



CALL NO. 347

CONTRACT ID. 172188

CARTER COUNTY

FED/STATE PROJECT NUMBER FE01 022 0001 011-012

DESCRIPTION CAROL MALONE BOULEVARD (KY 1)

WORK TYPE JPC PAVEMENT REPAIRS - DIAMOND GRINDING

PRIMARY COMPLETION DATE 11/15/2017

LETTING DATE: April 28,2017

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME April 28,2017. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

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

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PART I
SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 09

CONTRACT ID - 172188
FE01 022 0001 011-012
COUNTY - CARTER
PCN - MP02200011702
FE01 022 0001 011-012

CAROL MALONE BOULEVARD (KY 1) (MP 11.589) FROM NORTH END I-64 OVERPASS EXTENDING TO 175 FEET NORTH OF KY 1947 INCLUDING THE KY 1947 AND C W STEVENS BLVD APPROACHES (MP 11.777), A DISTANCE OF 0.19 MILES.JPC PAVEMENT REPAIRS - DIAMOND GRINDING
GEOGRAPHIC COORDINATES LATITUDE 38:20:45.00 LONGITUDE 82:56:30.00

COMPLETION DATE(S):

COMPLETED BY 11/15/2017	SPECIFIED COMPLETION DATE - ALL ITEMS IN CONTRACT
0 CALENDAR Hours	LANE CLOSURE DURING PROHIBITED HOURS

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 Expedite Bidding Program available on the Internet web site of the Department of Highways, Division of Construction Procurement. (www.transportation.ky.gov/construction-procurement)

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.

SPECIAL NOTE FOR COMPOSITE OFFSET BLOCKS

Contrary to the Standard Drawings (2016 edition) the Cabinet will allow 6" composite offset blocks in lieu of wooden offset blocks, except as specified on proprietary end treatments and crash cushions. The composite blocks shall be selected from the Cabinet's List of Approved Materials.

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.

06/01/16

SPECIAL NOTE FOR RECIPROCAL PREFERENCE

Reciprocal preference to be given by public agencies to resident bidders

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

03/01/2011

EXPEDITE PROJECT WORK ORDER

The Contractor may request that the Department expedite the work order for this project to allow for maximization of time to complete the work. In order for the Department to accomplish this task, the Contractor may be required to “hand carry” all required project documentation to facilitate the process. Immediately UPON NOTIFICATION OF AWARD OF THE CONTRACT, deliver required project documentation to:

Division of Construction Procurement
200 Mero St.
Frankfort, KY 40602

NATIONAL HIGHWAY

Be advised this project is on the NATIONAL HIGHWAY SYSTEM.

PROJECT TRAFFIC COORDINATOR (PTC)

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

SURFACING AREAS

The Department estimates the mainline surfacing width to be 72 feet.

The Department estimates the total mainline area to be surfaced to be 9,100 square yards.

The Department estimates the shoulder width to be 10 feet on each side.

The Department estimates the total shoulder area to be surfaced is included in the mainline area.

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 JPC and 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-110-07 or as directed by the Engineer. 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 JPC and the asphalt mixtures.

INITIAL TREATMENT

Unless directed otherwise by the Engineer, construct pavement crown on ¼":1' slope with parabolic centerline crown. Prepare a Drainage Development Worksheet (see Special Note for Staking) for the KY 1/I-64 Intersections and traffic island and obtain the Engineer's approval for crown adjustments to provide positive drainage upon completion of construction.

FUEL AND ASPHALT PAY ADJUSTMENT

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

OPTION B

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

**SPECIAL NOTE FOR JPC INTERSECTION
FE01 022 0001 011-012**

THIS PROJECT IS A PARTIALLY CONTROLLED ACCESS HIGHWAY

I. DESCRIPTION

Except as specified herein, construct Jointed Plain Concrete (JPC) Pavement in accordance with the Department's 2012 Standard and Supplemental Specifications, Special Provisions and Special notes, and Standard and Sepia Drawings, current editions, and as directed by the Engineer. Section references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for the following work:

- (1) Maintain and Control Traffic; (2) Site Preparation and Erosion Control; (3) Construct Island Curb and Gutter and reconstruct existing traffic island; (4) Remove existing asphalt pavement and replace with JPC Pavement; (5) Diamond Grind new JPC pavement and existing JPC pavement to remain in place; (6) Remove and replace guardrail; and (7) All other work specified as part of this contract.

II. MATERIALS

The Department will sample and test all materials according to the Department's Sampling Manual. Make the materials available for sampling a sufficient time in advance of use, to allow for the necessary time for testing, unless otherwise specified in these notes.

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

B. Dense Graded Aggregate. Use Dense Graded Aggregate (DGA). Do not furnish Crushed Stone Base in lieu of DGA.

C. JPC Pavement – 10 Inch. See Section 501. Use Class P or Class A Concrete. At Contractor's request and at no additional cost to the Department, the Engineer may approve high early strength rapid setting concrete; however the use of chloride accelerators will not be approved. The Department will allow either central mixing or truck mixing.

D. Shoulders. Use DGA and 10 inch non-reinforced JPC Pavement or Leveling and Wedging PG64-22, as applicable.

E. Joint Sealant. Use Hot-Poured Elastic, no alternate.

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F. Traffic Signal Loops. See Special Notes for Traffic Signal Preformed Loop Replacement.

G. Box Inlet, Pipe, and Slope and Flared Headwall. See Special Notes for Drainage.

H. Traffic Island. For Island Curb and Gutter, use Class A Concrete. Pave with 3 inches of Class 2 Asphalt Base PG64-22 and 1 inch Class 2 Asphalt Surface PG64-22. Modify the asphalt content and gradation to conform to Section 411.02.

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

I. Guardrail. See Special Note for Guardrail.

III. CONSTRUCTION METHODS

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

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

C. Shoulder Preparation and Restoration. Prior to placing any lane closures that require shifting traffic onto existing shoulders, patch the shoulder as directed by the Engineer.

D. Site Preparation. The Contractor shall provide staging areas off the Right-of-Way at no additional cost to the Department. Be responsible for all site preparation, including but not limited to, incidental excavation and backfilling; removal of all obstructions or any other items; disposal of materials; sweeping and removal of debris; shoulder preparation and restoration; temporary and permanent erosion and pollution control; final dressing, clean up, and seeding; and all incidentals. See Special Note for Erosion Control. Perform all Site Preparation only as approved or directed by the Engineer.

Prior to placing any lane closures that require shifting traffic onto existing shoulders, patch the shoulder as directed by the Engineer. Remove failed materials and perform additional patching as directed by the Engineer during the time the shoulder is used as a travel lane. Asphalt mixtures will be paid at the Contract unit bid prices; all other shoulder preparation and restoration will be incidental to other items of work.

E. Pavement Removal. Consider pavement removal locations and dimensions shown on the drawings to be approximate only; the Engineer will determine exact locations and dimensions at the time of construction. Prior to removal, saw-cut existing asphalt pavement at locations directed by the Engineer to provide a neat edge where new concrete will adjoin existing asphalt. Remove existing asphalt pavement and underlying DGA or other stone base as necessary to provide for the specified thickness of the

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replacement JPC Pavement without unnecessarily disturbing the remaining base by any method approved by the Engineer.

F. Preparation of Base. Compact the new and existing aggregate base to the Engineer's satisfaction. The Engineer will accept compaction by either visual inspection or by nuclear gauge. When the Engineer deems it necessary to stabilize the existing base, use DGA. Use Type III geotextile fabric as directed by the Engineer. Flowable fill and cement stabilization may be used as an alternative to stabilize the existing base or to replace unsuitable materials when a plan for such is presented to and approved by the Engineer. During compaction, wet the base as the Engineer directs. Compact areas not accessible to compaction equipment by hand tamping.

G. Traffic Signal Loops. See Special Notes for Traffic Signal Preformed Loop Replacement. Protect lead wires from each loop to the junction box during each phase of the construction sequence at no additional cost to the Department.

H. JPC Pavement Replacement. Prior to pavement removal and placing JPC Pavement, obtain the Engineer's approval of proposed method of construction for ensuring and establishing a smooth profile. Immediately after removing asphalt pavement, stabilize any exposed DGA base as directed by the Engineer. Install dowel bars and tie bars according to the Standard Drawings in both pavement and shoulders. JPC in a continuous operation in accordance with the Traffic Control Plan Phasing and as directed by the Engineer. Construct the replacement JPC Pavement with a minimum depth of 10 inches; however, transition the finished grade to match adjacent pavement that is to remain in place; therefore, the actual thickness of the pavement may be greater than 10 inches in some areas. Consolidate the concrete, strike off, machine finish with a vibrating or roller screed, and straightedge the plastic concrete with a straightedge conforming to Section 501.02.18. Test the profile of the finished pavement with a 10 foot straightedge according to Section 501.03.19. Provide positive drainage upon completion of construction.

I. Curing. Use curing blankets only. Do not use burlap curing or white membrane curing compound. If the Contractor elects to use JPC Pavement 24/48/72 cure according to Section 502.03(C).

J. Diamond Grinding. For new JPC Pavement-10 Inch, see Section 501.03.09. For existing JPC pavement, see Section 503.

K. Ride Quality. See Section 501.03.19, category B (after Diamond Grinding).

L. Joints. After Diamond Grinding, saw cut, clean, and seal all transverse and longitudinal joints and the pavement shoulder joint in the new and existing pavements with hot-poured elastic according to Section 501.03.17 and 501.03.18 and the standard drawings, except do not seal joints until after Diamond Grinding.

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M. Traffic Island. Construct Island Curb and Gutter as shown on the drawings according to Section 506. Construct traffic island with asphalt base and surface to grade according to section 411. Provide crown of at least ¼ inch per foot. Construct Curb Box Inlet, Pipe, and Slope and Flared Headwall as shown on the drawings and according to the special note for drainage. Provide positive drainage during and upon completion of construction.

N. Guardrail. See Special Note for Guardrail.

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

P. Pavement Markings. See Traffic Control Plan.

Q. On-Site Inspection. Prior to submitting a bid, make a thorough inspection of the site and become thoroughly familiar with the 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. The Department will not honor any claims resulting from site conditions.

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

S. Caution. Consider information shown on the drawings and in this proposal and the types and quantities of work listed are approximate only, and not 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 no claim will be considered for additional compensation or Contract time if the conditions encountered are not in accordance with the information shown.

T. Utility Clearance. Determine the location of all underground and overhead utilities prior to construction. It is not anticipated that utility facilities will need to be relocated and/or adjusted; however, in the event that work does require relocation and/or adjustment, the utility companies will work concurrently with the Contractor while relocating their facilities.

U. Final Dressing, Clean Up, and Seeding and Protection. After all work is completed, remove all waste and debris from the construction sites. Remove all temporary shoulder widening and restore disturbed shoulders. Perform Class A final dressing on all disturbed areas. Sow disturbed earthen areas with Seed Mixture No. 1.

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V. Coordination of Work. Be advised that other projects may be in progress within or in the near vicinity of this project. Take into consideration that the traffic control of those projects may affect this project and the traffic control of this project may affect those projects. Coordinate the work on this project with the work of the other contractors. In case of a conflict, the Engineer will determine the relative priority to give to work phasing on the various projects.

W. Staking. See Special Note For Staking.

IV. METHOD OF MEASUREMENT

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

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

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

C. Dense Graded Aggregate. See Section 302.04.01.

C. Shoulder Preparation and Restoration. The Department will measure asphalt materials to prepare and restore shoulders for maintaining traffic as Leveling and Wedging PG64-22. The Department will not measure other specific items for shoulder preparation and restoration but shall be incidental to Maintain and Control Traffic.

D. Remove Pavement. The department will measure removed pavement in square yards regardless of type. The Department will not measure removal of underlying base material but shall be incidental to Remove JPC Pavement.

E. JPC Pavement-10 Inch. See Section 502.04.01, except the Department will measure the actual pavement area.

F. Joint Sealing. The Department will not measure sawing, cleaning, and sealing joints in new JPC Pavement-10 Inch for payment, but will be incidental to JPC Pavement-10 Inch. The Department will measure sawing, cleaning, and sealing joints in the existing JPC Pavement according to section 503.04.02.

G. Smooth Dowels, Deformed Tie Bars, and Hook Bolts. The Department will not measure smooth dowels, deformed tie bars and hook bolts, but shall be incidental to JPC Pavement/24.

H. Diamond Grinding. See Section 503.04.01.

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H. Signal Loops. See Special Notes For Traffic Signal Preformed Loop Replacement.

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

J. Box Inlet, Pipe, and Slope and Flared Headwall. See Special Notes for Drainage.

K. Guardrail. See Special Note for Guardrail.

L. Traffic Island. For Island Curb and Gutter, see Section 506.04.03. The department will not measure saw cutting pavement or excavation required to construct the curb but shall be incidental to Island Curb and Gutter. The department will measure asphalt mixtures according to Section 402.04.

IV. BASIS OF PAYMENT

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

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

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

C. DGA. See Section 302.05.

D. Remove Pavement. Accept payment at the Contract unit price per square yard as full compensation for all labor, materials, equipment, and incidentals for removing and disposing of pavement and underlying base materials.

E. JPC Pavement 10 Inch. See Section 501.05.01.

F. Diamond Grinding. See Section 503.04.01.

G. Joint Sealing. The Department will make payment for sawing, cleaning, and sealing joints in the existing JPC Pavement according to section 503.05.

H. Signal Loops. See Special Notes For Traffic Signal Preformed Loop Replacement.

I. Box Inlet, Pipe, and Slope and Flared Headwall. See Special Notes for Drainage.

J. Guardrail. See Special Note for Guardrail.

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L. Traffic Island. For Island Curb and Gutter, see Section 506.05. The department will measure asphalt mixtures according to Section 402.05.02.

SPECIAL NOTES FOR DRAINAGE FE01 022 0001 011-012

I. DESCRIPTION

Except as specified herein, perform all work in accordance with the Department's 2012 Standard and Supplemental Specifications, Special Provisions and Special Notes, and Standard and Sepia Drawings, current editions. Section references are to the Standard Specifications. This work shall consist of:

(1) Site preparation and erosion control; (2) Constructing a Curb Box Inlet Type A, 18 Inch Storm Sewer Pipe and Slope and Flared Headwall; (3) Final dressing, cleanup, restoration, and seeding; (4) Maintaining and controlling traffic; and (5) any other work as specified by this contract.

I. MATERIALS AND DESIGN

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. Storm Sewer Pipe – 18 Inch. Furnish 18 Inch Culvert Pipe conforming to Section 810, Standard Drawings RDI-001-10, and RDI-035-02 (pH Range Medium).

C. Curb Box Inlet Type A. See Section 710.02 and Standard Drawing RDB-270-09, RDB-271-5, RDB-272-07, and RDB-273-06.

D. Slope And Flared Headwall – 18 inch. See Section 710 and Standard Drawing RDH-020-03.

D. Security Devices for Frames, Grates, and Lids. See Standard Drawing RDX-160-06.

E. Pipe Bedding and Backfill. Use Crushed Limestone Size No. 8 wrapped with Type IV Geotextile Fabric for bedding. Use flowable fill conforming to Section 701.02.05 for pipe backfill.

F. Concrete. Use Class A concrete for all concrete work.

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

H. Channel Lining. Use Class II Channel Lining conforming to Section 805.13.04.

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I. Asphalt Pavement. Use Leveling and Wedging PG64-22.

III. CONSTRUCTION METHODS

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

B. Site Preparation. Be responsible for all site preparation, including, but not limited to: all clearing and grubbing; removal of obstructions or any other items; excavation; structure excavation, foundation preparation and bedding; embankment and backfilling; waste and disposal of materials and debris; shoulder and slope restoration, cleanup and final dressing. Perform all site preparation as approved or directed by the Engineer.

C. Excavation. Saw cut the existing pavement and base to a neat edge prior to excavation. Obtain the Engineer's approval of trench width and removal limits prior to saw cutting. Excavate trench as directed or approved by the Engineer without disturbing existing underground utilities.

Be responsible for all excavation (common, roadway, structure, solid rock, and unclassified) required for construction. Provide positive drainage of slopes and ditches at all times during and upon completion of construction. Waste all removed materials not incorporated into the work at sites off the right of way obtained by the Contractor at no additional cost to the Department (see Special Note for Waste and Borrow). Perform all excavation and removal of obstructions only as approved or directed by the Engineer.

D. Curb Box Inlet Type A. Construct Curb Box Inlet Type A according Section 710.03 and the Standard Drawings as shown on the drawings, and as directed by the Engineer. Obtain the Engineer's approval of final centerline and flow lines to obtain the best fit of the existing grade and alignment. Connect new 18 inch storm sewer pipe to the curb box inlet in such a manner as to prevent leakage of the pipe and structure wall joint. Prior to placing concrete, obtain the Engineer's approval of the drop box and pipe connection installation. Provide security devices for frames, grates, and lids according to Standard Drawing RDX-160-06 with a chain of sufficient length to permit removal for clean out and maintenance purposes. Provide Positive drainage upon completion of the drop box installation.

E. Storm Sewer Pipe and Bedding. Construct storm sewer pipe as shown on the drawings, Standard Drawings, and as directed by the Engineer. Obtain the Engineer's approval of final centerline, flow lines and skew to obtain the best fit of the existing grade and alignment. Construct pipe bedding with 4 inches of Crushed Limestone wrapped in Type IV Geotextile Fabric as directed by the Engineer. The Department will not require geotextile fabric pipe wrap or Pipeline Video Inspection. Use approved connecting bands or concrete anchors as required. Construct pipe connections to the drop box inlet in such a manner as to prevent leakage of the pipe and structure wall joint. Prior to

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backfilling pipe, obtain the Engineer's approval of the pipe installation. Restore pavement over pipe trench with Leveling and Wedging PG64-22. Provide Positive drainage upon completion of pipe installation.

F. Slope and Flared Headwall – 18 Inch. Construct Slope and Flared Headwall according Section 710.03 and the Standard Drawings as shown on the drawings, and as directed by the Engineer. Obtain the Engineer's approval of final centerline and flow lines to obtain the best fit of the existing grade and alignment. Prior to placing concrete, obtain the Engineer's approval of the drop box and pipe connection installation. Provide Positive drainage upon completion of the drop box installation.

G. Backfilling and Asphalt Resurfacing. Backfill trench around the pipe with flowable fill up to the existing subgrade elevation. Backfill excavated area around the new drainage structure inlet according to Section 710.03. Restore temporary pavement to match existing thickness with Class 2 Asphalt Base 0.38D PG64-22. Seal the asphalt base with Leveling and Wedging PG64-22 and maintain until the permanent JPC Pavement is placed.

H. Channel Lining. Place Class II Channel Lining around the outlet culvert headwall as directed by the Engineer. See Special Note for Erosion Control.

I. Final Dressing, Clean Up, and Seeding and Protection. After all work is completed, completely remove debris from the construction site. Perform Final Dressing on all disturbed areas, both on and off the Right-of-Way. See Special Note for Erosion Control.

J. Disposal of Waste. Dispose of all excess materials, waste, and debris off the right-of-way at approved sites obtained by the Contractor at no additional cost to the Department. See Special Note for Waste and Borrow Sites.

K. Property Damage and 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.

L. 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 resulting from site conditions.

M. Caution. Do not take information shown on the plans 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. Without regard to the materials encountered, all excavation shall be unclassified. It shall be distinctly understood that any reference to rock, earth, or any other material on the plans or cross sections, whether in numbers or words, letters, or lines, is solely for the Department's information and is not to

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be taken as an indication of classified excavation or the quantity of either rock, earth, or any other material involved. 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 if the conditions encountered are not in accordance with the information shown.

N. Utility Clearance. Work around and do not disturb existing utilities. It is not anticipated that any utility facilities will require relocation and/or adjustment; however, in the event utilities are discovered that require relocation, the utility companies will work concurrently with the Contractor while relocating their facilities. Working days will not be charged for those days on which work on the controlling item is delayed due to the utility company's phase of the work, as provided in the Specifications. If the total delay exceeds ten working days, an extension of the specified completion date will be negotiated with the Contractor for delay to the Contractor's work.

IV. METHOD OF MEASUREMENT

Only the listed items will be measured for payment. All other items required to complete the work according to the Drawings, Specifications, these notes, and as directed by the Engineer shall be incidental to the applicable listed items.

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

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

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

D. Curb Box Inlet Type A. See Standard Drawing RDB-003-08 and Section 710.04.01. The Department will not measure pipe connections but shall be incidental to Drop Box Inlet Type 3.

E. Storm Sewer Pipe – 18 inch. See Section 701.04.01.

F. Slope and Flared Headwall - 18 inch. See Section 601.04.

G. Channel Lining. See Special Note for Erosion Control.

H. Asphalt Pavement. See Section 402.04.

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V. BASIS OF PAYMENT

No direct payment will be made other than for the bid items listed. All other items required to complete the construction shall be incidental to the bid items listed.

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

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

C. Curb Box Inlet Type A. See Section 710.05.

D. Storm Sewer Pipe – 18 Inch. Accept payment at the contract unit price per linear foot as full compensation for all materials, equipment, labor and incidentals necessary to complete the work as specified in these notes, Standard Specifications, and Standard Drawings for furnishing culvert pipe, connecting bands and pipe anchors; constructing bedding; installing culvert pipe; and backfilling the culvert pipe.

E. Slope and Flared Headwall – 18 inch. See Section 601.05.

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

G. Asphalt Pavement. See Section 402.05.02.

SPECIAL NOTE FOR STAKING
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In addition to the requirements of Section 201, perform the following:

1. Contrary to Section 201.03.01, perform items 1-3 usually performed by the Engineer; and
2. Verify intersection lane profile and alignment and prepare a Drainage Development Worksheet to provide for positive drainage upon completion of construction; and
3. Determine line, grade, inlet and outlet elevations, and flow lines of box inlets, pipe, and headwalls; and
4. Prior to incorporating into the work, obtain the Engineers approval of all designs and revisions to be provided by the Contractor; and
5. Produce and furnish to the Engineer "As Built" plans; and
6. Perform any and all other staking operations required to control and construct the work.

SPECIAL NOTE FOR FINAL PAVEMENT STRIPING
FE01 022 0001 011-12

On 2-lane roads, locate by measurement the true geometric center of the road and mark the true center prior to placing final permanent striping. Place the permanent centerline marking at this true center and not necessarily at the pavement joint. Measure for edgelines outward from the true centerline according to the dimensions shown on the typical sections and place the edgelines accordingly.

Where curve widening exists, the Engineer will determine the location of the centerline and edgeline striping at the time of construction. Mark the locations as determined by the Engineer prior to placing permanent striping.

On multi-lane roads, or 2-lane roads where additional lanes occur, mark and place the striping as determined by the engineer.

SPECIAL NOTES LIQUIDATED DAMAGES
FE01 022 0001 011-0112

In addition to the requirements of Section 108.09, the Department will assess Liquidated Damages in the amount of \$2,000 per hour for each hour or part of an hour a lane closure remains in place during days and hours prohibited by the Traffic Control Plan or the Engineer.

The Department will assess Liquidated Damages in the amount specified in Section 108.09 whenever work remains uncompleted beyond the Specified Completions Date.

Contrary to section 108.09, the Department will assess Liquidated Damages for the months of December through March.

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

All liquidated damages will be applied accumulatively.

All other applicable portions of Section 108 apply.

SPECIAL PROVISION FOR WASTE AND BORROW SITES

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

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

COORDINATION OF WORK WITH OTHER CONTRACTS

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

1-3193 Coordination Contracts
01/02/2012

SPECIAL NOTES FOR GUARDRAIL **FE01 022 0001 011-012**

I. DESCRIPTION

Except as specified herein, perform all work in accordance with the Department's 2012 Standard and Supplemental Specifications, Special Provisions and Special Notes, and Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications.

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

(1) Site preparation; (2) Remove existing guardrail systems; (3) Construct Guardrail, Bridge End Connectors, and Delineators for Guardrail; (4) Maintain and control traffic; and (5) all other work specified as part of this contract.

II. MATERIALS

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

A Maintain and Control Traffic. See Traffic Control Plan.

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

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

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

III. CONSTRUCTION METHODS

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

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

C. Site Preparation. Remove existing guardrail system including Bridge End connectors and other elements of the existing guardrail system as per Section 719. Be responsible for all site preparation, including but not limited to, clearing and grubbing, excavation, embankment, and removal of all obstructions or any other items; regrading, reshaping, adding and compacting of suitable materials on the existing shoulders to provide proper template or foundation for the guardrail; filling voids left as the result of removing existing

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guardrail and guard posts with dry sand; temporary pollution and erosion control; disposal, of excess and waste materials and debris; and final dressing, cleanup, and seeding and protection. Perform all site preparation as approved or directed by the engineer.

D. Guardrail. Consider guardrail removal and construction locations shown on the drawings to be approximate only. The Engineer will determine exact locations at the time of construction. Except as specified herein, construct guardrail system according to Section 719 and the Standard Drawings. Unless directed otherwise by the Engineer, provide existing shoulder width. Construct radii at entrances and road intersections as directed by the Engineer.

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

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

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

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

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

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

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I. Final Dressing, Clean Up, and Seeding and Protection. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas according to the Special Notes for Erosion Control.

IV. METHOD OF MEASUREMENT

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

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

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

D. Remove Guardrail, Guardrail, and Bridge End Connectors. See Section 719.04.

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

V. BASIS OF PAYMENT

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

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

C. Remove Guardrail, Guardrail, and Bridge End Connectors. See Section 719.05.

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

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

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

1-3725 Typical Section Dimensions
01/02/2012

TRAFFIC CONTROL PLAN
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THIS PROJECT IS A PARTIALLY
CONTROLLED ACCESS HIGHWAY

TRAFFIC CONTROL GENERAL

Except as provided herein, maintain and control traffic in accordance with the 2012 Standard and Supplemental Specifications, Special Provisions and Special Notes, and the Standard and Sepia Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic".

Contrary to Section 106.01, furnish new, or used in like new condition, traffic control devices at the beginning of the work and maintain in like new condition until completion of the work.

PROJECT PHASING & CONSTRUCTION PROCEDURES

Do not erect lane closures during the following days:

June 21-25, 2017	Rudy Fest
July 1-4, 2017	Independence Day Weekend
August 6-12, 2017	Carter County Fair
September 2-4, 2017	Labor Day Weekend
November 23-26, 2017	Thanksgiving Weekend
December 22-25, 2017	Christmas Weekend
December 29, 2017 – January 1, 2018	New Year’s Weekend

The Engineer may specify additional days and hours when lane closures will not be allowed.

Maintain the I-64 ramps open at all times. On the I-64 off ramp a lane closure will be permitted twice during construction for a duration of 48 hours each. During the lane closure, maintain a clear lane width of 14 feet. Do not allow the queue on the ramp to extend beyond the ramp exit gore at any time.

The dual left turn lanes on CW Stevens Boulevard shall be reduced to one left turn to accommodate lane closures on KY 1.

At locations with three or more lanes, maintain one lane of traffic in each direction at all times during construction. At locations with two lanes, maintain alternating one way traffic during construction. Provide a minimum clear lane width of 12 feet; however, provide for passage of vehicles of up to 16 feet in width. If traffic should be stopped due to construction operations, and a

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school bus on an official run arrives on the scene, make provisions for the passage of the bus as quickly as possible.

Night Work is allowed on this project. Obtain the Engineer's approval of the method of lighting prior to performing night work.

Fourteen (14) calendar days prior to erecting any lane closures, partner with the Engineer to develop a Phasing Plan and Work Schedule to expedite the work and minimize disruption to traffic.

Take these restrictions into account when submitting bid. The Department will not consider any claims for money or grant time extensions for any delays a result of these restrictions.

PUBLIC INFORMATION PLAN

This project is considered a significant project according to Section 112.03.12. The Department will prepare a public information plan and provide public notification. Notify the Engineer immediately and obtain approval of any changes to the approved Work Schedule.

LANE CLOSURES

Do not leave lane closures in place during non-working hours except as allowed by the approved phasing plan. Contrary to Section 112.04.17, the Department will not measure long term lane closures for payment, but shall be incidental to Maintain and Control Traffic.

SIGNS

The Engineer may require additional signing and/or traffic control devices in addition to the items shown on the Standard Drawings. Sign posts and splices shall be compliant with NCHRP 350 or MASH. Manufacturer's documentation validating this compliance shall be provided to the Engineer prior to installation. Signs, including any splices, shall be installed according to manufacturer's specifications and installation recommendations. Contrary to section 112.04.02, the Department will measure only long term signs (signs intended to be continuously in place for more than 3 days) for payment. The Department will not measure; short term signs (signs intended to be left in place for 3 days or less) for payment, but shall be incidental to Maintain and Control Traffic. Contrary to Section 112.04.02, the Department will measure individual signs only once for payment, regardless of how many times they are erected or relocated. The Department will not measure replacements for damaged signs directed by the Engineer to be replaced due to poor condition or reflectivity.

CHANGEABLE MESSAGE SIGNS

Provide changeable message signs in advance of and within the project at locations determined by the Engineer. If work is in progress concurrently in both directions or if more than one lane closure is in place in the same direction of travel, provide additional changeable message signs as directed by the Engineer. Place changeable message signs one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens, relocate or provide additional changeable message signs so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. The Engineer may vary the designated locations as the work progresses. The Engineer will determine the messages to be displayed. In the event of damage or mechanical/electrical failure, repair or replace the Changeable Message Sign within 24 hours. The Department will measure for payment the maximum number of Changeable Message Signs in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual Changeable Message Signs only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged Changeable Message Signs or for signs the Engineer directs be replaced due to poor condition or readability.

ARROW PANELS

Use arrow panels as shown on the Standard Drawings or as directed by the Engineer. The Department will measure for payment the maximum number of arrow panels in concurrent use at the same time on a single day on all sections of the contract. The Department will measure for payment the maximum number of Changeable Message Signs in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual Arrow Panels only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged Arrow Panels or for panels signs the Engineer directs be replaced due to poor condition or readability for payment.

TEMPORARY ENTRANCES

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

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

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

TRAFFIC SIGNALS

As required by the phasing, the Department will relocate signal heads, adjust signal timing, or place signal indications on flashing red/yellow as determined as determined by the Engineer. Provide flaggers to supplement the adjusted signals as required by the work in progress.

TRAFFIC LOOPS

Install traffic signal inductance loops according to the Special Notes for Traffic Signal Loop Replacement. Coordinate the placement of the loops with the Engineer.

BARRICADES

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

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

PAVEMENT STRIPING

If there is to be a deviation from the existing striping plan, the Engineer will furnish the Contractor a striping plan prior to placement of the JPC Pavement. Install Temporary and Permanent Striping according to Section 112 with the following exceptions:

1. Include edge lines in Temporary Striping; and

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2. Place Temporary or Permanent Striping before opening a lane to traffic; and
3. For Temporary Striping, use an approved removable lane tape; and
4. For Permanent Striping, use Durable Tape Type 1.

INTERSECTION MARKINGS

Consider the locations listed on the summary to be approximate only. Prior to pavement removal, locate and document the location of the existing markings. After Diamond Grinding, replace the markings with Type 1 Tape or Thermoplastic Intersection Markings as shown on the Summary. Place markings not previously existing as directed by the Engineer.

PAVEMENT EDGE DROP-OFFS

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

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

Less than 2" - No protection required.

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

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

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

USE AND PLACEMENT OF CHANGEABLE MESSAGE SIGNS

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

Application

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

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

CMS should not be used for:

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

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Messages

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

- Visible for at least ½ mile under ideal daytime and nighttime conditions
- Legible from all lanes a minimum of 650 feet
- Entire message readable twice while traveling at the posted speed
- Nor more than two message panels should be used (three panels may be used on roadways where vehicles are traveling less than 45 mph). A panel is the message that fits on the face of the sign without flipping or scrolling.
- Each panel should convey a single thought; short and concise
- Do not use two unrelated panels on a sign
- Do not use the sign for two unrelated messages
- Should not scroll text horizontally or vertically
- Should not contain both the words left and right
- Use standardized abbreviations and messages
- Should be accurate and timely
- Avoid filler/unnecessary words and periods (hazardous, a, an, the)
- Avoid use of speed limits
- Use words (not numbers) for dates

Placement

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

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

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Standard Abbreviations

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

<u>Word</u>	<u>Abbrev.</u>	<u>Example</u>
Access	ACCS	ACCIDENT AHEAD/USE ACCS RD NEXT RIGHT
Alternate	ALT	ACCIDENT AHEAD/USE ALT RTE NEXT RIGHT
Avenue	AVE	FIFTH AVE CLOSED/DETOUR NEXT LEFT
Blocked	BLKD	FIFTH AVE BLKD/MERGE LEFT
Boulevard	BLVD	MAIN BLVD CLOSED/USE ALT RTE
Bridge	BRDG	SMITH BRDG CLOSED/USE ALT RTE
Cardinal Directions	N, S, E, W	N I75 CLOSED/ DETOUR EXIT 30
Center	CNTR	CNTR LANE CLOSED/MERGE LEFT
Commercial	COMM	OVRSZ COMM VEH/USE I275
Condition	COND	ICY COND POSSIBLE
Congested	CONG	HVY CONG NEXT 3 MI
Construction	CONST	CONST WORK AHEAD/EXPECT DELAYS
Downtown	DWNTN	DWNTN TRAF USE EX 40
Eastbound	E-BND	E-BND I64 CLOSED/DETOUR EXIT 20
Emergency	EMER	EMER VEH AHEAD/PREPARE TO STOP
Entrance, Enter	EX, EXT	DWNTN TRAF USE EX 40
Expressway	EXPWY	WTRSN EXPWY CLOSED/DETOUR EXIT 10
Freeway	FRWY, FWY	GN SYNDR FWY CLOSED/DETOUR EXIT 15
Hazardous Materials	HAZMAT	HAZMAT IN ROADWAY/ALL TRAF EXIT 25
Highway	HWY	ACCIDENT ON AA HWY/EXPECT DELAYS
Hour	HR	ACCIDENT ON AA HWY/2 HR DELAY
Information	INFO	TRAF INFO TUNE TO 1240 AM
Interstate	I	E-BND I64 CLOSED/DETOUR EXIT 20
Lane	LN	LN CLOSED/MERGE LEFT
Left	LFT	LANE CLOSED/MERGE LFT
Local	LOC	LOC TRAF USE ALT RTE
Maintenance	MAINT	MAINT WRK ON BRDG/SLOW
Major	MAJ	MAJ DELWAYS I75/USE ALT RTE
Mile	MI	ACCIDENT 3 MI AHEAD/ USE

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Minor Minutes Northbound	MNR MIN N-BND	ALT RTE ACCIDENT 3 MI MNR DELAY ACCIDENT 3 MI/30 MIN DELAY N-BND I75 CLOSED/ DETOUR EXIT 50
Oversized	OVRSZ	OVRSZ COMM VEH/USE I275 NEXT RIGHT
Parking Parkway	PKING PKWY	EVENT PKING NEXT RGT CUM PKWAY TRAF/DETOUR EXIT 60
Prepare Right Road Roadwork	PREP RGT RD RDWK	ACCIDENT 3 MIL/PREP TO STOP EVENT PKING NEXT RGT HAZMAT IN RD/ALL TRAF EXIT 25 RDWK NEXT 4 MI/POSSIBLE DELAYS
Route Shoulder Slippery Southbound	RTE SHLDR SLIP S-BND	MAJ DELAYS I75/USE ALT RTE SHLDR CLOSED NEXT 5 MI SLIP COND POSSIBLE/ SLOW SPD S-BND I75 CLOSED/DETOUR EXIT 50
Speed Street Traffic	SPD ST TRAF	SLIP COND POSSIBLE/ SLOW SPD MAIN ST CLOSED/USE ALT RTE CUM PKWAY TRAF/DETOUR EXIT 60
Vehicle	VEH	OVRSZ COMM VEH/USE I275 NEXT RIGHT
Westbound	W-BND	W-BND I64 CLOSED/DETOUR EXIT 50
Work	WRK	CONST WRK 2MI/POSSIBLE DELAYS

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

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

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TYPICAL MESSAGES

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

<u>Reason/Problem</u>	Action
ACCIDENT	ALL TRAFFIC EXIT RT
ACCIDENT/XX MILES	AVOID DELAY USE XX
XX ROAD CLOSED	CONSIDER ALT ROUTE
XX EXIT CLOSED	DETOUR
BRIDGE CLOSED	DETOUR XX MILES
BRIDGE/(SLIPPERY, ICE, ETC.)	DO NOT PASS
CENTER/LANE/CLOSED	EXPECT DELAYS
DELAY(S), MAJOR/DELAYS	FOLLOW ALT ROUTE
DEBRIS AHEAD	KEEP LEFT
DENSE FOG	KEEP RIGHT
DISABLED/VEHICLE	MERGE XX MILES
EMER/VEHICLES/ONLY	MERGE LEFT
EVENT PARKING	MERGE RIGHT
EXIT XX CLOSED	ONE-WAY TRAFFIC
FLAGGER XX MILES	PASS TO LEFT
FOG XX MILES	PASS TO RIGHT
FREEWAY CLOSED	PREPARE TO STOP
FRESH OIL	REDUCE SPEED
HAZMAT SPILL	SLOW
ICE	SLOW DOWN
INCIDENT AHEAD	STAY IN LANE
LANES (NARROW, SHIFT, MERGE, ETC.)	STOP AHEAD
LEFT LANE CLOSED	STOP XX MILES
LEFT LANE NARROWS	TUNE RADIO 1610 AM
LEFT 2 LANES CLOSED	USE NN ROAD
LEFT SHOULDER CLOSED	USE CENTER LANE
LOOSE GRAVEL	USE DETOUR ROUTE
MEDIAN WORK XX MILES	USE LEFT TURN LANE
MOVING WORK ZONE, WORKERS IN ROADWAY	USE NEXT EXIT
NEXT EXIT CLOSED	USE RIGHT LANE
NO OVERSIZED LOADS	WATCH FOR FLAGGER
NO PASSING	
NO SHOULDER	
ONE LANE BRIDGE	
PEOPLE CROSSING	
RAMP CLOSED	
RAMP (SLIPPERY, ICE, ETC.)	

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RIGHT LANE CLOSED
RIGHT LANE NARROWS
RIGHT SHOULDER CLOSED
ROAD CLOSED
ROAD CLOSED XX MILES
ROAD (SLIPPERY, ICE, ETC.)
ROAD WORK
ROAD WORK (OR CONSTRUCTION) (TONIGHT, TODAY, TOMORROW, DATE)
ROAD WORK XX MILES
SHOULDER (SLIPPERY, ICE, SOFT, BLOCKED, ETC.)
NEW SIGNAL XX MILES
SLOW 1 (OR 2) - WAY TRAFFIC
SOFT SHOULDER
STALLED VEHICLES AHEAD
TRAFFIC BACKUP
TRAFFIC SLOWS
TRUCK CROSSING
TRUCKS ENTERING
TOW TRUCK AHEAD
UNEVEN LANES
WATER ON ROAD
WET PAINT
WORK ZONE XX MILES
WORKERS AHEAD

SPECIAL NOTE FOR PREFORMED QUADRAPOLE LOOPS

I. DESCRIPTION.

Except as specified herein, perform all work in accordance with the Departments 2012 Standard and Supplemental Specifications, Special Provisions and Special Notes, and Standard and Sepia Drawings, current editions, and as directed by the Engineer. Article references are to the Standard Specifications. Furnish all materials, equipment, labor, and incidentals for placement of Preformed Quadrapole Loops, Preformed Loops, Preformed Loop/Lead-In, loop lead-in, conduit, junction boxes, wiring, and connection to the existing signal system.

A. PREBID REQUIREMENTS. 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.

Information provided 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 their 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 if the conditions encountered are not in accordance with the information shown.

It is not anticipated that 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.

II. MATERIALS.

Except as provided herein, provide materials according to Section 723.02 and Section 835.

A. Preformed Quadrapole Loops or Preformed loops. All preformed loop wire shall be 16-gauge THWN stranded copper, single conductor in a 2-4-2 configuration for Quadrapole as shown on the Quadrapole Loop detail. If it is a 6'x6' loop, it shall have 3 turns installed in the preformed loop. The loop shall be housed in a class A oil resistant heavy-duty reinforced rubber hose with a 250-PSI internal pressure rating. Hose for the loop assembly shall be one continuous piece. The 3/8" I.D. (5/8" O.D.) hose shall be factory assembled. Preformed loops shall be pre-wired. The loop configuration lengths shall be assembled for the specific application. Hose tee connections shall be high temperature synthetic rubber. The tee shall be of proper size to attach directly to the hose, minimizing the glue joints. The tee shall have

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the same flexible properties as the hose to insure that the whole assembly can conform to pavement movement and shifting without cracking or breaking.

B. Preformed Loop/Lead-In. All preformed loop/lead-in (homerun) wire shall be 16-gauge THWN stranded copper, single conductor in a 2 configuration for homerun wire as shown on the quadrapole Loop detail. The homerun wire is from the junction box to the edge of the quadrapole loop. The home run shall be housed in a class A oil resistant heavy-duty reinforced rubber hose with a 250-PSI internal pressure rating. Hose for the loop and home run wire assembly shall be one continuous piece from the hose tee. The 3/8" I.D. (5/8" O.D.) hose shall be factory assembled. Homerun wires shall be pre-wired. The homerun lengths shall be assembled for the specific application. Hose tee connections shall be high temperature synthetic rubber. The tee shall be of proper size to attach directly to the hose, minimizing the glue joints. The tee shall have the same flexible properties as the hose to insure that the whole assembly can conform to pavement movement and shifting without cracking or breaking.

C. Maintain and Control Traffic. See Traffic Control Plan.

D. Sand. Furnish natural sand meeting the requirements of 804.04.01.

E. Seeding. Furnish Seed Mix Type I.

F. Loop Saw Slot and Fill. Furnish loop sealant, backer rod, and non-shrink grout according to the Saw Slot Detail only if to be used for sawing into existing pavement. Usually, the preformed loops will be laid on the ground before placement of the JPC Pavement.

G. Junction Boxes. Furnish electrical Junction Box type B, #57 Aggregate, and Geotextile Fabric Type IV according to the junction box detail.

H. Cable No. 14/1 Pair (Lead-In). Furnish cable that is specified in section 835. Cable shall be run splice free. This shall include splice kits to connect to the preformed loop/lead-in (homerun).

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

III. CONSTRUCTION METHODS.

Except as provided herein, construct and test Preformed Quadrapole Loops in accordance with applicable portions of Section 723.

A. Testing. The Contractor shall test all loops and cable no 14/1 pair (lead-in) according to section 723.03.17 before and after concrete inlays' construction. The Contractor may

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have to separate the loop from the lead-in to perform this test. If the loop/lead-in meets the requirement in section 723 at the controller cabinet, the loop/lead-in shall not be replaced. If the existing loop or preformed loop does not meet the requirement according to section 723.03.17 either before or after the concrete inlay, the loop shall be replaced. If the loop is replace before the concrete inlay, the Contractor shall verify that the loop meets the requirements per section 723.03.17 before the final concrete inlay is laid. If the loop does not meet per section 723.03.17, the Contractor shall replace the loop or preformed loop and it will be incidental to the concrete inlay bid item. The Contractor shall be responsible to re-splice the current loop to the lead-in with the proper splice as noted in the spec book (this will be incidental to the project).

B. Coordination. Notify the Engineer in writing, two (2) weeks prior to beginning any work. The Engineer will contact and maintain liaison with the District Traffic Engineer and the Central Office Division of Traffic Operations to coordinate the Department's operations with the Contractor's work. The electrical Contractor shall coordinate with the general Contractor and inspector to ensure the preformed loops are located and installed prior to placing the concrete inlays for each lane, JPC Pavement and JPC Shoulders, and operational prior to opening JPC Pavement to traffic.

C. Connection. The Contractor shall schedule all signal loop installation to ensure the new loops are connected to the lead-in and operational within 7 calendar days of the old loops being damaged and/or disconnected. This requirement includes damage caused by any work activity associated with the project. If the new signal loops are not functioning as intended following 7 calendar days, the Department may assess Liquidated Damages at a rate of \$500 per calendar day per signal location until the loops are operating at pre-construction conditions. All liquidated damages will be applied cumulatively.

D. Maintain and Control Traffic. See Traffic Control Plan.

E. Concrete Inlays. The Contractor shall coordinate with the concrete Contractor and the resident Engineer to get preformed loops installed in a timely matter. The Contractor may have to use 1" PVC conduit in sections of the concrete inlay for transition from lane to lane so that the perform loop or perform loop/lead-in can be connected to the perform loop. The PVC conduit shall be incidental to the project. The Contractor may have to use the preformed to keep the loop functioning while the installation of the other concrete inlays lanes. The preformed loop may be attached to the top pavement as recommended by the manufacturer.

F. Milling. If milling and texturing of the existing pavement, install preformed loops or preformed loop/lead-in in the existing pavement before or after performing the milling and texturing, bur prior to placement of the final asphalt surface course. If after milling the remnant contents of the existing saw slot (grout, loop wires, backer rod, and/or loop sealant) are not intact and flush with or below the top of the milled portion of the asphalt and with the saw slot completely filled with fines from the milling operation, clear the saw slot of loose remnant contents and refill the saw slot with natural sand. Obtain the

Preformed Quadrupole Loops
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Engineer's approval of the stabilized saw slot prior to resurfacing. The Department will not measure for separate payment clearing and stabilizing the saw slot, but shall consider this work incidental to Asphalt Pavement Milling and Texturing.

G. Loop Saw Slot and Fill. This will only be used if installed in existing concrete or in asphalt. The following is a typical step by step procedure for the installation of a loop.

- Carefully mark the slot to be cut, perpendicular to the flow of traffic and centered in the lane.
- Make each saw-cut 3/4-inch wide and at a depth such that the top of the backer rod is a minimum of 4 inches below the surface of asphalt/concrete pavement.
- Drill a 1½ inch core hole at each corner and use a chisel to smooth corners to prevent sharp bends in the wire.
- Clean ALL foreign and loose matter out of the slots and drilled cores and within 1 foot on all sides of the slots using a high pressure washer.
- Completely dry the slots and drilled cores and within 1 foot on all sides of the slots.
- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45° angle to the conduit adjacent to the roadway. There will be one for each homerun.
- Closely inspect all cuts, cores, and slots for jagged edges or protrusions prior to the placement of the wire. All jagged edges and protrusions shall be ground or re-cut and cleaned again.
- Place the preformed loop and homerun splice-free from the termination point (cabinet or junction box) to the preformed loop.
- Push the preformed loop and homerun into the saw slot with a blunt object such as a wooden stick. Make sure that the preformed loop and homerun is pushed fully to the bottom of the saw slot. Screwdrivers shall not be used.
- Install duct sealant to a minimum of 1 inch deep into the cored 1½ inch hole.
- Apply loop sealant from the bottom up and fully encapsulate the preformed loop and homerun in the saw slot. The preformed loop and homerun should not be able to move when the sealant has set.
- Cover the encapsulated preformed loop and homerun with a continuous layer of backer rod along the entire loop and home run saw slots such that no voids are present between the loop sealant and backer rod.
- Finish filling the saw cut with non-shrinkable grout per manufacturer's instructions. Alleviate all air pockets and refill low spaces. There shall be no concave portion to the grout in the saw slot. Any excess grout shall be cleaned from the roadway to alleviate tracking.
- Clean up the site and dispose of all waste off the project.
- Ensure that the grout has completely cured prior to subjecting the loop to traffic. Curing time varies with temperature and humidity.

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H. Final Dressing, Clean Up, and Seeding. After all work is completed, clean work sites and all disturbed areas. Dispose of all waste and debris off the right of way at sites obtained by the Contractor at no additional cost to the Department. Sow all disturbed earthen areas with Seed Mix Type I.

I Removal: The Contractor shall remove all existing junction boxes, wire from spans/poles/junction boxes/conduits, and conduits. The removal will be incidental to the project.

J. Property/Roadway Damage. The Contractor shall be responsible for all damage to public and/or private property resulting from the work. Upon completion of the work, restore all disturbed highway features and private property in like kind design and materials at no additional cost to the Department.

K. Right-of-Way Limits. The Department has not established exact limits of Right-of-Way. Limit work activities to obvious Right-of-Way and work areas secured by the Department through Consent and Release of the adjacent property owners. Be responsible for all encroachments onto private lands.

L. Utility Clearance. Work around and do not disturb existing utilities. The Department does not anticipate that existing utilities will require relocation; however, if utility relocation is required, the utility companies will work concurrently with the Contractor while relocating their facilities.

M. Caution. Consider the information in this proposal and shown on the plans and the type of work listed herein to be approximate. Do not take the information to be an accurate evaluation of the materials and conditions to be encountered during construction. The bidder must draw their own conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and will not consider any claims for additional compensation if the conditions encountered are not in accordance with the information shown.

N. Control. Perform all work under the absolute control of the Department of Highways. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other Contractors and its own forces and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with each other's work will be reduced to a minimum. By submitting bid, the Contractor agrees to make no claims against the Department for additional compensation due to delays or other conditions created by the operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the work in general harmony and in a satisfactory manner, and his decision shall be final and binding upon the Contractor.

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O. Bore and Jack. If conduit is under pavement of any kind, bore and jack 2” rigid steel conduit under all pavement areas except for the area that the loop transitions from the saw slot. The installation of conduit should follow the detail below.

IV. MEASUREMENT

The Department will measure for payment only the bid items listed. See section 723.04 for bid item notes. All other items required to complete the construction shall be incidental to the bid items listed.

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

B. Preformed Loop Quadrapole Loops. Bid item 20453ES835 (Usually used for 6’x30’ loops).

C. Preformed Loops. Bid item 20452ES835 (Usually used for 6’x6’ loops).

D. Preformed Loop/Lead-In. Bid item 4894.

E. Cable No. 14/1 Pair. Bid item 4850.

F. Loop Saw Slot and Fill. Bid item 4895.

G. Conduit. Bid item 4792, 4793, and 4795.

H. Trenching and Backfilling. Bid item 4820.

I. Electrical Junction Box Type B. Bid item 4811.

J. Bore and Jack Conduit. Bid item 21543EN.

V. PAYMENT

The Department will make payment for the completed and accepted quantities of listed items according to Section 723.05. The Department will consider payment as full compensation for all work required under these notes and the Standard Specifications.

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VI. CONSTRUCTION AND MEASUREMENT NOTES THAT ARE CONTRARY TO SECTION 723:

Subsection: 03.02 Poles and Bases installation.

Revision: Replace the first paragraph with the following:

Regardless of the station and offset noted, locate all poles/bases behind the guardrail a minimum of four feet from the front face of the guardrail to the front face of the pole base. Orient the handhole door away from traffic travel path. If pole base is installed within a sidewalk the top of the pole base shall be the same grade as the sidewalk.

Subsection: 03.02 Poles and Bases Installation.

Part: A) Steel Strain and Mast Arm Pole Installation.

Revision: Insert the following sentence at the beginning of the first paragraph:
Install pole bases 4 to 6 inches above grade.

Subsection: 03.02 Poles and Bases Installation.

Part: A) Steel Strain and Mast Arm Pole Installation.

Revision: Replace the second paragraph with the following:

For concrete base installation, see subsection 716.03.02 B), 2), paragraphs 2-6. Drilled shaft depth shall be based on the soil conditions encountered during drilling and slope condition at the site. Refer to the design chart below:

Subsection: 03.02 Poles and Bases Installation

Part: B) Pedestal or Pedestal Post Installation.

Revision: Replace the second sentence with the following:

If over 12 feet high, the base shall have the minimum depth and diameter as subsection 716.03.02 (A), paragraph 2.

Subsection: 03.03 Trenching.

Revision: Replace the first sentence with the following:

See subsection 716.03.03 (B).

Subsection: 03.03 Trenching.

Part: A) Under Roadway

Revision: Delete Part A) Under Roadway.

Subsection: 03.05 Conduit Requirements in Junction Boxes.

Revision: Delete the subsection and replace with the following:

23.03.05 Fuse Connector Kits. See subsection 716.03.09.

Subsection: 03.06 Coupling Installation.

Revision: Delete the subsection and replace with the following:

723.03.06 Painting. See subsection 716.03.15.

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Subsection: 03.07 Bonding Requirements.

Revision: Delete the subsection and replace with the following:
723.03.07 Electrical Junction Boxes. See subsection 716.03.10.

Subsection: 03.15 Painting

Revision: Remove title and change to Remove Signal Equipment. Replace entire note with the following:

Remove all traffic signal equipment that is identified by the Engineer as no longer necessary including, but not limited to, the following: pole bases, poles, junction boxes, cabinets, wood poles, and advance warning flashers. Pole bases shall be removed a minimum of one foot below finished grade by chipping off or other method that is approved by the Engineer. Dispose of all removed concrete off right-of-way. Wood poles shall be removed a minimum of one foot below finished grade. Backfill holes with material approved by the Engineer. Conduit may be abandoned in the ground. Contact the District Traffic Engineer to determine if any removed signal equipment needs to be returned to the district and to determine the location/time for such deliveries.

Subsection: 03.17 Acceptance and Inspection Requirements.

Revision: Replace the first paragraph of the section with the following:

See subsection 105.12. In coordination with the District Traffic Engineer, energize traffic control device as soon as it is fully functional and ready for inspection. After the work has been completed, conduct an operational test demonstrating that the system operates in accordance with the plans in the presence of the Engineer. The Department will also conduct its own tests with its own equipment before final acceptance. Ensure that the traffic control device remains operational until the Division of Traffic Operations has provided written acceptance of the electrical work.

Subsection: 04.01 Conduit.

Revision: Replace the second sentence of the subsection with the following:

The Department will not measure conduit fittings, ground lugs, test plugs, expansion joints, and clamps for payment and will consider them incidental to this item of work.

Subsection: 04.02 Junction Box.

Revision: Replace the subsection with the following:

The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure additional junction boxes for greater depths than those identified in plans, aggregate (#57), backfilling, restoration of disturbed areas to the satisfaction of the Engineer, geotextile fabric, concrete, hot dipped galvanized cover, stainless steel screws, rubber gasket, and any associated hardware for payment and will consider them incidental to this item of work.

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Subsection: 04.03 Trenching and Backfilling.

Revision: Replace the second sentence with the following:

The Department will not measure excavation, backfilling, underground utility warning tape, and the restoration of disturbed areas to original condition for payment and will consider them incidental to this item of work.

Subsection: 04.05 Loop Wire.

Revision: Replace the second sentence of the subsection with the following:

The Department will not measure splice boots, cable rings, and any other necessary hardware for payment and will consider them incidental to this item of work.

Subsection: 04.06 Cable.

Revision: Replace the second sentence of the subsection with the following:

The Department will not measure splice boots, cable rings, and any other hardware for payment and will consider them incidental to this item of work.

Subsection: 04.15 Loop Saw Slot and Fill.

Revision: Replace the second sentence of the subsection with the following:

The Department will not measure sawing, cleaning, filling induction loop saw slot, loop sealant, backer rod, drilling hole for conduit, and grout for payment and will consider them incidental to this item of work.

Subsection: 04.30 Bore And Jack Conduit.

Revision: Replace the paragraph with the following:

The Department will measure the quantity in linear feet. This item shall include all work necessary for boring and installing conduit under an existing roadway.

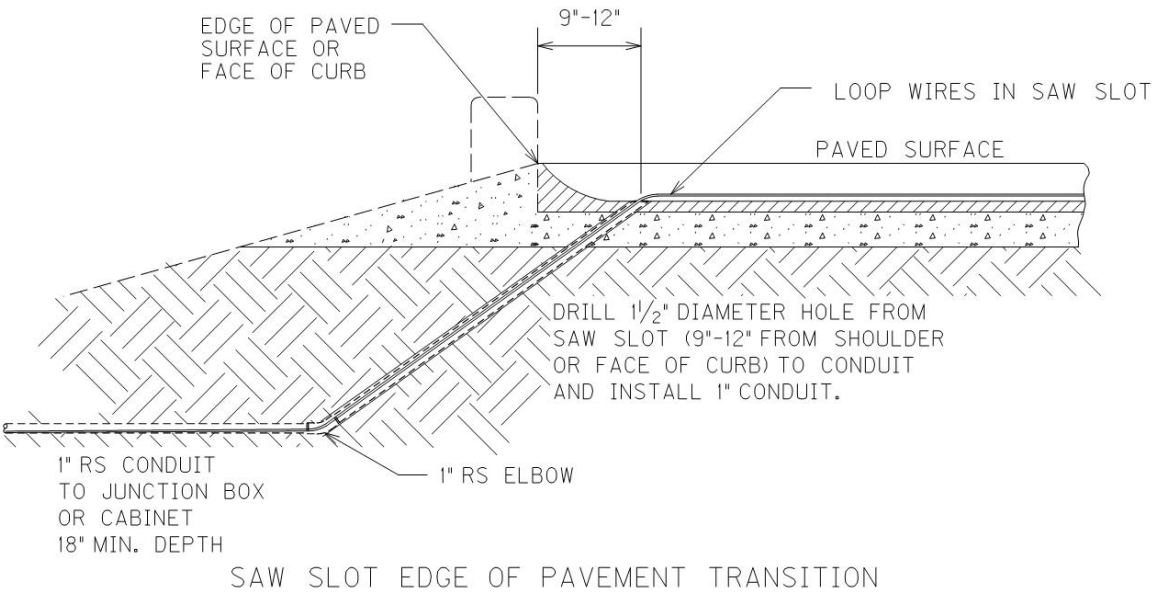
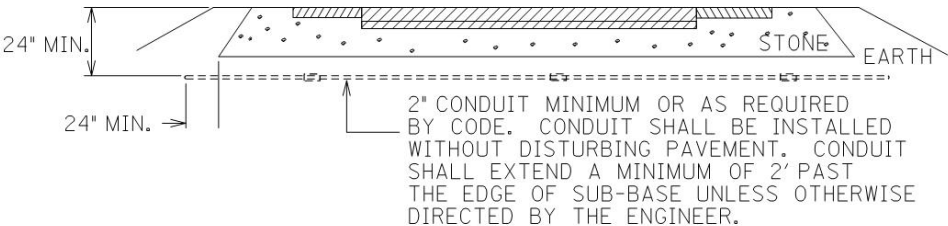
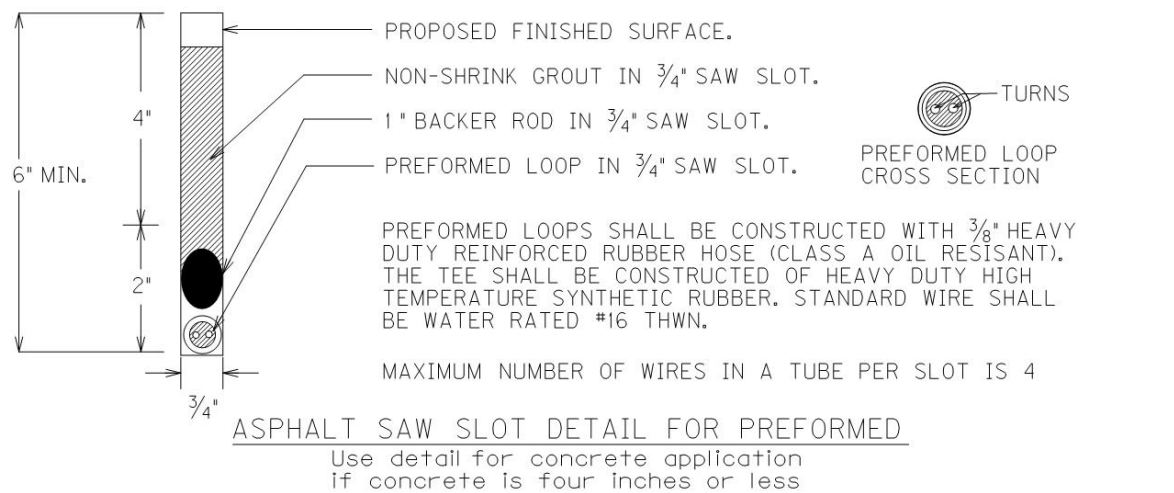
VII. CONSTRUCTION AND MEASUREMENT NOTES THAT ARE CONTRARY TO SECTION 716:

Subsection: 03.04 conduit installation.

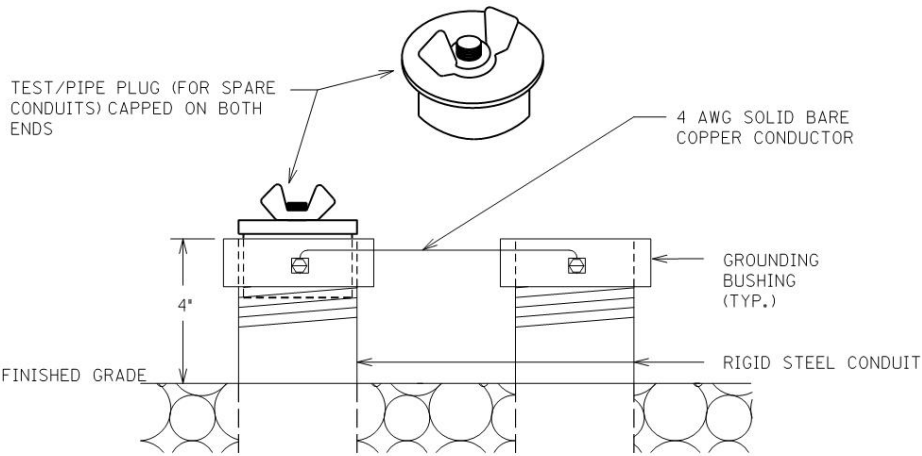
Revision: Add the following Part G to the subsection:

G) Bore and Jack. Construction methods shall be in accordance with subsections 706.03.02, paragraphs 1, 2 and 4.

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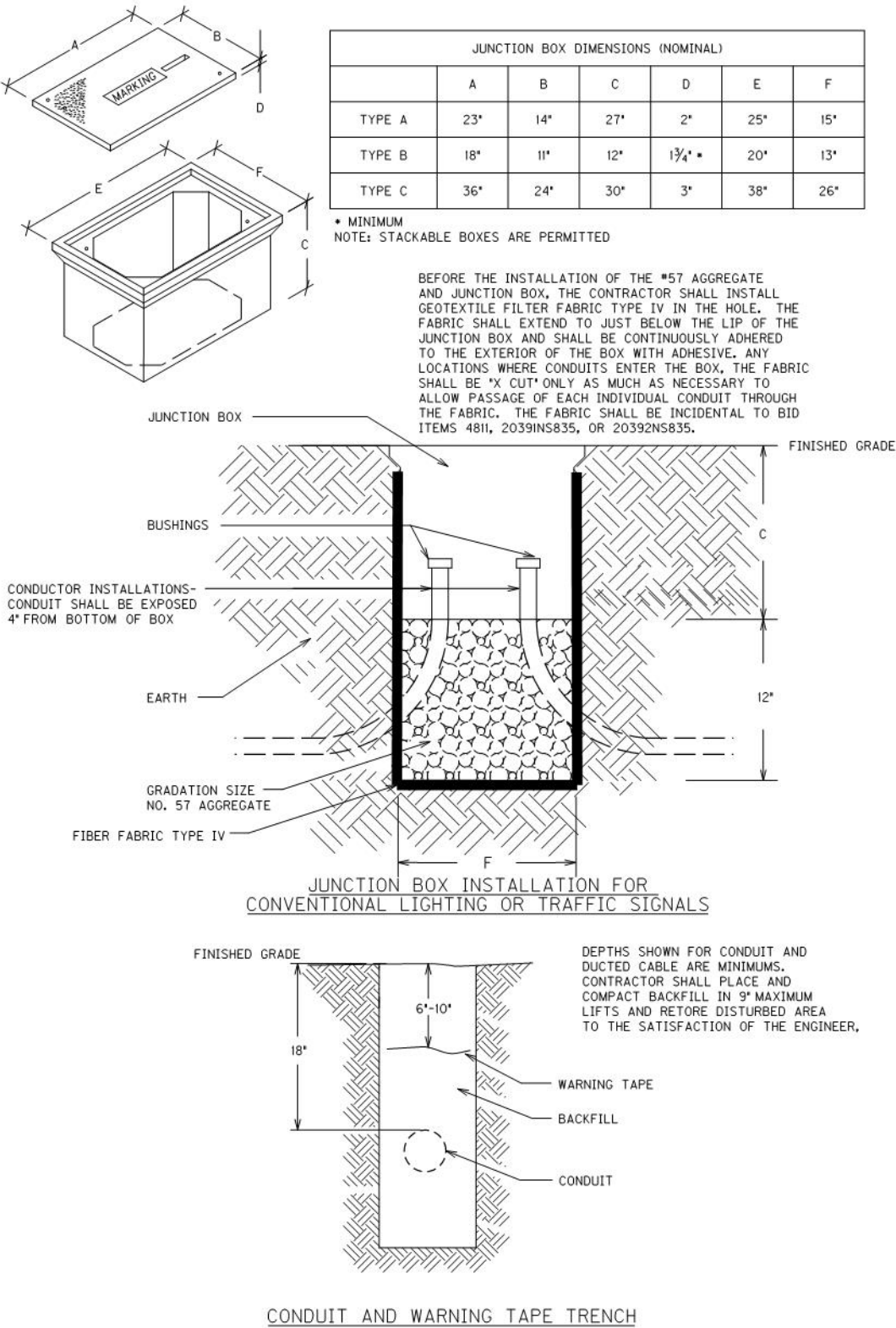


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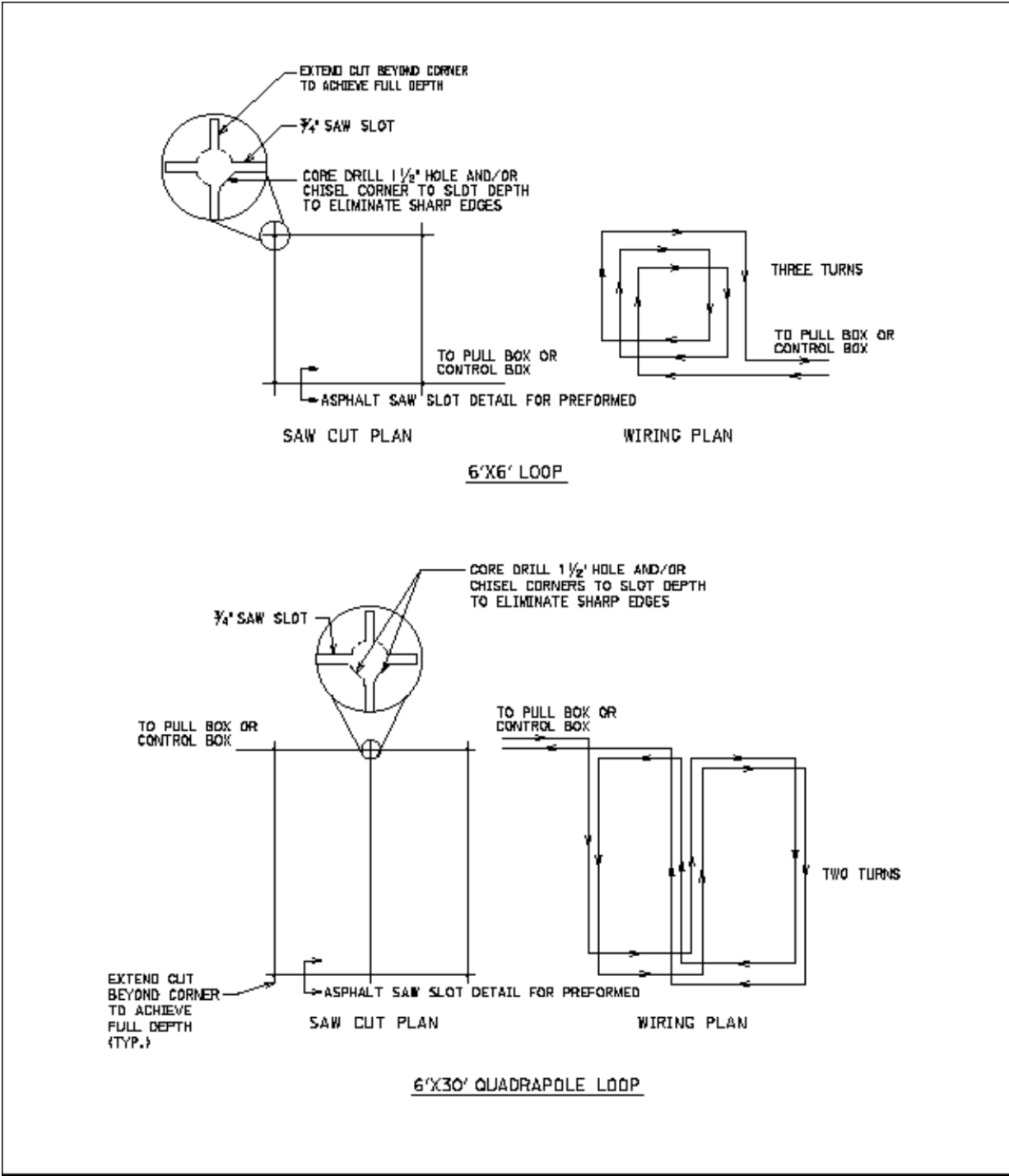


TEST/PIPE PLUG(FOR SPARE CONDUITS) AND GROUNDING DETAIL

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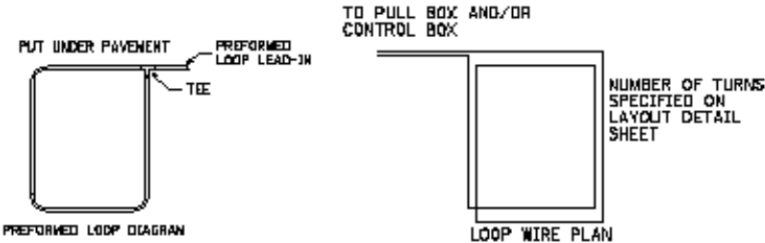


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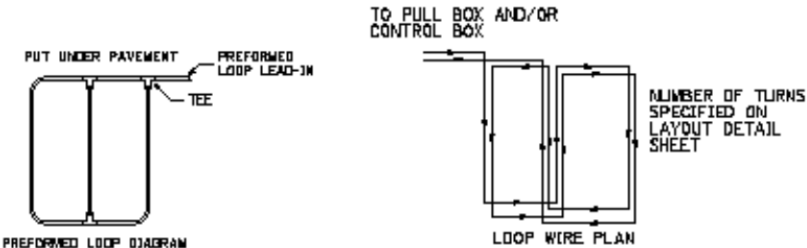
PREFORMED LOOP LEAD-IN SHALL BE TWISTED WITH THREE TO FIVE TURNS PER FOOT UNTIL TERMINATED AT FIELD CONNECTIONS IN THE CABINET OR CONNECTED TO SHIELDED CABLE.



STANDARD PREFORMED LOOP

•ALL LOOPS THAT ARE NOT QUADRAPLES SHALL BE STANDARD AND HAVE 3 TURNS

PREFORMED LOOP LEAD-IN SHALL BE TWISTED WITH THREE TO FIVE TURNS PER FOOT UNTIL TERMINATED AT FIELD CONNECTIONS IN THE CABINET OR CONNECTED TO SHIELDED CABLE.



QUADRAPOLE PREFORMED LOOP

•ALL 6'x30' LOOPS SHALL BE QUADRAPLE AND SHALL HAVE A 2-4-2 CONFIGURATION

SPECIAL NOTE FOR EROSION CONTROL

FE01 022 0001 011-012

I. DESCRIPTION

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

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

II. MATERIALS

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

III. CONSTRUCTION

Be advised, these Erosion Control Plan Notes do not constitute a BMP plan for the project. Jointly with the Engineer, prepare a site specific BMP plan for each drainage area within the project in accordance with Section 213. Provide a unique BMP at each project site using good engineering practices taking into account existing site conditions, the type of work to be performed, and the construction phasing, methods and techniques to be utilized to complete the work. Be responsible for all erosion prevention, sediment control, and water pollution prevention measures required by the BMP for each site. Represent and warrant compliance with the Clean Water Act (33 USC

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Section 1251 et seq.), the 404 Permit, the 401 Water Quality Certification, and applicable state and local government agency laws, regulations, rules, specifications, and permits. Contrary to Section 105.05, in case of discrepancy between these notes, the Standard Specifications, Interim Supplemental Specifications, Special and Special Notes, Standard and Sepia Drawings, and such state and local government agency requirements, adhere to the most restrictive requirement.

Conduct operations in such a manner as to minimize the amount of disturbed ground during each phase of the construction and limit the haul roads to the minimum required to perform the work. Preserve existing vegetation not required to be removed by the work or the contract. Seed and/or mulch disturbed areas at the earliest opportunity. Use silt fence, silt traps, temporary ditches, brush barriers, erosion control blankets, sodding, channel lining, and other erosion control measures in a timely manner as required by the BMP and as directed or approved by the Engineer. Prevent sediment laden water from leaving the project, entering an existing drainage structure, or entering a stream.

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

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

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

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IV. MEASUREMENT

Erosion Control Blanket. If required by the BMP, the Department will measure Erosion Control Blanket according to Section 212.04.07.

Sodding. If required by the BMP, the Department will measure Sodding according to Section 212.04.08.

Channel Lining. If required by the BMP, the Department will measure Channel Lining according to Sections 703.04.04-703.04.07.

Erosion Control. Contrary to Sections 212.04, 213.04, and 703.04 other than Erosion Control Blankets, Sodding, and Channel Lining, the Department will measure Erosion Control as one lump sum. The Department will not measure developing, updating, and maintaining a BMP plan for each site; providing a KEPSC qualified inspector; locating, furnishing, installing, inspecting, maintaining, and removing erosion and water pollution control items; Roadway Excavation, Borrow Excavation, Embankment In Place, Topsoil Furnished and Placed, and Spreading Stockpiled Topsoil; Topdressing Fertilizer, Temporary and Permanent Seeding and Protection, Special Seeding Crown Vetch, and Temporary Mulch; Sedimentation Basin and Clean Sedimentation Basin, Silt Trap Type "A" and Clean Silt Trap Type "A"; Silt Trap Type "B" and Clean Silt Trap Type "B"; Silt Trap Type "C" and Clean Silt Trap Type "C"; Temporary Silt Fence and Clean Temporary Silt Fence; Plants, Vines, Shrubs, and Trees; Gabion and Dumped Stone Deflectors and Riffle Structures; Boulders; Temporary Ditches and clean Temporary Ditches; Geotextile Fabric, and all other erosion and water pollution control items required by the BMP or the Engineer, but shall be incidental to Erosion Control.

V. Basis of Payment

Erosion Control Blanket. If not listed as a bid item, but required by the BMP, the Department will pay for Erosion Control Blankets as Extra Work according to Sections 104.03 and 109.04.

Sodding. If not listed as a bid item, but required by the BMP, the Department will pay for Sodding as Extra Work according to Sections 104.03 and 109.04.

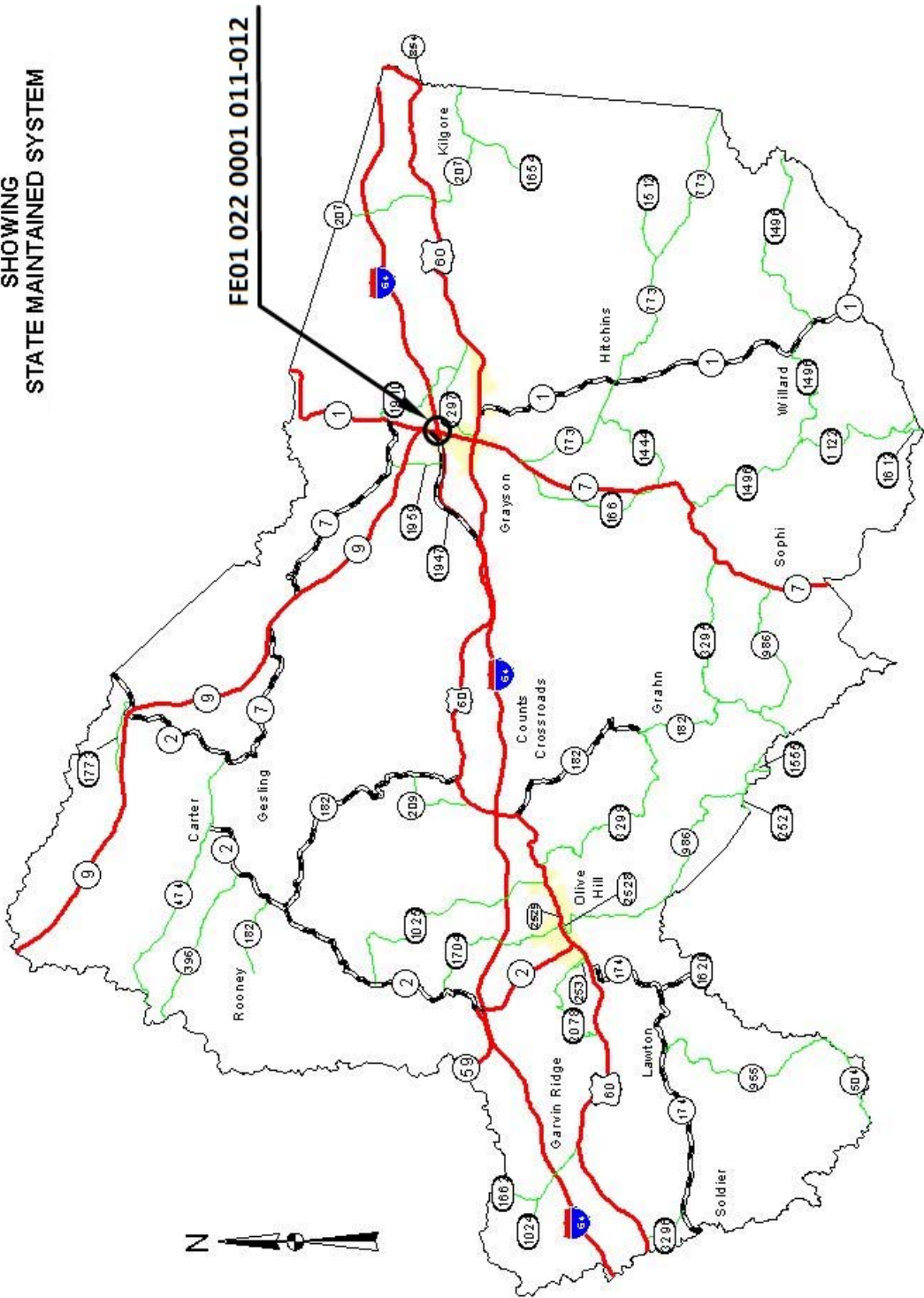
Channel Lining. If not listed as a bid item, but required by the BMP, the Department will pay for Channel Lining as Extra Work according to Sections 104.03 and 109.04.

Erosion Control
FE01 022 0001 011-012
Page 4 of 4

Erosion Control. Contrary to Sections 212.05 and 213.05, other than Erosion Control Blanket, Sodding, and Channel Lining, payment at the Contract lump sum price for Erosion Control, shall be full compensation for all materials, equipment, labor and incidentals necessary to complete the erosion and water pollution control work as specified in these notes, Sections 212 and 213, the Supplemental Specifications, applicable Special Provisions and Special Notes, and Standard and Sepia Drawings, including but not limited to developing, updating, and maintaining a BMP plan for each site; providing a KEPSC qualified inspector; locating, furnishing, installing, inspecting, maintaining, and removing erosion and water pollution control items; Roadway Excavation, Borrow Excavation, Embankment In Place, Topsoil Furnished and Placed, and Spreading Stockpiled Topsoil; Topdressing Fertilizer, Temporary and Permanent Seeding and Protection, Special Seeding Crown Vetch, and Temporary Mulch; Sedimentation Basin and Clean Sedimentation Basin, Silt Trap Type "A" and Clean Silt Trap Type "A"; Silt Trap Type "B" and Clean Silt Trap Type "B"; Silt Trap Type "C" and Clean Silt Trap Type "C"; Temporary Silt Fence and Clean Temporary Silt Fence; Plants, Vines, Shrubs, and Trees; Gabion and Dumped Stone Deflectors and Riffle Structures; Boulders; Temporary Ditches and clean Temporary Ditches; Geotextile Fabric and all other erosion and water pollution control items required by the BMP or the Engineer.

1-561 erosion Control Note for Maintenance Projects
06/08/2012

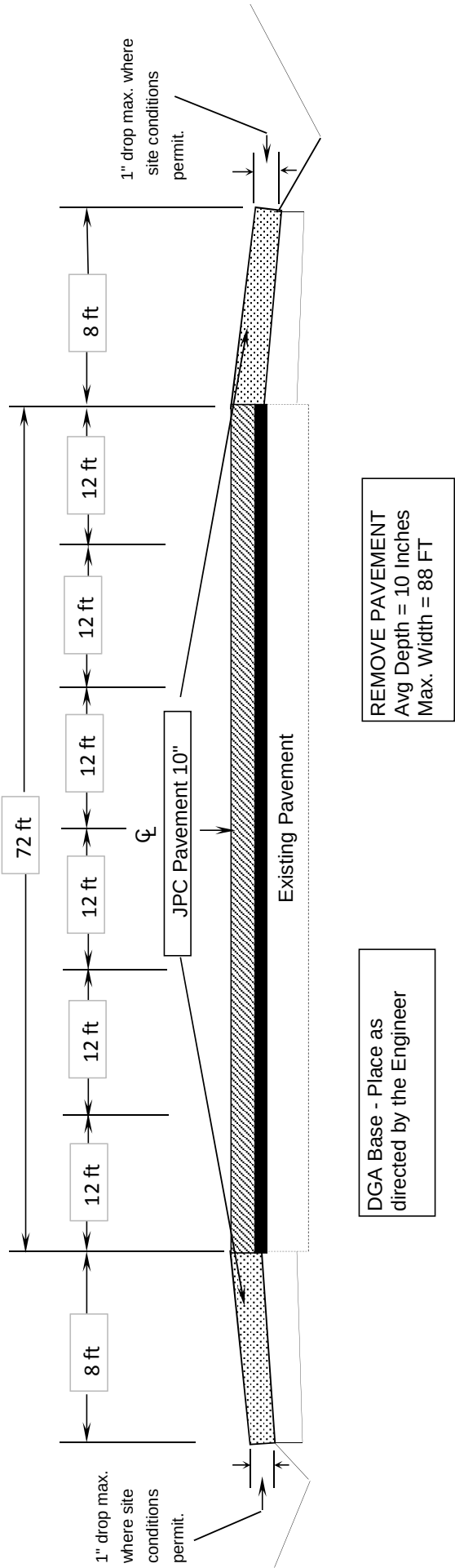
DEPARTMENT OF HIGHWAYS
MAP OF
CARTER COUNTY
SHOWING
STATE MAINTAINED SYSTEM



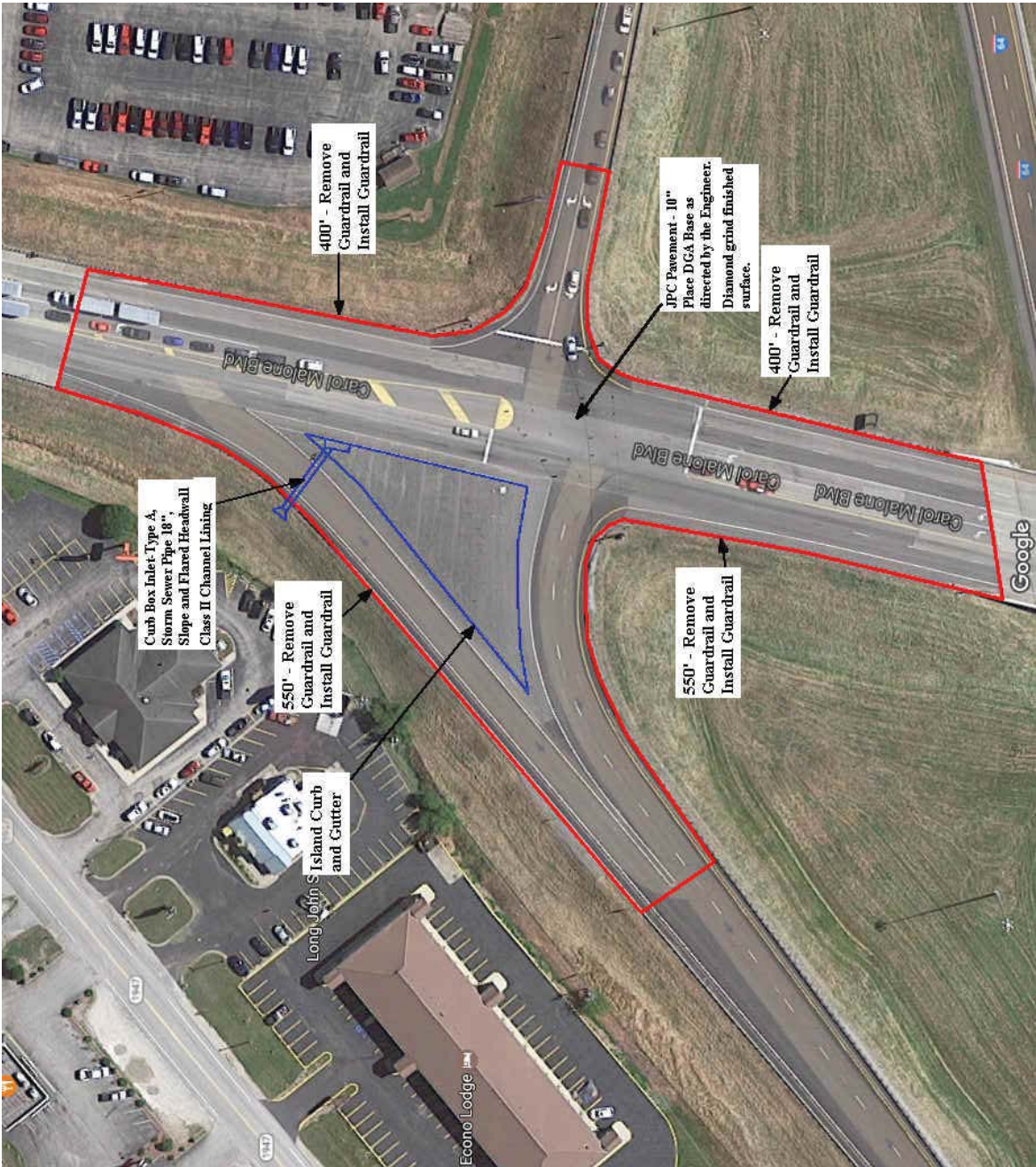
INTERSECTION PAVEMENT MARKINGS SUMMARY
FE01 022 0001 011-012

MILEPOINT	INTERSECTION	STOP BARS		ARROWS			THERMO CROSS HATCH SQ FT	NOTES
		THERMO 24 INCH LF	TY 1 TAPE 24 INCH LF	TY 1 TAPE CURVE EA	THERMO CURVE EA	THERMO COMB EA		
11.590	KY 1 NB @ I-64 Ramp		48	4				
11.648	I-64 Ramp		60	4				
11.690	KY 1 SB @ I-64 Ramp		24				800	
11.746	KY 1 SB		40	3				
11.746	KY 1 NB		40	2				
11.746	KY 1947	30			2			
11.746	CW Stevens Blvd		24		4	4		
TOTAL		30	236	13	6	4	800	

TYPICAL SECTION
FE01 022 0001 011-012

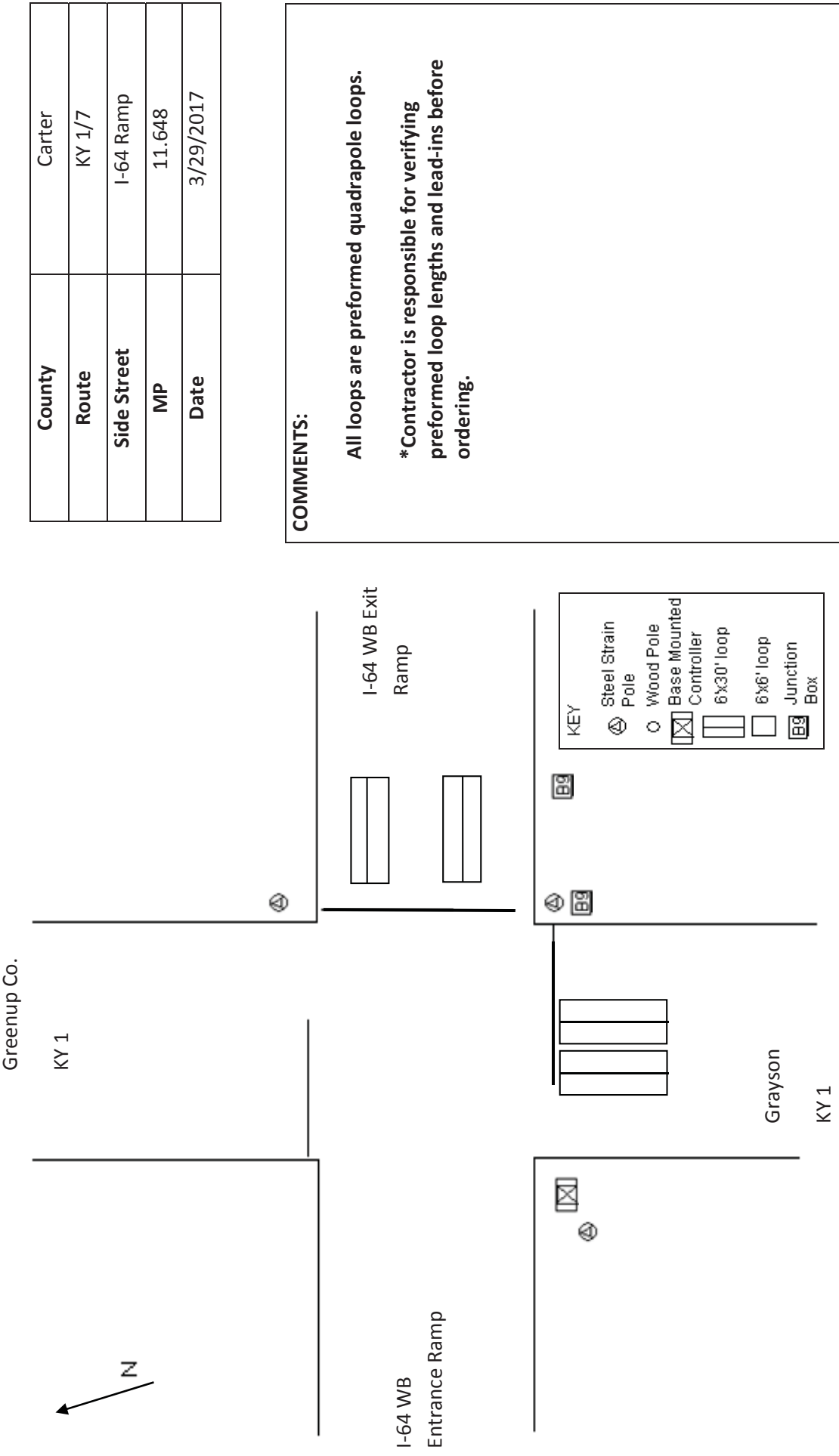


JPC PAVEMENT W/ DIAMOND GRINDING

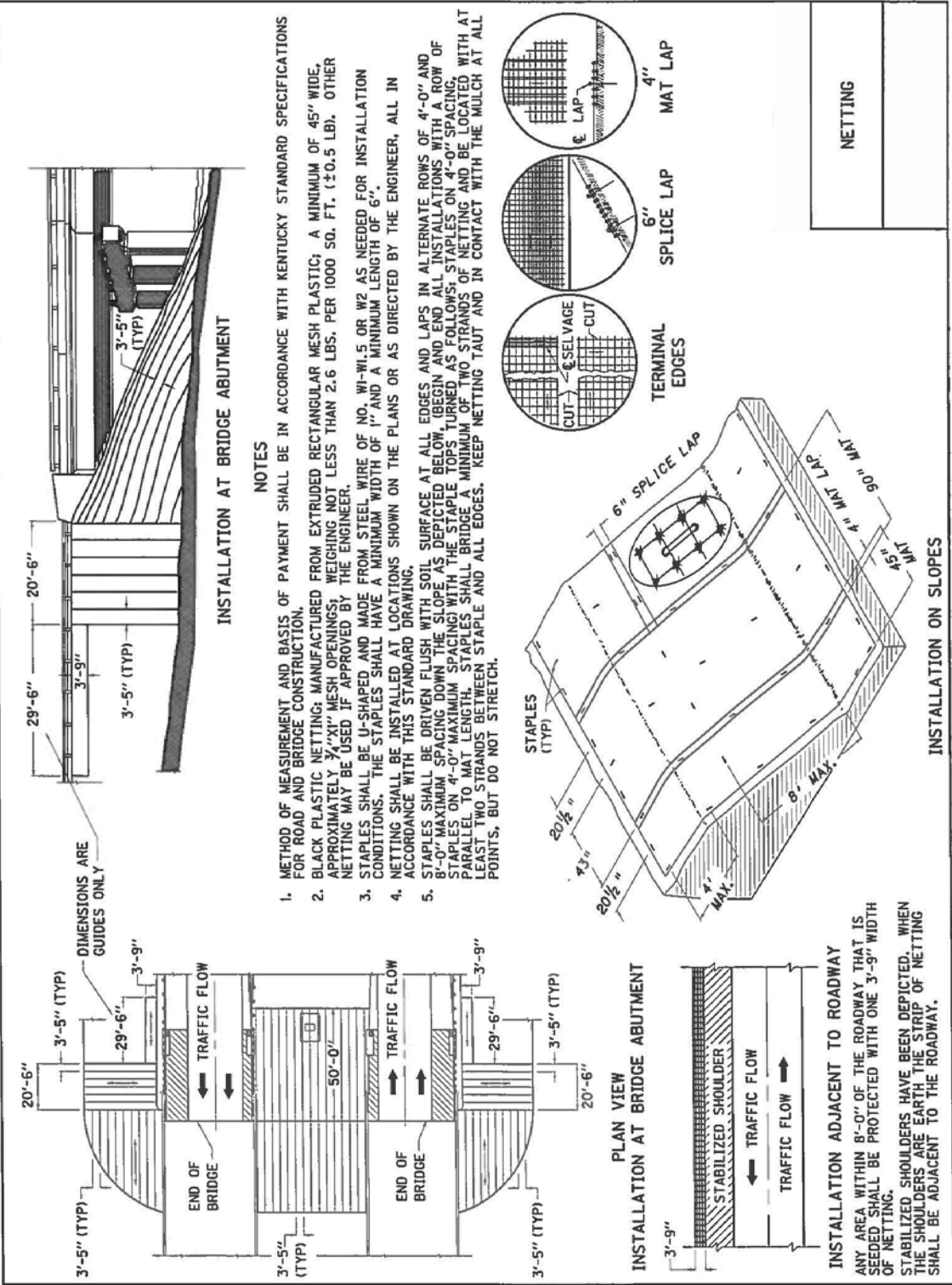


DIAMOND GRIND EXISTING PAVEMENT





Bid item code	Bid item	Unit	EB Approach	WB Approach	NB Approach	SB Approach	Total
20453ES835	Preformed Quadrapole Loops	LF		204	204		408
4894	Preformed Loop/Lead-In	LF		60	110		170



GUARDRAIL DELIVERY VERIFICATION SHEET

Contract Id: _____

Contractor: _____

Section Engineer: _____

District & County: _____

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

***Required Signatures before Leaving Project Site**

Printed Section Engineer's Representative _____ & Date _____

Signature Section Engineer's Representative _____ & Date _____

Printed Contractor's Representative _____ & Date _____

Signature Contractor's Representative _____ & Date _____

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

Printed Bailey Bridge Yard Representative _____ & Date _____

Signature Bailey Bridge Yard Representative _____ & Date _____

Printed Contractor's Representative _____ & Date _____

Signature Contractor's Representative _____ & Date _____

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

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

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 2012* and *Standard Drawings, Edition of 2016*.

SUPPLEMENTAL SPECIFICATIONS

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

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

SPECIAL NOTE FOR 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/⇒⇒⇒/	/MIN/SPEED/**MPH/
/KEEP/LEFT/⇐⇐⇐/	/ICY/BRIDGE/AHEAD/ /ONE
/LOOSE/GRAVEL/AHEAD/	LANE/BRIDGE/AHEAD/
/RD WORK/NEXT/**MILES/	/ROUGH/ROAD/AHEAD/
/TWO WAY/TRAFFIC/AHEAD/	/MERGING/TRAFFIC/AHEAD/
/PAINT/CREW/AHEAD/	/NEXT/***/MILES/
/REDUCE/SPEED/**MPH/	/HEAVY/TRAFFIC/AHEAD/
/BRIDGE/WORK/**0 FT/	/SPEED/LIMIT/**MPH/
/MAX/SPEED/**MPH/	/BUMP/AHEAD/
/SURVEY/PARTY/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:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

2016 KENTUCKY STANDARD DRAWINGS

FE01 022 0001 011-012

GUARDRAIL CONNECTOR TO BRIDGE END TYPE A COMPONENTS	RBC-002-03
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A AND A-1 COMPONENTS.....	RBC-003-08
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A	RBC-005
TYPICAL GUARDRAIL INSTALLATIONS.....	RBI-001-11
TYPICAL GUARDRAIL INSTALLATIONS.....	RBI-002-07
STEEL BEAM GUARDRAIL (“W”-BEAM).....	RBR-001-12
GUARDRAIL COMPONENTS.....	RBR-005-11
GUARDRAIL TERMINAL SECTIONS	RBR-010-06
STEEL GUARDRAIL POSTS.....	RBR-015-05
DELINEATORS FOR GUARDRAIL.....	RBR-055
CURB BOX INLET TYPE A (DETAIL DRAWING)	RDB-270-09
CURB BOX INLET TYPE A (STEEL DRAWING).....	RDB-271-05
CURB BOX INLET TYPE A (TOP PHASE TABLE).....	RDB-272-07
CURB BOX INLET TYPE A (DETAIL & BAR CHART FOR 8” LID).....	RDB-273-06
CHANNEL LINING CLASS II AND III.....	RDD-040-05
SLOPED & FLARED HEADWALLS FOR 12” TO 27” PIPE	RDH-020-03
CULVERT, ENTRANCE & STORM SEWER PIPE TYPES & COVER HEIGHTS	RDI-001-10
PIPE BEDDING FOR CULVERTS, ENTRANCE AND STORM SEWER PIPE.....	RDI-020-09
PIPE BEDDING FOR CULVERTS, ENTRANCE AND STORM SEWER REINFORCED CONC.PIPE.....	RDI-021-01
PIPE BEDDING, TRENCH CONDITION.....	RDI-025-05
PIPE BEDDING, TRENCH CONDITION REINFORCED CONC. PIPE.....	RDI-026-01
COATINGS, LININGS AND PAVINGS FOR NON-STRUCTURAL PLATE PIPE	RDI-035-02
INTERMEDIATE AND END ANCHORS FOR CIRCULAR PIPE	RDX-060-04
SECURITY DEVICES FOR FRAMES, GRATES AND LIDS	RDX-160-06
TEMPORARY SILT FENCE	RDX-210-03
SILT TRAP - TYPE A.....	RDX-220-05
SILT TRAP - TYPE B	RDX-225-01
SILT TRAP - TYPE C	RDX-230-01
CURVE WIDENING AND SUPERELEVATION TRANSITIONS.....	RGS-001-07
SUPERELEVATION FOR MULTILANE PAVEMENT.....	RGS-002-06
MISCELLANEOUS STANDARDS	RGX-001-06
APPROACHES, ENTRANCES, AND MAIL BOX TURNOUT	RPM-110-07
PAVEMENT TRANSITIONS AND JOINT DETAILS FOR JOINTED PLAIN CONCRETE PAVEMENT AT BRIDGE ENDS.....	RPN-010-07
JOINTED PLAIN CONCRETE PAVEMENT	RPN-015-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPN-020-04
CONCRETE PAVEMENT JOINT DETAILS.....	RPS-010-11
EXPANSION AND CONTRACTION JOINT - LOAD TRANSFER ASSEMBLIES.....	RPS-020-14
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-030-06
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-031-06
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-032-06
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-033-07
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-034-07
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-035-06
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-036-06
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-037-06
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-038-06
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-039-06

2016 Standard Drawings
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Page 2 of 2

HOT - POURED ELASTIC JOINT SEALS FOR CONCRETE PAVEMENT	RPX-015-04
LANE CLOSURE TWO-LANE HIGHWAY	TTC-100-04
LANE CLOSURE USING TRAFFIC SIGNALS	TTC-110-03
LANE CLOSURE MULTI-LANE HIGHWAY CASE I	TTC-115-03
DOUBLE LANE CLOSURE	TTC-125-03
SHOULDER CLOSURE.....	TTC-135-02
PAVEMENT CONDITION WARNING SIGNS	TTD-125-02
MOBILE OPERATION FOR DURABLE STRIPING CASE I	TTS-120-02
MOBILE OPERATION FOR DURABLE STRIPING CASE II	TTS-125-02
MOBILE OPERATION FOR DURABLE STRIPING CASE III.....	TTS-130-02
MOBILE OPERATION FOR DURABLE STRIPING CASE IV.....	TTS-135-02

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

**TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS**

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

- I. Application
- II. Nondiscrimination of Employees (KRS 344)

I. APPLICATION

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

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

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

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 administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

Revised: January 25, 2017

II. NONDISCRIMINATION OF EMPLOYEES

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

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

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

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

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

Kentucky Equal Employment Opportunity Act of 1978

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

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

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

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

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

EMPLOYEE RIGHTS

UNDER THE FAIR LABOR STANDARDS ACT

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

FEDERAL MINIMUM WAGE

\$7.25 PER HOUR

BEGINNING JULY 24, 2009

OVERTIME PAY

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

CHILD LABOR

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

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

No more than

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

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

Contract ID: 172188
Page 81 of 86

TIP CREDIT

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

ENFORCEMENT

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

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

ADDITIONAL INFORMATION

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

For additional information:



1-866-4-USWAGE

(1-866-487-9243)

TTY: 1-877-889-5627



WWW.WAGEHOUR.DOL.GOV

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

Report Date 4/18/17

Section: 0001 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	200.00	TON		\$	
0020	00190		LEVELING & WEDGING PG64-22	50.00	TON		\$	
0030	00221		CL2 ASPH BASE 0.75D PG64-22	200.00	TON		\$	
0040	00301		CL2 ASPH SURF 0.38D PG64-22	75.00	TON		\$	
0050	00522		STORM SEWER PIPE-18 IN	60.00	LF		\$	
0060	01456		CURB BOX INLET TYPE A	1.00	EACH		\$	
0070	01825		ISLAND CURB AND GUTTER	550.00	LF		\$	
0080	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	10.00	EACH		\$	
0090	01983		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	10.00	EACH		\$	
0100	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	30.00	EACH		\$	
0110	02014		BARRICADE-TYPE III	4.00	EACH		\$	
0120	02060		PCC PAVEMENT DIAMOND GRINDING (EXISTING PAVEMENT)	4,500.00	SQYD		\$	
0130	02060		PCC PAVEMENT DIAMOND GRINDING (NEW PAVEMENT)	9,100.00	SQYD		\$	
0140	02069		JPC PAVEMENT-10 IN	9,100.00	SQYD		\$	
0150	02091		REMOVE PAVEMENT	9,100.00	SQYD		\$	
0160	02351		GUARDRAIL-STEEL W BEAM-S FACE	2,000.00	LF		\$	
0170	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	1.00	EACH		\$	
0180	02381		REMOVE GUARDRAIL	2,000.00	LF		\$	
0190	02387		GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	1.00	EACH		\$	
0200	02483		CHANNEL LINING CLASS II	100.00	TON		\$	
0210	02562		TEMPORARY SIGNS	250.00	SQFT		\$	
0220	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0230	02671		PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH		\$	
0240	02726		STAKING	1.00	LS		\$	
0250	02775		ARROW PANEL	2.00	EACH		\$	
0260	04894		PREFORMED LOOP/LEAD-IN	170.00	LF		\$	
0270	06549		PAVE STRIPING-TEMP REM TAPE-B 6 INCH	3,000.00	LF		\$	
0280	06550		PAVE STRIPING-TEMP REM TAPE-W 6 INCH	5,000.00	LF		\$	
0290	06551		PAVE STRIPING-TEMP REM TAPE-Y 6 INCH	3,000.00	LF		\$	
0300	06568		PAVE MARKING-THERMO STOP BAR-24IN	30.00	LF		\$	
0310	06569		PAVE MARKING-THERMO CROSS-HATCH	800.00	SQFT		\$	
0320	06574		PAVE MARKING-THERMO CURV ARROW	6.00	EACH		\$	
0330	06575		PAVE MARKING-THERMO COMB ARROW	4.00	EACH		\$	
0340	08100		CONCRETE-CLASS A	.93	CUYD		\$	
0350	08150		STEEL REINFORCEMENT	8.00	LB		\$	
0360	08540		JOINT SEALING - HOT POURED ELASTIC	6,800.00	LF		\$	
0370	10020NS		FUEL ADJUSTMENT	2,644.00	DOLL	\$1.00	\$	\$2,644.00
0380	20453ES835		PREFORMED QUADRAPOLE LOOPS	408.00	LF		\$	
0390	21415ND		EROSION CONTROL	1.00	LS		\$	

Report Date 4/18/17

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0400	21417ES717		PAVE MARK THERMO CONE CAP-SOLID YELLOW	56.00	SQFT		\$	
0410	23265ES717		PAVE MARK TY 1 TAPE STOP BAR-24 IN	236.00	LF		\$	
0420	23270ES717		PAVE MARK TY 1 TAPE-CURV ARROW	13.00	EACH		\$	

Section: 0002 - DEMOBILZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0430	02569		DEMOBILIZATION	1.00	LS		\$	