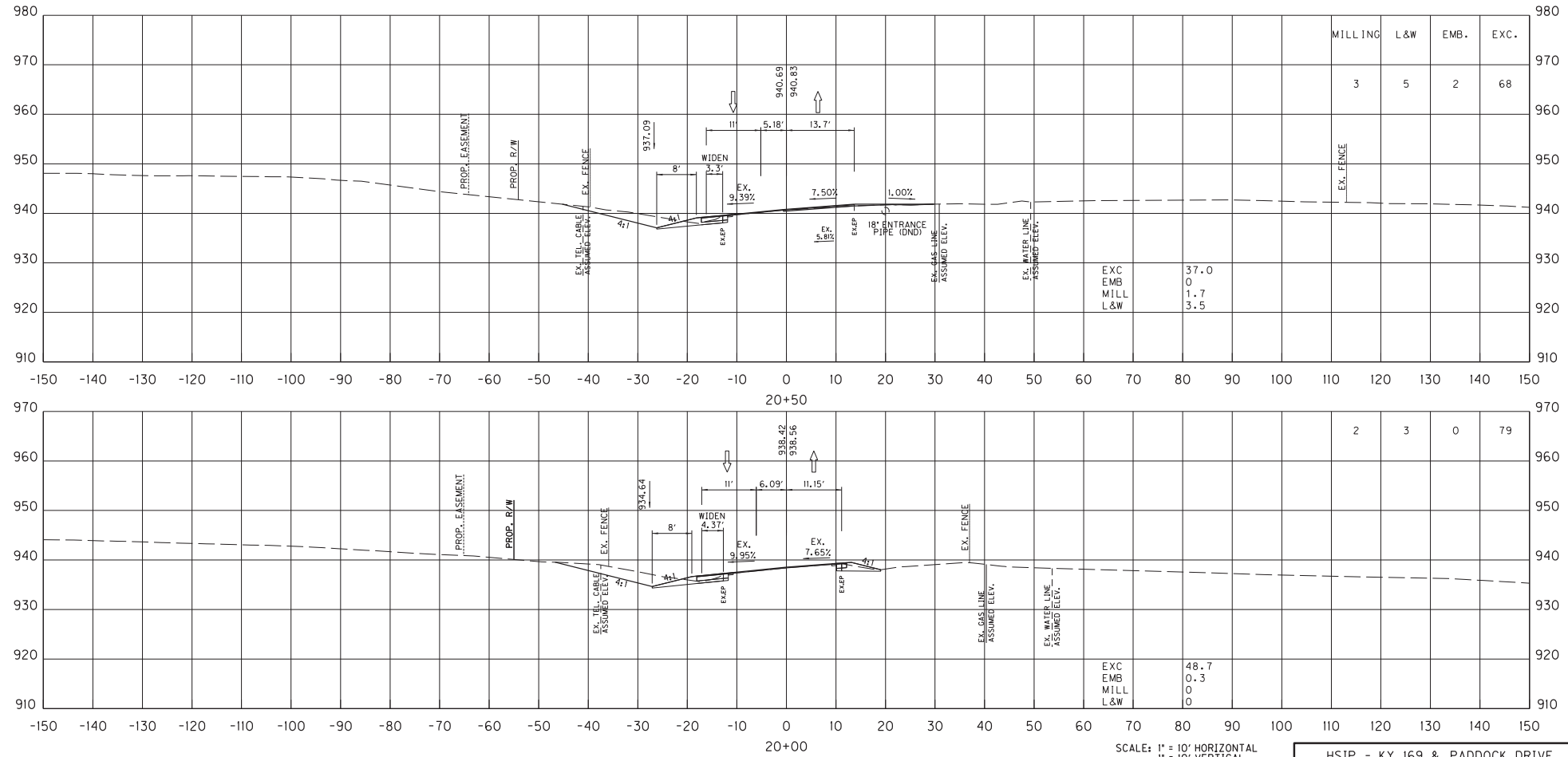
HSIP - KY 169 & PADDOCK DRIVE
STA. 19+00 TO STA. 19+50
CROSS SECTIONS

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



COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014	X12

RIGHT OF WAY PLANS



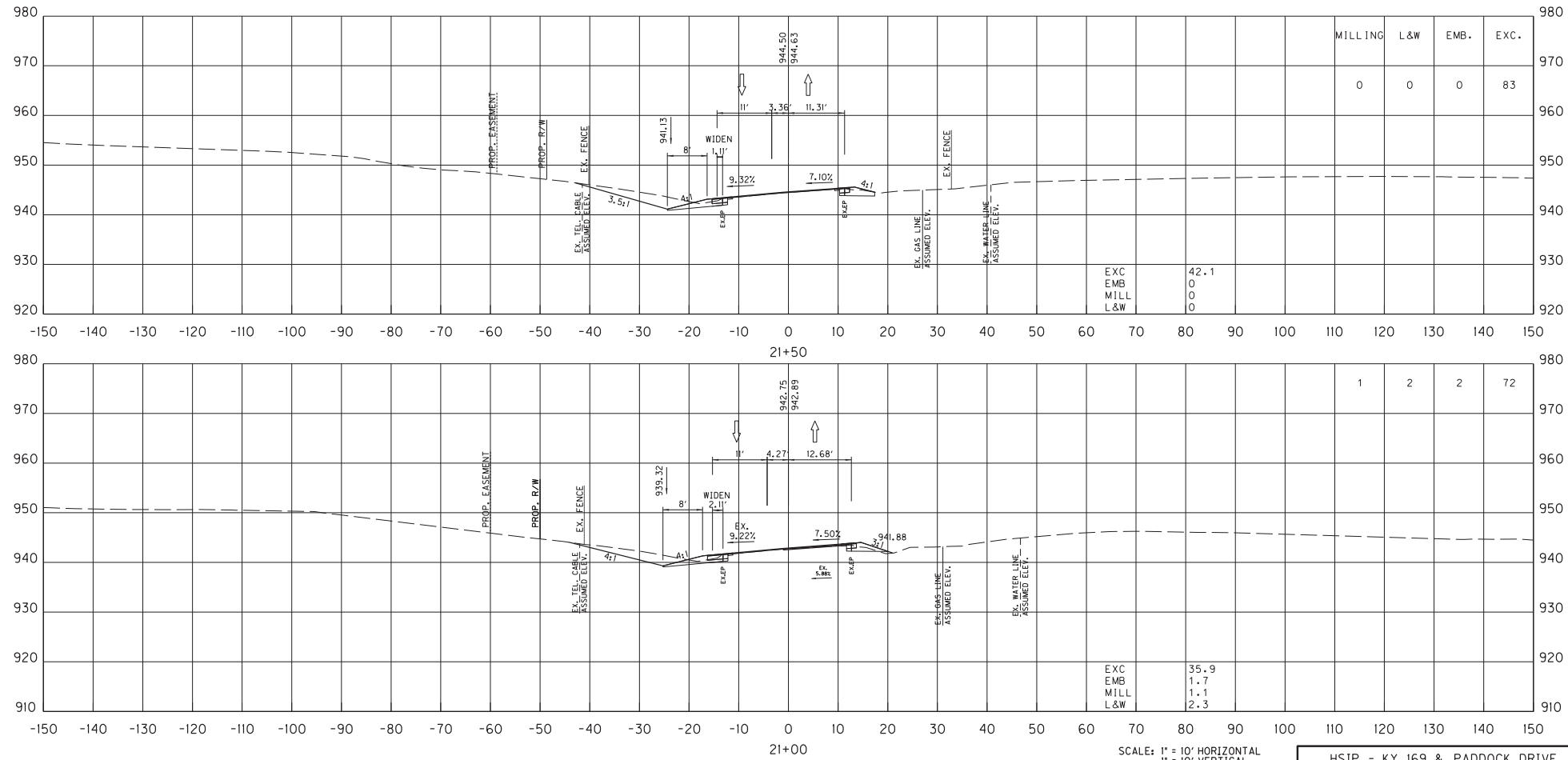
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

HSIP - KY 169 & PADDOCK DRIVE
STA. 20+00 TO STA. 20+50
CROSS SECTIONS

FILE NAME: C:\PW_WORKDIR\ANDREW.BLVM585739\JESSAMINE KY 169_PADDOCK SECTIONS_MASTER.DGN
USER: andrewb
DATE PLOTTED: August 4, 2022
E-SHEET NAME:
Power InRoads v8.11.9.397

COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014	X13

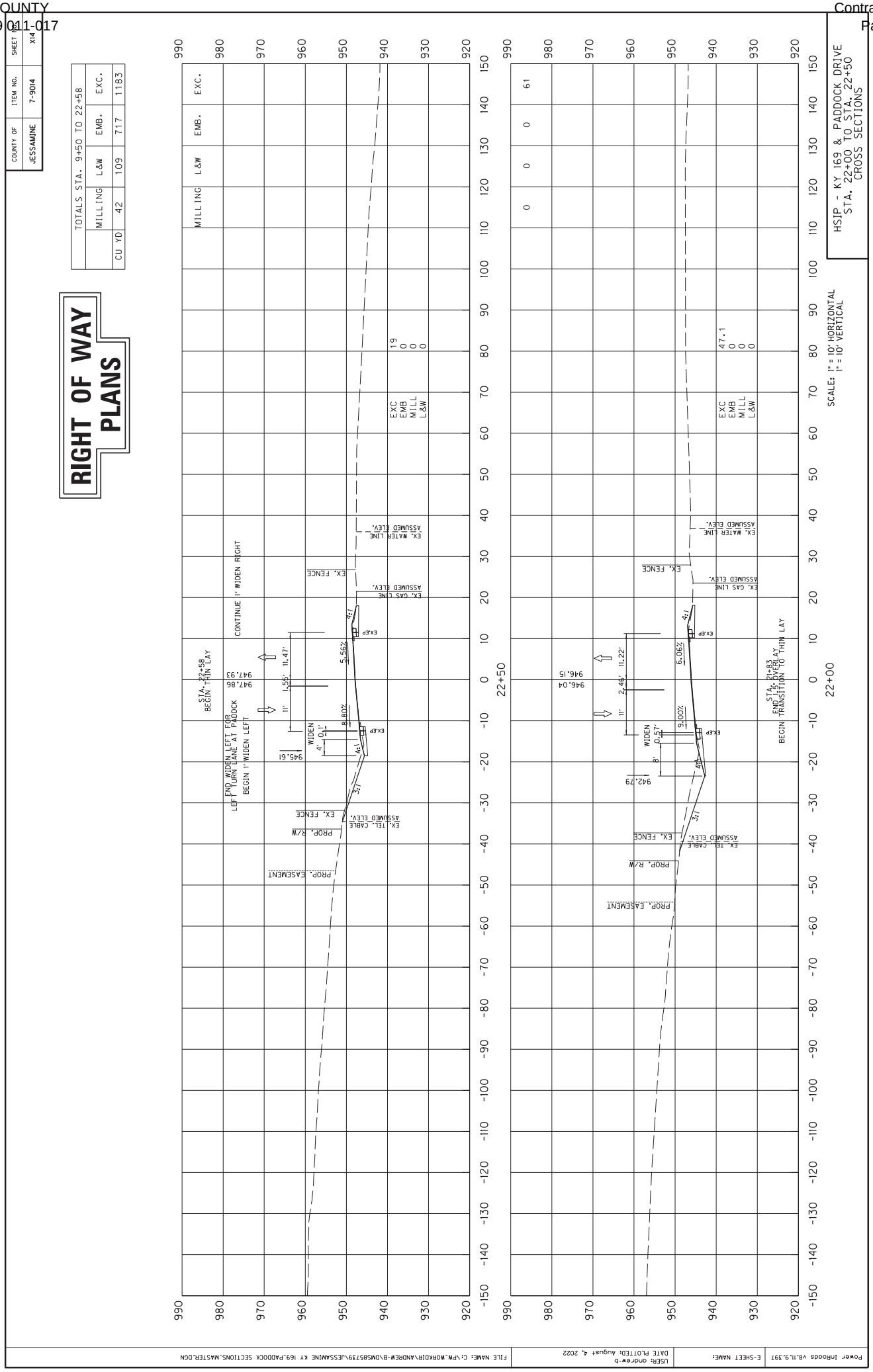
RIGHT OF WAY PLANS



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

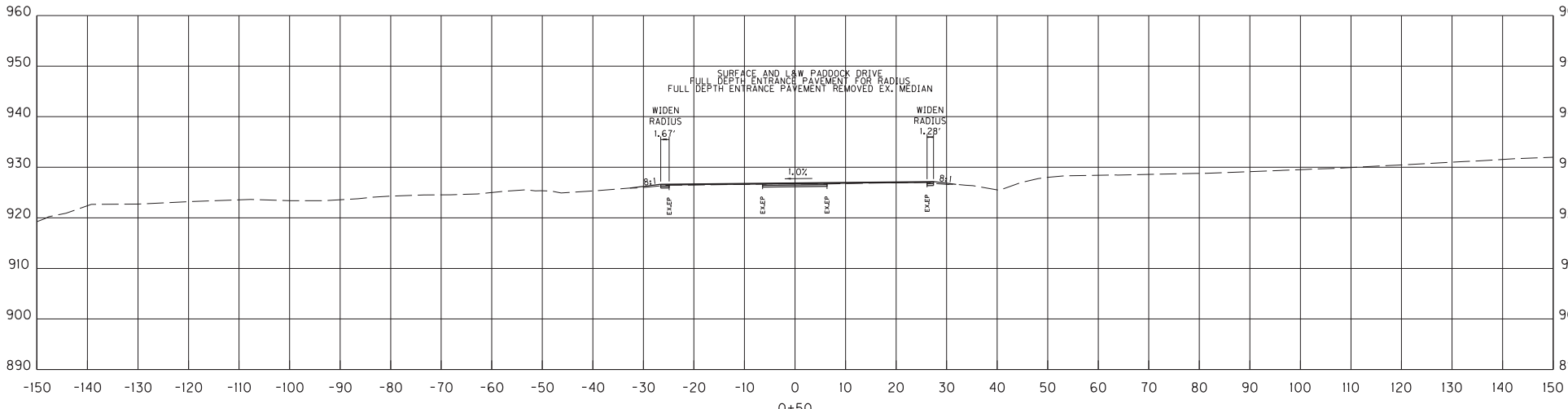
HSIP - KY 169 & PADDOCK DRIVE
STA. 21+00 TO STA. 21+50
CROSS SECTIONS

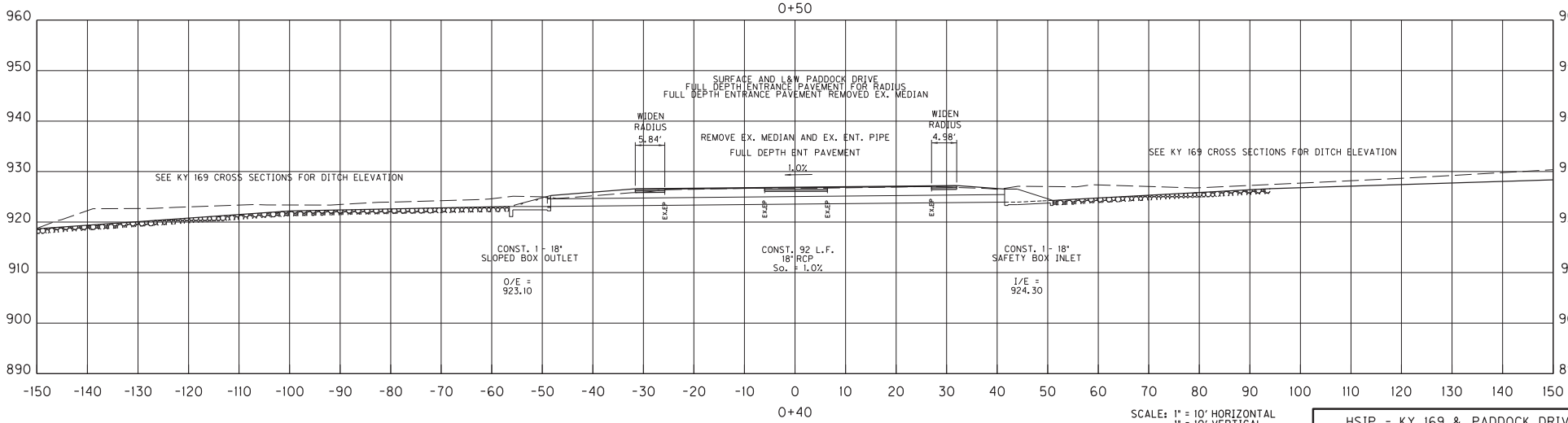
FILE NAME: C:\PW_WORKDIR\ANDREW-B\DMS85739\JESSAMINE KY 169_PADDOCK SECTIONS_MASTER.DGN
USER: andrewb
DATE PLOTTED: August 4, 2022
E-SHEET NAME:
Power InRoads v8.11.9.397


RIGHT OF WAY PLANS
COUNTY OF JESSAMINE
ITEM NO. 7-9014
SHEET NO. X14
TOTALS STA. 9+50 TO 22+58
MILLING L&W EMB. EXC.
CU YD 42 109 717 1183
HSIP - KY 169 & PADDOCK DRIVE
STA. 22+00 TO STA. 22+50
CROSS SECTIONS
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL
22+50
22+00
STA. 22+58 BEGIN THIN LAY
END WIDEN LEFT FOR LEFT TURN LANE AT PADDOCK
BEGIN 1' WIDEN LEFT
CONTINUE 1' WIDEN RIGHT
END STA. 21+83 THIN LAY
BEGIN TRANSITION TO THIN LAY
EXC EMB MILL L&W
EX. FENCE
EX. GAS LINE ASSUMED ELEV.
EX. WATER LINE ASSUMED ELEV.
EX. TEL. CABLE ASSUMED ELEV.
PROP. R/W
PROP. EASEMENT
WIDEN 4' 0.1'
945.61
947.93
947.86
946.15
946.04
942.79
Power InRoads V8.11.9.397
E-SHEET NAME:
USER: andrew.b
DATE PLOTTED: August 4, 2022
FILE NAME: C:\PW_WORKDIR\ANDREW.B\DM587399\JESSAMINE KY 169-PADDOCK SECTIONS_MASTER.DGN

COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014	X15

RIGHT OF WAY PLANS





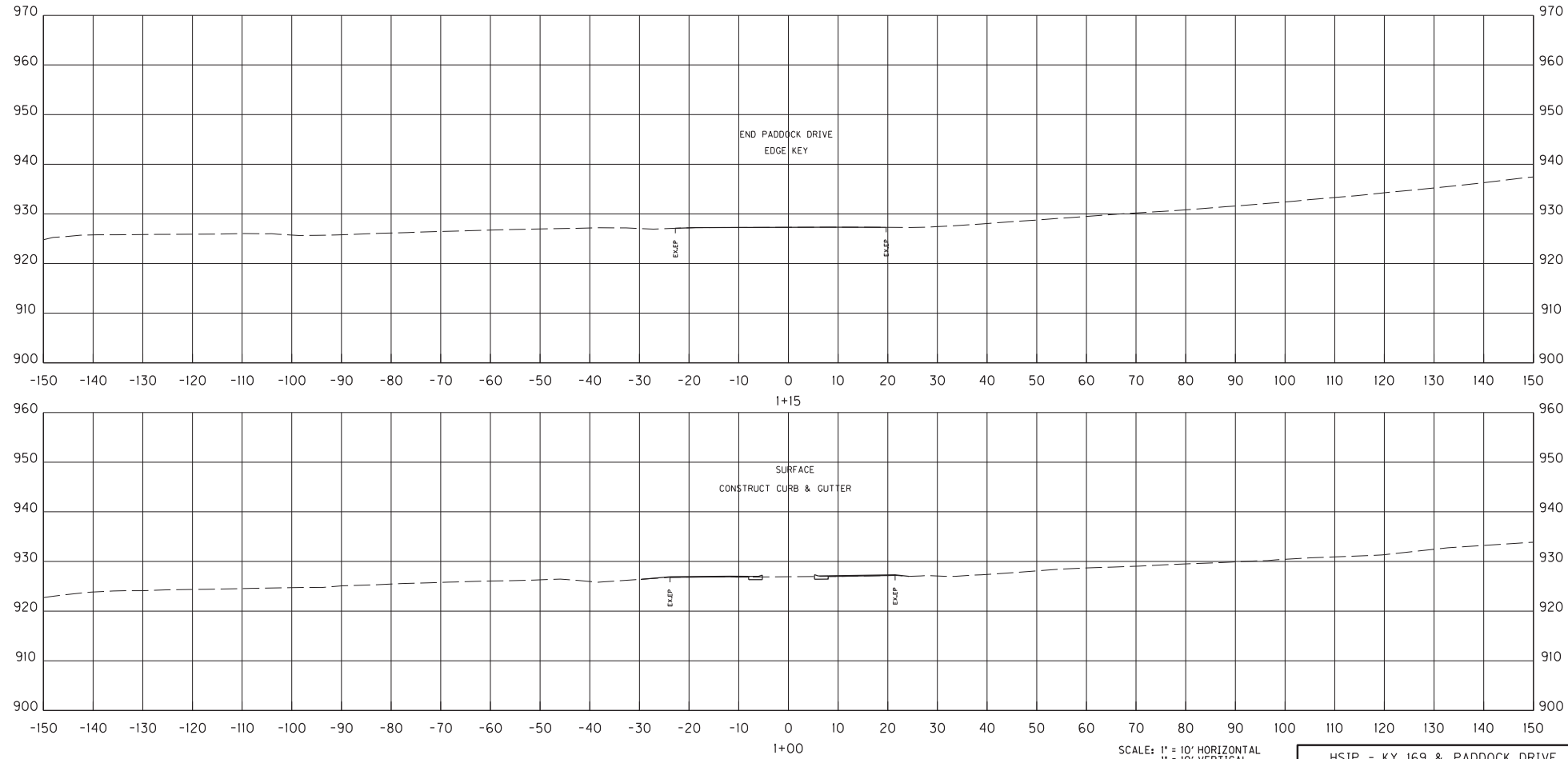
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

HSIP - KY 169 & PADDOCK DRIVE
STA. 0+40 TO STA. 0+50
PADDOCK DRIVE CROSS SECTIONS

FILE NAME: C:\PW_WORKDIR\ANDREW-B\DMS85739\JESSAMINE KY 169_PADDOCK SECTIONS_MASTER.DGN
USER: andrew-b
DATE PLOTTED: July 6, 2021
E-SHEET NAME:
Power InRoads v8.11.9.397

COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014	X16

RIGHT OF WAY PLANS

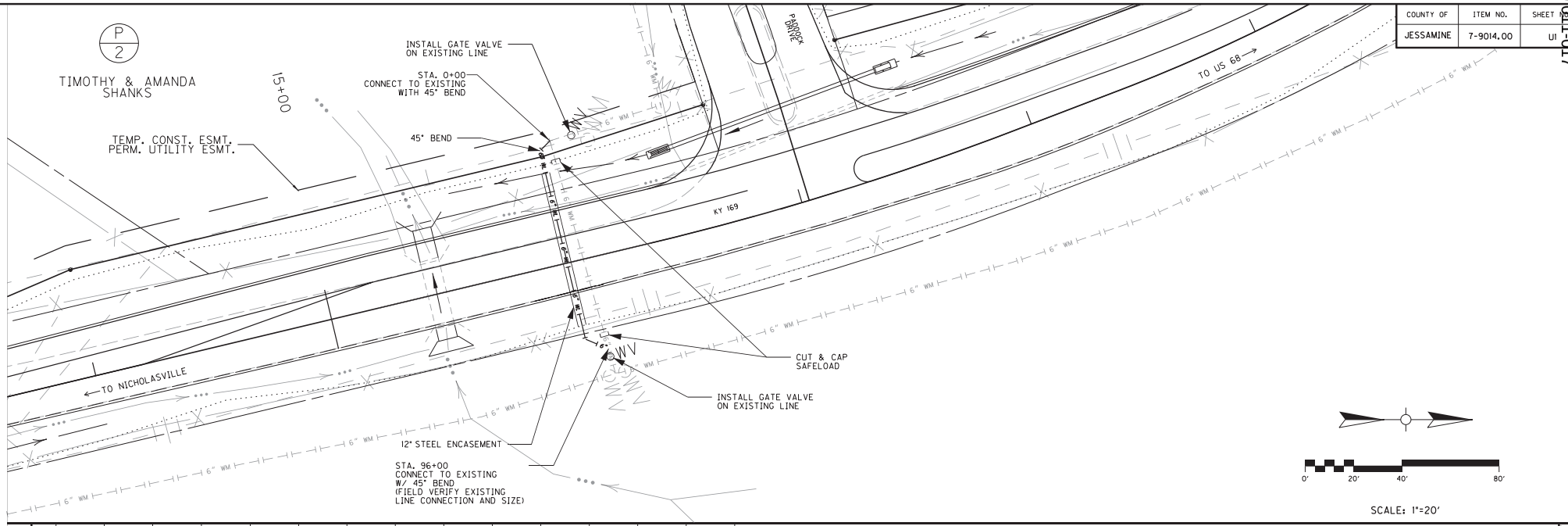


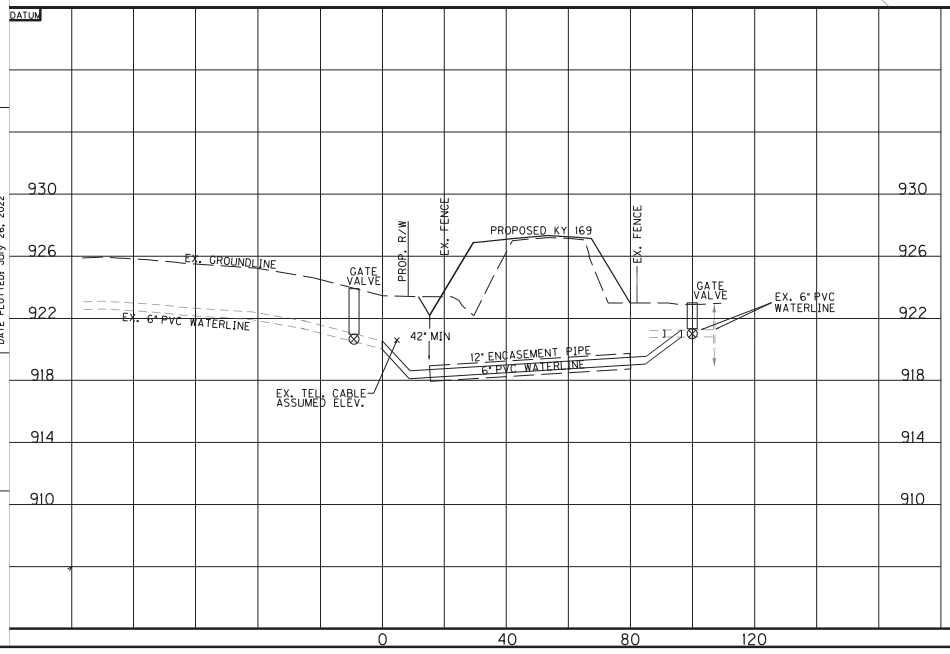
SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

HSIP - KY 169 & PADDOCK DRIVE
STA. 1+00 TO STA. 1+15
PADDOCK DRIVE CROSS SECTIONS

FILE NAME: C:\PW_WORKDIR\ANDREW-B\DMS85739\JESSAMINE KY 169_PADDOCK SECTIONS_MASTER.DGN
USER: andrew.b
DATE PLOTTED: July 6, 2021
E-SHEET NAME:
Power InRoads v8.11.9.397

COUNTY OF	ITEM NO.	SHEET
JESSAMINE	7-9014.00	01





GENERAL NOTES

1. ALL FITTINGS TO BE BLOCKED AND SHALL BE WRAPPED WITH HEAVY PLASTIC BEFORE PLACMENT OF CONCRETE. (4 MILS MINIMUM THICKNESS).

2. WATERLINE PIPE FITTINGS SHALL BE PVC.

3. ALL CONCRETE KICKERS SHALL BEAR AGAINST UNDISTURBED EARTH.

4. ALL WATER LINES SHALL HAVE A MINIMUM OF 3'6" COVER.

5. ENCASEMENT PIPE MUST BE BITUMINOUS COATED INSIDE AND OUT, AND SEALED ON BOTH ENDS WITH A RUBBER FURNCO END SEAL. ENCASEMENT PIPE THICKNESS SHALL BE PER KTYC SPECIFICATIONS.

6. FIELD ADJUST LOCATION OF PROPOSED WATERLINE TO AVOID EXISTING EXISTING UTILITIES WITH KYTC AND UTILITY OWNER APPROVAL.

7. ALL PIPE SHALL BE INSTALLED VIA JACK AND BORE. CONTRACTOR SHALL DETERMINE PREFERRED DIRECTION OF DRILLING USING PROPOSED AND EXISTING ROW AND EASEMENTS.

8. REMOVE AND REPLACE EXISTING LANDSCAPING WITH KYTC APPROVAL.

9. CONTRACTOR SHALL COORDINATE WITH CITY OF NICHOLASVILLE TO SCHEDULE TIE INS AND ANY TEMPORARY INTERRUPTIONS IN WATER SERVICE.

10. CONCTRACTOR SHALL BE RESPONSIBLE FOR TESTING AND DISINFECTION OF ALL CONSTRUCTED WATERLINES IN COMPLIANCE WITH CITY OF NICHOLASVILLE WATER REQUIREMENTS. TEMPORARY FLUSHING MEASURES ARE ACCEPTABLE WITH APPROVAL FROM CITY OF NICHOLASVILLE.

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.

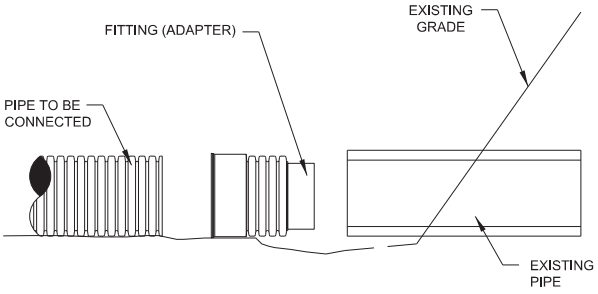
NOTE: LOCATION OF UNDERGROUND UTILITIES IS APPROXIMATE AND NOT ALL UTILITIES MAY BE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS AND EXISTING LINE SIZES WHEN PERFORMING WORK IN THESE AREAS.

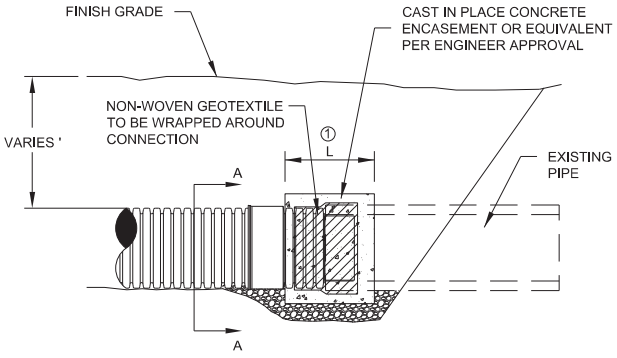
SCALE: 1" = 20' HORIZONTAL
1" = 4' VERTICAL

HSIP - KY 169
WATERLINE RELOCATION AT PADDOCK DR
PLAN AND PROFILE SHEET

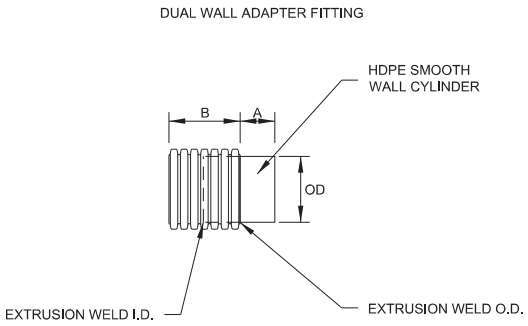
FILE NAME: C:\PW_WORKDIR\PEWIN_DAWN-S\D0130893\WORKING_WL_RELO.DGN
USER: dawn-s
DATE PLOTTED: July 26, 2022
E-SHEET NAME:
Power InRoads v8.11.9.397

PIPE EXTENSION DUAL WALL ADAPTER FITTING DETAILS
ADAPTER TO DISSIMILAR MATERIAL

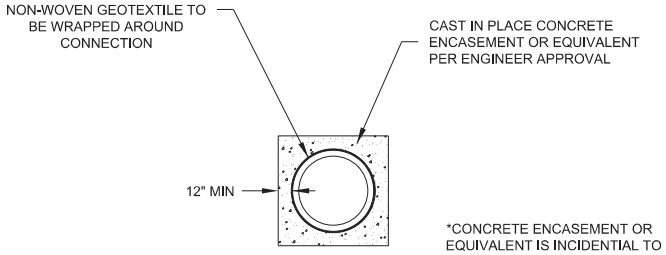




PIPE	L
15"	24"
18"	24.8"
24"	29.6"
36"	49.4"



PIPE	A	B	OD
15"	6"	13"	15"
18"	6"	13.4"	18"
24"	8"	15.8"	24"
36"	10"	25.7"	36"

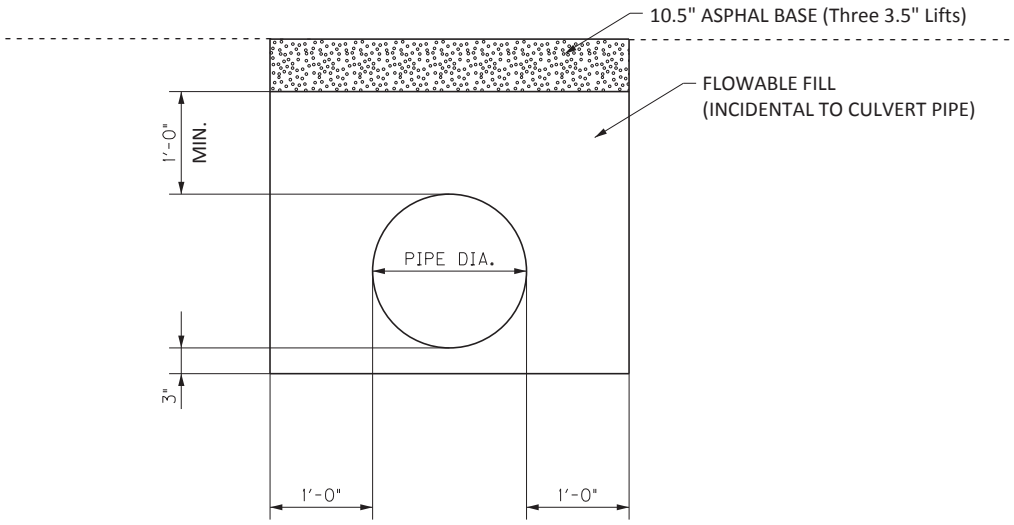


SECTION "A-A"

CAST IN PLACE CONCRETE ENCASEMENT	
APPROXIMATE QUANTITIES	
PIPE	CLASS "A" CONC. (CUYD)
15"	0.82
18"	0.95
24"	1.40
36"	3.29

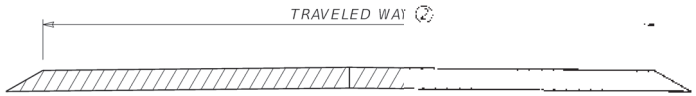
PIPE PAVING DETAIL

FOR DRAINAGE PIPES WHERE THE REMOVAL OF EXISTING PIPE WILL REQUIRE PAVING OPERATIONS



CULVERT PIPE EXTENSIONS - INITAL BACKFILL

Culvert Pipe Extensions 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, Level and Wedge any settlement prior to the Asphalt Surface overlay.



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. XX-XXXXX.XX COUNTY OF XXXXXXXXXXX
SHEET NO. RXXX

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_____

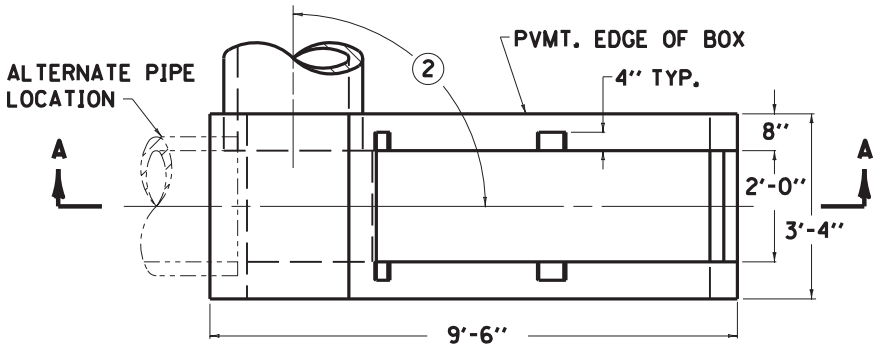
Signature Contractor's Representative_____& Date_____

**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.

JESSAMINE COUNTY
FD04 057 0169 011-017



PLAN VIEW

NOTES

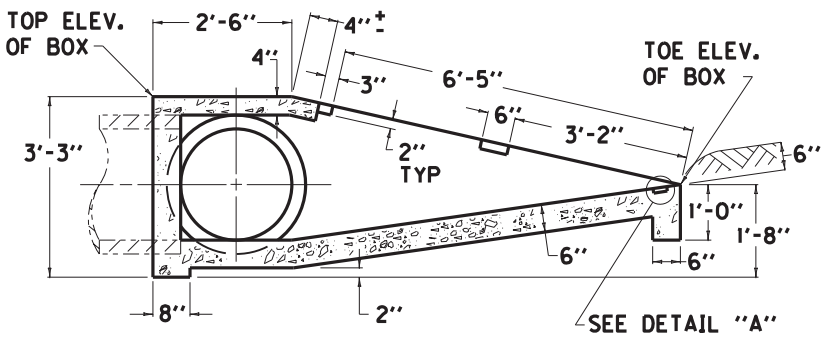
ITEM CODE	BID ITEM	UNIT
1726	SAFETY BOX INLET-18 INCH SDB-1	EACH
1727	SAFETY BOX INLET-24 INCH SDB-1	EACH

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.

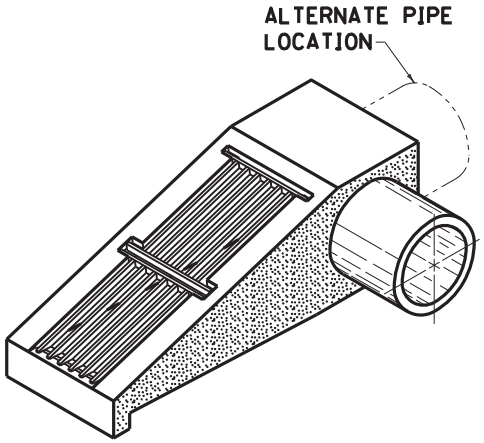
(1) TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.

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

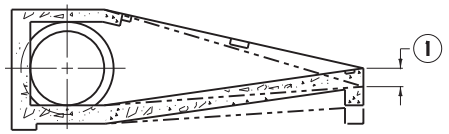
APPROXIMATE QUANTITIES			
CLASS "A" CONC.	GRATE	LBS. STRUCTURAL STEEL	
CUBIC YARDS	NUMBER	EACH GRATE	TOTAL POUNDS
1.44	1	145	298
	2	153	



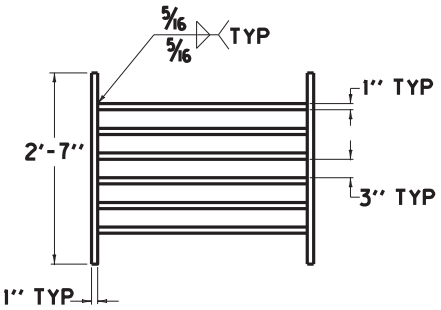
SECTION A-A



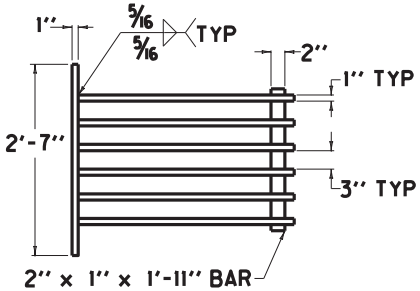
ISOMETRIC VIEW



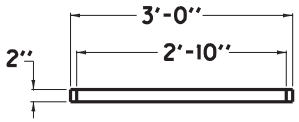
SECTIONAL VIEW



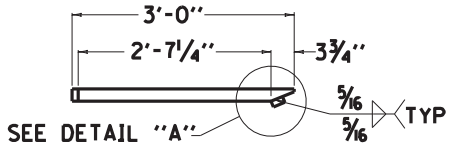
GRATE NO. 1
PLAN VIEW



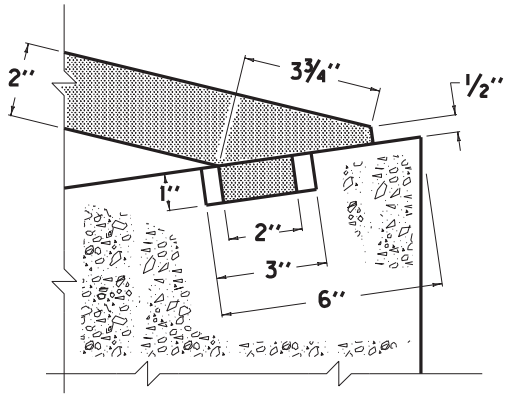
GRATE NO. 2
PLAN VIEW



GRATE NO. 1
SIDE ELEVATION



GRATE NO. 2
SIDE ELEVATION



DETAIL "A"

KENTUCKY
DEPARTMENT OF HIGHWAYS

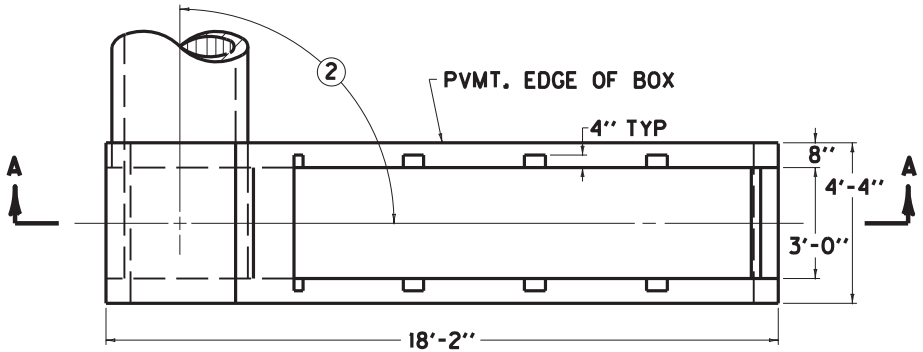
SAFETY TYPE BOX INLET (18" OR 24")

APPROVED _____ PROJECT ENGINEER

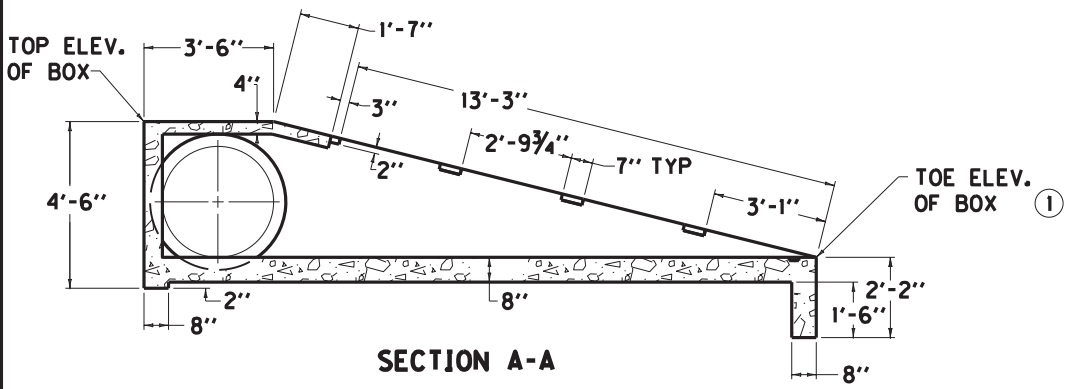
06-04-2008 DATE

Contract ID: 224405
Page 176 of 304

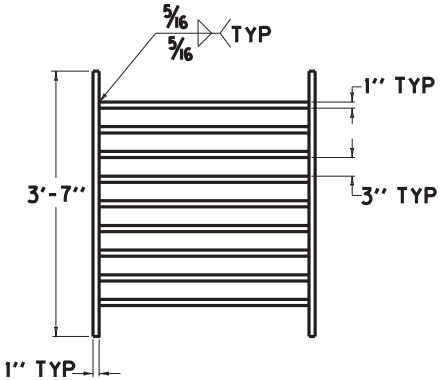
COUNTY OF	ITEM NO.	SHEET NO.



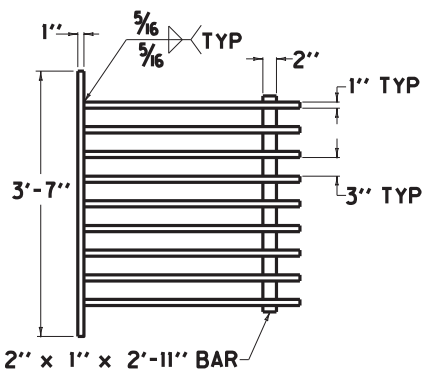
PLAN VIEW



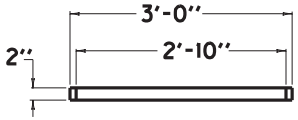
SECTION A-A



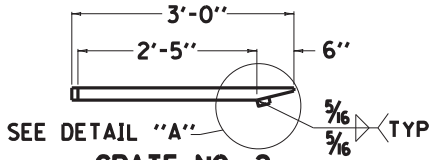
GRATE NO. 1
PLAN VIEW



GRATE NO. 2
PLAN VIEW



GRATE NO. 1
SIDE ELEVATION



GRATE NO. 2
SIDE ELEVATION

NOTES

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

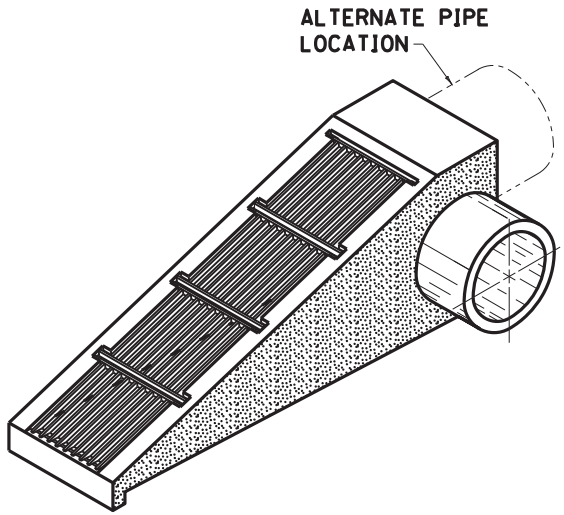
THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.

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

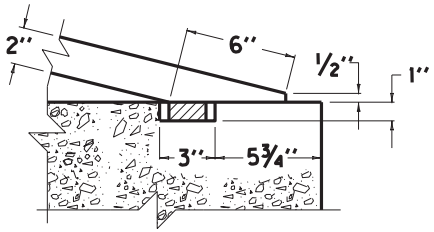
(2) SKEW OF BOX SHALL VARY TO FIT EXISTING FIELD CONDITIONS.

3. ALL QUANTITIES ARE FOR ONE HEADWALL.

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



ISOMETRIC VIEW



DETAIL "A"

SHEET 1 OF 2

KENTUCKY
DEPARTMENT OF HIGHWAYS

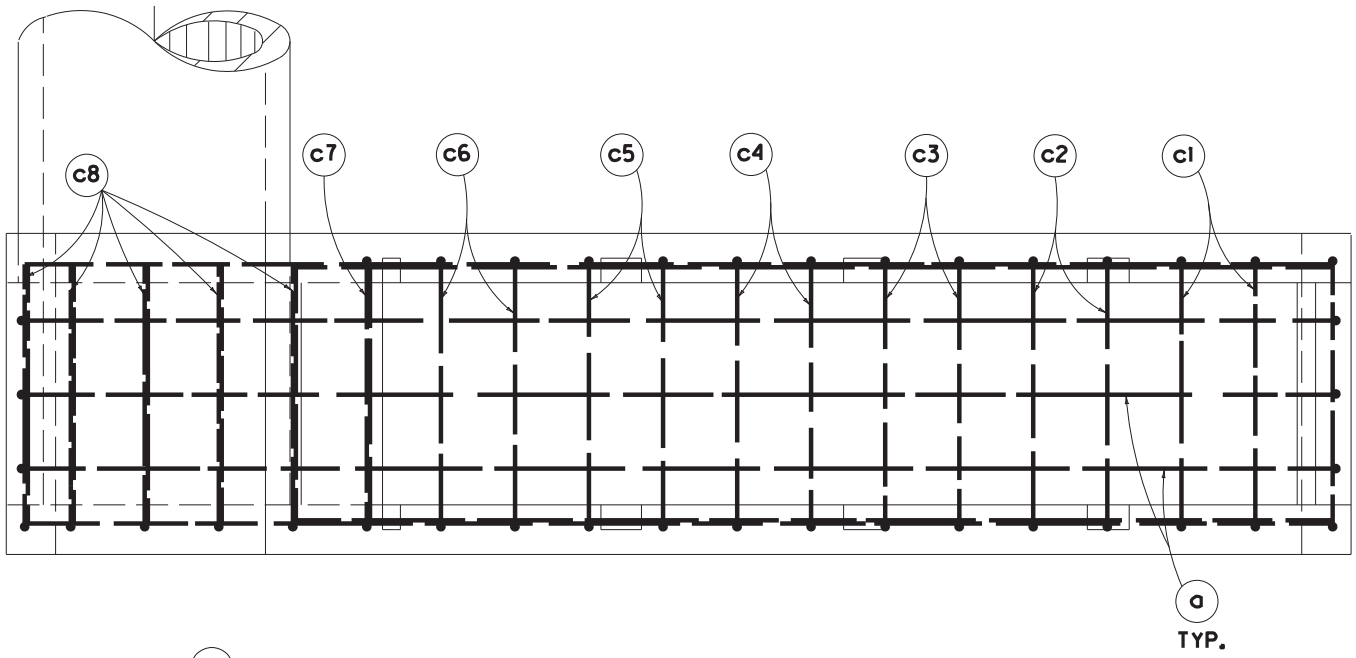
SAFETY TYPE
BOX INLET
(36")

APPROVED _____ PROJECT ENGINEER 06-04-2008 DATE

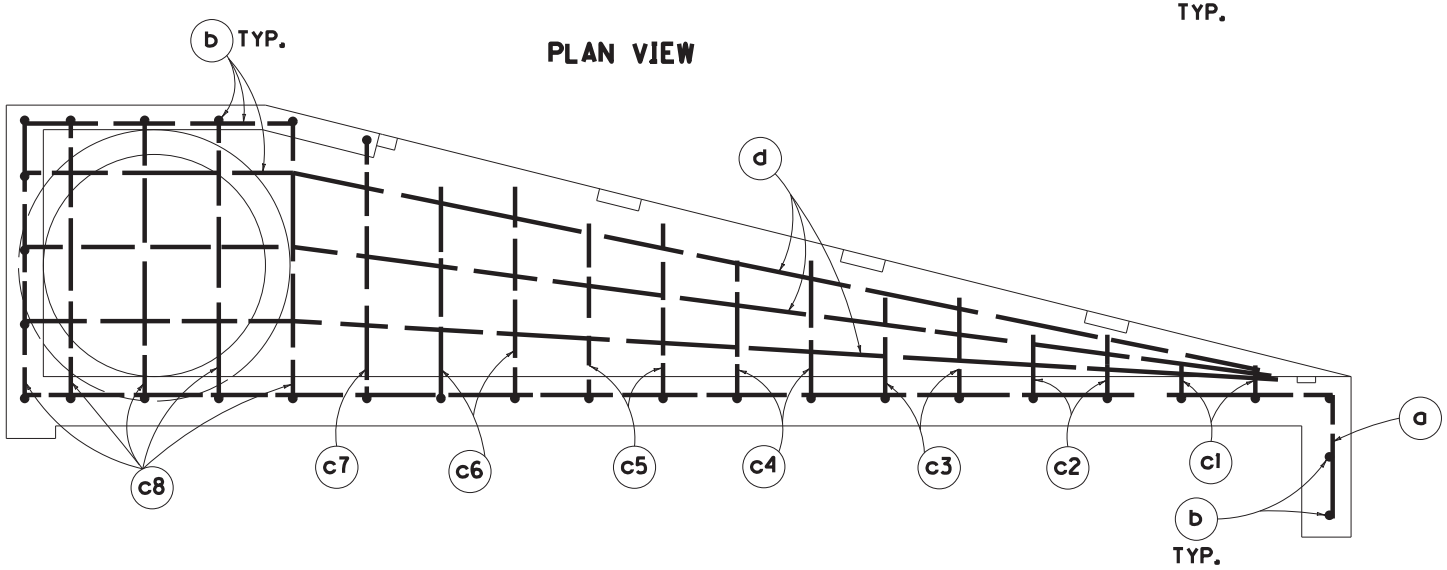
Contract ID: 224405
Page 297 of 304

JESSAMINE COUNTY
FD04 057 0169 011-012

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		

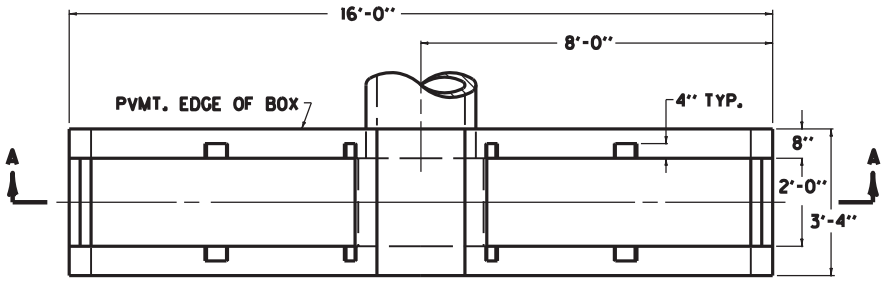
SHEET 2 OF 2

KENTUCKY
DEPARTMENT OF HIGHWAYS

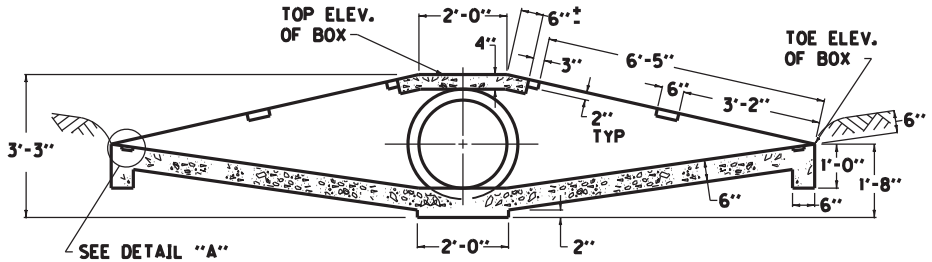
BILL OF REINFORCEMENT SAFETY TYPE BOX INLET (36")

APPROVED _____ PROJECT ENGINEER 06-04-2008 DATE

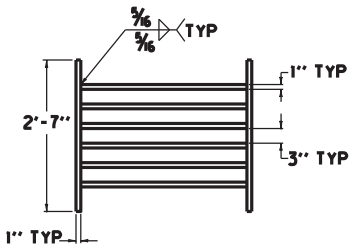
COUNTY OF	ITEM NO.	SHEET



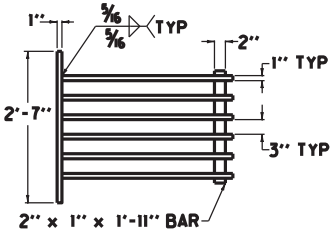
PLAN VIEW



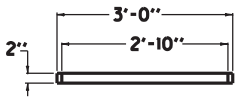
SECTION A-A



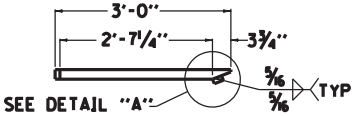
GRATE NO. 1
PLAN VIEW



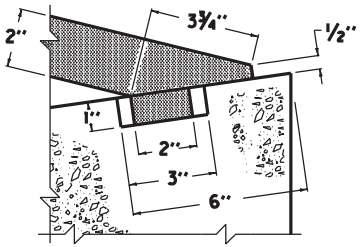
GRATE NO. 2
PLAN VIEW



GRATE NO. 1
SIDE ELEVATION



GRATE NO. 2
SIDE ELEVATION



DETAIL "A"

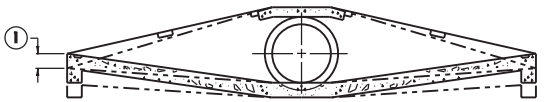
NOTES

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

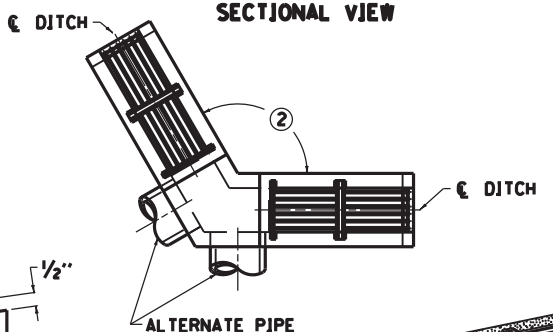
THE UNIT BID FOR EACH STRUCTURE SHALL INCLUDE ALL CONCRETE, STRUCTURAL STEEL GRATING, EXCAVATION, LABOR AND INCIDENTALS NECESSARY FOR ITS CONSTRUCTION AS DETAILED ON THIS SHEET.

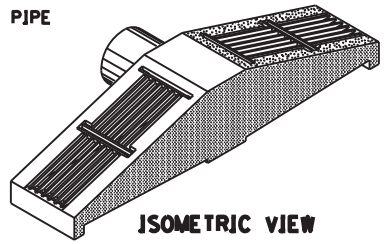
(1) TOE OF BOX SHALL BE RAISED OR LOWERED TO FIT EXISTING FIELD CONDITIONS.

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



SECTIONAL VIEW





ISOMETRIC VIEW

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

N/A

DBL SAFETY BOX INLET DETAIL SHEET

MicroStation v8.11.7.443
E-SHEET NAME: ——
USER: Patrick.Stone
DATE PLOTTED: September 24, 2013
FILE NAME: C:\USERS\PATRICK.STONE\APPDATA\LOCAL\MICROSOFT\WINDOWS\TEMPORARY INTERNET FILES\CONTENT.OUTLOOK\YOB43LNA\SAFETY BOX.DGN

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

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

SUPPLEMENTAL SPECIFICATIONS

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

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

1I

SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

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

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

2.0 MATERIALS.

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

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

2.2 Sign and Controls. All signs must:

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

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

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

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

2.3 Power.

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

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

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

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

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

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

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

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

Code	Pay Item	Pay Unit
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

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).

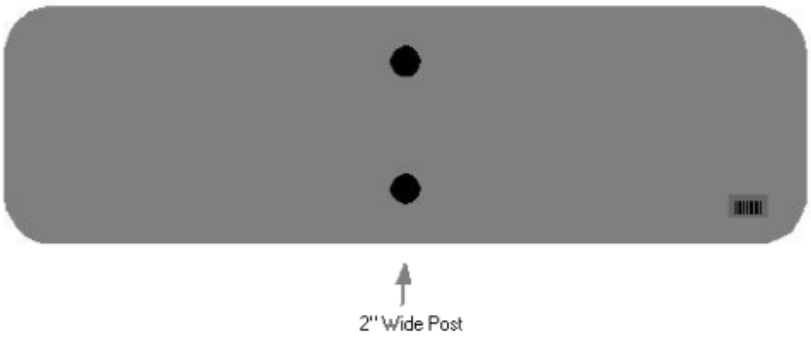
The installation of the permanent sign will be measured in accordance to Section 715.

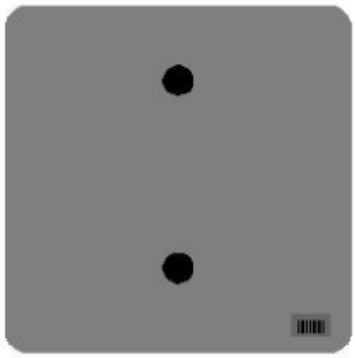
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
24631EC	Barcode Sign Inventory	Each

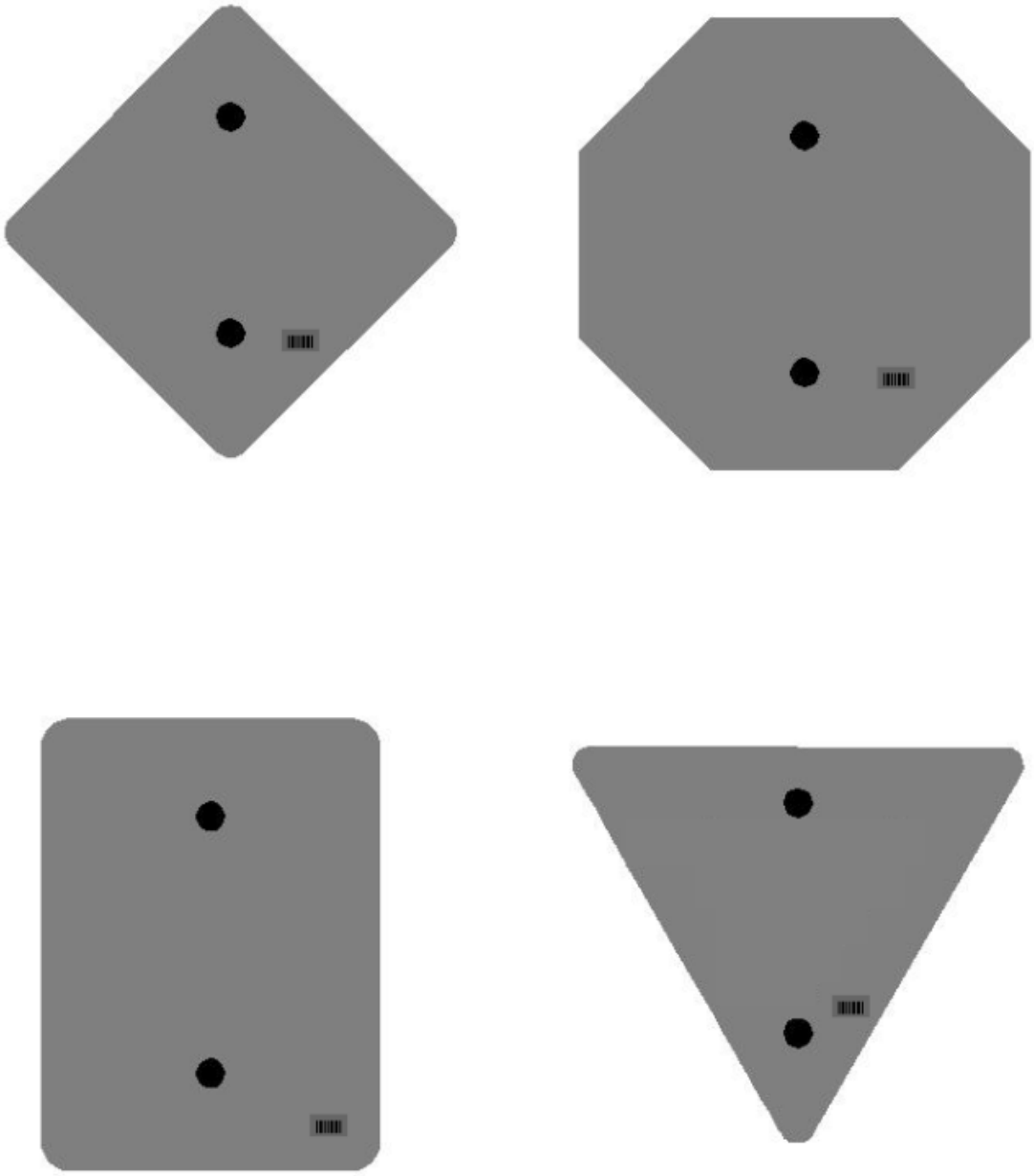
The Department will not make payment for this item until all barcodes are installed and sign inventory is complete on every permanent sign installed on the project. The Department will make payment for installation of the permanent sign in accordance to Section 715. The Department will consider payment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

One Sign Post

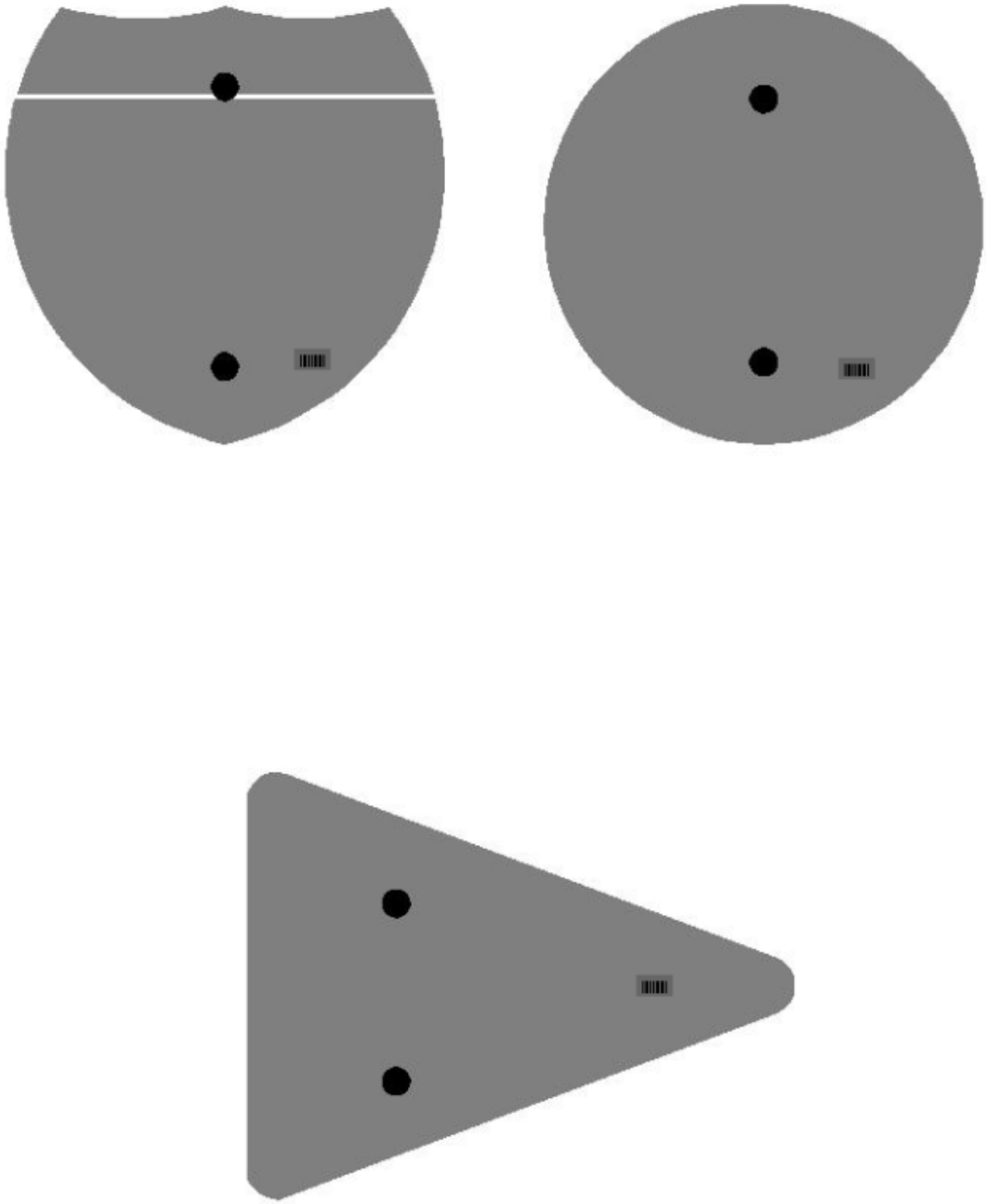




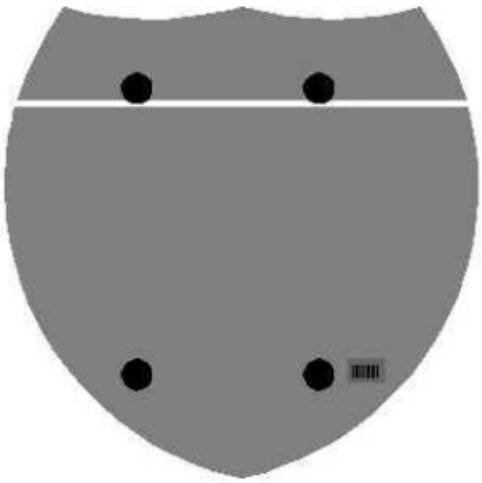
One Sign Post



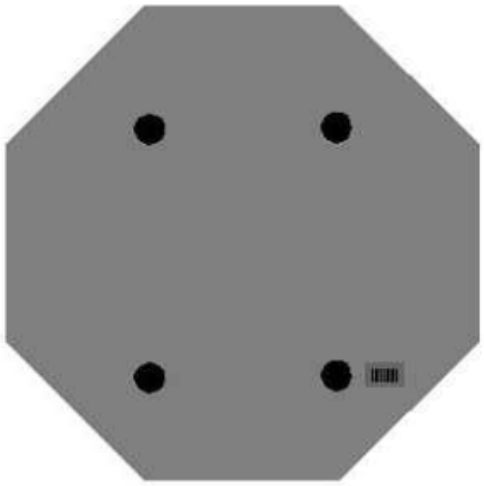
One Sign Post



Double Sign Post

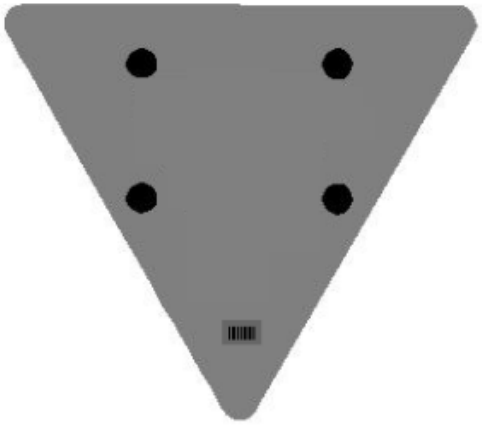


Interstate
Shield



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
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
GUARDRAIL SYSTEM TRANSITION RBR-018
GUARDRAIL END TREATMENT TYPE 1 ..... RBR-020-07
GUARDRAIL END TREATMENT TYPE 4A RBR-035-12
DELINEATORS FOR GUARDRAIL RBR-005-01

~ DRAINAGE ~

BOX INLETS AND OUTLETS

SLOPED BOXES

SLOPED BOX OUTLET TYPE 1 ..... RDB-100-05
GRATES FOR SLOPED BOX OUTLET TYPE 1 ..... RDB-101-05

PAVED DITCHES, FLUME INLETS AND CHANNEL LININGS

CHANNEL LINING CLASS II AND III RDD-040-05

TYPICAL DRAINAGE INSTALLATIONS

CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS (12” – 24” PIPE) RDI-001-10
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
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

MISCELLANEOUS DRAINAGE

SECURITY DEVICES FOR FRAMES, GRATES AND LIDS RDX-160-06
TEMPORARY SILT FENCE RDX-210-03
TEMPORARY SILT FENCE WITH WOVEN WIRE FENCE FABRIC RDX-215-01
SILT TRAP - TYPE A RDX-220-05
SILT TRAP - TYPE B RDX-225-01
SILT TRAP - TYPE C RDX-230-01

Standard Drawings That Apply
Page 2 of 2

~ GENERAL ~

CURVE WIDENING AND SUPERELEVATION

CURVE WIDENING AND SUPERELEVATION TRANSITIONS RGS-001-07

MISCELLANEOUS STANDARDS

RIGHT OF WAY MONUMENTS RGX-005-06
TYPICAL EMBANKMENT FOUNDATION BENCHES RGX-010-04

~ PAVEMENT ~

MEDIANS, CURBS, APPROACHES, ENTRANCES, ETC.

CURB AND GUTTER, CURBS AND VALLEY GUTTER RPM-100-11
APPROACHES, ENTRANCES, AND MAIL BOX TURNOUT RPM-110-07
ISLAND CURB CONSTRUCTION DETAILS (RIGID & FLEXIBLE PAVEMENT) RPM-120-07

TRAFFIC

~ PERMANENT ~

MARKERS

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

RUMBLE STRIPS

CENTERLINE RUMBLE STRIPS TPR-100
CENTERLINE RUMBLE STRIPS 6 INCH STRIPING TPR-110
SHOULDER & EDGELINE RUMBLE STRIPS PLACEMENT DETAILS TPR-115
EDGELINE RUMBLE STRIP DETAILS TWO LANE ROADWAYS TPR-120
RUMBLE STRIP DETAILS MULTI-LANE ROADWAYS AND RAMPS TPR-130

~ TEMPORARY ~

TRAFFIC CONTROL

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

STRIPING OPERATIONS

MOBILE OPERATION FOR DURABLE STRIPING CASE IV TTS-135-02

BRIDGES

~ HANDRAIL ~

STEEL HANDRAIL

RAILING SYSTEM SIDE MOUNTED MGS DETAILS BHS-011

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

224405

PROPOSAL BID ITEMS

Report Date 11/4/22

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	7,873.00	TON		$	
0020	00080		CRUSHED AGGREGATE SIZE NO 23	60.00	TON		$	
0030	00100		ASPHALT SEAL AGGREGATE	89.80	TON		$	
0040	00103		ASPHALT SEAL COAT	11.50	TON		$	
0050	00190		LEVELING & WEDGING PG64-22	607.00	TON		$	
0060	00212		CL2 ASPH BASE 1.00D PG64-22	1,514.00	TON		$	
0070	00214		CL3 ASPH BASE 1.00D PG64-22	3,479.00	TON		$	
0080	00301		CL2 ASPH SURF 0.38D PG64-22	1,761.00	TON		$	
0090	00388		CL3 ASPH SURF 0.38B PG64-22	451.00	TON		$	
0100	01820		LIP CURB AND GUTTER	116.00	LF		$	
0110	02676		MOBILIZATION FOR MILL & TEXT JESSAMINE KY 169 HSIP	1.00	LS		$	
0120	02677		ASPHALT PAVE MILLING & TEXTURING	314.00	TON		$	
0130	10020NS		FUEL ADJUSTMENT	17,878.00	DOLL	$1.00	$	$17,878.00
0140	10030NS		ASPHALT ADJUSTMENT	37,790.00	DOLL	$1.00	$	$37,790.00
0150	21289ED		LONGITUDINAL EDGE KEY	17,400.00	LF		$	
0160	23307EC		CL3 ASPH SURF NO.4B PG64-22	1,854.00	TON		$	
0170	24964EC		FINE MILLING	4,034.00	SQYD		$	
0180	24970EC		ASPHALT MATERIAL FOR TACK NON-TRACKING	40.80	TON		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0190	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	50.00	EACH		$	
0200	02159		TEMP DITCH	12,025.00	LF		$	
0210	02160		CLEAN TEMP DITCH	6,013.00	LF		$	
0220	02200		ROADWAY EXCAVATION	1,183.00	CUYD		$	
0230	02351		GUARDRAIL-STEEL W BEAM-S FACE	2,292.50	LF		$	
0240	02360		GUARDRAIL TERMINAL SECTION NO 1	6.00	EACH		$	
0250	02367		GUARDRAIL END TREATMENT TYPE 1	7.00	EACH		$	
0260	02381		REMOVE GUARDRAIL	3,225.00	LF		$	
0270	02391		GUARDRAIL END TREATMENT TYPE 4A	3.00	EACH		$	
0280	02403		REMOVE CONCRETE MASONRY	2.20	CUYD		$	
0290	02429		RIGHT-OF-WAY MONUMENT TYPE 1	9.00	EACH		$	
0300	02483		CHANNEL LINING CLASS II	220.00	TON		$	
0310	02545		CLEARING AND GRUBBING (XXX AC)	1.00	LS		$	
0320	02562		TEMPORARY SIGNS	210.00	SQFT		$	
0330	02650		MAINTAIN & CONTROL TRAFFIC (JESSAMINE KY 169 HSIP)	1.00	LS		$	
0340	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		$	
0350	02697		EDGELINE RUMBLE STRIPS	38,642.00	LF		$	
0360	02701		TEMP SILT FENCE	12,025.00	LF		$	
0370	02703		SILT TRAP TYPE A	9.00	EACH		$	
0380	02704		SILT TRAP TYPE B	9.00	EACH		$	

224405

PROPOSAL BID ITEMS

Report Date 11/4/22

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0390	02705		SILT TRAP TYPE C	9.00	EACH		$	
0400	02706		CLEAN SILT TRAP TYPE A	9.00	EACH		$	
0410	02707		CLEAN SILT TRAP TYPE B	9.00	EACH		$	
0420	02708		CLEAN SILT TRAP TYPE C	9.00	EACH		$	
0430	02726		STAKING (JESSAMINE KY 169)	1.00	LS		$	
0440	05950		EROSION CONTROL BLANKET	500.00	SQYD		$	
0450	05952		TEMP MULCH	29,268.00	SQYD		$	
0460	05953		TEMP SEEDING AND PROTECTION	21,951.00	SQYD		$	
0470	05963		INITIAL FERTILIZER	1.37	TON		$	
0480	05964		MAINTENANCE FERTILIZER	2.29	TON		$	
0490	05985		SEEDING AND PROTECTION	43,762.00	SQYD		$	
0500	05989		SPECIAL SEEDING CROWN VETCH	500.00	SQYD		$	
0510	05992		AGRICULTURAL LIMESTONE	27.44	TON		$	
0520	06510		PAVE STRIPING-TEMP PAINT-4 IN	100,000.00	LF		$	
0530	06542		PAVE STRIPING-THERMO-6 IN W	51,234.00	LF		$	
0540	06543		PAVE STRIPING-THERMO-6 IN Y	45,951.00	LF		$	
0550	06546		PAVE STRIPING-THERMO-12 IN W	144.00	LF		$	
0560	06565		PAVE MARKING-THERMO X-WALK-6 IN	532.00	LF		$	
0570	06568		PAVE MARKING-THERMO STOP BAR-24IN	214.00	LF		$	
0580	06569		PAVE MARKING-THERMO CROSS-HATCH (WHITE)	60.00	SQFT		$	
0590	06569		PAVE MARKING-THERMO CROSS-HATCH (YELLOW)	383.00	SQFT		$	
0600	06573		PAVE MARKING-THERMO STR ARROW	2.00	EACH		$	
0610	06574		PAVE MARKING-THERMO CURV ARROW	73.00	EACH		$	
0620	06575		PAVE MARKING-THERMO COMB ARROW	11.00	EACH		$	
0630	06578		PAVE MARKING-THERMO MERGE ARROW	3.00	EACH		$	
0640	06600		REMOVE PAVEMENT MARKER TYPE V	53.00	EACH		$	
0650	20191ED		OBJECT MARKER TY 3	10.00	EACH		$	
0660	20458ES403		CENTERLINE RUMBLE STRIPS	8,757.00	LF		$	
0670	20748ED		SHOULDER MILLING/TRENCHING (SECTION 1)	3,865.00	SQYD		$	
0680	20748ED		SHOULDER MILLING/TRENCHING (SECTION 2)	3,729.00	SQYD		$	
0690	21417ES717		PAVE MARK THERMO CONE CAP-SOLID YELLOW	75.00	SQFT		$	
0700	25017ED		RAIL SYSTEM SIDE MOUNTED MGS	56.00	LF		$	
0710	26175EC		ROADSIDE REGRADING	32,514.00	LF		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0720	00440		ENTRANCE PIPE-15 IN	157.00	LF		$	
0730	00441		ENTRANCE PIPE-18 IN	92.00	LF		$	
0740	00462		CULVERT PIPE-18 IN	27.00	LF		$	
0750	00464		CULVERT PIPE-24 IN	8.00	LF		$	
0760	01310		REMOVE PIPE	264.00	LF		$	
0770	01433		SLOPED BOX OUTLET TYPE 1-18 IN	1.00	EACH		$	
0780	01726		SAFETY BOX INLET-18 IN SDB-1	1.00	EACH		$	

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PROPOSAL BID ITEMS

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0790	01728		SAFETY BOX INLET-18 IN DBL SDB-5	2.00	EACH		$	
0800	01729		SAFETY BOX INLET-24 IN DBL SDB-5	1.00	EACH		$	
0810	02625		REMOVE HEADWALL	2.00	EACH		$	
0820	08002		STRUCTURE EXCAV-SOLID ROCK	13.00	CUYD		$	
0830	08003		FOUNDATION PREPARATION (MILEPOINT 12.98)	1.00	LS		$	
0840	08100		CONCRETE-CLASS A	72.00	CUYD		$	
0850	08150		STEEL REINFORCEMENT	5,176.00	LB		$	
0860	21819NN		FITTINGS (18" RCP TO PROPOSED 18" CULVERT PIPE)	3.00	EACH		$	
0870	21819NN		FITTINGS (24" RCP TO PROPOSED 18" CULVERT PIPE)	1.00	EACH		$	
0880	23497EC		REMOVE CULVERT PIPE HEADWALL	2.00	EACH		$	
0890	26131ED		SLOPED AND MITERED HEADWALL-18 IN	1.00	EACH		$	

Section: 0004 - UTILITY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0900	14003		W CAP EXISTING MAIN	2.00	EACH		$	
0910	14008		W ENCASEMENT STEEL BORED RANGE 3	65.00	LF		$	
0920	14059		W PIPE PVC 06 INCH	96.00	LF		$	
0930	14094		W TIE-IN 06 INCH	2.00	EACH		$	
0940	14117		W VALVE CUT-IN 06 INCH	2.00	EACH		$	

Section: 0005 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0950	06406		SBM ALUM SHEET SIGNS .080 IN	108.50	SQFT		$	
0960	06407		SBM ALUM SHEET SIGNS .125 IN	65.00	SQFT		$	
0970	06410		STEEL POST TYPE 1	318.00	LF		$	
0980	21134ND		REMOVE-STORE AND REINSTALL SIGN	12.00	EACH		$	
0990	21373ND		REMOVE SIGN	1.00	EACH		$	
1000	22400NN		REMOVE AND RELOCATE SIGN ASSEMBLY	6.00	EACH		$	
1010	24631EC		BARCODE SIGN INVENTORY	32.00	EACH		$	

Section: 0006 - SIGNALIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1020	04792		CONDUIT-1 IN	20.00	LF		$	
1030	04811		ELECTRICAL JUNCTION BOX TYPE B	1.00	EACH		$	
1040	04820		TRENCHING AND BACKFILLING	20.00	LF		$	
1050	04830		LOOP WIRE	668.00	LF		$	
1060	04844		CABLE-NO. 14/5C	450.00	LF		$	
1070	04850		CABLE-NO. 14/1 PAIR	800.00	LF		$	
1080	04895		LOOP SAW SLOT AND FILL	224.00	LF		$	
1090	20188NS835		INSTALL LED SIGNAL-3 SECTION	13.00	EACH		$	
1100	24900EC		PVC CONDUIT-1 1/4 IN-SCHEDULE 80	25.00	LF		$	

PROPOSAL BID ITEMS

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LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1110	24901EC		PVC CONDUIT-2 IN-SCHEDULE 80	20.00	LF		$	
1120	24955ED		REMOVE SIGNAL EQUIPMENT	1.00	EACH		$	
1130	24963ED		LOOP TEST	2.00	EACH		$	

Section: 0007 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1140	02569		DEMOBILIZATION	1.00	LS		$	