CALL NO. 201

CONTRACT ID. 191029

HARDIN - NELSON COUNTIES

FED/STATE PROJECT NUMBER 121GR19D029-NHPP

DESCRIPTION BLUEGRASS PARKWAY(PW-9002)

WORK TYPE ASPHALT PAVEMENT & ROADWAY REHAB

PRIMARY COMPLETION DATE 11/1/2019

LETTING DATE: June 21,2019

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

NO PLANS ASSOCIATED WITH THIS PROJECT.

DBE CERTIFICATION REQUIRED - 13%

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

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PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 04

CONTRACT ID - 191029

121GR19D029-NHPP

COUNTY - HARDIN

PCN - DE04790021929
NHPP 0021 (051)

BLUEGRASS PARKWAY(PW-9002) ADDRESS PAVEMENT CONDITION OF MARTHA LAYNE COLLINS BLUEGRASS PARKWAY BOTH DIRECTIONS FROM MP 5.82 TO MP 8.837, A DISTANCE OF 03.00 MILES.ASPHALT PAVEMENT & ROADWAY REHAB SYP NO. 04-20007.00.

GEOGRAPHIC COORDINATES LATITUDE 37:44:25.00 LONGITUDE 85:41:44.00

COUNTY - NELSON

PCN - DE09090021929
NHPP 0021 (051)

BLUEGRASS PARKWAY(PW-9002) ADDRESS PAVEMENT CONDITION OF MARTHA LAYNE COLLINS BLUEGRASS PARKWAY BOTH DIRECTIONS FROM MP 8.837 TO MP 10.172, A DISTANCE OF 01.34 MILES.ASPHALT PAVEMENT & ROADWAY REHAB SYP NO. 04-20007.00.

GEOGRAPHIC COORDINATES LATITUDE 37:44:25.00 LONGITUDE 85:41:44.00

COMPLETION DATE(S):

COMPLETED BY 11/01/2019	APPLIES TO ENTIRE CONTRACT
COMPLETED BY 10/01/2019	FOR INSTALLATION OF SURFACE COURSE, CL3 SURF 0.38A PG76-22

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.

FEDERAL CONTRACT NOTES

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

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

CIVIL RIGHTS ACT OF 1964

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

NOTICE TO ALL BIDDERS

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

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

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

SECOND TIER SUBCONTRACTS

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

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

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

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

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

DBE GOAL

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

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

OBLIGATION OF CONTRACTORS

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

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

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

CERTIFICATION OF CONTRACT GOAL

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

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

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

DBE PARTICIPATION PLAN

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

The DBE Participation Plan shall include the following:

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

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

b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;

c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;

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

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

UPON AWARD AND BEFORE A WORK ORDER WILL BE ISSUED

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

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

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

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

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

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

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

FAILURE TO MEET GOOD FAITH REQUIREMENT

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

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

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

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

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

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

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

PROMPT PAYMENT

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

CONTRACTOR REPORTING

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

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

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

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

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

DEFAULT OR DECERTIFICATION OF THE DBE

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

1/27/2017

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

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

SECTION 7 is expanded by the following new Article:

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

Pursuant to Title 46CFR Part 381, the Contractor agrees

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

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.

DGA BASE FOR SHOULDERS

Unless otherwise noted, the Department estimates the rate of application for DGA Base for Shoulders to be 115 lbs/sy per inch of depth. The Department will not measure necessary grading and/or shaping of existing shoulders prior to placing of DGA Base, but shall be incidental to the Contract unit price per ton for DGA Base.

Accept payment at the Contract unit price per ton as full compensation for all labor, materials, equipment, and incidentals for grading and/or shaping of existing shoulders and furnishing, placing, and compacting the DGA Base.

INCIDENTAL SURFACING

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

FUEL AND ASPHALT PAY ADJUSTMENT

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

ASPHALT PAVEMENT RIDE QUALITY CATEGORY A

The Department will apply Pavement Rideability Requirements on this project in accordance with Section 410, Category A.

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.

HARDIN AND NELSON COUNTIES

BLUEGRASS PARKWAY (BG-9002)

MP 5.876 to MP 10.240

Construction Numbers

FD52 047 9002 005-009

FD52 090 9002 008-011

NHPP 0021 (051)

Item Number: 4-20007.00

Prepared For The

Kentucky Transportation Cabinet

Prepared By

DLZ WMB

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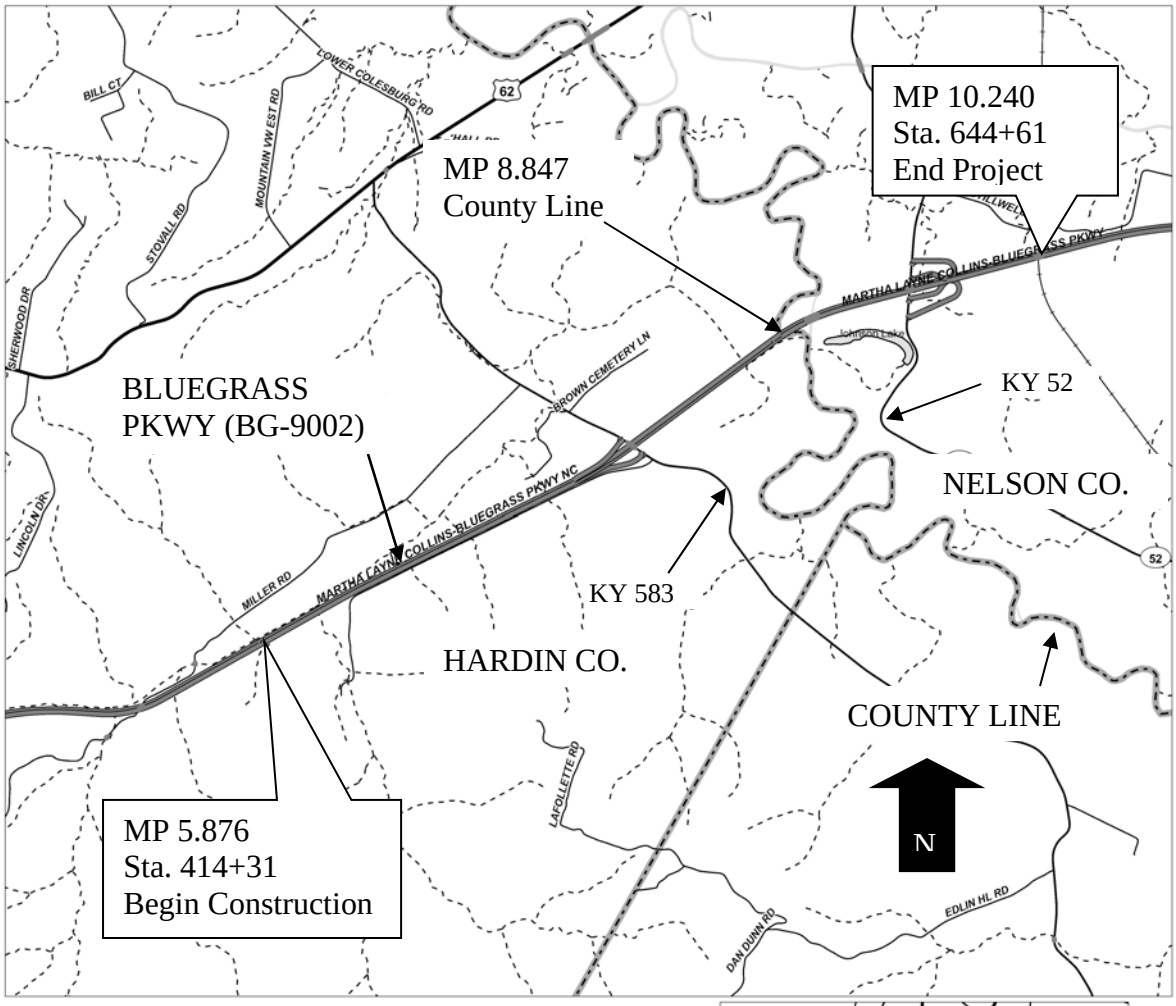
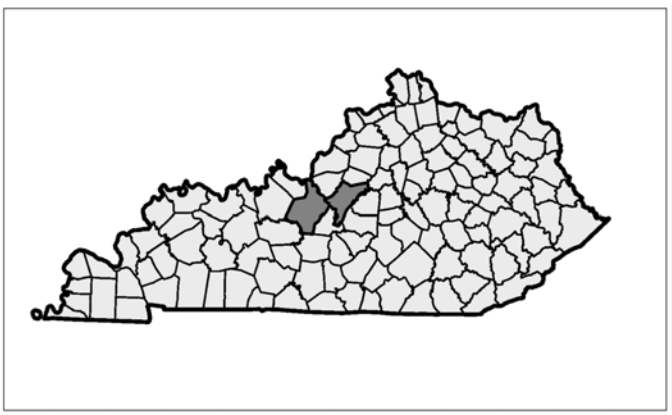
Lexington, Kentucky 40505
Ph. 859-299-5226





Not to Scale

Item Number: 4-20007.00

Construction Numbers: FD52 047 9002 005-009, FD52 090 9002 008-011, NHPP 0021 (051)

Letting Date: JUNE 21, 2019

Recommended By: ANDRE JOHANNES Date: _____
Project Manager

Plan Approved By: _____ Date: _____
State Highway Engineer

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REFERENCES

1. Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2019

2. FHWA Manual on Uniform Traffic Control Devices (MUTCD) – 2009 Edition w/Revisions

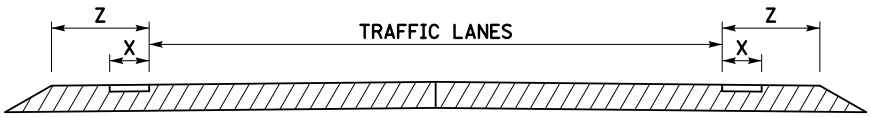
3. Kentucky Department of Highways Standard Drawings, 2019 edition, as applicable:

- RBB-002-09 Guardrail And Bridge End Drainage For Twin Structures
- RBB-003-03 Layout Of Guardrail At Twin Structures (Depressed Median)
- RBB-010-05 Guardrail Transition From Normal Shoulder To Narrow Bridge
- RBI-002-07 Typical Guardrail Installations
- RBI-003-09 Typical Installation For Guardrail End Treatment Type 2A
- RBI-005-08 Guardrail Installation At Bridge Columns
- RBI-006-07 Guardrail Installation At Sign Supports
- RBM-115-10 Concrete Barrier Wall Type 9T (Temporary)
- RBM-020-09 Delineators For Concrete Barriers
- RBR-005-11 Guardrail Components
- RBR-010-06 Guardrail Terminal Sections
- RBR-060 Delineators At Narrow Shoulder Bridges
- RDB-100-05 Sloped Box Outlet Type 1
- RDB-101-05 Grates For Sloped Box Outlet Type 1
- RDD-021-07 Flume Inlet Type 2
- RDD-040-05 Channel Lining Class II And III
- RDH-020-03 Sloped & Flared Headwalls For 12” To 27” Pipe
- RDI-001-10 Culvert, Entrance & Storm Sewer Pipe Types & Cover Heights
- RDI-021-01 Pipe Bedding For Culverts, Entrance, And Storm Sewer Reinforced Conc. Pipe
- RDI-025-05 Pipe Bedding Trench Condition
- RDI-026-01 Pipe Bedding Trench Condition Reinforced Conc. Pipe
- RDI-035-02 Coatings, Linings And Paving For Non-Structural Plate Pipe
- RDI-040-01 Erosion Control Blanket Slope Installation
- RDI-041-01 Erosion Control Blanket Channel Installation
- RPM-001-04 Permanent U-Turn Opening
- RPM-100-10 Curb And Gutter, Curbs And Valley Gutter
- TPM-105-03 Pavement Marker Arrangements Multi-Lane Roadways
- TPM-125-03 Pavement Marker Arrangement Exit Gore And Off-Ramp
- TPM-126 Pavement Marker Arrangement For Parallel Deceleration Lane
- TPM-130-03 Pavement Marker Arrangement On-Ramp With Tapered Acceleration Lane
- TPM-170 Flexible Delineator Post Arrangements For Horizontal Curves
- TPM-171 Flexible Delineator Post Arrangements For Interchange Ramp And Crossovers
- TTC-115-03 Lane Closure Multi-Lane Highway Case I
- TTC-120-03 Lane Closure Multi-Lane Highway Case II
- TTC-135-02 Shoulder Closure

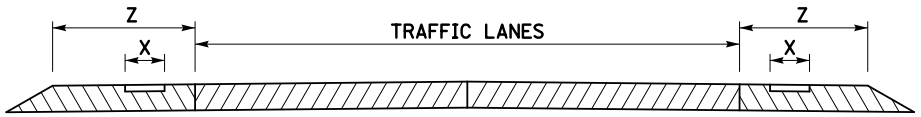
- TTD-120-02 Work Zone Speed Limit And Double Fine Signs
- TTD-125-02 Pavement Condition Warning Signs
- TTS-110-02 Mobile Operation For Paint Striping Case III
- TTS-115-02 Mobile Operation For Paint Striping Case IV

4. Kentucky Department of Highways Sepias, as applicable:

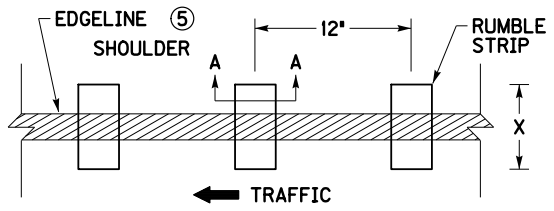
- Drawing No. 008 Rumble Strip Details Multi-Lane Roadways And Ramps
- Drawing No. 012 Guardrail Transition From Normal Shoulder To Narrow Bridge
- Drawing No. 021 Crash Cushion Type VI-BT
- Drawing No. 024 Typical Guardrail Installations
- Drawing No. 025 Installation Of Guardrail End Treatment Type 1
- Drawing No. 027 Steel Beam Guardrail (“W” Beam)
- Drawing No. 028 Steel Guardrail Posts
- Drawing No. 029 Guardrail End Treatment Type 1
- Drawing No. 032 Delineators For Guardrail
- Drawing No. 033 Guardrail System Transition
- Drawing No. 038 Guardrail End Treatment Type 2A
- Drawing No. 039 Typical Entrance Ramp Markings
- Drawing No. 040 Typical Exit Ramp Markings
- Drawing No. 045 Typical Markings For Gore Areas
- Drawing No. 046 Typical Markings For Islands And Medians



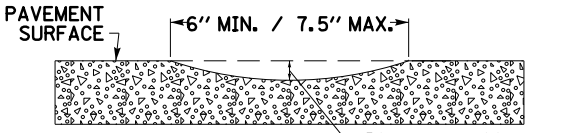
PAVEMENT CROSS-SECTION
(WHEN ELRS ARE SPECIFIED)



PAVEMENT CROSS-SECTION
(WHEN SRS ARE SPECIFIED)

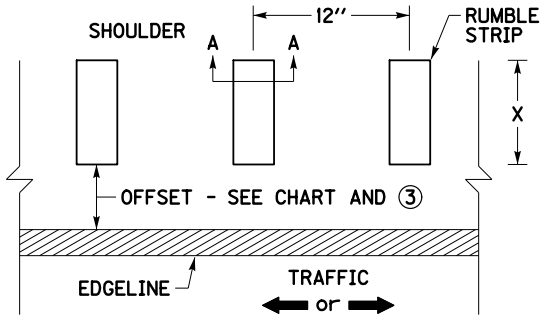


ELRS DETAILS

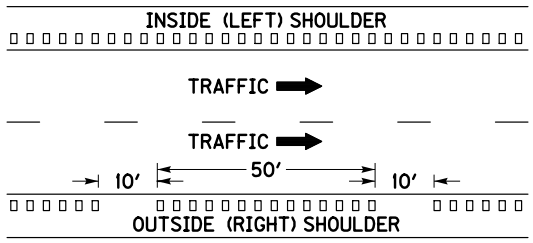


SECTION A-A

SHOULDER WIDTH (Z) ②	RUMBLE TYPE ①	RUMBLE LENGTH (X) ③	OFFSET ③
>=1'	ELRS	8"	N/A
2'	ELRS or SRS	8"	ELRS-N/A SRS-6"
3'	ELRS or SRS	8"	ELRS-N/A SRS-6"
4'	ELRS or SRS	8"	ELRS-N/A SRS-6"
5'	SRS ⑥	8"	6"
6'	SRS ⑥	8"	6"
7'	SRS ⑥	12"	12"
>=8'	SRS ⑥	16"	12"



SRS DETAILS



BICYCLE GAPS ⑥

~ NOTES ~

① FOR MULTI-LANE ROADWAYS, THE RUMBLE TYPE TO BE INSTALLED IS BASED ON SHOULER WIDTH (Z). FOR SHOULDER WIDTHS OF 2', 3', AND 4' THE RUMBLE TYPE MAY BE SPECIFIED AS EITHER EDGELINE RUMBLE STRIPS (ELRS) OR SHOULDER RUMBLE STRIPS (SRS). IN THESE SITUATIONS, THE RUMBLE TYPE TO BE INSTALLED WILL BE SPECIFIED IN THE PLANS, PROPOSAL, AND/OR BID ITEMS, OR AS DIRECTED BY THE ENGINEER.

② WHEN ELRS ARE SPECIFIED, SHOULDER WIDTH (Z) IS FROM LANE SIDE EDGE OF RUMBLE STRIP TO OUTSIDE EDGE OF TRAVERSABLE PAVEMENT. WHEN SRS ARE SPECIFIED, SHOULDER WIDTH (Z) IS FROM CENTER OF EDGELINE STRIPE TO OUTSIDE EDGE OF TRAVERSABLE PAVEMENT.

③ RUMBLE LENGTH (X) AND/OR OFFSET DISTANCE MAY BE MODIFIED AS THE ENGINEER DIRECTS, IF THE SHOULDER WIDTH (Z) IS EQUAL TO OR LESS THAN THE COMBINED WIDTH OF THE PROPOSED RUMBLE LENGTH (X) AND OFFSET DISTANCE.

4. DISTANCES SHOWN ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE.

⑤ WHEN ELRS ARE SPECIFIED, THE EDGELINE MARKING SHALL BE PLACED IN THE CENTER OF THE RUMBLE STRIP.

⑥ SHOULDER RUMBLE STRIPS (SRS) ALONG OUTSIDE (RIGHT) SHOULDERS THAT ARE 5' OR WIDER SHOULD INCLUDE BICYCLE GAPS AS DETAILED. BICYCLE GAPS ARE NOT REQUIRED ON INSIDE (LEFT) SHOULDERS. BICYCLE GAPS SHALL NOT BE USED ON INTERSTATES AND PARKWAYS.

7. RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS, OR WHEN THE SHOULDER WIDTH IS LESS THAN 1 FT.

BID ITEMS AND UNIT TO BID

SHOULDER RUMBLE STRIPS	LF
EDGELINE RUMBLE STRIPS	LF

DRAWING NOT TO SCALE

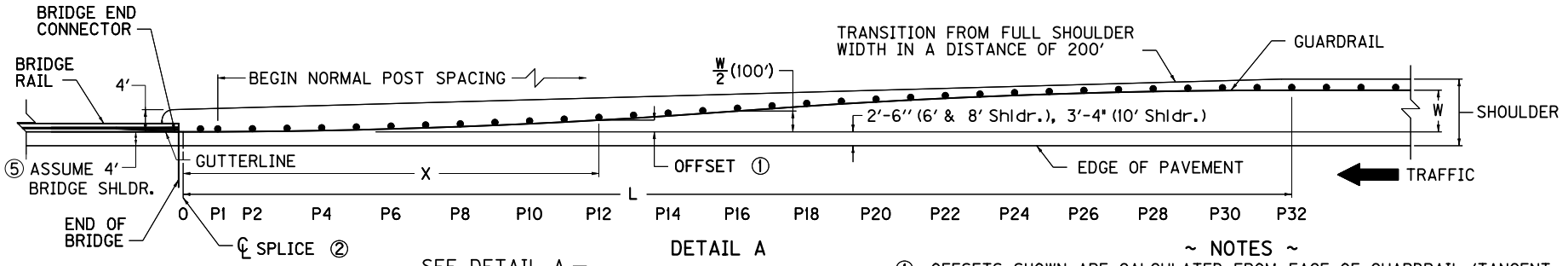
USE WITH SEPIA 005

KENTUCKY
DEPARTMENT OF HIGHWAYS

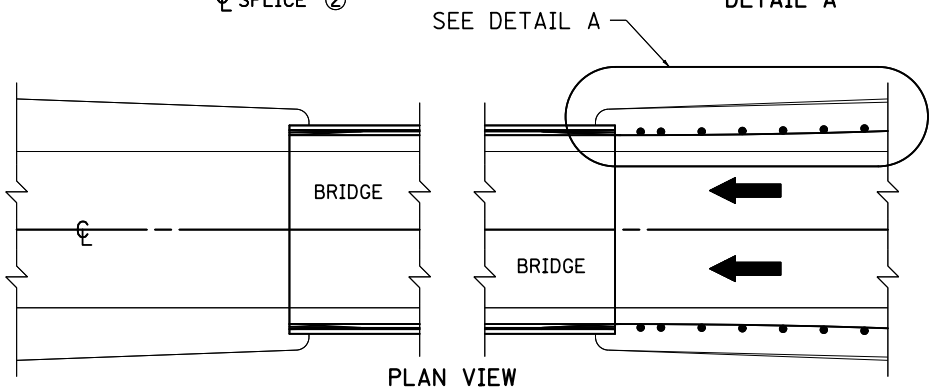
RUMBLE STRIP DETAILS
MULTI-LANE ROADWAYS
AND RAMPS

SUBMITTED B. Jeffrey Wolfe 11-23-16
DATE

008



DETAIL A



PLAN VIEW

~ NOTES ~

① OFFSETS SHOWN ARE CALCULATED FROM FACE OF GUARDRAIL (TANGENT EXTENDED FROM BRIDGE). OFFSET DIMENSIONS SHOWN ARE FOR 6 FOOT USABLE SHOULDERS, WITH W EQUAL TO 7.5 FEET.

② DISTANCES ARE FROM CENTER LINE OF SPLICE. SEE CURRENT STANDARD DRAWING RBC-002 FOR DETAILS.

3. CALCULATIONS FROM 0 FEET TO 100 FEET ARE BASED ON THE FOLLOWING FORMULA: OFFSET $= \left(\frac{X}{L/2}\right)^2 \times \frac{W}{2}$

FROM 100 FEET TO 200 FEET THE PROCEDURE IS AS FOLLOWS, FOR EXAMPLE AT P28: 7.5 FEET MINUS 0.23 FEET = 7.27 FEET, ETC.

4. THE ENGINEER SHALL USE THE OFFSET FORMULA AND CALCULATE OFFSETS NEEDED FOR FIELD CONDITIONS DIFFERENT THAN THAT SHOWN IN THE CHART.

⑤ BRIDGE SHOULDER WIDTH VARIES PER KYTC & AASHTO GUIDANCE.

6' USABLE SHOULDER
GUARDRAIL FLARE DIMENSIONS

POST NUMBER	DISTANCE	OFFSET
	FEET	
0	0	0
P1	6.25	0.01
P2	12.5	0.02
P4	25.0	0.08
P6	37.5	0.19
P8	50.0	0.34
P10	62.5	0.52
P12	75.0	0.75
P14	87.5	1.03
P16	100.0	1.34
P18	112.5	1.64
P20	125.0	1.92
P22	137.5	2.15
P24	150.0	2.33
P26	162.5	2.48
P28	175.0	2.59
P30	187.5	2.65
P32	200.0	2.67

8' USABLE SHOULDER
GUARDRAIL FLARE DIMENSIONS

POST NUMBER	DISTANCE	OFFSET
	FEET	
0	0	0
P1	6.25	0.01
P2	12.5	0.04
P4	25.0	0.15
P6	37.5	0.33
P8	50.0	0.59
P10	62.5	0.91
P12	75.0	1.32
P14	87.5	1.79
P16	100.0	2.34
P18	112.5	2.88
P20	125.0	3.35
P22	137.5	3.76
P24	150.0	4.08
P26	162.5	4.34
P28	175.0	4.52
P30	187.5	4.63
P32	200.0	4.67

10' USABLE SHOULDER
GUARDRAIL FLARE DIMENSIONS

POST NUMBER	DISTANCE	OFFSET
	FEET	
0	0	0
P1	6.25	0.01
P2	12.5	0.05
P4	25.0	0.21
P6	37.5	0.47
P8	50.0	0.84
P10	62.5	1.30
P12	75.0	1.88
P14	87.5	2.56
P16	100.0	3.34
P18	112.5	4.11
P20	125.0	4.79
P22	137.5	5.37
P24	150.0	5.83
P26	162.5	6.20
P28	175.0	6.46
P30	187.5	6.62
P32	200.0	6.67

USE WITH CUR. STD. DWG. RBC-002

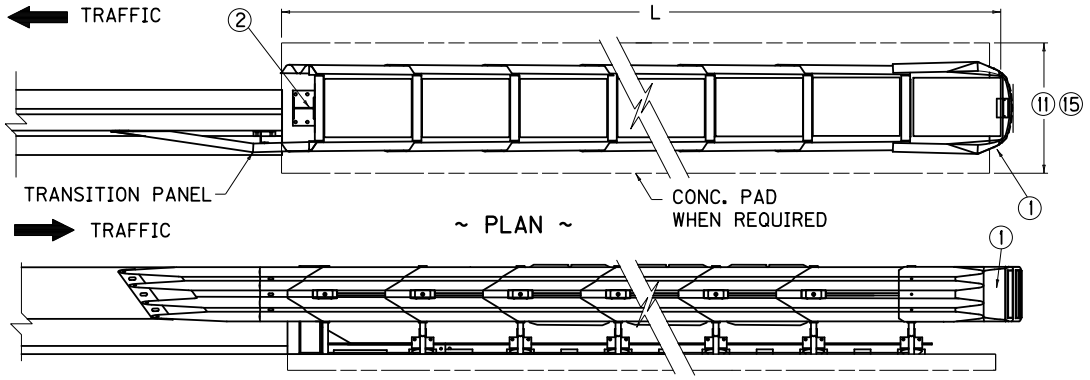
KENTUCKY
DEPARTMENT OF HIGHWAYS

GUARDRAIL TRANSITION FROM NORMAL SHOULDER TO NARROW BRIDGE

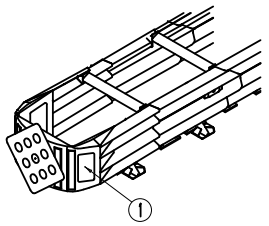
SUBMITTED William S. Ballard — DIRECTOR DIVISION OF DESIGN — 11-17-17 DATE

012

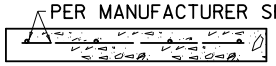
COUNTY OF	FISCAL YEAR	SHEET NO.	TOTAL SHEETS



~ ELEVATION ~



~ PICTORIAL VIEW ~



~ CONCRETE PAD SECTION ~
(PER MANUFACTURER SPECIFICATIONS)
REFER TO NOTES ⑪⑮

~ NOTES ~

① NOSE ASSEMBLY (OBJECT MARKER TYPE 1 AS NECESSARY)
② CONSTRUCTION ZONE BACKUP
3. CRASH CUSHION TYPE VI , CLASS B, ☆ , △
   ☆ EITHER TEST LEVEL 2 (TL2) OR TEST LEVEL 3 (TL3), AS REQUIRED.
   △ SEE "CONNECTION DETAILS OF CRASH CUSHION TYPE VI TO DOUBLE FACE GUARDRAIL".
4. CRASH CUSHION TYPE VI-BT IS DEPICTED ATTACHED TO A CONCRETE BARRIER (TEMPORARY).
5. WHEN CRASH CUSHION TYPE VI-BT IS ATTACHED TO STEEL "W" BEAM GUARDRAIL (DOUBLE FACE), ALL APPLICABLE DETAILS SHOWN ON CUR. STD. DWG. RBC-110, "CONNECTION DETAIL OF CRASH CUSHION TYPE VI TO DOUBLE FACE GUARDRAIL" SHALL BE REQUIRED.
6. WHEN CRASH CUSHION TYPE VI-BT IS ATTACHED TO STEEL "W" BEAM GUARDRAIL (DOUBLE FACE), THE TRANSITION PANEL SHALL BE ELIMINATED.
7. IN A TWO-WAY TRAFFIC SITUATION FOR A 6" OR 9" TOP WIDTH WALL THE UNIT SHALL BE OFFSET FROM THE CENTERLINE OF THE WALL AS SHOWN IN THE PLAN VIEW. FOR A 12" TOP WIDTH WALL, THE UNIT SHALL BE CENTERED ON THE END OF THE BARRIER.
8. FOR ONE-WAY APPROACH TRAFFIC THE UNIT SHALL BE CENTERED ON THE END OF THE BARRIER.
9. THE COMPLETE INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF ENERGY ABSORPTIONS INC. OR TRINITY INDUSTRIES INC.
10. ANCHORAGE DEVICES TO SECURE THE CRASH CUSHION TO THE EXISTING SURFACE SHALL BE SHOWN ON APPROVED SHOP DRAWINGS.
11. THE CONRETE PAD, PAD EXCAVATION AND STEEL REINFORCEMENT, INSTALLED IN PLACE SHALL BE INCLUDED IN THE UINT PRICE BID FOR CRASH CUSHION TYPE VI. DIMENSION AND REINFORCEMENT SPECIFICATIONS FOR CONCRETE PADS ARE TO BE PROVIDED BY THE MANUFACTURER. THE PAD WILL NOT BE REQUIRED WHEN UNIT IS CONSTRUCTED ON RIGID PAVEMENT.
12. THE PAD WILL NOT BE REQUIRED WHEN THE UNIT IS CONSTRUCTED ON EXISTING PAVEMENT OR BRIDGES AND THE COST OF ANCHORING SHALL BE INCLUDED IN THE UNIT PRICE OF THE CRASH CUSHION.
13. USE WITH CUR. STD. DWG. RBC-110 WHEN CONNECTING TO DOUBLE FACE GUARDRAIL.
14. PERMISSABLE ALTERNATES FOR CRASH CUSHION TYPE VI-BT ARE PATENTED ITEMS: ENERGY ABSORPTION SYSTEMS, INC. OF CHICAGO, IL., TRINITY INDUSTRIES, INC. OF DALLAS, TX.
15. CRASH CUSHIONS ARE TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS, INCLUDING THE CONCRETE PAD. THE MANUFACTURER SHALL FURNISH TWO (2) SETS OF SHOP DRAWINGS TO THE CONTRACTOR WITH EACH INSTALLATION.

CLASS	SPEED (MPH)	ATTENUATOR		
		MODEL	PRODUCT NAME	LENGTH
B	45 & LESS	TL2	SHORTRACC	14'-0"
			3-BAY QUADGUARD	12'-0"
	OVER 45	TL3	TRACC	21'-0"
			5-BAY QUADGUARD	18'-0"

A TYPE VI-CLASS C CAN BE USED AT THE CONTRACTOR'S DISCRETION.

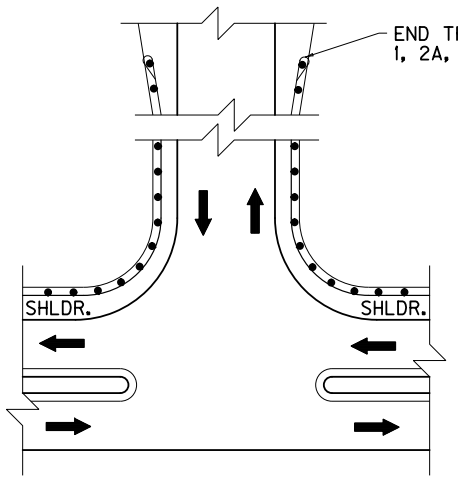
USE WITH CUR. STD. DWG.
RBC-110, RBE-060

KENTUCKY
DEPARTMENT OF HIGHWAYS

CRASH CUSHION
TYPE VI-BT

SUBMITTED William S. Haskins 11-17-17
DIRECTOR DIVISION OF HIGHWAY DESIGN — DATE

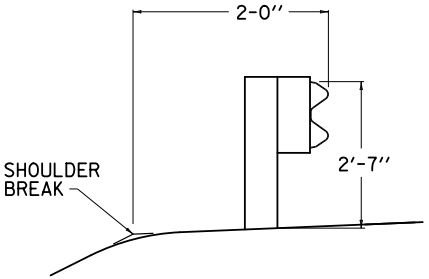
021



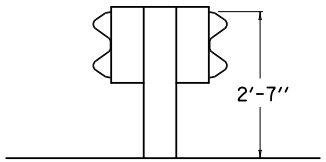
APPROACH ROADS

~ NOTES ~

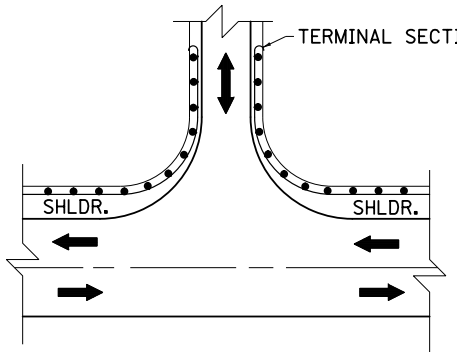
1. FOR END TREATMENT TYPE 4A USE CUR. STD. DWG. RBR-035 FOR OFFSETS.
2. THE MINIMUM LENGTH OF GUARDRAIL, INCLUDING THE END TREATMENT, PRECEDING A FIXED OBJECT IS 200 FEET: (LENGTH MAY BE REDUCED SHOULD FIELD CONDITIONS WARRANT).



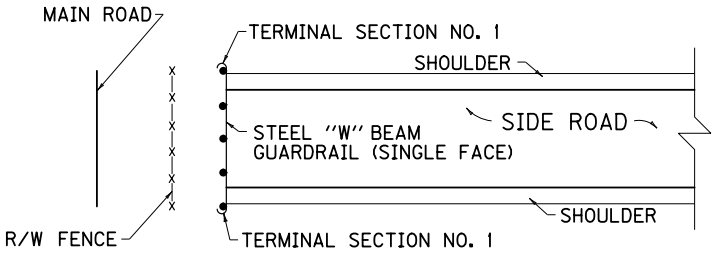
NORMAL GUARDRAIL INSTALLATION



TYPICAL DOUBLE FACE
GUARDRAIL INSTALLATION



ENTRANCES



GUARDRAIL USED AS A BARRICADE

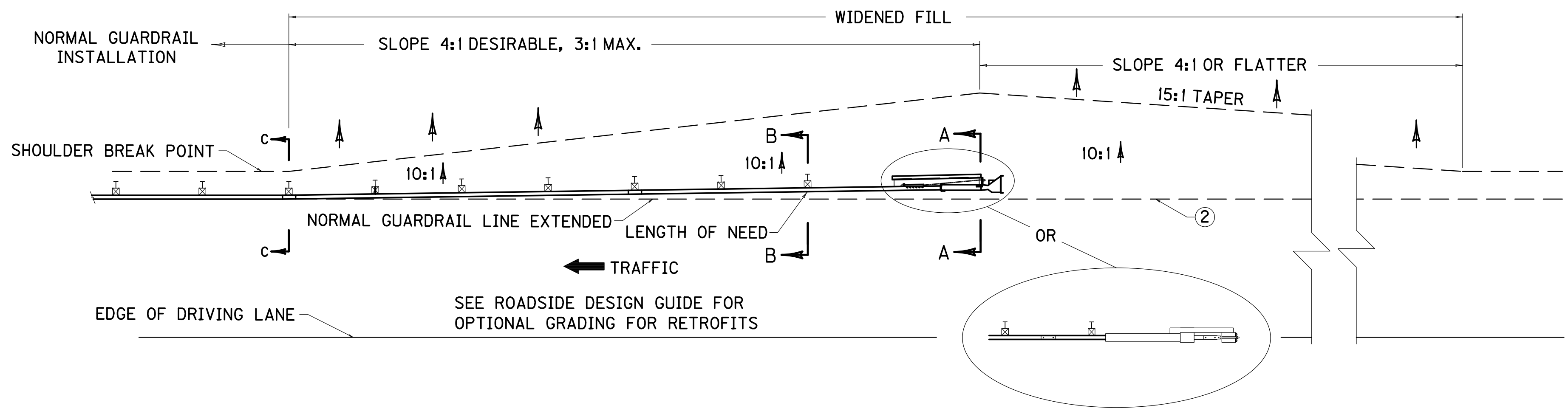
USE WITH CUR. STD. DWG.
RBI-002, RBR-035

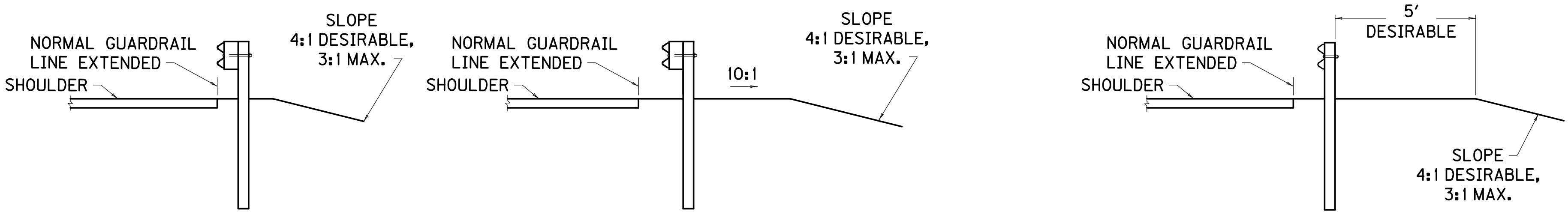
KENTUCKY
DEPARTMENT OF HIGHWAYS

TYPICAL GUARDRAIL
INSTALLATIONS

SUBMITTED William S. Dalton 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

024

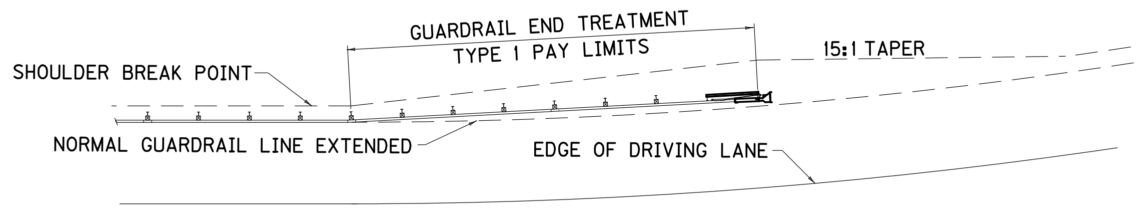




SECTION C-C

SECTION B-B

SECTION A-A



GUARDRAIL END TREATMENT TYPE 1
INSTALLED ON A CURVE ③

~ NOTES ~

BID ITEMS AND UNIT TO BID:

GUARDRAIL END TREATMENT TYPE 1	EACH
ROADWAY OR BORROW EXCAVATION, OR EMBANKMENT IN PLACE	CUYD

1. THE MINIMUM LENGTH OF GUARDRAIL, INCLUDING THE END TREATMENT, PRECEDING A FIXED OBJECT IS 200 FEET (LENGTH MAY BE REDUCED SHOULD FIELD CONDITIONS WARRANT).

② GUARDRAIL EXTRUDER EDGE CLOSEST TO TRAFFIC SHALL BE PLACED ON NORMAL GUARDRAIL LINE EXTENDED.

③ END TREATMENT TYPE 1 MAY BE ATTACHED TO CURVED GUARDRAIL PROVIDED CURVE IS A 550' RADIUS OR MORE. END TREATMENT TYPE 1 SHALL BE INSTALLED ON A STRAIGHT LINE TAPER WITHIN THE PAY LIMITS.

4. INTENDED USE: FILLS WITH ADEQUATE VEHICLE RECOVERY ZONE BEHIND GUARDRAIL.

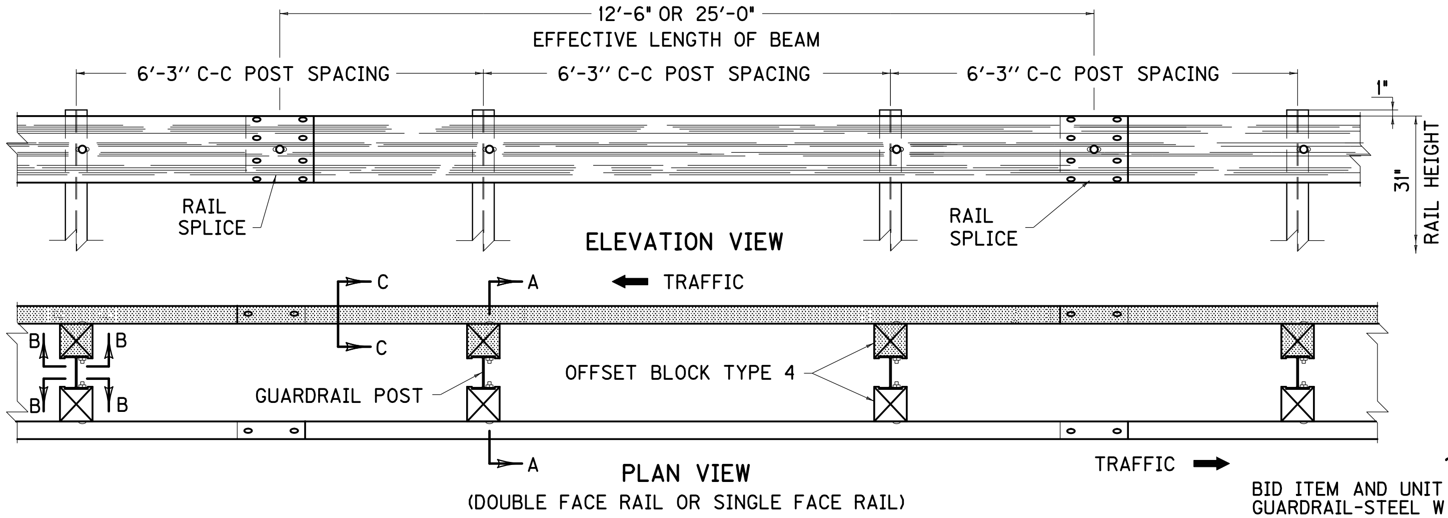
USE WITH CUR. STD. DWG. RBR-020

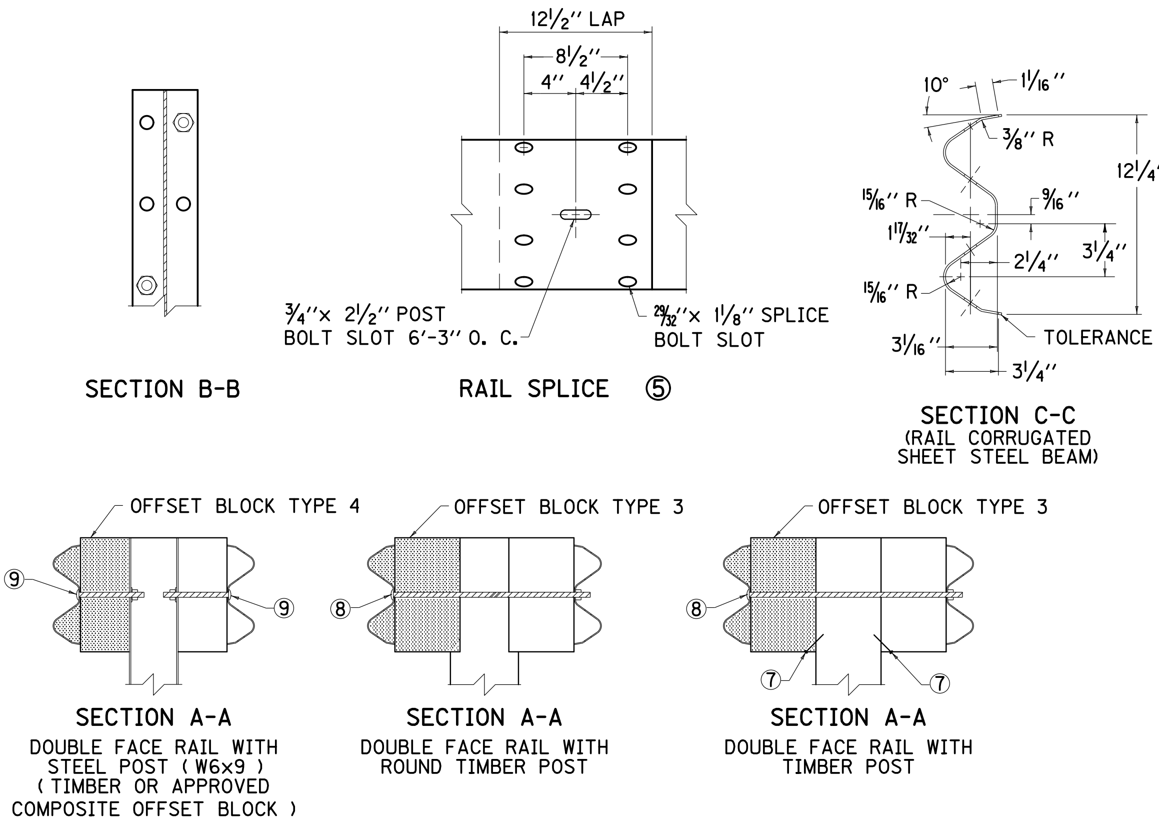
KENTUCKY
DEPARTMENT OF HIGHWAYS

INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1

SUBMITTED [signature] DIRECTOR DIVISION OF DESIGN 11-17-17 DATE

025





~ NOTES ~

BID ITEM AND UNIT TO BID

GUARDRAIL-STEEL W BEAM-S FACE	LF
OR	
GUARDRAIL-STEEL W BEAM-D FACE	LF

1. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE AND ACCEPTED MANUFACTURING PRACTICES.
2. THE RAIL ELEMENT SHALL COMPLY WITH AASHTO M-180 -CLASS A, TYPE II.
3. ALL LAPS SHALL BE PLACED IN THE DIRECTION OF TRAFFIC FLOW.

④ TOLERANCE + 1¼", -¼"

⑤ 8-⅝"× 1¼" LONG BUTTON HEAD BOLTS AND HEX HEAD RECESS NUTS REQUIRED FOR EACH RAIL SPLICE.

⑥ LENGTH EQUALS POST AND BLOCK WIDTH PLUS 2" FOR BOLT OR 2¼" FOR THREADED ROD.

⑦ GALVANIZED STEEL 10d COMMON COATED NAIL (DRIVE NAIL AT THE TOP OR BOTTOM CENTER OF BLOCK AND POST AFTER BOLT IS INSTALLED).

⑧ ⅝"× ⑥ STEEL THREADED ROD AND TWO (2) HEX HEAD NUTS OR ⅝"× ⑥ BUTTON OR HEX HEAD BOLT AND HEX HEAD NUT.

⑨ ⅝"×8" BUTTON HEAD BOLT, HEX HEAD RECESS NUT AND ONE ⅝" ROUND WASHER (TYP.). BOLT SHALL HAVE A MINIMUM THREAD LENGTH OF 2".

(shaded) REQUIRED FOR DOUBLE RAIL

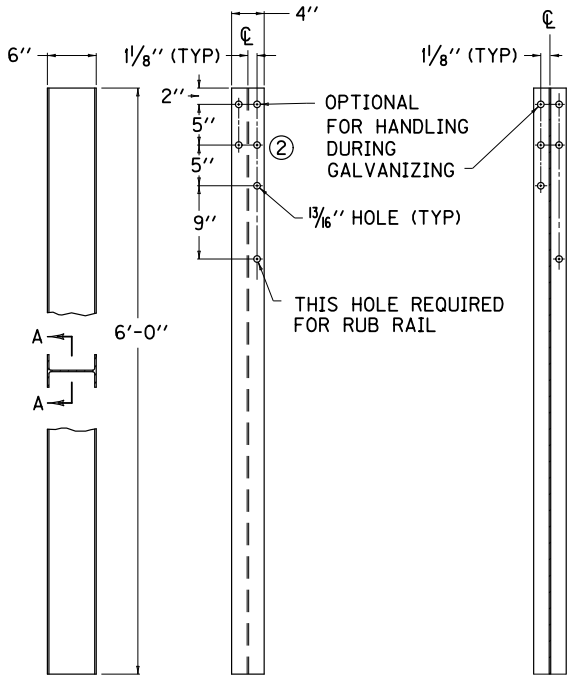
10. BOTH 12'-6" AND 25' LENGTHS OF "W" BEAM GUARDRAIL SECTIONS WILL BE PERMITTED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

KENTUCKY
DEPARTMENT OF HIGHWAYS

STEEL BEAM GUARDRAIL ("W" BEAM)

SUBMITTED [signature] DIRECTOR DIVISION OF DESIGN — 11-17-17 DATE

027



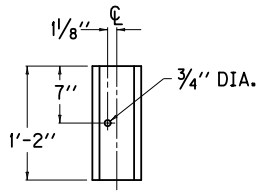
~ W6 X 9.0 STEEL POST ① ~

~ NOTES ~

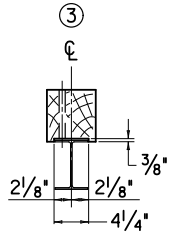
① W6 X 8.5 IS AN ACCEPTABLE ALTERNATE.

② THESE HOLES ARE REQUIRED FOR ATTACHING RAIL.

③ TIMBER OR COMPOSITE BLOCKOUTS MAY BE USED WITH STEEL POST.

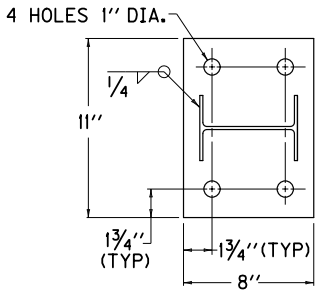


REAR ELEVATION

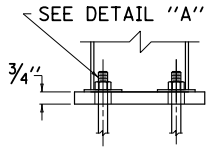


PLAN VIEW

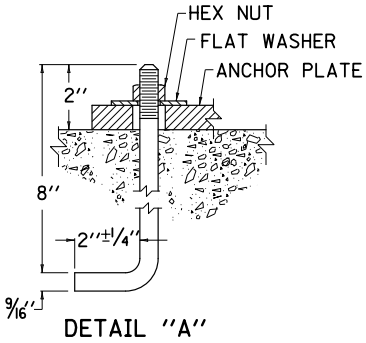
OFFSET BLOCK TYPE 4
6" X 8" (Nominal Size)
(TIMBER OR APPROVED COMPOSITE)
(FOR USE WITH STEEL POST ONLY)



PLAN VIEW



SIDE VIEW
ANCHOR PLATE



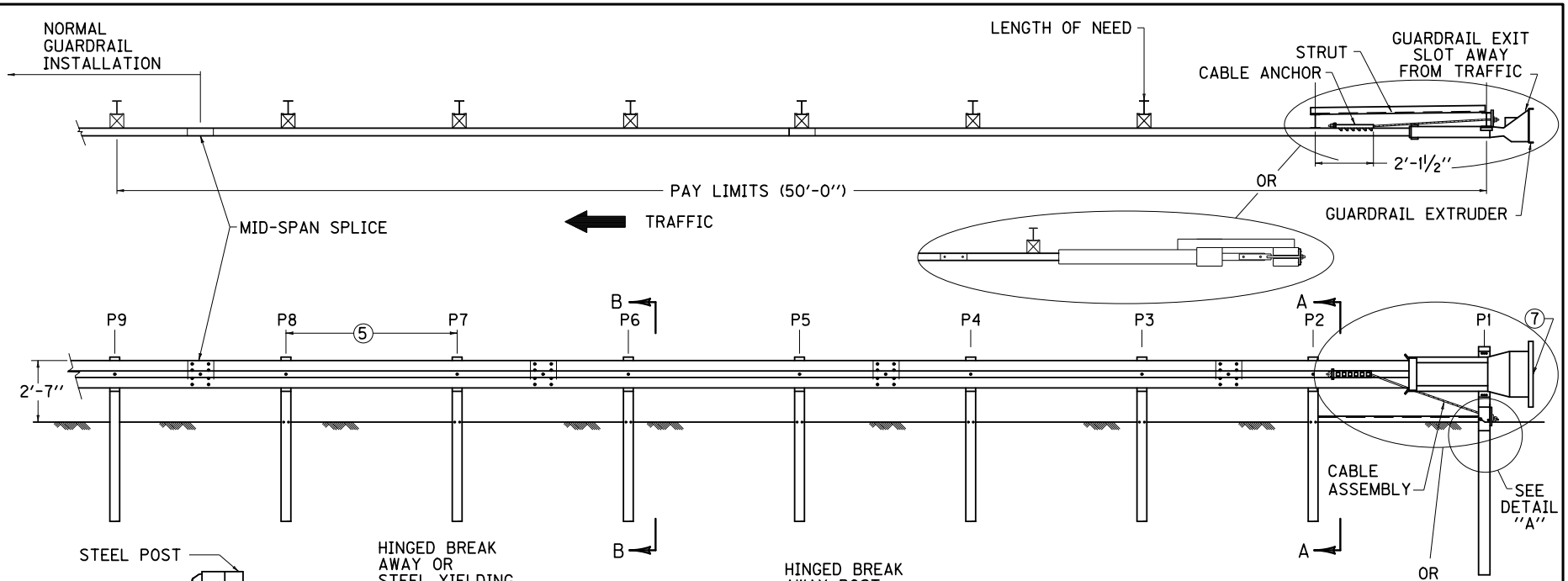
DETAIL ''A''

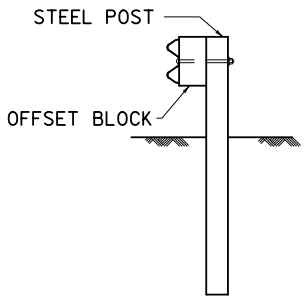
KENTUCKY
DEPARTMENT OF HIGHWAYS

STEEL
GUARDRAIL POSTS

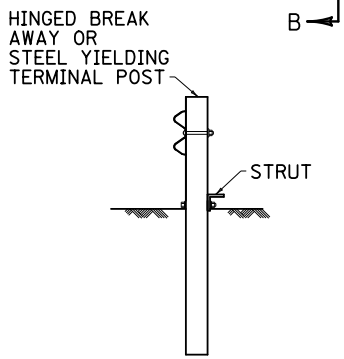
SUBMITTED William S. Ballard 01-09-18
DIRECTOR DIVISION OF DESIGN DATE

028

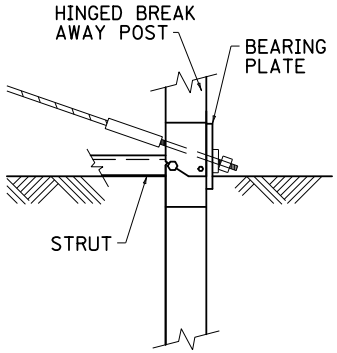




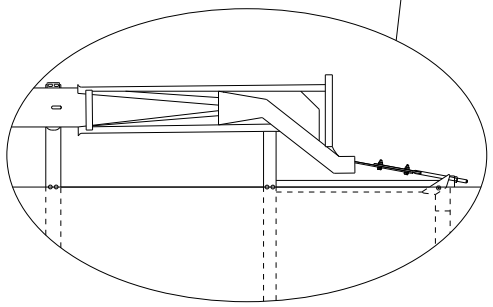
SECTION B-B
(POSTS P3 THRU P8)



SECTION A-A
(POST P2)



DETAIL ''A''



~ NOTES ~

BID ITEM AND UNIT TO BID

GUARDRAIL END TREATMENT TYPE 1	EACH
OBJECT MARKER TY 3	EACH

1. GUARDRAIL END TREATMENT TYPE 1 SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, AND INCLUDES POSTS, RAIL ELEMENTS, GUARDRAIL EXTRUDER AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION AS DETAILED.
2. PERMISSIBLE ALTERNATES FOR GUARDRAIL END TREATMENT TYPE 1 ARE PATENTED ITEMS: SOFT-STOP MANUACTURED BY TRINITY INDUSTRIES OF DALLAS, TEXAS OR MSKT MANUFACTURED BY ROAD SYSTEMS INC. OF BIG SPRINGS, TEXAS.
3. THE MANUFACTURER SHALL FURNISH TWO (2) SETS OF SHOP PLANS TO THE CONTRACTOR WITH EACH INSTALLATION.
4. THE COMPLETED INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE MANUFACTURER (SEE SHOP DRAWINGS).

⑤ POSTS P1 THROUGH P9 ARE SPACED 6'-3'' ON CENTER.

6. INTENDED USE: AREAS WITH ADEQUATE VEHICLE RECOVERY ZONE BEHIND END TREATMENT.

⑦ OBJECT MARKER TYPE 3 (SEE CURRENT MUTCD MANUAL FOR DETAILS)

USE WITH CUR. STD. DWG.
RBI-004

KENTUCKY
DEPARTMENT OF HIGHWAYS

GUARDRAIL END TREATMENT TYPE 1

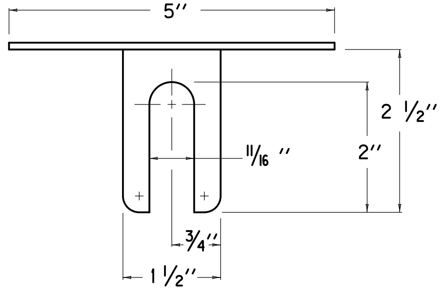
SUBMITTED William S. Stalick — DIRECTOR DIVISION OF DESIGN — 11-17-17 DATE

029

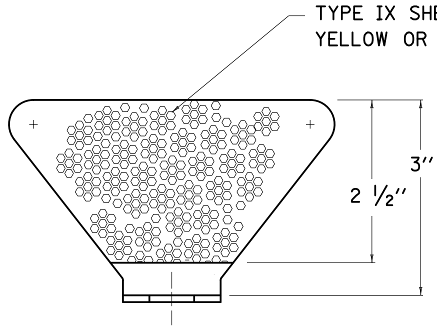
~ NOTES ~

BID ITEMS AND UNIT TO BID	
DELINEATOR FOR GUARDRAIL B/W	EACH
DELINEATOR FOR GUARDRAIL M/W	EACH
DELINEATOR FOR GUARDRAIL M/Y	EACH

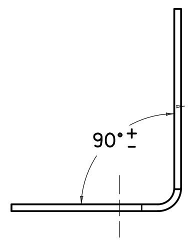
1. DELINEATORS SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE EACH AND SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR ONE COMPLETE INSTALLATION.
2. DELINEATOR SHAPE AND DIMENSIONS ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY. TYPES OF DELINEATORS PERMITTED SHALL BE FROM THE LIST OF APPROVED MATERIALS.
3. GUARDRAIL DELINEATORS SHALL BE REQUIRED ON ALL GUARDRAIL.
4. DELINEATORS SHALL NOT BE INSTALLED WITHIN THE PAY LIMITS OF THE END TREATMENT.
5. DELINEATORS SHALL BE MANUFACTURED FROM 12 GA. GALVANIZED STEEL.
6. DIMENSIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MANUFACTURER'S TOLERANCES.
7. WHEN CONCRETE BARRIERS EXTEND ACROSS BRIDGE STRUCTURES IN LIEU OF STEEL BEAM GUARDRAIL, DELINEATORS SHALL BE INSTALLED AT SAME VERTICAL ALIGNMENT AS ON THE GUARDRAIL, AND DELINEATORS SHALL COMPLY WITH CURRENT STANDARD DRAWING RBM-020.
8. DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



PLAN VIEW

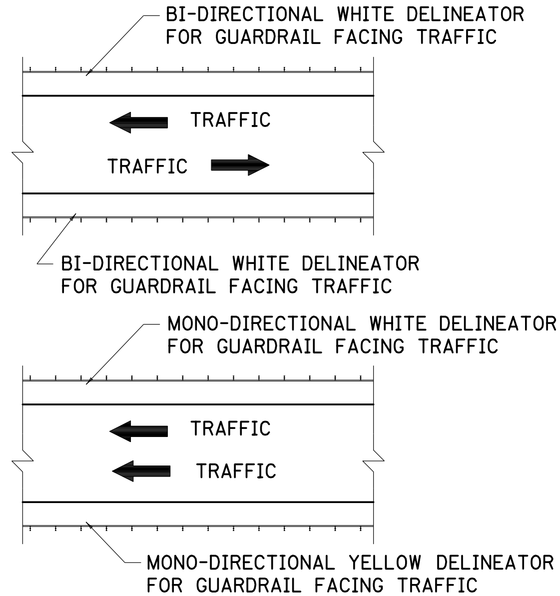


FRONT VIEW

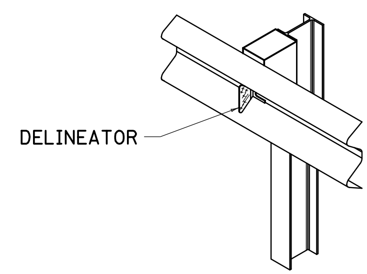


SIDE VIEW

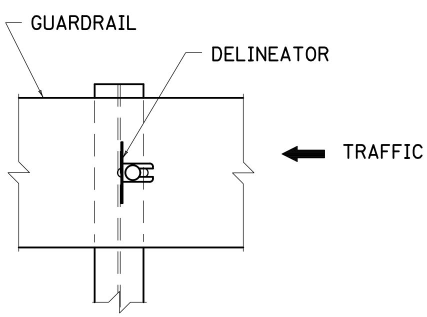
DIMENSIONS SHOWN ARE FOR ONE VERSION OF A WEB-MOUNTED GUARDRAIL DELINEATOR. DELINEATORS WITH ALTERNATE DIMENSIONS MAY BE CONSIDERED FOR INCLUSION ON THE APPROVED PRODUCTS LIST.



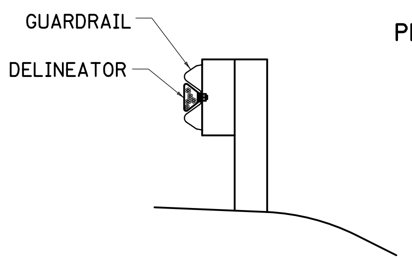
PLACEMENT OF DELINEATORS FOR GUARDRAIL



ISOMETRIC VIEW



FRONT VIEW



SIDE VIEW

APPROXIMATE DELINEATOR SPACING	
TANGENT	100′
CURVE	50′

SPACING SHOULD BE ADJUSTED IN CURVES SO THAT SEVERAL DELINEATORS ARE ALWAYS SIMULTANEOUSLY VISIBLE TO THE ROAD USER.

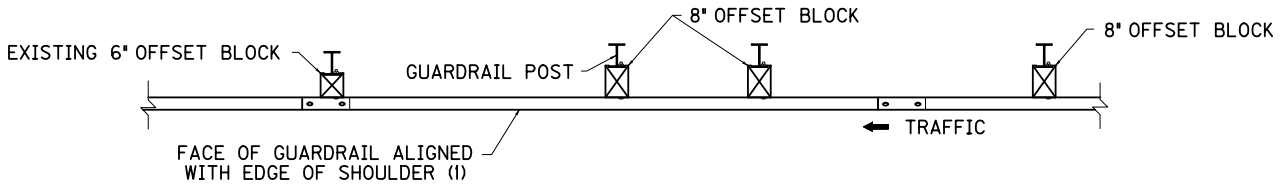
USE WITH CUR. STD. DWGS. RBM-020, RBR-060

KENTUCKY
DEPARTMENT OF HIGHWAYS

DELINEATORS FOR GUARDRAIL

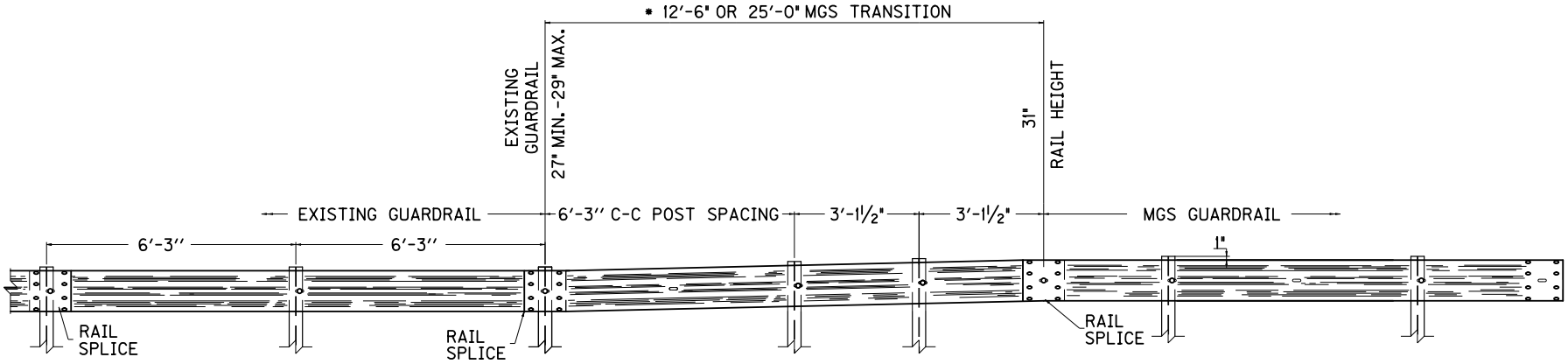
SUBMITTED [signature] DIRECTOR DIVISION OF DESIGN
11-17-17 DATE

032



PLAN VIEW

* 12'-6' TRANSITION FROM 29" TO 31" SHOWN,
25'-0" REQUIRED FOR 27" TO 31" TRANSITION.



ELEVATION VIEW

~ NOTES ~

1) WHERE POST OFFSET IS CONSTRAINED, AND WHEN THE EXISTING SHOULDER IS WIDER THAN 4 FEET, THE EXISTING SHOULDER MAY BE REDUCED UP TO 2 INCHES TO ACCOMMODATE THE 8 INCH BLOCKS OF THE MGS GUARDRAIL. WHERE SITE CONSTRAINTS PROHIBIT THE POST FROM BEING PLACED AT LEAST TWO FEET IN FRONT OF THE SLOPE BREAK POINT. USE 7 FOOT POSTS.

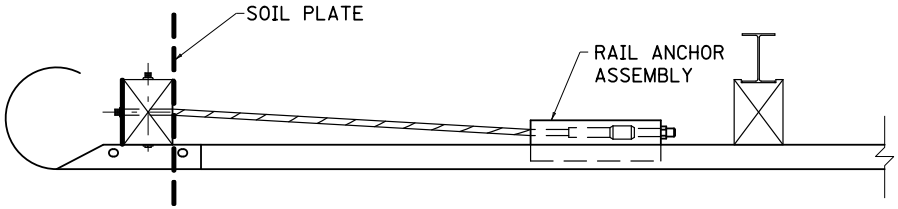
2) MGS TRANSITION FROM EXISTING GUARDRAIL SHALL BE COMPLETED OUTSIDE THE 50 FEET MGS END TERMINAL LIMITS.

KENTUCKY
DEPARTMENT OF HIGHWAYS

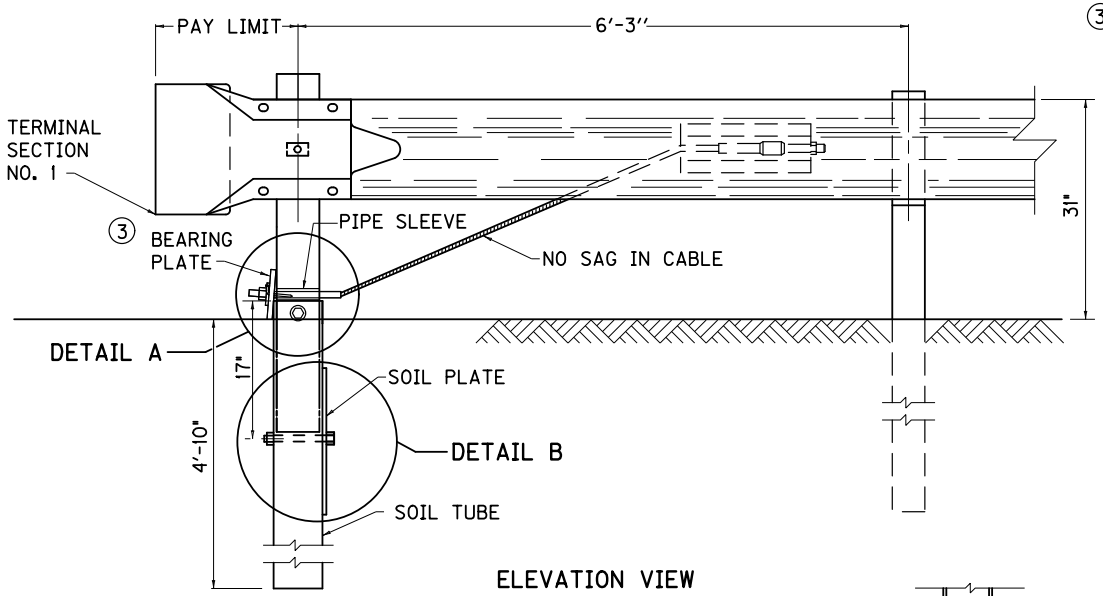
GUARDRAIL SYSTEM
TRANSITION

SUBMITTED William S. Haley 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

033



PLAN VIEW



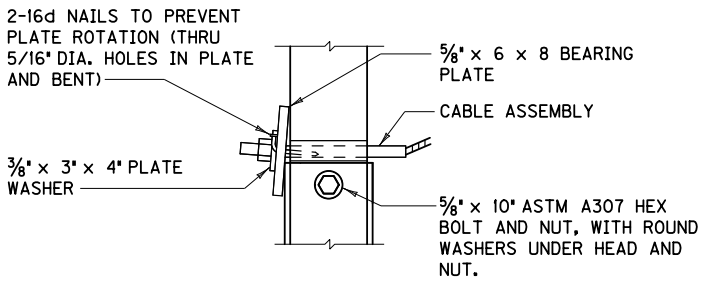
ELEVATION VIEW

~ NOTES ~

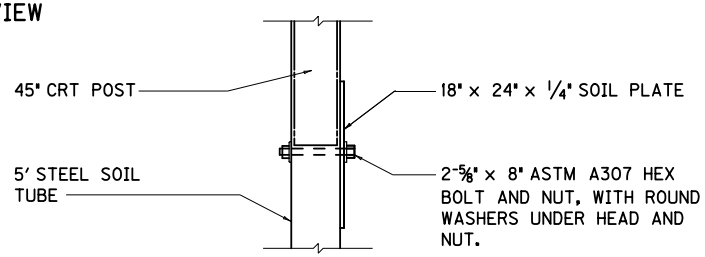
BID ITEM AND UNIT TO BID
GUARDRAIL END TREATMENT TYPE 2A — EACH

1. GUARDRAIL END TREATMENT TYPE 2A SHALL BE TO THE PAY LIMITS AS DETAILED. THE CONTRACT UNIT BID IS EACH AND SHALL INCLUDE A TERMINAL SECTION NO. 1, RAIL ANCHOR ASSEMBLY, CABLE ANCHOR ASSEMBLY, SOIL TUBE, SOIL PLATE AND ALL OTHER INCIDENTALS NECESSARY FOR A COMPLETE INSTALLATION AS DETAILED.
2. IN THE EVENT SOLID ROCK IS ENCOUNTERED, THE SOIL TUBE MAY BE SHORTENED, PROVIDED IT EXTENDS INTO THE SOLID GROUND A MINIMUM OF 3 FEET.

③ INSTALL BEARING PLATE SO THAT THE "V" OPENING IS AT THE TOP.



DETAIL A



DETAIL B

USE WITH CUR. STD. DWGS.
RBI-001 , RBI-002, RBI-003
RBR-010

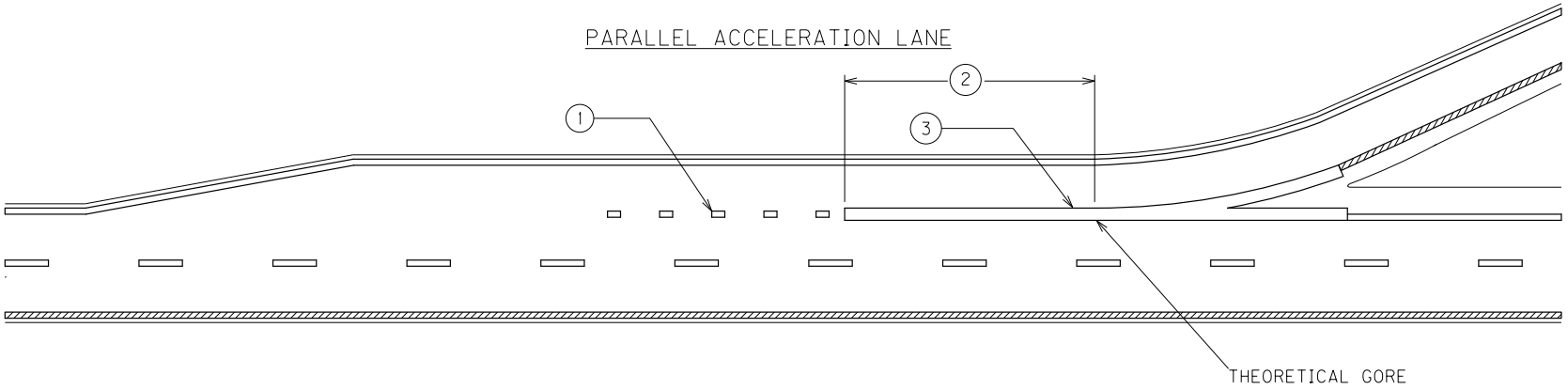
KENTUCKY
DEPARTMENT OF HIGHWAYS

GUARDRAIL
END TREATMENT
TYPE 2A

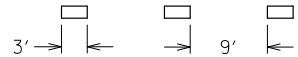
SUBMITTED _____ 3-06-18
DIRECTOR DIVISION OF DESIGN — DATE

038

PARALLEL ACCELERATION LANE

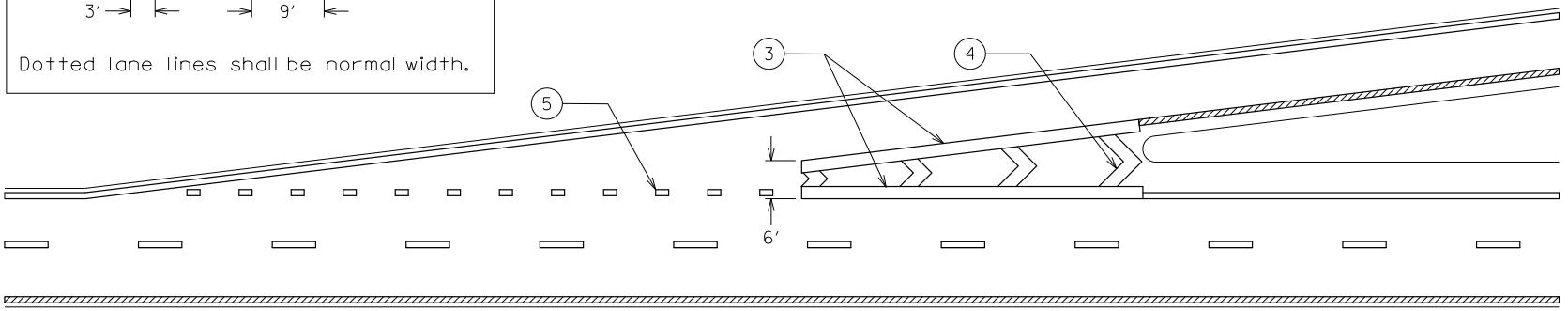


DOTTED LANE LINE DIMENSIONS:



Dotted lane lines shall be normal width.

TAPERED ACCELERATION LANE



(1) IN A PARALLEL ACCELERATION LANE, DOTTED LANE LINES SHALL BE INSTALLED FOR AT LEAST HALF THE LENGTH OF THE FULL-WIDTH ACCELERATION LANE PLUS TAPER MEASURED FROM THE THEORETICAL GORE. DOTTED EXTENSIONS MAY BE INSTALLED THROUGH THE TAPER IF DESIRED.

(2) WIDE SOLID LINE SHALL EXTEND DOWNSTREAM FROM THE THEORETICAL GORE FOR AT LEAST 1/4 THE LENGTH OF THE FULL-WIDTH ACCELERATION LANE PLUS TAPER.

(3) 12" WIDE SOLID WHITE CHANNELIZATION LINES.

(4) GORE AREA CHEVRON MARKINGS ARE OPTIONAL ON ENTRANCE RAMPS. SEE SEPIA 008 FOR DETAILS ON CHEVRON MARKINGS.

(5) IN A TAPERED ACCELERATION LANE, DOTTED EXTENSIONS MAY BE INSTALLED AS SHOWN.

LEGEND

MARKINGS

WHITE

YELLOW

DRAWING NOT TO SCALE

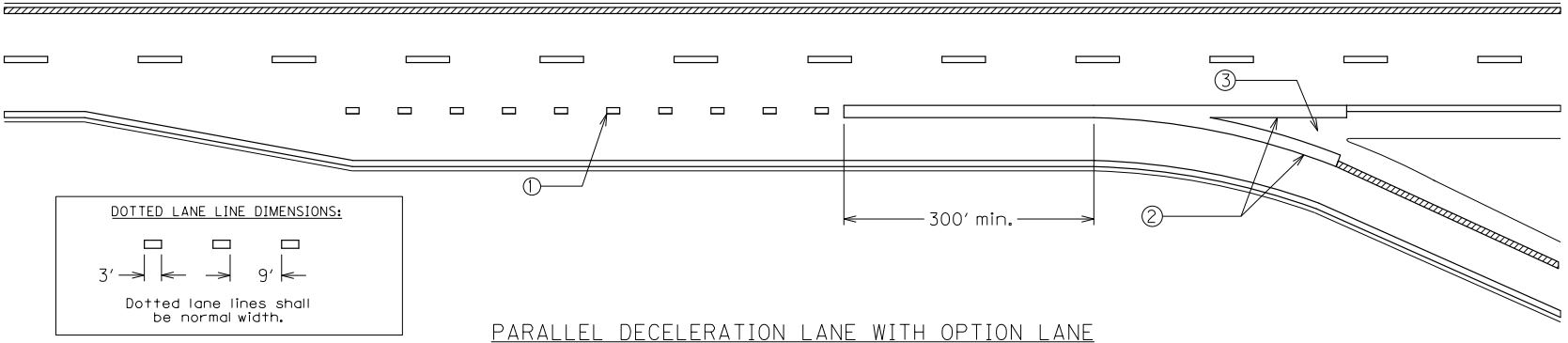
KENTUCKY
DEPARTMENT OF HIGHWAYS

TYPICAL ENTRANCE RAMP MARKINGS FOR INTERSTATES AND PARKWAYS

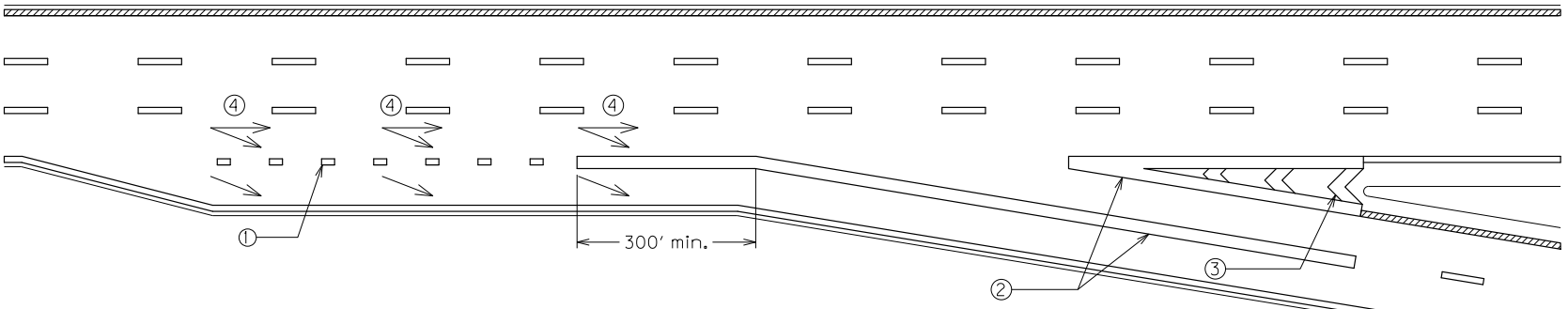
SUBMITTED R. Jeffrey Wolfe 8-23-18
DATE

039

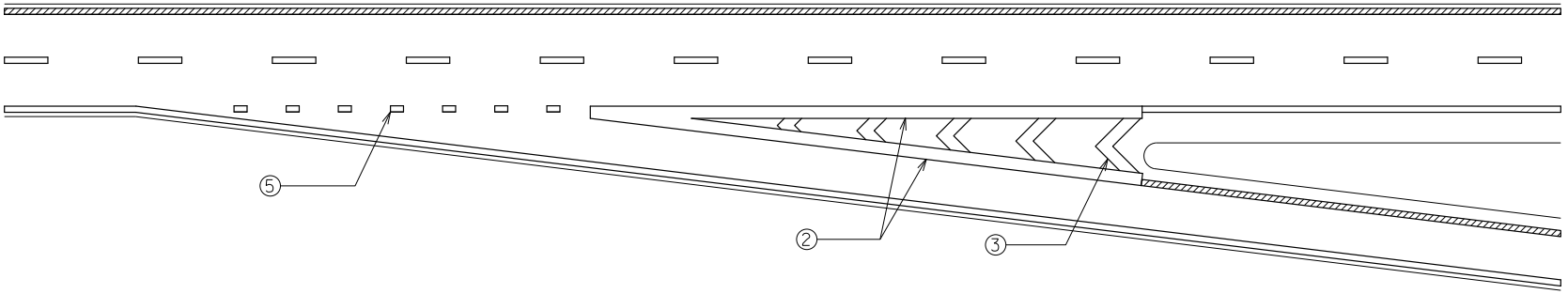
PARALLEL DECELERATION LANE



PARALLEL DECELERATION LANE WITH OPTION LANE



TAPERED DECELERATION LANE



① NORMAL WIDTH DOTTED LANE LINES SHALL BE USED ALONG THE FULL-WIDTH SECTION OF A PARALLEL DECELERATION LANE. IF DESIRED, EXTENSION LINES MAY BE USED ALONG THE TAPER.

② 12" WIDE SOLID CHANNELIZATION LINE.

③ GORE AREA CHEVRON MARKINGS SHOULD BE USED IN ACCORDANCE WITH SEPIA 045.

④ LANE USE ARROWS MAY BE USED WHEN THERE IS AN OPTION LANE. IF USED, A MINIMUM OF THREE ARROWS PER LANE SHOULD BE PLACED AS SHOWN AND SPACED AT APPROXIMATELY 1/4 MILE.

⑤ FOR TAPERED DECELERATION LANES, DOTTED EXTENSIONS MAY BE INSTALLED AS SHOWN.

DRAWING NOT TO SCALE

LEGEND
MARKINGS
WHITE
YELLOW

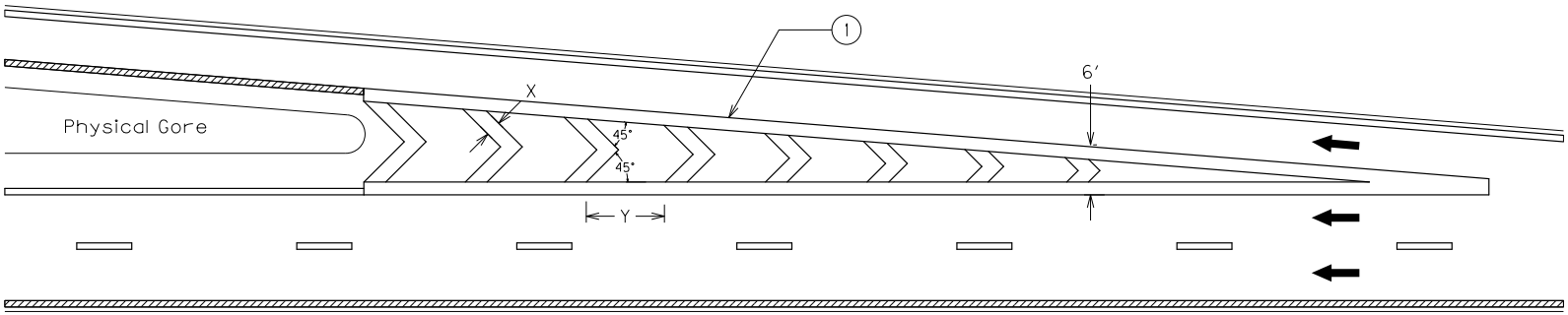
KENTUCKY DEPARTMENT OF HIGHWAYS

TYPICAL EXIT RAMP MARKINGS FOR INTERSTATES AND PARKWAYS

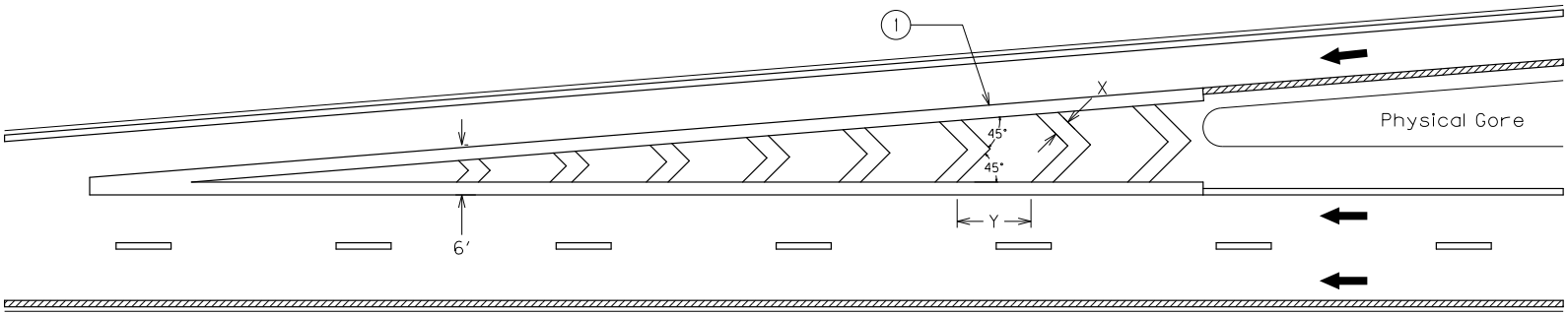
SUBMITTED R. Jeffrey Wolfe 11-30-18
DATE

040

TYPICAL EXIT RAMP GORE MARKINGS



TYPICAL ENTRANCE RAMP GORE MARKINGS



(1) 12" SOLID WHITE LINE TO BE INSTALLED AS SHOWN. THIS LINE SHOULD TERMINATE AT THE PHYSICAL GORE.

2 CHEVRON MARKINGS SHOULD BEGIN WHEN THE 12" WHITE CHANNELIZING LINES ARE APPROXIMATELY 6' APART.

3 A MINIMUM OF THREE CHEVRON MARKINGS SHOULD BE USED. IF AT LEAST THREE MARKINGS WILL NOT FIT INTO THE GORE AREA, NO CHEVRON MARKINGS SHOULD BE PLACED.

4 THE MINIMUM CHEVRON MARKING WIDTH (X) SHOULD BE 2'. THE MINIMUM SPACING BETWEEN CHEVRON MARKINGS (Y) SHOULD BE 20'. THESE DIMENSIONS MAY BE INCREASED. FOR EACH ADDITIONAL 1' OF WIDTH (X), INCREASE THE SPACING (Y) BY 10'.

5 GORE AREA CHEVRON MARKINGS SHALL BE THERMOPLASTIC.

DRAWING NOT TO SCALE

LEGEND
MARKINGS
WHITE
YELLOW

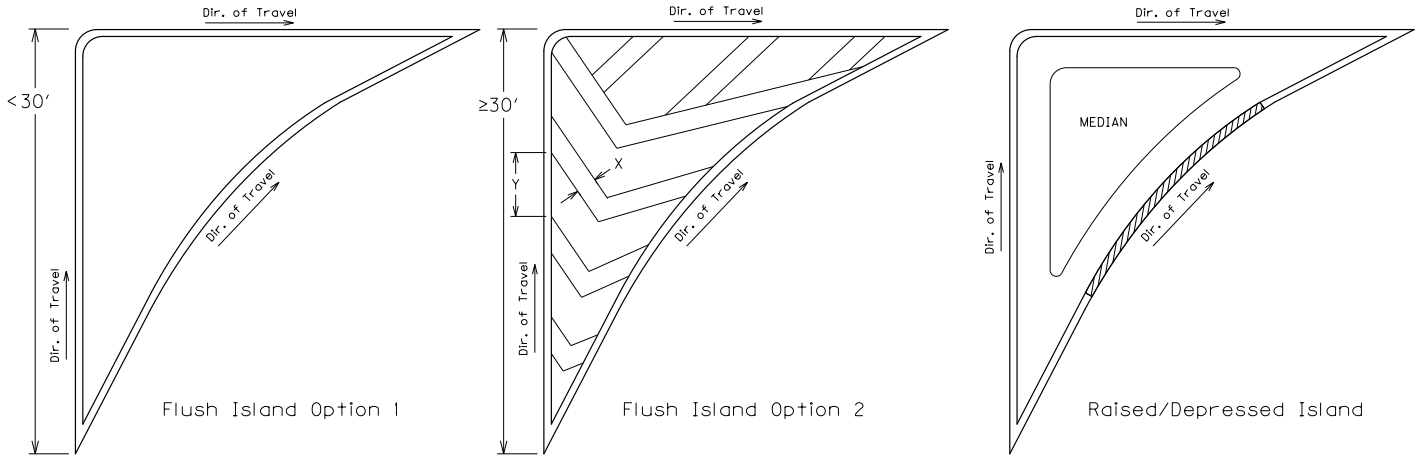
KENTUCKY DEPARTMENT OF HIGHWAYS

TYPICAL MARKINGS FOR GORE AREAS

SUBMITTED R. Jeffrey Wolfe 11-30-18 DATE

045

TYPICAL RIGHT-TURN CHANNELIZING ISLAND MARKINGS



GENERAL NOTES

THE MINIMUM WIDTH (X) OF CROSSHATCH MARKINGS IS 12" FOR LOW SPEED ROADS (< 45 MPH) AND 24" FOR HIGH SPEED ROADS (≥ 45 MPH).

THE SPACE BETWEEN ADJACENT CROSSHATCH MARKINGS (Y) SHOULD BE SET AT 10 TIMES THE WIDTH (X) OF THE CROSSHATCH MARKINGS.

CROSSHATCH MARKINGS SHOULD NOT BE PLACED IN A MEDIAN LESS THAN 6' IN WIDTH.

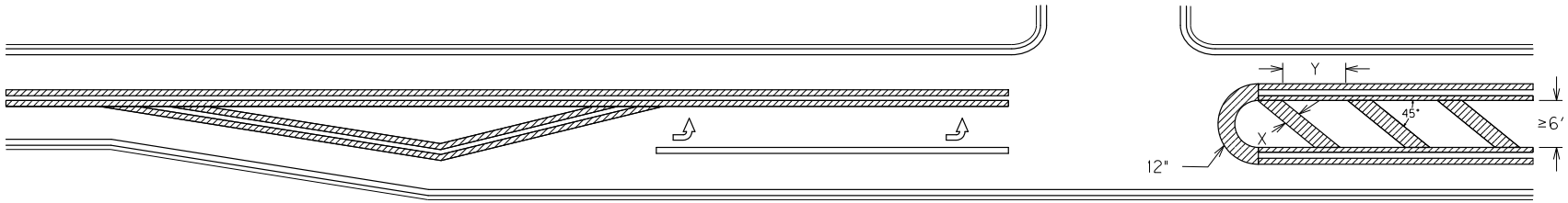
CROSSHATCH MARKINGS SHOULD NOT BE PLACED IN AND ISLAND IF ANY SIDE OF AN ISLAND IS LESS THAN 30' IN LENGTH.

THE OUTLINE OF AN ISLAND SHOULD BE EITHER 8" OR 12".

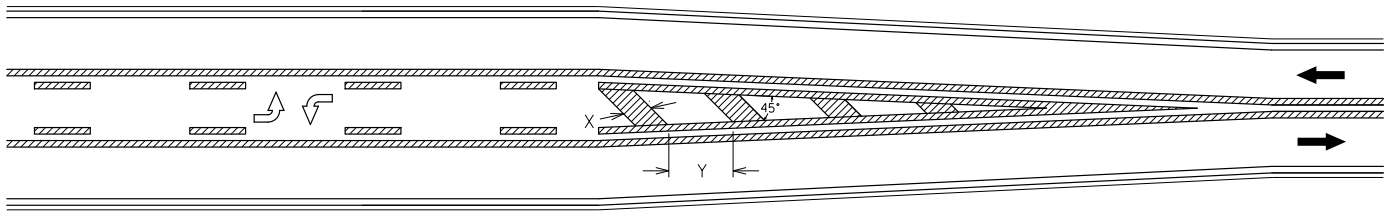
MEDIAN NOSES MAY BE EITHER A SINGLE 12" LINE OR A SOLID SEMI-CIRCLE.

CROSSHATCH AND CHEVRON MARKINGS SHOULD BE THERMOPLASTIC.

TYPICAL LEFT-TURN LANE / FLUSH MEDIAN CROSSHATCH MARKINGS



TYPICAL TWO-WAY LEFT-TURN LANE (TWLTL) TRANSITION MARKINGS



Note: Crosshatch markings shall be placed in the transition area of a TWLTL.

LEGEND

MARKINGS

WHITE

YELLOW

DRAWING NOT TO SCALE

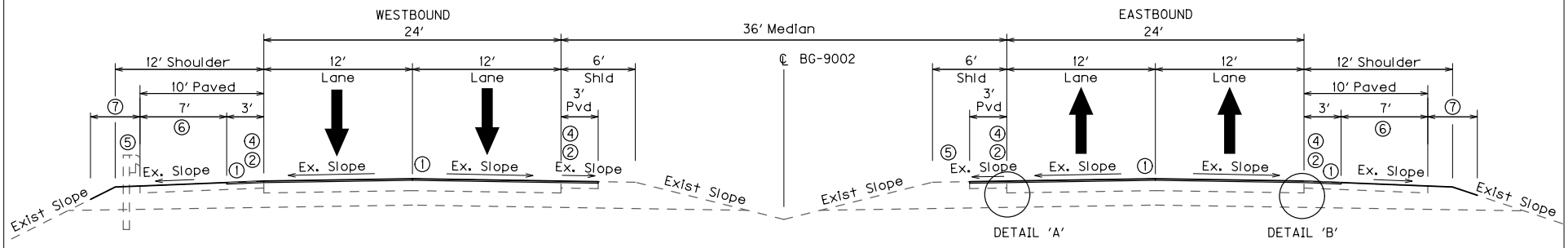
KENTUCKY DEPARTMENT OF HIGHWAYS

TYPICAL MARKINGS FOR ISLANDS AND MEDIANS

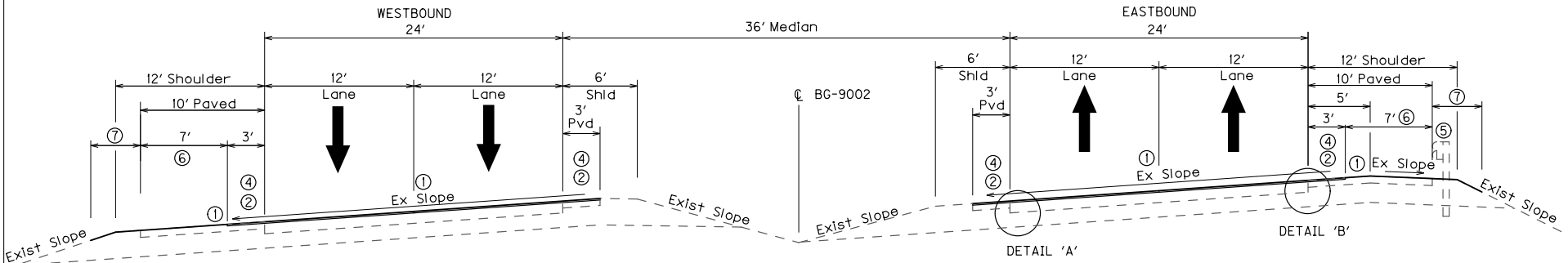
SUBMITTED R. Jeffrey Wolfe 11-30-18 DATE

046

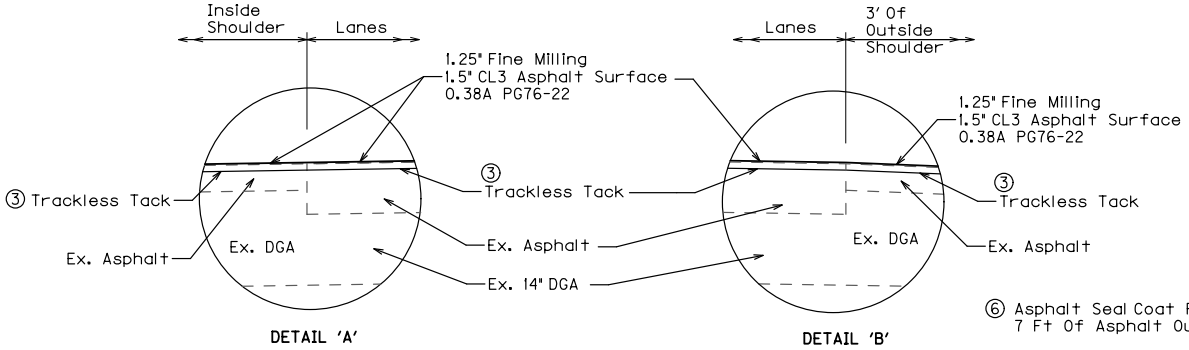
TYPICAL SECTIONS
BLUEGRASS PARKWAY (BG–9002)



NORMAL SECTION



SUPERELEVATED SECTION



PAVEMENT REHABILITATION

DRIVING LANES, INSIDE SHOULDER & MEDIAN CROSSOVERS ④

SURFACE —
- 1.5" CL3 ASPHALT SURFACE 0.38A PG76-22
- TRACKLESS TACK ③
- 1.25" FINE MILLING

3 FT OF OUTSIDE SHOULDER ④

SURFACE —
- 1.5" CL3 ASPHALT SURFACE 0.38A PG76-22
- TRACKLESS TACK ③
- 1.25" FINE MILLING

① Place Joint Adhesive Between Driving Lanes And At Driving Lane To Outside Shoulder Joint.

② Construct Sawed Rumble Strips

③ Trackless Tack Applied At 0.50 LB/SY. See The Special Note For Non-Tracking Tack Coat.

④ Asphalt Shoulder To Be Placed Concurrently With Driving Lane. Match Existing Cross Slope.

⑤ Existing Guardrail Is Not To Be Disturbed Unless Otherwise Listed In The Proposal For Replacement

⑥ Asphalt Seal Coat Required On The Remaining 7 Ft Of Asphalt Outside Shoulder.

One Application Required Of Item 291 Emulsified Asphalt RS-2 & Item 24961EC Asphalt Seal Aggregate - Type D.

See The Special Note For Asphalt Chip Seal On Shoulders.

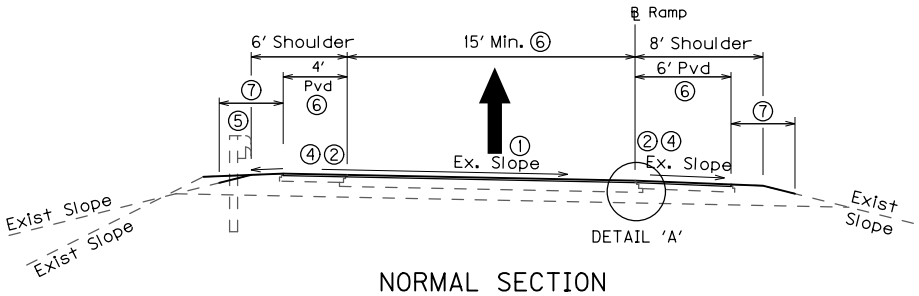
⑦ Where Guardrail Is Replaced Or New DGA Placed On The Existing DGA Shoulders, Asphalt Seal Coat Required From The Outside Paved Shoulder To A Point 2' Down The Ditch Or Fill Slope (Or As Directed By The Engineer).

Two (2) Applications Required At The Rate Of:
2.40 Lbs/SY Item 103 Asphalt Seal Coat
20 Lbs/SY Item 100 Asphalt Seal Aggregate
(Size NO. 8 OR 9M).

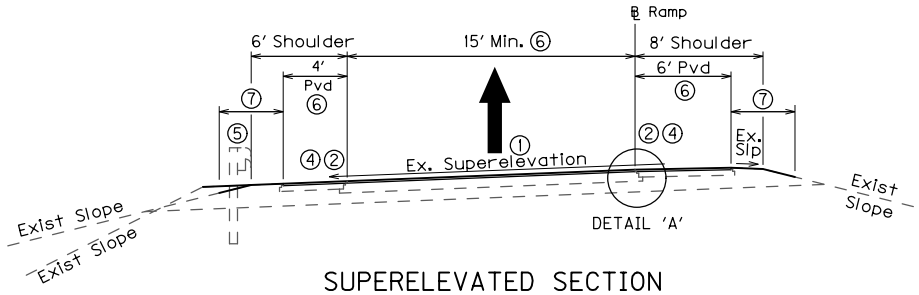
NOTE: EXISTING PAVEMENT INFORMATION TAKEN FROM PREVIOUS PLANS

NOT TO SCALE

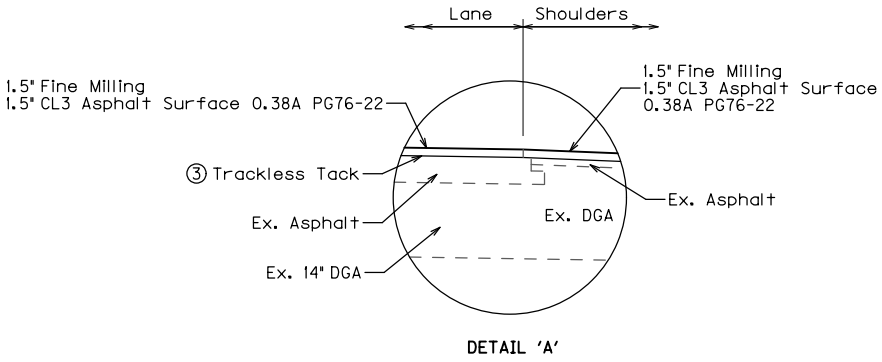
KY 583 RAMPS TYPICAL SECTIONS



NORMAL SECTION



SUPERELEVATED SECTION



DETAIL 'A'

PAVEMENT REHABILITATION

DRIVING LANE & SHOULDERS

SURFACE ---
- 1.5" CL3 ASPHALT SURFACE 0.38A PG76-22
- TRACKLESS TACK ③
- 1.5" FINE MILLING

① Place Joint Adhesive At Joint Between Paver Passes.

② Construct Sawed Rumble Strips

③ Trackless Tack Applied At 0.50 LB/SY. See The Special Note For Non-Tracking Tack Coat.

④ Asphalt Shoulders To Be Placed Concurrently With Driving Lane. Match Existing Cross Slope.

⑤ Existing Guardrail Is Not To Be Disturbed Unless Otherwise Listed In The Proposal For Replacement

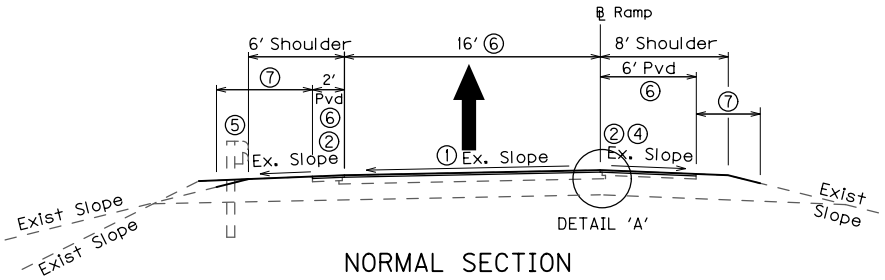
⑥ Match Existing Width.

⑦ Where Guardrail Is Replaced Or New DGA Placed On The Existing DGA Shoulders, Asphalt Seal Coat Required From The Outside Paved Shoulder To A Point 2' Down The Ditch Or Fill Slope (Or As Directed By The Engineer).

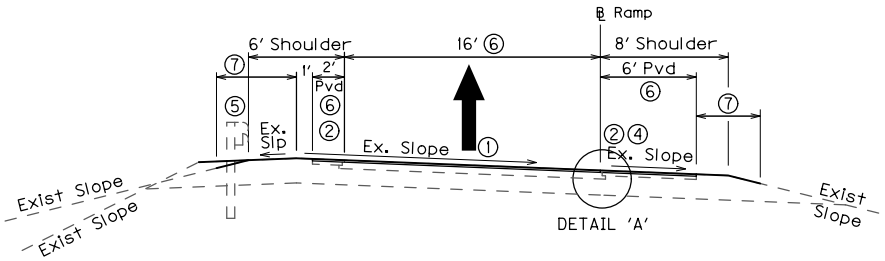
Two (2) Applications Required At The Rate Of:
2.40 Lbs/SY Item 103 Asphalt Seal Coat
20 Lbs/SY Item 100 Asphalt Seal Aggregate
(Size NO. 8 OR 9M).

NOT TO SCALE

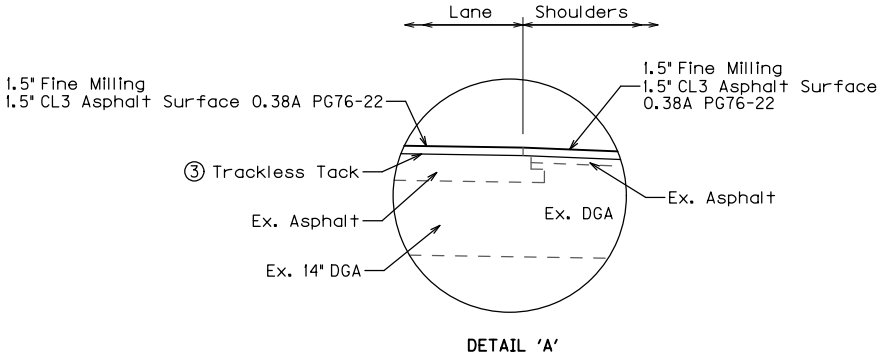
KY 52 RAMPS TYPICAL SECTIONS



NORMAL SECTION



SUPERELEVATED SECTION



DETAIL 'A'

PAVEMENT REHABILITATION

DRIVING LANE & SHOULDERS

SURFACE ---
- 1.5" CL3 ASPHALT SURFACE 0.38A PG76-22
- TRACKLESS TACK ③
- 1.5" FINE MILLING

TRAFFIC ISLANDS ⑧

SURFACE ---- 1.5" CL3 ASPHALT SURFACE 0.38A PG76-22

BASE ------
- TRACKLESS TACK ③
- 8" (4"+4") CL3 ASPHALT BASE 1.00D PG64-22
- 4" DENSE GRADED AGGREGATE

① Place Joint Adhesive At Joint Between Paver Passes.

② Construct Sawed Rumble Strips

③ Trackless Tack Applied At 0.50 LB/SY. See The Special Note For Non-Tracking Tack Coat.

④ Asphalt Shoulders To Be Placed Concurrently With Driving Lane. Match Existing Cross Slope.

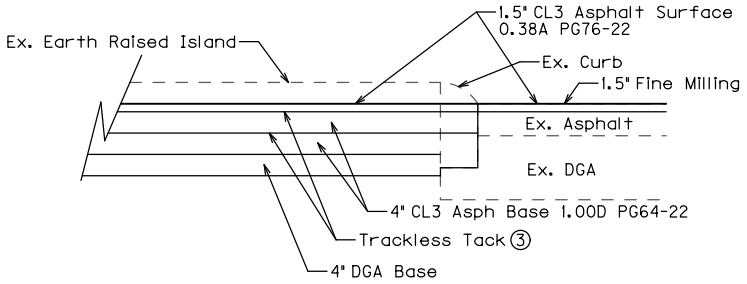
⑤ Existing Guardrail Is Not To Be Disturbed Unless Otherwise Listed In The Proposal For Replacement

⑥ Match Existing Width.

⑦ Where Guardrail Is Replaced Or New DGA Placed On The Existing DGA Shoulders, Asphalt Seal Coat Required From The Outside Paved Shoulder To A Point 2' Down The Ditch Or Fill Slope (Or As Directed By The Engineer).

Two (2) Applications Required At The Rate Of:
2.40 Lbs/SY Item 103 Asphalt Seal Coat
20 Lbs/SY Item 100 Asphalt Seal Aggregate
(Size NO. 8 OR 9M).

⑧ Bid Item No. 20997EC "Remove Traffic Island" Shall Include Removal and Disposal of The Existing Raised Island Material And Curbs To The Depth Of The Proposed DGA Base.



REMOVE TRAFFIC ISLAND DETAIL ⑧
(SEE PLANS SHEETS FOR LOCATIONS)

NOT TO SCALE

BLUEGRASS PARKWAY (BG-9002)
PAVEMENT REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
ITEM NO. 4-20007.00

HARDIN COUNTY GENERAL SUMMARY

CODE	ITEM	UNIT	BLUEGRASS PARKWAY	KY 583 RAMP A	KY 583 RAMP B	HARDIN COUNTY TOTAL	NOTES
78	Crushed Aggregate Size No. 2	Ton	1,109			**1,109**	(1)
461	Culvert Pipe-15 IN	Lin Ft	70			**70**	(4)
1202	Pipe Culvert Headwall-15 IN	Each	4			**4**	(4)
1432	Sloped Box Outlet Type 1-15 IN	Each	1			**1**	(4)
2014	Barricade-Type III	Each				**4**	
2165	Remove Paved Ditch	SY	634			**634**	(2)
2200	Roadway Excavation	CY	435			**435**	(6)
2483	Channel Lining Class II	Ton	469			**469**	(9)
2484	Channel Lining Class III	Ton	1,815			**1,815**	(7)
2562	Temporary Signs	SF				**300**	
2568	Mobilization	LS				**1**	
2569	Demobilization	LS				**1**	
2575	Ditching And Shouldering	Lin Ft				**15,660**	
2596	Geotextile Fabric Type 1	SY	400			**400**	(8)
2650	Maintain & Control Traffic	LS				**1**	
2671	Portable Changeable Message Sign	Each				**2**	
2701	Temp Silt Fence	LF				**2,500**	
2703	Silt Trap Type A	Each				**7**	
2704	Silt Trap Type B	Each				**15**	
2705	Silt Trap Type C	Each				**5**	
2726	Staking	LS				**1**	
2775	Arrow Panel	Each				**2**	
3260	Clean Roadway Drains	Each	1			**1**	(4)
5950	Erosion Control Blanket	SY	4,146			**4,146**	(3)
5963	Initial Fertilizer	Ton				**0.5**	
5964	20-10-10 Fertilizer	Ton				**0.5**	
5985	Seeding And Protection	SY				**3,000**	
5992	Agricultural Limestone	Ton				**2**	
6401	Flexible Delineator Post - M/W	Each	132	31	37	**200**	
6404	Flexible Delineator Post - M/Y	Each		17	30	**47**	
6511	Pave Striping-Temp Paint-6 In	Lin Ft				**70,470**	
6542	Pave Striping-Thermo-6 In W	Lin Ft	39,150	1,546	1,811	**42,507**	
6543	Pave Striping-Thermo-6 In Y	Lin Ft	31,320	826	1,463	**33,609**	
6546	Pave Striping-Thermo-12 In W	Lin Ft	2,183			**2,183**	
6549	Pave Striping-Temp Rem Tape-B	Lin Ft				**4,000**	
6550	Pave Striping-Temp Rem Tape-W	Lin Ft				**2,000**	
6551	Pave Striping-Temp Rem Tape-Y	Lin Ft				**2,000**	
6568	Pave Marking-Thermo Stop Bar-24 In	Lin Ft			36	**36**	
10020NS	Fuel Adjustment	Doll				**8,642**	

BLUEGRASS PARKWAY (BG-9002)
PAVEMENT REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
ITEM NO. 4-20007.00

HARDIN COUNTY GENERAL SUMMARY							
CODE	**ITEM**	**UNIT**	**BLUEGRASS PARKWAY**	**KY 583 RAMP A**	**KY 583 RAMP B**	**HARDIN COUNTY TOTAL**	**NOTES**
10030NS	Asphalt Adjustment	Doll				**17,458**	
23484EC	Pipe Liner Acceptance Testing	LS				**1**	(8)
24489EC	Inlaid Pavement Markers	Each	501	19	23	**543**	(5)
24543EC	Clean	Lin Ft	154			**154**	(8)
25031EC	CIPP Liner 42 In	Lin Ft	154			**154**	(8)

NOTES:

(1) Quantity carried forward from the Fill Slope Erosion Repair Summary.
(2) Quantity carried forward from the Ditch And Erosion Repair Summary.
(3) 2146 SY carried forward from the Ditch And Erosion Repair Summary and 2000 SY to be used as directed by the Engineer.
(4) Quantity carried forward from the Drainage Summary.
(5) Existing pavement marker removal shall be incidental to the Fine Milling bid item. See the Special Note for Inlaid Pavement Markers.
(6) 143 CY carried forward from the Ditch And Erosion Repair Summary and 292 CY carried forward from the Pipe And Outlet Ditch Repair Detail.
(7) 1415 Tons carried forward from the Ditch And Erosion Repair Summary and 400 Tons carried forward from the Pipe And Outlet Ditch Repair Detail.
(8) Quantity carried forward from the Pipe And Outlet Ditch Repair Detail.
(9) Included 269 Tons carried forward from the Ditch And Erosion Repair Summary and 200 Tons for filling in eroded slopes or used as directed by the Engineer. See the Fill Slope Erosion Repair detail.

BLUEGRASS PARKWAY (BG-9002)
PAVEMENT REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
ITEM NO. 4-20007.00

NELSON COUNTY GENERAL SUMMARY

CODE	ITEM	UNIT	BLUEGRASS PARKWAY	KY 52 RAMP A	KY 52 RAMP B	KY 52 RAMP C	KY 52 RAMP D	NELSON COUNTY TOTAL	PROJECT TOTAL	NOTES (NELSON CO.)
78	Crushed Aggregate Size No. 2	Ton	2,711					**2,711**	**3,820**	(3)
461	Culvert Pipe-15 IN	Lin Ft						**0**	**70**	
1202	Pipe Culvert Headwall-15 IN	Each						**0**	**4**	
1432	Sloped Box Outlet Type 1-15 IN	Each						**0**	**1**	
1691	Flume Inlet Type 2	Each	8					**8**	**8**	(10)
1825	Island Curb And Gutter	Lin Ft	46.5					**46.5**	**46.5**	(10)
1984	Delineator For Barrier - White	Each	82					**82**	**82**	(1)
1985	Delineator For Barrier - Yellow	Each	82					**82**	**82**	(1)
1992	Install Temp Conc Med Barr	Lin Ft	2,320					**2,320**	**2,320**	(7)
2014	Barricade-Type III	Each						**4**	**8**	
2165	Remove Paved Ditch	SY	218					**218**	**852**	(4)
2200	Roadway Excavation	CY						**0**	**435**	
2483	Channel Lining Class II	Ton	162					**162**	**631**	(9)
2484	Channel Lining Class III	Ton	728					**728**	**2,543**	(11)
2562	Temporary Signs	SF						**300**	**600**	
2565	Object Marker Type 2	Each	12					**12**	**12**	(2)
2568	Mobilization	LS						**1**	**1**	
2569	Demobilization	LS						**1**	**1**	
2575	Ditching And Shouldering	Lin Ft						**7,009**	**22,669**	
2596	Geotextile Fabric Type 1	SY						**0**	**400**	
2650	Maintain & Control Traffic	LS						**1**	**1**	
2671	Portable Changeable Message Sign	Each						**2**	**4**	
2701	Temp Silt Fence	LF						**500**	**3,000**	
2703	Silt Trap Type A	Each						**0**	**7**	
2704	Silt Trap Type B	Each						**5**	**20**	
2705	Silt Trap Type C	Each						**5**	**10**	
2726	Staking	LS						**1**	**1**	
2775	Arrow Panel	Each						**2**	**4**	
2898	Relocate Crash Cushion	Each	6					**6**	**6**	(8)
3260	Clean Roadway Drains	Each						**0**	**1**	
5950	Erosion Control Blanket	SY	1,383					**1,383**	**5,529**	(5)
5963	Initial Fertilizer	Ton						**0.5**	**1.0**	
5964	20-10-10 Fertilizer	Ton						**0.5**	**1.0**	
5985	Seeding And Protection	SY						**1,000**	**4,000**	
5992	Agricultural Limestone	Ton						**1**	**3**	
6401	Flexible Delineator Post - M/W	Each	99	38	23	19	29	**208**	**408**	
6404	Flexible Delineator Post - M/Y	Each		38	23	19	29	**109**	**156**	
6511	Pave Striping-Temp Paint-6 In	Lin Ft						**31,541**	**102,011**	
6542	Pave Striping-Thermo-6 In W	Lin Ft	17,523	1,888	1,111	932	1,422	**22,876**	**65,383**	
6543	Pave Striping-Thermo-6 In Y	Lin Ft	14,018	1,888	1,111	932	1,422	**19,371**	**52,980**	
6546	Pave Striping-Thermo-12 In W	Lin Ft	433					**433**	**2,616**	
6549	Pave Striping-Temp Rem Tape-B	Lin Ft						**4,000**	**8,000**	
6550	Pave Striping-Temp Rem Tape-W	Lin Ft						**2,000**	**4,000**	
6551	Pave Striping-Temp Rem Tape-Y	Lin Ft						**2,000**	**4,000**	
6568	Pave Marking-Thermo Stop Bar-24 In	Lin Ft		46		**54**		**100**	**136**	
8903	Crash Cushion TY VI Class BT TL3	Each	6					**6**	**6**	(8)
10020NS	Fuel Adjustment	Doll						**4,614**	**13,256**	
10030NS	Asphalt Adjustment	Doll						**9,322**	**26,780**	
23484EC	Pipe Liner Acceptance Testing	LS						**0**	**1**	
24489EC	Inlaid Pavement Markers	Each	197	24	14	12	18	**265**	**808**	(6)
24543EC	Clean (42 INCH CMP)	Lin Ft						**0**	**154**	
25031EC	CIPP Liner 42 In	Lin Ft						**0**	**154**	

BLUEGRASS PARKWAY (BG-9002)
PAVEMENT REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
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NOTES:

(1) Includes 24 Bridge Barrier Walls and 58 for the temporary concrete median barrier walls (20' spacing).
(2) See Std. Dwg. RBR-060.
(3) Quantity carried forward from the Fill Slope Erosion Repair Summary.
(4) Quantity carried forward from the Ditch And Erosion Repair Summary.
(5) Includes 383 SY carried forward from the Ditch And Erosion Repair Summary and 1000 SY to be used as directed by the Engineer.
(6) Existing pavement marker removal shall be incidental to the Fine Milling bid item. See the Special Note for Inlaid Pavement Markers.
(7) Relocating the barrier wall between construction phases will be incidental to this bid item. See the Temporary Barrier Wall Layout For Bridge Work detail sheet.
(8) See the Temporary Barrier Wall Layout For Bridge Work detail sheet.

(9) Includes 62 Tons carried forward from the Curb And Flume Summary and 100 Tons for filling in eroded slopes or used as directed by the Engineer. See the Fill Slope Erosion Repair detail
(10) Quantity carried forward from the Curb And Flume Summary.
(11) Includes 183 Tons carried forward from the Curb And Flume Summary and 545 Tons carried forward from the Ditch And Erosion Repair Summary.

SEE THE BRIDGE PROPOSAL FOR BRIDGE WORK QUANTITIES

BLUEGRASS PARKWAY (BG-9002)
PAVEMENT REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
ITEM NO. 4-20007.00

HARDIN COUNTY PAVEMENT SUMMARY

ITEM CODE	ITEM		UNIT	BG PARKWAY		KY 583 INTERCHANGE		HARDIN COUNTY TOTAL
				EASTBOUND	WESTBOUND	RAMP A	RAMP B	
1	DENSE GRADED AGGREGATE	(9) (10)	TON	2334	2095	46	254	**4729**
100	ASPHALT SEAL AGGREGATE	(1)	TON	271	243	5	29	**548**
103	ASPHALT SEAL COAT	(2)	TON	32.5	29.1	0.6	3.5	**65.7**
291	EMULSIFIED ASPHALT RS-2	(7)	TON	19.5	19.5			**39.0**
336	CL3 ASPH SURF 0.38A PG76-22	(3)	TON	4,313	4,447	464	475	**9849 (13)**
2676	MOBILIZATION FOR MILLING & TEXTURING		LS					**1**
20071EC	JOINT ADHESIVE	(4)	LF	15,660	15,660	1,546	1,811	**34,677**
20362ES403	SHOULDER RUMBLE STRIPS-SAWED	(14)	LF	31,320	31,320	2,372	3,274	**68,286**
24781EC	INTELLIGENT COMPACTION FOR ASPHALT	(6)	TON	4,313	4,447	464	475	**9,699**
24891EC	PAVE MOUNT INFRARED TEMP EQUIPMENT	(8)	SF	470,529	485,145	50,625	51,831	**1,058,130**
24961EC	ASPHALT SEAL AGGREGATE - TYPE D		SY	12,180	12,180			**24,360**
24964EC	FINE MILLING	(11)	SY	52,281	53,905	5,625	5,759	**117,570**
24970EC	TRACKLESS TACK	(5)	TON	13.1	13.5	1.4	1.4	**29.4**
24986EC	HMA ELECTRONIC DELIVERY MGMT SYSTEM	(12)	LS					**1**

NOTES:

(1) Estimated at 20 pounds per square yard per application with two applications required.
(2) Estimated at 2.4 pounds per square yard per application with two applications required.
(3) Estimated at 110 pounds per square yard per inch depth.
(4) See Special Note For Longitudinal Pavement Joint Adhesive.
(5) Estimated at 0.50 pounds per square yard. See the Special Note For Non-Tracking Tack Coat.
(6) See the special notes for Intelligent Compaction Of Asphalt Mixtures.
(7) Estimated at 3.2 pounds per square yard.
(8) See the special notes for Pavement Mounted Temperature Control Profiles.
(9) Estimated at 115 pounds per square yard per inch depth or 2.07 tons per cubic yard.
(10) Eroded DGA Shoulder Refill estimated at 3 inches
(11) See the Special Note for Fine Milling. The asphalt
(12) See the Special Note for HMA Electronic Delivery
(13) Includes 150 tons for leveling & wedging to be used as
(14) See Sepia 008.

BLUEGRASS PARKWAY (BG-9002)
PAVEMENT REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
ITEM NO. 4-20007.00

NELSON COUNTY PAVEMENT SUMMARY												
ITEM CODE	ITEM		UNIT	BG PARKWAY		KY 52 INTERCHANGE				NELSON COUNTY TOTAL	PROJECT TOTAL
				EASTBOUND	WESTBOUND	RAMP A	RAMP B	RAMP C	RAMP D		
1	DENSE GRADED AGGREGATE	(9) (10)	TON	1014	620	232	83	61	213	**2222**	**6,951**
100	ASPHALT SEAL AGGREGATE	(1)	TON	118	72	25	7	6	20	**248**	**796**
103	ASPHALT SEAL COAT	(2)	TON	14.1	8.6	3.0	0.8	0.7	2.4	**29.6**	**95.3**
214	CL3 ASPH BASE 1.00D PG64-22	(3)	TON			35	46	23	75	**179**	**179**
291	EMULSIFIED ASPHALT RS-2	(7)	TON	8.2	8.2					**16**	**55.4**
336	CL3 ASPH SURF 0.38A PG76-22	(3)	TON	1,851	1,843	445	272	232	357	**5050 (12)**	**14,899**
2676	MOBILIZATION FOR MILLING & TEXTURING		LS							**1**	**1**
20071EC	JOINT ADHESIVE	(4)	LF	6,584	6,584	1,888	1,111	932	1,422	**18,521**	**53,198**
20362ES403	SHOULDER RUMBLE STRIPS-SAWED	(14)	LF	13,168	13,168	3,776	2,222	932	1,422	**34,688**	**102,974**
20997ED	REMOVE TRAFFIC ISLAND		SY			80	105	52	171	**408**	**408**
24781EC	INTELLIGENT COMPACTION FOR ASPHALT	(6)	TON	1,851	1,843	445	272	232	357	**5,000**	**14,699**
24891EC	PAVE MOUNT INFRARED TEMP EQUIPMENT	(8)	SF	201,933	201,033	48,573	29,700	25,272	38,979	**545,490**	**1,603,620**
24961EC	ASPHALT SEAL AGGREGATE - TYPE D		SY	5,121	5,121					**10,242**	**34,602**
24964EC	FINE MILLING	(11)	SY	22,437	22,337	5,317	3,195	2,756	4,160	**60,202**	**177,772**
24970EC	TRACKLESS TACK	(5)	TON	5.6	5.6	1.3	0.8	0.7	1.1	**15.1**	**44.5**
24986EC	HMA ELECTRONIC DELIVERY MGMT SYSTEM	(13)	LS							**1**	**1**

NOTES:

(1) Estimated at 20 pounds per square yard per application with two applications required.
(2) Estimated at 2.4 pounds per square yard per application with two applications required.
(3) Estimated at 110 pounds per square yard per inch depth.
(4) See Special Note For Longitudinal Pavement Joint Adhesive.
(5) Estimated at 0.50 pounds per square yard. See the Special Note For Non-Tracking Tack Coat.
(6) See the special notes for Intelligent Compaction Of Asphalt Mixtures.
(7) Estimated at 3.2 pounds per square yard.
(8) See the special notes for Pavement Mounted Temperature Control Profiles.
(9) Estimated at 115 pounds per square yard per inch depth or 2.07 tons per cubic yard.
(10) Eroded DGA Shoulder Refill estimated at 3 inches depth.
(11) See the Special Note for Fine Milling. Millings are to be delivered to: approximately 2,500 ton to the Hardin County Maintenance Lot and the remainder to the Nelson County Maintenance Lot.
(12) Includes 50 tons for leveling & wedging to be used as directed by the Engineer.
(13) See the Special Note for HMA Electronic Delivery Management System (HMA e-Ticketing).
(14) See Sepia 008.

BLUEGRASS PARKWAY (BG-9002)
PAVEMENT REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
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HARDIN COUNTY PAVEMENT AREAS						
ITEM		BG PARKWAY		KY 583 INTERCHANGE		HARDIN COUNTY TOTAL
		EASTBOUND (3)	WESTBOUND	RAMP A	RAMP B	
		SQUARE YARDS				
1.5" CL3 ASPH SURF 0.38A PG76-22	(3)	52,281	53,905	5,625	5,759	**117,570**
1.25" FINE MILLING	(3)	52,281	53,905			**106,186**
1.5" FINE MILLING				5,625	5,759	**11,384**
TRACKLESS TACK	(3)	52,281	53,905	5,625	5,759	**117,570**
ASPHALT SEAL AGGREGATE - TYPE D	(2)	12,180	12,180			**24,360**
EMULSIFIED ASPHALT RS-2	(2)	12,180	12,180			**24,360**
ERODED DGA SHOULDER REFILL		13,529	12,145	267	1,473	**27,415**
ASPHALT SEAL AGGREGATE	(1)	27,059	24,291	533	2,947	**54,829**
ASPHALT SEAL COAT	(1)	27,059	24,291	533	2,947	**54,829**

(1) Area for two applications shown.
(2) See the Special Note for Asphalt Chip Seal On Shoulders.
(3) Eastbound totals include area for permanent median crossover.

BLUEGRASS PARKWAY (BG-9002)
PAVEMENT REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
ITEM NO. 4-20007.00

NELSON COUNTY PAVEMENT AREAS									
ITEM	BG PARKWAY		KY 52 INTERCHANGE				NELSON COUNTY TOTAL	PROJECT TOTAL
	EASTBOUND (3)	WESTBOUND	RAMP A	RAMP B	RAMP C	RAMP D		
	SQUARE YARDS							
1.5" CL3 ASPH SURF 0.38A PG76-22 (4)	22,437	22,337	5,397	3,300	2,808	4,331	**60,610**	**178,180**
1.25" FINE MILLING	22,437	22,337					**44,774**	**150,960**
1.5" FINE MILLING			5,317	3,195	2,756	4,160	**15,428**	**26,812**
TRACKLESS TACK	22,437	22,337	5,397	3,300	2,808	4,331	**60,610**	**178,180**
REMOVE TRAFFIC ISLAND			80	105	52	171	**408**	**408**
4" DENSE GRADED AGGREGATE			80	105	52	171	**408**	**408**
8" (4+4) CL3 ASPH BASE 1.00D PG64-22			80	105	52	171	**408**	**408**
ASPHALT SEAL AGGREGATE - TYPE D (2)	5,121	5,121					**10,242**	**34,602**
EMULSIFIED ASPHALT RS-2 (2)	5,121	5,121					**10,242**	**34,602**
ERODED DGA SHOULDER REFILL	5,876	3,595	1,239	341	281	1,008	**12,340**	**39,754**
ASPHALT SEAL AGGREGATE (1)	11,751	7,190	2,478	682	563	2,015	**24,679**	**79,508**
ASPHALT SEAL COAT (1)	11,751	7,190	2,478	682	563	2,015	**24,679**	**79,508**

(1) Area for two applications shown.
(2) See the Special Note for Asphalt Chip Seal On Shoulders.
(3) Eastbound totals include area for permanent median crossover.
(4) Ramp areas include island area at the KY 52 end of the ramp.

BLUEGRASS PARKWAY (BG-9002)
PAVEMENT REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
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HARDIN COUNTY GUARDRAIL SUMMARY

LOCATION					ITEM (1) 2381	2351	2352	2367	2369	(3) 1982	(3) 1983
					REMOVE GUARDRAIL	STEEL W BEAM		END TREATMENT		DELINEATOR MONO DIR.	
STATIONS			SIDE (4)			S FACE	D FACE	1	2A	W	Y
					(LF)			EACH			
EASTBOUND BG PKWY											
427+34.5	To	427+59.5	Rt	(2)	25.0	25.0			1		
499+95.0	To	503+20.0	Rt	(2)	325.0	325.0			1		
544+50.0	To	550+50.0	Rt	(2)	600.0	600.0					
553+75.0	To	570+91.0	Rt		1716.0	1675.0		1			
TOTAL EASTBOUND					2666.0	2625.0	0	1	2		
WESTBOUND BG PWKY											
441+87.0	To	448+87.0	Rt	(2)	700.0	700.0					
500+70.0	To	503+20.0	Rt	(2)	250.0	250.0					
521+95.0	To	525+45.0	Rt	(2)	275.0	300.0		1			
548+47.0	To	549+97.0	Rt	(2)	150.0	150.0					
553+25.9	To	553+63.4	Rt	(2)	37.5	37.5			1		
568+11.4	To	568+86.4	Rt	(2)	75.0	75.0					
TOTAL WESTBOUND					1487.5	1512.5	0	1	1		
TOTAL HARDIN CO.					**4153.5**	**4137.5**	**0**	**2**	**3**	**123**	**11**

(1) Salvage existing guardrail per the Standard Specifications, current edition, Section 719.03.07. The "Guardrail Delivery Verification Sheet" must be completed at the job site and provided to the Central Sign Shop and Recycle Center (formerly the Baily Bridge Yard) representative when the delivery is made. All wood posts shall become property of the contractor to be disposed of off site.

(2) Connect to existing guardrail.

(3) Delineators Are To Be Installed On All Guardrail (Existing Or New) Within The Project Limits.

(4) Relative To Direction Of Travel.

NOTE:

See Sepia Drawing No. 033 "Guardrail System Transition" for details on transitioning MGS guardrail to older style guardrail.

BLUEGRASS PARKWAY (BG-9002)
PAVEMENT REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
ITEM NO. 4-20007.00

NELSON COUNTY GUARDRAIL SUMMARY

LOCATION			SIDE [4]		ITEM [1] 2381 REMOVE GUARDRAIL	2351 STEEL W BEAM S FACE	2352 STEEL W BEAM D FACE	2367 END TREATMENT 1	2369 END TREATMENT 2A	ITEM [6] 25025ED THRIE BEAM GUARDRAIL TRANS. TL-3	ITEM [3] 1982 DELINEATOR MONO DIR. W	ITEM [3] 1983 DELINEATOR MONO DIR. Y
STATIONS					(LF)			EACH				
EASTBOUND BG PKWY												
570+91.0	To	577+82.7	Rt		683.6	675.0				1		
577+57.8	To	578+00.9	Lt	(2)	37.5	25.0				1		
580+91.4	To	605+79.6	Rt		2467.7	2450.0				2		
605+49.9	To	605+93.0	Lt	(2)	38.2	25.0				1		
606+96.2	To	615+70.5	Rt		864.5	837.5			1	1		
618+90.6	To	633+05.0	Rt		1412.5	1412.5			2			
638+28.0	To	639+03.0	Rt	(2)	75.0	75.0						
639+96.0	To	640+86.0	Rt	(2)	82.3	75.0				1		
639+86.7	To	640+94.4	Lt	(2)	100.0	87.5				1		
642+54.8	To	644+61.0	Rt	(2)	200.0	187.5				1		
TOTAL EASTBOUND					5961.3	5850	0	0	3	9		
WESTBOUND BG PWKY												
571+08.3	To	572+08.3	Rt	(2)	100.0	100.0						
575+28.3	To	578+37.0	Rt	(2)	301.0	287.5				1		
577+76.0	To	578+19.1	Lt			25.0			1	1		
581+24.5	To	581+67.7	Lt	(2)	38.7	25.0				1		
581+40.8	To	581+84.0	Rt	(2)	35.9	25.0				1		
582+30.6	To	583+18.1	Lt	(2)	87.5		87.5					
598+87.0	To	606+16.2	Rt	(2)	719.7	712.5				1		
607+19.4	To	607+62.6	Lt	(2)	38.3	25.0				1		
607+32.6	To	608+89.5	Rt	(2)	151.7	137.5				1		
613+51.5	To	615+39.0	Rt	(2)	187.5	187.5			1			
628+89.0	To	634+51.5	Rt	(2)	451.1	512.5		1				
639+18.1	To	641+11.2	Rt		177.6	175.0			1	1		
640+59.8	To	641+02.9	Lt			25.0			1	1		
642+71.7	To	643+14.9	Lt	(2)	42.8	25.0				1		
642+80.3	To	643+93.3	Rt	(2)	112.5	100.0				1		
TOTAL WESTBOUND					2444.3	2362.5	87.5	1	4	11		

BLUEGRASS PARKWAY (BG-9002)
PAVEMENT REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
ITEM NO. 4-20007.00

NELSON COUNTY GUARDRAIL SUMMARY

LOCATION					ITEM (1) 2381 REMOVE GUARDRAIL	2351 STEEL W BEAM S FACE	2352 STEEL W BEAM D FACE	2367 END TREATMENT 1	2369 END TREATMENT 2A	(6) 25025ED THRIE BEAM GUARDRAIL TRANS. TL-3	(3) 1982 DELINEATOR MONO DIR. W	(3) 1983 DELINEATOR MONO DIR. Y
STATIONS			SIDE (4)		(LF)			EACH				
KY 52 INTERCHANGE												
RAMP B												
207+07.2	To	207+82.2	Rt	(2)	75.0	75.0						
209+98.1	To	101+73.5	Rt	(5)	450.0	450.0						
TOTAL RAMPS					525	525	0	0	0	0		
TOTAL NELSON CO.					**8930.6**	**8737.5**	**87.5**	**1**	**7**	**20**	**181**	**67**
TOTAL PROJECT					**13084.1**	**12875**	**87.5**	**3**	**10**	**20**	**304**	**78**

(1) Salvage existing guardrail per the Standard Specifications, current edition, Section 719.03.07. The "Guardrail Delivery Verification Sheet" must be completed at the job site and provided to the Central Sign Shop and Recycle Center (formerly the Baily Bridge Yard) representative when the delivery is made. All wood posts shall become property of the contractor to be disposed of off site.

(2) Connect to existing guardrail.

(3) Delineators Are To Be Installed On All Guardrail (Existing Or New) Within The Project Limits.

(4) Relative To Direction Of Travel.

(5) Ramp B Station To Ramp A Station. Connect To Existing At End Points.

(6) See the Thrie Beam Guardrail Transition TL-3 detail sheet.

NOTES:

See Sepia Drawing No. 033 "Guardrail System Transition" for details on transitioning MGS guardrail to older style guardrail.

The Contractor Is To Remove The Aluminum Handrail On The Bridges Without Damaging Them and is to deliver the handrail to the Hardin County Maintenance Lot At 310 Valley Creek Road, Elizabethtown, KY.

KENTUCKY TRANSPORTATION CABINET
Department of Highways
DIVISION OF CONSTRUCTION

TC 63-72
Rev. 08/2015
Page 1 of 1

GUARDRAIL DELIVERY VERIFICATION SHEET

SECTION 1: CONTRACT INFORMATION

CONTRACT ID	**CONTRACTOR**
SECTION ENGINEER	**DISTRICT & COUNTY**

SECTION 2: GUARDRAIL DESCRIPTIONS & QUANTITIES

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 maintenance facility	LF		
Damaged posts to maintenance facility	EACH		

SECTION 3: REQUIRED SIGNATURES PART 1 *(required before leaving project site)*

SECTION ENGINEER'S REPRESENTATIVE NAME (*(Print.)*	
SECTION ENGINEER'S REPRESENTATIVE SIGNATURE	**DATE**
CONTRACTOR'S REPRESENTATIVE NAME *(Print.)*	
CONTRACTOR'S REPRESENTATIVE SIGNATURE	**DATE**

SECTION 4: REQUIRED SIGNATURES PART 2 *(required after arrival at Bailey Bridge Yard)*

Note: All material on the truck must be counted & the quantity received column completed before signatures.

BAILEY BRIDGE YARD REPRESENTATIVE NAME *(Print.)*	
BAILEY BRIDGE YARD REPRESENTATIVE SIGNATURE	**DATE**
CONTRACTOR'S REPRESENTATIVE NAME *(Print.)*	
CONTRACTOR'S REPRESENTATIVE SIGNATURE	**DATE**

Note: 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 by	**DATE**

BLUEGRASS PARKWAY PAVEMENT REHABILITATION
HARDIN AND NELSON COUNTIES ITEM NO 4-20007.00

HARDIN COUNTY FILL SLOPE EROSION REPAIR SUMMARY			
			CRUSHED AGGREGATE SIZE NO. 2 (1)
		ITEM CODE	78
		UNIT	TON
STA - STA	SIDE	EST. WIDTH (2)	
441+88 - 448+87	Westbound	16	249
500+05 - 503+21	Eastbound	14	98
500+76 - 503+16	Westbound	17	91
544+58 - 550+43	Eastbound	22	286
548+59 - 549+96	Westbound	11	33
554+13 - 561+12	Eastbound	15	233
561+88 - 564+40	Eastbound	13	73
564+59 - 566+08	Eastbound	14	46
		TOTAL	1,109

(1) Quantity based on 4 inch average depth & estimated at 100 pounds per square yard per inch of depth. Quantity carried forward to the General Summary.
(2) Average width as measured from the shoulder break point to the vegetated area.

See the Fill Slope Erosion Repair detail sheet for additional information.
See the General Summary for a quantity of Channel Lining Class II estimated to be needed to fill in deeper eroded areas.

Do Not Remove Guardrail To Perform This Work Unless Shown To Be Replaced In The Guardrail Summary.

BLUEGRASS PARKWAY PAVEMENT REHABILITATION
HARDIN AND NELSON COUNTIES ITEM NO 4-20007.00

NELSON COUNTY FILL SLOPE EROSION REPAIR SUMMARY			
			CRUSHED AGGREGATE SIZE NO. 2 (1)
		ITEM CODE	78
		UNIT	TON
STA - STA	SIDE	EST. WIDTH (2)	
567+56 - 577+17	Eastbound	15	320
581+03 - 605+72	Eastbound	20	1097
598+95 - 606+11	Westbound	16	255
607+03 - 615+21	Eastbound	15	273
613+99 - 615+27	Westbound	25	71
615+40 - 619+05	Eastbound	20	182
619+09 - 632+58	Eastbound	16	480
639+99 - 640+78	Eastbound	19	33
		TOTAL	2,711

(1) Quantity based on 4 inch average depth & estimated at 100 pounds per square yard per inch of depth. Quantity carried forward to the General Summary.
(2) Average width as measured from the shoulder break point to the vegetated area.

See the Fill Slope Erosion Repair detail sheet for additional information.
See the General Summary for a quantity of Channel Lining Class II estimated to be needed to fill in deeper eroded areas.

Do Not Remove Guardrail To Perform This Work Unless Shown To Be Replaced In The Guardrail Summary.

BLUEGRASS PARKWAY PAVEMENT REHABILITATION
HARDIN AND NELSON COUNTIES ITEM NO 4-20007.00

HARDIN COUNTY DITCH EROSION REPAIR SUMMARY							
		REMOVE PAVED DITCH (2)	ROADWAY EXCAVATION (4)	CHANNEL LINING CLASS II	CHANNEL LINING CLASS III (1)	EROSION CONTROL BLANKET (3)	NOTES
	ITEM CODE	2165	2200	2483	2484	5950	
	UNIT	SQ YD	CU YD	TON	TON	SQ YD	
STA - STA	SIDE						
449+94	Eastbound	26	93		45	173	4' FB - Perpendicular To Roadway
454+99	Eastbound	23	50		40	156	4' FB - Perpendicular To Roadway
484+08 - 484+35	Eastbound				50	56	2' FB
516+66 - 520+58	Eastbound			237		456	2' FB
537+98	Eastbound				22	24	2' FB
547+48 - 547+91	Eastbound			32		61	2' FB
557+49	Eastbound	4			6	7	2' FB - Perpendicular To Roadway
427+10 - 427+15	Westbound	14			20	22	2' FB
519+70 - 525+16	Westbound	250			507	608	2' FB
521+82	Westbound				50	56	2' FB - Perpendicular To Roadway
538+00	Westbound	67			100	111	2' FB - Perpendicular To Roadway
543+33 - 546+30	Westbound	201			301	334	2' FB
543+64 - 544+21	Westbound	38			57	63	2' FB
545+49 - 545+66	Westbound	11			17	19	2' FB
	TOTAL	634	143	269	1,415	2,146	

NOTES:
All quantities carried forward to the General Summary.
(1) An additional 200 tons has been included for filling in eroded side slopes along the ditch.
(2) Any clearing and grubbing required to remove the paved ditches will be incidental to this bid item.
(3) For areas disturbed while repairing ditches.
(4) Excavation necessary to reestablish original ditch.

BLUEGRASS PARKWAY PAVEMENT REHABILITATION
HARDIN AND NELSON COUNTIES ITEM NO 4-20007.00

NELSON COUNTY DITCH EROSION REPAIR SUMMARY					
		REMOVE PAVED DITCH (2)	CHANNEL LINING CLASS III (1)	EROSION CONTROL BLANKET (3)	NOTES
	ITEM CODE	2165	2484	5950	
	UNIT	SQ YD	TON	SQ YD	
STA - STA	SIDE				
617+04	Eastbound	109	12	13	2' FB - Perpendicular To Roadway
630+64 - 632+27	Westbound	109	163	181	2' FB
632+27 - 633+97	Westbound		170	189	2' FB
	TOTAL	218	545	383	

NOTES:
All quantities carried forward to the General Summary.
(1) An additional 200 tons has been included for filling in eroded side slopes along the ditch.
(2) Any clearing and grubbing required to remove the paved ditches will be incidental to this bid item.
(3) For areas disturbed while repairing ditches.

BLUEGRASS PARKWAY PAVEMENT REHABILITATION
HARDIN AND NELSON COUNTIES ITEM NO 4-20007.00

HARDIN COUNTY DRAINAGE SUMMARY							
		CULVERT PIPE - 15 IN (3)	PIPE CULVERT HEADWALL - 15 IN	SLOPED BOX OUTLET TYPE 1-15 IN	CLEAN ROADWAY DRAINS (2)	CLEAN OUT PIPE (4)	NOTES
		461	1202	1432	3260		
		LIN FT	EACH	EACH	EACH	LIN FT	
STATION	Location						
427+10	Lt	10	1				Headwall Has Fallen Over - Existing Pipe Is 15" CMP
454+98	Cross Drain					134	36" CMP
467+54	Lt	10		1			Existing 15" CMP Is Eroded Near Outlet
481+52	Cross Drain					130	24" CMP
489+52	Med				1	66	Median Inlet Not Draining. 15" Median Drain.
513+06	Lt	10	1				Headwall Has Detached From Pipe - Existing Pipe Is 15" CMP
518+58	Cross Drain					152	Double 24" CMP
516+58	Rt						Remove Debris From Inlet- Incidental to 2575 Ditching And Shouldering
522+60	Med Drain					66	15" CMP
538+00	Cross Drain					140	24" CMP
547+50	Cross Drain					164	24" CMP
553+49	Lt	20	1				Existing 15" CMP Is Exposed From Erosion.
557+49	Rt	20	1				Headwall Has Fallen Over - Existing Pipe Is 15" CMP
	Total	70	4	1	1		

All quantities carried forward to the General Summary.

(1) Removal of existing pipe and headwall will be incidental to their respective bid items.

(2) Inlets are to be cleaned after the milling operation.

(3) Refilling any washed out areas over the pipe with an embankment material approved by the Engineer will be incidental to the unit bid price for the pipe.

(4) Cleaning out pipes 36" or less will be incidental to the Ditching & Shouldering Bid Item.

Note: No Drainage Summary for Nelson County.

BLUEGRASS PARKWAY PAVEMENT REHABILITATION
HARDIN AND NELSON COUNTIES ITEM NO. 4-20007.00

NELSON COUNTY CURB AND FLUME SUMMARY						
		ISLAND CURB AND GUTTER (2)	FLUME INLET TYPE 2	CHANNEL LINING CLASS II	CHANNEL LINING CLASS III (1)	NOTES
ITEM CODE		1825	1691	2483	2484	
UNIT		LIN FT	EACH	TON	TON	
STATION	Location					
BLUEGRASS PARKWAY BRIDGE OVER ROLLING FORK (090B00011L & R)						
577+85.2	WB Inside	4.25	1			
577+85.2 - 578+10.0	WB Inside			15		2' FB Ditch, Grade To Drain
581+18.0 - 581+58.4	WB Inside			24		2' FB Ditch, Grade To Drain
581+58.4	WB Inside	4.25	1			
577+36.3	EB Outside	16.75	1		46	Do Not Disturb Nearby Signs, 2' FB Ditch
581+25.3	EB Outside	4.25	1		46	2' FB Ditch
BLUEGRASS PARKWAY BRIDGE OVER CSX RAILROAD (090B00013L & R)						
640+69.0	WB Inside	4.25	1			
640+77.3	WB Outside	4.25	1		51	2' FB Ditch
640+52.1	EB Outside	4.25	1		40	2' FB Ditch
640+60.5	EB Inside	4.25	1			
640+60.5 - 641+00.0	EB Inside			23		2' FB Ditch, Grade To Drain
	Total	46.50	8	62	183	

(1) Place channel lining from end of flume to bottom of slope.

(2) Const Island Curb & Gutter from the end of the Header Curb installed with the Thrie Beam transition to the Flume.

Notes:

No Curb And Flume Summary Items For Hardin County.

All Quantities Carried Forward To The General Summary

GENERAL NOTES
BLUEGRASS PARKWAY (BG-9002) REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
ITEM NO. 4-20007.00

THIS PROJECT IS A FULLY CONTROLLED ACCESS HIGHWAY

I. GENERAL

Perform all work in accordance with the Department's 2019 Standard Specifications, Supplemental Specifications, applicable Special Provisions, and Standard and Sepia Drawings except as specified in these notes or elsewhere in this proposal. Article references are to the Standard Specifications.

All existing mile markers within the project limits have been shown on the plan sheets along with their station based on the centerlines shown in the plans. These can be used to relate the stations shown in the summaries to their location in the field.

II. MATERIALS

Except as specified in these notes or on the drawings, all materials will be according to the Standard Specifications and applicable Special Provisions and Special Notes. The Department will sample and test all materials according to the Department's Sampling Manual and the Contractor will have the 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 Maintenance Of Traffic Plan.

B. PAVEMENT STRIPING-6 INCH PAINT. Use Pave Striping-Thermo-6 inch W or Y for permanent striping (12 inch at entrance and exit ramp tapers).

C. EROSION CONTROL BLANKET. Erosion Control Blanket is to be placed on any disturbed areas in the median, roadway side slopes, or other areas disturbed where work is required in the proposal.

III. CONSTRUCTION METHODS

A. MAINTAIN AND CONTROL TRAFFIC. See Maintenance Of Traffic Plan.

B. SITE PREPARATION. Be responsible for all site preparation. This item shall include, but is not limited to, clearing and grubbing, excavation and backfilling, embankments, removal of obstructions or any other items, and disposal of materials. All site preparation shall be only as approved or directed by the Engineer. Except for the bid items listed, site preparation will not be measured for payment but shall be incidental to the other items of work.

C. MILLING AND PAVING. After milling, where milling is called for in the proposal, correct settlement over pipes and culverts and remove de-bonded or flaking courses.

D. DISPOSAL OF WASTE. Dispose of all cuttings, debris, and other waste off the right-of-way at approved sites obtained by the Contractor at no additional cost to the Department. The Contractor will be responsible for obtaining any necessary permits for this work. Temporary openings in the right-of-way fence for direct access to waste sites off the right-of-way or for access to other public roads will not be allowed. No separate payment will be made for the disposal of waste and debris from the project or obtaining the necessary permits, but will be incidental to the other items of the work.

E. FINAL DRESSING, CLEANUP, AND SEEDING. After all work is completed, completely remove all debris from the job site. Perform Final Dressing Class A on all disturbed areas. This item is incidental to the other items of the work. Sow all disturbed earthen areas with the seed mixtures specified by the Engineer or place Erosion Control blanket on the areas if directed to do so by the Engineer.

F. PAVEMENT STRIPING AND PAVEMENT MARKERS. Permanent striping will be in accordance with Section 714, except that:

(1) Striping will be 6” in width, except 12” in gore areas;
(2) Permanent Striping will be in place before a lane is opened to traffic;
(3) Permanent striping will be Pave Striping-Thermo-6 or 12 inch W or Y;
(4) Existing pavement marker removal shall be incidental to Fine Milling.
(5) Inlaid Pavement Markers will be required. See the Special Note for Inlaid Pavement Markers.

G. ON SITE INSPECTION. Each Contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting a bid and shall be thoroughly familiarized with existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. The Department will not honor any claims resulting from site conditions.

H. PROPERTY DAMAGE. The Contractor shall be responsible for all damage to public and/or private property resulting from the Contractor’s work. Restore all disturbed features in like kind materials and design to the existing or proposed grades, as applicable, at no additional cost to the Department.

I. CAUTION. Information shown on the drawings and in this proposal and the types and quantities of work listed are not to be taken as an accurate or complete evaluation of the material and conditions to be encountered during construction. The bidder must draw his own conclusion as to the conditions encountered. The department does not give any guarantee as to the accuracy of the data and will not consider any claim for additional compensation if the conditions encountered are not in accordance with the information shown.

J. UTILITY CLEARANCE. 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. The Contractor shall be responsible for repairing all utility damage that occurs as a result of his operations at no additional cost to the Department. See the Special Note for Utility Clearance Impact on Construction.

IV. METHOD OF MEASUREMENT

Except as specified in these notes, or elsewhere in the drawings or this proposal, the method of measurement will be in accordance with the Standard Specifications.

A. MAINTAIN AND CONTROL TRAFFIC. See Maintenance Of Traffic Plan.

B. SITE PREPARATION. Other than the bid items listed, the Department will not measure Site Preparation for payment but shall be incidental to other items of work.

C. INLAID PAVEMENT MARKERS AND PERMANENT STRIPING. Pave Striping-Thermo (6” and 12”) is measured per linear foot. See Traffic Control Plan. Inlaid Pavement Markers are measured as each. See the Special Note for Inlaid Pavement Markers.

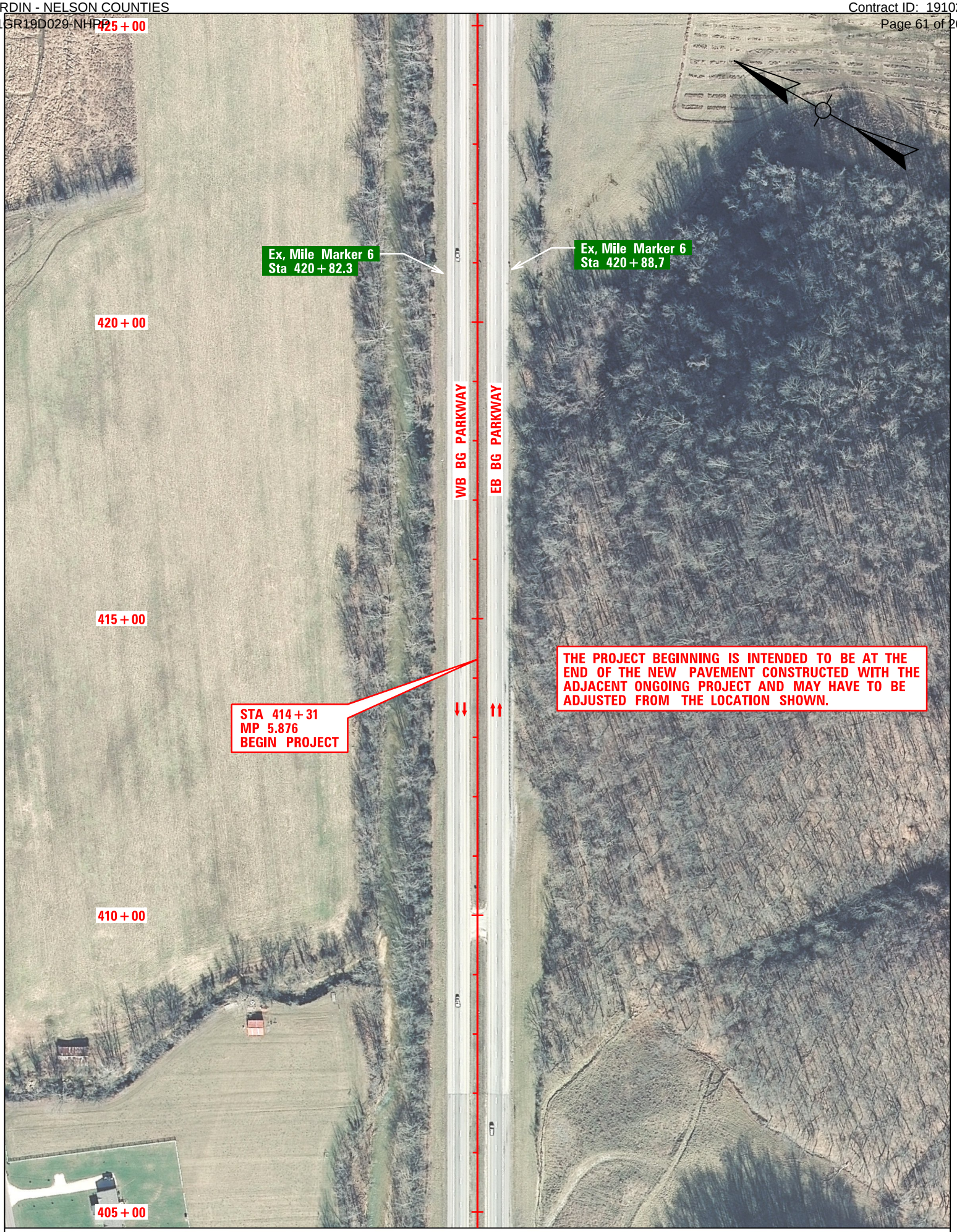
V. BASIS OF PAYMENT

Except as specified in these notes, or elsewhere in the drawings or this proposal, basis of payment will be in accordance with the Standard Specifications. No direct payment will be made other than for the bid items listed. All other items required to complete the construction will be incidental to the bid items listed. Existing signs damaged by the Contractor will be replaced by the Contractor at the Contractor’s expense.

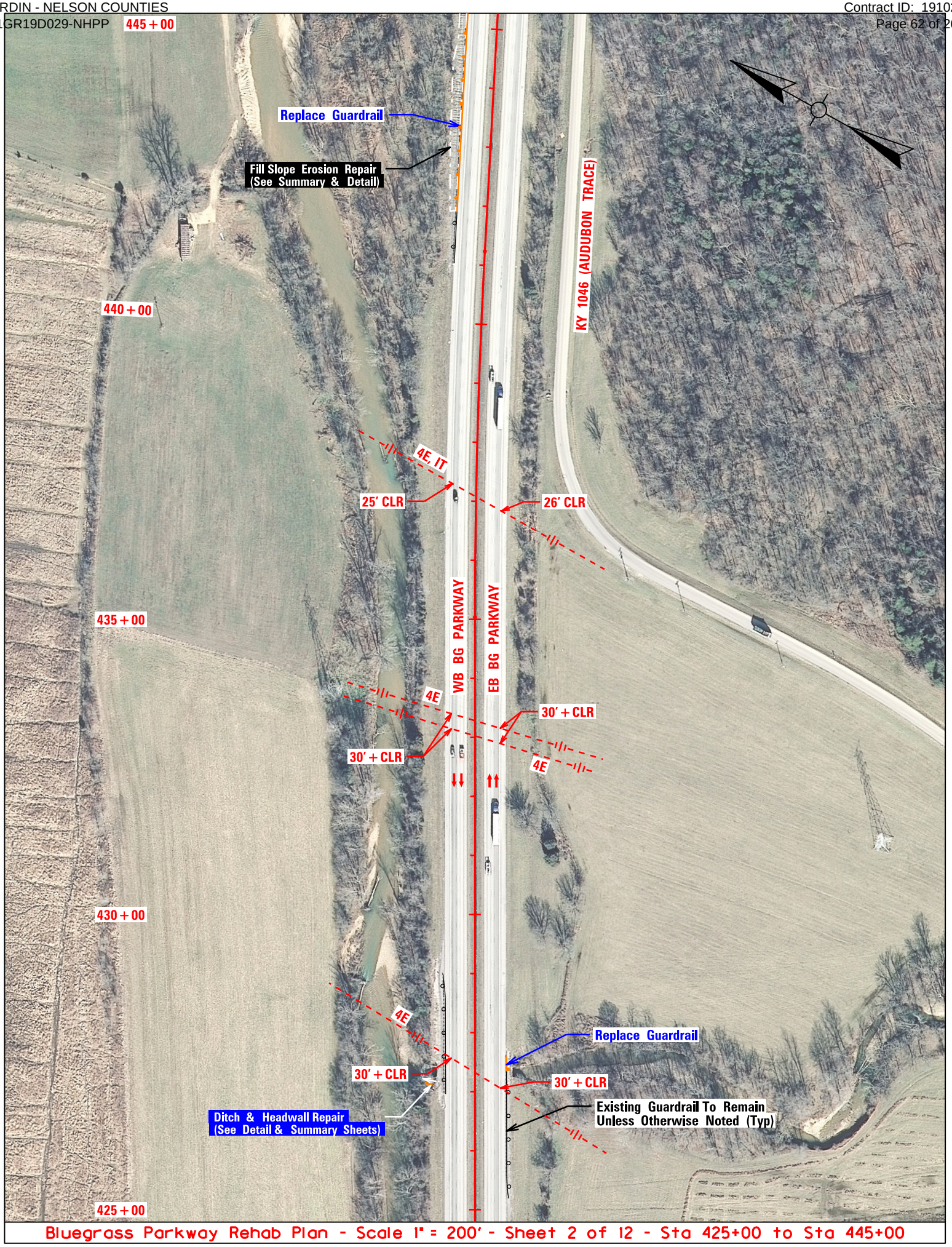
A. MAINTAIN AND CONTROL TRAFFIC. See Maintenance Of Traffic Plan.

B. SITE PREPARATION. Other than the bid items listed, no direct payment will be allowed for site preparation, but will be incidental to the other items of work.

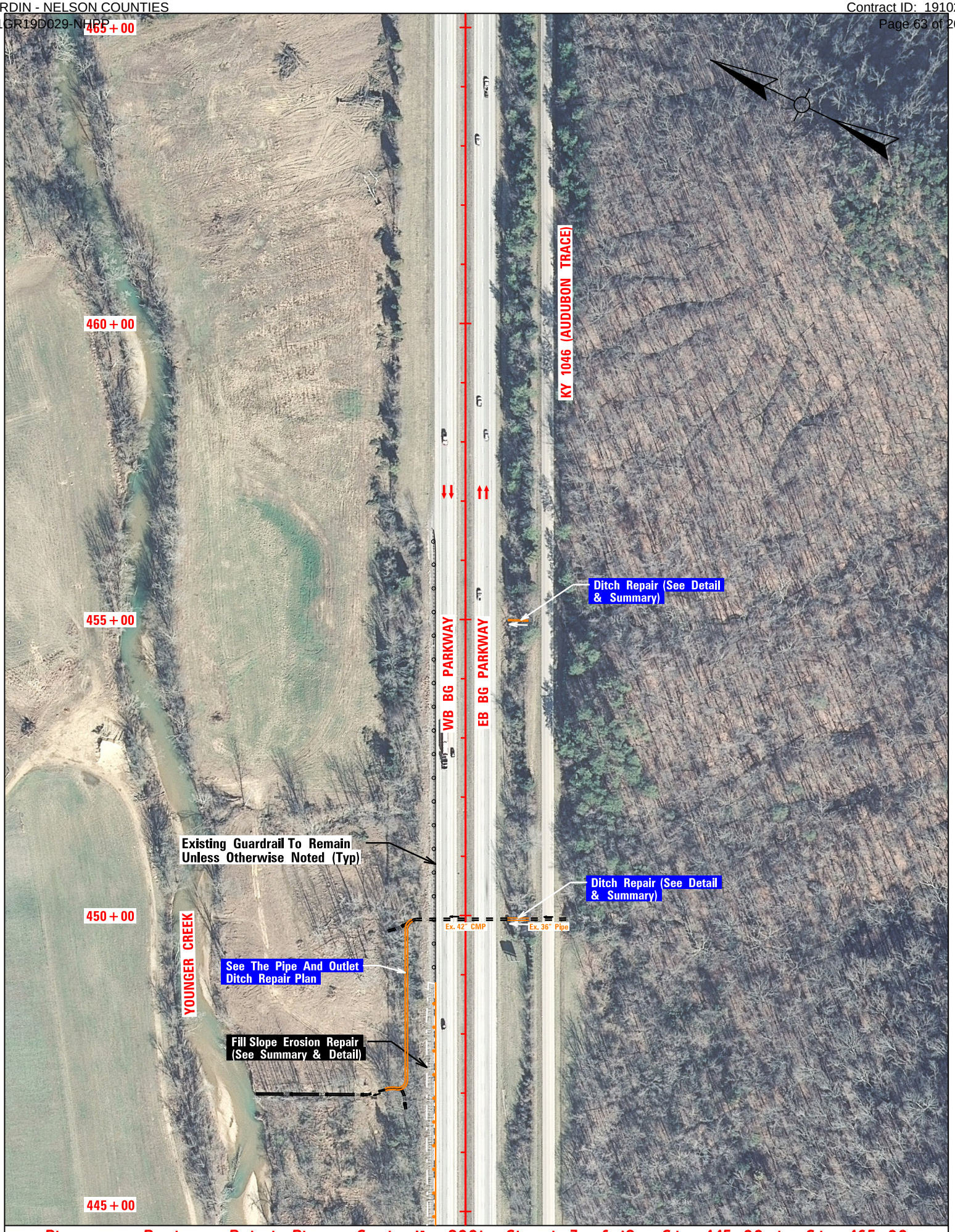
D. INLAID PAVEMENT MARKERS AND PERMANENT STRIPING. See the General Summary sheets and the Special Note for Inlaid Pavement Markers.



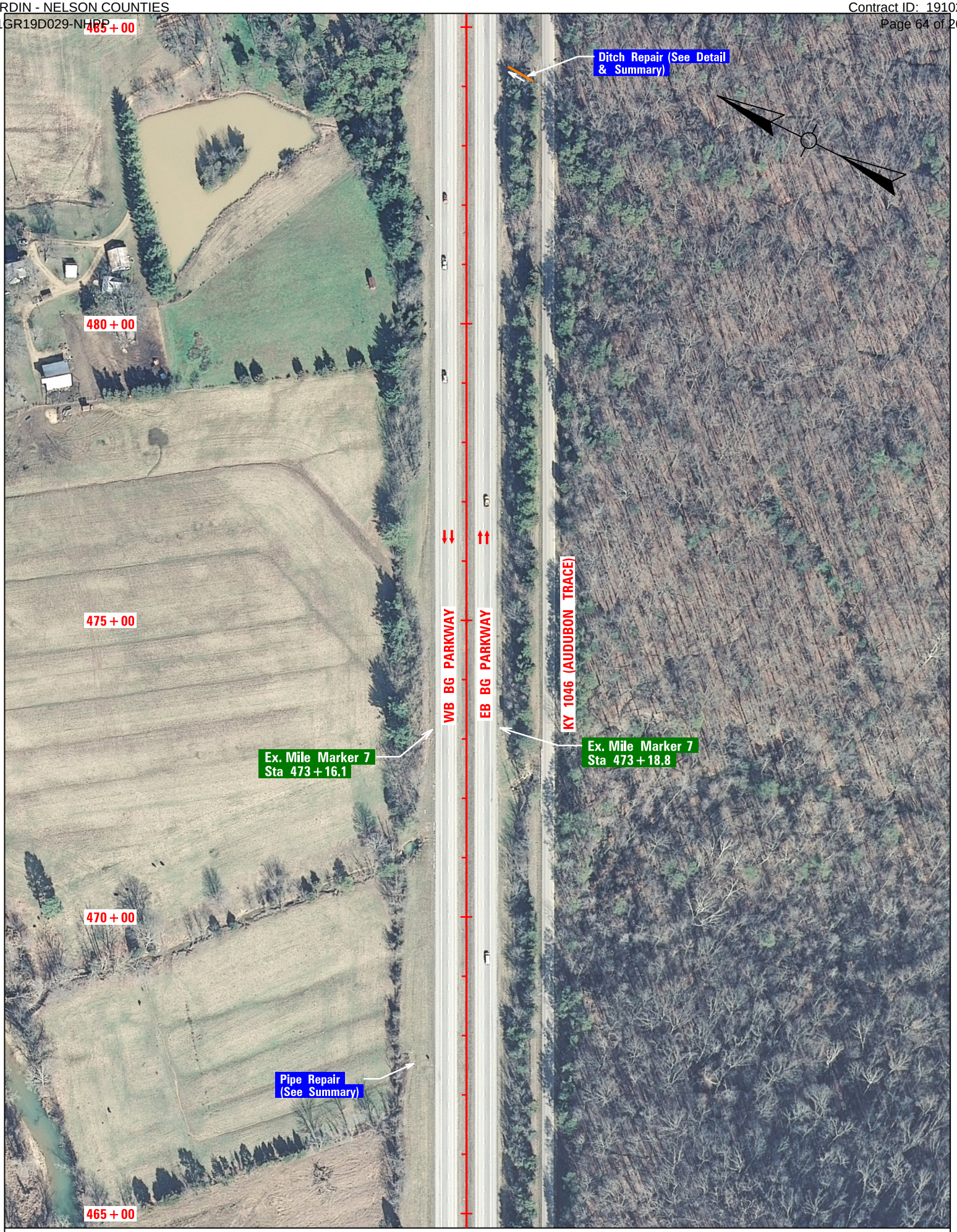
Bluegrass Parkway Rehab Plan - Scale 1" = 200' - Sheet 1 of 12 - Sta 405+00 to Sta 425+00



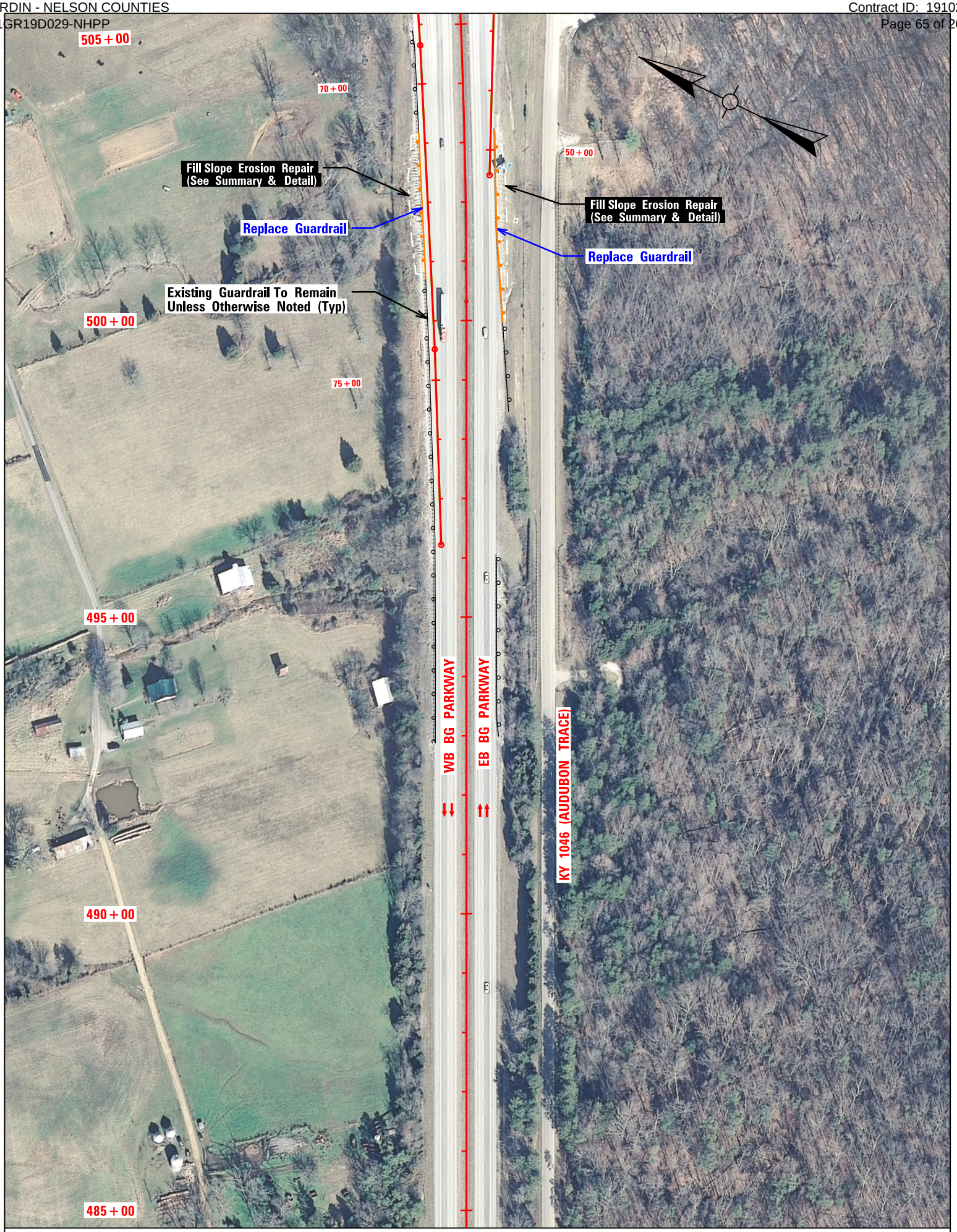
Bluegrass Parkway Rehab Plan - Scale 1" = 200' - Sheet 2 of 12 - Sta 425+00 to Sta 445+00



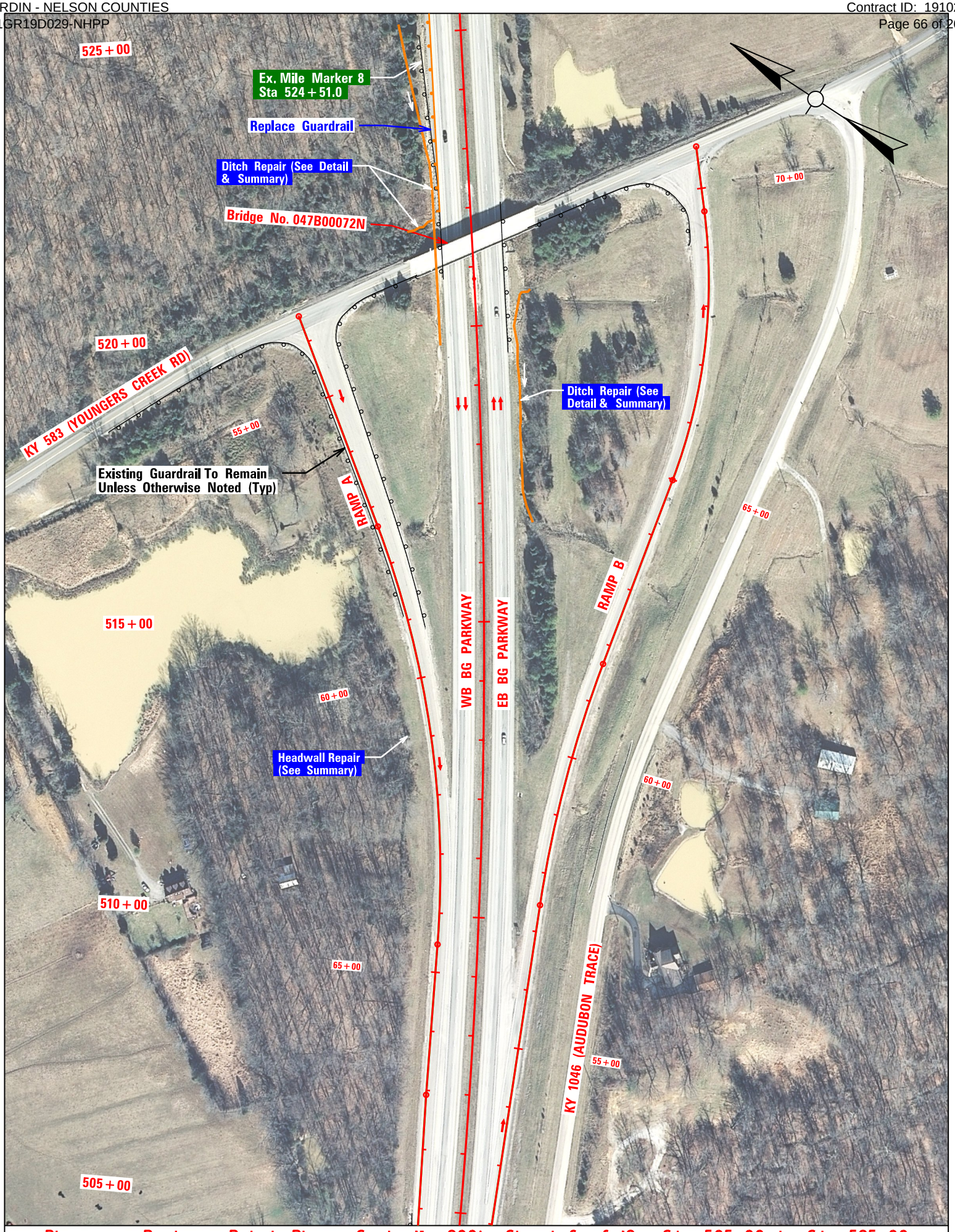
Bluegrass Parkway Rehab Plan - Scale 1" = 200' - Sheet 3 of 12 - Sta 445+00 to Sta 465+00



Bluegrass Parkway Rehab Plan - Scale 1" = 200' - Sheet 4 of 12 - Sta 465+00 to Sta 485+00

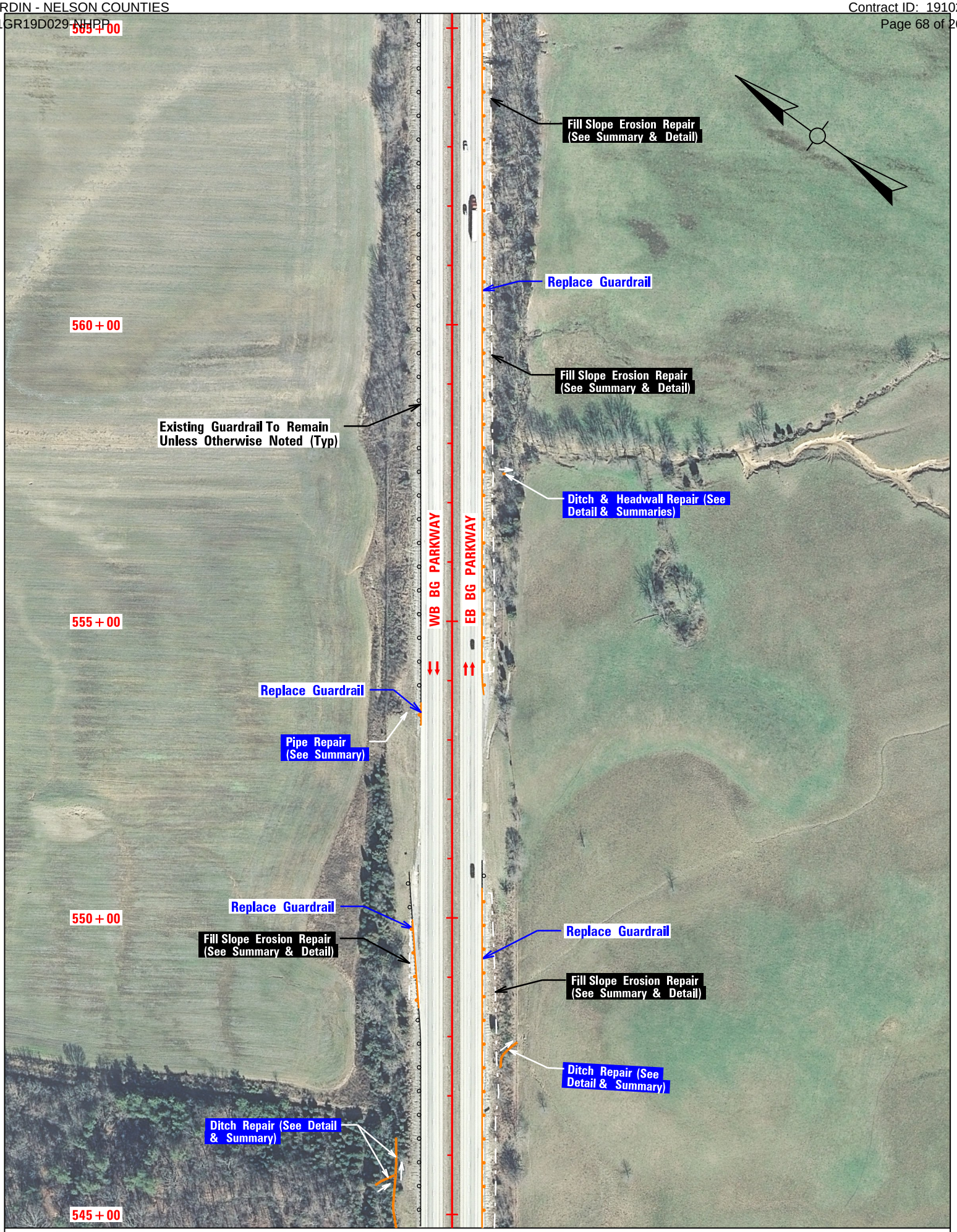


Bluegrass Parkway Rehab Plan - Scale 1" = 200' - Sheet 5 of 12 - Sta 485+00 to Sta 505+00

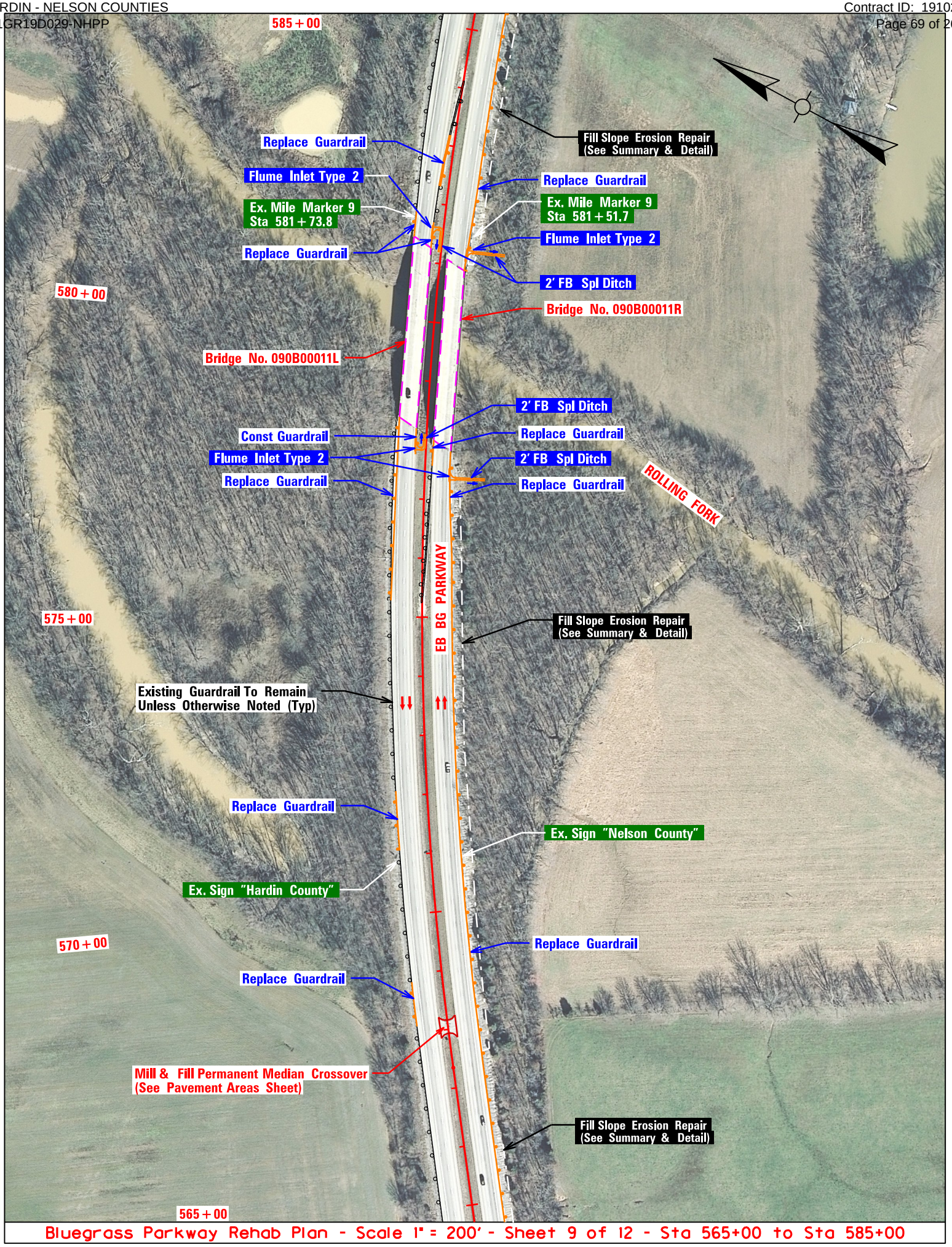


Bluegrass Parkway Rehab Plan - Scale 1" = 200' - Sheet 6 of 12 - Sta 505+00 to Sta 525+00

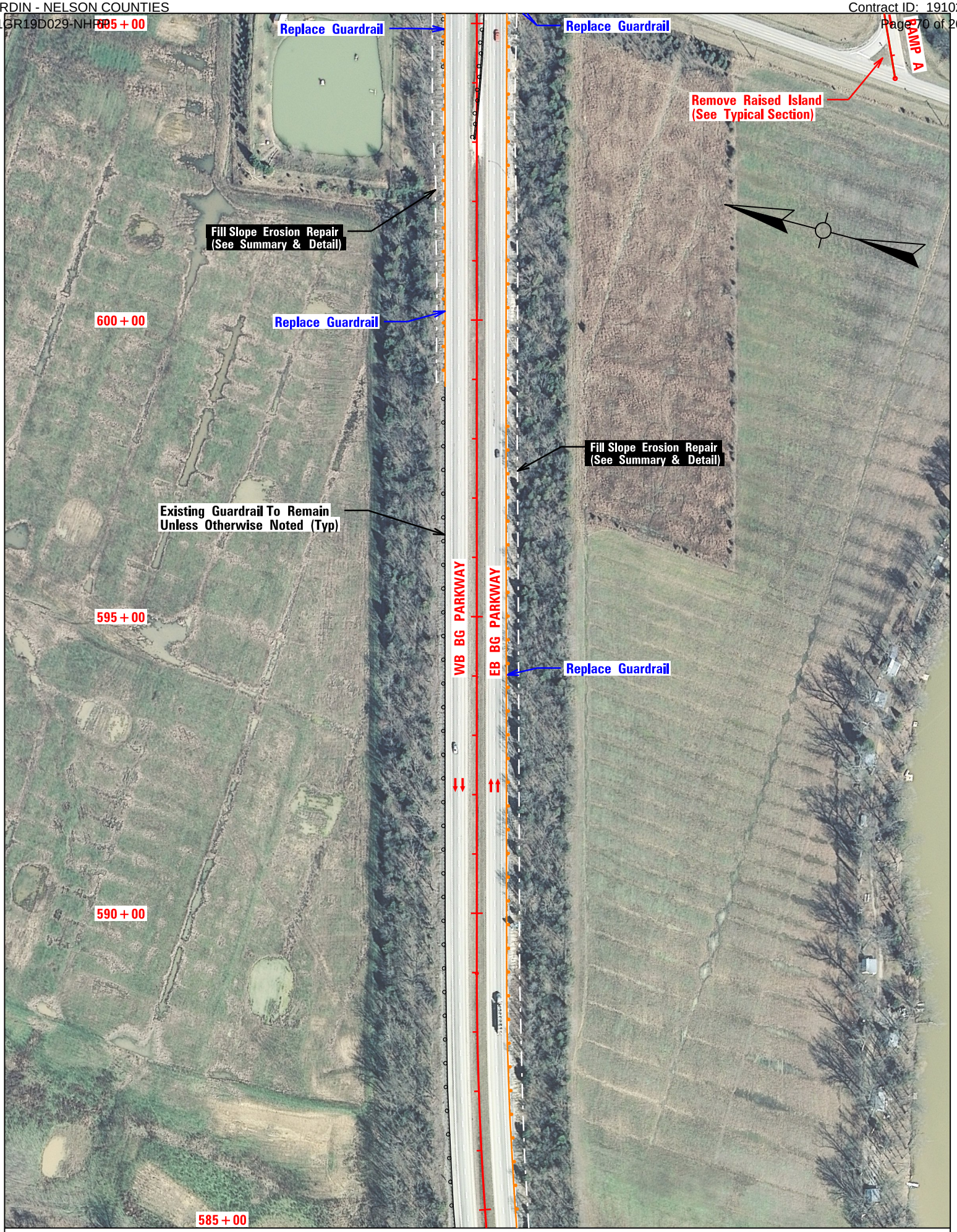
Bluegrass Parkway Rehab Plan - Scale 1" = 200' - Sheet 7 of 12 - Sta 525+00 to Sta 545+00



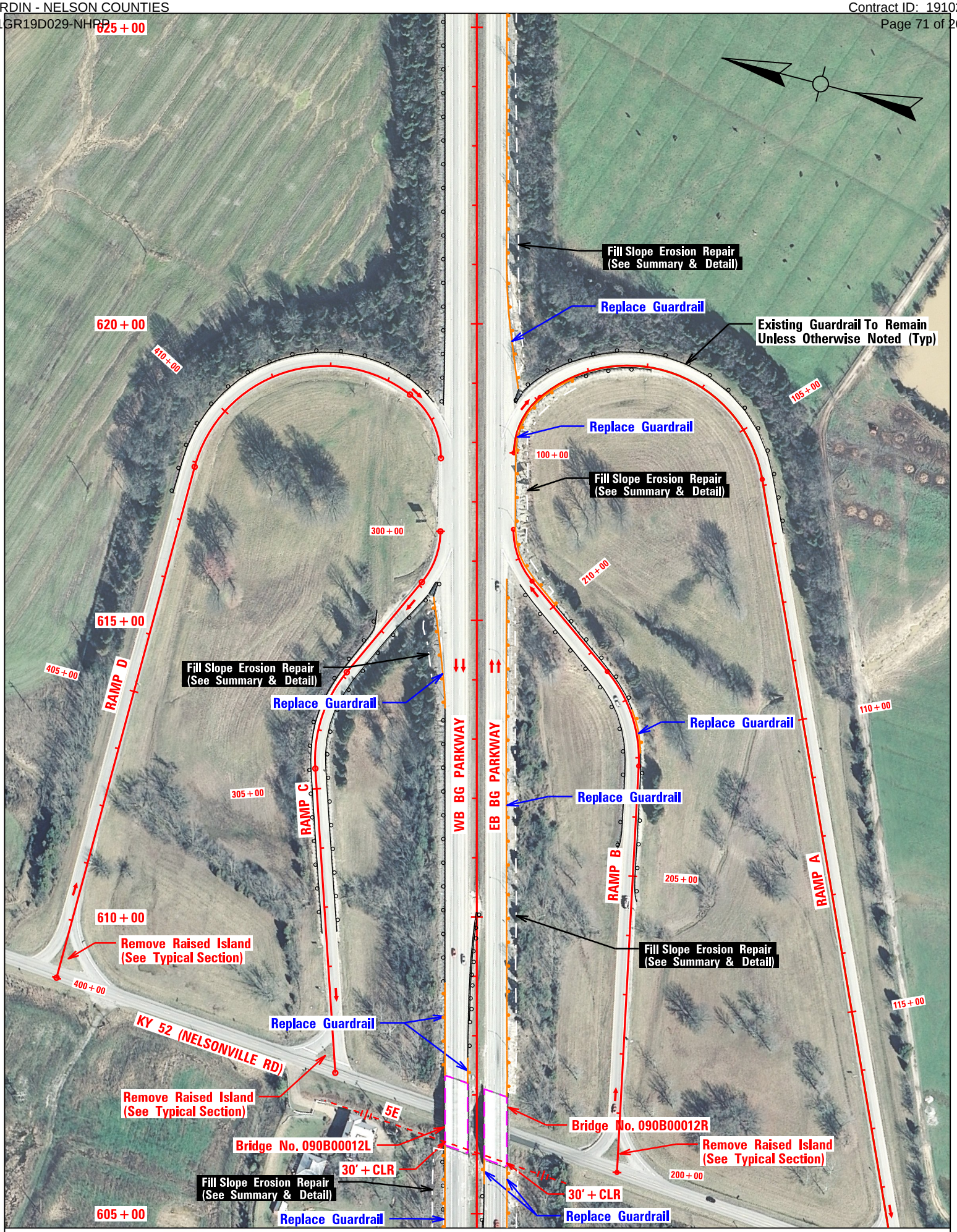
Bluegrass Parkway Rehab Plan - Scale 1" = 200' - Sheet 8 of 12 - Sta 545+00 to Sta 565+00



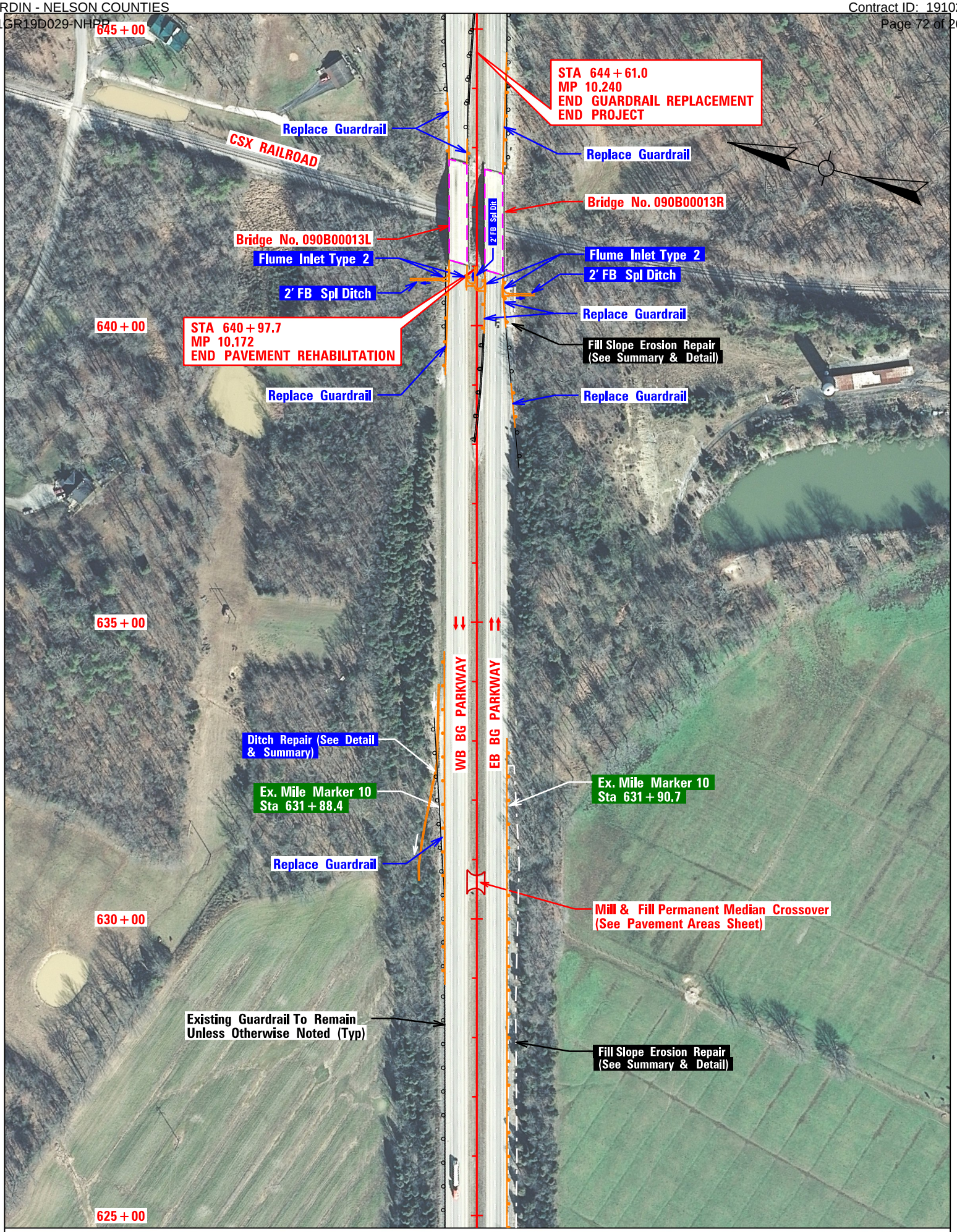
Bluegrass Parkway Rehab Plan - Scale 1" = 200' - Sheet 9 of 12 - Sta 565+00 to Sta 585+00



Bluegrass Parkway Rehab Plan - Scale 1" = 200' - Sheet 10 of 12 - Sta 585+00 to Sta 605+00



Bluegrass Parkway Rehab Plan - Scale 1" = 200' - Sheet 11 of 12 - Sta 605+00 to Sta 625+00



Bluegrass Parkway Rehab Plan - Scale 1" = 200' - Sheet 12 of 12 - Sta 625+00 to Sta 645+00

COUNTY OF	ITEM NO.	SHEET NO.
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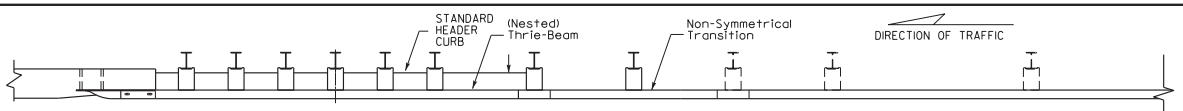
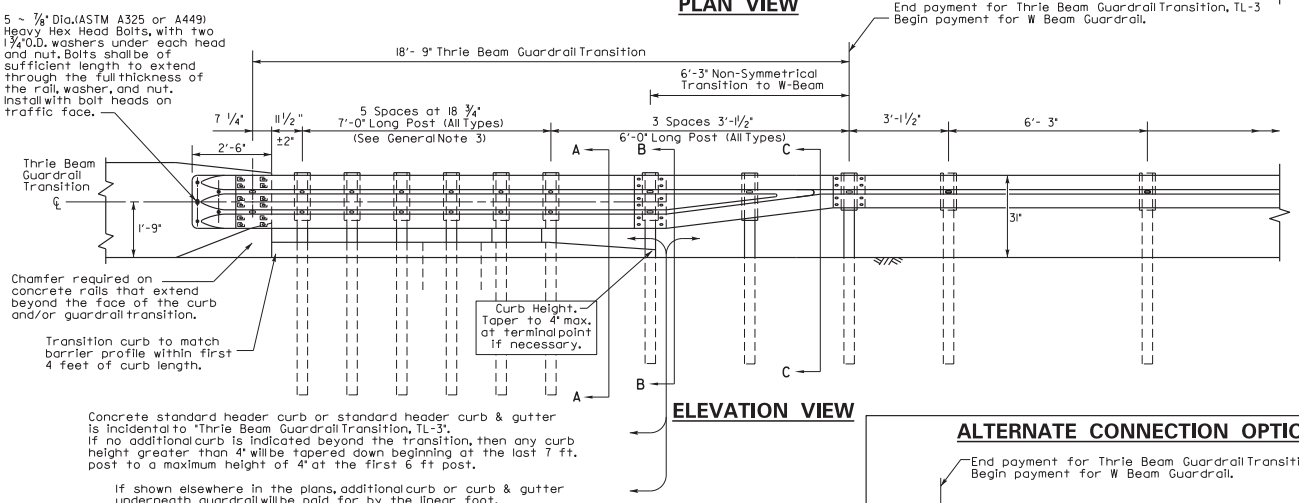


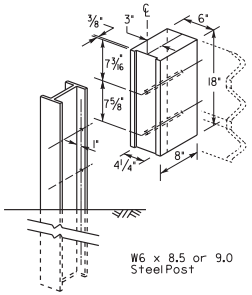
PLAN VIEW



ELEVATION VIEW

Concrete standard header curb or standard header curb & gutter is incidental to "Thrie Beam Guardrail Transition, TL-3". If no additional curb is indicated beyond the transition, then any curb height greater than 4" will be tapered down beginning at the last 7 ft. post to a maximum height of 4" at the first 6 ft post.

If shown elsewhere in the plans, additional curb or curb & gutter underneath guardrail will be paid for by the linear foot.



STEEL POST & BLOCK

(Showing Thrie Beam Block)

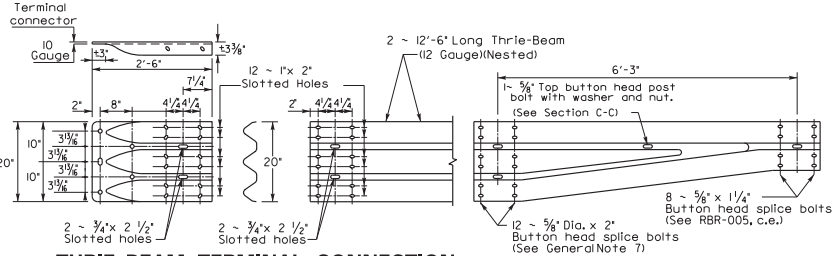
GENERAL NOTES

1. Concrete curb shall be standard header curb or standard header curb and gutter as shown on Std. Dwg. RPM-100, c.e. unless otherwise shown in the plans. If other curb heights are shown in the plans in conjunction with the transition, the curb height may be from 4" to 8" with a relatively vertical face. Concrete curb shall be continuous to the seventh post.
2. Use steel posts as shown unless indicated otherwise in the plans.
3. The post length shall be marked on all 7'- 0" long posts by the Manufacturer. The mark shall be located within the top 1 ft. region of the post, at least ⅝" in height, and visible after installation. Steel posts shall be marked with a stencil before galvanizing.
4. Rail element shall meet the requirements of AASHTO M180 except as modified on the plans. The thrie-beam terminal connector and the thrie-beam transition to w-beam shall be of the same material, but shall not be less than 10 gauge.

   Contractor shall verify that the locations of bolt holes match those in the thrie-beam terminal connector prior to ordering materials.
5. Unless otherwise shown in the plans, transitions shall be placed with the block face in front of or directly above the curb face.
6. Galvanized washers used with the ⅝" dia. post bolts shall be 1¾" O.D. washers. The (12) rectangular plate washers are required at the terminal connector splice.
7. Button head "post" bolts (ASTM A307) shall be of sufficient length to extend through the full thickness of the nut (ASTM A563) and washer and not more than 1" beyond it. Button head "splice" bolts (ASTM A307) ⅝" dia.x 2" (at triple rail splices) with ⅞" double recessed nuts.
8. Bolts, nuts, and washers shall be galvanized in accordance with AASHTO M232. Hardware shall be incidental to the bid item.
9. If solid rock is encountered, see the standard specifications for the proper installation guidance.
10. Posts shall not be set in concrete.
11. This railing has been successfully evaluated by full scale crash test to meet MASH TL-3 criteria. This railing transition is to be used when speeds are over 45 mph.
12. Method of measurement and basis of payment.

    A. Thrie Beam Guardrail Transition, TL-3 shall be paid at the contract unit price Each and includes the Thrie beam terminal connection, nested Thrie Beam elements, non symmetrical transition, posts, concrete standard header curb or standard header curb and gutter, hardware and all other incidentals necessary to complete the installation. This transition must tie into W Beam Guardrail, which is not included in this transition bid item.

    B. Plastic pipe and cost of forming holes shall be included in the cost for the bridge railing.

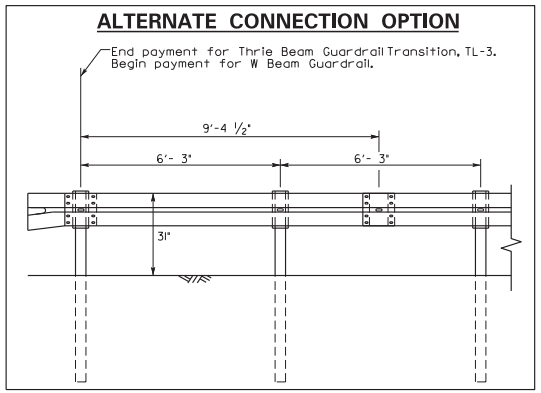


THRIE-BEAM TERMINAL CONNECTION

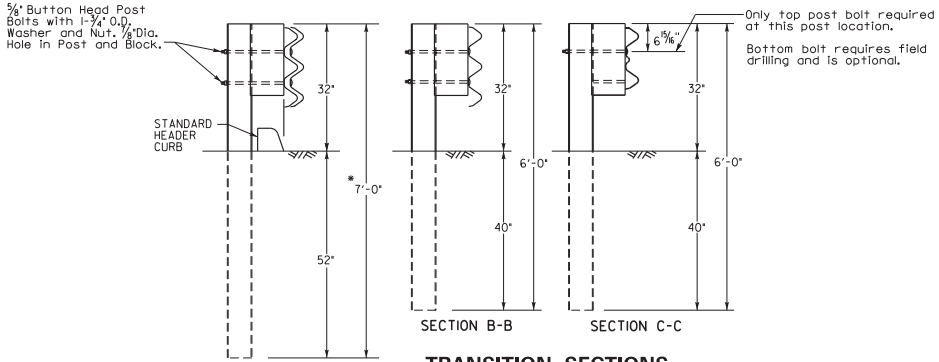
(See General Notes 6 & 7 for required hardware)

NON-SYMMETRICAL TRANSITION TO W-BEAM (10 Gauge)

ALTERNATE CONNECTION OPTION



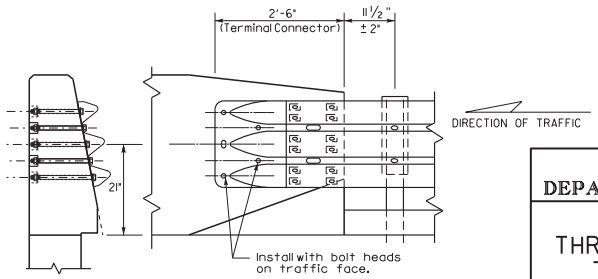
ELEVATION VIEW



SECTION A-A

*Note: (All post types) (See General Note 3)

TRANSITION SECTIONS



CONNECTION TO CONCRETE BRIDGE RAIL AND TRAFFIC BARRIERS

(12) Galvanized rectangular washers (See Std. Dwg. RBR-005, c.e.) are required under the recessed nut at the terminal connector splice to nested thrie-beam. (See General Notes 6 & 7).

KENTUCKY DEPARTMENT OF HIGHWAYS

THRIE BEAM GUARDRAIL TRANSITION, TL-3

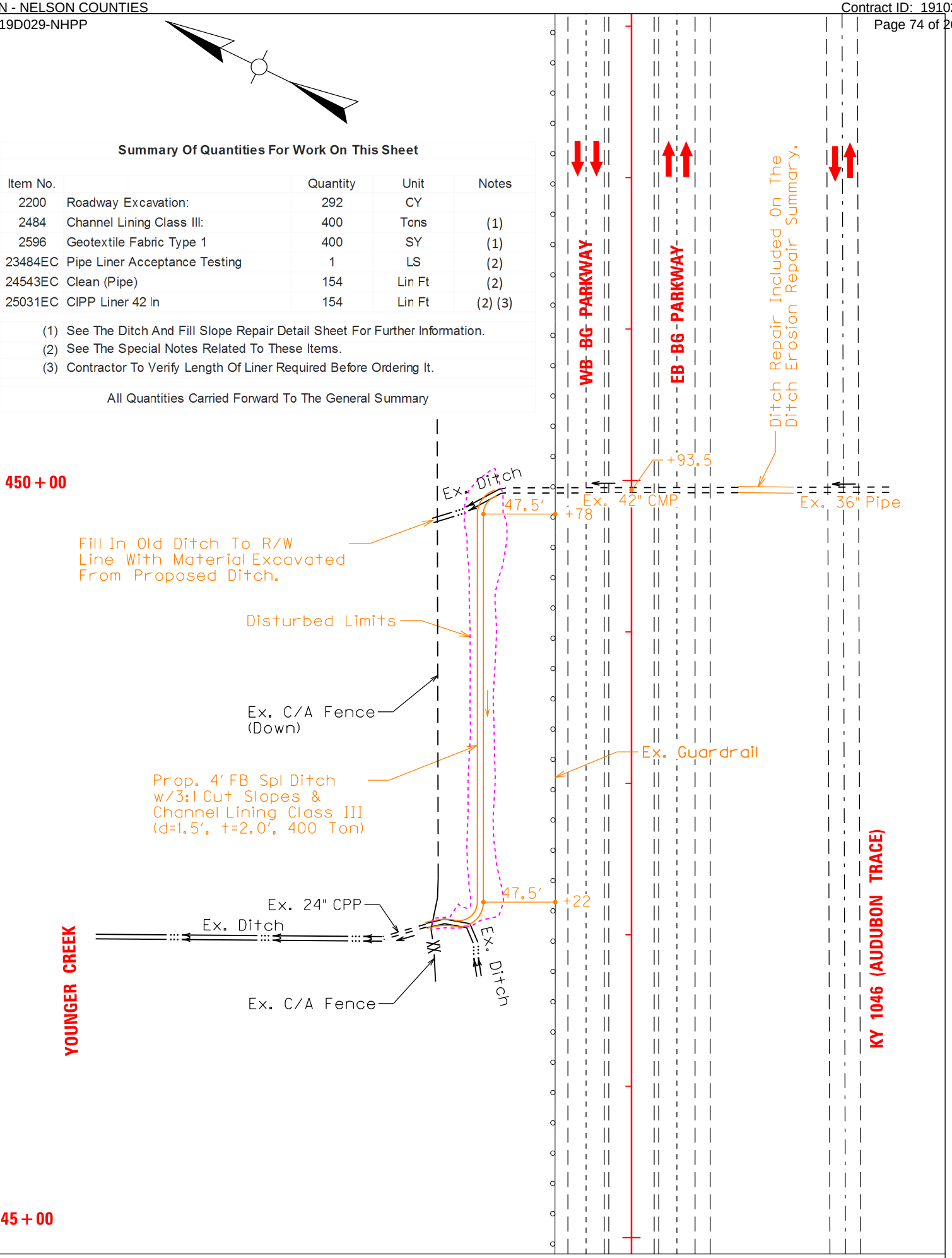
SUBMITTED _____ 1-02-19
ACTING DIRECTOR DIVISION OF HIGHWAY DESIGN — DATE

Summary Of Quantities For Work On This Sheet

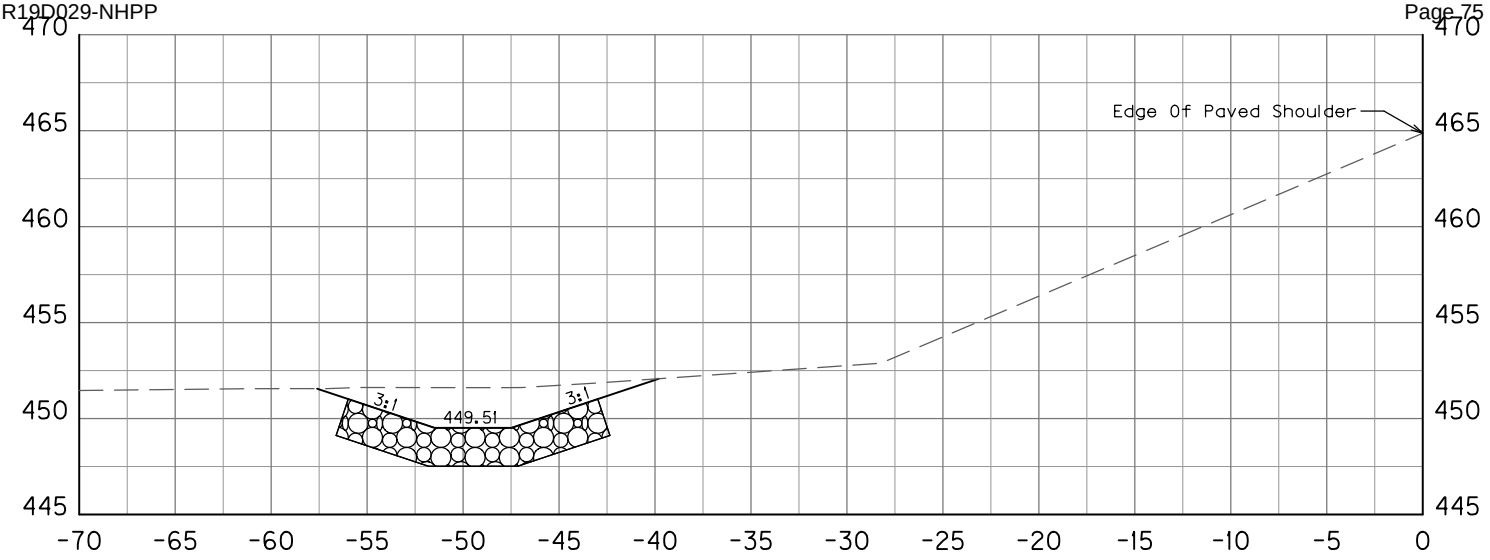
Item No.		Quantity	Unit	Notes
2200	Roadway Excavation:	292	CY	
2484	Channel Lining Class III:	400	Tons	(1)
2596	Geotextile Fabric Type 1	400	SY	(1)
23484EC	Pipe Liner Acceptance Testing	1	LS	(2)
24543EC	Clean (Pipe)	154	Lin Ft	(2)
25031EC	CIPP Liner 42 In	154	Lin Ft	(2) (3)

(1) See The Ditch And Fill Slope Repair Detail Sheet For Further Information.
(2) See The Special Notes Related To These Items.
(3) Contractor To Verify Length Of Liner Required Before Ordering It.

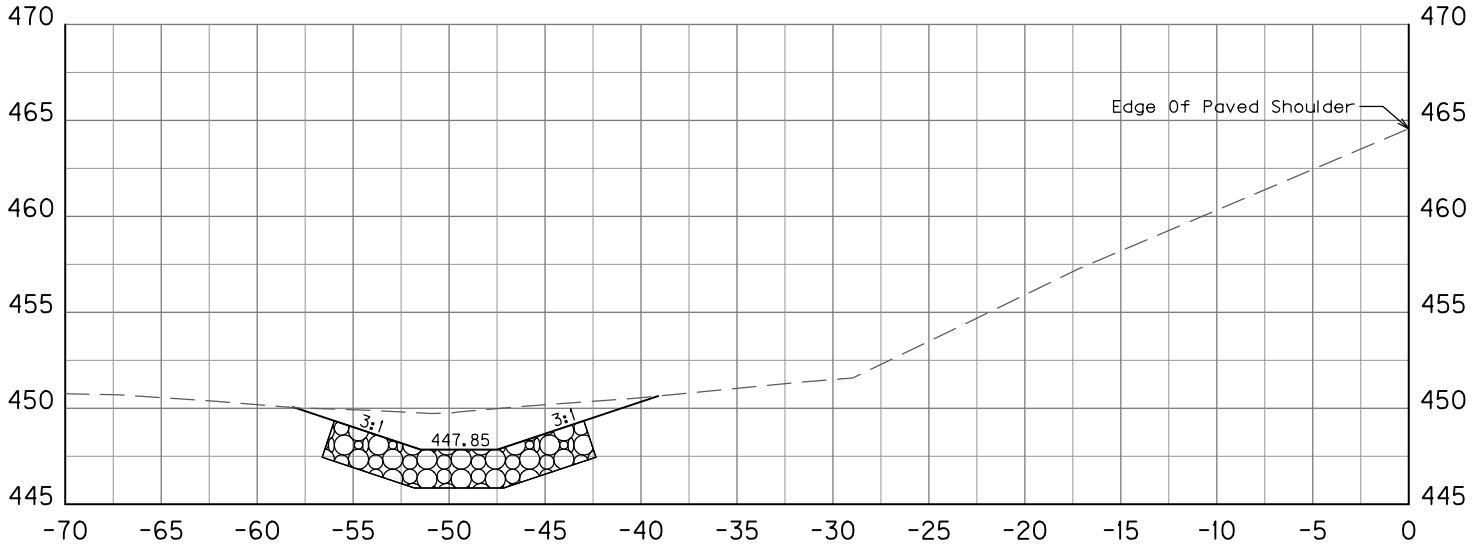
All Quantities Carried Forward To The General Summary



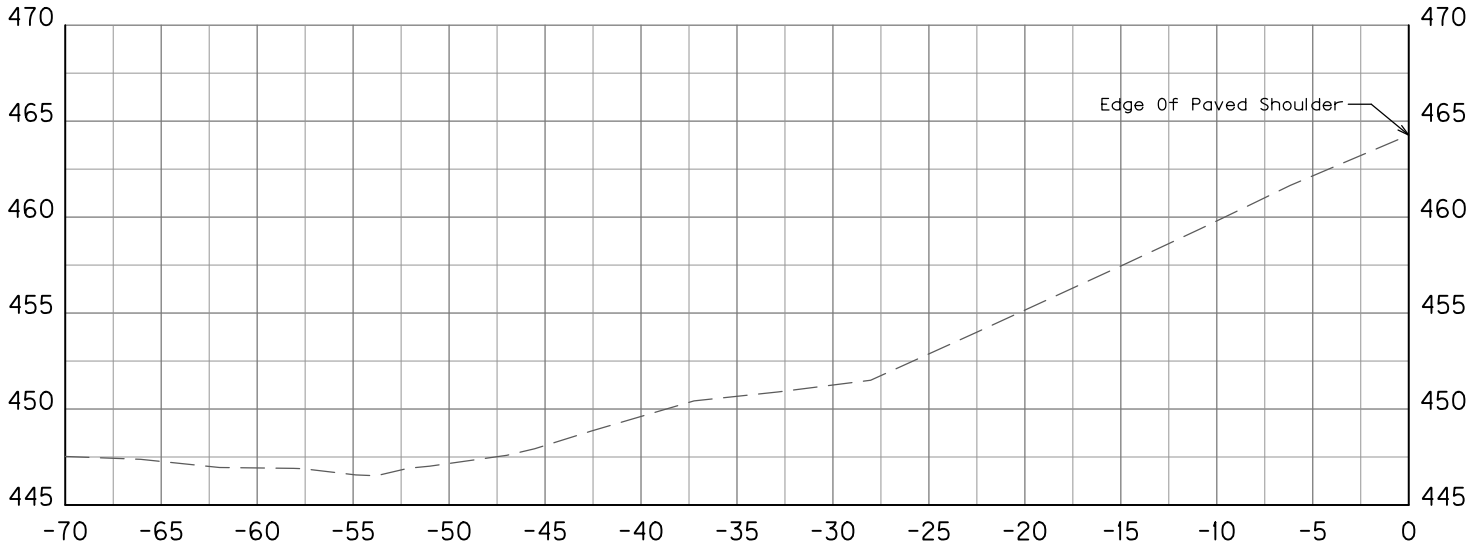
BGP Rehab - Pipe And Outlet Ditch Repair Plan - Scale 1" = 80' - Sta 445+00 to Sta 453+00



448+00



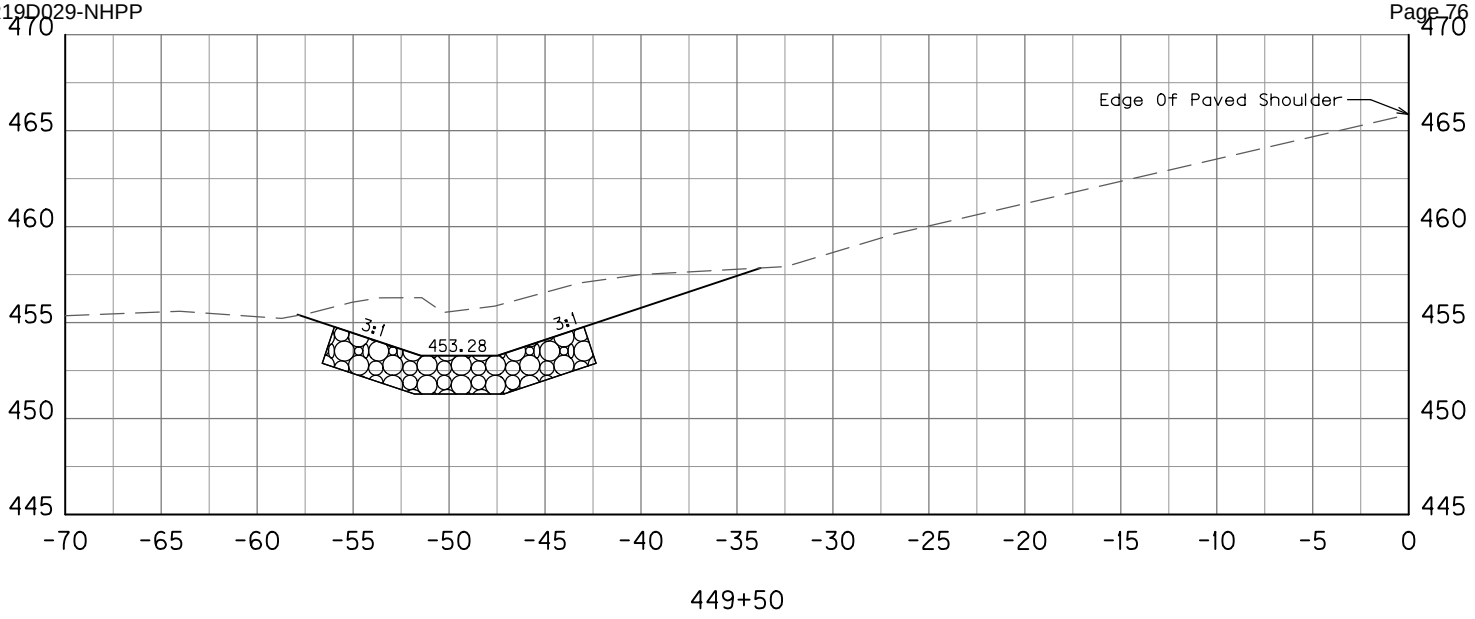
447+50



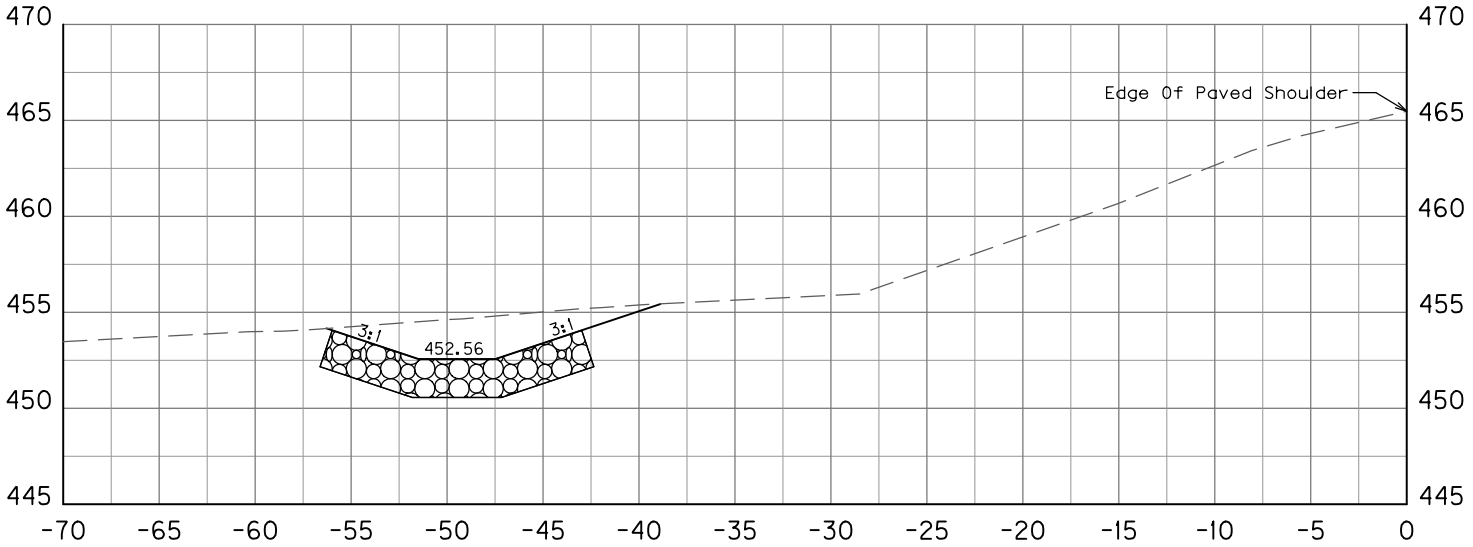
447+00

Scale: 1" = 10'

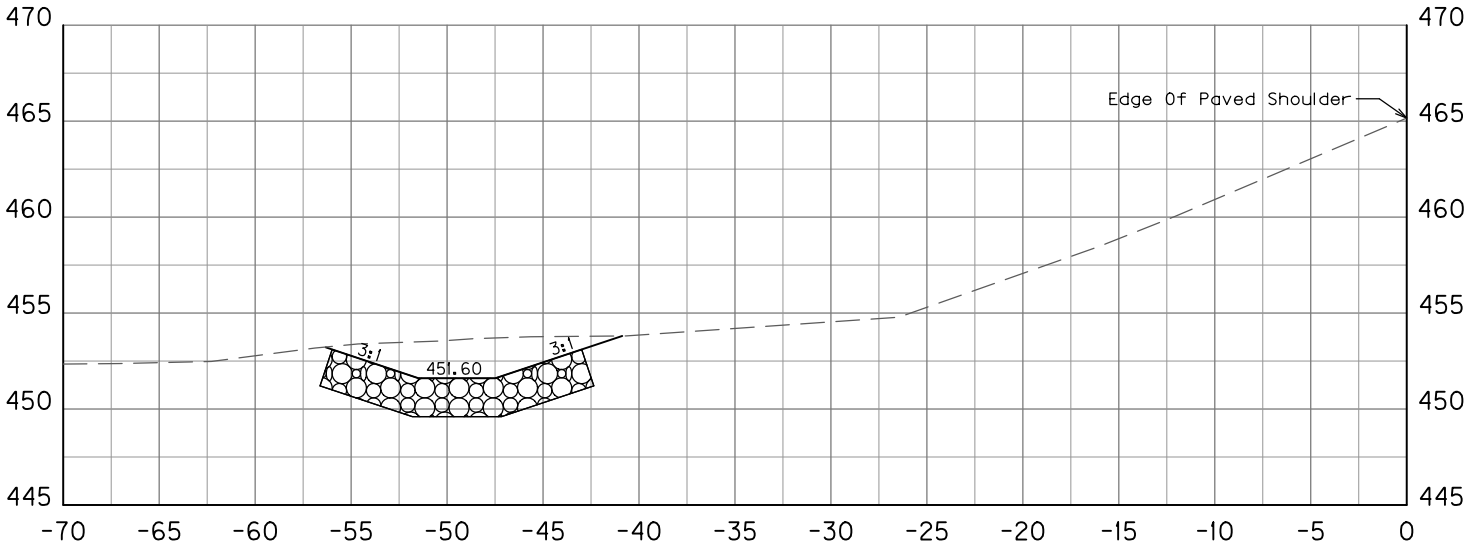
Blegrass Parkway Rehab - Pipe And Outlet Ditch Repair Plan - Sta 447+00 to Sta 448+00



449+50



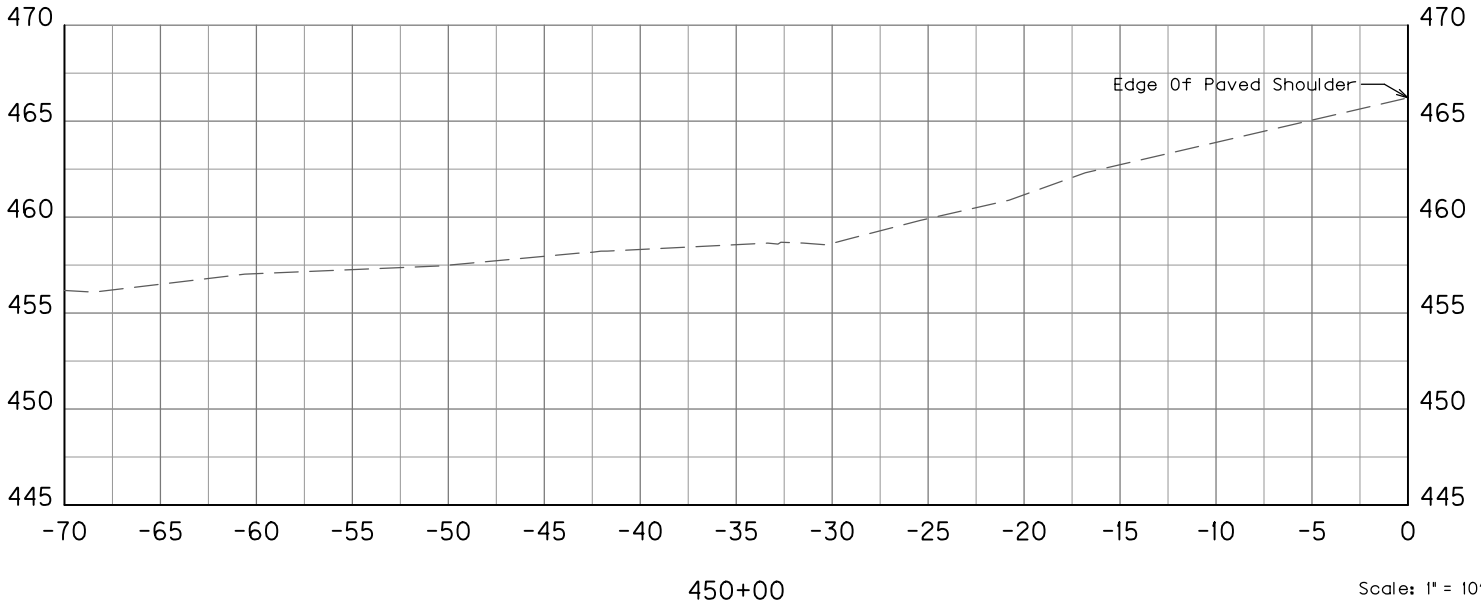
449+00



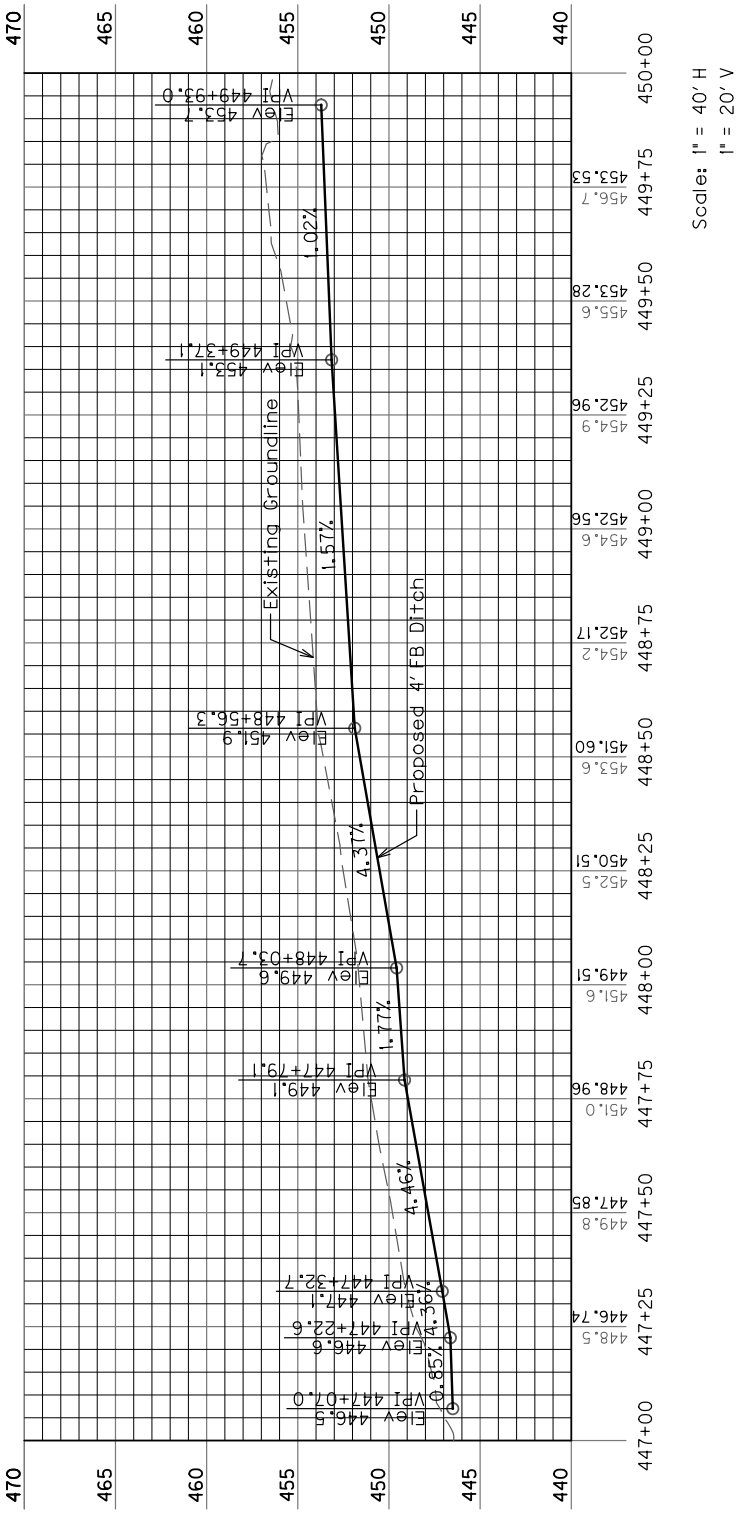
448+50

Scale: 1" = 10'

Blegrass Parkway Rehab - Pipe And Outlet Ditch Repair Plan - Sta 448+50 to Sta 459+50



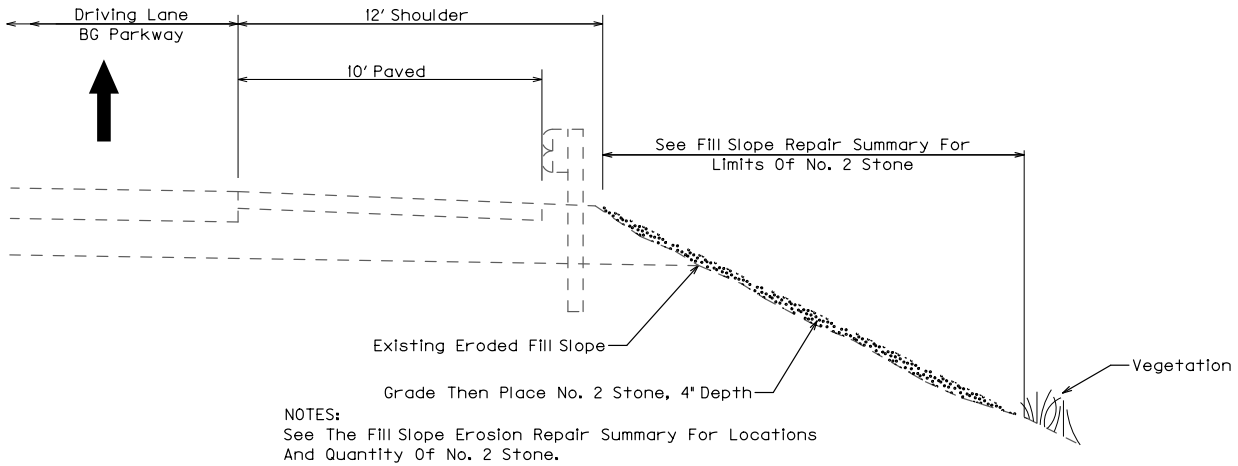
Bluegrass Parkway Rehab - Pipe And Outlet Ditch Repair Plan - Sta 450+00



Bluegrass Parkway Rehab - Pipe And Outlet Ditch Repair Profile - Sta 447+00 to Sta 450+00

FILL SLOPE EROSION REPAIR AND DITCH REPAIR DETAILS

FILL SLOPE EROSION REPAIR



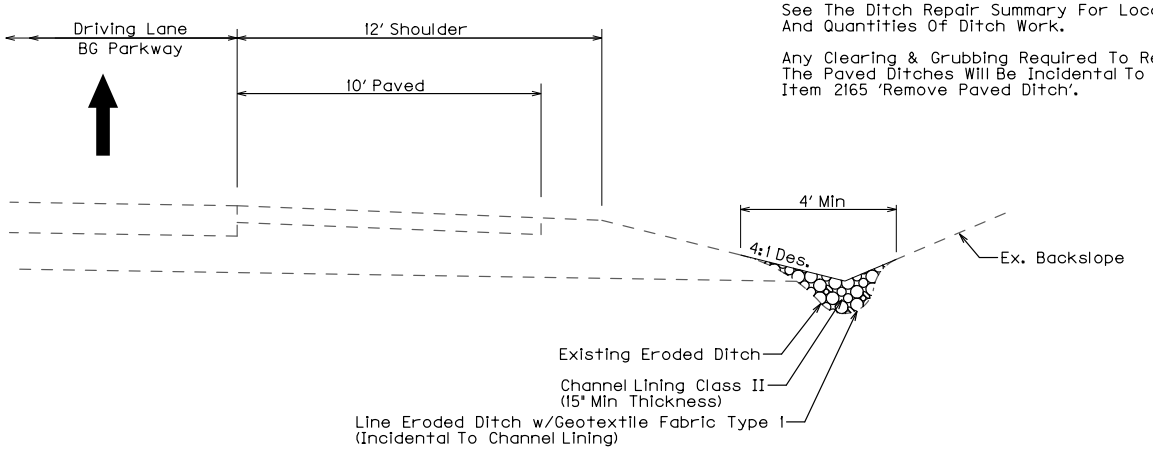
NOTES:
See The Fill Slope Erosion Repair Summary For Locations And Quantity Of No. 2 Stone.

Grading The Slope Prior To Placement Of No. 2 Stone Will Be Incidental To The Stone Bid Item.

A Quantity Of Channel Lining Class II Has Been Included On The General Summary For Filling In Deeply Eroded Areas Prior To Grading And Placing The No. 2 Stone.

DITCH REPAIR

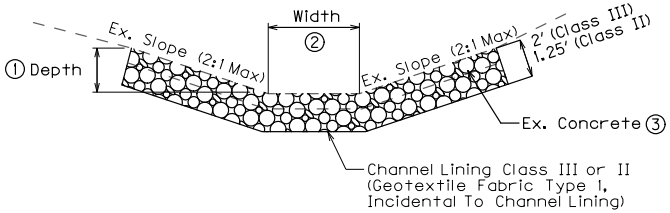
ROADWAY DITCHES



NOTES:
See The Ditch Repair Summary For Locations And Quantities Of Ditch Work.

Any Clearing & Grubbing Required To Repair The Paved Ditches Will Be Incidental To Bid Item 2165 'Remove Paved Ditch'.

EX. BROKEN PAVED DITCHES



① Match Existing Or 1.0' Min, Whichever Is Greater.

② See Ditch Repair Summary

③ Existing Concrete May Be Broken Into Pieces The Size Of The Specified Channel Lining And Reshaped To That Of The New Ditch.

NOT TO SCALE

TRAFFIC CONTROL PLAN
BLUEGRASS PARKWAY (BG-9002) REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
ITEM NO. 4-20007.00

THIS PROJECT IS FOR A FULLY CONTROLLED ACCESS HIGHWAY

TRAFFIC CONTROL GENERAL

Except as provided herein, “Maintain and Control Traffic” shall be in accordance with the 2019 Standard Specifications and the 2016 Standard Drawings, current editions. Except for the roadway and traffic control bid items included in the project, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic". All lane closures used on the Project will be in compliance with the appropriate Standard Drawings and the Manual on Uniform Traffic Control Devices (MUTCD), current edition.

Contrary to Section 106.01, traffic control devices used on this project may be new, or used in like new condition at the beginning of the work and maintained in like new condition until completion of the work. Traffic control devices will conform to current MUTCD.

Reduce the speed limit in work areas to 55 miles per hour (10 miles per hour less than posted speed for ramps) and establish double fines for work zone speeding violations. The extent of these areas within the project limits will be restricted to the proximity of actual work areas as determined by the Engineer. Notify the Engineer a minimum of 12 hours prior to using the double fine signs. At the beginning of the work zone, the “WARNING FINE DOUBLED IN WORK ZONE” signs will be dual mounted. At the end of the work zone, the “END DOUBLE FINE” signs will be dual mounted as well. Remove or cover the signs when the highway work zone does not have workers present for more than a two-hour period of time. Payment for the signs will be at the unit bid price for temporary signs. Any relocation or covering of the signs will be incidental to “Maintain and Control Traffic”.

PROJECT PHASING & CONSTRUCTION PROCEDURES

This project has a fixed completion date. See the special note for Fixed Completion Date and Liquidated Damages.

Note that lane closures are required for the project. The minimum lane width shall be 11 ft. Stripe and taper according to the MUTCD and Standard Drawings.

Obtain the Engineer’s approval on the method of lighting prior to performing night work.

During the days and hours when a lane closure is allowed, implement the following procedures: Maintain traffic as specified in the phasing notes and typical sections.

The contractor must notify the Engineer at least fourteen (14) days prior to the beginning of each construction phase in either direction and at least seven (7) days prior to a ramp closure.

PHASE I

BLUEGRASS PARKWAY EB & WB
Shift traffic to the outside lane and shoulder and close the inside lane and shoulder to traffic. Mill 1.25 inches of the existing inside lane and inside shoulder, then place 1.5 inches of surface pavement on the milled lane and shoulder.

Complete all inside shoulder work, and any other work shown in the proposal for the inside shoulder and median area (median slopes, ditches, roadway drainage, etc.).

Traffic channelizing devices are to be moved along with the active construction zone to minimize traffic on the shoulders.

PHASE II

BLUEGRASS PARKWAY EB & WB
Shift traffic to the inside lane and shoulder and close the outside lane and shoulder to traffic. Mill 1.25 inches of the existing outside lane and 3 ft of the outside shoulder, then place 1.5 inches of surface pavement on the milled lane and shoulder. Chip and seal the remaining 7 ft of outside shoulder as shown on the Roadway Typical Sections.

Complete all outside shoulder work, and any other work shown in the proposal for the outside shoulder and side slopes, ditches, or roadway drainage.

Traffic channelizing devices are to be moved along with the active construction zone to minimize traffic on the shoulders.

PHASE III – PERMANENT STRIPING

After all other work is completed, or when approved by the Engineer, place permanent striping and install the inlaid pavement markers. Mobile operations may be utilized.

BRIDGE WORK

Armored edges shown in the Bridge Proposal to be replaced are to be replaced prior to milling and filling the adjacent roadway pavement.

The Contractor It To Remove The Aluminum Handrail On The Bridges Without Damaging Them and is to deliver the rail to the Hardin County Maintenance Lot At 310 Valley Creek Road.

RAMPS

Ramps at the KY 583 interchange may be closed a total of two (2) consecutive nights to complete all work on both ramps. Each night's closure shall begin at 6 PM and the ramps are to be opened to traffic by 6 AM the next morning. Both ramps are to be closed during each of the two nights. Both ramps are to be milled during the first night closure and both ramps are to be overlain during the second night closure.

Ramps at the KY 52 interchange may be closed a total of four (4) nights to complete all work on the ramps. Each night's closure shall begin at 6 PM and the ramps are to be opened to traffic by 6 AM the next morning. Two ramps in the same Bluegrass Parkway traffic direction are to be closed at the same time for two consecutive nights. Both ramps are to be milled during the first night closure and both ramps are to be overlain during the second night closure.

All ramp closures shall be coordinated so they do not occur during a free service day at the Pearl Hollow Landfill located at 1620 Audubon Trace Rd, Elizabethtown, KY. The phone number for the landfill is 270-506-1062 or 423-716-0034. Further information on the Pearl Hollow Landfill may be found at the Hardin County Government's Solid Waste and Landfill web page.

COORDINATION OF WORK

The Contractor is advised that other projects may be in progress within or in the near vicinity of this project. The traffic control of those projects may affect this project and the traffic control of this project may affect those projects. The Contractor will coordinate the work on this project with the work of the other contractors. Phase II construction may occur prior to Phase I to allow coordination with lane closures of the adjacent project. In case of conflict, the Engineer will determine the relative priority to give to work phasing on the various projects.

LANE CLOSURES

Limit the lengths of lane closures to only that needed for actual operations in accordance with the phasing specified herein, or as directed by the Engineer. Only one lane closure in each direction at any time will be permitted. Lanes closures may not stay in place for more than 48 hours without work actively being performed in the closed lane. Contrary to section 112, lane closures will **NOT** be measured for payment, but are considered incidental to "Maintain and Control Traffic".

SIGNS

Additional traffic control signs in addition to normal lane closure signing detailed on the Standard Drawings may be required by the Engineer. Additional signs needed for lane closures may include, but are not limited to, dual mounted TRUCKS USE LEFT/RIGHT LANE, LEFT/RIGHT LANE CLOSED 1 MILE, LEFT/RIGHT LANE CLOSED 2 MILE, LEFT/RIGHT LANE CLOSED 3 MILE, SLOWED/STOPPED TRAFFIC AHEAD. Signage for reduced speed limits and double fine work zones will be furnished, relocated, and maintained by the Contractor.

Contrary to section 112, individual signs will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for damaged signs or signs directed to be replaced by the Engineer due to poor legibility or reflectivity will not be measured for payment.

FLASHING ARROWS

Flashing arrows will be paid for once, no matter how many times they are moved or relocated. The Department **WILL NOT** take possession of the flashing arrows upon completion of the work.

PORTABLE CHANGEABLE MESSAGE SIGNS

Provide portable changeable message signs (PCMS) in advance of and within the project at locations to be determined by the Engineer. If work is in progress concurrently in both directions provide additional PCMS. Place PCMS one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens, relocate or provide additional PCMS so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. The locations designated may vary as the work progresses. 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. PCMS will be paid for once, no matter how many times they are moved or relocated. The Department **WILL NOT** take possession of the PCMS upon completion of the work.

TRUCK MOUNTED ATTENUATORS

Furnish and install MUTCD approved truck mounted attenuators (TMA) in advance of work areas when workers are present less than 12 feet from traffic. If there is less than 500 feet between work sites, only a single TMA will be required at a location as directed by the Engineer. Locate the TMAs at the individual work sites and move them as the work zone moves within the project limits. All details of the TMA installations shall be approved by the Engineer. TMA will not be measured for payment, but are incidental to “Maintain and Control Traffic”. The Department **WILL NOT** take possession of the TMAs upon completion of the work.

PAVEMENT MARKINGS

If lane closures are in place during nighttime hours, remove or cover the lenses of raised pavement markers that do not conform to the traffic control scheme in use, or as directed by the Engineer. Replace or uncover lenses before a closed lane is reopened to traffic. No direct payment will be made for removing and replacing or covering and uncovering the lenses, but will be incidental to "Maintain and Control Traffic," lump sum.

Any striping removal (temporary or permanent) shall be removed by waterblasting. Waterblasting and removal of temporary tape will be considered incidental to the “Maintain and Control Traffic” bid item.

Place temporary striping in accordance with Section 112, except that:

1. Temporary will be 6" in width.
2. If the contractor's operations or phasing requires temporary markings which must be subsequently removed from the ultimate pavement, an approved removable lane tape will be used.
3. Edge lines will be required for temporary striping.
4. Existing, temporary, or permanent striping will be in place before a lane is opened to traffic.

Should the Contractor change the existing striping pattern, the Contractor is to restripe the roadway back to its original configuration after a certain period of time especially if no work is anticipated for a period of time (i.e. Winter shutdown).

PAVEMENT EDGE DROP-OFFS

Pavement edge drop-offs will be protected by a lane or shoulder closure. Lane closures will be protected with plastic drums, vertical panels, or barricades as shown on the Standard Drawings.

Pavement edges that traffic is not expected to cross, except accidentally, shall be treated as follows:

Less than 2” – Protect with a lane closure.

2” to 4” – Protect with a lane closure. Place plastic drums, vertical panels, or barricades every 50 feet. Construct a wedge with compacted cuttings from milling, trenching, or asphalt mixtures with a 3:1 or flatter slope, when work is not active in the drop-off area. Place Type III Barricades at the beginning of the lane closures, and place additional Type III Barricades spaced at 2,500 feet during the time the lane closure is in place.

4” and greater - Drop-offs 4” or greater will be allowed during duration of the project. Protect with a lane or shoulder closure using drums, cones, or barricades. Place drums, or barricades with spacing not to exceed 20 feet and appropriate lighting should be utilized to illuminate the area during nighttime operations. Place Type III Barricades facing oncoming traffic at each drop off. If for any reason traffic must be maintained less than 6 feet from the drop off, wedge with DGA on 3:1 or flatter slope when work is not actively in progress in the drop-off area. Once excavation begins, work continuously to construct DGA and asphalt base to eliminate the drop-off. Drop-offs greater than 4 inches within 6 feet of traffic will not be allowed during non-working hours.

TRAFFIC COORDINATOR

Be advised this project is a significant project pursuant to section 112.03.12.

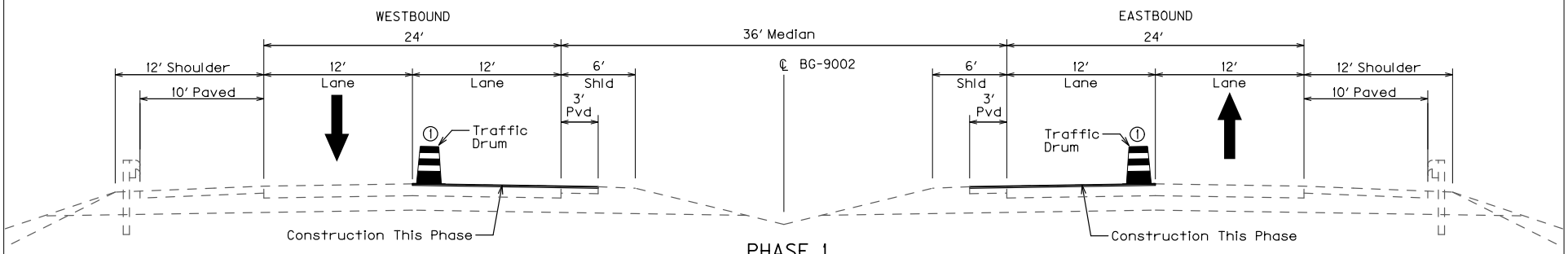
Designate an employee to be traffic coordinator. The designated Traffic Coordinator must be certified in accordance with Department's 2019 Standard Specifications Sec. 112.03.12. The Traffic Coordinator will inspect the project maintenance of traffic once daily, including weekends, during the Contractor's operations and at any time a lane closure is in place. The Traffic Coordinator will report all incidents throughout the work zone to the Engineer on the project. The Contractor will furnish the name and telephone number where the Traffic Coordinator can be contacted at all times.

During any period when a lane closure is in place, the Traffic Coordinator will arrange for personnel to be present on the project at all times to inspect the traffic control, maintain the signing and devices, and relocate portable changeable message boards as queue lengths change. The personnel will have access on the project to a radio or telephone to be used in case of emergencies or accidents.

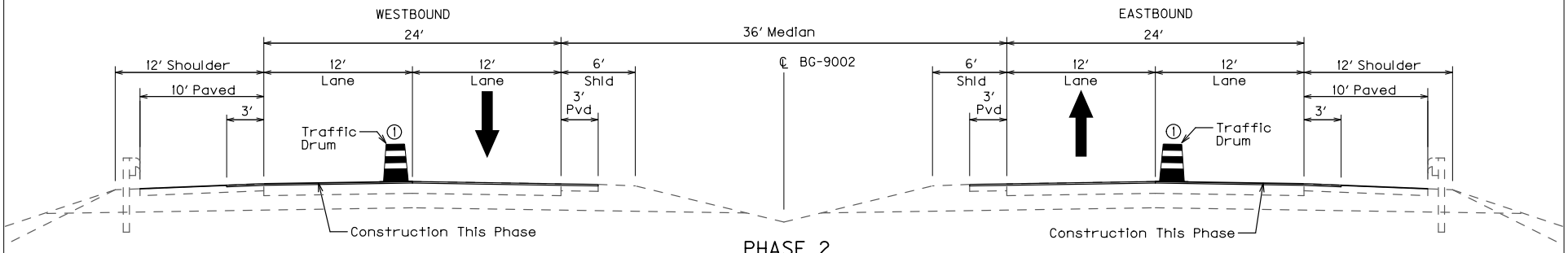
CONTRACTOR'S AND CONTRACTOR'S EMPLOYEES' VEHICLES

Do not use or allow employees to use median crossovers at any time except when inside lanes are closed for construction. In all other phases of construction, change vehicular direction of travel only at interchanges.

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS
BLUEGRASS PARKWAY (BG–9002)



PHASE 1
NORMAL SECTION



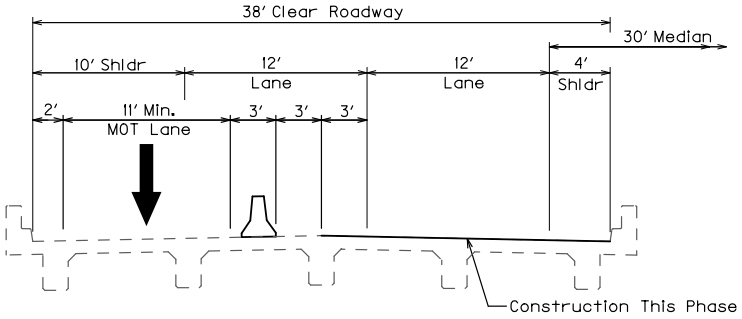
PHASE 2
NORMAL SECTION

① Drums Are To Be Moved Along With The Milling And Paving Operations To Minimize Traffic On Shoulders.

NOT TO SCALE

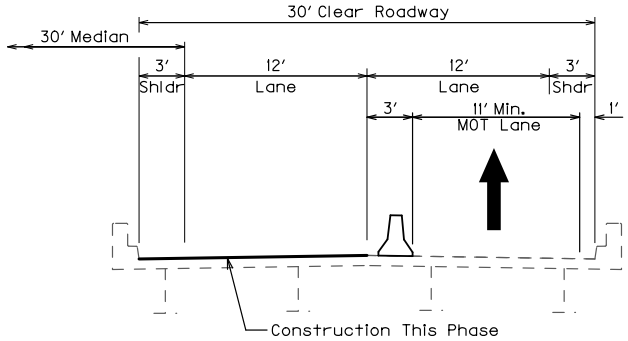
MAINTENANCE OF TRAFFIC
BRIDGES TYPICAL SECTIONS
BLUEGRASS PARKWAY (BG–9002)

090B00012L & R
(BGP OVER KY 52)

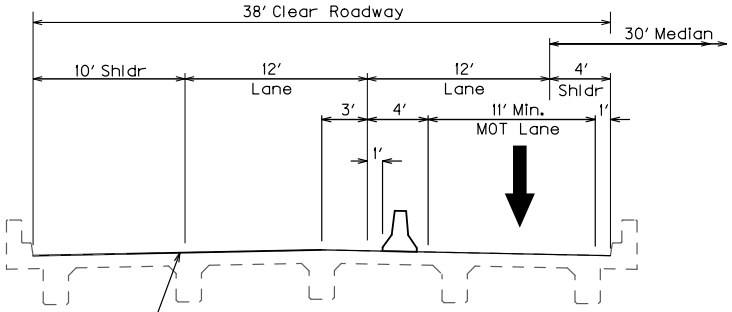


BRIDGE WORK
EASTBOUND OR WESTBOUND
PHASE 1

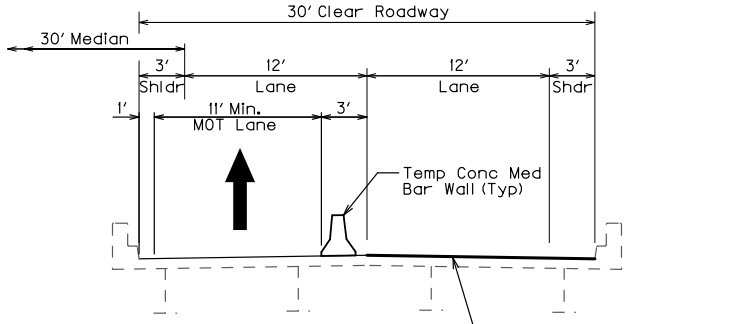
090B00011L & R
(BGP OVER ROLLING FORK RIVER)
909B00013L & R
(BGP OVER CSX RR)



BRIDGE WORK
EASTBOUND OR WESTBOUND
PHASE 1



BRIDGE WORK
EASTBOUND OR WESTBOUND
PHASE 2

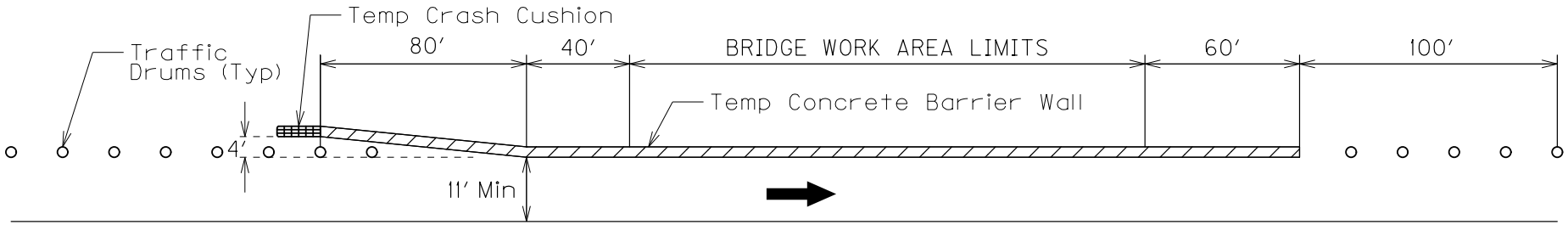


BRIDGE WORK
EASTBOUND OR WESTBOUND
PHASE 2

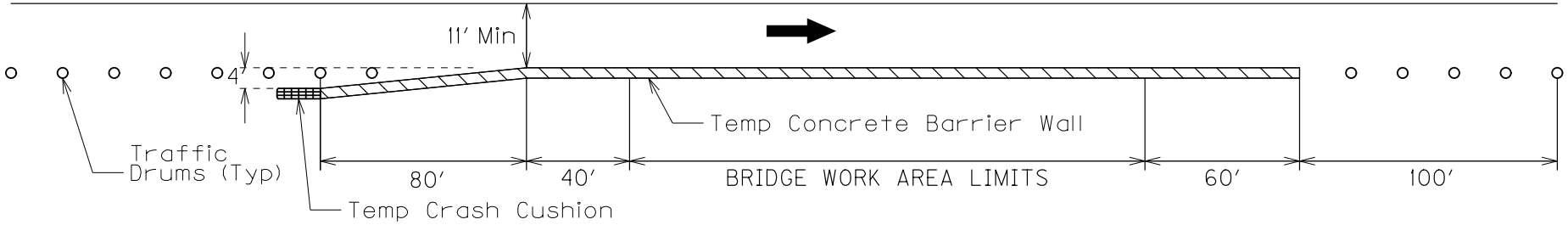
SEE THE BRIDGE PLANS FOR BRIDGE WORK DETAILS

NOT TO SCALE

MAINTENANCE OF TRAFFIC
TEMPORARY BARRIER WALL LAYOUT FOR BRIDGE WORK



PHASE 1



PHASE 2

All lane closures will be in compliance with the appropriate Standard Drawings and the Manual on Uniform Traffic Control Devices (MUTCD), current edition.

The Contractor is to pick up the barrier wall at approximate mile point 81.1 on northbound I-65 and return the barrier wall to the same location after it is no longer needed for this project. Picking up and returning the barrier wall will be incidental to bid item 1992 "Install Temp Conc Med Barr".

See the General Summary for quantities.

NOT TO SCALE

SPECIAL NOTES APPLICABLE TO
BLUEGRASS PARKWAY (BG-9002) REHABILITATION PROJECT
HARDIN AND NELSON COUNTIES
ITEM NO. 4-20007.00

- FIXED COMPLETION DATE AND LIQUIDATED DAMAGES
- GENERAL NOTE 444 – ASPHALT PAVEMENT RIDE QUALITY
- GENERAL NOTE 447 – COMPACTION OF ASPHALT MIXTURES
- INTELLIGENT COMPACTION FOR ASPHALT MIXTURES
- PAVER MOUNTED TEMPERATURE CONTROLS
- FINE MILLING
- ASPHALT CHIP SEAL ON ASPHALT SHOULDERS
- LONGITUDINAL PAVEMENT JOINT ADHESIVE
- NON-TRACKING TACK COAT
- HMA ELECTRONIC DELIVERY MANAGEMENT SYSTEM (HMA e-TICKETING)
- PIPE CLEANING
- CURE IN PLACE PIPE LINING
- PIPE LINER ACCEPTANCE TESTING
- INLAID PAVEMENT MARKERS
- PORTABLE CHANGEABLE MESSAGE SIGNS
- WASTE AND BORROW SITES
- TYPICAL SECTION DIMENSIONS

OTHER SPECIAL NOTES MAY APPLY.

Special Note for Fixed Completion Date
And Liquidated Damages
Bluegrass Parkway (BG-9002) Rehabilitation Project
Hardin and Nelson Counties
Item No. 4-20007.00

This project will have a fixed completion date of **November 1, 2019** for completion of all work associated with this project. Installation of the surface course, CL3 Asph Surf 0.38A PG76-22, shall be completed by **October 1, 2019**.

Liquidated damages per the Standard Specifications will be charged for each calendar day the PG76-22 surface course is installed after **October 1, 2019**, and for any work completed after **November 1, 2019**.

In addition to the Liquidated Damages specified in Section 108.09, Liquidated Damages in the following amounts will be charged when one of the KY 583 or KY 52 interchange ramps remains closed beyond the opening time specified in the Traffic Control Plan:

$2,000 for each hour or fraction thereof

Contrary to Section 108.09 of the Standard Specifications, Liquidated Damages per the Standard Specifications will be charged during the months of December through March for all work that is not completed.

All liquidated damages will be applied cumulatively.

All other applicable portions of Section 108 apply.

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 ft 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 at 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’ straightedge. 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 and profile errors. Contractor shall deliver approximately 2,500 tons of the millings to the Hardin County Maintenance Lot and the remainder to the Nelson County Maintenance Lot. The milled surface shall be swept clean of all loose material after milling and prior to resurfacing.

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 M 247) 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 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 Square Yards of surface milled.

E). Payment Payment at the contract unit price per Square Yard of Fine Milling shall be full compensation for all equipment, work, and material necessary to complete the operations described herein.

January 2, 2019

SPECIAL NOTE FOR ASPHALT CHIP SEAL ON ASPHALT SHOULDERS

1. DESCRIPTION. Construct an asphalt chip seal consisting of one application of asphalt material and cover aggregate.

2. MATERIAL AND EQUIPMENT.

Asphalt Material. Furnish undiluted RS-2 that meets the requirements of Section 806.04.

Aggregate. Provide a cleaned damp aggregate cover material size **9M** from an approved aggregate producer and shall meet the material requirements that conform to Section 805, as applicable. Contrary to **Section 805.05.04** provide coarse aggregates having no more than 2.0 percent passing the No. 200 sieve.

Equipment. Provide, and keep on the project at all times, an accurate thermometer, hand brooms, and other small tools and equipment essential for completion of the work.

Calibration of equipment application rates shall be completed prior to application or as directed by the engineer. A test strip shall be required at the beginning of each new project or as directed by the engineer.

The asphalt distributor for the application of the emulsion shall have full circulation spray bar that is adjustable to at least 16 feet wide in 2 feet increments and capable of heating and circulating the emulsion simultaneously, conforming to **Section 406.02.05**. It must have computerized rate control for adjusting and controlling the application from the cab within 0.01 gallons per square yard increments. The distributor shall also be equipped with a volume-measuring device and a thermometer for measuring the emulsion temperature in the tank. For each emulsion application, follow manufactures recommendations for proper nozzle type and adjustment.

The aggregate spreader shall be a front discharge, continuous mechanical feed, self-propelled aggregate spreader with a screen capable of removing oversized materials. It must have computerized control for adjusting and regulating application rates, as well as width, from the operating platform. Ensure the spreader can evenly distribute the aggregate from the transporting vehicle directly onto the fresh asphalt material in smooth, uniform layers, independent of the forward speed. The spreader must be capable of being filled and moved without discharging aggregate. The spreader must be equipped with a locking mechanism compatible with the triaxle trucks used to supply aggregate.

Rollers. Pneumatic tire roller shall weigh at least 5 tons. Double steel wheel type roller shall weigh at least 5 tons but no more than 8 tons.

3. CONSTRUCTION.

Weather Limitations. Application of chip seal shall be applied when air temperature is at least 50°F and rising and a minimum surface temperature of 70°F. Do not construct when the ambient temperature within the preceding 24 hours has been 35°F or lower. Do not proceed with construction if rain is expected in a minimum period of 4 hours. If an

unexpected shower arises during operations, the asphalt distributor should be shut off immediately and placement of aggregate continued until all asphalt has been covered.

Preparation of Mixture. Submit a complete mix design a minimum of 14 days prior to construction. Mix design shall be prepared by an approved laboratory, to verify the compatibility of the aggregate, asphalt emulsion and other additives. Perform the mix design with the same materials that will be used on the project.

Surface Preparation. All surfaces intended for application shall be thoroughly cleaned of all vegetation, loose material, dirt, or other objectionable material immediately before application of emulsion using a mechanical sweeper and wire hand brooms, when necessary. Clean the edges of the surface providing a full and uniformly clean width of roadway. Where mud or earth exists, remove it in advance and allow surface to thoroughly dry before applying emulsion. Mowing or removal of shoulder vegetation and or brush may be necessary for proper application.

4. APPLICATION.

Application Rates of Materials for Single Layer Chip Seal for Asphalt Shoulders.

Properties	Minimum	Maximum
Application rate of emulsion, Gal/SY	0.30	0.38
Emulsion temperature, F	120	180
Application rate of aggregate, Lb/SY	15	20

Application of Emulsion. Heat and maintain emulsion between 120 and 180°F during application. Emulsion shall be applied when air temperature is at least 50°F and rising and a minimum surface temperature of 70°F. Emulsion shall be applied using a pressure distributor in a uniform, continuous quantity at specified rates.

Keep the nozzles of the spray bar clean at all times. Immediately make any streaked areas uniform by use of a hand hose equipped with a nozzle.

Do not allow distributor to apply asphalt material ahead of aggregate spreader for more than 150 feet.

Prevent spotting or discoloring curbs, headwalls, and other structures. When such discolorations occur, remove them at no expense to KYTC.

Aggregate. Aggregate cover material shall be cleaned to remove dirt and dust, ensuring appropriate adhesion with emulsion. Aggregate shall be damp during application. Aggregate shall only be stockpiled once per project and must be placed on a pad clean from unwanted materials and debris. The Department will sample and test the aggregate from the stockpile to determine if the aggregate meets the washed gradation and the percent passing the No. 200 sieve requirements before any placement of the aggregate. Reject the stockpile when the aggregate does not meet the requirements. **Prior to breaking of the emulsion**, aggregate shall be continuously and evenly spread with the proper equipment at the specified rates. Spreading equipment shall not contact the

January 2, 2019

asphalt material before it is covered with aggregate. Precautions should be taken not to exceed the designated rate by more than 5 percent. Use hand brooms to correct any irregularities.

Rolling. Two self-propelled pneumatic tire rollers and one double steel wheel roller shall be used for the required rolling of the aggregate. This shall be done no more than 5 minutes after the spreading of aggregate. Operate the rollers parallel to the centerline in a manner preventing the dislodgment of newly applied aggregate. Rolling should proceed from the outer edge to the center, with each pass overlapping the previous by one-half. Rolling shall consist of at least two passes or more with pneumatic tire roller, followed by at least one pass with the double steel wheel roller when the engineer directs. Roller speeds shall not exceed 5 mph. Additional roller patterns and/or equipment may be required as directed by the engineer depending on speed of application.

Sweeping. Power sweep and/or vacuum the completed application to remove all excess aggregate 7-10 days after placement, unless engineer determines an early sweeping is needed. If directed by the engineer, water may be applied during sweeping process.

Little to no aggregate shall be remaining on the following:

Entrances
Exit aprons
Intersections
Crossroads
Driveways
Lawns
Curbs

5. MEASUREMENT.

Asphalt Material. KYTC will measure the quantity in tons according to **Section 109.**

Aggregate. KYTC will measure the quantity in square yards according to **Section 109.**

6. PAYMENT. The washed gradation acceptance will follow **Section 805.15** guidelines for the **9M** aggregate size used for the asphalt seal aggregate. Contrary to Section **805.15**, the department will apply a 50% reduction on the bid price for asphalt seal aggregate when exceeding 2% on the No. 200 sieve. KYTC will make payment for the completed and accepted quantities under the following:

ITEM #	DESCRIPTION	PAY UNIT
00291	EMULSIFIED ASPHALT RS-2	TON
24961EC	ASPHALT SEAL AGGREGATE-TYPE D	SY

KYTC will consider payment for these bid items as full compensation for all work required under this special note.

SPECIAL NOTE FOR NON-TRACKING TACK COAT

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

2. MATERIALS, EQUIPMENT, AND PERSONNEL.

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

2.1.1 Provide a tack conforming to the following material requirements:

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

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

2.2. Equipment. Provide a distributor truck capable of heating, circulating, and spraying the tack between 170 ˚F and 180 ˚F. Do not exceed 180 ˚F. Circulate the material while heating. As required by the manufacturer, ensure the spray bar is equipped with #1 or #2 ¼" V-slot Etnyre nozzles. Other nozzles are not acceptable. Arrange the nozzles in the following patterns from left to right:

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

Ensure the bar can be raised to between 14 and 18" from the roadway.

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

3. CONSTRUCTION.

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

3.2 Non-tracking Tack Application. Ensure the roadway temperature is a minimum of 40 ˚F and rising during the application of the tack. This material is not suitable for use in colder temperatures. Prior to applying the tack, demonstrate competence in applying the tack according to this note to the satisfaction of the Engineer. Heat the tack in the distributor to between 170 – 180 ˚F. After initial heating to between 170 – 180 ˚F, the material may be sprayed between 165 ˚F and 180 ˚F. Do not apply outside this temperature range. Apply material at a rate of 0.50 pounds (0.06 gallons) per square yard. Ensure full coverage of the material on the pavement surface. Full coverage of this material is critical. If full coverage is not achieved, material application rate may be increased to ensure full coverage. Do not heat material more than twice in one day.

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

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

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

5. PAYMENT. The Department will pay for the non-tracking tack at the Contract unit bid price and apply an adjustment for each manufacturer’s lot of material based on the degree of compliance as defined in the following schedule. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

Non-Tracking Tack Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Viscosity, SFS, 77 ˚ F	20 – 100	19 - 102	17 - 18 103 - 105	15 - 16 106 - 107	14 108 - 109	≤13 ≥ 110
Sieve, %	0.30 max.	≤ 0.40	0.41 - 0.50	0.51 - 0.60	0.61 - 0.70	≥ 0.71
Asphalt Residue, %	50 min.	≥49.0	48.5 – 48.9	48.0 – 48.4	47.5-47.9	≤ 47.4
Oil Distillate, %	1.0 max.	≤1.0	1.1-1.5	1.6 - 1.7	1.8-1.9	>2.0
Residue Penetration, 77 ° F	20 max.	≤ 21	22 - 23	24 - 25	26 - 27	≥ 28
Original Dynamic Shear (G*/sin δ), 82 ˚ C	1.0 min.	≥0.95	0.92 – 0.94	0.90 – 0.91	0.85 - 0.89	≤ 0.84
Softening Point, º F	149 min.	≥145	142 - 144	140 - 141	138 - 139	≤ 137
Solubility, %	97.5 min.	≥ 97.0	96.8 – 96.9	96.6 – 96.7	96.4 – 96.5	≤ 96.3

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

April 30, 2018

SPECIAL NOTE FOR HMA ELECTRONIC DELIVERY MANAGEMENT SYSTEM
(HMA e-Ticketing)

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction current edition.

1.0 DESCRIPTION. Incorporate a GPS Fleet Management System for all HMA delivered to the project in order to monitor, track, and report loads of HMA during the construction processes from the point of measurement and loading to the point of incorporation to the project.

2.0 MATERIALS AND EQUIPMENT. Submit to the Engineer for approval, no fewer than 30 days prior to HMA placement activities, a GPS fleet management system supplier that can provide a qualified representative for on-site technical assistance during the initial setup, pre-construction verifications, and data management and processing as needed during the Project to maintain equipment.

Provide operator settings, user manuals, training videos, and required viewing/export software for review. Provide equipment that will meet the following:

1. A wireless fleet management or GPS device that is capable of tracking all delivery trucks (both company-owned and third-party) must be installed on all trucks and equipment (dump trucks, belly dumps, side-load dumps, transfer vehicles, pavers, or any other trucks/vehicles) used to transfer and incorporate HMA into the project. KYTC personnel shall have the ability to access Real Time monitoring through the use of a mobile device such as an iPad, smartphone, etc.

2. The fleet management system shall be fully integrated with the Contractor's Load Read-Out scale system at the HMA plant site.

3. The fleet management system shall have the ability to measure and track vehicles and their contents (weights and material types) continuously from the plant site to the project site. The system shall have internal battery backup capabilities due to loss of power, and have the ability to store data if GPS connectivity is lost and transmit that same data when unit re-establishes connectivity. To be considered continuous, no two data points shall be more than 60 seconds apart unless the vehicle is stopped. Duration of stop time for any reason shall be recorded.

3.0 CONSTRUCTION. Provide the Engineer with the manufacturer's specifications and all required documentation for data access at the pre-construction conference.

A. Construction Requirements

1. Install and operate equipment in accordance with the manufacturer's specifications.

2. Verify the GPS is working within the requirements of this Special Note.

B. Data Deliverables

Provide to the Engineer a means in which to gather report summaries by way of iOS apps, web pages, or any other method at the disposal of the Engineer. The Engineer may request data at any time during paving operations.

1. Real-time Continuous Data Items

Provide the Engineer access to a GIS map-based data viewer which displays the following information in real-time with a web-based system compatible with iOS and Windows environments.

- Each Truck
  - UniqueTruck ID
  - Truck status
    - Time At Source
    - Time At Destination

- Time At Paver
- Time At Scale
- Time to and from plant/job
- Time Stopped with Engine Running

- Time of last transmission
- Location (Latitude and Longitude in decimal degrees to nearest 0.0000001) every 60 seconds
- Description of Material being transported (i.e. asphalt base, asphalt surface)
- Mix Design Number
- Net Weight of material being transported to the nearest 0.01 ton
- Running Daily Total of Net Weight of material being transported to nearest 0.01 ton.
- Project Number

- Scale Location
- Project Location
- Point of Delivery (i.e. paver)

2. Daily Summary

The following summary information shall be provided to the Engineer electronically within 4 hours of beginning operations on the next working day

- For each Material
  - List of Individual Loads
    - Contractor Name
    - Project Number
    - Unique Truck ID
    - Net Weight For Payment (nearest 0.01 tons)
    - Date
    - Mix Temperature at Time of Loading, Fahrenheit (to be key entered by plant)
    - Time Loaded
    - Time Unloaded
    - Delivery Location (Latitude/Longitude in decimal degrees to nearest 0.0000001)
- For each Bid Item
    - Total Quantity for Payment (nearest 0.01 tons)

4.0 MEASUREMENT. The Department will measure the HMA electronic delivery management system as a lump sum item.

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

1. Payment is full compensation for all work associated with providing all required equipment, training, and documentation.
2. Delays due to GPS satellite reception of signals or equipment breakdowns will not be considered justification for contract modifications or contract extensions.
3. Payment will be full compensation for costs related to providing the GPS system, including all equipped pavers and transfer vehicles, integration with plant load-out systems, and any software required for the construction and reporting process. All quality control procedures including the GPS systems representative's technical support and on-site training shall be included in the Contract lump sum price.

Code	Pay Item	Pay Unit
24986EC	HMA ELECTRONIC DELIVERY MANAGEMENT SYSTEM	LS

SPECIAL NOTE FOR PIPE CLEANING

PART 1 -- GENERAL

1.01 SCOPE OF WORK

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

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

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

PART 2 -- PRODUCTS

2.01 MATERIALS

A. Hydraulically propelled Sewer Cleaning Equipment

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

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

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

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

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

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

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

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

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

6. Equipment operating controls located above ground.

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

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

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

PART 3 -- EXECUTION

3.01 PERFORMANCE

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

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

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

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

F. Removal of Materials

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

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

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

H. No cleaning shall take place in a particular segment until all upstream pipe segments have been cleaned. If cleaning is done in a downstream pipe segment in order to facilitate overall cleaning operations, the segment shall be re-cleaned at no additional cost, after all pipes upstream of that segment have been cleaned.

3.02 FIELD QUALITY CONTROL

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

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

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

PART 4 – PAYMENT

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

October 23, 2013

SPECIAL NOTE FOR CURED-IN-PLACE PIPE LINING

PART 1 -- GENERAL

1.01 REQUIREMENTS

A. It is the intent of this specification to provide for the reconstruction of pipelines by the installation of a resin-impregnated flexible tube which is formed to the original conduit and cured to produce a continuous and tight fitting Cured-In-Place Pipe (CIPP). Cured-In-Place Pipe shall be designed for storm water application.

B. The work specified in this Section includes all labor, materials, accessories, equipment and tools necessary to install and test cured-in-place (CIPP) pipe lining as shown on the Drawings and as specified herein.

1.02 SUBMITTALS

A. The CONTRACTOR shall submit shop drawings and other information to the ENGINEER for review.

B. With the bid, the following submittals are required:

Documentation as outlined herein under paragraph 1.06 A, including installation references of projects that are similar in size and scope to this project. The submittal shall include, at a minimum, the client contact name, phone number, and the diameter and footage of pipe rehabilitated. Documentation for product and installation experience must be satisfactory to the ENGINEER.

C. After contract award, the following submittals are required.

1. The CONTRACTOR shall submit design data and specification data sheets listing all parameters used in the CIPP design and thickness calculations based on ASTM F1216 or F2019 and D2412 for “fully deteriorated gravity pipe conditions.” All CIPP liner design calculations shall be sealed and signed by a registered professional Engineer in the Commonwealth of Kentucky. Submit P.E. certification form for all CIPP design data. Submit detailed installation procedures, lining production schedule and location, testing procedures and schedule, quality control procedures, liner curing procedures including heat-up and cool-down rates, curing temperature and duration, and shipping and storage requirements, schedule and procedures. Detailed design calculations as specified herein under paragraph 2.01 Q.

2. Various test results as specified herein under Section 2.03.

3. Documentation as specified herein for the Cure Report under Paragraph 3.08 A.

4. Documentation as specified herein for the Television Survey under Paragraph Section 3.10 Television Survey.

D. Curing log, including temperatures, pressures, and times during the curing process to document that a proper cure has been achieved. Curing log is to be submitted immediately after the curing is complete for each line segment that is rehabilitated.

1.03 RELATED WORK SPECIFIED ELSEWHERE

A. Special Note for Pipe Cleaning

B. Special Note for CIPP Acceptance Testing

1.04 REFERENCE STANDARDS

A. American Society for Testing and Materials (ASTM)

1. ASTM D638 – Standard Test Methods for Tensile Properties of Plastics.

2. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

3. ASTM D2412- Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading.

4. ASTM D2990 – Standard Test Methods for Tensile, Compressive and Flexural Creep and Creep-Rupture of Plastics.

5. ASTM F1216 - Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube.

6. ASTM F1743 – Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP).

7. ASTM F2019 – Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Pulled in Place Installation of Glass Reinforced Plastic (GRP) Cured-in-Place Thermosetting Resin Pipe (CIPP)

8. ASTM E1252 - Standard Practice for General Techniques for Obtaining Infrared Spectra for Qualitative Analysis

B. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

1.05 QUALIFICATIONS

A. The CONTRACTOR performing the CIPP lining work shall be fully qualified, experienced and equipped to complete this work expeditiously and in a satisfactory manner and shall be certified and/or licensed as an installer by the CIPP manufacturer. Only commercially proven products and installers with substantial track records will be approved. In addition the Contractor shall meet the following requirements:

1. The CONTRACTOR shall have minimum of 10,000 LF of CIPP successfully installed of similar diameter and using the specific method of installation and curing being used.

2. The CONTRACTOR shall submit a certified statement from the manufacturer that he/she is a certified and/or licensed installer of the CIPP lining.

3. A minimum of three clients that the CONTRACTOR has performed this type of work for, including names, phone numbers, linear footage, and a description of the actual work performed.

4. The CONTRACTOR'S superintendent who will perform the work under this section must have at least 3 years of experience and have successfully installed at least 5,000 linear feet 24-inch diameter or greater of the proposed product and curing method.

B. The CONTRACTOR shall also be capable of providing crews as needed to complete the work without undue delay.

C. The ENGINEER shall approve or disapprove the CONTRACTOR and/or manufacturer based on the submitted information and a follow up interview, if warranted.

D. Inspection of the liner may be made by the representative of the ENGINEER after delivery. The liner shall be subject to rejection at any time on account of failure to meet any of the requirements specified, even though sample liner may have been accepted as satisfactory at the place of manufacture. Liner rejected after delivery shall be marked for identification and shall be removed from the job site at once.

1.06 GUARANTEE

A. All CIPP lining placed shall be guaranteed by the CONTRACTOR and manufacturer for a period of one year from the date of final acceptance. During this period, defects discovered in the CIPP lining, as determined by the ENGINEER, shall be removed and replaced in a satisfactory manner by the CONTRACTOR at no cost to the ENGINEER. The ENGINEER may conduct an independent television inspection, at his own expense, of the lining work prior to the completion of the one year guarantee period.

1.07 DELIVERY, STORAGE AND HANDLING

A. Care shall be taken in shipping, handling and storage to avoid damaging the liner. Extra care shall be taken during cold weather construction. Any liner damaged in shipment shall be replaced as directed by the ENGINEER.

B. Any liner showing a split or tear, or which has otherwise received damage shall be marked as rejected and removed at once from the job site.

C. The liner shall be maintained at a proper temperature in refrigerated facilities to prevent premature curing at all times prior to installation. The liner shall be protected from UV light prior to installation. Any liner showing evidence of premature curing will be rejected for use and will be removed from the site immediately.

PART 2 -- PRODUCTS

2.01 CIPP LINING

A. CIPP lining shall be Insituform by Insituform Technologies, Inliner by Inliner Technologies, Premier Pipe, Blue-Tek by Reline America, or approved equal.

B. The tube shall consist of one or more layers of absorbent non-woven felt fabric and meet the requirements of ASTM F1216 or ASTM F1743, Section 5. The tube shall be constructed to

withstand installation pressures, have sufficient strength to bridge breaks and missing sections of the existing pipe, and stretch to fit irregular pipe sections. The new jointless pipe-within-a-pipe must fit tightly against the old pipe wall and consolidate all disconnected sections into a single continuous conduit, substantially reducing or eliminating infiltration or exfiltration.

C. The wetout tube shall have a uniform thickness that when compressed at installation pressures will meet or exceed the Design thickness.

D. The tube shall be fabricated to a size that when installed will tightly fit the internal circumference and length of the original pipe with minimal shrinkage, in such a way as to minimize water migration (tracking) between the liner and the host pipe. Allowance should be made for circumferential stretching during inversion, and longitudinal stretching during pull in. Overlapped layers of felt in longitudinal seams that cause lumps in the final product shall not be utilized.

E. The minimum tube length shall be that deemed necessary by the Contractor to effectively span the distance between the access points and to facilitate a good, "non-tracking" seal. The Contractor shall verify the lengths in the field before cutting liner to length and otherwise preparing it for installation.

F. The outside layer of the tube (before wetout) shall be coated with an impermeable, flexible membrane that will contain the resin and facilitate monitoring of resin saturation during the resin impregnation (wetout) procedure.

G. The tube shall be homogeneous across the entire wall thickness containing no intermediate or encapsulated elastomeric layers. No material shall be included in the tube that may cause delamination in the cured CIPP. No dry or unsaturated layers shall be evident.

H. The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.

I. Seams in the tube shall be stronger than the unseamed felt.

J. The outside of the tube shall be marked for distance at regular intervals along its entire length, not to exceed 5 ft. Such markings shall include the Manufacturers name or identifying symbol. The tubes shall be manufactured in the USA.

K. The resin system shall be a corrosion resistant polyester, vinyl ester, or epoxy and catalyst system that when properly cured within the tube composite meets the requirements of ASTM F1216 and ASTM F1743, the physical properties herein, and those which are to be utilized in the Design of the CIPP for this project. The resin shall produce CIPP which will comply with the structural and chemical resistance requirements of this specification.

L. The finished pipe in place shall be fabricated from materials which when cured will be chemically resistant to withstand internal exposure to domestic sewage. All constituent materials will be suitable for service in the environment intended. The final product will not deteriorate, corrode or lose structural strength that will reduce the projected product life. In industrial areas a liner system using epoxy vinyl ester resin shall be utilized and a polyester resin shall be used in non-industrial areas. The ENGINEER shall determine the type of appropriate resin to be utilized for each line segment.

M. The CIPP shall be designed as per ASTM F1216, Appendix X1. The CIPP design shall assume no bonding to the original pipe wall. The structural performance of the finished pipe must be adequate to accommodate all anticipated loads throughout its design life.

N. The CIPP must have a minimum design life of fifty (50) years. The minimum design life may be documented by submitting life estimates by national and/or international authorities or specifying agencies. Otherwise, long-term testing and long-term in-service results (minimum ten (10) years) may be used, with the results extrapolated to fifty (50) years.

O. The CONTRACTOR must have performed long-term testing for flexural creep of the CIPP pipe material installed by his company. Such testing results are to be used to determine the long-term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (tube and resin) and general workmanship of the installation and curing. A percentage of the instantaneous flexural modulus value (as measured by ASTM D-790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. Values in excess of 50% will not be applied unless substantiated by qualified third party test data. The materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in design.

P. The minimum required structural CIPP wall thickness shall be based on the physical and structural properties described herein and in accordance with the design equations in the appendix of ASTM F 1216 or F 2019, and the following design parameters:

Design Safety Factor	2.0
Retention Factor for Long-Term Flexural Modulus to be used in Design *(as determined by Long-Term tests described in paragraph 2.03)*	50 %
Ovality*	2 %
Soil Depth (above crown)*	Refer to Contract Plans
Design Condition	Fully deteriorated
**Denotes information which can be provided here or in inspection video tapes or project construction plans. Multiple line segments may require a table of values.*	

Q. The lining manufacturer shall submit to the ENGINEER for review complete design calculations for the liner, signed and sealed by a Professional Engineer registered in the Commonwealth of Kentucky and certified by the manufacturer as to the compliance of his materials to the values used in the calculations. The buckling analysis shall account for the combination of dead load, live load, hydrostatic pressure and grout pressure (if any). The liner side support shall be considered as if provided by soil pressure against the liner. The existing pipe shall not be considered as providing any structural support. Modulus of soil reaction shall be 1000, corresponding to a moderate degree of compaction of bedding and a fine-grained soil as shown in AWWA Manual M45, Fiberglass Pipe Design.

R. The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If separation of the layers occurs during testing of field samples, new samples will be cut from the work. Any reoccurrence may cause rejection of the work.

S. Any layers of the tube that are not saturated with resin prior to insertion into the existing pipe shall not be included in the structural CIPP wall thickness computation.

2.02 END SEALS

A. A watertight seal shall be made at every manhole entrance and exit and all other terminus of the liner. End seals shall be made by using a hydrophilic seal such as Insignia or equal.

2.02 STRUCTURAL REQUIREMENTS FOR MAIN LINES

A. Resin shall be impregnated by vacuum application or approved equal. If reinforcing materials (fiberglass, etc.) are used, the reinforcing material must be fully encapsulated within the resin to assure that the reinforcement is not exposed, either to the inside of the pipe or at the interface of the CIPP and the existing pipe.

B. The design for the CIPP wall thickness will be based on the following strengths, unless otherwise submitted to and approved by the ENGINEER.

Property	Test Method	Cured Composite per ASTM F1216
Flexural Modulus of Elasticity	ASTM D-790	250,000 psi
Flexural Stress	ASTM D-790	4,500 psi

2.03 TESTING REQUIREMENTS

A. Chemical Resistance - The CIPP shall meet the chemical resistance requirements of ASTM F1216 or F2019. CIPP samples for testing shall be of tube and resin system similar to that proposed for actual construction. It is required that CIPP samples with and without plastic coating meet these chemical testing requirements.

B. Prior to any liner installation, the CONTRACTOR shall submit technical data sheets showing the physical and chemical properties and infrared spectrum analysis per ASTM E1252 (chemical fingerprint) of the proposed resin system as modified for the cured-in-place process. Additionally, copies of the certificates of analysis for resin used on the project must be made available to the ENGINEER.

C. The CONTRACTOR shall provide resin samples as directed by the ENGINEER during the duration of the project and infrared spectrography chemical fingerprints shall be run and compared to the submitted fingerprint to verify the resin used is the resin submitted for use on this project. These analyses shall be conducted at the ENGINEER's expense.

D. In the case of liner installation performed under this contract, CIPP samples shall be prepared and physical properties tested in accordance with ASTM F1216, F2019, or ASTM F1743, Section 8, using either method proposed.

1. Where the diameter is less than or equal to 15-inches, the samples shall be restrained type samples made by extending the liner through a form with a diameter as close as possible to the existing pipeline. The formed sample shall be provided with insulation to contain cure heat as well as a heat sink such as sand bags for cool down.

2. Where the diameter is greater than 15-inches, a plate sample shall be prepared. The test sample shall be fabricated from the material taken from the liner and cured in a clamped mold with the resin used in the liner construction placed in the down tube.

3. Each sample shall be large enough to provide at least five total specimens for testing. One thickness, flexural strength, and flexural modulus shall be conducted in accordance with ASTM F1216, ASTM D790, and ASTM D2290 for each segment. The material must meet the initial strength requirements of ASTM F1216, Table 1.

4. These samples will be tested to verify compliance with the installed material specifications and shall be paid for through the testing allowance on the bid form. The CONTRACTOR shall produce these test samples for each pipe segment installed, defined as a contiguous length of insertion. Liners which do not pass these material tests will be rejected. The cost for sample collection shall be included in the bid price for the cured in place pipe.

5. Test specimens shall be marked in indelible ink with the appropriate lateral or main section, work order number, date of installation, and orientation to the top of the pipe (direction of up) so the results can be correlated to the field work performed. All test results shall use this designated labeling as a reference.

6. The extraction and labeling of test specimens shall be done in the presence of the ENGINEER. The ENGINEER and CONTRACTOR shall, upon completion of sample extraction and labeling, both sign a chain-of-custody form that shall subsequently accompany the sample at all times and shall ultimately be received and signed at the testing laboratory. Test reports shall include a copy of the chain-of-custody form with all signatures to ensure that reported test results are for the correct sample.

7. The flexural properties must meet or exceed the values specified herein.

8. Wall thickness of samples shall be determined as described in paragraph 8.1.6 of ASTM F1743.

9. Visual inspection of the CIPP shall be by closed-circuit television.

PART 3 -- EXECUTION

3.01 CLEANING/SURFACE PREPARATION

A. It shall be the responsibility of the CONTRACTOR to clean the pipeline and to remove all internal debris out of the pipeline in accordance with the Special Note for Pipe Cleaning.

3.02 JOINT, CRACK, ANNULAR SPACE, AND LINER END CHEMICAL SEALING

A. Prior to cured-in-place liner installation, all active leaks of a magnitude to compromise the integrity of the liner shall be stopped using chemical grout, at no additional cost to the ENGINEER.

B. Materials used on this Project shall have the following properties: react quickly to form a permanent watertight seal; resultant seal shall be flexible and immune to the effects of wet/dry cycles; non-biodegradable and immune to the effects of acids, and alkalis; component packaging and mixing compatible with field conditions and worker safety; extraneous sealant left inside pipe shall be readily removable; and shall be compatible with the CIPP liner resin system utilized. The chemical sealing materials shall be acrylic resin type and shall be furnished with activators, initiators, inhibitors and any other materials recommended by the manufacturer for a complete grout system. Sealing grout shall be furnished in liquid form in standard manufacturer's containers. Sealing grout shall be AV-100 manufactured by Avanti International or approved equal.

C. The Contractor shall modify his equipment as necessary to seal the leaks, however both his equipment and sealing method must meet the approval of the ENGINEER prior to use. Extreme caution shall be utilized during leak sealing (pressure) operations in order to avoid damaging the already weakened sewer pipe. If any damage occurs, it shall be repaired at the CONTRACTOR's cost and to the satisfaction of the ENGINEER. Excessive pumping of grout which might plug a service lateral shall be avoided. Any service laterals blocked by the grouting operation shall be cleared immediately by the Contractor.

3.03 FLOW CONTROL

A. Flow control shall be exercised as required to ensure that no flowing water comes into contact with sections of pipe under repair.

3.04 LINER INSTALLATION FOR MAIN LINES AND LATERALS

A. In presence of ENGINEER, perform a pre-lining CCTV inspection immediately prior to CIPP lining to demonstrate that the pipe is clean and free of roots, grease, sand, rocks, sludge, PACP runners or gushers, pockets of water, or structural impediments that would affect long-term viability of the pipe liner. Obtain ENGINEER's approval of the acceptability of the existing pipe condition prior to installation of CIPP.

B. The CONTRACTOR shall present to the ENGINEER, for review, a description of his methods for avoiding liner stoppage due to conflict and friction with such points as the manhole entrance and the bend into the pipe entrance. He shall also present plans for dealing with a liner stopped by snagging within the pipe. This information shall be rendered to the ENGINEER in a timely fashion prior to the preconstruction conference.

C. The CONTRACTOR shall immediately notify the ENGINEER of any construction delays taking place during the insertion operation. Such delays shall possibly require sampling and testing by an independent laboratory of portions of the cured liner at the ENGINEER's discretion. The cost of such test shall be born by the CONTRACTOR and no extra compensation will be allowed. Any failure of sample tests or a lack of immediate notification of delay shall be automatic cause for rejection of that part of the work at the ENGINEER's discretion.

D. On site wet out (if applicable) - The CONTRACTOR shall designate a location where the tube will be impregnated with resin prior to installation. The CONTRACTOR shall allow the ENGINEER and/or ENGINEER to inspect the materials and the "wet-out" procedure.

E. The materials and processes must be reasonably available for pre-installation, installation and post-installation inspections. Areas which require inspection include, but are not limited to, the following:

1. Product materials should exhibit sufficient transparency to visually verify the quality of resin impregnation.

2. Temperature sensing devices, such as thermocouples, shall be located between the existing pipe and the CIPP to ensure the quality of the cure of the wall laminate.

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LINER INSTALLATION FOR MAIN LINES

A. (Heat cured) After the inversion is complete, the CONTRACTOR shall supply a suitable heat source throughout the pipeline. The equipment shall be capable of delivering hot water or steam throughout the pipeline to uniformly raise the temperature to a level required to effectively cure the resin. The heat source shall be fitted with suitable monitors to gauge the temperature of the incoming and outgoing water supply or steam. Another such gage shall be placed between the tube and the host pipe at the termination end at or near the bottom to determine the temperatures during cure. Water temperature or steam in the pipe during the cure period shall be as recommended by the resin manufacturer.

B. Initial cure shall be deemed complete when the exposed portions of the tube appear to be hard and sound and the temperature sensor indicates that the temperature is of a magnitude to realize an exotherm. The cure period shall be of a duration recommended by the resin manufacturer and may require continuous recirculation of the water to maintain the temperature. The CONTRACTOR shall have on hand at all times, for use by his personnel and the ENGINEER, a digital thermometer or other means of accurately and quickly checking the temperature of exposed portions of the liner.

C. CIPP installation shall be in accordance with ASTM F1216, Section 7, ASTM F1743, Section 6 or ASTM F2019, with modifications as listed herein.

D. Resin Impregnation: The quantity of resin used for tube impregnation shall be sufficient to fill the volume of air voids in the tube with additional allowances for polymerization shrinkage and the loss of resin through cracks and irregularities in the original pipe wall. A vacuum impregnation or approved equal process shall be used. To insure thorough resin saturation throughout the length of the felt tube, the point of vacuum shall be no further than 25 feet from the point of initial resin introduction. After vacuum in the tube is established, a vacuum point shall be no further than 75 feet from the leading edge of the resin. The leading edge of the resin slug shall be as near to perpendicular as possible. A roller system shall be used to uniformly distribute the resin throughout the tube. If the Installer uses an alternate method of resin impregnation, the method must produce the same results. Any alternate resin impregnation method must be proven.

E. Tube Insertion: The wetout tube shall be positioned in the pipeline using either inversion or a pull-in method. If pulled into place, a power winch should be utilized and care should be exercised not to damage the tube as a result of pull-in friction. The tube should be pulled-in or inverted through an existing manhole or approved access point and fully extend to the next designated manhole or termination point.

F. Temperature gauges shall be placed inside the tube at the invert level of each end to monitor the temperatures during the cure cycle.

G. Curing shall be in accordance with the manufacturer's recommended cure schedule.

H. Cooldown: The CONTRACTOR shall cool the hardened pipe to a temperature below 100 F before relieving the hydrostatic head. Cooldown may be accomplished by the introduction of cool water into the inversion standpipe to replace water being pumped out of the manhole. Care should be taken in release of static head so that vacuum will not be developed that could damage the newly installed liner.

I. Finish: The new pipe shall be cut off in the manhole at a suitable location. The finished product shall be continuous over the length of pipe reconstructed and be free from dry spots, delamination and lifts. Pipe entries and exits shall be smooth, free of irregularities, and watertight. No visible leaks shall be present and the CONTRACTOR shall be responsible for grouting to remove leaks or fill voids between the host pipe and the liner. During the warranty

period, any defects which will affect the integrity or strength of the product shall be repaired at the CONTRACTOR's expense, in a manner mutually agreed upon by the ENGINEER and the CONTRACTOR.

3.06 FIELD QUALITY CONTROL

A. Field acceptance of the liner shall be based on the ENGINEER's evaluation of the installation including TV video and a review of certified test data for the installed pipe samples.
   1. Groundwater infiltration of the liner shall be zero.
   2. There shall be no evidence of splits, cracks, breaks, lifts, kinks, delaminations or crazing in the liner.
   3. If any defective liner is discovered after it has been installed, it shall be removed and replaced with either a sound liner or a new pipe at no additional cost to the ENGINEER.

3.07 ACCEPTANCE

A. The finished liner shall be continuous over the entire length of the installation. The liner shall be free from visual defects, damage, deflection, holes, delamination, uncured resin, and the like. No pinholes, cracks, thin spots, dry spots, or other defects in the liner will be permitted. There shall be no visible infiltration through the liner or from behind the liner at manholes and service connections. Cut-ins and attachments at service connections shall be neat and smooth.

B. Defects, which, in the opinion of the Engineer, will affect the liner's structural integrity, strength, hydraulic performance, future maintenance access, and overall line performance, shall be repaired or the sewer replaced at the Contractor's expense. Any lined section of segment (from manhole to manhole) exhibiting these defects will be rejected for payment until such time repairs have been made to the defective liner to the satisfaction of the Engineer. The following methods of repair shall be implemented by the Contractor to resolve defects unless otherwise approved by the Engineer:

Defects	**Repair Method**
Annular space or infiltration at lateral opening	Re-seal with structural grout or point repair
Damaged lateral caused by overly ground tap	Repair with structural grout or point repair
Annular space or infiltration at manhole wall and liner termination	Re-grout liner termination
Cracked, missing pipe or voids caused by the cleaning operation	Repair with structural grout, thicken liner, or point repair
Dropped pipe or shape loss caused by the cleaning operation	Point repair
Wrinkles or ridges in liner greater than 5% of the pipe diameter	Grinding allowed if not part of structural component of liner. If grinding would require removal of structural component, then Contractor must make point repair
Re-installed bulkheaded tap or inactive service connection	Re-seal with structural grout or point repair
Lined over debris	Point repair
Soft spots or lifts in the liner	Point repair
Final liner thickness less than required thickness bid	Replace inadequate liner

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3.08 WET-OUT AND CURE REPORT

A. The CONTRACTOR shall submit "wet out" and "cure" reports documenting the specific details of the liner's vacuum impregnation and saturation with resin and the CIPP installation of the liner. A report shall be generated for each liner installation. A copy of all "wet out" and "cure" records shall be made available to the ENGINEER upon request, and shall be turned over to the ENGINEER on a weekly basis and prior to request for payment. If the "wet out" and "cure" reports are not presented prior to a payment request for a repair work order, payment for the work will not be made and the request will be rejected. At a minimum, this report shall include, in addition to CONTRACTOR and Contract identification:

1. Line identification and location
2. Wet-out date
3. Sample identification(s) and technician
4. Installation (in sewer) date
5. Host sewer pipe inside diameter
6. Liner thickness
7. Liner length
8. Liner and resin batch numbers
9. Resin type
10. Wet out length
11. Roller spacing
12. Vacuum setting
13. Quantity of resin and catalyst utilized
14. Wet out technicians
15. Time wet out started and completed
16. Applicable remarks
17. (Heat cure) Boiler and liner heating fluid pressure and temperature versus time log during cure period
18. (UV cure) Pressure and temperature versus time log and light train speed during cure period.
19. Cool down report

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3.09 CLEANUP

A. After the liner installation has been completed and accepted, the CONTRACTOR shall cleanup the entire project area and return the ground cover to the original or better condition. All excess material and debris not incorporated into the permanent installation shall be disposed of by the CONTRACTOR.

3.10 TELEVISION SURVEY

A. Television survey, including Preconstruction Survey, Post Construction Survey, and Warranty Survey, shall be in accordance with Special Note for CIPP Acceptance Testing. Television survey shall be done for all cured-in-place lining, and shall be completed within 2 weeks of liner installation.

PART 4 – PAYMENT

Payment for Cured-in-Place Pipe Liner will be made per linear foot as CIPP LINER 42 IN. Payment for CIPP LINER 42 IN will be considered full compensation for all work, equipment, and incidentals necessary to install the pipe liners in accordance with this note.

END OF SECTION

SPECIAL NOTE FOR PIPE LINER ACCEPTANCE TESTING

PART 1 -- GENERAL

1.01 SCOPE OF WORK

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

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

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

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

PART 2 -- PRODUCTS

2.01 EQUIPMENT

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

PART 3 -- EXECUTION

3.01 PROCEDURE

A. The camera shall be moved through the pipe in either direction at a uniform rate, stopping when necessary to ensure proper documentation of the pipe's condition but in no case will the television camera be pulled at a speed greater than 30 fpm. Manual winches, power winches, TV cable and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the pipe conditions shall be used to move the camera through the line. If, during the inspection operation, the television camera will not pass through the entire section, the equipment shall be removed and repositioned in a manner so that the inspection can be performed from the opposite opening. All set-up costs for the inspection shall be included in the unit prices bid. If the camera fails to pass through the entire section, the Contractor shall perform point repairs as required or approved by the Engineer. Point repairs will be paid as each at the bid price for "PIPE REPAIR". The Contractor shall re-clean or further remove blockage after the point repairs at no additional cost to the Engineer.

B. Whenever non-remote powered and controlled winches are used to pull the television camera

through the line, telephones, radios, or other suitable means of communication shall be set up between the two openings of the line being inspected to ensure that good communications exist between members of the crew.

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

Lighting system shall be adequate for quality pictures.

3.02 RECORDING OF FIELD OBSERVATIONS

A. Television Inspection logs

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

B. Digital Recordings

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

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

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

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

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

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

PART 4 – PAYMENT

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

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

SPECIAL NOTE FOR INLAID PAVEMENT MARKERS

I. DESCRIPTION

Except as provided herein, perform all work in accordance with the Department's Standard and Supplemental Specifications and applicable Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications. This work shall consist of:

(1) Maintain and Control Traffic; and (2) Furnish and install Inlaid Pavement Markers (IPMs) in recessed grooves; and (3) Any other work as specified by these notes and the Contract.

II. MATERIALS

The Department will sample all materials in accordance with the Department's Sampling Manual. 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 unless otherwise specified in these Notes.

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

B. Markers. Provide reflective lenses with depth control breakaway positioning tabs. Before furnishing the markers, provide to the Engineer the manufacturer's current recommendations for adhesives and installation procedures. Use one brand and design throughout the project. Use markers meeting the specifications in the table below.

SPECIFICATIONS FOR HOUSING AND REFLECTOR	
Material:	Polycarbonate Plastic
Weight:	Housing 2.00 oz.
	Reflector 2.00oz.
Housing Size:	5.00" x 3.00" x 0.70" high
Specific Intensity of Reflectivity at 0.2° Observation Angle	
White:	3.0 at 0°entrance angle
	1.2 at 20°entrance angle
Yellow:	60% of white values
Red:	25% of white values

C. Adhesives. Use adhesives that conform to the manufacturer's recommendations.

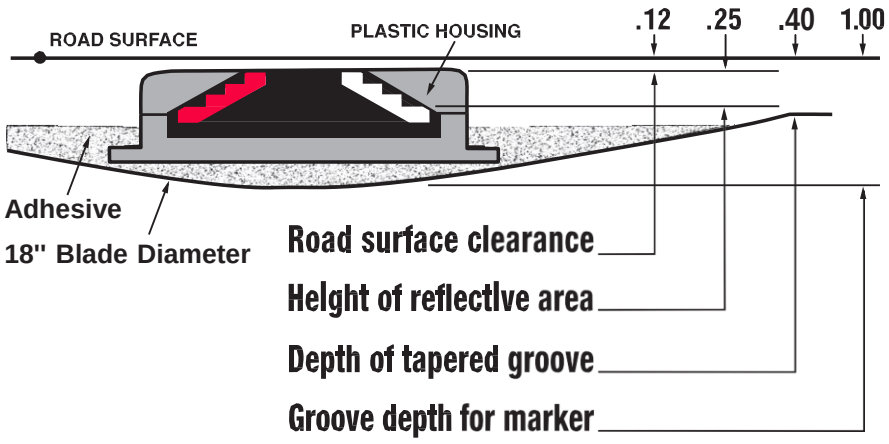
III. CONSTRUCTION

A. Experimental Evaluation. The University of Kentucky Transportation Center will be evaluating this installation of IPMs. Notify the Engineer a minimum of 14 calendar days prior to beginning work. The Engineer will coordinate the University's activities with the Contractor's work.

B. Maintain and Control Traffic. See Traffic Control Plan.

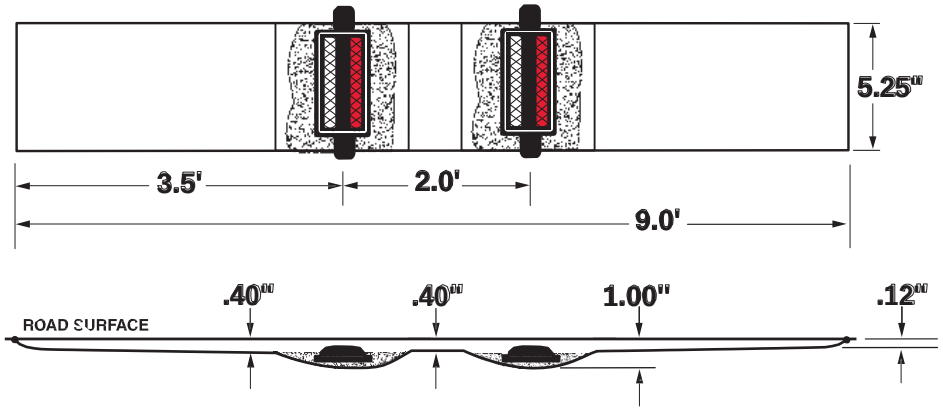
C. Installation. Install IPMs in recessed grooves cut into the final course of pavement according to the manufacturer's recommendations. Do not cut the grooves until the pavement has cured sufficiently to prevent damaging the pavement. Cut installation grooves using diamond blades on saws that accurately control groove dimensions. Remove all dirt, grease, oil, loose or unsound layers, and any other material from the marker area which would reduce the bond of the adhesive. Maintain pavement surfaces in a clean condition until placing markers.

Prepare the pavement surfaces, and install the markers in the recessed groove according to the drawing below. Use an approved snowplowable epoxy adhesive. Ensure that the adhesive bed area is equal to the bottom area of the marker, and apply adhesive in sufficient quantity to force excess out around the entire perimeter of the marker. Use materials, equipment, and construction procedures that ensure proper adhesion of the markers to the pavement surface according to the manufacturer's recommendations. Remove all excess adhesive from in front of the reflective faces. If any adhesive or foreign matter cannot be removed from the reflective faces, or if any marker fails to properly adhere to the pavement surface, remove and replace the marker at no additional cost to the Department.



D. Location and Spacing. Install the markers in the pattern for high reflectivity with two (2) IPMs per groove. Locate and space markers as shown in the current standard drawings or sepias (note: use Inlaid Pavement Markers wherever Type V Pavement Markers are called for). Do not install markers on bridge decks. Do not install a marker

on top of a pavement joint or crack. Offset the recessed groove a minimum of 2 inches from any longitudinal pavement joint or crack and at least one inch from the painted stripe, ensuring that the finished line of markers is straight with minimal lateral deviation. Give preference to maintaining the 2-inch offset between recessed groove and joint as opposed to keeping the line of markers straight.



Place inlaid markers as much in line with existing pavement striping as possible. Place markers installed along an edge line or channelizing line so that the near edge of the plastic housing is no more than one inch from the near edge of the line. Place markers installed along a lane line between and in line with the dashes. Do not place markers over the lines except where the lines deviate visibly from their correct alignment, and then only after obtaining the Engineer's prior approval of the location.

If conflicts between recessed groove placement in relation to pavement joint and striping cannot be resolved, obtain the Engineer's approval to eliminate the marker or revise the alignment.

E. Disposal of Waste. Dispose of all removed pavement, debris, and other waste at sites off the right of way obtained by the Contractor at no additional cost to the Department. See Special Note for waste and Borrow.

F. Restoration. Be responsible for all damage to public and/or private property resulting from the work. Restore all damaged features in like kind materials and design at no additional cost to the Department.

G. On-Site Inspection. Make a thorough inspection of the site prior to submitting a bid and be thoroughly familiar with existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid as evidence of this inspection having been made and will not honor any claims for money or grant Contract time extensions resulting from site conditions.

H. Caution. Do not take information shown on the drawings and in this proposal and the types and quantities of work listed as an accurate or complete evaluation of the

material and conditions to be encountered during construction, but consider the types and quantities of work listed as approximate only. The bidder must draw his own conclusion as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation or extension of Contract time if the conditions encountered are not in accordance with the information shown.

IV. MEASUREMENT

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

B. "INLAID PAYMENT MARKER" shall be measured as each. One (1) installation of "INLAID PAVEMENT MARKER" will consist of grooving the pavement, removing cuttings and debris, preheating pavement to remove moisture, adhesives, and installation of two (2) markers with all lenses in accordance with this note.

Note: Each pay item of Inlaid Pavement Marker will require two markers.

V. PAYMENT

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

B. Inlaid Pavement Markers. The Department will make payment for the completed and accepted quantity of completely installed "INLAID PAVEMENT MARKERS" at the Contract unit price, each. Accept payment as full compensation for all labor, equipment, materials, and incidentals to accomplish this work to the satisfaction of the Engineer. A system of one (1) groove and two (2) markers shall be paid as one "INLAID PAVEMENT MARKER". The bid item "INLAID PAVEMENT MARKER" shall be used regardless of the color and type of lenses required.

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

The dimensions shown on the typical sections for pavement and shoulder widths are nominal or typical dimensions. The actual dimensions to be constructed or diamond ground may be varied to fit existing conditions as directed or approved by the Engineer. It is not intended that existing pavement or shoulders be widened unless specified elsewhere in the Proposal.

DLZ WMB
ARCHITECTURE • ENGINEERING • PLANNING
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HARDIN AND NELSON COUNTIES
BLUEGRASS PARKWAY
BRIDGE REHABILITATION

Construction No. NHPP 0021 (051)
FD52 047 9002 005-009 | FD52 090 9002 008-011

Item No. 4-20007

MP 5.820
To
MP 10.172 (BRIDGE OVER CSX RAILROAD)

KENTUCKY TRANSPORTATION CABINET

COMMONWEALTH OF KENTUCKY TRANSPORTATION
CABINET DEPARTMENT OF HIGHWAYS
DIVISION OF STRUCTURAL DESIGN
May 2019

BLUEGRASS PARKWAY – BRIDGE REHABILITATION

HARDIN AND NELSON COUNTIES
CONSTRUCTION NO. NHPP 0021 (047)
FD52 047 9002 005-009 | FD52 090 9002 008-011
ITEM NO. 4-20007 | MP 5.820 to MP 10.172

INDEX

STATE OF KENTUCKY
MATTHEW R. WILLIAMS
29507
LICENSED PROFESSIONAL ENGINEER

05/03/2019

Matthew R. Williams, PE
KY PE NO. 29,507

DATE

Prepared By: DLZ WMB
ARCHITECTURE • ENGINEERING • PLANNING
SURVEYING • CONSTRUCTION SERVICES

BLUEGRASS PARKWAY - ESTIMATE OF QUANTITIES
HARDIN AND NELSON COUNTIES - ITEM NO. 4-20007

SUMMARY OF TOTAL ESTIMATE OF QUANTITIES			
ITEM NUMBER	**DESCRIPTION**	**QUANTITY**	**UNIT**
3299	ARMORED EDGE FOR CONCRETE	140	LF
8106	CONCRETE CLASS M 1	58	CY
8151	STEEL REINFORCEMENT EPOXY COATED	5590	LBS
8435	JACK AND SUPPORT BRIDGE SPAN (B1)	1	LS
8435	JACK AND SUPPORT BRIDGE SPAN (B2)	1	LS
21969NN	BEARING REPLACEMENT	4	EACH
22146EN	CONCRETE PATCHING REPAIR	452	SF
23032EN	BRIDGE BARRIER RETROFIT	2368	LF
23386EC	JOINT SEAL REPLACEMENT (1 IN)	70	LF
23386EC	JOINT SEAL REPLACEMENT (4 IN)	70	LF
23783EC	REMOVE CONCRETE BARRER	24.0	EACH
24981EC	BRIDGE CLEANING (B1)	1	LS
24982EC	CONCRETE COATING (B1)	1	LS
24981EC	BRIDGE CLEANING (B2)	1	LS
24982EC	CONCRETE COATING (B2)	1	LS
24982EC	CONCRETE COATING (B3)	1	LS
24982EC	CONCRETE COATING (B4)	1	LS
24982EC	CONCRETE COATING (B5)	1	LS
24982EC	CONCRETE COATING (B6)	1	LS
24983EC	BEARING LUBRICATION	12	EACH
25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	212	LF

REFERENCES

[1] Kentucky Transportation Cabinet Department of Highways. *Standard Specifications for Road and Bridge Construction.* Current Ed.

The following Kentucky Standard Drawings (Current Ed.) were used:

- Barrier Transition - BGX-010-04 CE
- Armored Edge – BJE-001-11
- Elastomeric Bearings Pads - BBP-001 CE

The following special notes apply to all bridges and are found in the roadway plans for this project:

- Special Note for Contract Completion Date and Liquidated Damages.
- Project Phasing and Maintenance of Traffic Plan.

SPECIAL NOTE FOR REPLACING EXPANSION DAMS AND/OR INSTALLING ARMORED EDGES FOR CONCRETE ON BRIDGES

1. **DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2019 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

   This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing concrete and expansion device(s) and/or bridge ends; (3) Install armored edges and new concrete as specified and in accordance with the attached detail drawings; (4) Install new joint seals (if applicable); (5) Maintain and control traffic; and (6) Any other work specified as part of this contract.

2. **MATERIALS.**

   2.1. Class "M" Concrete. Use either "M1" or "M2". See Section 601.

   2.2. Structural Steel. Use new, commercial grade steel suitable for welding. The Engineer will base acceptance on visual inspection. See Standard Drawing BJE-001, current edition.

   2.3. Stud Anchors. The armored edge stud anchors are ¾" x 6" embedded stud shear connectors conforming to ASTM A108, Grade 1015 (Nelson Studs or equal).

   2.4. Steel Reinforcement. Use Grade 60. See Section 602.

   2.5. Epoxy Bond Coat. See Section 511.

   2.6. Neoprene Joint Sealers (Compression Seals). See Section 807.

   2.7. Silicone Rubber Sealant. See Section 807.

   2.8. Neoprene Strip Seals. See attached detail drawings and Section 807.

3. CONSTRUCTION.

3.1. Remove Existing Materials. Remove the existing expansion dam/bridge end and specified areas of concrete as shown on the attached sketches. Remove debris and/or expansion joint filler as directed by the Engineer. Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Expansion Joint Replacement" or “Armored Edge for Concrete”.

Clean and leave all existing steel reinforcement encountered in place.

3.2. Place New Concrete and Armored Edges. After all specified existing materials have been removed; place new armored edges to match the grade of the proposed overlay or to match the original grade (See attached detail drawings). Place the new Class “M” concrete to the scarified grade and finish to receive the new overlay or place the new Class “M” concrete to the original grade and finish with broom strokes drawn transversely from curb to curb. No accelerants are to be added to Class “M” Concrete as specified in Section 601 of the Standard Specifications.

All new structural steel shall be cleaned and painted with two coats of commercial primer paint red orange in color, except that surfaces to come in contact with concrete are not to be painted.

Blast clean all areas of existing concrete and structural steel to come in contact with new concrete until free of all laitance and deleterious substances immediately prior to the placement of the Class "M" Concrete. The surface areas of existing concrete to come in contact with the new Class "M" Concrete are to be coated with an epoxy bond coat immediately prior to placing new concrete in accordance with Section 511. The interfaces of the new and old concrete shall be as nearly vertical and horizontal as possible.

3.3. Additional Steel Reinforcement. Furnish for replacement, as directed by the Engineer (see attached detail drawings for reinforcement details). Place these bars in areas deemed by the Engineer to require additional reinforcement. Field cutting and bending is permitted. Do not place any additional steel reinforcement above the height of the top row of Nelson Studs on the armored edges. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04 prior to pouring the new Class “M” concrete. Reinforcement is incidental to the contract unit price for “Expansion Joint Replacement” or “Armored Edge for Concrete”.

3.4. Stage Construction. Installation of concrete and armored edges in two (or more if specified) stages is necessary. Join the armored edges at or near the centerline of the roadway or lane line, field weld and grind smooth.

3.5. Preformed Neoprene Joint Seal (if applicable). Place the preformed joint seal in one continuous, unbroken length. Place neoprene compression seals as recommended by the manufacturer and in accordance with Section 609.03.04 (D). Place neoprene strip seals as recommended by the manufacturer and in accordance with Section 609.03.04 (E), except that shop drawings will not be required.

3.6. Silicone Rubber Sealant (if applicable). Place the silicone sealant as recommended by the manufacturer and in accordance with Section 609.03.04 (C).

3.7. Shop Plans. Shop plans will not be required. The Contractor is responsible for obtaining field measurements and supplying properly sized materials to complete the work.

4. MEASUREMENT.

4.1. Expansion Joint Replacement – ¾", 1", 1 ½", 2", 2 ½", 4". The Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint.

4.2. Armored Edge for Concrete. The Department will measure the quantity in linear feet from gutterline to gutterline along the face of the bridge end.

4.3. Steel Reinforcement. See Section 602.

5. PAYMENT.

5.1. Expansion Joint Replacement – ¾", 1", 1 ½", 2", 2 ½", 4". Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the new armored edges, concrete, neoprene joint seal, and all incidental items necessary to complete the work (except the overlay material, if applicable) within the specified pay limits as specified by this note and as shown on the attached detail drawings.

5.2. Armored Edge for Concrete (if applicable). Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the new armored edges, concrete and all incidental items necessary to complete the work (except the overlay material, if applicable) within the specified pay limits as specified by this note and as shown on the attached detail drawings.

5.3. Steel Reinforcement. Reinforcement is incidental to the contract unit price for "Expansion Joint Replacement" or "Armored Edge for Concrete".

The Department will consider payment as full compensation for all work required by this note and the attached detail drawings.

SPECIAL NOTE FOR BRIDGE JOINT SEAL REPLACEMENT

I. DESCRIPTION.

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's Standard Specifications for Road and Bridge Construction (Current Edition) and applicable Supplemental Specifications, the Standard Drawings, this Note, and the detail drawings included in this proposal. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing bridge joint seals; (3) Install new joint seals; (4) Maintain and control traffic; (5) Any other work specified as part of this contract.

All construction will be in accordance with Section 606 unless otherwise specified.

II. MATERIALS.

A. (4") Joint Seal. It shall have a cellular, or micro-cell, polyurethane foam impregnated with a hydrophobic acrylic emulsion, or a hydrophobic polymer. The polyurethane foam external facing shall be factory coated and cured with highway-grade, fuel resistant silicone or a highway-grade elastomeric coating at a width greater than the maximum joint expansion.

B. (4") Preformed Neoprene Strip Seal. In accordance with Section 807.

C. (1") Hot-Poured Bituminous Mastic Sealer. From the KYTC approved material supplier

III. CONSTRUCTION.

A. Remove Existing Materials. Remove existing expansion dam joint seal where indicated on the attached sketches. Remove debris and/or expansion joint filler as directed by the Engineer. Clean and leave all existing steel armored edges in place. Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Joint Seal Replacement".

B. (4") Joint Seal. Seal shall be installed in accordance with manufacturer's recommendations concerning approved adhesives, welds between sticks and appurtenances, and adhesion to concrete deck or armored edges. Joint seal is to be installed ½" recessed from the surface.

C. (4") Preformed Neoprene Strip Seal. Place the preformed joint seal in one continuous, unbroken length. Place neoprene strip seal as recommended by the manufacturer and in accordance with Section 609.03.04

D. (1") Hot-Poured Bituminous Mastic Sealer. Sealer shall be installed in accordance with the manufacture's recommendations.

E. Shop Plans. Shop plans will not be required. The Contractor is responsible for obtaining field measurements and supplying properly sized materials to complete the work.

IV. **MEASUREMENT.**

A. Joint Seal Replacement (1" & 4"). The Department will measure the quantity in linear feet from gutter line to gutter line along the centerline of the joint.

V. PAYMENT.

See Section 606 and the following:

A. Joint Seal Replacement (1" & 4"). Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing neoprene strip seal or pre-compressed horizontal expansion joint system and all incidental items necessary to complete the work within the specified pay limits as specified by this note and as shown on the attached detail drawings.

SPECIAL NOTE FOR BRIDGE BARRIER RETROFIT

1. **DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2019 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.
   This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing aluminum handrail and deliver to Bailey Bridge Lot in Frankfort, KY; (3) Remove a portion of the existing concrete wing barrier as shown in the attached detail drawings and clean reinforcement to be reused in the proposed final wing barrier; (4) Remove any existing spalled/delaminated concrete from portion of the barrier to remain in place; (5) Repair and replace damaged and corroded reinforcing bars; (6) Drill and epoxy grout reinforcement into the existing barrier; (7) Prepare surface for concrete placement by blast cleaning; (8) Pour new concrete barrier using Class "M" Concrete according to the Standard Specifications; (9) Apply concrete coating to areas of new concrete as shown on the attached detail drawings; and (10) Any other work specified as part of this contract according to the attached detail drawings.

2. **MATERIALS.**

   2.1. Class "M" Concrete. Use either "M1" or "M2". See Section 601.

   2.2. Steel Reinforcement. Use Grade 60. See Section 602.

   2.3. Concrete Coatings. Use one of the coatings from the following manufactures:

Manufacture	Prime Coat	Finish Coat
Sherwin Williams	Macropoxy 646	Acrolon 218 HS
PPG	Amberlock 2	Devoe Devflex
Carboline	Carboguard 890	Carbothane 133 HB
Tnemec	Elastogrip 151	EnviroCrete 15

3. **CONSTRUCTION.**

   3.1. Concrete Removal and Preparation. The Contractor, as directed by the Engineer, shall locate and remove all loose, spalled, deteriorated and delaminated concrete. Sounding shall be used to locate delaminated areas. Care shall be exercised not to damage areas of sound concrete or reinforcing steel during concrete removal operations. Concrete removal shall be in accordance with a sequence approved by the Engineer.

   Concrete removal shall be accomplished by chipping with hand picks, chisels or light duty pneumatic or electric chipping hammers (not to exceed 15 lbs.). If sound concrete is encountered before existing reinforcing steel is exposed, the surface shall be prepared and repaired without further removal of the concrete. When corroded reinforcing steel is exposed, concrete removal shall continue until there is a minimum ¾ inch clearance

around the exposed, corroded reinforcing bar. Care shall be taken to not damage bond to adjacent non-exposed reinforcing steel during concrete removal processes.

The perimeter of all areas where concrete is removed shall be tapered at an approximately 45° angle, except that the outer edges of all chipped areas shall be saw cut to minimum depth of ¾ inch to prevent featheredging unless otherwise approved by the Engineer.

After all deteriorated concrete has been removed, the repair surface to receive concrete patching shall be prepared by abrasive blast cleaning. Abrasive blast cleaning shall remove all fractured surface concrete and all traces of any unsound material or contaminants such as oil, grease, dirt, slurry, or any materials which could interfere with the bond of freshly placed concrete.

The Contractor shall dispose of all removed material off State Right of Way in an approved site.

The Department will not measure concrete removal, Concrete Class "M", and steel reinforcement and will consider all work necessary as incidental to the bid item "BRIDGE BARRIER RETROFIT" from bridge end to bridge end.

3.2. Prepare Existing Surface. Prepare the existing surface including vertical face of curb by blast cleaning in accordance with 606.03.04.

3.3. Construct New Barrier Wall. Drill and epoxy grout reinforcement into existing concrete according to Section 511. Form and pour new barrier wall in accordance with the detailed drawings.

3.4. Concrete Coatings Application. Apply concrete coating to new concrete surfaces, curb, top of existing barrier, and deck according to attached detail drawings. Use compressed air to remove any loose debris from the surfaces that are to be coated after power washing. All coatings shall be applied within manufacturers recommended dry film thickness range. Comply with KYTC "Standard Specifications for Road and Bridge Construction" Section 614.03.02 and coatings supplier recommended conditions for application. Allow the surfaces to be coated to dry before any coating is applied. The coating must be applied to a clean and dry surface. All coating application shall be executed using brushes, rollers, etc. No spray application will be permitted. The Department requires acceptance testing of samples obtained on a per-lot basis per-shipment. The Division of Materials shall perform acceptance testing. Test samples shall be taken at the Contractor's paint storage site. Department personnel shall perform sampling. Allow (10) working days for testing and approval of the sampled paint. It is the Contractor's responsibility to maintain an adequate inventory of approved paint. The Department shall assume no responsibility for lost work due to rejection of paint or approved paint subsequently found to be defective during the application process.

Preform all concrete coating application at temperatures above 40 degrees Fahrenheit or in accordance with manufactures specifications.

The finish coat shall be gray and will meet the following values:

Color	L*	a*	b*
Grey	74.94	- 1.54	3.92

All cost to complete Concrete Coating Application as specified shall be included in the Lump Sum price for "Concrete Coatings".

4. MEASUREMENT. See Section 606 and the following:

4.1. Bridge Barrier Retrofit. The Department will measure the quantity in linear feet from bridge end to bridge end.

4.2. Wingwalls.

4.2.1.1. The wingwing lengths will be measured by linear feet of as-built curb length (see attached detail drawings).

4.2.1.2. Removal of existing wingwall barrier concrete and steel will be measured by each wingwall (see attached detail drawings).

4.2.1.3. Measurement of concrete and steel to bring removed concrete back up to existing grade will be measured in cubic yards of concrete and lbs of steel (see attached detail drawings).

4.3. Concrete Coating. The Department will measure the quantity in lump sum within the specified paylimits (see attached detail drawings).

5. PAYMENT.

5.1. Bridge Barrier Retrofit. The Department will make payment at the contract unit price per linear foot under the bid item #23032EN "BRIDGE BARRIER RETROFIT" for full compensation for removal and delivery of aluminum railing, repair of spalled concrete, preparation of concrete surfaces, furnishing and installing the concrete and reinforcement, and all incidental items necessary to complete the work within the specified pay limits as specified by this note and as shown on the attached detail drawings.

5.2. Wingwalls. The Department will make payment at the contract unit price per linear foot under the bid item #25027ED "RAIL SYSTEM SINGLE SLOPE - 36 IN" for all work to construct barrier as specified by this note and as shown on the attached detail drawings. Payment for the removal of existing wingwall concrete and steel will be under the bid item #23783EC "REMOVE CONCRETE BARRIER" as specified by this note and as shown on the attached detail drawings. Payment for the concrete and steel necessary to return the wingwall slabs to existing grade will be paid for by bid item #8106 "CONCRETE CLASS

M 1” for concrete and bid item #8151 “STEEL REINFORCEMENT EPOXY COATED” for steel as shown on the attached detail drawings.

5.3. Concrete Coating. The Department will make payment at the contract unit price per lump sum under the bid item #24982EC “CONCRETE COATING”.

The Department will consider payment as full compensation for all work required by these notes and the attached detail drawings.

SPECIAL NOTE FOR BEARING REPLACEMENT

1. DESCRIPTION. Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings (current editions), this note, and the attached detailed drawings for Bearing Replacement. Section references are to the Standard Specifications. This work consists of the following: (1) Furnish all labor, materials, tools, and equipment. (2) Replace Bearing. (3) Maintain and control traffic. (4) Any other work specified as part of this contract.

2. MATERIALS.

A. Structural Steel
ASTM Material, A709 Grade 50 Structural Steel Plates and Shapes. Minimum structural steel strength ~ 50,000 psi.

B. Elastomeric Bearings Pads
See Standard Drawing BBP-001 (Current Edition).

C. Expansion Anchors
Expansion anchors shall be 3/4" diameter HILTI KWIK Bolt 3 or equal with 6" minimum embedment into concrete or as recommended by manufacturer.

D. Cleaning and Painting
See Special Note for Paint Application and Surface Preparation.

3. CONSTRUCTION.

A. Bearing Replacement. Complete bearing replacement as specified in this special note and shown in the attached detailed drawings. Each bearing shall be replaced one at a time with the no traffic on the lane above.

B. Remove Existing Bearing. Remove existing bearings as shown on the attached detailed drawings. Dispose of all removed material entirely away from the job site. This work shall be incidental to the contract unit price for "Bearing Replacement".

C. Expansion Anchors. See attached detailed drawings.

D. Bearing Pads. Set bearing pads in accordance with Section 607.03.17 of the Standard Specification.

E. Jack and Support. Jack and Support the beams under full dead and live loads while replacing the bearings. Reaction Loads = 37 Tons Dead Load and 34 tons Live Load per beam line. A jack capacity of 107 tons minimum or greater per beam line shall be required. Jacks shall be locked during bearing replacement. The Contractor shall submit his jack and support plan to the Engineer for approval. This plan must be prepared, signed and stamped by a licensed Kentucky professional engineer.

F. Cleaning and Painting.
Existing Steel. All existing faying surfaces where new steel is to be installed shall be cleaned and receive the prime coat as specified in Special Note for Surface Preparation and Paint Application. Level of cleaning shall be to an **SSPC-SP 15** (Commercial Grade Power Tool Cleaning). All Power tools shall

be equipped with vacuum shrouds and fitted with HEPA filters at their air exhausts. Maintain and operate all vacuum shrouded power tools to collect generated debris.

- If after cleaning the steel embedded plate in beam there is insufficient material to weld bearing top sole plate to, then an alternate shear transfer device can be constructed as shown on Detail Sheet 2.

New Structural Steel. All new structural steel shall receive shop surface preparation and shop applied prime coating as specified in Special Note for Surface Preparation and Paint Application. Necessary touch up/repair of the shop applied prime coat on the new steel may be performed in the field. Intermediate and Finish coatings specified shall be field applied.

All items necessary to complete cleaning and painting as specified in this note shall be considered incidental to the unit price bid "Each" for Bearing Replacement.

F. Residual Lead. Residual lead paint may still be on bridge. The Contractor is advised to take all necessary protective measures including worker safety and environmental regulations when performing surface preparation. The Department will not consider any claims based on residual lead paint.

G. Verifying Field Conditions. The Contractor shall field verify all plate and shape dimensions, bolt patterns and locations before ordering any material. New material that is unsuitable due to variation in existing structure shall be replaced at the Contractors expense.

H. Damage to the structure. The Contractor shall bear all responsibility and expense for any and all damage to the structure during the repair work, even to the removal and replacement of a fallen span, should the fallen span result from the Contractors actions.

I. Field Welding. Section 106.10 applies to all field welding. Field welds not permitted except as shown on the detail drawings or as directed by the Engineer.

4. MEASUREMENT.

A. Bearing Replacement. The Department will measure the quantity as Each, completed and accepted.

B. Jack and Support Bridge Span. The Department will measure the quantity by Lump Sum, completed and accepted.

5. PAYMENT.

A. Bearing Replacement (21969NN). Payment at the contract unit price for "Each" is full compensation for furnishing and installing all material as specified.

B. Jack and Support Bridge Span (08435). Payment at the contract "Lump Sum" includes all items necessary to jack and support bridge span as specified.

SPECIAL NOTE FOR BRIDGE CLEANING AND PREVENTATIVE MAINTENANCE

1. **DESCRIPTION**. Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2019 Standard Specification for Road and Bridge Construction Applicable Supplemental Specifications, Standard Drawings, this Note and Attached Detailed Drawings. Section references are to the Standard Specifications. This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Debris removal; (3) Stratified and pack rust removal; (4) Pressure washing; (5) Apply concrete coating; (6) Lubricate bearing devices. (7) Maintain and control traffic; (8) All other work required for this contract.

2. **SUBMITTALS.** The Contractor shall comply with the submittal requirements detailed in Section 108 of the Standard Specifications for Road and Bridge Construction (Current Edition) and submit the following **written** items to the Project Engineer **14 days** prior to the Pre-Construction Conference:
   - **2.1.** A detailed Progress of Work Schedule.
   - **2.2.** Traffic Control Plan.
   - **2.3.** Manufacturers' recommended Film Thickness and application conditions for the concrete coating system to be used.

All submittals must be received, accepted and/or approved by the KYTC Engineer prior to beginning any work.

3. **MATERIALS.**

3.1. Wash Water. Use clean potable water for all pressure washing.

3.2. Concrete Coatings. Use one of the coatings from the following manufactures:

Manufacture	Prime Coat	Finish Coat
Sherwin Williams	Macropoxy 646	Acrolon 218 HS
PPG	Amberlock 2	Devoe Devflex
Carboline	Carboguard 890	Carbothane 133 HB
Tnemec	Elastogrip 151	EnviroCrete 15

3.3. Bearing Lubricant. Use one of the lubricants from the following manufactures:

Manufacture	Lubricant
Bostik Inc.	Never Seez - Mariner's Choice
Mobil Oil	Mobil Centaur Moly NLGI Grades 1 or 2
Certified Labs	Premalube #1 WG

3.4. Rust Inhibitor. Use the following rust inhibitor:

Manufacture	Rust Inhibitor
Rhomar Inc.	Black Max

4. CONSTRUCTION.

4.1. Debris Removal. All debris shall be removed from the bridge components. Equipment for removing debris from the bridge components shall be determined by the Contractor, subject to the approval of the Engineer. The Contractor shall prevent any debris from entering any body of water, bridge drainage system, or traffic lanes. All debris removed shall be disposed of in a suitable off-site disposal facility. Prior to all cleaning work, the Contractor shall confirm that any bridge drainage system is not blocked by un-removable debris. A blocked drainage system is classified as one that debris cannot be removed using the means specified in this note. If the Engineer has be notified, and concurs that the drainage system is blocked prior to performing other cleaning work, then proceed at the direction of the engineer. If the Contractor does not inspect the bridge drainage system and notify the engineer prior to beginning work any blocked drains will be considered to be the result of the Contractor's operations, and all clearing and cleaning of the drainage system shall be done as part of the work of the specification. All vegetation present at areas of the bridge that are to be addressed in this proposal shall be removed as determined by the Engineer. All cost to complete Debris Removal, Clean Deck Drains and Remove Vegetation shall be included in the Lump Sum price for "Bridge Cleaning."

4.2. Stratified and Pact Rust Removal. Stratified and pack rust shall be removed from all bearing devices. See attached detailed drawings for each bridge showing location and quantity of the bearing devices. Hand tools including wire brushes, scrapers or impact devices (hand hammers or power chisels) are to be used for removing stratified and pack rust. All surfaces to have stratified and pack rust removed shall be cleaned to an SSPC SP-2 level. All debris collected shall be disposed of in a suitable off-site disposal facility. All cost to complete Stratified and Pack Rust Removal shall be considered incidental to the unit price bid for "Bearing Lubrication".

4.3. Pressure Washing. Specified bridge components shall be pressure washed. See attached detailed drawings for each bridge addressing components to be pressure washed. All equipment for pressure washing shall be operated at a minimum pressure of up 4,000 psi with 0 degree spinner tip and/or fan tips as determined by the engineer at the working location with a minimum flow rate of 3.5 gal/minute provided that these pressures do not damage any components of the structure. Pressure and flow rates shall be reduced to a level satisfactory to the Engineer should any damage occur due to power washing procedures. Pressure washing shall be operated at distance of approximately six inches from and perpendicular to the surface. All pressure washing wands shall be equipped with a gauge to accurately determine the amount of pressure used. Pressure washing of any bridge element will proceed from top of wash area to bottom of wash area. Wash water will not be released to a bridge element previously washed.

Preform all pressure washing at temperatures above 40 degrees Fahrenheit. All cost to complete Pressure Washing shall be included in the Lump Sum price for "Bridge Cleaning".

4.4. Concrete Coatings Application. The pier caps shall have concrete coating applied to as specified after debris removal and power washing. Use compressed air to remove any loose debris from the surfaces that are to be coated after power washing. See concrete coating diagram. All coatings shall be applied within manufacturers recommended dry film thickness range. Comply with KYTC "Standard Specifications for Road and Bridge Construction" Section 614.03.02 and coatings supplier recommended conditions for application. Allow the surfaces to be coated to dry before any coating is applied. The coating must be applied to a clean and dry surface. All coating application shall be executed using brushes, rollers, etc. No spray application will be permitted. The Department requires acceptance testing of samples obtained on a per-lot basis per-shipment. The Division of Materials shall perform acceptance testing. Test samples shall be taken at the Contractor's paint storage site. Department personnel shall perform sampling. Allow (10) working days for testing and approval of the sampled paint. It is the Contractor's responsibility to maintain an adequate inventory of approved paint. The Department shall assume no responsibility for lost work due to rejection of paint or approved paint subsequently found to be defective during the application process. Preform all concrete coating application at temperatures above 40 degrees Fahrenheit or in accordance with manufactures specifications.
The finish coat shall be gray and will meet the following values:

Color	L*	a*	b*
Grey	74.94	- 1.54	3.92

All cost to complete Concrete Coating Application as specified shall be included in the Lump Sum price for "Concrete Coating".

Approximate square footage of concrete to have concrete coatings applied for each bridge follows:

4.4.1. B1 – 090B00011L = 905 SF
4.4.2. B2 – 090B00011R = 905 SF

The square footage listed for each bridge is for informational purposes only. It has been estimated based on the pier cap surface area for Pier 1 & 4.

4.5. Bearing Lubrication Application. Bearing devices shall be lubricated as specified after all stratified rust and pack rust is removed and power washing is complete, bearing devices shall have lubricant applied to all surfaces of the bearing including bearing plates and points of movement. See attached detailed drawings for each bridge showing location and quantity of the bearing devices. Allow bearing devices to dry before lubricant is applied. Preform all bearing lubrication application at temperatures above 40 degrees Fahrenheit or in accordance with manufactures specifications. All cost to complete Bearing Lubrication Application as specified shall be included in the unit price for "Lubricate Bearing".

4.6. Rust Inhibitor Application. After removing debris, rust, and washing, apply a protective coating to the rusted areas of the structural steel within 4 feet of the joint, see detailed drawing for each structure. The coating should be applied all

steel members (Beams, Diaphragms and Stiffeners). See attached detailed drawings for locations of specified work for each structure. All cost to complete Stratified and Pack Rust Removal shall be considered incidental to the unit price bid for "Bearing Lubrication".

4.7. Sequence of Work. Complete work in the sequence listed below:

4.7.1. Debris Removal
4.7.2. Stratified Rust Removal
4.7.3. Pressure Washing
4.7.4. Concrete Coating Application
4.7.5. Rust Inhibitor Application
4.7.6. Bearing Lubrication Application

4.8. Access. The Contractor shall provide OSHA compliant safe access for all bridge cleaning and preventative maintenance operations and inspection. Cost to furnish all items for access shall be considered incidental to the contract.

4.9. Inspection. The Cabinet will provide inspection for all items required in this contract. Visual inspection will be required upon completion of each work item for each structure component or at the discretion of the Engineer at any time. All visual inspection shall be performed within arm's length distance.

4.9.1. Debris Removal: Visual Inspection.

4.9.2. Stratified Rust or Pack Rust Removal: Visual Inspection and Scraper Test any surface cleaned to SSPC SP2 will be inspected by a dull scraper test to ascertain adherence of existing coating and a hammer test for tightness of pact rust.

4.9.3. Power Washing: Visual Inspection.

4.9.4. Concrete Coating:

Prime Coat Application Check for dry film thickness* and defects in paint. Finish Coat Application Check for dry film thickness*, paint appearance, color and quality of application.

*Destructive DFTs shall be used. Contractor shall repair all test locations, cost will be considered incidental to the contract.

4.9.5. Bearing Greasing: Visual Inspection.

4.10. Verifying Field Conditions. The Contractor shall be familiar with all conditions at each bridge site. The Cabinet will not consider any claims due to the Contractor having not familiarized themselves with requirements of this work. Residual lead paint may present on each bridge. The Contractor is advised to take all necessary protective measures including worker safety and environmental regulations when performing surface preparation. The Department will not consider any claims based on residual lead paint.

4.11. Residual Lead. Residual lead paint may still be on bridge. The Contractor is advised to take all necessary protective measures including worker safety and environmental regulations when performing surface preparation. The Department will not consider any claims based on residual lead paint.

4.12. Damage to the structure. The Contractor shall bear all responsibility and expense for all damage to the structure during the repair work, even to the removal and replacement of a fallen span, should the fallen span result from the Contractors actions.

5. MEASUREMENT.

5.1. Bridge Cleaning: The Cabinet will measure this item by Lump Sum, completed and accepted.

5.2. Concrete Coating: The Cabinet will measure this item by Lump Sum, completed and accepted.

5.3. Bearing Lubrication: The Cabinet will measure this item by Each, completed and accepted.

6. PAYMENT.

6.1. Bridge Cleaning (24981EC): Payment at the contract unit price for “Lump Sum” is full compensation for Debris Removal, Deck Drain Cleaning, Pressure Washing and all incidental items required to complete this with as specified in this note.

6.2. Concrete Coating (24982EC): Payment at the contract unit price for “Lump Sum” is full compensation for applying the concreate coatings and all incidental items required to complete this work as specified in this note and attached detailed drawings.

6.3. Bearing Lubrication (24983EC): Payment at the contract unit price “Each” is full compensation for applying bearing lubrication and all incidental items required to complete this work as specified in this note and attached detailed drawings.

SPECIAL NOTES FOR BRIDGE PIER, GIRDER, AND RCBC CONCRETE PATCHING

These Notes or designated portions thereof, apply where so indicated on the plans, proposals or bidding instruction.

1. **DESCRIPTION.** Perform all work in accordance with the Department's 2019 Standard Specifications, and applicable Supplemental Specifications, and these Notes. Section references are to the Standard Specifications. This work consists of: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing spalled/delaminated concrete; (3) Prepare the existing surface for concrete patching; (4) Place hook fasteners and welded wire fabric over surfaces to be repaired (where applicable); (5) Apply concrete patching as specified by this note; (6) Finish and cure the new Concrete Patches; (7) Maintain & control traffic; and, (8) Any other work specified as part of this contract.

2. **MATERIALS.**

   2.1. Concrete. Approved Concrete Product for Vertical and Overhead Repair Patch.

   2.2. Steel Reinforcement. Use Grade 60. See Section 602

   2.3. Welded Steel Wire Fabric (WWF). Conform to Section 811

   2.4. Hook Fasteners. Use commercial grade galvanized hook fasteners. Minimum 3/16" diameter.

3. **CONSTRUCTION.**

   3.1. Concrete Removal and Preparation. The Contractor, as directed by the Engineer shall locate and remove all loose, spalled, deteriorated and delaminated concrete. Sounding shall be used to locate delaminated areas. Care shall be exercised not to damage areas of sound concrete or reinforcing steel during concrete removal operations. Unless specifically *directed by the Engineer*, depth of removal shall not exceed 6 inches. Concrete removal shall be in accordance with a sequence approved by the Engineer.

   Concrete removal shall be accomplished by chipping with hand picks, chisels or light duty pneumatic or electric chipping hammers (not to exceed 15 lbs.). If sound concrete is encountered before existing reinforcing steel is exposed, the surface shall be prepared and repaired without further removal of the concrete. When corroded reinforcing steel is exposed, concrete removal shall continue until there is a minimum ¾ inch clearance around the exposed, corroded reinforcing bar. Care shall be taken to not damage bond to adjacent non-exposed reinforcing steel during concrete removal processes.

   The perimeter of all areas where concrete is removed shall be tapered at an approximately 45° angle, except that the outer edges of all chipped areas shall be saw cut to minimum depth of ¾ inch to prevent featheredging unless otherwise approved by the Engineer.

After all deteriorated concrete has been removed; the repair surface to receive concrete patching shall be prepared by abrasive blast cleaning. Abrasive blast cleaning shall remove all fractured surface concrete and all traces of any unsound material or contaminants such as oil, grease, dirt, slurry, or any materials which could interfere with the bond of freshly placed concrete. The Contractor shall dispose all removed material off State Right of Way in an approved site.

3.2. Steel Reinforcement. All corroded reinforcing steel exposed during concrete removal shall have corrosion products removed by abrasive grit blasting or wire brush whichever is more appropriate. Furnish for replacement, as directed by the Engineer, 200 linear feet of steel reinforcing bars ½" diameter by 20-foot lengths. Place these bars in areas deemed by the Engineer to require additional reinforcement. Field cutting and bending is permitted. Providing & installing steel reinforcement is incidental to "CONCRETE PATCHING REPAIR".

Reinforcing steel displaying deep pitting or loss of more than 20 percent of cross-sectional area shall be removed and replaced. Such bars shall be placed in accordance with the recommendations of ACI 506R, Sections 5.4 and 5.5. In particular, bars shall not be bundled in lapped splices, but shall be placed such that the minimum spacing around each bar is three times the maximum aggregate size to allow for proper encapsulation with concrete patching.

Intersecting reinforcing bars shall be tightly secured to each other using tie wire and adequately supported to minimize movement during concrete placement.

Welded wire fabric (WWF) shall be provided at each repair area larger than 1 square foot if the depth of the repair exceeds 3 inches from the original dimension of the repaired member. Sheets of adjoining WWF shall be lapped by at least one and one-half spaces at all intersections, in both directions, and be securely fastened. WWF fabric shall be supported no closer than ½ inch to the prepared concrete surface and shall have a minimum concrete cover of 1-½ inches.

WWF shall be fastened to preset anchors on a grid not more than 12 inches square. Large knots of tie wire which could result in sand pockets and voids during patching shall be avoided.

3.3. Hook Fasteners. Hook fasteners shall be positioned at the spacing as stated above or as directed by the Engineer. Any given area shall have a minimum of four anchors. The WWF shall not move or deform excessively during concrete patching. Maximum hook fastener spacing shall not exceed 2 feet on a grid pattern over the entire repair area. Hook fasteners shall be of commercial grade galvanized steel with a minimum diameter of 3/16". They may be mechanically set or grouted, as approved by the Engineer.

The Department will randomly select hook fasteners to be tested to verify pullout force is sufficient. If any anchors fail to meet the minimum acceptable pullout value, corrective measures shall be taken by the Contractor and further testing will be conducted.

3.4. Concrete Patching. Place and finish the new concrete for the patching area in accordance with the manufacturer's recommendations, as shown on the attached detail drawings, or as directed by the Engineer. The Engineer shall approve the Contractor's method of placing and consolidating the concrete prior to the beginning of this operation.

3.5. Curing. On completion of finishing operation, patching concrete shall immediately be prevented from drying out and cracking by fogging, wetting, and/or any appropriate method approved by the Engineer. Curing shall continue for duration recommended by the product manufacturer.

Each Contractor submitting a bid for this work shall make a thorough inspection of the site prior to submitting his bid and shall thoroughly familiarize himself with existing conditions so that the work can be expeditiously performed after a contract is awarded. Submission of a bid will be considered evidence of this inspection having been made. Any claims resulting from site conditions will not be honored by the Department.

Quantities given are approximate. The quantity for "Concrete Patching Repair" shall be bid with the contingency that quantities may be increased, decreased, or eliminated by the Engineer. Dispose of all removed material entirely away from the job site as approved by the Engineer. This work is incidental to the contract unit price for "Concrete Patching Repair".

4. MEASUREMENT.

4.1. Concrete Patching Repair. The Department will measure the quantity per square feet of each area restored.

4.1.1. The estimated quantity has been taken as 25% of the surface area of the pier cap on Pier 1 & 4. The actual quantity shall be determined in the field and approved by the Engineer.

4.1.1.1. B1 – 090B00011L = 226 SF

4.1.1.2. B2 – 090B00011R = 226 SF

4.2. Steel Reinforcement. Will not be measured for payment but shall be considered incidental to "Concrete Patching Repair".

4.3. Welded Wire Fabric & Hook Fasteners. Welded Wire Fabric and Hook Fasteners will not be measured for payment but shall be considered incidental to "Concrete Patching Repair".

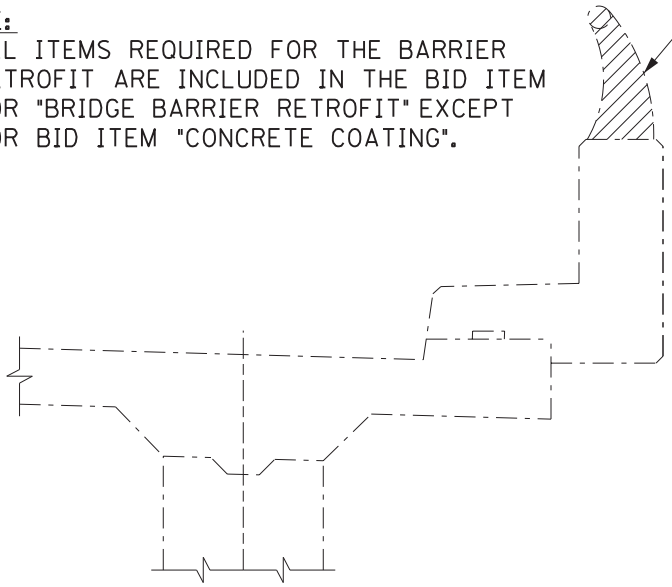
5. PAYMENT.

5.1. Concrete Patching Repair (22146EN): Payment at the contract unit price per square feet is full compensation for the following: (1) Furnish all labor, materials, tools, equipment; (2) preparation of specified areas including removing and disposing of specified existing materials; (3) place, finish and cure new concrete patches; and (4) all incidentals necessary to complete the work as specified by this note and as shown on the attached detail drawings.

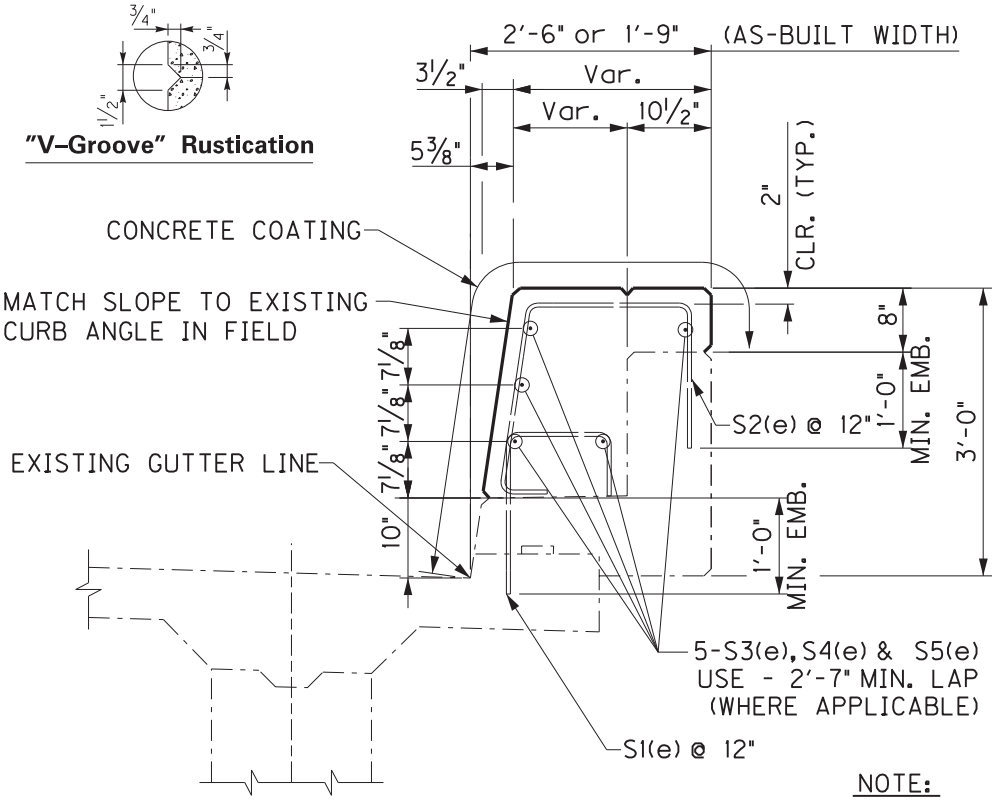
The Department will consider payment as full compensation for all work required by these Notes and the Detail Drawings.

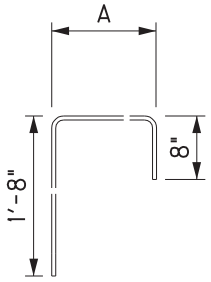
BRIDGE BARRIER RETROFIT DETAIL

NOTE:
ALL ITEMS REQUIRED FOR THE BARRIER RETROFIT ARE INCLUDED IN THE BID ITEM FOR "BRIDGE BARRIER RETROFIT" EXCEPT FOR BID ITEM "CONCRETE COATING".

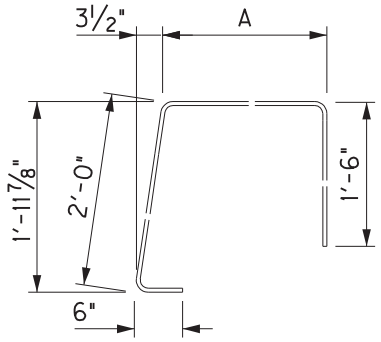


EXISTING BARRIER SECTION





S1(e) #5 BAR



S2(e) #5 BAR

S3(e)#5 BAR
S4(e)#5 BAR
S5(e)#5 BAR
LT. & RT.

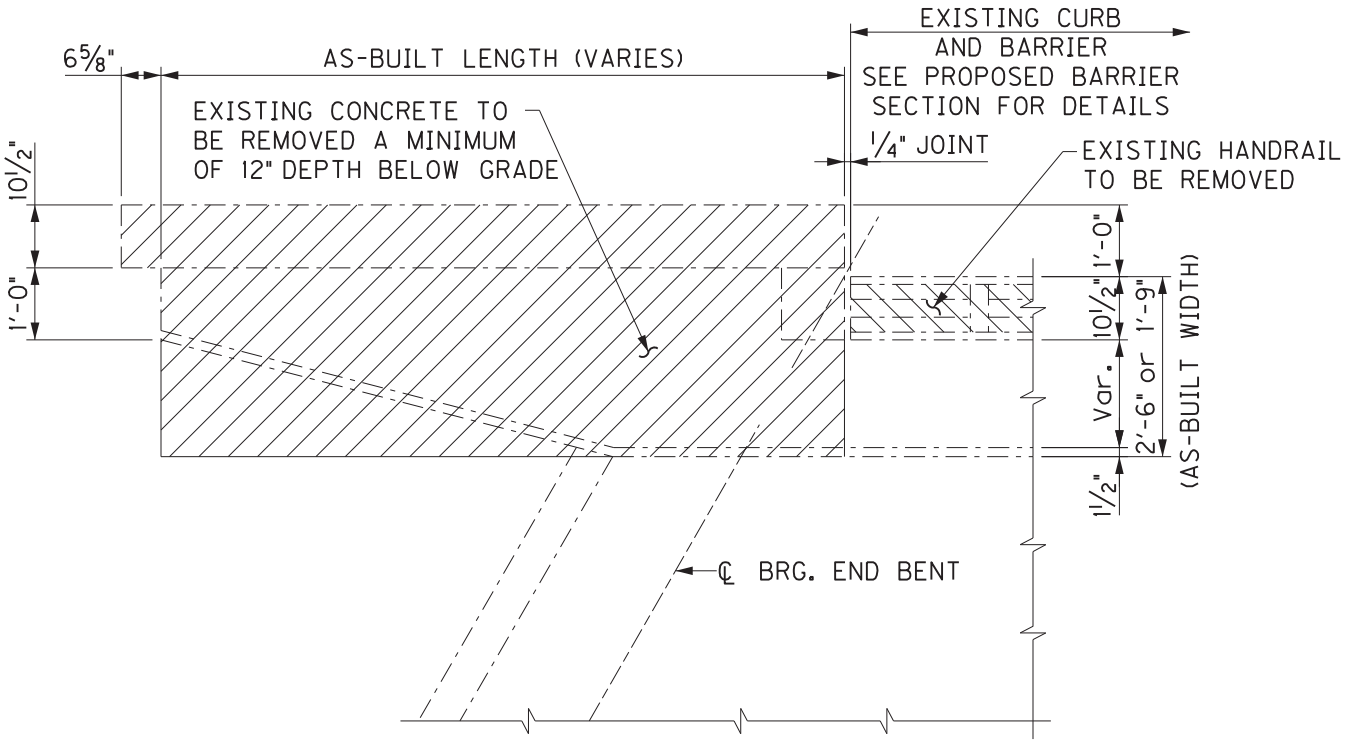
(SEE BARBILL FOR DIMENSIONS.)

NOTE:
DRILL AND EPOXY GROUT BARS S1(e) & S2(e) INTO EXISTING CURB OR BARRIER.

PROPOSED BARRIER SECTION

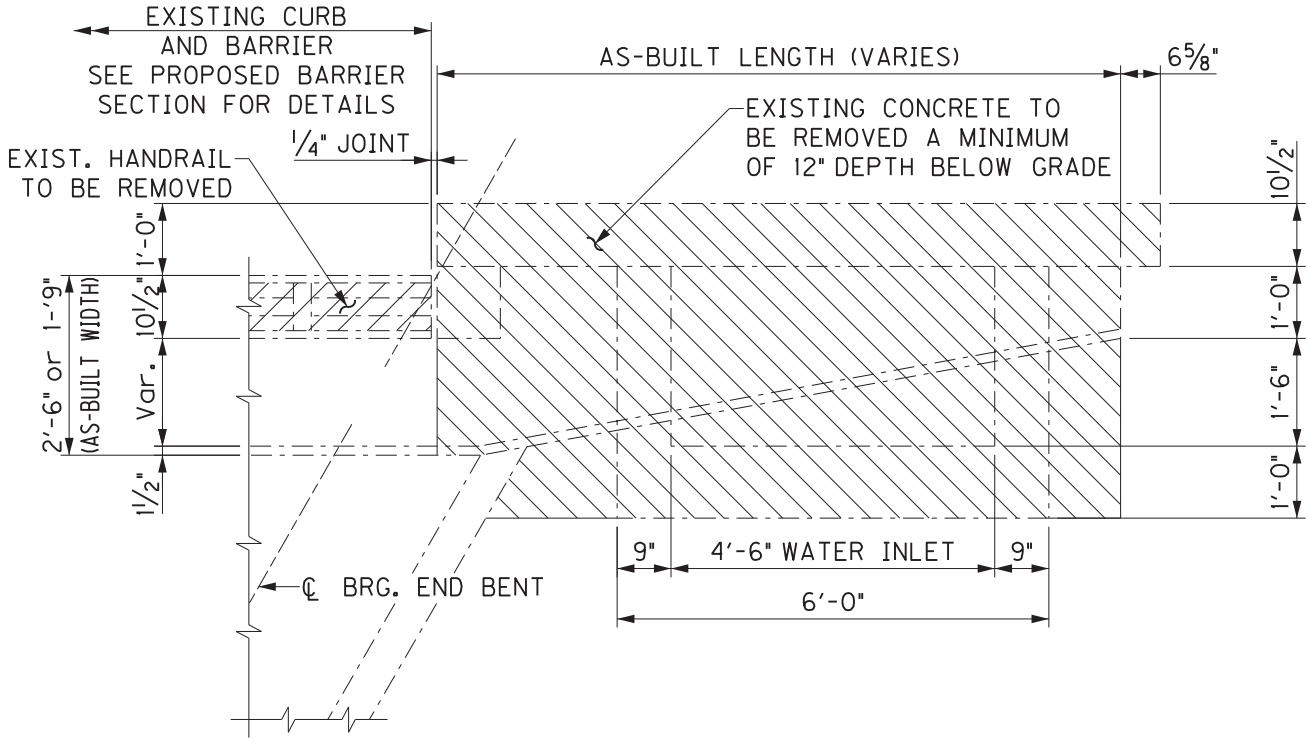
DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE BARRIER RETROFIT	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622
CHECKED BY: MRW	SCALE: NTS		
JOB NO.:1831-2102	SHEET:		

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226



PLAN – EXISTING WINGWALL WITHOUT BOX INLET

(TYPICAL)



PLAN – EXISTING WINGWALL WITH BOX INLET

(TYPICAL)

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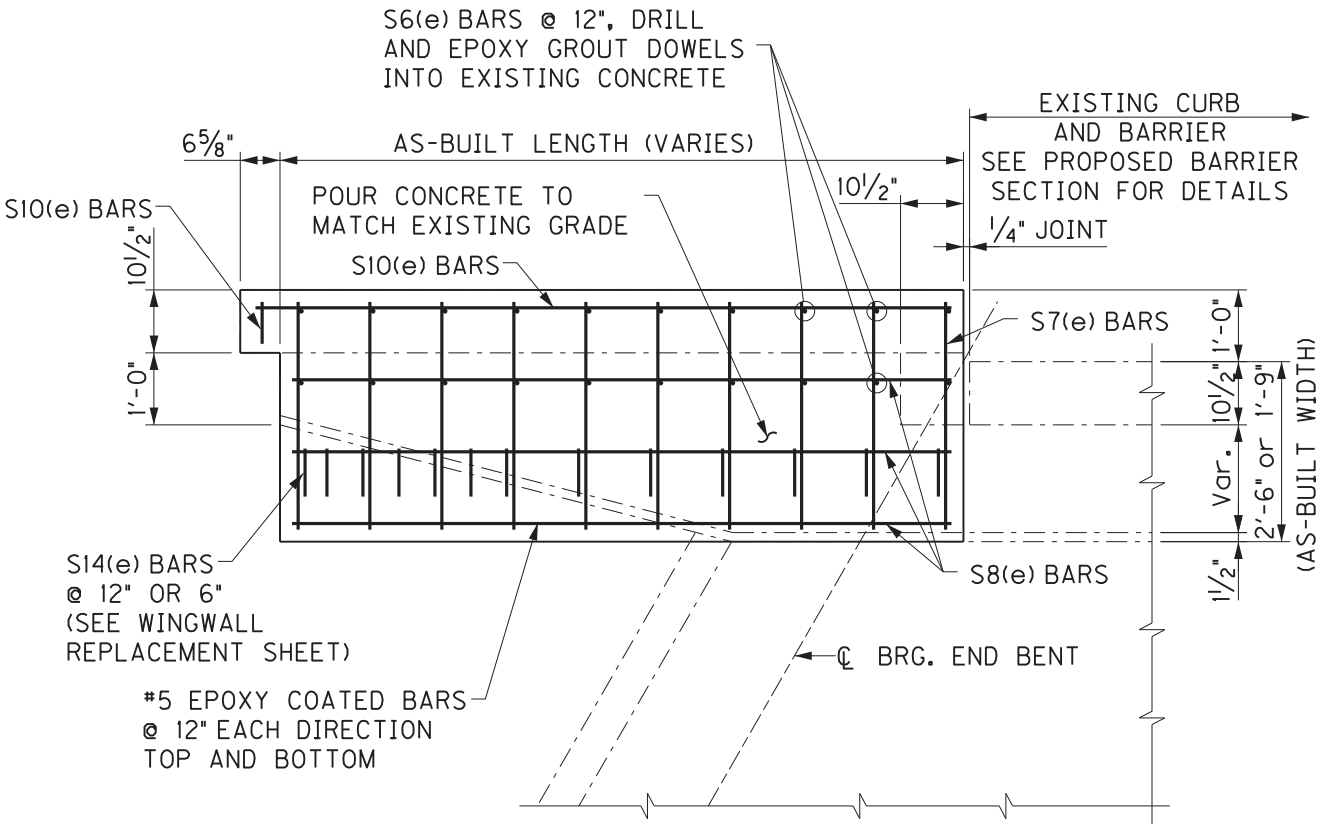
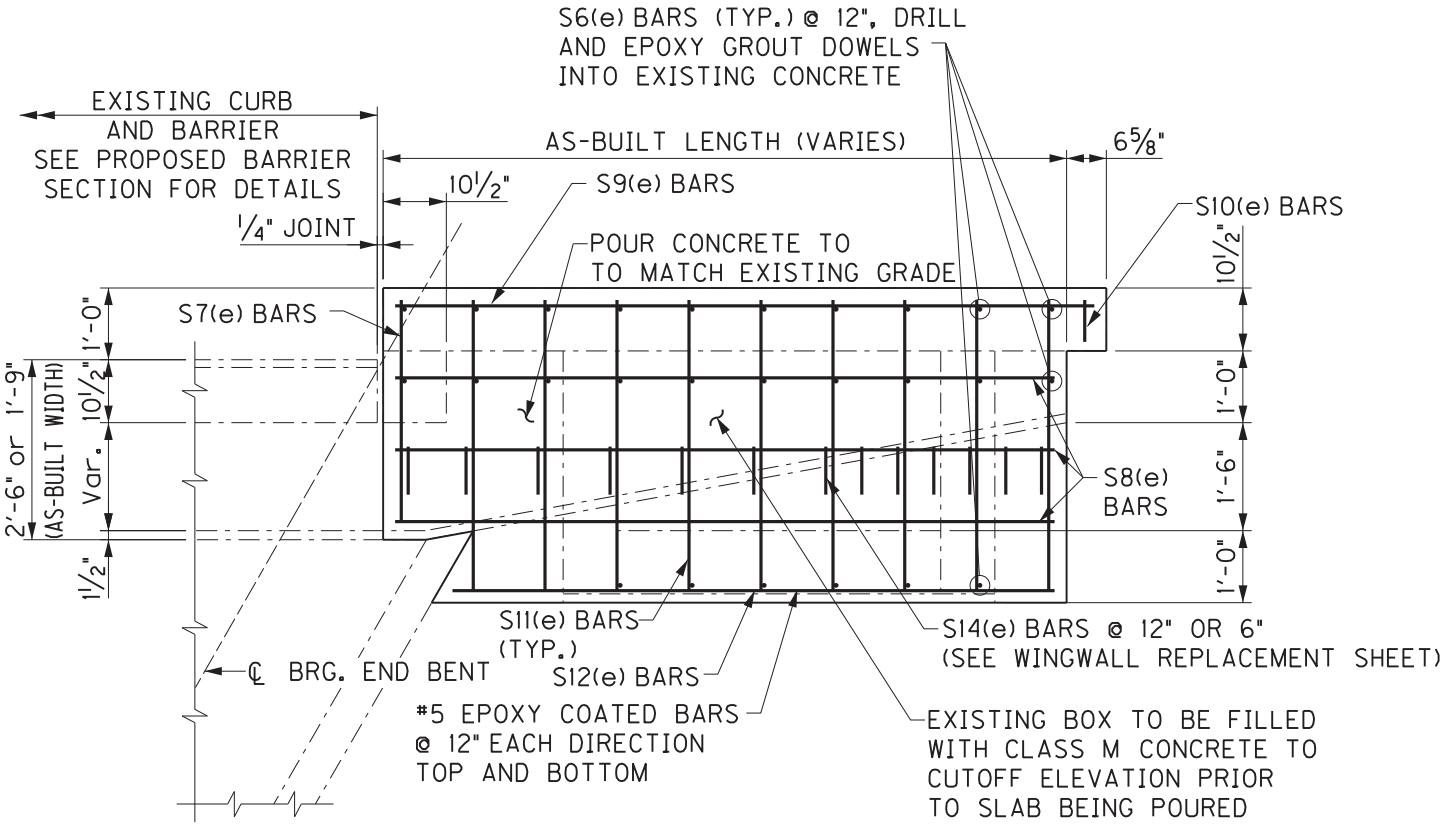
CHECKED BY: MRW	SCALE: NTS			
JOB NO.: 1831-2102	SHEET:			



PLAN – PROPOSED WINGWALL SLAB WITHOUT BOX INLET

(TYPICAL)



PLAN – PROPOSED WINGWALL SLAB WITH BOX INLET

(TYPICAL)

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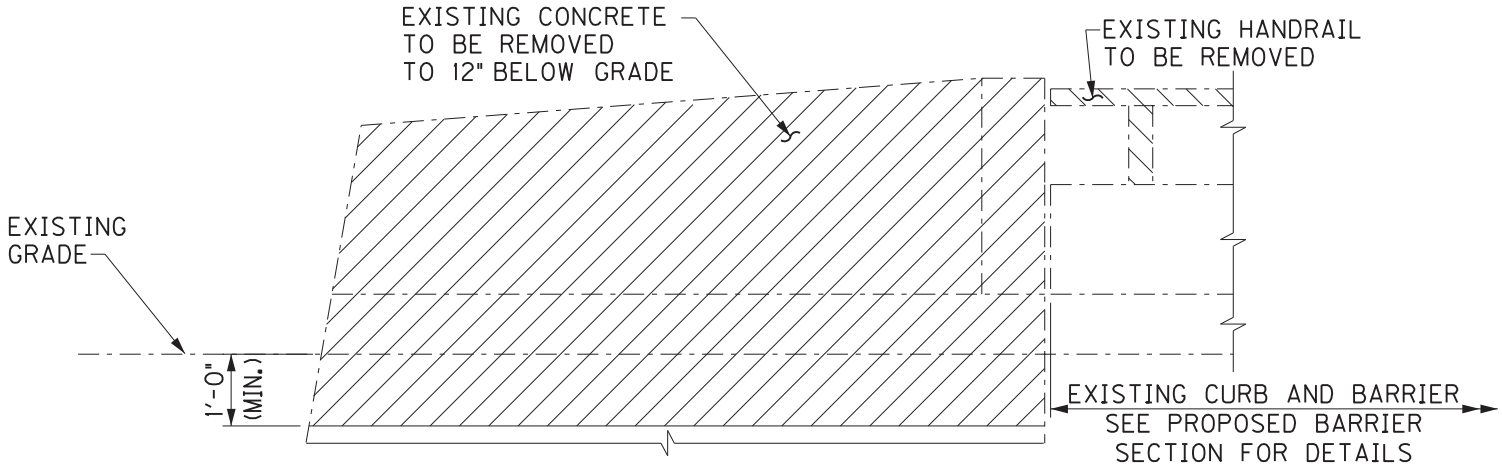
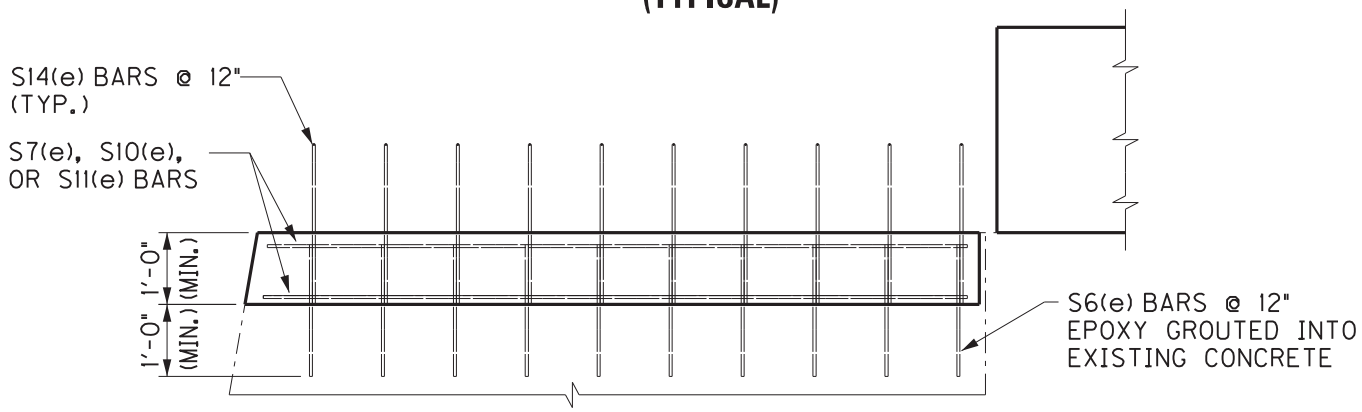
CHECKED BY: MRW	SCALE: NTS		
JOB NO.: 1831-2102	SHEET:		

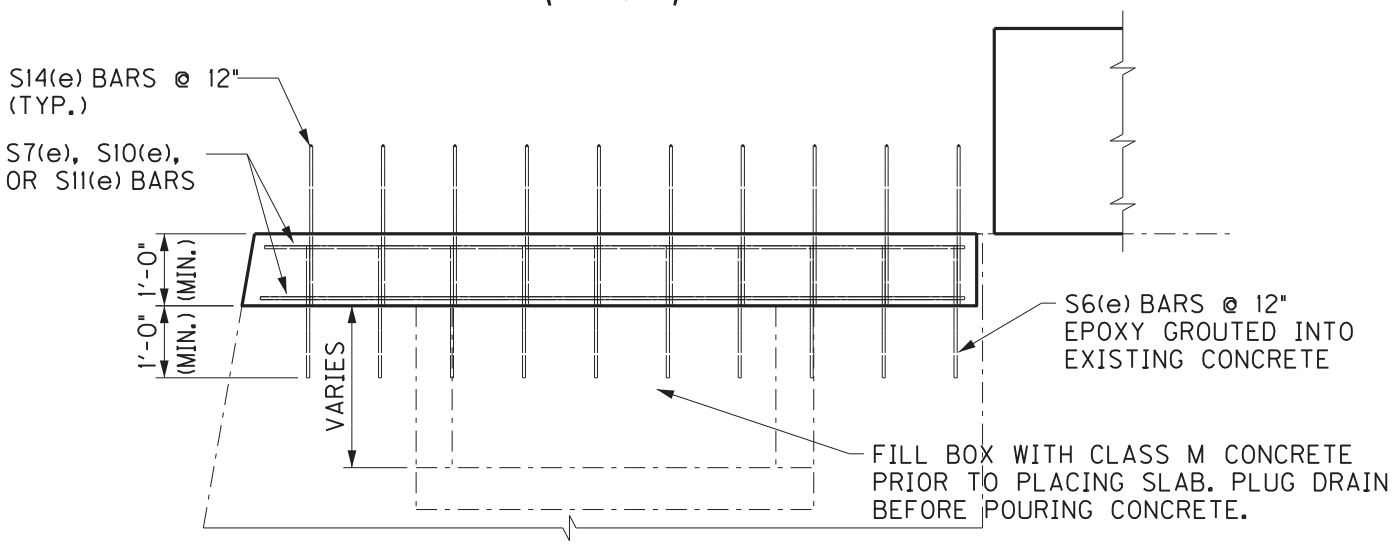
DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226



ELEVATION – EXISTING WINGWALL
(TYPICAL)



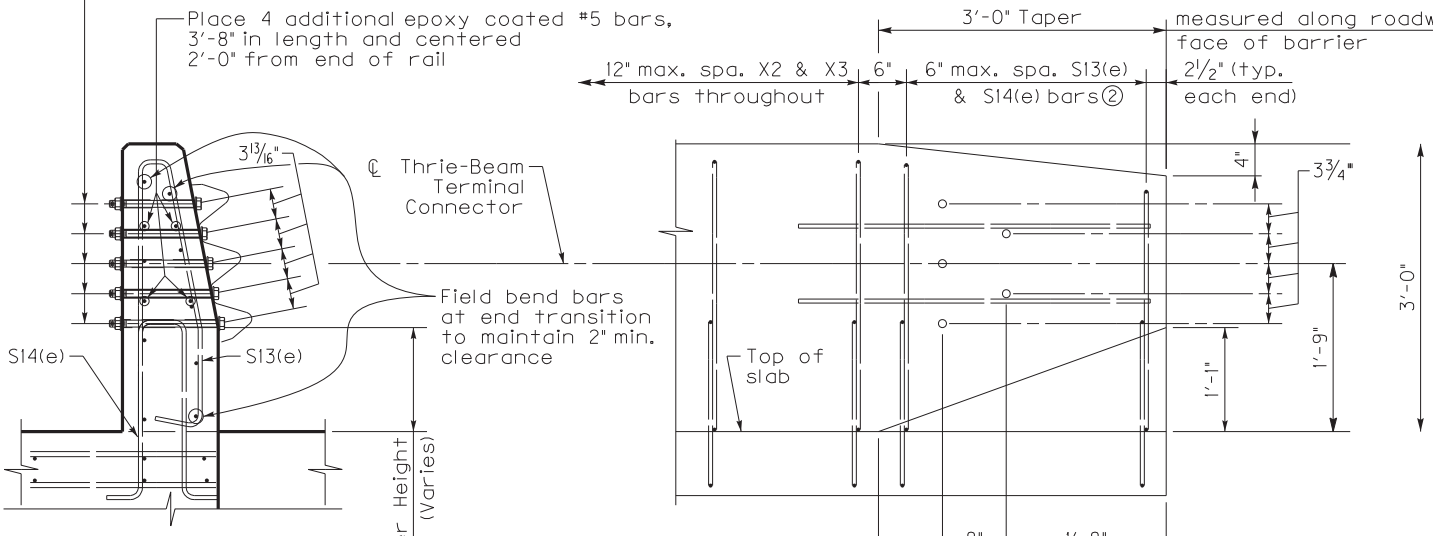
ELEVATION – PROPOSED WINGWALL SLAB WITHOUT BOX INLET
(TYPICAL)



ELEVATION – PROPOSED WINGWALL SLAB WITH BOX INLET
(TYPICAL)

DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE WINGWALL SLAB REPLACEMENT (ELEVATION)	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622	DLZ WMB 1950 HAGGARD COURT LEXINGTON, KENTUCKY 40505 (859) 299-5226
CHECKED BY: MRW	SCALE: NTS			
JOB NO.: 1831-2102	SHEET:			

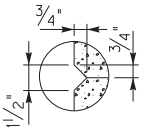
5 ~ 1" Dia holes. Form or core holes. Percussion drilling is not permitted. Adjust placement of reinforcing steel as necessary to avoid bolt holes. Tighten the 5 Terminal Connection Bolts in a well distributed pattern so to prevent damage or distortion of the Thrie-Beam Connection and the guardrail Transition. Cut bolts off after installation so as to extend no more than ¾" beyond nut. Paint ends of cut-off bolts with Zinc-rich paint.



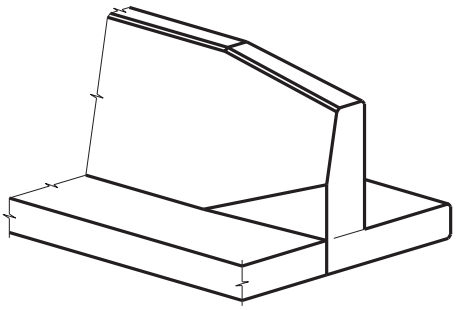
SECTION THROUGH TRANSITION

ELEVATION

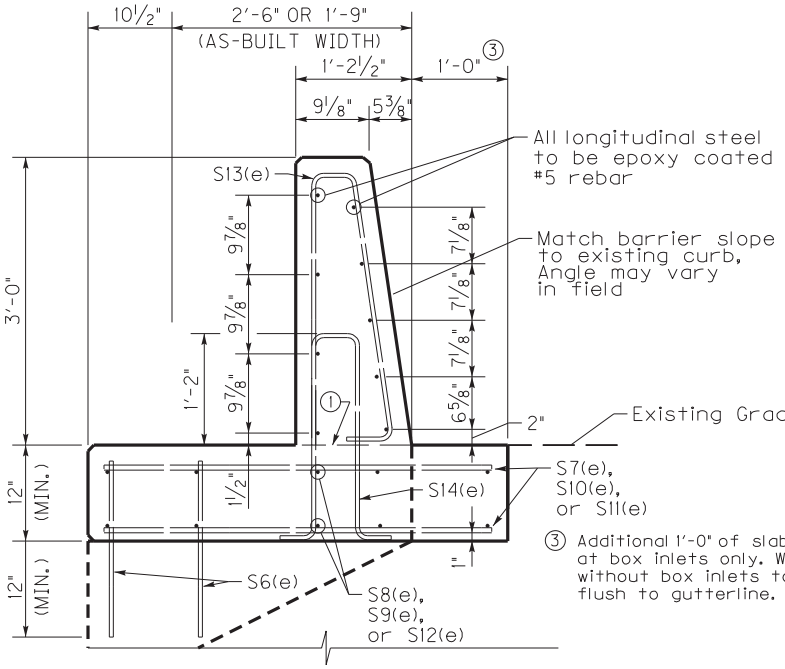
NOTE:
All guardrail transition fasteners and terminal connectors are included in the lump sum price bid for the guardrail transition.



"V–Groove" Rustication



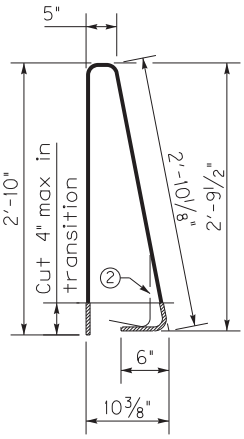
OBLIQUE VIEW



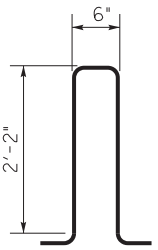
TYPICAL 36" BARRIER SECTION

③ Additional 1'-0" of slab required at box inlets only. Wingwalls without box inlets to be cut flush to gutterline.

① Mandatory roughened construction joint. Concrete above this joint is to be placed after slab has been properly cured and included in the bid for Rail System, 36 Inch Single Slope.



S13(e) Bars
#5 Bar



S14(e) Bars
#5 Bar

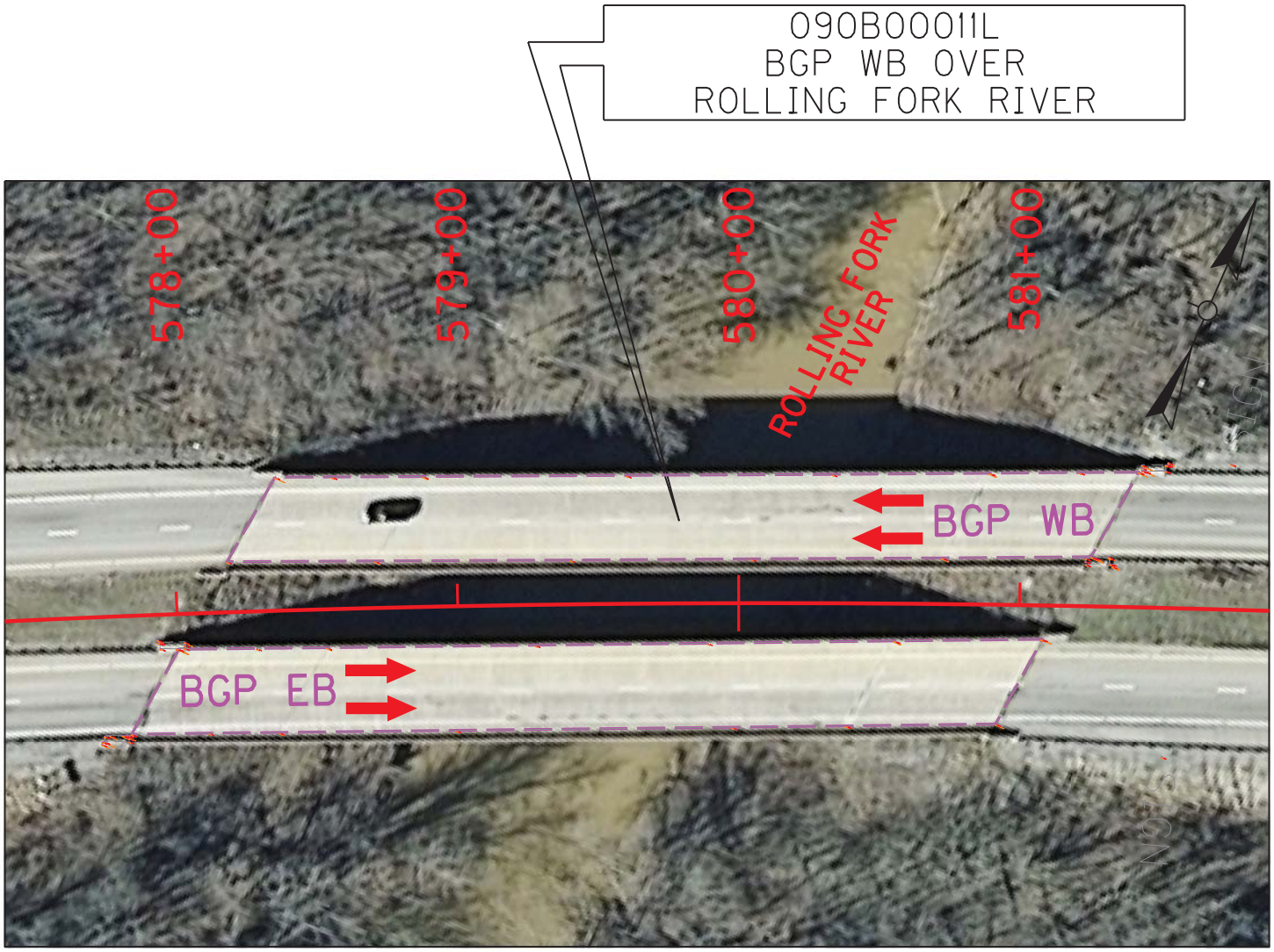
② Bend and field cut S13(e) bar as necessary to maintain 2" min. clearance to sides of taper and 2" to top of barrier.

DRAWN BY: DWW	DATE: MAY 2019	BRIDGE WINGWALL REPLACEMENT & END TRANSITION	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622
CHECKED BY: MRW	SCALE: NTS		
JOB NO.: 1831-2102	SHEET:		

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B1

BRIDGE #1 (090B00011L)
NELSON COUNTY



APPROXIMATE LOCATION INFORMATION
LATITUDE: 37°44'49"N
LONGITUDE: 85°41'00"E
MP 9.014 ON BLUEGRASS PARKWAY

DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE 090B00011L OVER ROLLING FORK RIVER	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622	DLZ WMB 1950 HAGGARD COURT LEXINGTON, KENTUCKY 40505 (859) 299-5226
CHECKED BY: MRW	SCALE: NTS			
JOB NO.: 1831-2102	SHEET:			

BRIDGE #1 (090B00011L) - ESTIMATE OF QUANTITIES

STRUCTURE INFORMATION:

1. District: 4
2. County: Nelson
3. Route: KY 9002
4. Constr. Number: 4-20007
5. Road Name: Bluegrass Parkway
6. Description: Bluegrass Parkway WB over Rolling Fork

7. Type of Work: Bridge Barrier Retrofit
Bridge Cleaning and Preventative Maintenance
Bridge Bearing Replacement
Bridge Concrete Patching
Install Armored Edge for Concrete

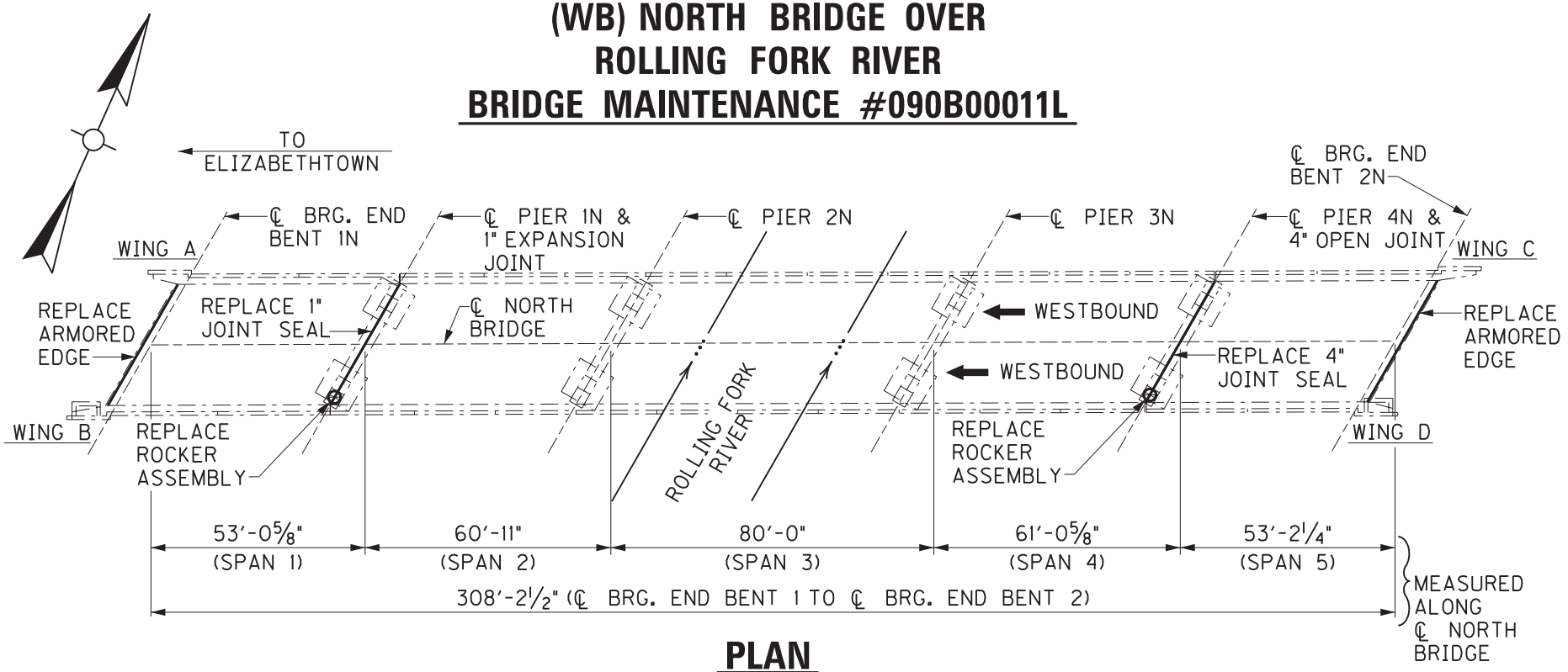
8. Length (ft):	308.20	**Curb to Curb Width (ft):**	30.00
Skew:	30° 00' LT	**Out to Out Width (ft):**	35.00
Surface Area (SY):	1028	**Deck Thickness (in):**	7.00

ESTIMATE OF QUANTITIES

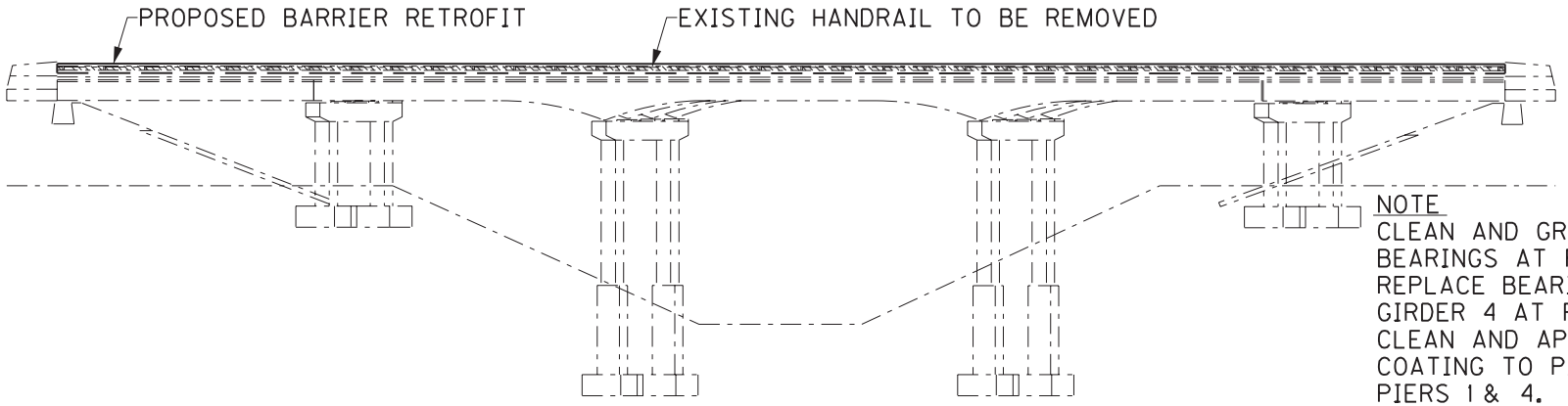
ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT
3299	ARMORED EDGE FOR CONCRETE	70	LF
8106	CONCRETE CLASS M 1	9	CY
8151	STEEL REINFORCEMENT EPOXY COATED	923	LBS
8435	JACK AND SUPPORT BRIDGE SPAN	1	LS
21969NN	BEARING REPLACEMENT	2	EACH
22146EN	CONCRETE PATCHING REPAIR	226	SF
23032EN	BRIDGE BARRIER RETROFIT	616	LF
23386EC	JOINT SEAL REPLACEMENT (1 IN)	35	LF
23386EC	JOINT SEAL REPLACEMENT (4 IN)	35	LF
23783EC	REMOVE CONCRETE BARRER	4.0	EACH
24981EC	BRIDGE CLEANING	1	LS
24982EC	CONCRETE COATING	1	LS
24983EC	BEARING LUBRICATION	6	EACH
25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	38	LF

See Bridge Barrier Retrofit Detail Sheets after Special Notes for Bridge Barrier Retrofit and Wingwall Replacement details.

(WB) NORTH BRIDGE OVER ROLLING FORK RIVER
BRIDGE MAINTENANCE #090B00011L



PLAN



ELEVATION

B1

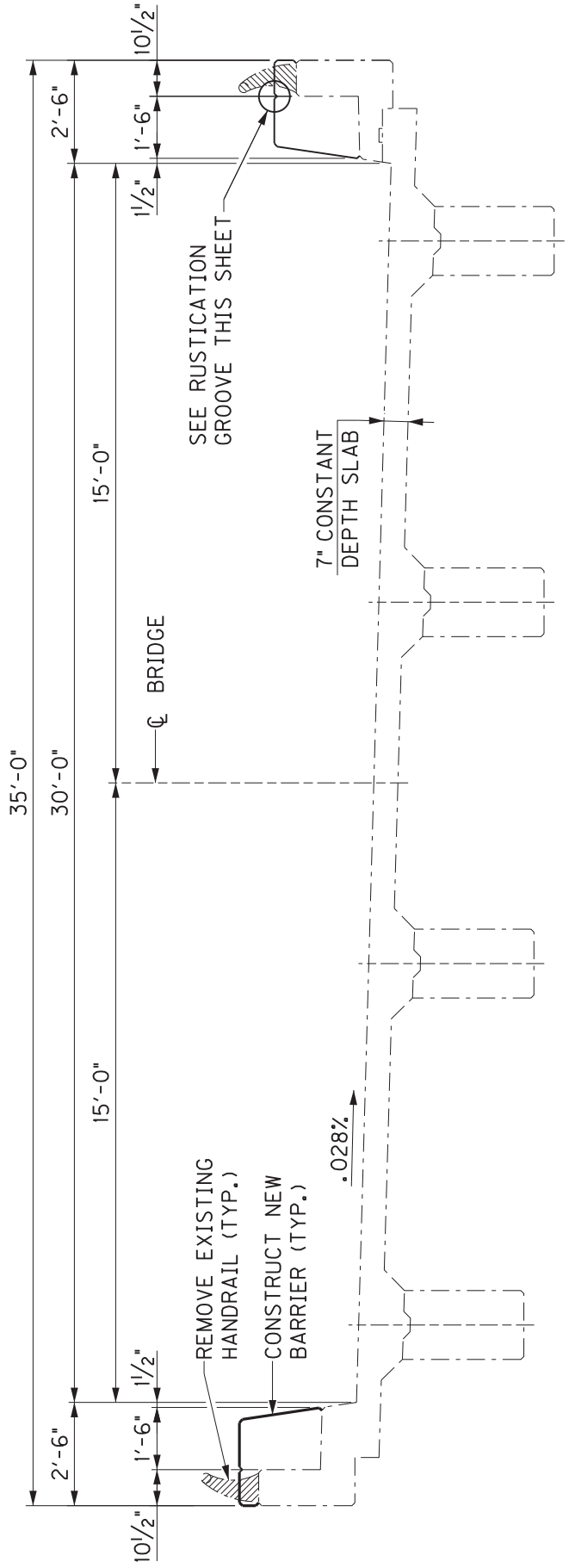
DRAWN BY: DWW
CHECKED BY: MRW
JOB NO.:1831-2102
DATE: OCT. 2018
SCALE: NTS
SHEET:

BRIDGE 090B00011L
OVER ROLLING FORK RIVER

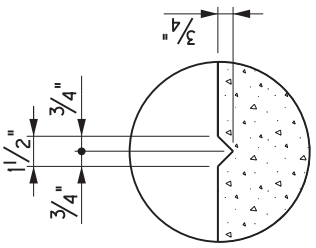
KENTUCKY TRANSPORTATION CABINET
200 MERO STREET
FRANKFORT, KY 40622

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B1



TYPICAL SECTION



RUSTICATION GROOVE

DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE 090B00011L OVER ROLLING FORK RIVER	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622
CHECKED BY: MRW	SCALE: NTS		
JOB NO.: 1831-2102	SHEET:		

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B1

BRIDGE #1 (090B00011L) – BILL OF REINFORCEMENT

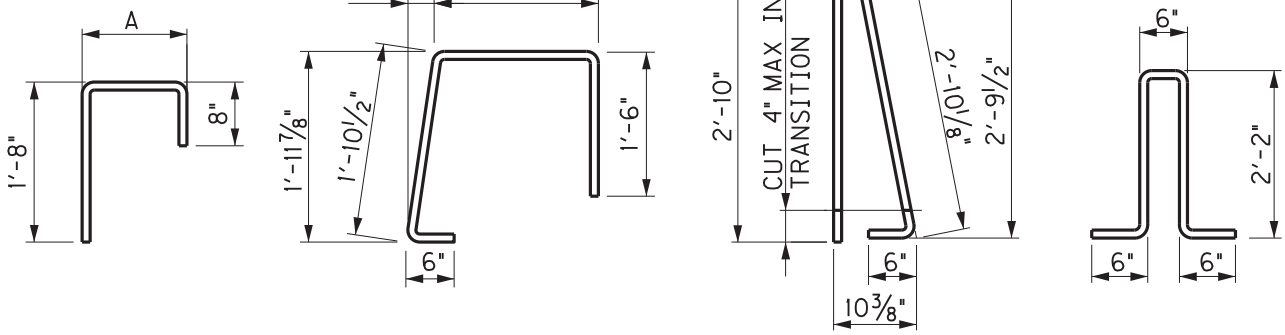
MARK	TYPE	NUMBER					SIZE	LENGTH		LOCATION	A		B		C	
		BRIDGE	WING A	WING B	WING C	WING D		FT	IN		FT	IN	FT	IN	FT	IN
S1(e)	①	622	—	—	—	—	5	3	5	BRIDGE BARRIER RETROFIT	1	1				
S2(e)	②	622	—	—	—	—	5	5	9	" " "	1	8½				
S3(e)	STR.	12	—	—	—	—	5	52	8	" " "						
S4(e)	STR.	48	—	—	—	—	5	52	6	" " "						
S5(e)	STR.	12	—	—	—	—	5	52	10	" " "						
S6(e)	STR.	—	20	26	20	26	5	2	10	WING BARRIER RETROFIT						
S7(e)	STR.	—	20	2	20	2	5	3	2	" " "						
S8(e)	STR.	—	6	6	6	6	5	9	2	" " "						
S9(e)	STR.	—	2	2	2	2	5	9	8	" " "						
S10(e)	STR.	—	2	2	2	2	5	0	6	" " "						
S11(e)	STR.	—	—	18	—	18	5	4	2	" " "						
S12(e)	STR.	—	—	2	—	2	5	8	4	" " "						
S13(e)	③	—	14	14	14	14	5	6	7	" " "						
S14(e)	④	—	14	14	14	14	5	5	10	" " "						

TOTAL WEIGHT = 11,518 LBS.

BARS S6(e)-S12(e) TO BE PAID SEPARATELY
NET WEIGHT = 923 LBS.

CONCRETE SLAB TO BE PAID SEPARATELY
CLASS M VOLUME = 9 CY

WING LENGTH			
WING A	WING B	WING C	WING D
9'-6"	9'-6"	9'-6"	9'-6"



TYPE ① TYPE ② TYPE ③ TYPE ④

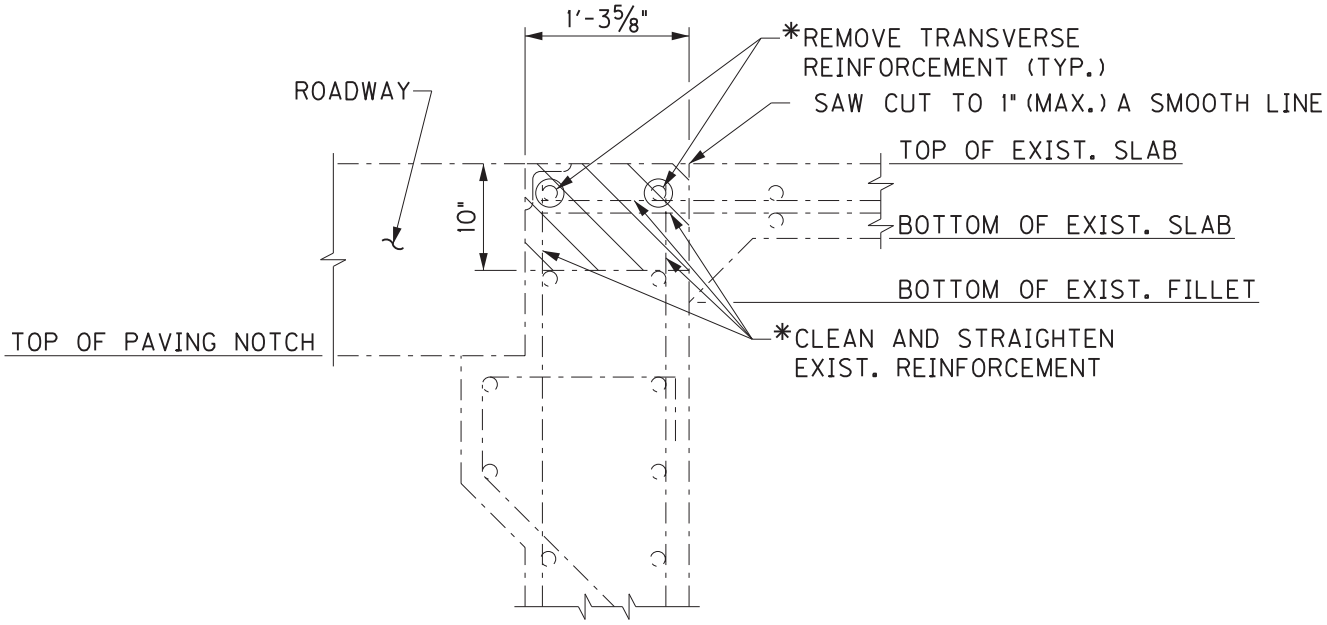
DRAWN BY: DWW	DATE: MAY 2019
CHECKED BY: MRW	SCALE: NTS
JOB NO.: 1831-2102	SHEET:

BRIDGE 090B00011L
OVER ROLLING FORK RIVER

KENTUCKY TRANSPORTATION CABINET
200 MERO STREET
FRANKFORT, KY 40622

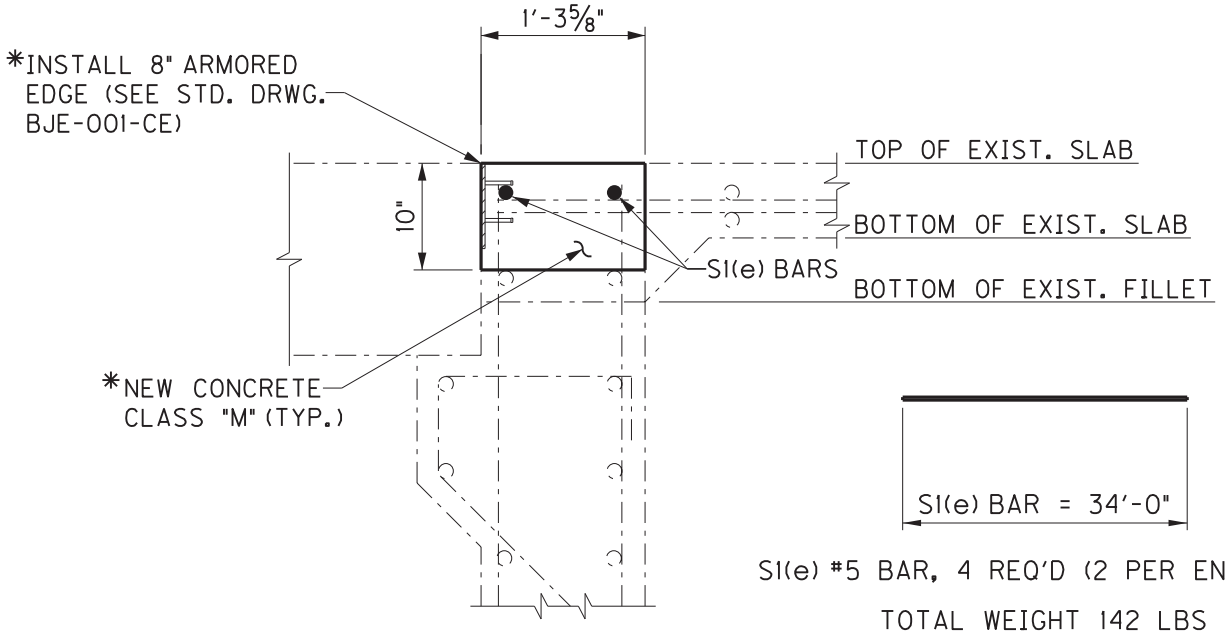
DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

ARMORED EDGE REPLACEMENT DETAIL B1



EXISTING SECTION @ END BENT

(END BENT 1 SHOWN
END BENT 2 SIMILAR)



S1(e) #5 BAR, 4 REQ'D (2 PER END BENT)

TOTAL WEIGHT 142 LBS

PROPOSED SECTION @ END BENT

(END BENT 1 SHOWN
END BENT 2 SIMILAR)

*ALL ITEMS REQUIRED FOR REPLACING THE ARMORED EDGE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "ARMORED EDGE FOR CONCRETE"

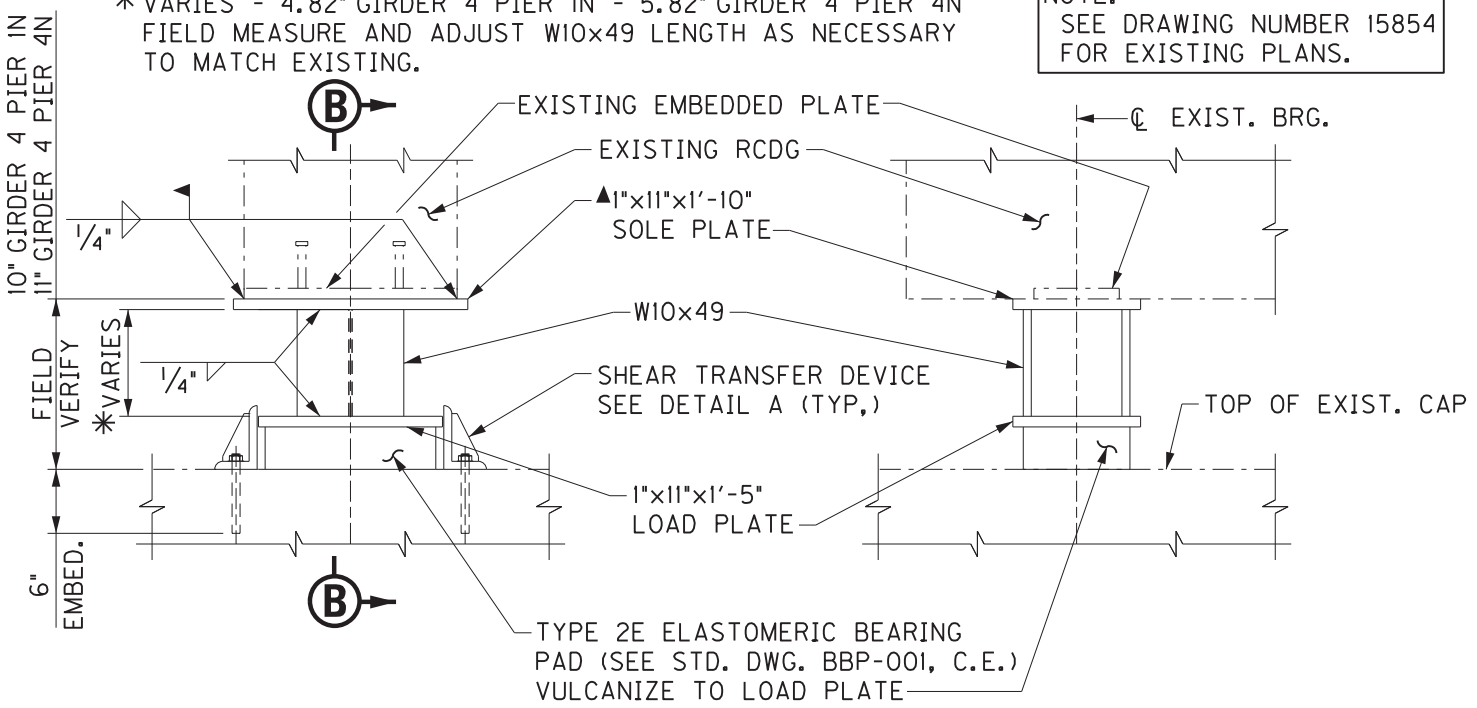
DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE 090B000111L OVER ROLLING FORK RIVER	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622	DLZ WMB 1950 HAGGARD COURT LEXINGTON, KENTUCKY 40505 (859) 299-5226
CHECKED BY: MRW	SCALE: NTS			
JOB NO.: 1831-2102	SHEET:			

BEARING REPLACEMENT SHEET 1

B1

✳VARIES - 4.82" GIRDER 4 PIER 1N - 5.82" GIRDER 4 PIER 4N
FIELD MEASURE AND ADJUST W10x49 LENGTH AS NECESSARY
TO MATCH EXISTING.

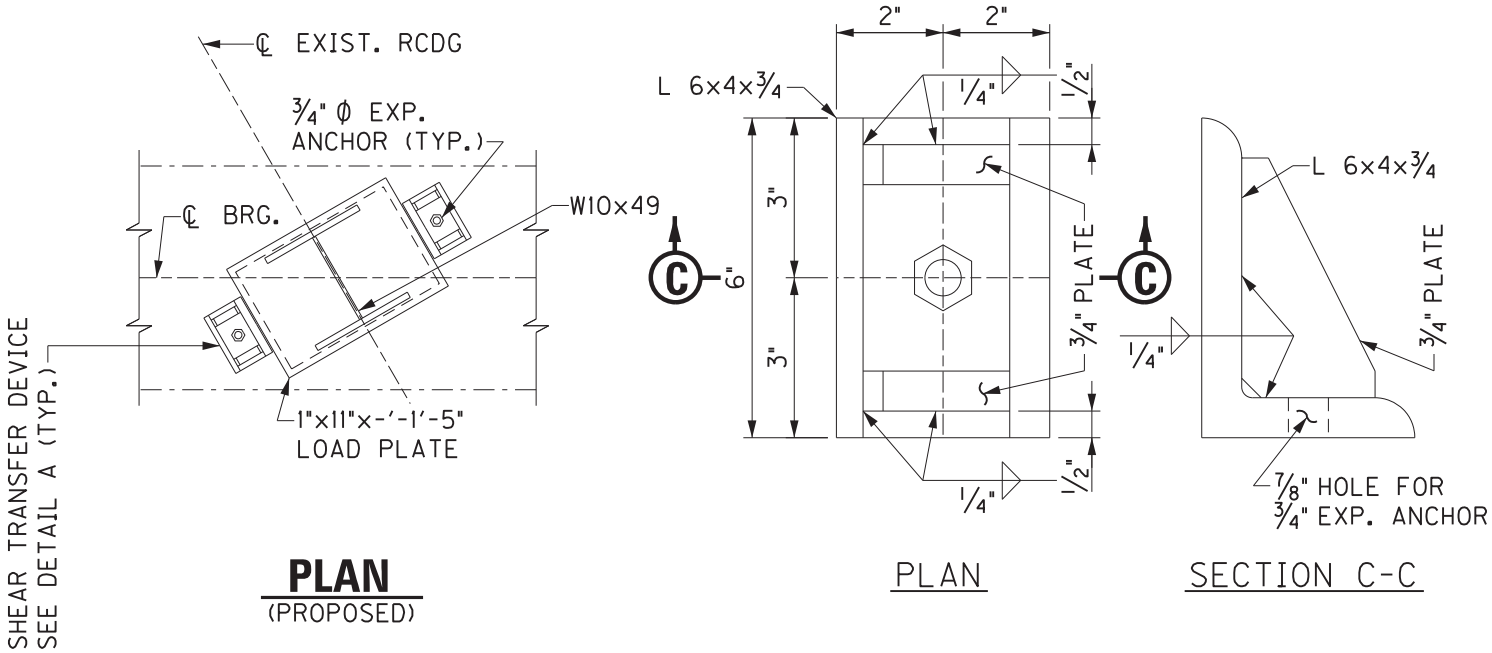
NOTE:
SEE DRAWING NUMBER 15854
FOR EXISTING PLANS.



FRONT ELEVATION
(PROPOSED)

SECTION B–B
(PROPOSED)

▲FIELD COPE TOP SOLE
PLATE AS NECESSARY



PLAN
(PROPOSED)

PLAN

SECTION C-C

DETAIL A
(SHEAR TRANSFER DEVICE)
(PROPOSED)

NOTE:
SEE SPECIAL NOTE FOR BEARING REPLACEMENT

DRAWN BY: DWW	DATE: JAN. 2019	BRIDGE 090B00011L OVER ROLLING FORK RIVER	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622
CHECKED BY: MRW	SCALE: NTS		
JOB NO.:1831-2102	SHEET:		

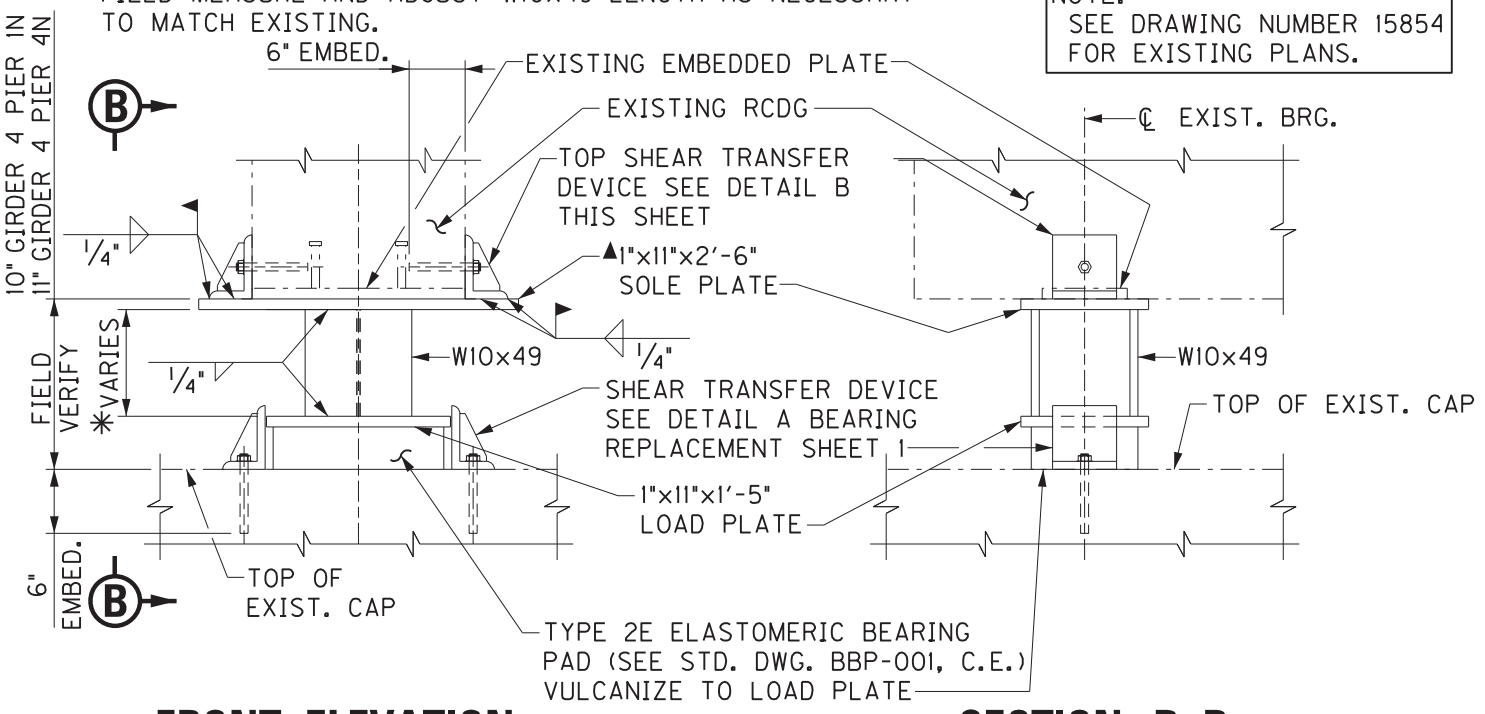
DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

BEARING REPLACEMENT SHEET 2

B1

✳VARIES - 4.82" GIRDER 4 PIER 1N - 5.82" GIRDER 4 PIER 4N
FIELD MEASURE AND ADJUST W10x49 LENGTH AS NECESSARY
TO MATCH EXISTING.

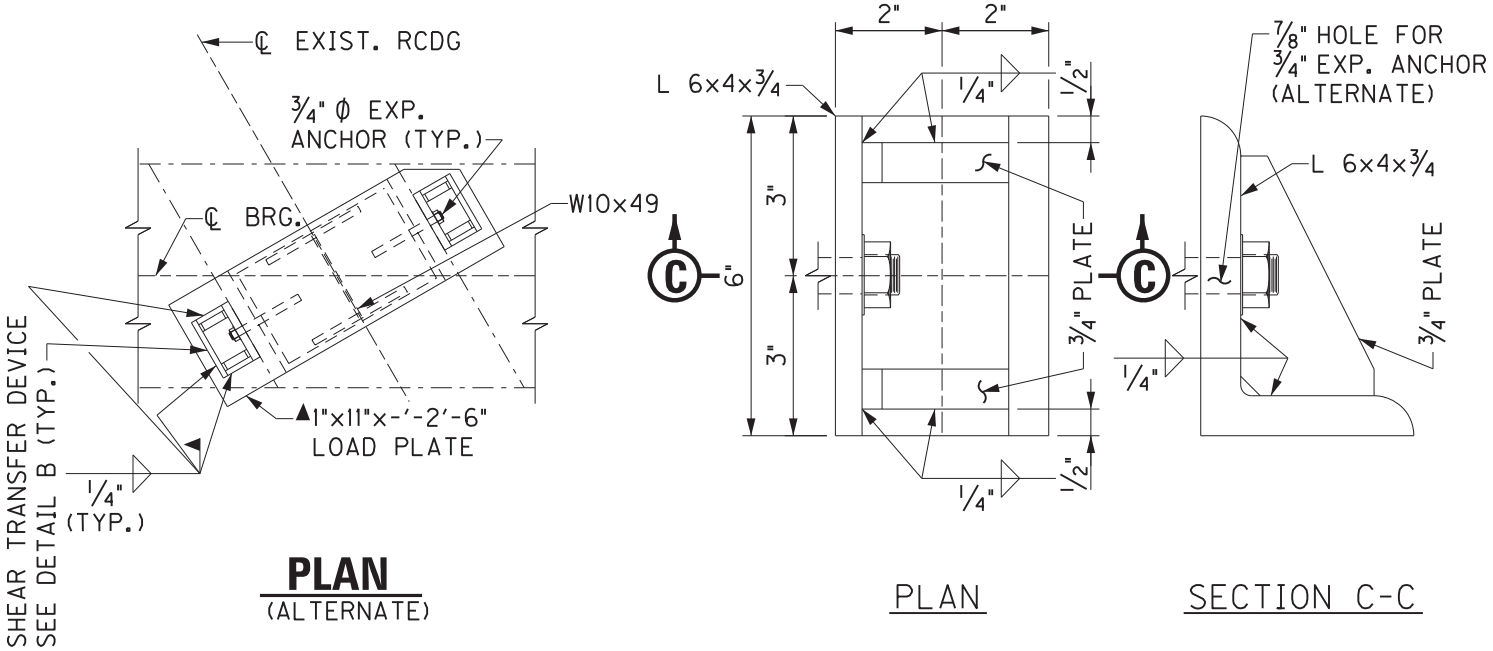
NOTE:
SEE DRAWING NUMBER 15854
FOR EXISTING PLANS.



FRONT ELEVATION
(ALTERNATE)

SECTION B–B
(ALTERNATE)

▲FIELD COPE TOP SOLE PLATE AS NECESSARY



PLAN
(ALTERNATE)

PLAN

SECTION C-C

NOTE:
SEE SPECIAL NOTE FOR BEARING REPLACEMENT

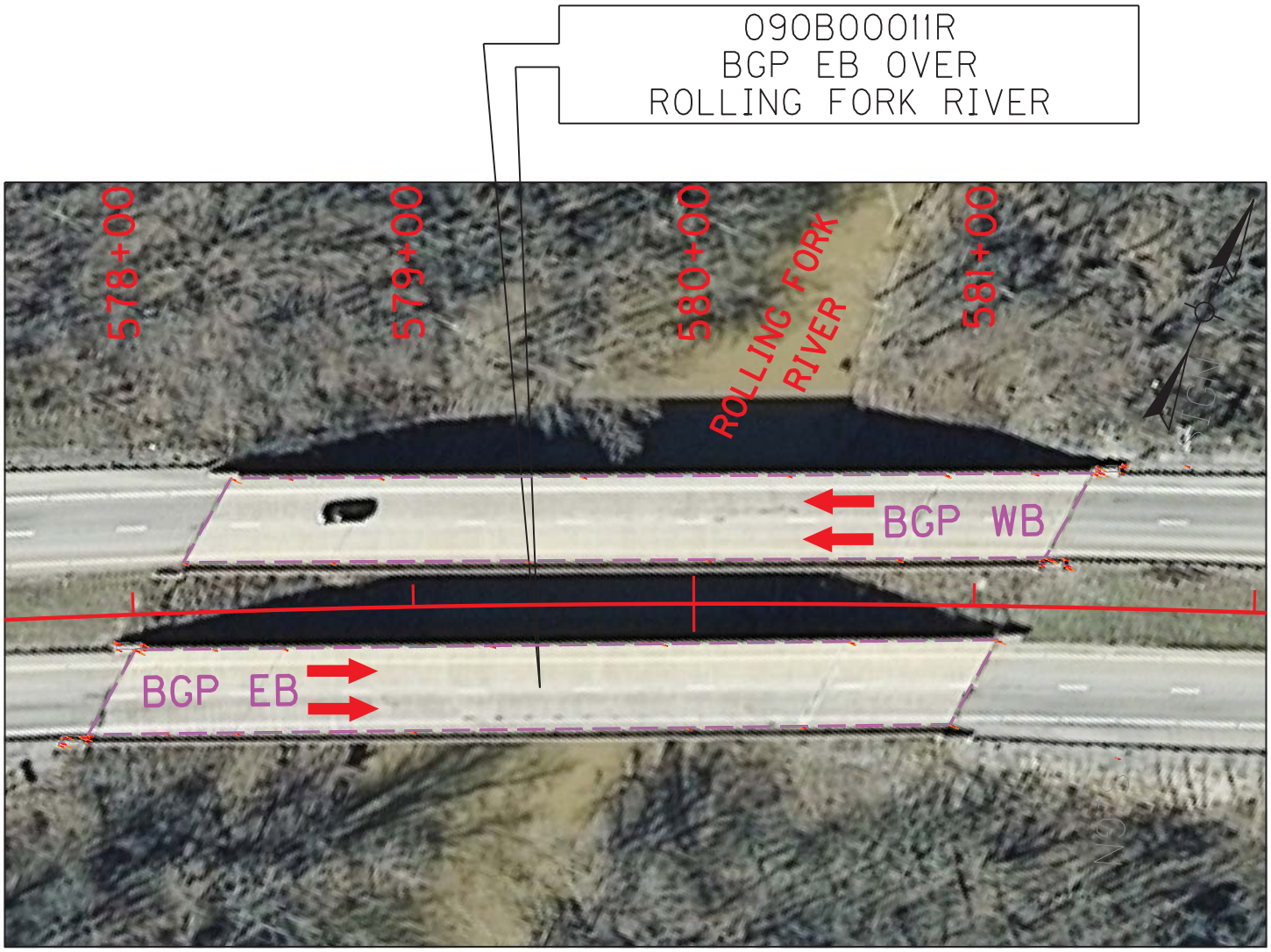
DETAIL B
(TOP SHEAR TRANSFER DEVICE)
(ALTERNATE)

DRAWN BY: DWW	DATE: JAN. 2019	BRIDGE 090B00011L OVER ROLLING FORK RIVER	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622
CHECKED BY: MRW	SCALE: NTS		
JOB NO.:1831-2102	SHEET:		

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B2

BRIDGE #2 (090B00011R)
NELSON COUNTY



APPROXIMATE LOCATION INFORMATION
LATITUDE: 37°44'48"N
LONGITUDE: 85°41'00"E
MP 9.003 ON BLUEGRASS PARKWAY

DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE 090B00011R OVER ROLLING FORK RIVER	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622	DLZ WMB 1950 HAGGARD COURT LEXINGTON, KENTUCKY 40505 (859) 299-5226
CHECKED BY: MRW	SCALE: NTS			
JOB NO.:1831-2102	SHEET:			

BRIDGE #2 (090B00011R) - ESTIMATE OF QUANTITIES

STRUCTURE INFORMATION:

1. District: 4
2. County: Nelson
3. Route: KY 9002
4. Constr. Number: 4-20007
5. Road Name: Bluegrass Parkway
6. Description: Bluegrass Parkway EB over Rolling Fork

7. Type of Work: Bridge Barrier Retrofit
Bridge Cleaning and Preventative Maintenance
Bridge Bearing Replacement
Bridge Concrete Patching
Install Armored Edge for Concrete

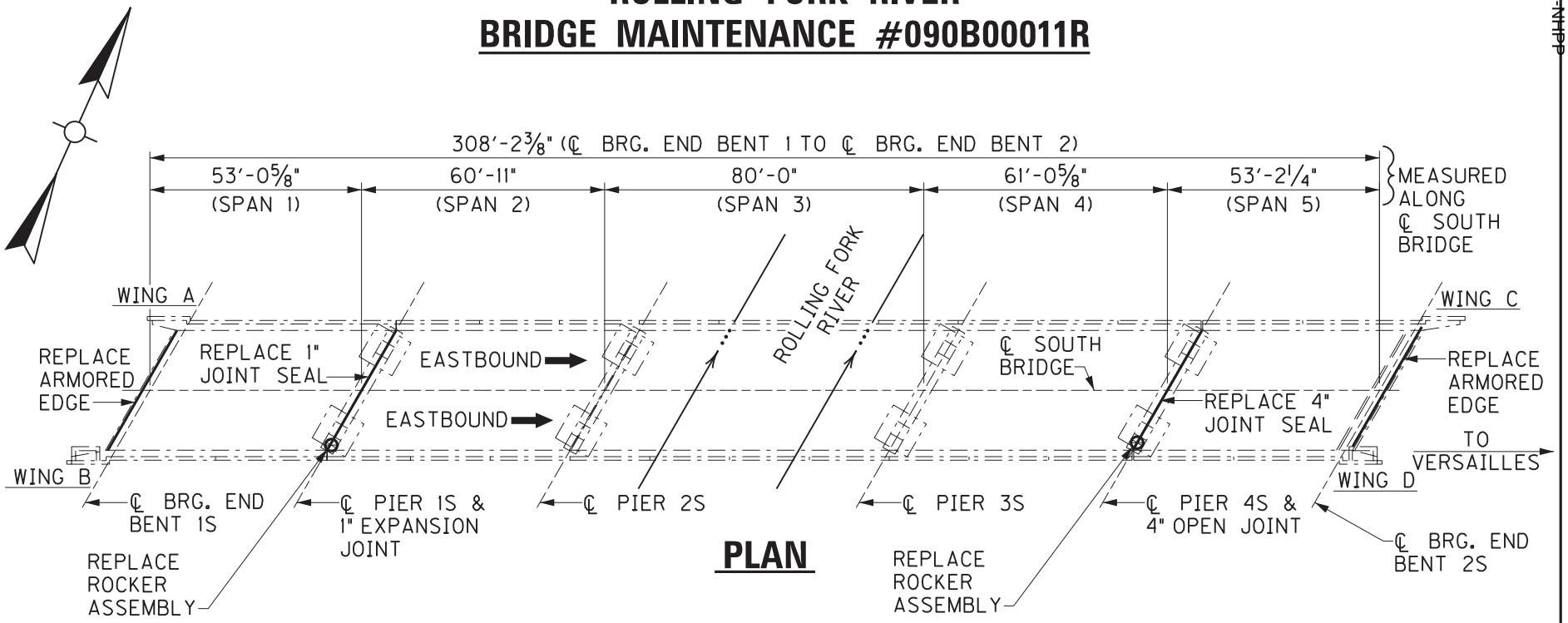
8. Length (ft):	308.20	**Curb to Curb Width (ft):**	30.00
Skew:	30° 00' LT	**Out to Out Width (ft):**	35.00
Surface Area (SY):	1028	**Deck Thickness (in):**	7.00

ESTIMATE OF QUANTITIES

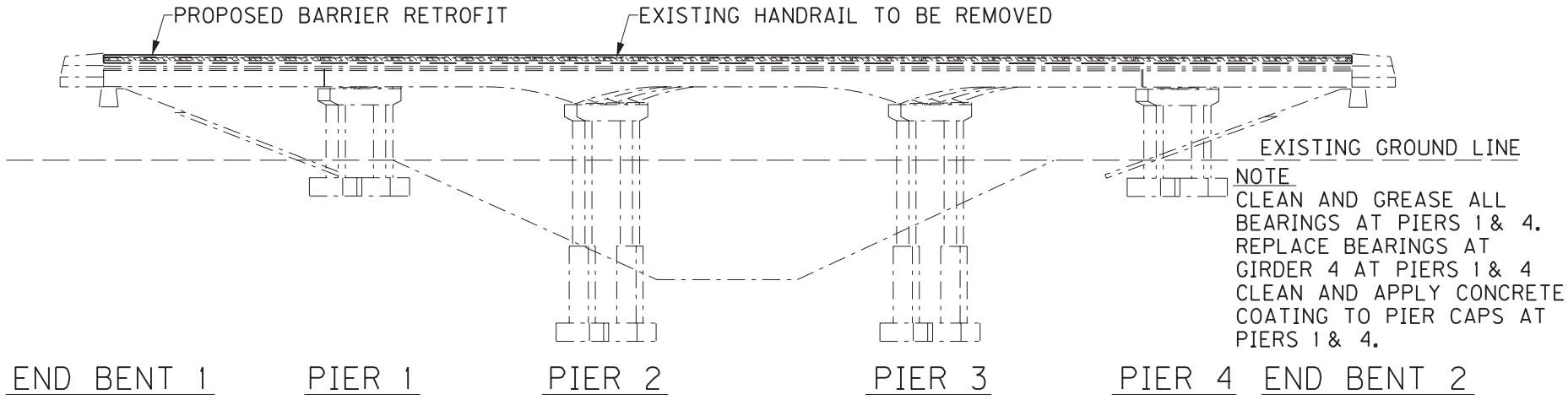
ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT
3299	ARMORED EDGE FOR CONCRETE	70	LF
8106	CONCRETE CLASS M 1	9	CY
8151	STEEL REINFORCEMENT EPOXY COATED	923	LBS
8435	JACK AND SUPPORT BRIDGE SPAN	1	LS
21969NN	BEARING REPLACEMENT	2	EACH
22146EN	CONCRETE PATCHING REPAIR	226	SF
23032EN	BRIDGE BARRIER RETROFIT	616	LF
23386EC	JOINT SEAL REPLACEMENT (1 IN)	35	LF
23386EC	JOINT SEAL REPLACEMENT (4 IN)	35	LF
23783EC	REMOVE CONCRETE BARRER	4.0	EACH
24981EC	BRIDGE CLEANING	1	LS
24982EC	CONCRETE COATING	1	LS
24983EC	BEARING LUBRICATION	6	EACH
25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	38	LF

See Bridge Barrier Retrofit Detail Sheets after Special Notes for Bridge Barrier Retrofit and Wingwall Replacement details.

(EB) SOUTH BRIDGE OVER ROLLING FORK RIVER
BRIDGE MAINTENANCE #090B00011R



PLAN



ELEVATION

B2

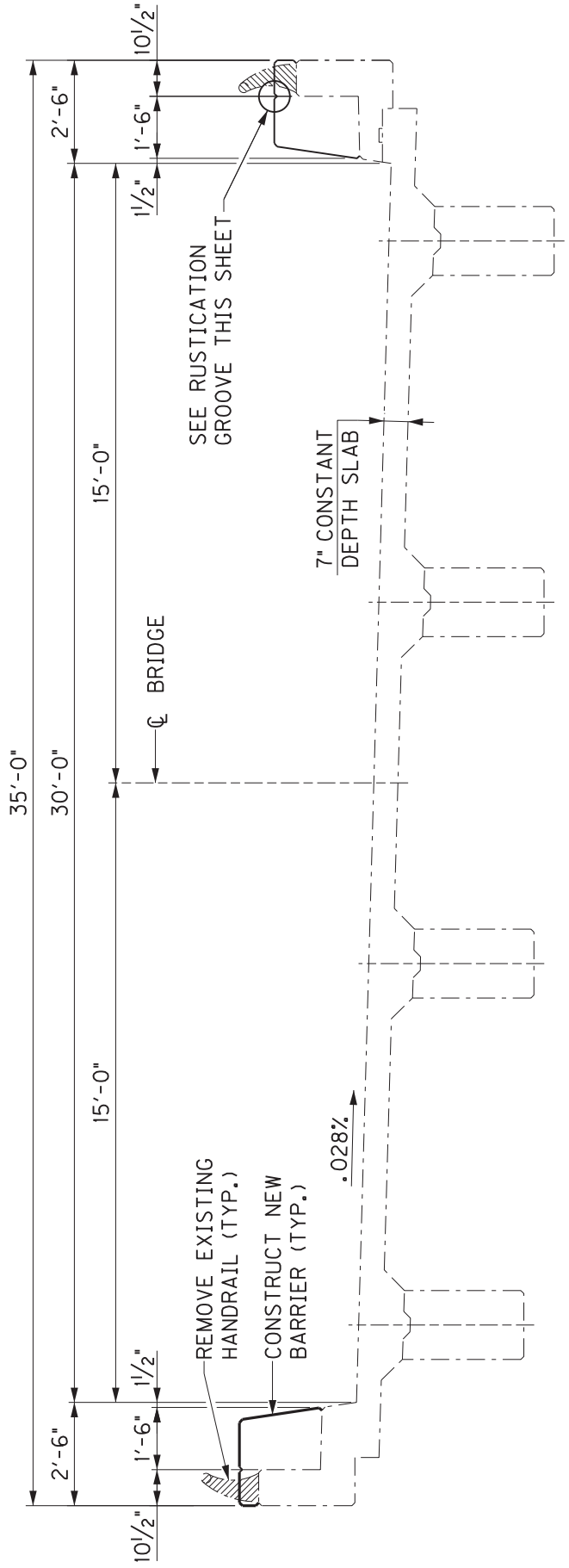
DRAWN BY: DWW
CHECKED BY: MRW
JOB NO.:1831-2102
DATE: OCT. 2018
SCALE: NTS
SHEET:

BRIDGE 090B00011R
OVER ROLLING FORK RIVER

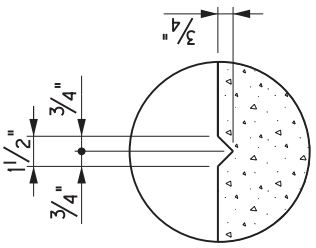
KENTUCKY TRANSPORTATION CABINET
200 MERO STREET
FRANKFORT, KY 40622

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B2



TYPICAL SECTION



RUSTICATION GROOVE

DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE 090B00011R OVER ROLLING FORK RIVER	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622
CHECKED BY: MRW	SCALE: NTS		
JOB NO.: 1831-2102	SHEET:		

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B2

BRIDGE #2 (090B00011R) – BILL OF REINFORCEMENT

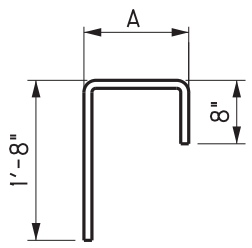
MARK	TYPE	NUMBER					SIZE	LENGTH		LOCATION	A		B		C	
		BRIDGE	WING A	WING B	WING C	WING D		FT	IN		FT	IN	FT	IN	FT	IN
S1(e)	①	622	—	—	—	—	5	3	5	BRIDGE BARRIER RETROFIT	1	1				
S2(e)	②	622	—	—	—	—	5	5	9	〃 〃 〃	1	8½				
S3(e)	STR.	12	—	—	—	—	5	52	8	〃 〃 〃						
S4(e)	STR.	48	—	—	—	—	5	52	6	〃 〃 〃						
S5(e)	STR.	12	—	—	—	—	5	52	10	〃 〃 〃						
S6(e)	STR.	—	20	26	20	26	5	2	10	WING BARRIER RETROFIT						
S7(e)	STR.	—	20	2	20	2	5	3	2	〃 〃 〃						
S8(e)	STR.	—	6	6	6	6	5	9	2	〃 〃 〃						
S9(e)	STR.	—	2	2	2	2	5	9	8	〃 〃 〃						
S10(e)	STR.	—	2	2	2	2	5	0	6	〃 〃 〃						
S11(e)	STR.	—	—	18	—	18	5	4	2	〃 〃 〃						
S12(e)	STR.	—	—	2	—	2	5	8	4	〃 〃 〃						
S13(e)	③	—	14	14	14	14	5	6	7	〃 〃 〃						
S14(e)	④	—	14	14	14	14	5	5	10	〃 〃 〃						

TOTAL WEIGHT = 11,518 LBS.

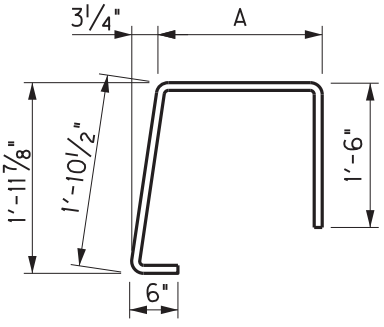
BARS S6(e)-S12(e) TO BE PAID SEPARATELY
NET WEIGHT = 923 LBS.

CONCRETE SLAB TO BE PAID SEPARATELY
CLASS M VOLUME = 9 CY

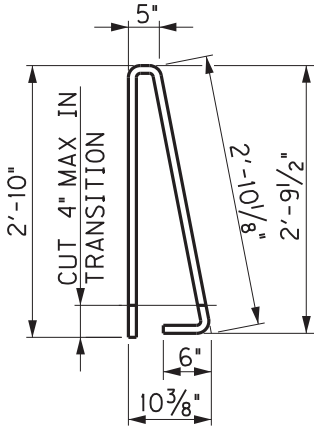
WING LENGTH			
WING A	WING B	WING C	WING D
9'-6"	9'-6"	9'-6"	9'-6"



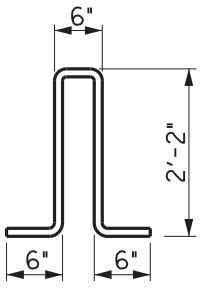
TYPE ①



TYPE ②



TYPE ③

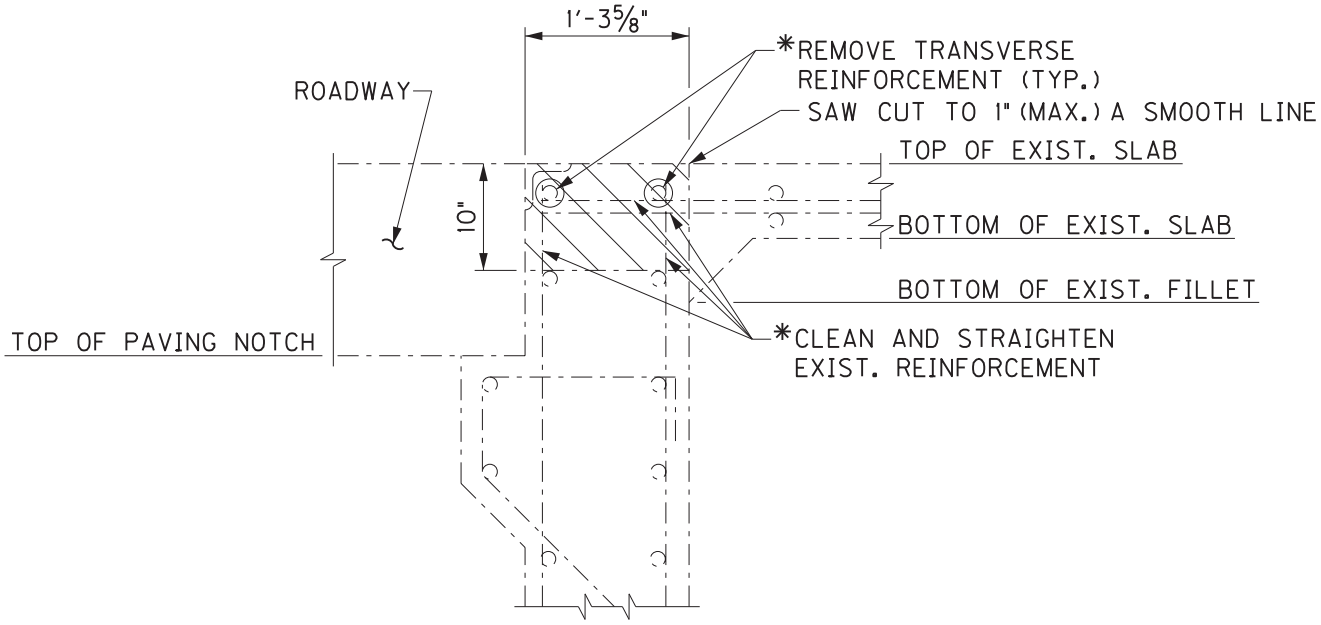


TYPE ④

DRAWN BY: DWW	DATE: MAY 2019	BRIDGE 090B00011R OVER ROLLING FORK RIVER	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622
CHECKED BY: MRW	SCALE: NTS		
JOB NO.: 1831-2102	SHEET:		

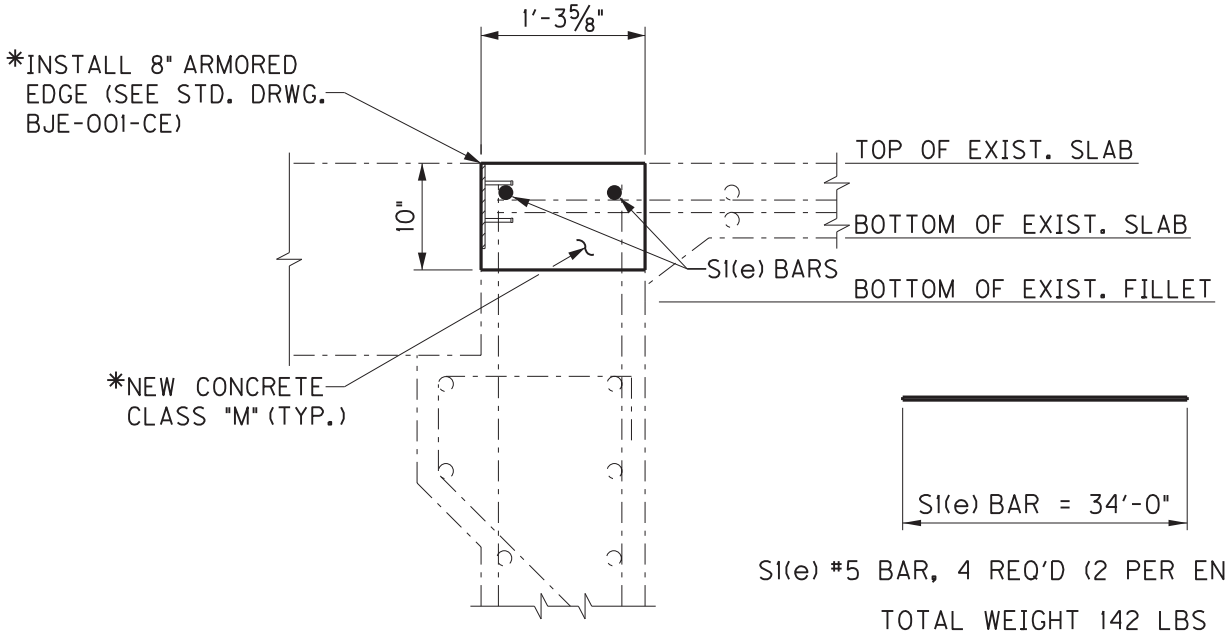
DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

ARMORED EDGE REPLACEMENT DETAIL B2



EXISTING SECTION @ END BENT

(END BENT 1 SHOWN
END BENT 2 SIMILAR)



S1(e) #5 BAR, 4 REQ'D (2 PER END BENT)

TOTAL WEIGHT 142 LBS

PROPOSED SECTION @ END BENT

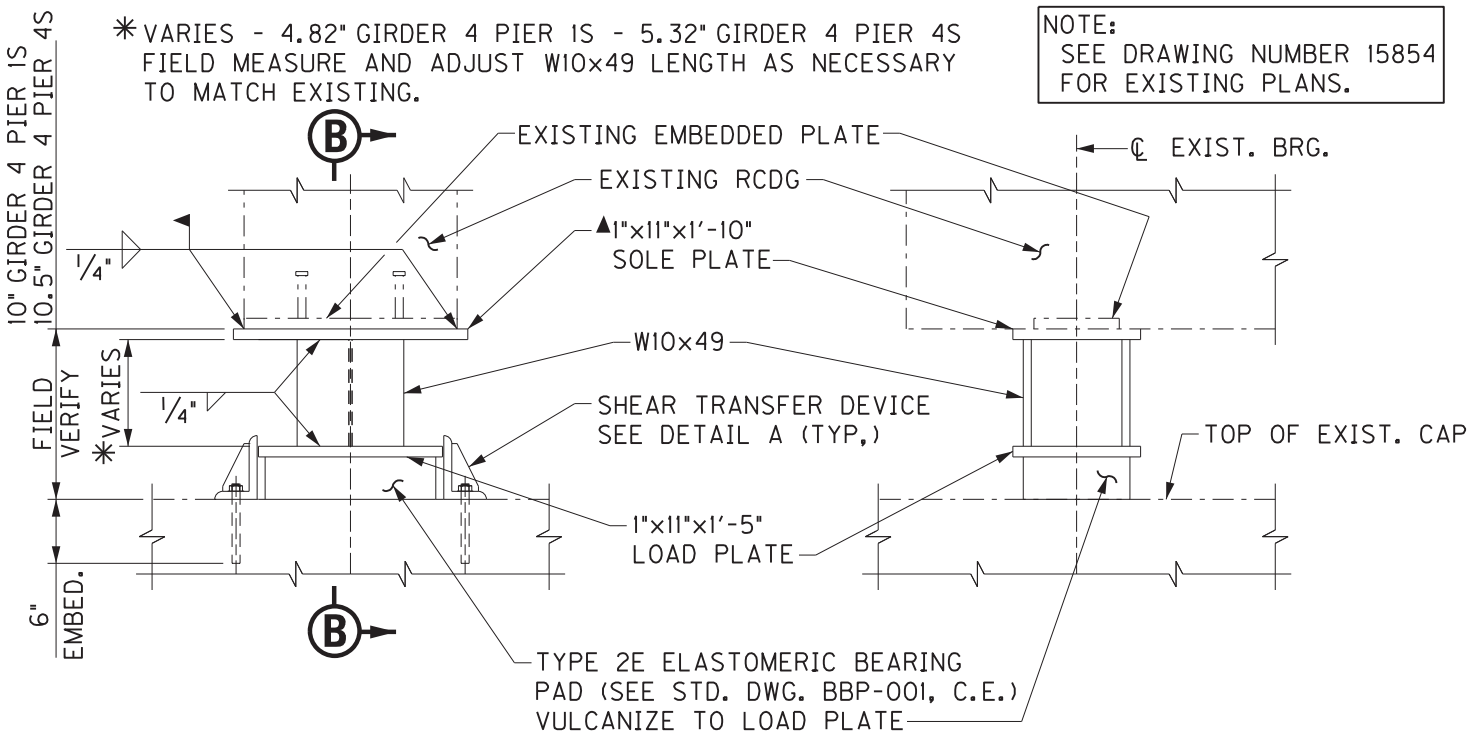
(END BENT 1 SHOWN
END BENT 2 SIMILAR)

*ALL ITEMS REQUIRED FOR REPLACING THE ARMORED EDGE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "ARMORED EDGE FOR CONCRETE"

DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE 090B00011R OVER ROLLING FORK RIVER	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622	DLZ WMB 1950 HAGGARD COURT LEXINGTON, KENTUCKY 40505 (859) 299-5226
CHECKED BY: MRW	SCALE: NTS			
JOB NO.: 1831-2102	SHEET:			

BEARING REPLACEMENT SHEET 1

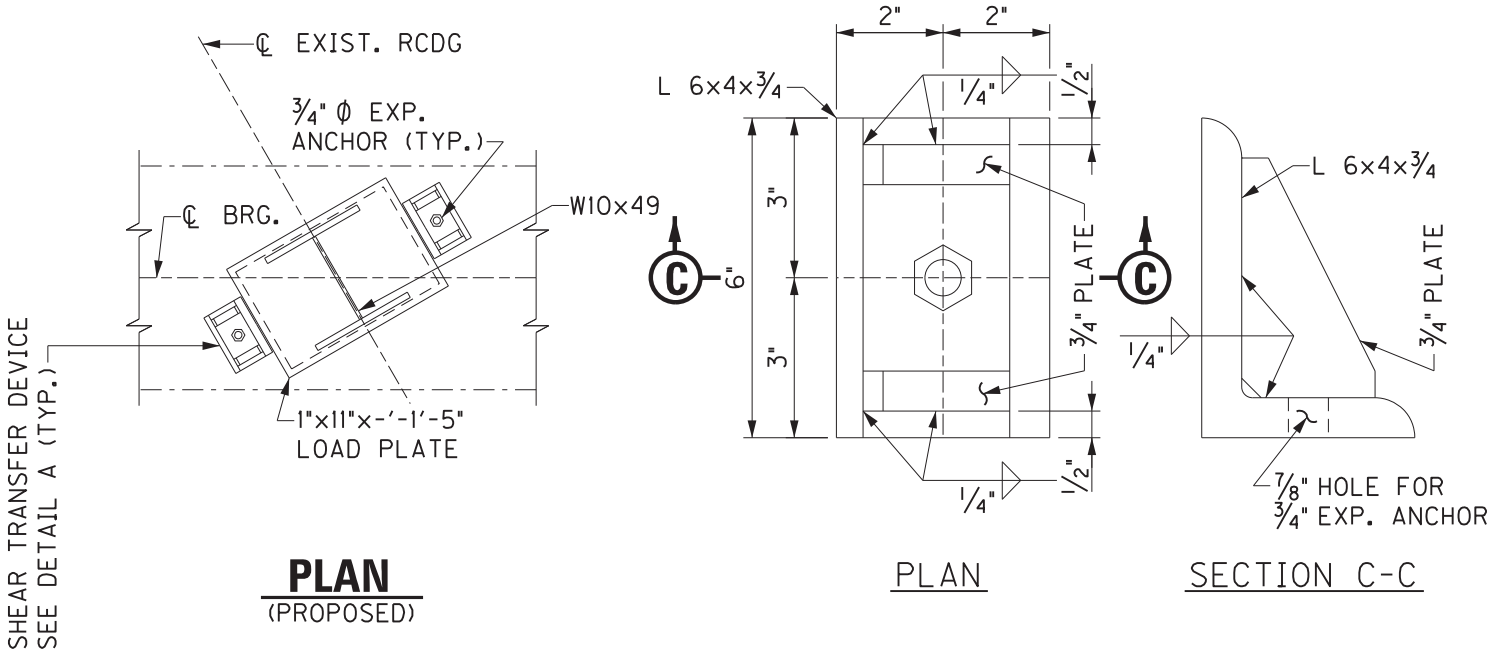
B2



FRONT ELEVATION
(PROPOSED)

SECTION B–B
(PROPOSED)

▲FIELD COPE TOP SOLE PLATE AS NECESSARY



PLAN
(PROPOSED)

PLAN

SECTION C-C

DETAIL A
(SHEAR TRANSFER DEVICE)
(PROPOSED)

NOTE:
SEE SPECIAL NOTE FOR BEARING REPLACEMENT

DRAWN BY: DWW	DATE: JAN. 2019	BRIDGE 090B00011R OVER ROLLING FORK RIVER	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622
CHECKED BY: MRW	SCALE: NTS		
JOB NO.:1831-2102	SHEET:		

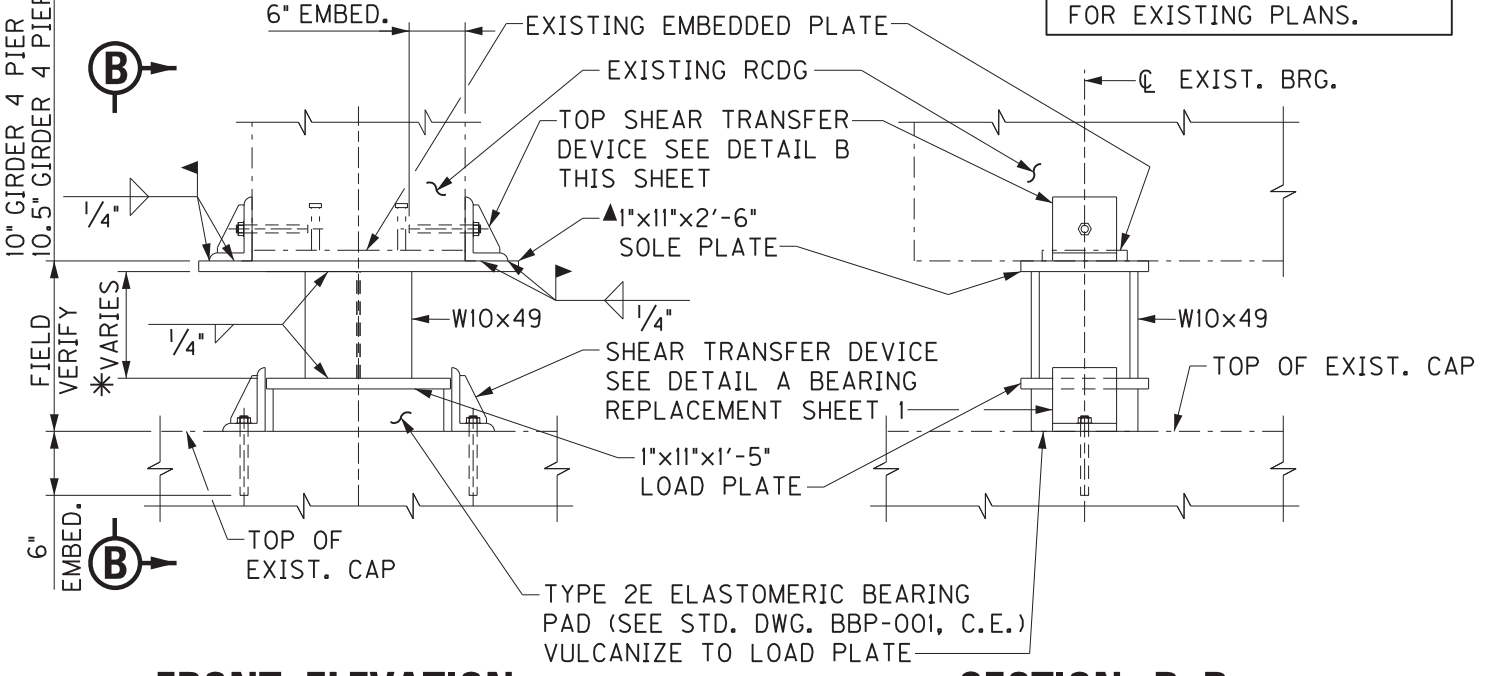
DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

BEARING REPLACEMENT SHEET 2

B2

✳VARIES - 4.82" GIRDER 4 PIER 1S - 5.32" GIRDER 4 PIER 4S
FIELD MEASURE AND ADJUST W10x49 LENGTH AS NECESSARY
TO MATCH EXISTING.

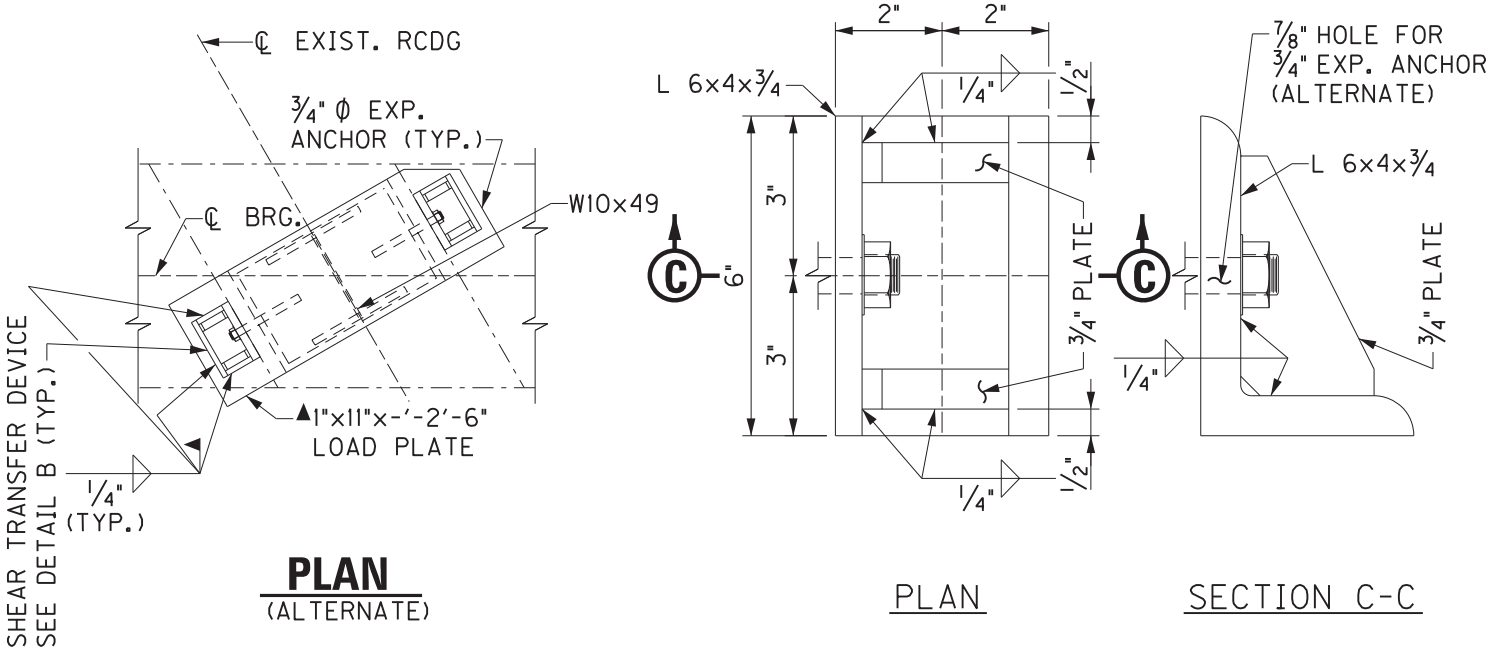
NOTE:
SEE DRAWING NUMBER 15854
FOR EXISTING PLANS.



FRONT ELEVATION
(ALTERNATE)

SECTION B–B
(ALTERNATE)

▲FIELD COPE TOP SOLE PLATE AS NECESSARY



PLAN
(ALTERNATE)

PLAN

SECTION C-C

NOTE:
SEE SPECIAL NOTE FOR BEARING REPLACEMENT

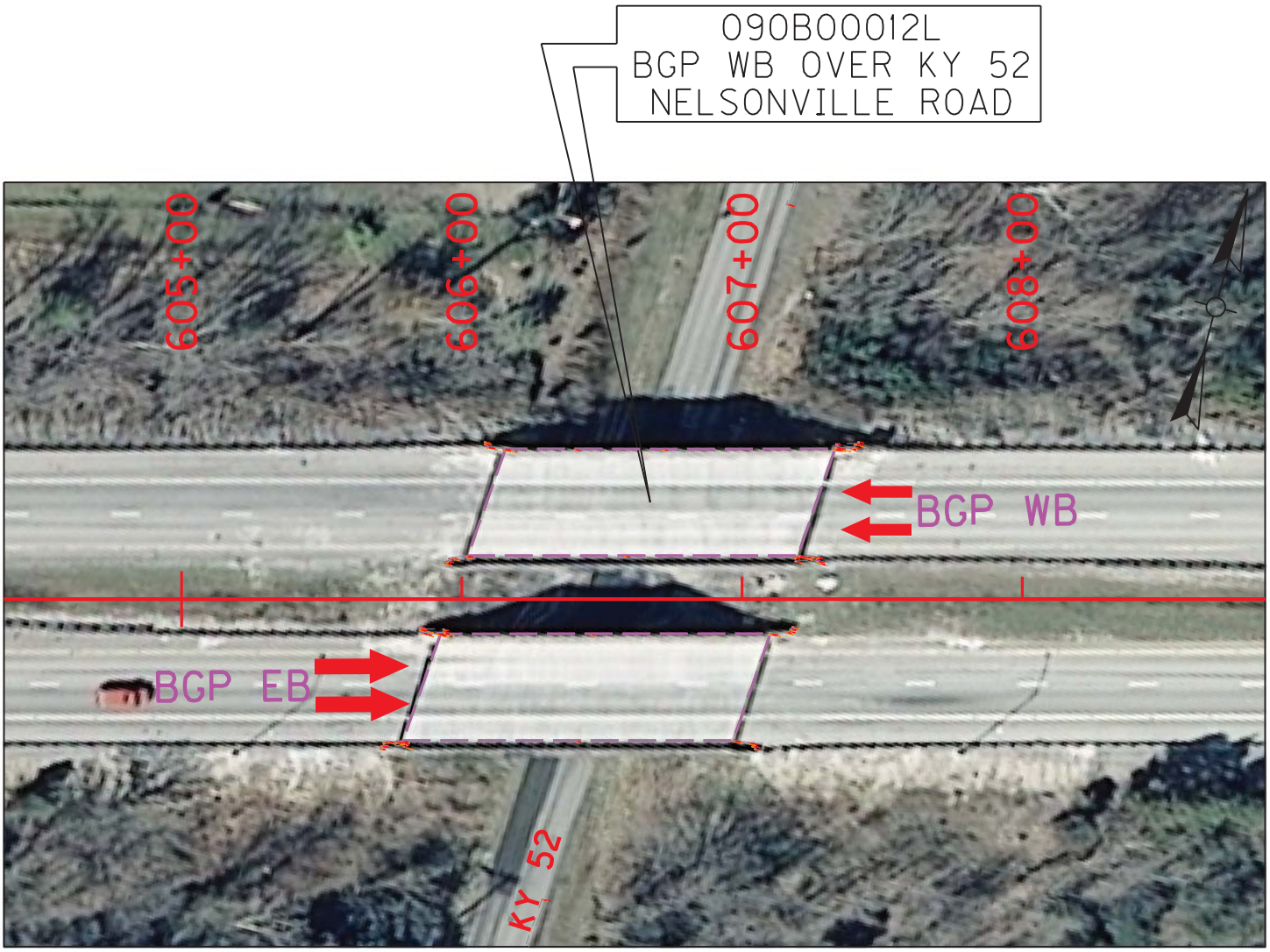
DETAIL B
(TOP SHEAR TRANSFER DEVICE)
(ALTERNATE)

DRAWN BY: DWW	DATE: JAN. 2019	BRIDGE 090B00011R OVER ROLLING FORK RIVER	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622
CHECKED BY: MRW	SCALE: NTS		
JOB NO.:1831-2102	SHEET:		

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B3

BRIDGE #3 (090B00012L)
NELSON COUNTY



APPROXIMATE LOCATION INFORMATION
LATITUDE: 37°44'56"N
LONGITUDE: 85°40'28"E
MP 9.514 ON BLUEGRASS PARKWAY

DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE 090B00012L OVER KY 52	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622	DLZ WMB 1950 HAGGARD COURT LEXINGTON, KENTUCKY 40505 (859) 299-5226
CHECKED BY: MRW	SCALE: 1" = 60'-0"			
JOB NO.: 1831-2102	SHEET:			

BRIDGE #3 (090B00012L) - ESTIMATE OF QUANTITIES

STRUCTURE INFORMATION:

1. District: 4
2. County: Nelson
3. Route: KY 9002
4. Constr. Number: 4-20007
5. Road Name: Bluegrass Parkway
6. Description: Bluegrass Parkway WB over KY 52

7. Type of Work: Bridge Barrier Retrofit

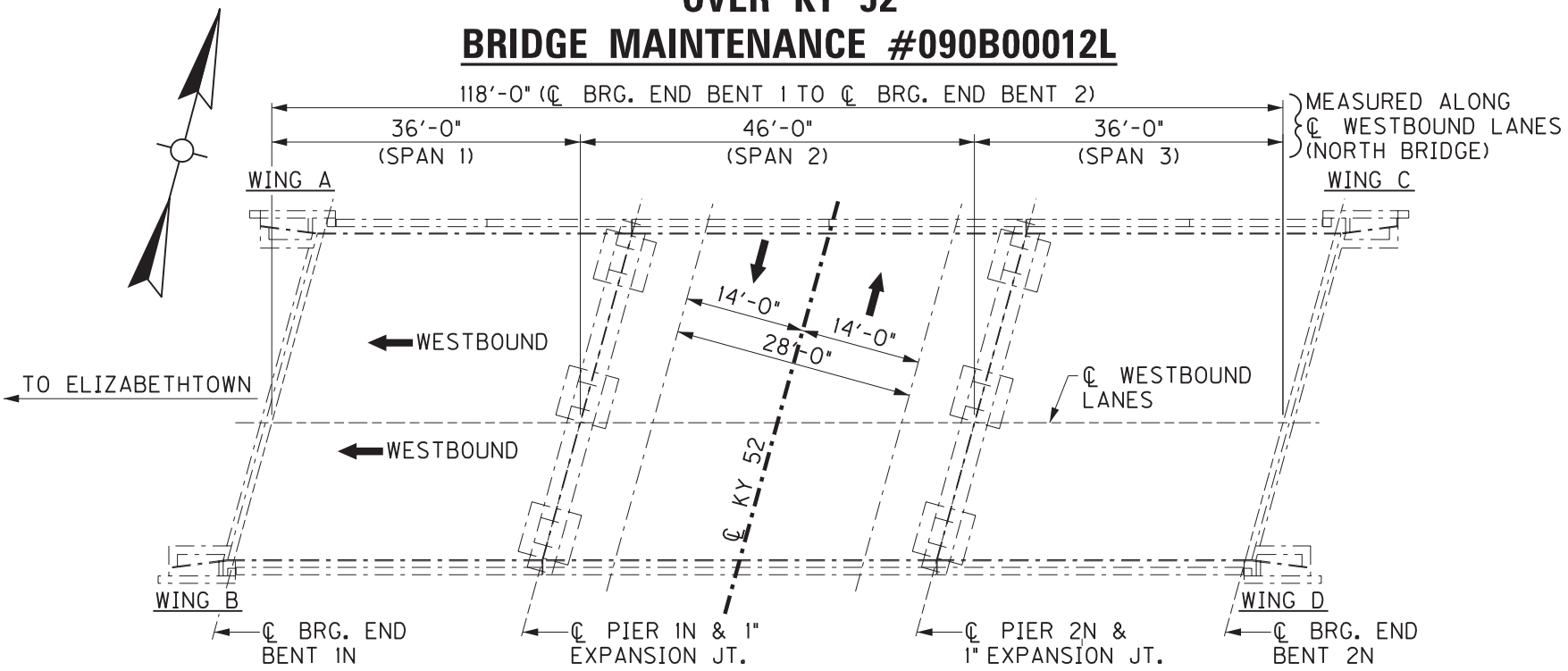
8. Length (ft):	118.00	**Curb to Curb Width (ft):**	38.00
Skew:	19° 00' LT	**Out to Out Width (ft):**	41.50
Surface Area (SY):	499	**Deck Thickness (in):**	7.00

ESTIMATE OF QUANTITIES

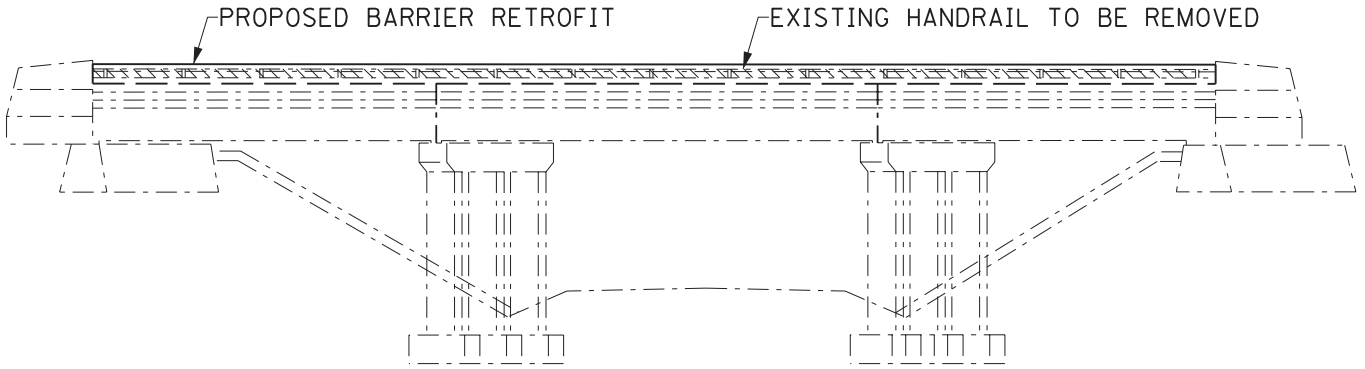
ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT
8106	CONCRETE CLASS M 1	10	CY
8151	STEEL REINFORCEMENT EPOXY COATED	874	LBS
23032EN	BRIDGE BARRIER RETROFIT	236	LF
23783EC	REMOVE CONCRETE BARRER	4.0	EACH
24982EC	CONCRETE COATING	1	LS
25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	33.0	LF

See Bridge Barrier Retrofit Detail Sheets after Special Notes for Bridge Barrier Retrofit and Wingwall Replacement details.

(WB) NORTH BRIDGE
OVER KY 52
BRIDGE MAINTENANCE #090B00012L



PLAN



ELEVATION

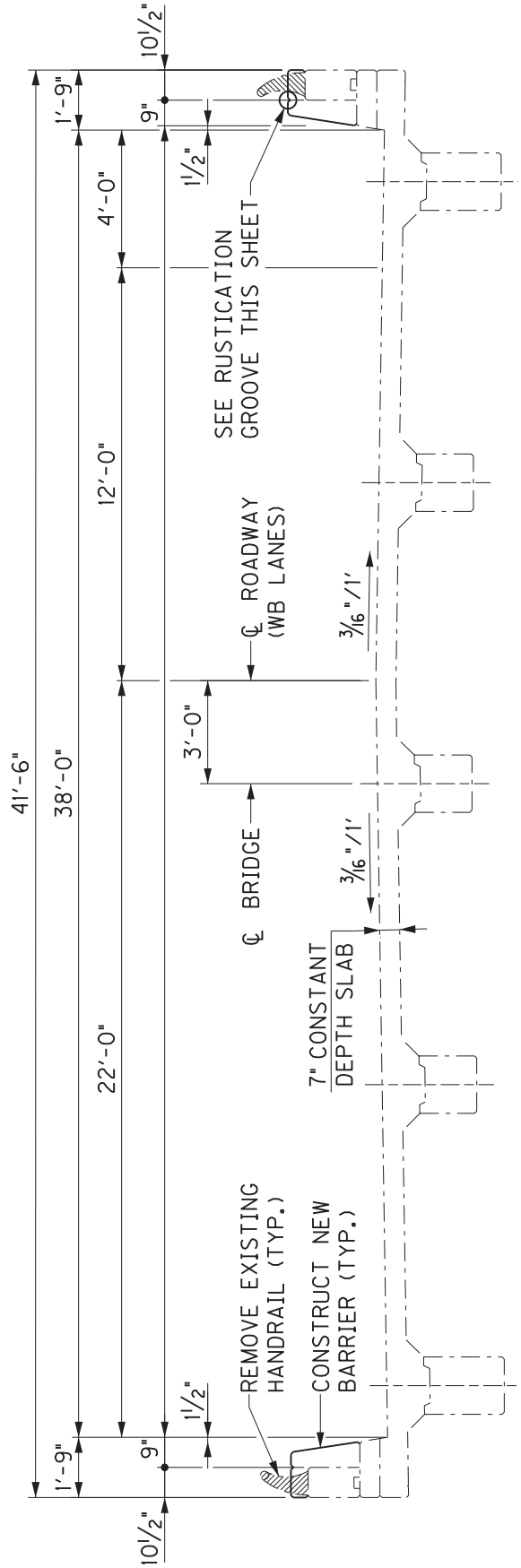
DRAWN BY: DWW
CHECKED BY: MRW
JOB NO.: 1831-2102
DATE: OCT. 2018
SCALE: NTS
SHEET:

BRIDGE 090B00012L
OVER KY 52

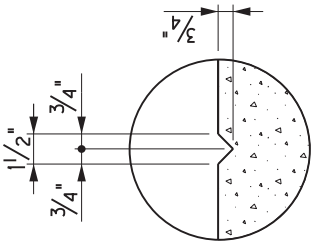
KENTUCKY TRANSPORTATION CABINET
200 MERO STREET
FRANKFORT, KY 40622

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B3



TYPICAL SECTION



RUSTICATION GROOVE

DRAWN BY: DWW	DATE: OCT. 2018
CHECKED BY: MRW	SCALE: NTS
JOB NO.: 1831-2102	SHEET:

BRIDGE 090B00012L
OVER KY 52

KENTUCKY TRANSPORTATION CABINET
200 MERO STREET
FRANKFORT, KY 40622

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B3

BRIDGE #3 (090B00012L) – BILL OF REINFORCEMENT

MARK	TYPE	NUMBER					SIZE	LENGTH		LOCATION	A		B		C	
		BRIDGE	WING A	WING B	WING C	WING D		FT	IN		FT	IN	FT	IN	FT	IN
S1(e)		242	—	—	—	—	5	3	5	BRIDGE BARRIER RETROFIT	1	1				
S2(e)		242	—	—	—	—	5	5	0	" " "	1	8½				
S3(e)	STR.	12	—	—	—	—	5	35	4	" " "						
S4(e)	STR.	6	—	—	—	—	5	45	7	" " "						
S5(e)																
S6(e)		—	24	22	22	24	5	2	10	WING BARRIER RETROFIT						
S7(e)	STR.	—	2	2	2	2	5	2	5	" " "						
S8(e)	STR.	—	6	6	6	6	5	8	5*	" " "						
S9(e)	STR.	—	2	2	2	2	5	8	11*	" " "						
S10(e)	STR.	—	2	2	2	2	5	0	6	" " "						
S11(e)	STR.	—	16	16	16	16	5	3	9	" " "						
S12(e)	STR.	—	2	2	2	2	5	7	7*	" " "						
S13(e)		—	12	12	12	12	5	6	7	" " "						
S14(e)		—	12	12	12	12	5	5	10	" " "						

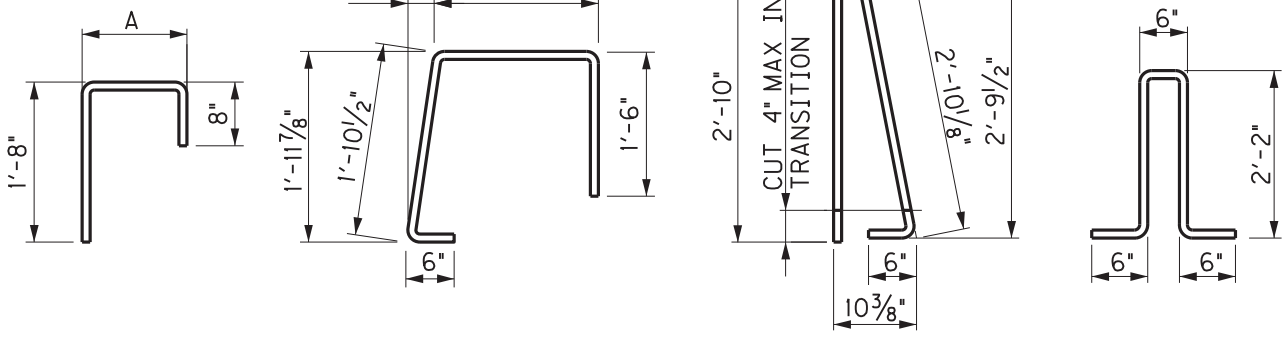
* REDUCE BAR LENGTH BY 1'-0" FOR SHORTER WING LENGTH

TOTAL WEIGHT = 4,338 LBS.

BARS S6(e)-S12(e) TO BE PAID SEPARATELY
NET WEIGHT = 874 LBS.

CONCRETE SLAB TO BE PAID SEPARATELY
CLASS M VOLUME = 10 CY

WING LENGTH			
WING A	WING B	WING C	WING D
8'-9"	7'-9"	7'-9"	8'-9"



TYPE ① TYPE ② TYPE ③ TYPE ④

DRAWN BY: DWW	DATE: MAY 2019
CHECKED BY: MRW	SCALE: NTS
JOB NO.: 1831-2102	SHEET:

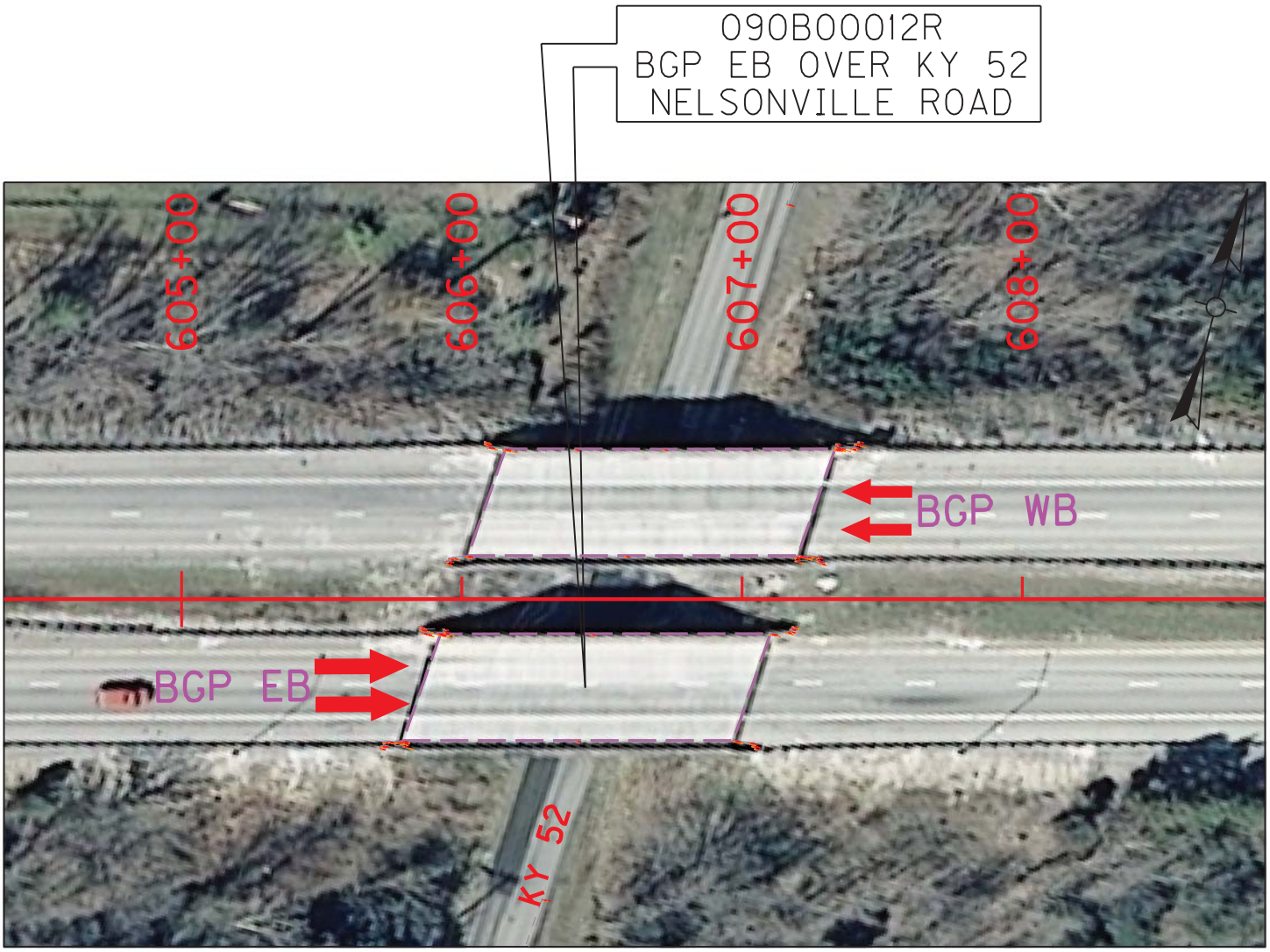
BRIDGE 090B00012L
OVER KY 52

KENTUCKY TRANSPORTATION CABINET
200 MERO STREET
FRANKFORT, KY 40622

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B4

BRIDGE #4 (090B00012R)
NELSON COUNTY



APPROXIMATE LOCATION INFORMATION
LATITUDE: 37°44'56"N
LONGITUDE: 85°40'28"E
MP 9.509 ON BLUEGRASS PARKWAY

DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE 090B00012R OVER KY 52	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622	DLZ WMB 1950 HAGGARD COURT LEXINGTON, KENTUCKY 40505 (859) 299-5226
CHECKED BY: MRW	SCALE: 1" = 60'-0"			
JOB NO.: 1831-2102	SHEET:			

BRIDGE #4 (090B00012R) - ESTIMATE OF QUANTITIES

STRUCTURE INFORMATION:

1. District: 4
2. County: Nelson
3. Route: KY 9002
4. Constr. Number: 4-20007
5. Road Name: Bluegrass Parkway
6. Description: Bluegrass Parkway EB over KY 52

7. Type of Work: Bridge Barrier Retrofit

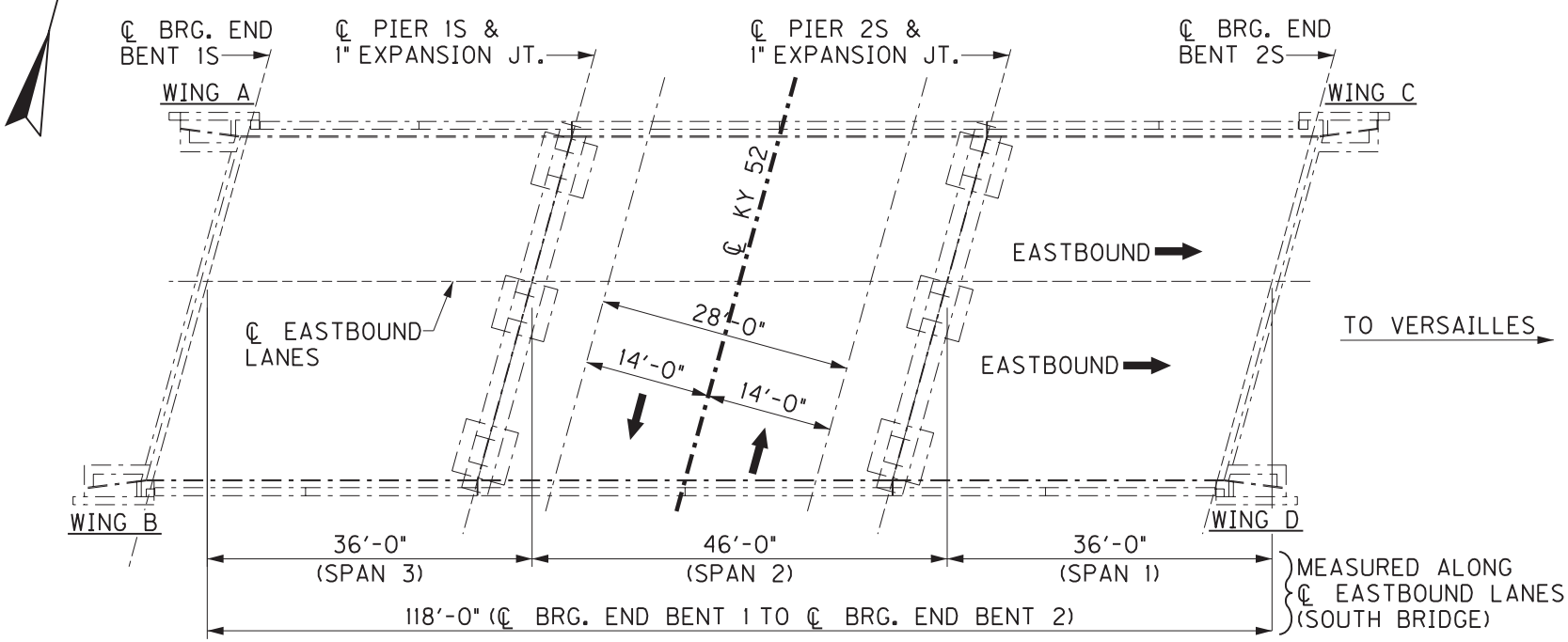
8. Length (ft):	118.00	**Curb to Curb Width (ft):**	38.00
Skew:	19° 00' LT	**Out to Out Width (ft):**	41.50
Surface Area (SY):	499	**Deck Thickness (in):**	7.00

ESTIMATE OF QUANTITIES

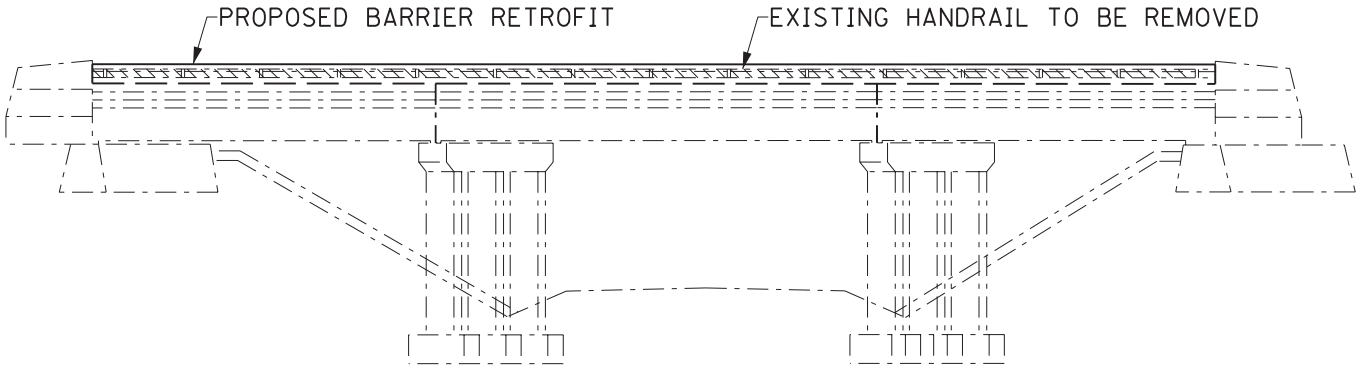
ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT
8106	CONCRETE CLASS M 1	10	CY
8151	STEEL REINFORCEMENT EPOXY COATED	874	LBS
23032EN	BRIDGE BARRIER RETROFIT	236	LF
23783EC	REMOVE CONCRETE BARRER	4.0	EACH
24982EC	CONCRETE COATING	1	LS
25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	33.0	LF

See Bridge Barrier Retrofit Detail Sheets after Special Notes for Bridge Barrier Retrofit and Wingwall Replacement details.

(EB) SOUTH BRIDGE
OVER KY 52
BRIDGE MAINTENANCE #090B00012R



PLAN



ELEVATION

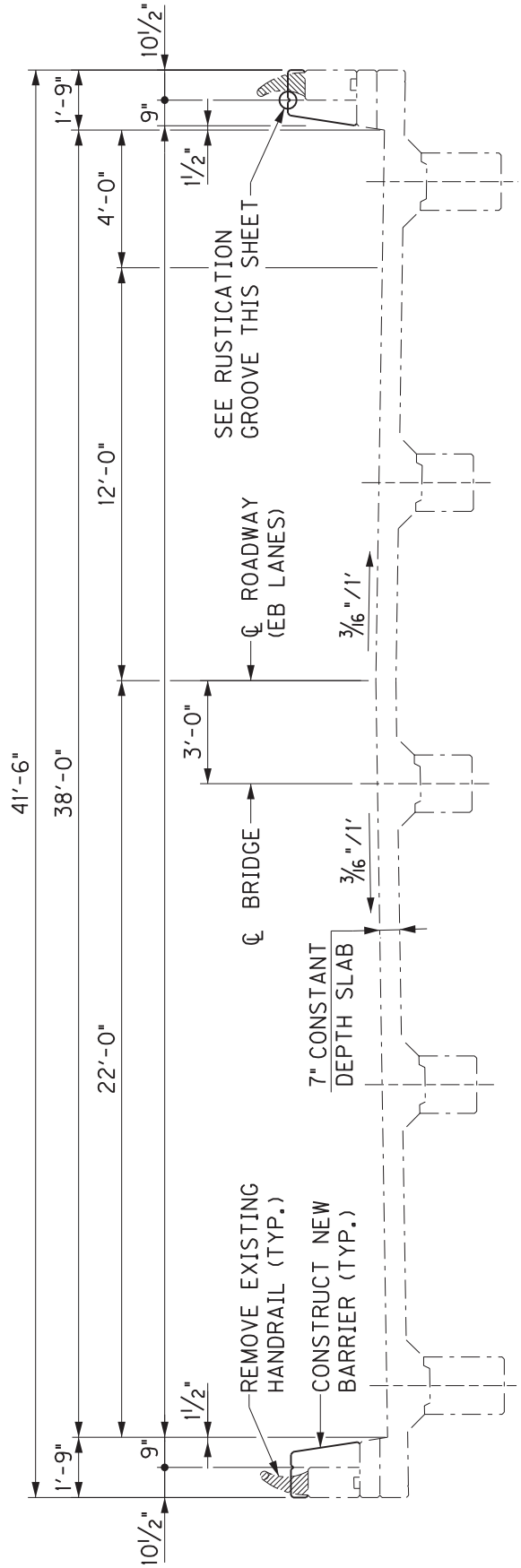
DRAWN BY: DWW
CHECKED BY: MRW
JOB NO.:1831-2102
DATE: OCT. 2018
SCALE: NTS
SHEET:

BRIDGE 090B00012R
OVER KY 52

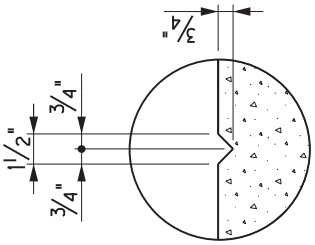
KENTUCKY TRANSPORTATION CABINET
200 MERO STREET
FRANKFORT, KY 40622

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B4



TYPICAL SECTION



RUSTICATION GROOVE

DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE 090B00012R OVER KY 52	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622
CHECKED BY: MRW	SCALE: NTS		
JOB NO.: 1831-2102	SHEET:		

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B4

BRIDGE #4 (090B00012R) – BILL OF REINFORCEMENT

MARK	TYPE	NUMBER					SIZE	LENGTH		LOCATION	A		B		C	
		BRIDGE	WING A	WING B	WING C	WING D		FT	IN		FT	IN	FT	IN	FT	IN
S1(e)		242	—	—	—	—	5	3	5	BRIDGE BARRIER RETROFIT	1	1				
S2(e)		242	—	—	—	—	5	5	0	" " "	1	8 1/2				
S3(e)	STR.	12	—	—	—	—	5	35	4	" " "						
S4(e)	STR.	6	—	—	—	—	5	45	7	" " "						
S5(e)																
S6(e)		—	24	22	22	24	5	2	10	WING BARRIER RETROFIT						
S7(e)	STR.	—	2	2	2	2	5	2	5	" " "						
S8(e)	STR.	—	6	6	6	6	5	8	5*	" " "						
S9(e)	STR.	—	2	2	2	2	5	8	11*	" " "						
S10(e)	STR.	—	2	2	2	2	5	0	6	" " "						
S11(e)	STR.	—	16	16	16	16	5	3	9	" " "						
S12(e)	STR.	—	2	2	2	2	5	7	7*	" " "						
S13(e)		—	12	12	12	12	5	6	7	" " "						
S14(e)		—	12	12	12	12	5	5	10	" " "						

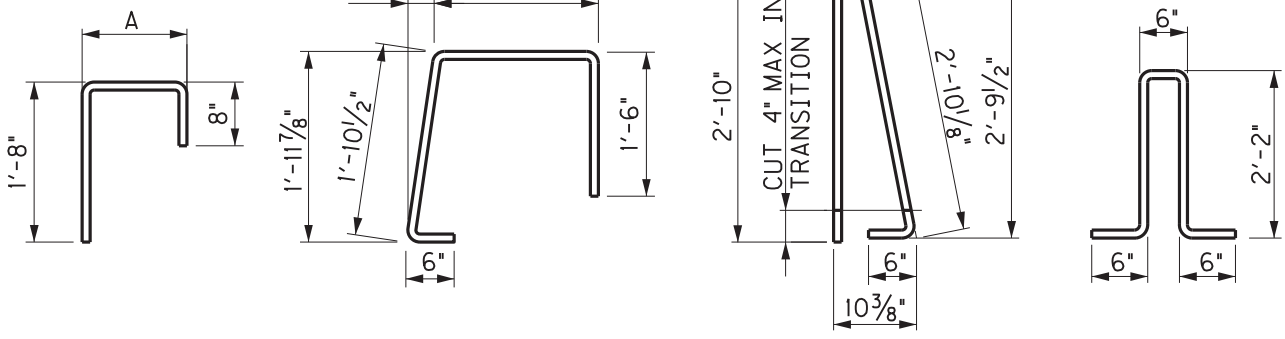
* REDUCE BAR LENGTH BY 1'-0" FOR SHORTER WING LENGTH

TOTAL WEIGHT = 4,338 LBS.

BARS S6(e)-S12(e) TO BE PAID SEPARATELY
NET WEIGHT = 874 LBS.

CONCRETE SLAB TO BE PAID SEPARATELY
CLASS M VOLUME = 10 CY

WING LENGTH			
WING A	WING B	WING C	WING D
8'-9"	7'-9"	7'-9"	8'-9"



TYPE ① TYPE ② TYPE ③ TYPE ④

DRAWN BY: DWW	DATE: MAY 2019
CHECKED BY: MRW	SCALE: NTS
JOB NO.: 1831-2102	SHEET:

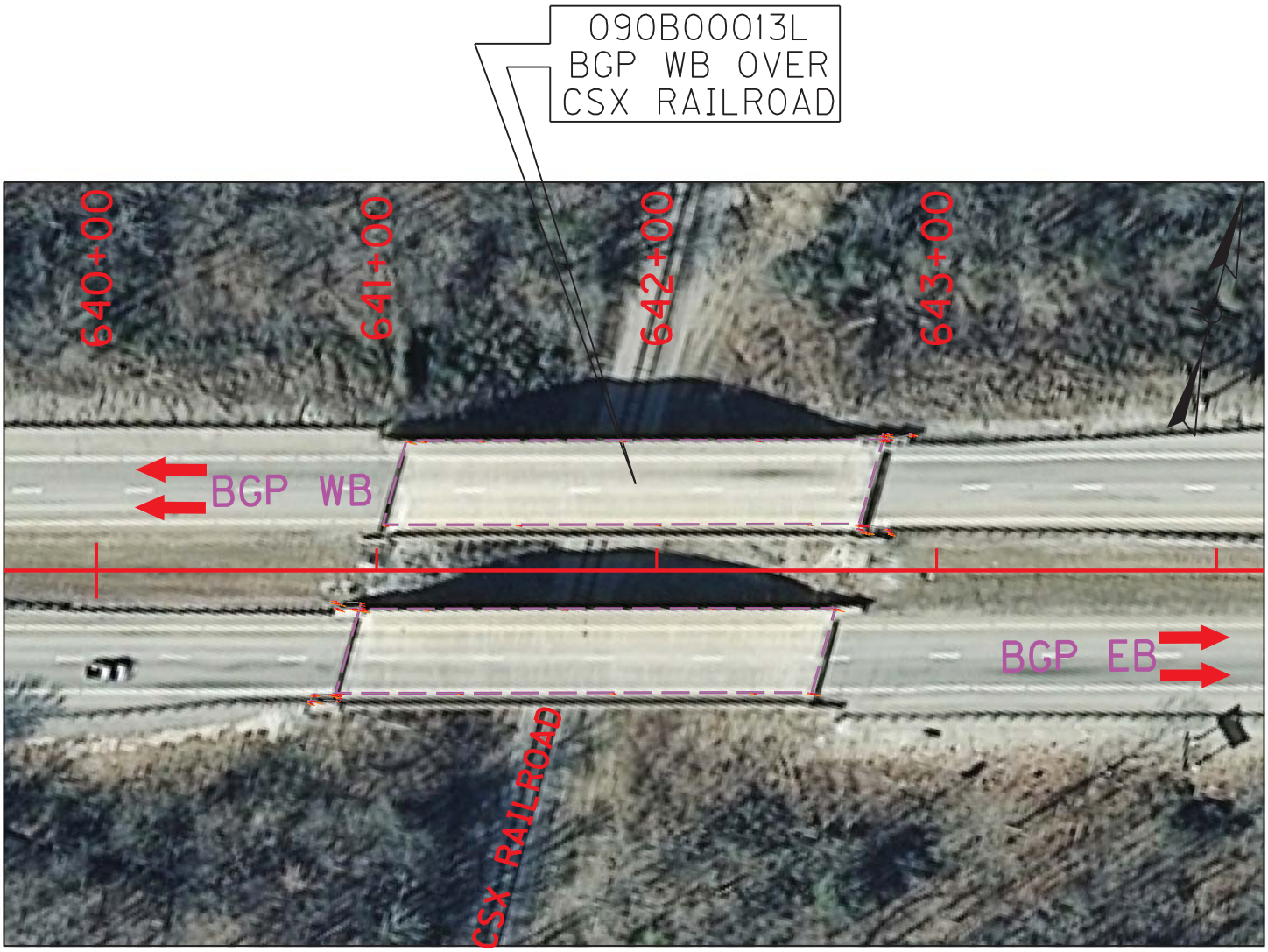
BRIDGE 090B00012R
OVER KY 52

KENTUCKY TRANSPORTATION
CABINET
200 MERO STREET
FRANKFORT, KY 40622

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B5

BRIDGE #5 (090B00013L)
NELSON COUNTY



APPROXIMATE LOCATION INFORMATION
LATITUDE: 37°45'05"N
LONGITUDE: 85°39'46"E
MP 10.179 ON BLUEGRASS PARKWAY

DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE 090B00013L OVER CSX RR	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622	DLZ WMB 1950 HAGGARD COURT LEXINGTON, KENTUCKY 40505 (859) 299-5226
CHECKED BY: MRW	SCALE: 1" = 60'-0"			
JOB NO.: 1831-2102	SHEET:			

BRIDGE #5 (090B00013L) - ESTIMATE OF QUANTITIES

STRUCTURE INFORMATION:

1. District: 4
2. County: Nelson
3. Route: KY 9002
4. Constr. Number: 4-20007
5. Road Name: Bluegrass Parkway
6. Description: Bluegrass Parkway WB over CSX RR

7. Type of Work: Bridge Barrier Retrofit

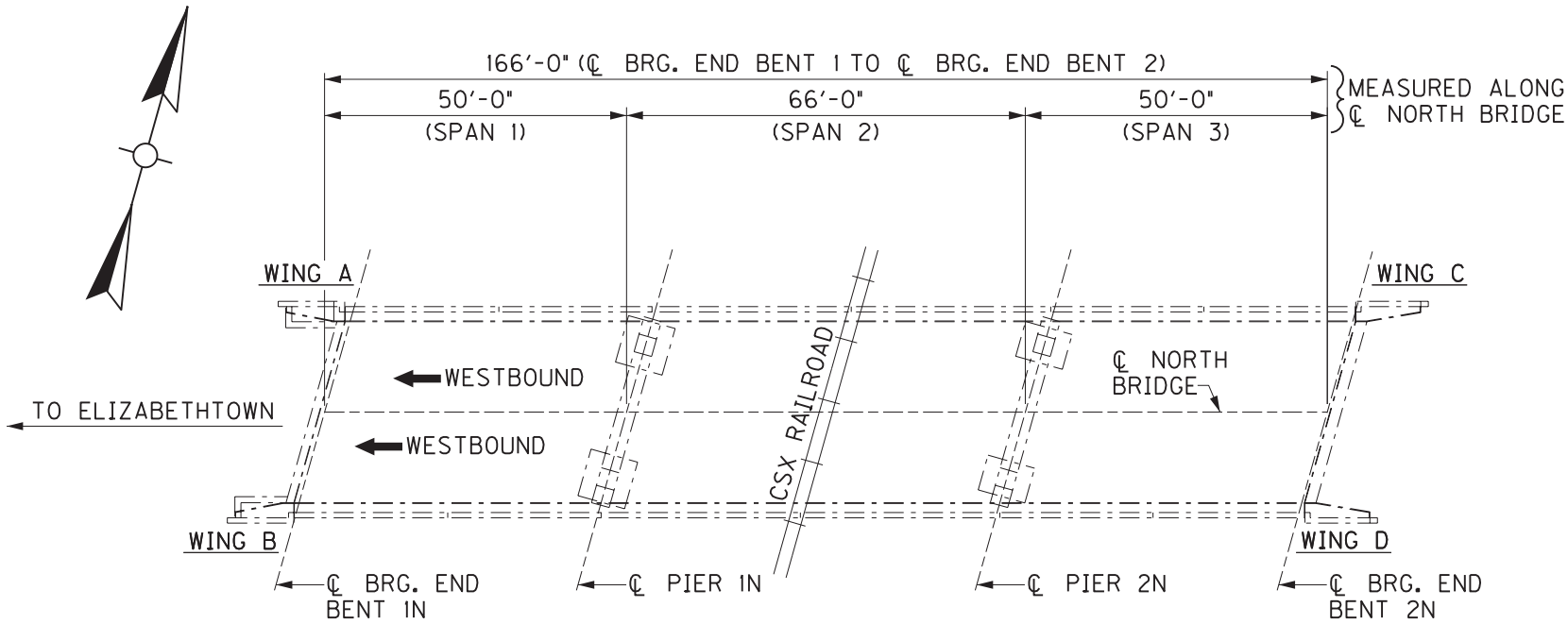
8. Length (ft):	166.00	**Curb to Curb Width (ft):**	30.00
Skew:	15° 00' LT	**Out to Out Width (ft):**	35.00
Surface Area (SY):	554	**Deck Thickness (in):**	7.00

ESTIMATE OF QUANTITIES

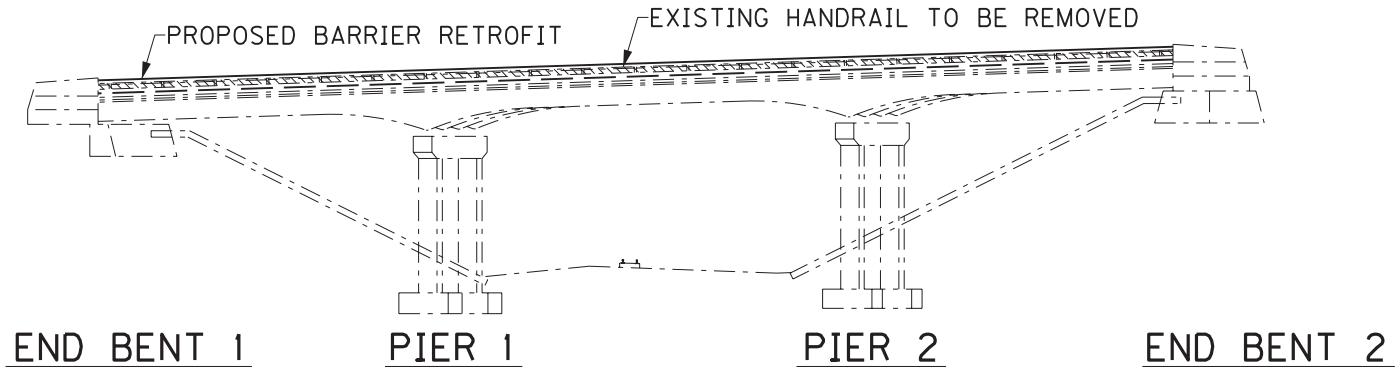
ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT
8106	CONCRETE CLASS M 1	10	CY
8151	STEEL REINFORCEMENT EPOXY COATED	998	LBS
23032EN	BRIDGE BARRIER RETROFIT	332	LF
23783EC	REMOVE CONCRETE BARRER	4.0	EACH
24982EC	CONCRETE COATING	1	LS
25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	35	LF

See Bridge Barrier Retrofit Detail Sheets after Special Notes for Bridge Barrier Retrofit and Wingwall Replacement details.

(WB) NORTH BRIDGE OVER CSX RAILROAD
BRIDGE MAINTENANCE #090B00013L



PLAN



ELEVATION

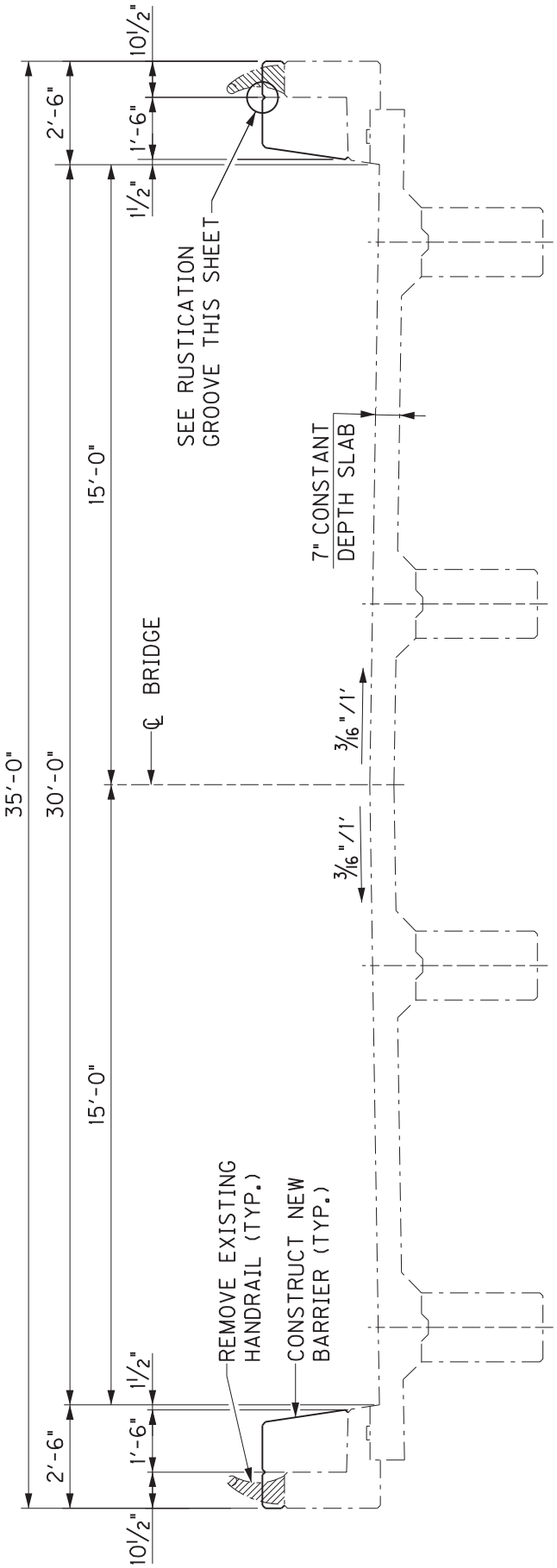
DRAWN BY: DWW
CHECKED BY: MRW
JOB NO.: 183I-2102
DATE: OCT. 2018
SCALE: NTS
SHEET:

BRIDGE 090B00013L
OVER CSX RAILROAD

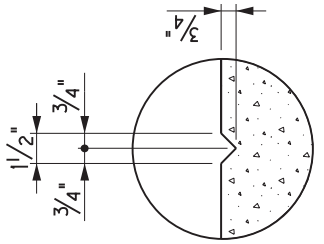
KENTUCKY TRANSPORTATION CABINET
200 MERO STREET
FRANKFORT, KY 40622

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B5



TYPICAL SECTION



RUSTICATION GROOVE

DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE 090B00013L OVER CSX RR	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622
CHECKED BY: MRW	SCALE: NTS		
JOB NO.: 1831-2102	SHEET:		

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B5

BRIDGE #5 (090B00013L) – BILL OF REINFORCEMENT

MARK	TYPE	NUMBER					SIZE	LENGTH		LOCATION	A		B		C	
		BRIDGE	WING A	WING B	WING C	WING D		FT	IN		FT	IN	FT	IN	FT	IN
S1(e)	①	338	—	—	—	—	5	3	5	BRIDGE BARRIER RETROFIT	1	1				
S2(e)	②	338	—	—	—	—	5	5	9	" " "	1	8½				
S3(e)	STR.	36	—	—	—	—	5	57	6	" " "						
S4(e)																
S5(e)																
S6(e)	STR.	—	28	28	24	24	5	2	10	WING BARRIER RETROFIT						
S7(e)	STR.	—	4	4	24	24	5	3	2	" " "						
S8(e)	STR.	—	6	6	6	6	5	9	2*	" " "						
S9(e)	STR.	—	2	2	2	2	5	9	8*	" " "						
S10(e)	STR.	—	2	2	2	2	5	0	6	" " "						
S11(e)	STR.	—	18	18	—	—	5	4	2	" " "						
S12(e)	STR.	—	2	2	—	—	5	8	4	" " "						
S13(e)	③	—	14	14	15	15	5	6	7	" " "						
S14(e)	④	—	14	14	15	15	5	5	10	" " "						

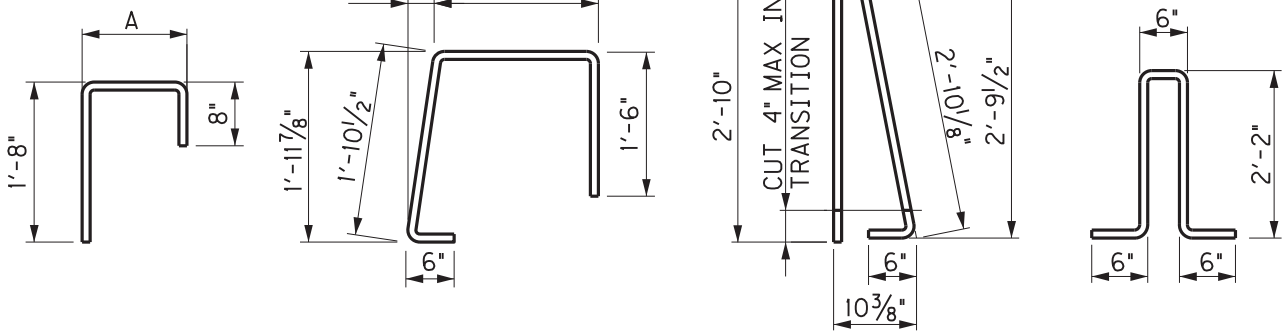
* REDUCE BAR LENGTH BY 1'-0" FOR SHORTER WING LENGTH

TOTAL WEIGHT = 7,125 LBS.

BARS S6(e)-S12(e) TO BE PAID SEPARATELY
NET WEIGHT = 998 LBS.

CONCRETE SLAB TO BE PAID SEPARATELY
CLASS M VOLUME = 10 CY

WING LENGTH			
WING A	WING B	WING C	WING D
9'-9"	9'-9"	10'-9"	10'-9"



TYPE ① TYPE ② TYPE ③ TYPE ④

DRAWN BY: DWW	DATE: MAY 2019
CHECKED BY: MRW	SCALE: NTS
JOB NO.: 1831-2102	SHEET:

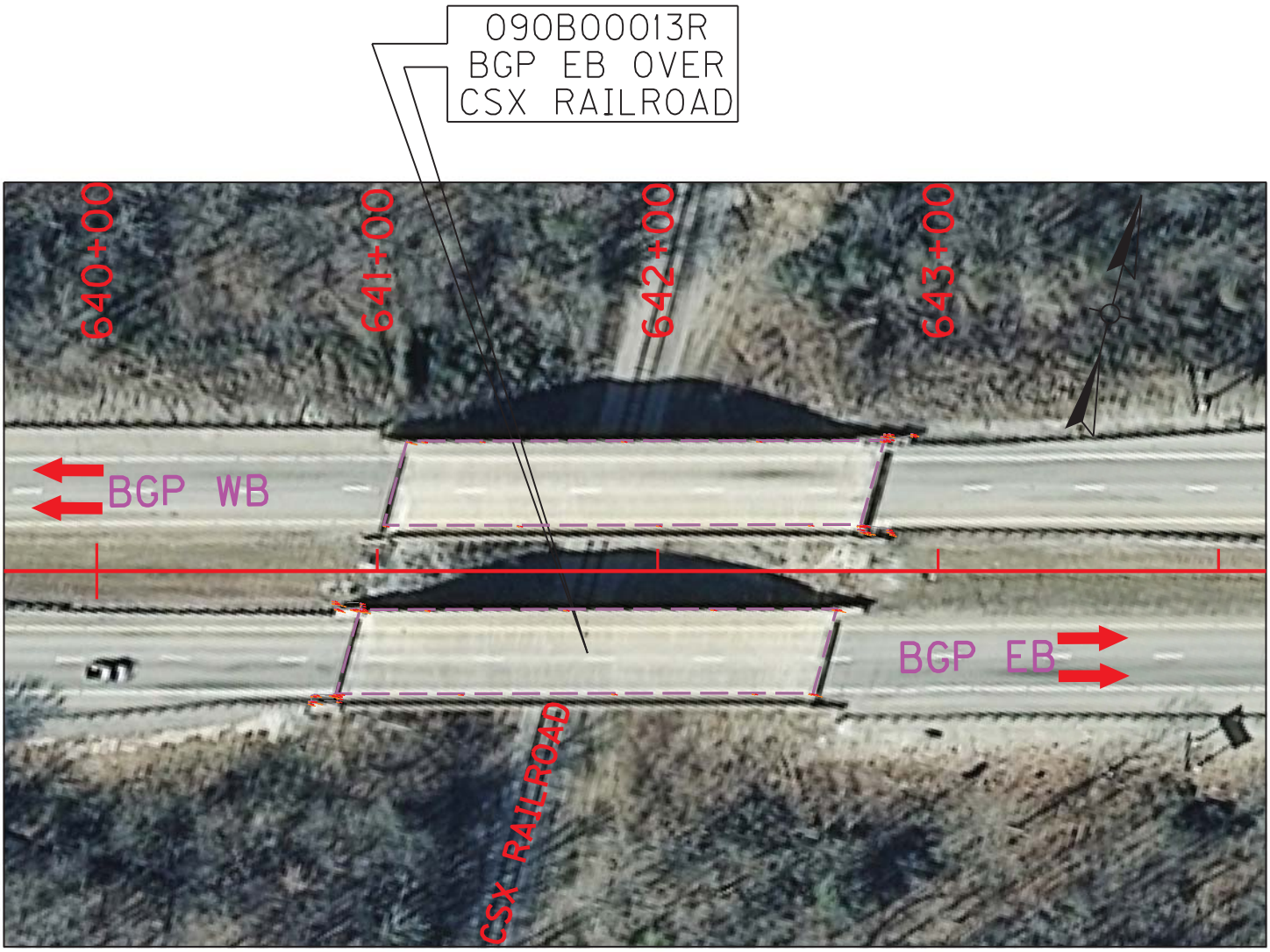
BRIDGE 090B00013L
OVER CSX RAILROAD

KENTUCKY TRANSPORTATION
CABINET
200 MERO STREET
FRANKFORT, KY 40622

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B6

BRIDGE #6 (090B00013R)
NELSON COUNTY



APPROXIMATE LOCATION INFORMATION
LATITUDE: 37°45'05"N
LONGITUDE: 85°39'46"E
MP 10.176 ON BLUEGRASS PARKWAY

DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE 090B00013R OVER CSX RR	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622	DLZ WMB 1950 HAGGARD COURT LEXINGTON, KENTUCKY 40505 (859) 299-5226
CHECKED BY: MRW	SCALE: 1" = 60'-0"			
JOB NO.: 1831-2102	SHEET:			

BRIDGE #6 (090B00013R) - ESTIMATE OF QUANTITIES

STRUCTURE INFORMATION:

1. District: 4
2. County: Nelson
3. Route: KY 9002
4. Constr. Number: 4-20007
5. Road Name: Bluegrass Parkway
6. Description: Bluegrass Parkway EB over CSX RR

7. Type of Work: Bridge Barrier Retrofit

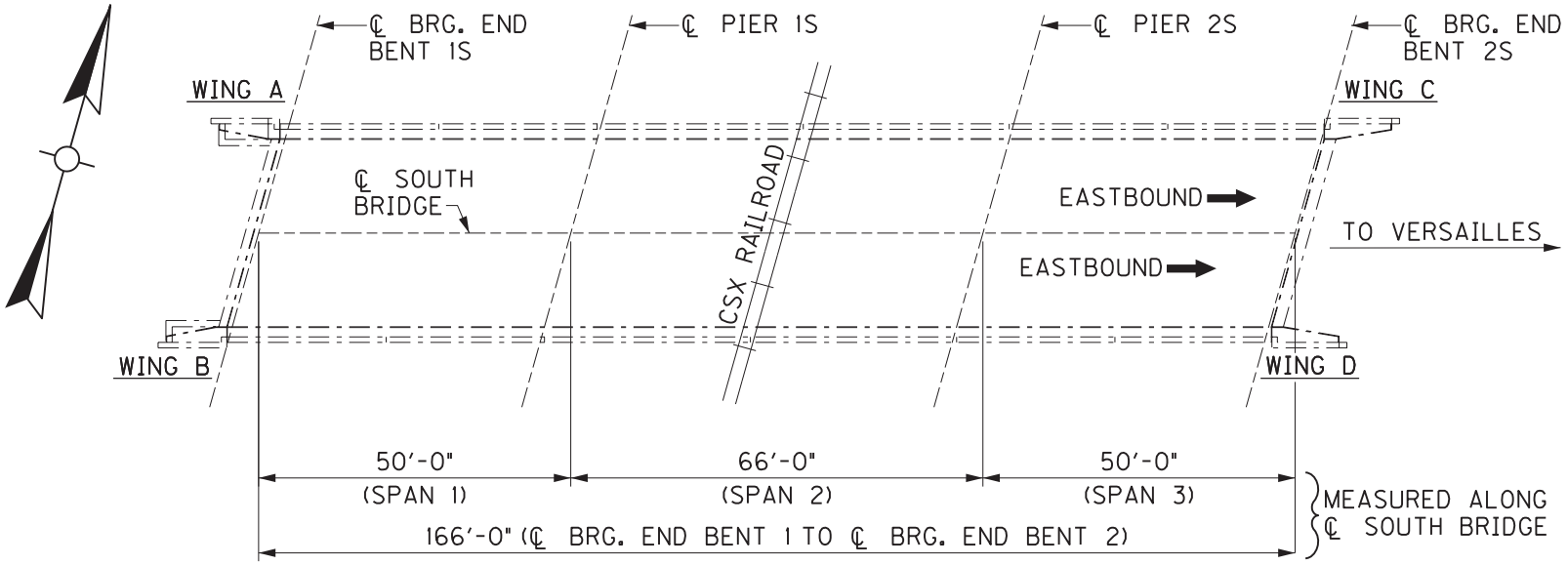
8. Length (ft):	166.00	**Curb to Curb Width (ft):**	30.00
Skew:	15° 00' LT	**Out to Out Width (ft):**	35.00
Surface Area (SY):	554	**Deck Thickness (in):**	7.00

ESTIMATE OF QUANTITIES

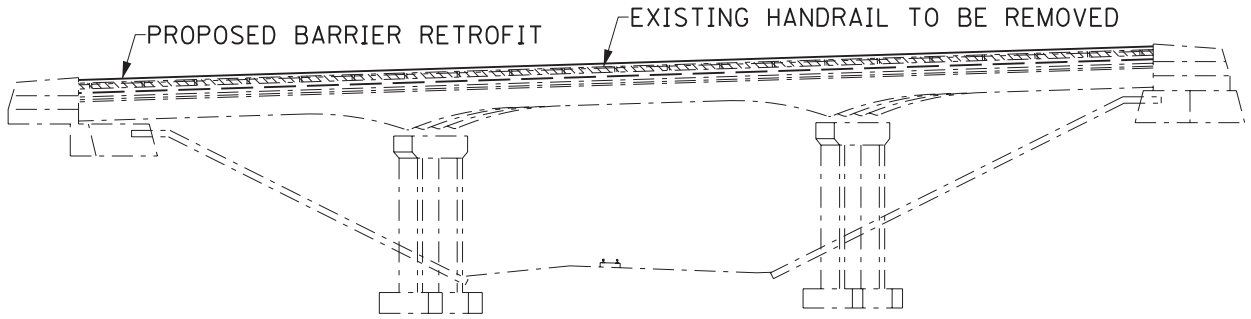
ITEM NUMBER	DESCRIPTION	QUANTITY	UNIT
8106	CONCRETE CLASS M 1	10	CY
8151	STEEL REINFORCEMENT EPOXY COATED	998	LBS
23032EN	BRIDGE BARRIER RETROFIT	332	LF
23783EC	REMOVE CONCRETE BARRER	4.0	EACH
24982EC	CONCRETE COATING	1	LS
25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	35	LF

See Bridge Barrier Retrofit Detail Sheets after Special Notes for Bridge Barrier Retrofit and Wingwall Replacement details.

(EB) SOUTH BRIDGE OVER CSX RAILROAD
BRIDGE MAINTENANCE #090B00013R



PLAN



ELEVATION

DRAWN BY: DWW
CHECKED BY: MRW
JOB NO.: 1831-2102
DATE: OCT. 2018
SCALE: NTS
SHEET:

BRIDGE 090B00013R
OVER CSX RAILROAD

KENTUCKY TRANSPORTATION CABINET
200 MERO STREET
FRANKFORT, KY 40622

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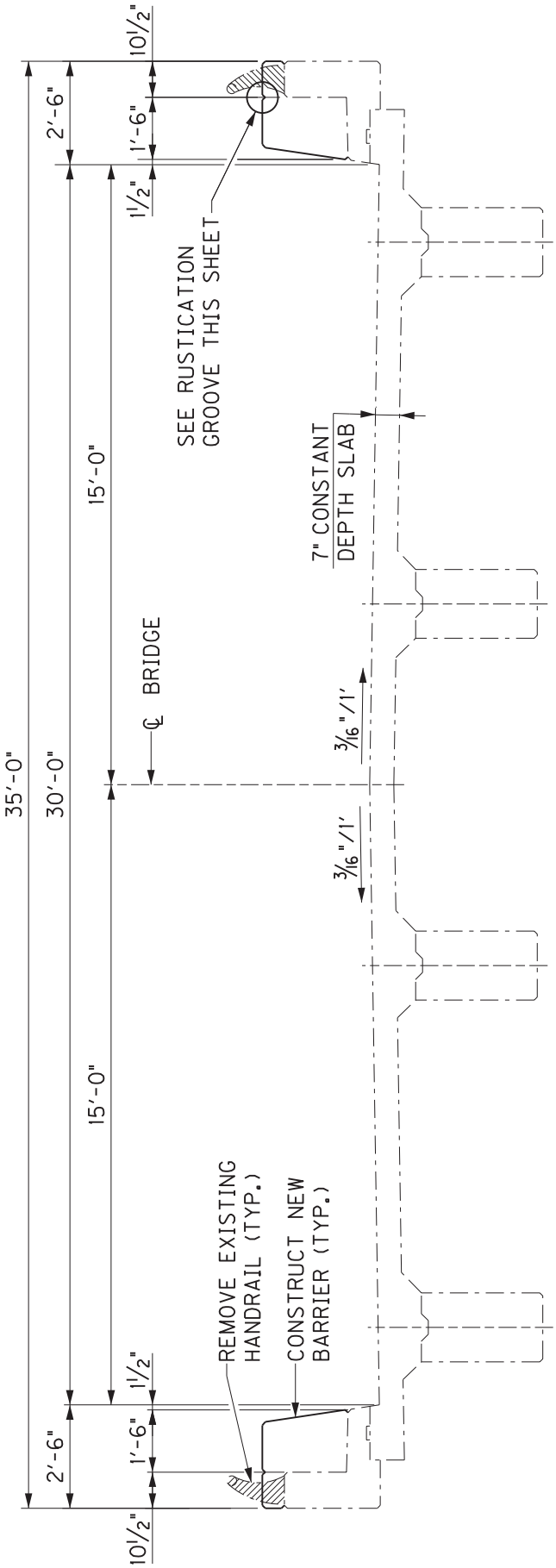
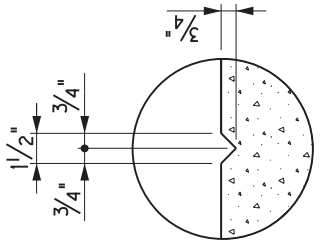
B6



TYPICAL SECTION



RUSTICATION GROOVE

DRAWN BY: DWW	DATE: OCT. 2018	BRIDGE 090B00013R OVER CSX RR	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622
CHECKED BY: MRW	SCALE: NTS		
JOB NO.: 1831-2102	SHEET:		

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

B6

BRIDGE #6 (090B00013R) – BILL OF REINFORCEMENT

MARK	TYPE	NUMBER					SIZE	LENGTH		LOCATION	A		B		C	
		BRIDGE	WING A	WING B	WING C	WING D		FT	IN		FT	IN	FT	IN	FT	IN
S1(e)	①	338	—	—	—	—	5	3	5	BRIDGE BARRIER RETROFIT	1	1				
S2(e)	②	338	—	—	—	—	5	5	9	" " "	1	8½				
S3(e)	STR.	36	—	—	—	—	5	57	6	" " "						
S4(e)																
S5(e)																
S6(e)	STR.	—	28	28	24	24	5	2	10	WING BARRIER RETROFIT						
S7(e)	STR.	—	4	4	24	24	5	3	2	" " "						
S8(e)	STR.	—	6	6	6	6	5	9	2*	" " "						
S9(e)	STR.	—	2	2	2	2	5	9	8*	" " "						
S10(e)	STR.	—	2	2	2	2	5	0	6	" " "						
S11(e)	STR.	—	18	18	—	—	5	4	2	" " "						
S12(e)	STR.	—	2	2	—	—	5	8	4	" " "						
S13(e)	③	—	14	14	15	15	5	6	7	" " "						
S14(e)	④	—	14	14	15	15	5	5	10	" " "						

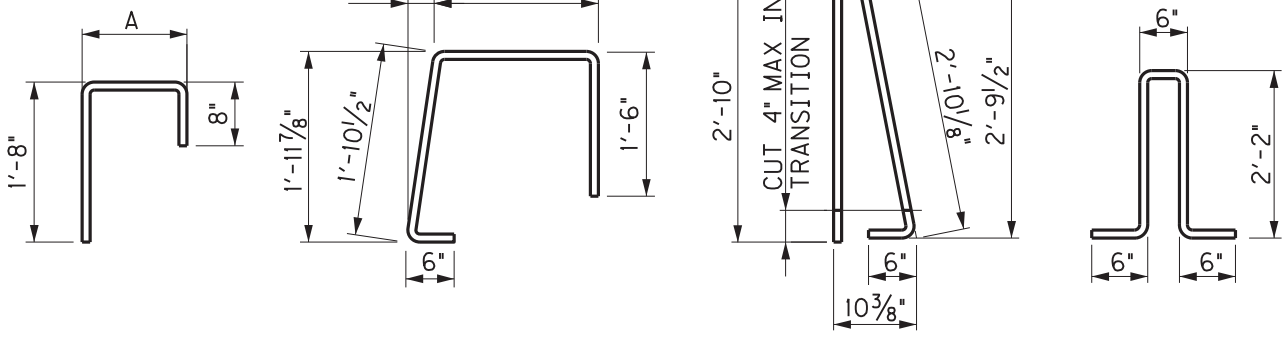
* REDUCE BAR LENGTH BY 1'-0" FOR SHORTER WING LENGTH

TOTAL WEIGHT = 7,125 LBS.

BARS S6(e)-S12(e) TO BE PAID SEPARATELY
NET WEIGHT = 998 LBS.

CONCRETE SLAB TO BE PAID SEPARATELY
CLASS M VOLUME = 10 CY

WING LENGTH			
WING A	WING B	WING C	WING D
9'-9"	9'-9"	10'-9"	10'-9"



TYPE ① TYPE ② TYPE ③ TYPE ④

DRAWN BY: DWW	DATE: MAY 2019
CHECKED BY: MRW	SCALE: NTS
JOB NO.: 1831-2102	SHEET:

BRIDGE 090B00013R
OVER CSX RAILROAD

KENTUCKY TRANSPORTATION
CABINET
200 MERO STREET
FRANKFORT, KY 40622

DLZ WMB
1950 HAGGARD COURT
LEXINGTON, KENTUCKY 40505
(859) 299-5226

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 INTELLIGENT COMPACTION OF ASPHALT MIXTURES

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction current edition.

1.0 DESCRIPTION. Provide and use Intelligent Compaction (IC) Rollers for compaction of all asphalt mixtures.

2.0 MATERIALS AND EQUIPMENT. In addition to the equipment specified in Subsection 403.02, a minimum of one (1) IC roller is to be used on the project at all times, two (2) IC rollers will be required when the paving train consists of three (3) or more rollers. The Contractor is to only use the IC roller(s) for compaction as the breakdown and/or intermediate roller(s). All IC rollers will meet the following minimum characteristics:

1. Are self propelled double-drum vibratory rollers equipped with accelerometers mounted in or about the drum to measure the interactions between the rollers and compacted materials in order to evaluate the applied compactive effort. The IC rollers must have the approval of the Engineer prior to use. Examples of rollers equipped with IC technology can be found at www.IntelligentCompaction.com.
2. Are equipped with non-contact temperature sensors for measuring pavement surface temperatures.
3. The output from the roller is designated as the IC-MV which represents the stiffness of the materials based on the vibration of the roller drums and the resulting response from the underlying materials.
4. Are equipped with integrated on-board documentation systems that are capable of displaying real-time color-coded maps of IC measurement values including the stiffness response values, location of the roller, number of roller passes, machine settings, together with the material temperature, speed and the frequency and amplitude of roller drums. Ensure the display unit is capable of transferring the data by means of a cloud based system.
5. Are equipped with a mounted Global Positioning System GPS radio and receiver either a Real Time Kinematic (RTK-GPS) or Global Navigational Satellite System (GNSS) units that monitor the location and track the number of passes of the rollers. Accuracy of the positioning system is to be a minimum of 12 inches. Data is to be transferred to the Cabinet via a cloud based system within 30 minutes of collection.

3.0 WORK PLAN. Submit to the Engineer an IC Work Plan at the Preconstruction Conference and at least 2 weeks prior to beginning construction. Describe in the work plan the following:

1. Compaction equipment to be used including:
    - Vendor(s)
    - Roller model(s),
    - Roller dimensions and weights,
    - Description of IC measurement system,
    - GPS capabilities,
    - Documentation system,
    - Temperature measurement system, and
    - Software.

2. Roller data collection methods including sampling rates and intervals and data file types.
3. Transfer of data to the Engineer including method, timing, and personnel responsible. At the preconstruction meeting, provide the Cabinet with rights to allow for web access to the data file location. Access to the data is not to be hindered in any way. The Contractor will provide the Cabinet with any vendor specific software, user id, passwords, etc. needed to access the data through this service, cost of this access is incidental to the thermal profile bid item. The Cabinet is to have access to all data as it is being collected. If a third party is used for collecting and distributing the data the Cabinet is to have the same access rights and time as the Contractor.
4. Training plan and schedule for roller operators, project foreman, project surveyors, and Cabinet personnel; including both classroom and field training. Training should be conducted at least 1 week before beginning IC construction. The training is to be performed by a qualified representative(s) from the IC Roller manufacture(s) to be used on the project. This training shall include how to access and use the data from the cloud data source.

4.0 CONSTRUCTION. Do not begin work until the Engineer has approved the IC submittals and the IC equipment.

Follow requirements established in Section 400 for production and placement, materials, equipment, acceptance plans and adjustments except as noted or modified in this Specification. Provide the Engineer at least one day's notice prior to beginning construction or prior to resuming production if operations have been temporarily suspended. Ensure paving equipment complies with all requirements specified in Section 400. The IC roller temperatures will be evaluated by the Department with the data from a Paver Mounted Infrared Temperature Gauge.

A. Pre-Construction Test Section(s) Requirements.

Three to five days prior to the start of production, ensure the proper setup of the GPS, IC roller(s) and the rover(s) by conducting joint GPS correlation and verification testing between the Contractor, GPS representative and IC roller manufacturer using the same datum.

1. Ensure GPS correlation and verification testing includes the following minimum processes:

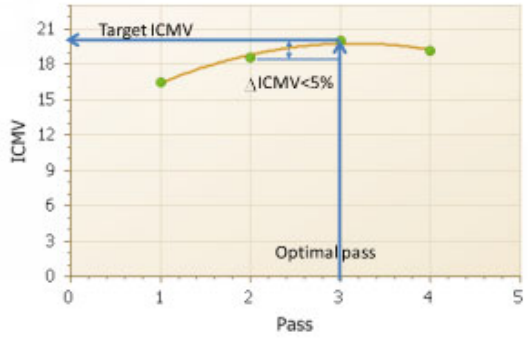
    a. Establish the GPS system to be used either one with a base station or one with mobile receivers only. Ensure all components in the system are set to the correct coordinate system; then,
    b. Verify that the roller and rover are working properly and that there is a connection with the base station; then,
    c. Record the coordinates of the two edges where the front drum of the roller is in contact with the ground from the on-board, color-coded display; then,
    d. Mark the locations of the roller drum edges and move the roller, and place the mobile receiver at each mark and record the readings; then,

2. Compare coordinates between the roller and rover receivers. If the coordinates are within 12.0 in. of each other, the comparison is acceptable. If the coordinates are not within 12.0 in., diagnose and perform necessary corrections and repeat the above steps until verification is acceptable.
3. Do not begin work until acceptable GPS correlation and verification has been obtained.
4. The Contractor and the Department should conduct random GPS verification testing during production to ensure data locations are accurate. The recommended rate is once per day with a requirement of at least once per week.
5. All acceptance testing shall be as outlined in Standard Specifications section 400.

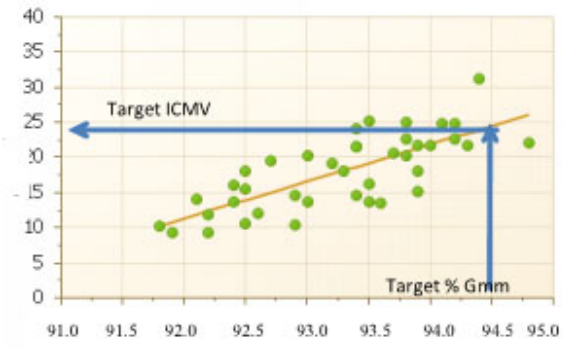
B. Construction Test Section(s) Requirements.

Construct test section(s) at location(s) agreed on by the Contractor and the Engineer within the project limits. The test section is required to determine a compaction curve of the asphalt mixtures in relationship to number of roller passes and to the stiffness of mixture while meeting the Department in-place compaction requirements. All rollers and the respective number of passes for each is to be determined via control strip each time a material change, equipment change or when the Engineer deems necessary.

Conduct test section(s) on every lift and every asphalt mixture. Ensure test section quantities of 500 to 1,000 tons of mainline mixtures. Operate IC rollers in the low to medium amplitude range and at the same settings (speed, frequency) throughout the section while minimizing overlapping of the roller, **the settings are to be used throughout the project with no changes.** After each roller pass, the qualified technician from the contractor observed by the Department will use a nondestructive nuclear gauge that has been calibrated to the mixture to estimate the density of the asphalt at 10 locations uniformly spaced throughout the test section within the width of a single roller pass. The density readings and the number of roller passes needed to achieve the specified compaction will be recorded. The estimated target density will be the peak of the average of the nondestructive readings within the desired compaction temperature range for the mixture. The IC roller data in conjunction with the Veda software will create an IC compaction curve for the mixture. The target IC-MV is the point when the increase in the IC-MV of the material between passes is less than 5 percent on the compaction curve. The IC compaction curve is defined as the relationship between the IC-MV and the roller passes. A compaction curve example is as follows:



Subsequent to the determination of the target IC-MV, compact an adjoining > 250 < 500 tons section using same roller settings and the number of estimated roller passes and allow the Department to verify the compaction with the same calibrated nondestructive nuclear gauge following the final roller pass. **The Department will obtain cores at 10 locations (No cores for calibration are to be taken in the surface layer, use non-destructive density results only!!)** uniformly spaced throughout the test section within the width of the single roller. Obtain GPS measurement of the core locations with a GPS rover. Use the Veda software to perform least square linear regression between the core data and IC-MV in order to correlate the production IC-MV values to the Department specified in-place air voids. A sample linear regression curve example is as follows.



C. Construction Requirements.

Use the IC roller on all lifts and types of asphalt within the limits of the project.

Ensure the optimal number of roller passes determined from the test sections has been applied to a minimum coverage of 80% of the individual IC Construction area. Ensure a minimum of 75% of the individual IC Construction area meets the target IC-MV values determined from the test sections.

Do not continue paving operations if IC Construction areas not meeting the IC criteria are produced until they have been investigated by the Department. Obtain the Engineer's approval to resume paving operations. Non-IC rollers are allowed to be used as the third roller on the project; one of the breakdown or the finish rollers is to be equipped with IC technology.

IC Construction areas are defined as subsections of the project being worked continuously by the Contractor. The magnitude of the IC Construction areas may vary with production but must be at least 750 tons per mixture for evaluation. Partial IC Construction areas of < 750 tons will be included in the previous area evaluation. IC Construction areas may extend over multiple days depending on the operations.

The IC Construction Operations Criteria does not affect the Department's acceptance processes for the materials or construction operations

5.0 MEASUREMENT. The Department will measure the total tons of asphalt mixtures compacted using the IC roller(s). Compaction is to be performed by a minimum of one (1) IC roller for a two (2) roller operation and a minimum of two (2) IC rollers when three (3) or more rollers are used for compaction. Material compacted by rollers not equipped with properly functioning IC equipment will not be accepted for payment of the bid item asphalt mixtures IC rolled. Use of

non-IC rollers can be accepted on small areas due to equipment malfunctions at the written approval of the Engineer. Paving operations should be suspended for equipment malfunctions that will extend over three days of operation.

Data is to be transferred to the cabinet in usable form no later than 30 minutes after collection. Data is to be transferred via a cloud based system.

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

1. Payment is full compensation for all work associated with providing IC equipped rollers, laptop computer, transmission of electronic data files, two copies of IC roller manufacturer software, and training.
2. Delays due to GPS satellite reception of signals to operate the IC equipment or IC roller breakdowns will not be considered justification for contract modifications or contract extensions.
3. Delays in data transfer will result in a reduction payment. Delays over 1 hour after collection are 75% pay, over 90 minutes are 50% pay, over 2 hours are 25% pay.

Code	Pay Item	Pay Unit
24781EC	Intelligent Compaction for Asphalt	Ton

March 14, 2019

SPECIAL NOTE FOR PAVER MOUNTED TEMPERATURE PROFILES

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's Standard Specifications for Road and Bridge Construction current edition.

1.0 DESCRIPTION. Provide a paver mounted infrared temperature equipment to continually monitor the temperature of the asphalt mat immediately behind all paver(s) during the placement operations for all mainline pavements (including ramps for Interstates and Parkways) within the project limits. Provide thermal profiles that include material temperature and measurement locations.

2.0 MATERIALS AND EQUIPMENT. In addition to the equipment specified in Subsection 403.02 Utilize a thermal equipment supplier that can provide a qualified representative for on-site technical assistance during the initial setup, pre-construction verification, and data management and processing as needed during the Project to maintain equipment within specifications and requirements.

Provide operator settings, user manuals, required viewing/export software for analysis. Ensure the temperature equipment will meet the following:

A. A device with one or more infrared sensors that is capable of measuring in at least 1 foot intervals across the paving width, with a minimum width of 12 feet, or extending to the recording limits of the equipment, whichever is greater. A **Maximum of two (2)** brackets are allowed in the influence area under the sensors. A temperature profile must be made on at least 1 foot intervals longitudinally down the road:
B. Infrared sensor(s):
   1. Measuring from 32°F to 400°F with an accuracy of ± 2.0% of the sensor reading.
C. Ability to measure the following:
   1. The placement distance using a Global Positioning System (GPS) or a Distance Measuring Instrument (DMI) and a Global Positioning System (GPS).
   2. Stationing
D. GPS: Accuracy ± 4 feet in the X and Y Direction
E. Latest version of software to collect, display, retain and analyze the mat temperature readings during placement. The software must have the ability to create and analyze:
   1. Full collected width of the thermal profiles,
   2. Paver speed and
   3. Paver stops and duration for the entire Project.
F. Ability to export data automatically to a remote data server ("the cloud").
   At the preconstruction meeting, provide the Cabinet with rights to allow for web access to the data file location. Access to the data is not to be hindered in any way. The Contractor will provide the Cabinet with any vendor specific software, user id, passwords, etc. needed to access the data through this service, cost of this access is incidental to the thermal profile bid item. The Cabinet is to have access to all data as it is being collected. If a third party is used for collecting and distributing the data the Cabinet is to have the same access rights and time as the Contractor.
   This web-based software must also provide the Department with the ability to download the raw files and software and to convert them into the correct format.
G. The thermal profile data files must provide the following data in a neat easy to read table format.
   1. Project information including Road Name and Number, PCN, Beginning and Ending MPs.
   2. IR Bar Manufacturer and Model number
   3. Number of Temperature Sensors (N)
   4. Spacing between sensors and height of sensors above the asphalt mat
   5. Total number of individual records taken each day (DATA BLOCK)
      a. Date and Time reading taken
      b. Latitude and Longitude
      c. Distance paver has moved from last test location
      d. Direction and speed of the paver
      e. Surface temperature of each of the sensors

3.0 CONSTRUCTION. Provide the Engineer with all required documentation at the pre-construction conference.

A. Install and operate equipment in accordance with the manufacturer's specifications.
B. Verify that the temperature sensors are within ± 2.0% using an independent temperature device on a material of known temperature. Collect and compare the GPS coordinates from the equipment with an independent measuring device.
    1. Ensure the independent survey grade GPS measurement device is calibrated to the correct coordinate system (using a control point), prior to using these coordinates to validate the equipment GPS.
    2. The comparison is considered acceptable if the coordinates are within 4 feet of each other in the X and Y direction.
C. Collect thermal profiles on all mainline pavements during the paving operation and transfer the data to the "cloud" network or if automatic data transmission is not available, transfer the data to the Engineer at the end of daily paving.
D. Contact the Department immediately when System Failure occurs. Daily Percent Coverage will be considered zero when the repairs are not completed within two (2) working days of System Failure. The start of this two (2) working day period begins the next working day after System Failure.
E. Evaluate thermal profile segments, every 150 feet, and summarize the segregation of temperature results. Results are to be labeled as Minimal 0°-25°F, Moderate 25.1°-50°F and Severe >50°. Severe readings over 3 consecutive segments or over 4 or more segments in a day warrant investigation on the cause of the differential temperature distribution.

4.0 MEASUREMENT. The Department will measure the total area of the pavement lanes mapped by the infrared scanners. Full payment will be provided for all lanes with greater than 85% coverage. Partial payment will be made for all areas covered from 50% coverage to 85% coverage at the following rate Coverage area percentage X Total bid amount. And area with less than 50% coverage will not be measured for payment.

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

1. Payment is full compensation for all work associated with providing all required equipment, training, and documentation.
2. Delays due to GPS satellite reception of signals or equipment breakdowns will not be considered justification for contract modifications or contract extensions.

Code	Pay Item	Pay Unit
24891EC	Pave Mount Infrared Temp Equipment	Square Foot

March 14, 2019

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 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
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Matthew G. Bevin
Governor

Greg Thomas
Secretary

Asbestos Inspection Report

To: Ross Mills

District: Central Office

Date: May 17, 2019

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Nelson 04-20007

Structure ID: 090B00011L

Structure Location: Martha Layne Collins Parkway over Rolling Fork River

Sample Description: The samples collected were negative for asbestos.

Inspection Date: May 1, 2019

Results and Recommendations

The results of the samples collected were negative for the presence of asbestos above 1%. No abatement is required at this time.

It is recommended that this report accompany the 10-Day Notice of Intent for Demolition (DEP7036 Form) 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.

Chain of Custody Record

Kentucky Transportation Cabinet

200 Mero Street, 5th Floor West
Frankfort, Kentucky 40622
(502) 564-7250 fax (502) 564-5655

O'Dail Lawson o'dail.lawson@ky.gov
KYTC
Address: 200 Mero Street
Frankfort KY
Phone: 502-564-7250 Fax: 502-564-5655
PO#:

Client Information KY TRANS CABINET

Martha. Layne Collins plaza over Rolling Fork River.

Results Code:
ND = None Detected
FTD = Filter Tampering or Damaged
N/A = Not Applicable

Samplers (signature):

Project or Subject Reference: Nelson 4-20007 0903000111

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Grab/ Comp.	No. of Cont.	Cont. Type	Preservative
N11-1	Gumo rail mastic	5/1/15	12:10	Asbestos bulk	grey			N/A
N11-2	Concrete sealant	↓	↓	↓	brown			

Relinquished By: Date/Time:

Received By: Whitney Mead Date/Time: 5/03/15

Relinquished By: Date/Time:

Received at Lab By: Date/Time:

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway / Suite # 902 (502) 495-1212
Louisville, Kentucky - 40202 - 2133 Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N # # 905167 A Address: Nelson 4-20007 090B00011L
Client Name: K Y T C
Sampled By: O'Dail Lawson

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Sample ID	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
#N11-1	Gray	Yes	No				None	2%			98%
#N11-2	Brown	Yes	No				None	2%			98%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 16-May-19
Analyst : Winterford Mensah Reviewed By: Signature

AIHA # 102459 AJHA #1 02459

ENVIRONMENTAL TRAINING CONCEPTS, INC
P.O Box 99603 Louisville, KY 40269
(502)640-2951

Certification Number: ETC-AIR-041619-00415

O'Dail Lawson

has on 04-16-2019, 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 and Tennessee Department of Environment & Conservation The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 1520 Alliant Ave., Louisville, KY

Name – Training Manager

Expiration Date: 04-16-2020

Name - Instructor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Matthew G. Bevin
Governor

Greg Thomas
Secretary

Asbestos Inspection Report

To: Ross Mills

District: Central Office

Date: May 17, 2019

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Nelson 04-20007

Structure ID: 090B00012L

Structure Location: Martha Layne Collins Parkway over KY 52

Sample Description: The samples collected were negative for asbestos.

Inspection Date: May 1, 2019

Results and Recommendations

The results of the samples collected were negative for the presence of asbestos above 1%. No abatement is required at this time.

It is recommended that this report accompany the 10-Day Notice of Intent for Demolition (DEP7036 Form) 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.

Chain of Custody Record

Kentucky Transportation Cabinet

200 Mero Street, 5th Floor West
Frankfort, Kentucky 40622
(502) 564-7250 fax (502) 564-5655

O'Dail Lawson o'dail.lawson@ky.gov
KYTC
Address: 200 Mero Street
Frankfort KY
Phone: 502-564-7250 Fax: 502-564-5655
PO#:

Client Information KY TRANS CABINET

Martin Layne Collins plaza over KY 52

Results Code:
ND = None Detected
FTD = Filter Tampering or Damaged
N/A = Not Applicable

Samplers (signature):

Project or Subject Reference: Nelson 4 - 20007 090B000121

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Grab/ Comp.	No. of Cont.	Cont. Type	Preservative
W12-1	Concrete Sealant	5/1/19	12:00	Asbestos bulk	grey.			N/A

Relinquished By: Date/Time:

Received By: Kimberly Mercer Date/Time: 5/03/19

Relinquished By: Date/Time:

Received at Lab By: Date/Time:

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway / Suite # 902
Louisville, Kentucky - 40202 - 2133

(502) 495-1212
Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N #: # 905167 B
Client Name: K Y T C
Sampled By: O'Dail Lawson

Address: Nelson 4-20007 090B00012L

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Sample ID	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
#N12-1	Gray	Yes	No				None	3%			97%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 16-May-19
Analyst : Winterford Mensah

Reviewed By: Winterford Mensah
Signature

AIHA # 102459

AJHA #1 02459

ENVIRONMENTAL TRAINING CONCEPTS, INC
P.O Box 99603 Louisville, KY 40269
(502)640-2951

Certification Number: ETC-AIR-041619-00415

O'Dail Lawson

has on 04-16-2019, 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 and Tennessee Department of Environment & Conservation The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 1520 Alliant Ave., Louisville, KY

Expiration Date: 04-16-2020

Name – Training Manager

Name - Instructor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Matthew G. Bevin
Governor

Greg Thomas
Secretary

Asbestos Inspection Report

To: Ross Mills

District: Central Office

Date: May 17, 2019

Conducted By: O'Dail Lawson

Report Prepared By: O'Dail Lawson

Project and Structure Identification

Project Number: Nelson 04-20007

Structure ID: 090B00013L

Structure Location: Martha Layne Collins Parkway over CSX Railroad

Sample Description: The samples collected were negative for asbestos.

Inspection Date: May 1, 2019

Results and Recommendations

The results of the samples collected were negative for the presence of asbestos above 1%. No abatement is required at this time.

It is recommended that this report accompany the 10-Day Notice of Intent for Demolition (DEP7036 Form) 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.

Chain of Custody Record

Kentucky Transportation Cabinet
200 Mero Street, 5th Floor West
Frankfort, Kentucky 40622
(502) 564-7250 fax (502) 564-5655

O'Dail Lawson o'dail.lawson@ky.gov
KYTC
Address: 200 Mero Street
Frankfort KY
Phone: 502-564-7250 Fax: 502-564-5655
PO#:

Client Information KY TRANS CABINET
Results Code:
ND = None Detected
FTD = Filter Tampering or Damaged
N/A = Not Applicable

Martha Layne Collins pkwy over CSX RR

Project or Subject Reference: Nelson 4-20007 090B00013L

Samplers (signature): [illegible signature]

Sample ID	Sample Description	Collected Date	Collected Time	Analysis Requested	Grab/ Comp.	No. of Cont.	Cont. Type	Preservative
W13-1	Joint Compound	5/1/19	11:45	Asbestos bulk	black			N/A
N13-2	guard rail mastic	↓	↓	↓	gray			

Relinquished By:	Date/Time:
Received By: [illegible signature]	Date/Time: 5/03/19
Relinquished By:	Date/Time:
Received at Lab By:	Date/Time:

MRS, INC. *MRS, Inc. Analytical Laboratory Division*

332 West Broadway / Suite # 902
Louisville, Kentucky - 40202 - 2133

(502) 495-1212
Fax: (502) 491-7111

BULK SAMPLE ASBESTOS ANALYSIS

Analysis N #: # 905167 C
Client Name: K Y T C
Sampled By: O'Dail Lawson
Address: Nelson 4-20007 090B00013L

				% FIBROUS ASBESTOS				% NON-ASBESTOS FIBERS			
Sample ID	Color	Layered	Fibrous	Chrysotile	Amosite	crocidolite	Others	Cellulose	Fiberglass	Syn. Fiber	Other/Mat.
#N-13-1	Black	Yes	No				None				100%
#N-13-2	Gray	Yes	No				None	2%			98%

Methodology : EPA Method 600/R-93-116
Date Analyzed : 16-May-19
Analyst : Winterford Mensah
Reviewed By: Winterford Mensah
Signature

AIHA # 102459

AJHA #1 02459

ENVIRONMENTAL TRAINING CONCEPTS, INC
P.O Box 99603 Louisville, KY 40269
(502)640-2951

Certification Number: ETC-AIR-041619-00415

O'Dail Lawson

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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 and Tennessee Department of Environment & Conservation The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 1520 Alliant Ave., Louisville, KY

Name – Training Manager

Expiration Date: 04-16-2020

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)
04-20007	Hardin-Nelson	FD52 047 090 9200 5.876-10.24	NHPP 0021 (047)

PROJECT DESCRIPTION

pavement rehab project in Hardin and Nelson County on BG-9002 from MP 5.876 – 10.24

☒ **No Additional Right of Way Required**

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

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

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

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

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

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

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

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

Notes/ Comments (Use Additional Sheet if necessary)

LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Michael H. Price
Signature		Signature	Michael H. Price
Date		Date	05/06/2019
Right of Way Director		**FHWA**	
Printed Name		Printed Name	No Signature Required as per FHWA-KYTC Current Stewardship Agreement
Signature	2019.05.07 08:27:46 -05'00'	Signature	
Date		Date	

UTILITIES AND RAIL CERTIFICATION NOTE

HARDIN AND NELSON COUNTIES,
FEDERAL PROJECT #NHPP 0021 (047)
STATE PROJECT #FD52 047 9002 005-009 AND #FD52090 9002 008-011
BLUEGRASS PARKWAY (BG 9002)/PAVEMENT REHAB
ITEM #4-20007 AND #4-20023

GENERAL PROJECT NOTE ON UTILITY PROTECTION

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

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

There may be existing overhead throughout the project. The contractor should take necessary precautions to avoid them. There may also be existing underground utilities on the right of way in the project limits but they should not interfere with the work.

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

N/A

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

N/A

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)**

The Kentucky Railway Museum Line has existing railroad adjacent to the project but no coordination is expected to be required.

UTILITIES AND RAIL CERTIFICATION NOTE

HARDIN AND NELSON COUNTIES,
FEDERAL PROJECT #NHPP 0021 (047)
STATE PROJECT #FD52 047 9002 005-009 AND #FD52090 9002 008-011
BLUEGRASS PARKWAY (BG 9002)/PAVEMENT REHAB
ITEM #4-20007 AND #4-20023

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

HARDIN AND NELSON COUNTIES,
FEDERAL PROJECT #NHPP 0021 (047)
STATE PROJECT #FD52 047 9002 005-009 AND #FD52090 9002 008-011
BLUEGRASS PARKWAY (BG 9002)/PAVEMENT REHAB
ITEM #4-20007 AND #4-20023

AREA UTILITIES CONTACT LIST

Utility Company/Agency	Contact Name	Contact Information
Nolin RECC	Paul Baker	270-765-6153
AT&T	Don Gar	502-741-8374
Hardin County Water District No. 2	Forrest Pollock	270-737-1056
Comcast Communications	Steve Gaddie	270-706-0326
Windstream	Steve Johnson	859-357-6209
KU/LG&E	Caroline Justice	502-627-3708
City of Bardstown	Jessica Filiatreau	502-348-5947

MATERIAL SUMMARY

CONTRACT ID: 191029 **121GR19D029-NHPP** **DE04790021929**

BLUEGRASS PARKWAY(PW-9002) ADDRESS PAVEMENT CONDITION OF MARTHA LAYNE COLLINS BLUEGRASS PARKWAY BOTH DIRECTIONS FROM MP 5.82 TO MP 8.837 ASPHALT PAVEMENT & ROADWAY REHAB, A DISTANCE OF 3 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	00001	DGA BASE	4,729.00	TON
0010	00100	ASPHALT SEAL AGGREGATE	548.00	TON
0015	00103	ASPHALT SEAL COAT	65.70	TON
0020	00291	EMULSIFIED ASPHALT RS-2	39.00	TON
0025	00336	CL3 ASPH SURF 0.38A PG76-22	9,849.00	TON
0030	02676	MOBILIZATION FOR MILL & TEXT	1.00	LS
0035	20071EC	JOINT ADHESIVE	34,677.00	LF
0040	20362ES403	SHOULDER RUMBLE STRIPS-SAWED	68,286.00	LF
0045	24781EC	INTELLIGENT COMPACTION FOR ASPHALT	9,699.00	TON
0050	24891EC	PAVE MOUNT INFRARED TEMP EQUIPMENT	1,058,130.00	SF
0055	24961EC	ASPHALT SEAL AGGREGATE - TYPE D	24,360.00	SQYD
0060	24964EC	FINE MILLING	117,570.00	SQYD
0065	24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	29.40	TON
0070	24986EC	HMA ELECTRONIC DELIVERY MGMT SYSTEM	1.00	L S
0075	01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	123.00	EACH
0080	01983	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	11.00	EACH
0085	02014	BARRICADE-TYPE III	4.00	EACH
0090	02351	GUARDRAIL-STEEL W BEAM-S FACE	4,137.50	LF
0095	02367	GUARDRAIL END TREATMENT TYPE 1	2.00	EACH
0100	02369	GUARDRAIL END TREATMENT TYPE 2A	3.00	EACH
0105	02381	REMOVE GUARDRAIL	4,153.50	LF
0110	02562	TEMPORARY SIGNS	300.00	SQFT
0115	02575	DITCHING AND SHOULDERING	15,660.00	LF
0120	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS
0125	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH
0130	02701	TEMP SILT FENCE	2,500.00	LF
0135	02703	SILT TRAP TYPE A	7.00	EACH
0140	02704	SILT TRAP TYPE B	15.00	EACH
0145	02705	SILT TRAP TYPE C	5.00	EACH
0150	02726	STAKING	1.00	LS
0155	02775	ARROW PANEL	2.00	EACH
0160	05963	INITIAL FERTILIZER	.50	TON
0165	05964	MAINTENANCE FERTILIZER	.50	TON
0170	05985	SEEDING AND PROTECTION	3,000.00	SQYD
0175	05992	AGRICULTURAL LIMESTONE	2.00	TON
0180	06401	FLEXIBLE DELINEATOR POST-M/W	200.00	EACH
0185	06404	FLEXIBLE DELINEATOR POST-M/Y	47.00	EACH
0190	06511	PAVE STRIPING-TEMP PAINT-6 IN	70,470.00	LF
0195	06542	PAVE STRIPING-THERMO-6 IN W	42,507.00	LF
0200	06543	PAVE STRIPING-THERMO-6 IN Y	33,609.00	LF
0205	06546	PAVE STRIPING-THERMO-12 IN W	2,183.00	LF
0210	06549	PAVE STRIPING-TEMP REM TAPE-B	4,000.00	LF

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0215	06550	PAVE STRIPING-TEMP REM TAPE-W	2,000.00	LF
0220	06551	PAVE STRIPING-TEMP REM TAPE-Y	2,000.00	LF
0225	06568	PAVE MARKING-THERMO STOP BAR-24IN	36.00	LF
0230	10020NS	FUEL ADJUSTMENT	8,642.00	DOLL
0235	10030NS	ASPHALT ADJUSTMENT	17,458.00	DOLL
0240	24489EC	INLAID PAVEMENT MARKER	543.00	EACH
0245	00078	CRUSHED AGGREGATE SIZE NO 2	1,109.00	TON
0250	00461	CULVERT PIPE-15 IN	70.00	LF
0255	01202	PIPE CULVERT HEADWALL-15 IN	4.00	EACH
0260	01432	SLOPED BOX OUTLET TYPE 1-15 IN	1.00	EACH
0265	02165	REMOVE PAVED DITCH	634.00	SQYD
0270	02200	ROADWAY EXCAVATION	435.00	CUYD
0275	02483	CHANNEL LINING CLASS II	469.00	TON
0280	02484	CHANNEL LINING CLASS III	1,815.00	TON
0285	02596	FABRIC-GEOTEXTILE TYPE I	400.00	SQYD
0290	03260	CLEAN ROADWAY DRAINS	1.00	EACH
0295	05950	EROSION CONTROL BLANKET	4,146.00	SQYD
0300	23484EC	PIPE LINER ACCEPTANCE TESTING	1.00	LS
0305	24543EC	CLEAN - 42 INCH CMP	154.00	LF
0310	25031EC	CIPP LINER 42 IN	154.00	LF
0315	02568	MOBILIZATION	1.00	LS
0320	02569	DEMOBILIZATION	1.00	LS

CONTRACT ID: 191029 **121GR19D029-NHPP** **DE09090021929**

BLUEGRASS PARKWAY(PW-9002) ADDRESS PAVEMENT CONDITION OF MARTHA LAYNE COLLINS BLUEGRASS PARKWAY BOTH DIRECTIONS FROM MP 8.837 TO MP 10.172 ASPHALT PAVEMENT & ROADWAY REHAB, A DISTANCE OF 1.34 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0325	00001	DGA BASE	2,222.00	TON
0330	00100	ASPHALT SEAL AGGREGATE	248.00	TON
0335	00103	ASPHALT SEAL COAT	29.60	TON
0340	00214	CL3 ASPH BASE 1.00D PG64-22	179.00	TON
0345	00291	EMULSIFIED ASPHALT RS-2	16.40	TON
0350	00336	CL3 ASPH SURF 0.38A PG76-22	5,050.00	TON
0355	02676	MOBILIZATION FOR MILL & TEXT	1.00	LS
0360	20071EC	JOINT ADHESIVE	18,521.00	LF
0365	20362ES403	SHOULDER RUMBLE STRIPS-SAWED	34,688.00	LF
0370	20997ED	REMOVE TRAFFIC ISLAND	408.00	SQYD
0375	24781EC	INTELLIGENT COMPACTION FOR ASPHALT	5,000.00	TON
0380	24891EC	PAVE MOUNT INFRARED TEMP EQUIPMENT	545,490.00	SF
0385	24961EC	ASPHALT SEAL AGGREGATE - TYPE D	10,242.00	SQYD
0390	24964EC	FINE MILLING	60,202.00	SQYD
0395	24970EC	ASPHALT MATERIAL FOR TACK NON-TRACKING	15.10	TON
0400	24986EC	HMA ELECTRONIC DELIVERY MGMT SYSTEM	1.00	L S
0405	01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	181.00	EACH

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0410	01983	DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	67.00	EACH
0415	01984	DELINEATOR FOR BARRIER - WHITE	82.00	EACH
0420	01985	DELINEATOR FOR BARRIER - YELLOW	82.00	EACH
0425	01992	INSTALL TEMP CONC MED BARR - (REVISED: 6-14-19)	2,320.00	LF
0430	02014	BARRICADE-TYPE III	4.00	EACH
0435	02351	GUARDRAIL-STEEL W BEAM-S FACE	8,737.50	LF
0440	02352	GUARDRAIL-STEEL W BEAM-D FACE	87.50	LF
0445	02367	GUARDRAIL END TREATMENT TYPE 1	1.00	EACH
0450	02369	GUARDRAIL END TREATMENT TYPE 2A	7.00	EACH
0455	02381	REMOVE GUARDRAIL	8,930.60	LF
0460	02562	TEMPORARY SIGNS	300.00	SQFT
0465	02565	OBJECT MARKER TYPE 2	12.00	EACH
0470	02575	DITCHING AND SHOULDERING	7,009.00	LF
0475	02650	MAINTAIN & CONTROL TRAFFIC	1.00	LS
0480	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH
0485	02701	TEMP SILT FENCE	500.00	LF
0490	02704	SILT TRAP TYPE B	5.00	EACH
0495	02705	SILT TRAP TYPE C	5.00	EACH
0500	02726	STAKING	1.00	LS
0505	02775	ARROW PANEL	2.00	EACH
0510	05963	INITIAL FERTILIZER	.50	TON
0515	05964	MAINTENANCE FERTILIZER	.50	TON
0520	05985	SEEDING AND PROTECTION	1,000.00	SQYD
0525	05992	AGRICULTURAL LIMESTONE	1.00	TON
0530	06401	FLEXIBLE DELINEATOR POST-M/W	208.00	EACH
0535	06404	FLEXIBLE DELINEATOR POST-M/Y	109.00	EACH
0540	06511	PAVE STRIPING-TEMP PAINT-6 IN	31,541.00	LF
0545	06542	PAVE STRIPING-THERMO-6 IN W	22,876.00	LF
0550	06543	PAVE STRIPING-THERMO-6 IN Y	19,371.00	LF
0555	06546	PAVE STRIPING-THERMO-12 IN W	433.00	LF
0560	06549	PAVE STRIPING-TEMP REM TAPE-B	4,000.00	LF
0565	06550	PAVE STRIPING-TEMP REM TAPE-W	2,000.00	LF
0570	06551	PAVE STRIPING-TEMP REM TAPE-Y	2,000.00	LF
0575	06568	PAVE MARKING-THERMO STOP BAR-24IN	100.00	LF
0580	08903	CRASH CUSHION TY VI CLASS BT TL3 - (REVISE: 6-14-19)	6.00	EACH
0585	10020NS	FUEL ADJUSTMENT	4,614.00	DOLL
0590	10030NS	ASPHALT ADJUSTMENT	9,322.00	DOLL
0595	24489EC	INLAID PAVEMENT MARKER	265.00	EACH
0600	25025ED	THRIE BEAM GUARDRAIL TRANSITION TL-3	20.00	LF
0605	00078	CRUSHED AGGREGATE SIZE NO 2	2,711.00	TON
0610	01691	FLUME INLET TYPE 2	8.00	EACH
0615	01825	ISLAND CURB AND GUTTER	46.50	LF
0620	02165	REMOVE PAVED DITCH	218.00	SQYD
0625	02483	CHANNEL LINING CLASS II	162.00	TON
0630	02484	CHANNEL LINING CLASS III	728.00	TON
0635	05950	EROSION CONTROL BLANKET	1,383.00	SQYD
0640	03299	ARMORED EDGE FOR CONCRETE	70.00	LF
0645	08106	CONCRETE-CLASS M 1	9.00	CUYD
0650	08151	STEEL REINFORCEMENT-EPOXY COATED	923.00	LB

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0655	08435	JACK & SUPPORT BRIDGE SPAN	1.00	LS
0660	21969NN	BEARING REPLACEMENT	2.00	EACH
0665	22146EN	CONCRETE PATCHING REPAIR	226.00	SQFT
0670	23032EN	BRIDGE BARRIER RETROFIT	616.00	LF
0675	23386EC	JOINT SEAL REPLACEMENT - 1 IN	35.00	LF
0680	23386EC	JOINT SEAL REPLACEMENT - 4 IN	35.00	LF
0685	23783EC	REMOVE CONCRETE BARRIER	4.00	EACH
0690	24981EC	BRIDGE CLEANING - 090B00011L	1.00	LS
0695	24982EC	CONCRETE COATING - 090B00011L	1.00	LS
0700	24983EC	BEARING LUBRICATION	6.00	EACH
0705	25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	38.00	LF
0710	03299	ARMORED EDGE FOR CONCRETE	70.00	LF
0715	08106	CONCRETE-CLASS M 1	9.00	CUYD
0720	08151	STEEL REINFORCEMENT-EPOXY COATED	923.00	LB
0725	08435	JACK & SUPPORT BRIDGE SPAN	1.00	LS
0730	21969NN	BEARING REPLACEMENT	2.00	EACH
0735	22146EN	CONCRETE PATCHING REPAIR	226.00	SQFT
0740	23032EN	BRIDGE BARRIER RETROFIT	616.00	LF
0745	23386EC	JOINT SEAL REPLACEMENT - 1 IN	35.00	LF
0750	23386EC	JOINT SEAL REPLACEMENT - 4 IN	35.00	LF
0755	23783EC	REMOVE CONCRETE BARRIER	4.00	EACH
0760	24981EC	BRIDGE CLEANING - 090B00011R	1.00	LS
0765	24982EC	CONCRETE COATING - 090B00011R	1.00	LS
0770	24983EC	BEARING LUBRICATION	6.00	EACH
0775	25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	38.00	LF
0780	08106	CONCRETE-CLASS M 1	10.00	CUYD
0785	08151	STEEL REINFORCEMENT-EPOXY COATED	874.00	LB
0790	23032EN	BRIDGE BARRIER RETROFIT	236.00	LF
0795	23783EC	REMOVE CONCRETE BARRIER	4.00	EACH
0800	24982EC	CONCRETE COATING - 090B00012L	1.00	LS
0805	25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	33.00	LF
0810	08106	CONCRETE-CLASS M 1	10.00	CUYD
0815	08151	STEEL REINFORCEMENT-EPOXY COATED	874.00	LB
0820	23032EN	BRIDGE BARRIER RETROFIT	236.00	LF
0825	23783EC	REMOVE CONCRETE BARRIER	4.00	EACH
0830	24982EC	CONCRETE COATING - 090B00012R	1.00	LS
0835	25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	33.00	LF
0840	08106	CONCRETE-CLASS M 1	10.00	CUYD
0845	08151	STEEL REINFORCEMENT-EPOXY COATED	998.00	LB
0850	23032EN	BRIDGE BARRIER RETROFIT	332.00	LF
0855	23783EC	REMOVE CONCRETE BARRIER	4.00	EACH
0860	24982EC	CONCRETE COATING - 090B00013L	1.00	LS
0865	25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	35.00	LF
0870	08106	CONCRETE-CLASS M 1	10.00	CUYD
0875	08151	STEEL REINFORCEMENT-EPOXY COATED	998.00	LB
0880	23032EN	BRIDGE BARRIER RETROFIT	332.00	LF
0885	23783EC	REMOVE CONCRETE BARRIER	4.00	EACH
0890	24982EC	CONCRETE COATING - 090B00013R	1.00	LS
0895	25027ED	RAIL SYSTEM SINGLE SLOPE - 36 IN	35.00	LF
0900	02568	MOBILIZATION	1.00	LS

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0905	02569	DEMOBILIZATION	1.00	LS
0910	02898	RELOCATE CRASH CUSHION - (ADDED: 6-14-19)	6.00	EACH

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

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

SUPPLEMENTAL SPECIFICATIONS

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

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

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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

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SPECIAL NOTE FOR LONGITUDINAL PAVEMENT JOINT ADHESIVE

1. DESCRIPTION. This specification covers the requirements and practices for applying an asphalt adhesive material to the longitudinal joint of the surface course of an asphalt pavement. Apply the adhesive to the face of longitudinal joint between driving lanes for the first lane paved. Then, place and compact the adjacent lane against the treated face to produce a strong, durable, waterproof longitudinal joint.

2. MATERIALS, EQUIPMENT, AND PERSONNEL.

2.1 Joint Adhesive. Provide material conforming to Subsection 2.1.1.

2.1.1 Provide an adhesive conforming to the following requirements:

Property	Specification	Test Procedure
Viscosity, 400 ° F (Pa·s)	4.0 – 10.0	ASTM D 4402
Cone Penetration, 77 ° F	60 – 100	ASTM D 5329
Flow, 140 ° F (mm)	5.0 max.	ASTM D 5329
Resilience, 77 ° F (%)	30 min.	ASTM D 5329
Ductility, 77 ° F (cm)	30.0 min.	ASTM D 113
Ductility, 39 ° F (cm)	30.0 min.	ASTM D 113
Tensile Adhesion, 77 ° F (%)	500 min.	ASTM D 5329, Type II
Softening Point, ° F	171 min.	AASHTO T 53
Asphalt Compatibility	Pass	ASTM D 5329

Ensure the temperature of the pavement joint adhesive is between 380 and 410 °F when the material is extruded in a 0.125-inch-thick band over the entire face of the longitudinal joint.

2.2. Equipment.

2.2.1 Melter Kettle. Provide an oil-jacketed, double-boiler, melter kettle equipped with any needed agitation and recirculating systems.

2.2.2 Applicator System. Provide a pressure-feed-wand applicator system with an applicator shoe attached.

2.3 Personnel. Ensure a technical representative from the manufacturer of the pavement joint adhesive is present during the initial construction activities and available upon the request of the Engineer.

3. CONSTRUCTION.

3.1 Surface Preparation. Prior to the application of the pavement joint adhesive, ensure the face of the longitudinal joint is thoroughly dry and free from dust or any other debris that would inhibit adhesion. Clean the joint face by the use of compressed air.

Ensure this preparation process occurs shortly before application to prevent the return of debris on the joint face.

3.2 Pavement Joint Adhesive Application. Ensure the ambient temperature is a minimum of 40 ^{o} F during the application of the pavement joint adhesive. Prior to applying the adhesive, demonstrate competence in applying the adhesive according to this note to the satisfaction of the Engineer. Heat the adhesive in the melter kettle to the specified temperature range. Pump the adhesive from the melter kettle through the wand onto the vertical face of the cold joint. Apply the adhesive in a continuous band over the entire face of the longitudinal joint. Do not use excessive material in either thickness or location. Ensure the edge of the extruded adhesive material is flush with the surface of the pavement. Then, place and compact the adjacent lane against the joint face. Remove any excessive material extruded from the joint after compaction (a small line of material may remain).

3.3 Pavement Joint Adhesive Certification. Furnish the joint adhesive's 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 random sample of pavement joint adhesive from each manufacturer's lot of material. Extrude two 5 lb. samples of the heated material and forward the sample to the Division of Materials for testing. Reynolds oven bags, turkey size, placed inside small cardboard boxes or cement cylinder molds have been found suitable. Ensure the product temperature is 400°F or below at the time of sampling.

4. MEASUREMENT. The Department will measure the quantity of Pavement Joint Adhesive in linear feet. 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 Pavement Joint Adhesive, the cleaning of the joint face, or furnishing and placing the adhesive. The Department will consider all such items incidental to the Pavement Joint Adhesive.

5. PAYMENT. The Department will pay for the Pavement Joint Adhesive at the Contract unit bid price and apply an adjustment for each manufacturer's lot of material based on the degree of compliance as defined in the following schedule. When a sample fails on two or more tests, the Department may add the deductions, but the total deduction will not exceed 100 percent.

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Pavement Joint Adhesive Price Adjustment Schedule						
Test	Specification	100% Pay	90% Pay	80% Pay	50% Pay	0% Pay
Joint Adhesive Referenced in Subsection 2.1.1						
Viscosity, 400 º F (Pa•s)			3.0-3.4	2.5-2.9	2.0-2.4	≤1.9
ASTM D 3236	4.0-10.0	3.5-10.5	10.6-11.0	11.1-11.5	11.6-12.0	≥ 12.1
Cone Penetration, 77 º F			54-56	51-53	48-50	≤ 47
ASTM D 5329	60-100	57-103	104-106	107-109	110-112	≥ 113
Flow, 140 º F (mm) ASTM D 5329	≤ 5.0	≤ 5.5	5.6-6.0	6.1-6.5	6.6-7.0	≥ 7.1
Resilience, 77 º F (%) ASTM D 5329	≥ 30	≥ 28	26-27	24-25	22-23	≤ 21
Tensile Adhesion, 77 º F (%) ASTM D 5329	≥ 500	≥ 490	480-489	470-479	460-469	≤ 459
Softening Point, º F AASHTO T 53	≥ 171	≥ 169	166-168	163-165	160-162	≤ 159
Ductility, 77 º F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9
Ductility, 39 º F (cm) ASTM D 113	≥ 30.0	≥ 29.0	28.0-28.9	27.0-27.9	26.0-26.9	≤ 25.9

Code	Pay Item	Pay Unit
20071EC	Joint Adhesive	Linear Foot

May 7, 2014

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

EMPLOYMENT REQUIREMENTS
RELATING TO
NONDISCRIMINATION OF EMPLOYEES
(APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)

AN ACT OF THE KENTUCKY GENERAL ASSEMBLY TO PREVENT DISCRIMINATION IN EMPLOYMENT

KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972

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

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

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

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

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

Revised: January 25, 2017

Standard Title VI/Non-Discrimination Assurances

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, **Federal Highway Administration**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the **Federal Highway Administration** to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the **Federal Highway Administration**, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the **Federal Highway Administration** may determine to be appropriate, including, but not limited to:

    a. withholding payments to the contractor under the contract until the contractor complies; and/or
    b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the **Federal Highway Administration** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Standard Title VI/Non-Discrimination Statutes and Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq*., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq*.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq*.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq*.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

EXECUTIVE BRANCH CODE OF ETHICS

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

> KRS 11A.040 (7) provides:
>
> No present or former public servant shall, within six (6) months following termination of his office or employment, accept employment, compensation, or other economic benefit from any person or business that contracts or does business with, or is regulated by, the state in matters in which he was directly involved during the last thirty-six (36) months of his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, or for which he received, prior to his state employment, a professional degree or license, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his tenure in state government. This subsection shall not prohibit the performance of ministerial functions, including but not limited to filing tax returns, filing applications for permits or licenses, or filing incorporation papers, nor shall it prohibit the former officer or public servant from receiving public funds disbursed through entitlement programs.
>
> KRS 11A.040 (9) states:
>
> A former public servant shall not represent a person or business before a state agency in a matter in which the former public servant was directly involved during the last thirty-six (36) months of his tenure, for a period of one (1) year after the latter of:
>
> a) The date of leaving office or termination of employment; or
> b) The date the term of office expires to which the public servant was elected.

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

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

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

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, 3 Fountain Place, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: January 27, 2017

General Decision Number: KY190038 02/15/2019 KY38

Superseded General Decision Number: KY20180100

State: Kentucky

Construction Type: Highway

Counties: Anderson, Bath, Bourbon, Boyd, Boyle, Bracken, Breckinridge, Bullitt, Carroll, Carter, Clark, Elliott, Fayette, Fleming, Franklin, Gallatin, Grant, Grayson, Greenup, Hardin, Harrison, Henry, Jefferson, Jessamine, Larue, Lewis, Madison, Marion, Mason, Meade, Mercer, Montgomery, Nelson, Nicholas, Oldham, Owen, Robertson, Rowan, Scott, Shelby, Spencer, Trimble, Washington and Woodford Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate,if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019
1	02/15/2019

BRIN0004-003 06/01/2017

BRECKENRIDGE COUNTY

	Rates	Fringes

BRICKLAYER.....$ 26.80 12.38

BRKY0001-005 06/01/2017

BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, & TRIMBLE COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 26.80	12.38

BRKY0002-006 06/01/2017

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 27.81	13.01

BRKY0007-004 06/01/2017

BOYD, CARTER, ELLIOT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 32.98	19.02

BRKY0017-004 06/01/2017

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, OWEN, SCOTT, WASHINGTON & WOODFORD COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 26.47	12.76

CARP0064-001 05/01/2015

	Rates	Fringes
CARPENTER	$ 27.50	16.06
Diver	$ 41.63	16.06
PILEDRIVERMAN	$ 27.75	16.06

ELEC0212-008 06/04/2018

BRACKEN, GALLATIN and GRANT COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 28.39	18.98

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* ELEC0212-014 11/26/2018

BRACKEN, GALLATIN & GRANT COUNTIES:

	Rates	Fringes
Sound & Communication Technician	$ 24.35	10.99

ELEC0317-012 06/01/2018

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

	Rates	Fringes
ELECTRICIAN (Wiremen)		
Cable Splicer	$ 32.68	18.13
Electrician	$ 33.75	20.03

ELEC0369-007 05/30/2018

ANDERSON, BATH, BOURBON, BOYLE, BRECKINRIDGE, BULLITT, CARROLL, CLARK, FAYETTE, FRAONKLIN, GRAYSON, HARDIN, HARRISON, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, MONTGOMERY, NELSON, NICHOLAS, OLDHAM, OWEN, ROBERTSON, SCOTT, SHELBY, SPENCER, TRIMBLE, WASHINGTON, & WOODFORD COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 31.66	17.01

* ELEC0575-002 12/31/2018

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 32.75	16.69

ENGI0181-018 07/01/2017

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1	$ 31.95	15.15
GROUP 2	$ 29.09	15.15
GROUP 3	$ 29.54	15.15
GROUP 4	$ 28.77	15.15

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller; Batcher Plant; Bituminous Paver; Bituminous Transfer Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All Scoop; Carry Deck Crane; Central Compressor Plant; Cherry Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over); Concrete Paver; Truck-Mounted Concrete Pump; Core Drill; Crane; Crusher Plant; Derrick; Derrick Boat; Ditching & Trenching Machine; Dragline; Dredge Operator; Dredge Engineer; Elevating Grader & Loaders; Grade-All; Gurries; Heavy Equipment Robotics Operator/Mechanic; High Lift; Hoe-Type Machine; Hoist (Two or More Drums); Hoisting Engine (Two or More Drums); Horizontal Directional Drill

Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau; Locomotive; Mechanic; Mechanically Operated Laser Screed; Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel Bucket; Overhead Crane; Piledriver; Power Blade; Pumpcrete; Push Dozer; Rock Spreader, attached to equipment; Rotary Drill; Roller (Bituminous); Rough Terrain Crane; Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck Crane; Tunnel Mining Machines, including Moles, Shields or similar types of Tunnel Mining Equipment

GROUP 2 - Air Compressor (Over 900 cu. ft. per min.); Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft.); Dredge Engineer; Electric Vibrator; Compactor/Self-Propelled Compactor; Elevator (One Drum or Buck Hoist); Elevator (When used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Conrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points; & Whirley Oiler

GROUP 3 - All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES - with booms 150 ft. & Over (Including JIB), and where the length of the boom in combination with the length of the piling leads equals or exceeds 150 ft. - $1.00 over Group 1 rate

EMPLOYEES ASSIGNED TO WORK BELOW GROUND LEVEL ARE TO BE PAID 10%
ABOVE BASIC WAGE RATE. THIS DOES NOT APPLY TO OPEN CUT WORK.

IRON0044-009 06/01/2018

BRACKEN, GALLATIN, GRANT, HARRISON, ROBERTSON,
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);
MASON (Western two-thirds, including Townships of Dover,

Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);
NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);
OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);
SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall)

	Rates	Fringes
IRONWORKER		
Fence Erector	$ 26.76	21.20
Structural	$ 28.17	21.20

IRON0070-006 06/01/2018

ANDERSON, BOYLE, BRECKINRIDGE, BULLITT, FAYETTE, FRANKLIN, GRAYSON, HARDIN, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE, WASHINGTON & WOODFORD
BOURBON (Southern two-thirds, including Townships of Austerlity, Centerville, Clintonville, Elizabeth, Hutchison, Littlerock, North Middletown & Paris);
CARROLL (Western two-thirds, including Townships of Carrollton, Easterday, English, Locust, Louis, Prestonville & Worthville);
CLARK (Western two-thirds, including Townships of Becknerville, Flanagan, Ford, Pine Grove, Winchester & Wyandotte);
OWEN (Eastern eighth, including Townships of Glenmary, Gratz, Monterey, Perry Park & Tacketts Mill);
SCOTT (Southern third, including Townships of Georgetown, Great Crossing, Newtown, Stampling Ground & Woodlake);

	Rates	Fringes
IRONWORKER	$ 28.79	22.50

IRON0769-007 06/01/2018

BATH, BOYD, CARTER, ELLIOTT, GREENUP, LEWIS, MONTGOMERY & ROWAN
CLARK (Eastern third, including townships of Bloomingdale, Hunt, Indian Fields, Kiddville, Loglick, Rightangele & Thomson);
FLEMING (Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);
MASON (Eastern third, including Townships of Helena, Marshall, Orangeburg, Plumville & Springdale);
NICHOLAS (Eastern eighth, including the Township of Moorefield Sprout)

	Rates	Fringes
IRONWORKER		
ZONE 1	$ 31.67	25.27
ZONE 2	$ 31.67	25.27
ZONE 3	$ 31.67	25.27

ZONE 1 - (no base rate increase) Up to 10 mile radius of Union Hall, 1643 Greenup Ave, Ashland, KY.

ZONE 2 - (add $0.40 per hour to base rate) 10 to 50 mile radius of Union Hall, 1643 Greenup Ave, Ashland, KY.

ZONE 3 - (add $2.00 per hour to base rate) 50 mile radius & over of Union Hall, 1643 Greenup Ave, Ashland, KY.

LABO0189-003 07/01/2018

BATH, BOURBON, BOYD, BOYLE, BRACKEN, CARTER, CLARK, ELLIOTT, FAYETTE, FLEMING, FRANKLIN, GALLATIN, GRANT, GREENUP, HARRISON, JESSAMINE, LEWIS, MADISON, MASON, MERCER, MONTGOMERY, NICHOLAS, OWEN, ROBERTSON, ROWAN, SCOTT, & WOOLFORD COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 23.07	14.21
GROUP 2	$ 23.32	14.21
GROUP 3	$ 23.37	14.21
GROUP 4	$ 23.97	14.21

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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LABO0189-008 07/01/2018

ANDERSON, BULLITT, CARROLL, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 23.07	14.21
GROUP 2	$ 23.32	14.21
GROUP 3	$ 23.37	14.21
GROUP 4	$ 23.97	14.21

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free

Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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LABO0189-009 07/01/2018

BRECKINRIDGE & GRAYSON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 23.07	14.21
GROUP 2	$ 23.32	14.21
GROUP 3	$ 23.37	14.21
GROUP 4	$ 23.97	14.21

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen &

Blasters; Troxler & Concrete Tester if Laborer is Utilized

PAIN0012-005 06/11/2005

BATH, BOURBON, BOYLE, CLARK, FAYETTE, FLEMING, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, ROBERTSON, SCOTT & WOODFORD COUNTIES:

	Rates	Fringes
PAINTER		
Bridge/Equipment Tender and/or Containment Builder	$ 18.90	5.90
Brush & Roller	$ 21.30	5.90
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 22.30	5.90
Sandblasting & Waterblasting	$ 22.05	5.90
Spray	$ 21.80	5.90

PAIN0012-017 05/01/2015

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

	Rates	Fringes
PAINTER (Heavy & Highway Bridges - Guardrails - Lightpoles - Striping)		
Bridge Equipment Tender and Containment Builder	$ 20.73	9.06
Brush & Roller	$ 23.39	9.06
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 24.39	9.06
Sandblasting & Water Blasting	$ 24.14	9.06
Spray	$ 23.89	9.06

PAIN0118-004 06/01/2018

ANDERSON, BRECKINRIDGE, BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES:

	Rates	Fringes
PAINTER		
Brush & Roller	$ 22.00	12.52
Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning	$ 23.00	12.52

PAIN1072-003 12/01/2018

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS and ROWAN COUNTIES

	Rates	Fringes
Painters:		
Bridges; Locks; Dams; Tension Towers & Energized Substations	$ 33.33	18.50
Power Generating Facilities	$ 30.09	18.50

PLUM0248-003 06/01/2018

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
Plumber and Steamfitter	$ 36.00	20.23

PLUM0392-007 06/01/2018

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN & ROBERTSON COUNTIES:

	Rates	Fringes
Plumbers and Pipefitters	$ 32.01	19.67

PLUM0502-003 08/01/2018

BRECKINRIDGE, BULLITT, CARROLL (Western Half), FRANKLIN (Western three-fourths), GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
PLUMBER	$ 34.62	20.78

SUKY2010-160 10/08/2001

	Rates	Fringes
Truck drivers:		
GROUP 1	$ 16.57	7.34
GROUP 2	$ 16.68	7.34
GROUP 3	$ 16.86	7.34
GROUP 4	$ 16.96	7.34

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Mobile Batch Truck Tender

GROUP 2 - Greaser; Tire Changer; & Mechanic Tender

GROUP 3 - Single Axle Dump; Flatbed; Semi-trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Distributor; Mixer; & Truck Mechanic

GROUP 4 - Euclid & Other Heavy Earthmoving Equipment &

Lowboy; Articulator Cat; 5-Axle Vehicle; Winch & A-Frame when used in transporting materials; Ross Carrier; Forklift when used to transport building materials; & Pavement Breaker

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing

the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid to an employee at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Director
Division of Construction Procurement
Frankfort, Kentucky 40622
502-564-3500

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (Executive Order 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
9.6%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. The notification shall be mailed to:

Evelyn Teague, Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8609

4. As used in this Notice, and in the contract resulting from this solicitation, the **"covered area"** is Hardin County.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (Executive Order 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
9.6%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. The notification shall be mailed to:

Evelyn Teague, Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8609

4. As used in this Notice, and in the contract resulting from this solicitation, the **"covered area"** is Nelson County.

PART IV

INSURANCE

INSURANCE

The Contractor shall procure and maintain the following insurance in addition to the insurance required by law:

1) Commercial General Liability-Occurrence form – not less than $2,000,000 General aggregate, $2,000,000 Products & Completed Aggregate, $1,000,000 Personal & Advertising, $1,000,000 each occurrence.

2) Automobile Liability- $1,000,000 per accident

3) Employers Liability:

   a) $100,000 Each Accident Bodily Injury
   b) $500,000 Policy limit Bodily Injury by Disease
   c) $100,000 Each Employee Bodily Injury by Disease

4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
   a) "policy contains no deductible clauses."
   b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."

5) KENTUCKY WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

The cost of insurance is incidental to all contract items. All subcontractors must meet the same minimum insurance requirements.

PART V

BID ITEMS

191029

PROPOSAL BID ITEMS

Report Date 6/20/19

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	6,951.00	TON		$	
0020	00100		ASPHALT SEAL AGGREGATE	796.00	TON		$	
0030	00103		ASPHALT SEAL COAT	95.30	TON		$	
0040	00214		CL3 ASPH BASE 1.00D PG64-22	179.00	TON		$	
0050	00291		EMULSIFIED ASPHALT RS-2	55.40	TON		$	
0060	00336		CL3 ASPH SURF 0.38A PG76-22	14,899.00	TON		$	
0070	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		$	
0080	20071EC		JOINT ADHESIVE	53,198.00	LF		$	
0090	20362ES403		SHOULDER RUMBLE STRIPS-SAWED	102,974.00	LF		$	
0100	20997ED		REMOVE TRAFFIC ISLAND	408.00	SQYD		$	
0110	24781EC		INTELLIGENT COMPACTION FOR ASPHALT	14,699.00	TON		$	
0120	24891EC		PAVE MOUNT INFRARED TEMP EQUIPMENT	1,603,620.00	SF		$	
0130	24961EC		ASPHALT SEAL AGGREGATE - TYPE D	34,602.00	SQYD		$	
0140	24964EC		FINE MILLING	177,772.00	SQYD		$	
0150	24970EC		ASPHALT MATERIAL FOR TACK NON-TRACKING	44.50	TON		$	
0160	24986EC		HMA ELECTRONIC DELIVERY MGMT SYSTEM	1.00	L S		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0170	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	304.00	EACH		$	
0180	01983		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	78.00	EACH		$	
0190	01984		DELINEATOR FOR BARRIER - WHITE	82.00	EACH		$	
0200	01985		DELINEATOR FOR BARRIER - YELLOW	82.00	EACH		$	
0210	01992		INSTALL TEMP CONC MED BARR (REVISED: 6-14-19)	2,320.00	LF		$	
0220	02014		BARRICADE-TYPE III	8.00	EACH		$	
0230	02351		GUARDRAIL-STEEL W BEAM-S FACE	12,875.00	LF		$	
0240	02352		GUARDRAIL-STEEL W BEAM-D FACE	87.50	LF		$	
0250	02367		GUARDRAIL END TREATMENT TYPE 1	3.00	EACH		$	
0260	02369		GUARDRAIL END TREATMENT TYPE 2A	10.00	EACH		$	
0270	02381		REMOVE GUARDRAIL	13,084.10	LF		$	
0280	02562		TEMPORARY SIGNS	600.00	SQFT		$	
0290	02565		OBJECT MARKER TYPE 2	12.00	EACH		$	
0300	02575		DITCHING AND SHOULDERING	22,669.00	LF		$	
0310	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
0320	02671		PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH		$	
0330	02701		TEMP SILT FENCE	3,000.00	LF		$	
0340	02703		SILT TRAP TYPE A	7.00	EACH		$	
0350	02704		SILT TRAP TYPE B	20.00	EACH		$	
0360	02705		SILT TRAP TYPE C	10.00	EACH		$	
0370	02726		STAKING	1.00	LS		$	
0380	02775		ARROW PANEL	4.00	EACH		$	

PROPOSAL BID ITEMS

191029

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Report Date 6/20/19

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0385	02898		RELOCATE CRASH CUSHION (ADDED: 6-14-19)	6.00	EACH		$	
0390	05963		INITIAL FERTILIZER	1.00	TON		$	
0400	05964		MAINTENANCE FERTILIZER	1.00	TON		$	
0410	05985		SEEDING AND PROTECTION	4,000.00	SQYD		$	
0420	05992		AGRICULTURAL LIMESTONE	3.00	TON		$	
0430	06401		FLEXIBLE DELINEATOR POST-M/W	408.00	EACH		$	
0440	06404		FLEXIBLE DELINEATOR POST-M/Y	156.00	EACH		$	
0450	06511		PAVE STRIPING-TEMP PAINT-6 IN	102,011.00	LF		$	
0460	06542		PAVE STRIPING-THERMO-6 IN W	65,383.00	LF		$	
0470	06543		PAVE STRIPING-THERMO-6 IN Y	52,980.00	LF		$	
0480	06546		PAVE STRIPING-THERMO-12 IN W	2,616.00	LF		$	
0490	06549		PAVE STRIPING-TEMP REM TAPE-B	8,000.00	LF		$	
0500	06550		PAVE STRIPING-TEMP REM TAPE-W	4,000.00	LF		$	
0510	06551		PAVE STRIPING-TEMP REM TAPE-Y	4,000.00	LF		$	
0520	06568		PAVE MARKING-THERMO STOP BAR-24IN	136.00	LF		$	
0530	08903		CRASH CUSHION TY VI CLASS BT TL3 (REVISE: 6-14-19)	6.00	EACH		$	
0540	10020NS		FUEL ADJUSTMENT	13,256.00	DOLL	$1.00	$	$13,256.00
0550	10030NS		ASPHALT ADJUSTMENT	26,780.00	DOLL	$1.00	$	$26,780.00
0560	24489EC		INLAID PAVEMENT MARKER	808.00	EACH		$	
0570	25025ED		THRIE BEAM GUARDRAIL TRANSITION TL-3	20.00	LF		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0580	00078		CRUSHED AGGREGATE SIZE NO 2	3,820.00	TON		$	
0590	00461		CULVERT PIPE-15 IN	70.00	LF		$	
0600	01202		PIPE CULVERT HEADWALL-15 IN	4.00	EACH		$	
0610	01432		SLOPED BOX OUTLET TYPE 1-15 IN	1.00	EACH		$	
0620	01691		FLUME INLET TYPE 2	8.00	EACH		$	
0630	01825		ISLAND CURB AND GUTTER	46.50	LF		$	
0640	02165		REMOVE PAVED DITCH	218.00	SQYD		$	
0650	02165		REMOVE PAVED DITCH (REVISED: 6-20-19)	634.00	SQYD		$	
0660	02200		ROADWAY EXCAVATION	435.00	CUYD		$	
0670	02483		CHANNEL LINING CLASS II	631.00	TON		$	
0680	02484		CHANNEL LINING CLASS III	2,543.00	TON		$	
0690	02596		FABRIC-GEOTEXTILE TYPE I	400.00	SQYD		$	
0700	03260		CLEAN ROADWAY DRAINS	1.00	EACH		$	
0710	05950		EROSION CONTROL BLANKET	5,529.00	SQYD		$	
0720	23484EC		PIPE LINER ACCEPTANCE TESTING	1.00	LS		$	
0730	24543EC		CLEAN 42 INCH CMP	154.00	LF		$	
0740	25031EC		CIPP LINER 42 IN	154.00	LF		$	

Section: 0004 - BRIDGE NO. 1 - WB BG PARKWAY OVER ROLLING FORK (090B00011L)

191029

PROPOSAL BID ITEMS

Report Date 6/20/19

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0750	03299		ARMORED EDGE FOR CONCRETE	70.00	LF		$	
0760	08106		CONCRETE-CLASS M 1	9.00	CUYD		$	
0770	08151		STEEL REINFORCEMENT-EPOXY COATED	923.00	LB		$	
0780	08435		JACK & SUPPORT BRIDGE SPAN	1.00	LS		$	
0790	21969NN		BEARING REPLACEMENT	2.00	EACH		$	
0800	22146EN		CONCRETE PATCHING REPAIR	226.00	SQFT		$	
0810	23032EN		BRIDGE BARRIER RETROFIT	616.00	LF		$	
0820	23386EC		JOINT SEAL REPLACEMENT 1 IN	35.00	LF		$	
0830	23386EC		JOINT SEAL REPLACEMENT 4 IN	35.00	LF		$	
0840	23783EC		REMOVE CONCRETE BARRIER	4.00	EACH		$	
0850	24981EC		BRIDGE CLEANING 090B00011L	1.00	LS		$	
0860	24982EC		CONCRETE COATING 090B00011L	1.00	LS		$	
0870	24983EC		BEARING LUBRICATION	6.00	EACH		$	
0880	25027ED		RAIL SYSTEM SINGLE SLOPE - 36 IN	38.00	LF		$	

Section: 0005 - BRIDGE NO. 2 - EB BG PARKWAY OVER ROLLING FORK (090B00011R)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0890	03299		ARMORED EDGE FOR CONCRETE	70.00	LF		$	
0900	08106		CONCRETE-CLASS M 1	9.00	CUYD		$	
0910	08151		STEEL REINFORCEMENT-EPOXY COATED	923.00	LB		$	
0920	08435		JACK & SUPPORT BRIDGE SPAN	1.00	LS		$	
0930	21969NN		BEARING REPLACEMENT	2.00	EACH		$	
0940	22146EN		CONCRETE PATCHING REPAIR	226.00	SQFT		$	
0950	23032EN		BRIDGE BARRIER RETROFIT	616.00	LF		$	
0960	23386EC		JOINT SEAL REPLACEMENT 1 IN	35.00	LF		$	
0970	23386EC		JOINT SEAL REPLACEMENT 4 IN	35.00	LF		$	
0980	23783EC		REMOVE CONCRETE BARRIER	4.00	EACH		$	
0990	24981EC		BRIDGE CLEANING 090B00011R	1.00	LS		$	
1000	24982EC		CONCRETE COATING 090B00011R	1.00	LS		$	
1010	24983EC		BEARING LUBRICATION	6.00	EACH		$	
1020	25027ED		RAIL SYSTEM SINGLE SLOPE - 36 IN	38.00	LF		$	

Section: 0006 - BRIDGE NO. 3 - WB BG PARKWAY OVER KY 52 (090B00012L)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1030	08106		CONCRETE-CLASS M 1	10.00	CUYD		$	
1040	08151		STEEL REINFORCEMENT-EPOXY COATED	874.00	LB		$	
1050	23032EN		BRIDGE BARRIER RETROFIT	236.00	LF		$	
1060	23783EC		REMOVE CONCRETE BARRIER	4.00	EACH		$	

PROPOSAL BID ITEMS

Report Date 6/20/19

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1070	24982EC		CONCRETE COATING 090B00012L	1.00	LS		$	
1080	25027ED		RAIL SYSTEM SINGLE SLOPE - 36 IN	33.00	LF		$	

Section: 0007 - BRIDGE NO. 4 - EB BG PARKWAY OVER KY 52 (090B00012R)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1090	08106		CONCRETE-CLASS M 1	10.00	CUYD		$	
1100	08151		STEEL REINFORCEMENT-EPOXY COATED	874.00	LB		$	
1110	23032EN		BRIDGE BARRIER RETROFIT	236.00	LF		$	
1120	23783EC		REMOVE CONCRETE BARRIER	4.00	EACH		$	
1130	24982EC		CONCRETE COATING 090B00012R	1.00	LS		$	
1140	25027ED		RAIL SYSTEM SINGLE SLOPE - 36 IN	33.00	LF		$	

Section: 0008 - BRIDGE NO. 5 - WB BG PARKWAY OVER CSX RAILROAD (090B00013L)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1150	08106		CONCRETE-CLASS M 1	10.00	CUYD		$	
1160	08151		STEEL REINFORCEMENT-EPOXY COATED	998.00	LB		$	
1170	23032EN		BRIDGE BARRIER RETROFIT	332.00	LF		$	
1180	23783EC		REMOVE CONCRETE BARRIER	4.00	EACH		$	
1190	24982EC		CONCRETE COATING 090B00013L	1.00	LS		$	
1200	25027ED		RAIL SYSTEM SINGLE SLOPE - 36 IN	35.00	LF		$	

Section: 0009 - BRIDGE NO. 6 - EB BG PARKWAY OVER CSX RAILROAD (090B00013R)

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1210	08106		CONCRETE-CLASS M 1	10.00	CUYD		$	
1220	08151		STEEL REINFORCEMENT-EPOXY COATED	998.00	LB		$	
1230	23032EN		BRIDGE BARRIER RETROFIT	332.00	LF		$	
1240	23783EC		REMOVE CONCRETE BARRIER	4.00	EACH		$	
1250	24982EC		CONCRETE COATING 090B00013R	1.00	LS		$	
1260	25027ED		RAIL SYSTEM SINGLE SLOPE - 36 IN	35.00	LF		$	

Section: 0010 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1270	02568		MOBILIZATION	1.00	LS		$	
1280	02569		DEMOBILIZATION	1.00	LS		$	

BLUEGRASS PARKWAY – BRIDGE REHABILITATION

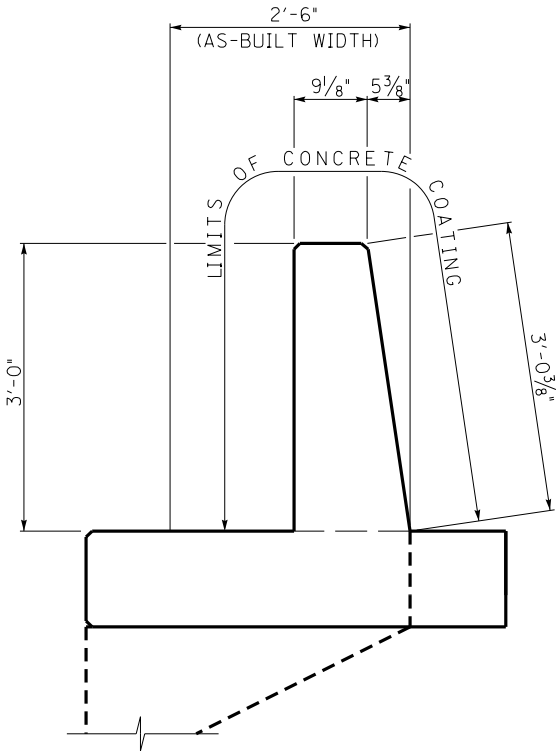
HARDIN AND NELSON COUNTIES | ITEM NO. 4-20007

6/11/2019

Concrete Coating Quantities

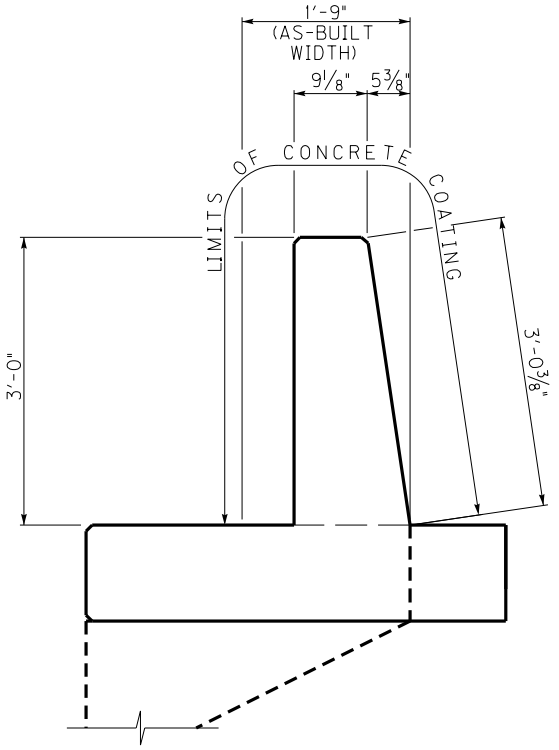
Bridge 1 - 090B00011L BGP WB over Rolling Fork		
	Quantity (SF)	Remark
Barrier Wall Retrofit	4085	
Wingwalls	258	Total for 4 wingwalls
Pier Cap Repairs	905	Total for Pier 1 & 4
Bridge 2 - 090B00011R BGP EB over Rolling Fork		
	Quantity (SF)	Remark
Barrier Wall Retrofit	4085	
Wingwalls	258	Total for 4 wingwalls
Pier Cap Repairs	905	Total for Pier 1 & 4
Bridge 3 - 090B00012L BGP WB over KY 52		
	Quantity (SF)	Remark
Barrier Wall Retrofit	1387	
Wingwalls	224	Total for 4 wingwalls
Bridge 4 - 090B00012R BGP EB over KY 52		
	Quantity (SF)	Remark
Barrier Wall Retrofit	1387	
Wingwalls	224	Total for 4 wingwalls
Bridge 5 - 090B00013L BGP WB over CSX RR		
	Quantity (SF)	Remark
Barrier Wall Retrofit	2200	
Wingwalls	279	Total for 4 wingwalls
Bridge 6 - 090B00013R BGP EB over CSX RR		
	Quantity (SF)	Remark
Barrier Wall Retrofit	2200	
Wingwalls	279	Total for 4 wingwalls

Concrete coating quantities shown are estimates only and will be paid as lump sum per bridge by Bid Item 24982EC.



36" BARRIER SECTION

(CONCRETE COATING LIMITS)
(BRIDGES 1,2,5 & 6)



36" BARRIER SECTION

(CONCRETE COATING LIMITS)
(BRIDGES 3 & 4)

DRAWN BY: DWW	DATE: JUNE 2019	BRIDGE WINGWALL CONCRETE COATING LIMITS	KENTUCKY TRANSPORTATION CABINET 200 MERO STREET FRANKFORT, KY 40622	DLZ WMB 1950 HAGGARD COURT LEXINGTON, KENTUCKY 40505 (859) 299-5226
CHECKED BY: MRW	SCALE: NTS			
JOB NO.: 1831-2102	SHEET:			