



CALL NO. 405

CONTRACT ID. 092187

BARREN COUNTY

FED/STATE PROJECT NUMBER 005GR09P075-FE01

DESCRIPTION COLUMBIA AVENUE-EDMONTON ROAD (US 68)

WORK TYPE JPC PAVEMENT REPAIRS - DIAMOND GRINDING

PRIMARY COMPLETION DATE 12/1/2009

LETTING DATE: June 12, 2009

Sealed Bids will be received in the Division of Construction Procurement and/or the Auditorium located on the 1st floor of the Transportation Cabinet Office Building until 10:00 AM EASTERN DAYLIGHT TIME June 12, 2009. Bids will be publicly opened and read at 10:00 AM EASTERN DAYLIGHT TIME.

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

(Check guaranty submitted: Cashier's Check Certified Check Bid Bond)

BID BONDS WHEN SUBMITTED WILL BE RETAINED WITH THE PROPOSAL

DBE General Plan Included

BID

PROPOSAL ISSUED TO: _____

SPECIMEN

Address City State Zip

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PART I
SCOPE OF WORK

CONTRACT ID - 092187

ADMINISTRATIVE DISTRICT - 03

PROJECT(S) IDENTIFICATION AND DESCRIPTION:

COUNTY - BARREN
005GR09P075-FE01

COLUMBIA AVENUE-EDMONTON ROAD (US 68)

COUNTY - BARREN
FE01 005 0068 012-014

PES - MP00500680901

COLUMBIA AVENUE (US 68) FROM 65 FEET EAST OF FRONT STREET (MP 12.812) EXTENDING EAST TO DAVIS STREET (MP 13.236), A DISTANCE OF 0.42 MILES. JPC PAVEMENT REPAIRS - DIAMOND GRINDING.

GEOGRAPHIC COORDINATES LATITUDE 36^59'53" LONGITUDE 85^54'22"

AVERAGE DAILY TRAFFIC - 12000 AVERAGE MAINLINE WIDTH - 36.0 FEET

COUNTY - BARREN
FE01 005 0068 013-015

PES - MP00500680902

COLUMBIA AVENUE-EDMONTON ROAD (US 68) FROM DAVIS STREET (MP 13.236) EXTENDING EAST TO NEW ASPHALT PAST GLASGOW HIGH SCHOOL (MP 14.470), A DISTANCE OF 1.23 MILES. JPC PAVEMENT REPAIRS - DIAMOND GRINDING.

GEOGRAPHIC COORDINATES LATITUDE 37^00'00" LONGITUDE 85^55'00"

AVERAGE DAILY TRAFFIC - 9000 AVERAGE MAINLINE WIDTH - 36.0 FEET

COMPLETION DATE(S):

COMPLETION DATE - December 01, 2009

APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

Bidder must use the Department's Expedite Bidding Program available on the Internet web site of the Department of Highways, Division of Construction Procurement. (www.transportation.ky.gov/contract)

The Bidder must download the bid file located on the web site to prepare a bid packet for submission to the Department. The bidder must include the completed bid packet printed from the Program along with the disk created by said program.

JOINT VENTURE BIDDING

Joint Venture bidding is permissible. However, both companies MUST purchase a bidding proposal. Either proposal may be submitted but must contain the company names and signatures of both parties where required. 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 is advised that the Underground Facility Damage Protection Act of 1994, became law January 1, 1995. It is the contractor's responsibility to determine the impact of the act regarding this project, and take all steps necessary to be in compliance with the provision of the act.

01/01/2009

SURFACING AREAS

Mainline surfacing width is estimated to vary 24-36 feet.

Total mainline area to be Diamond Ground is estimated to be 39,214 square yards.

There are no shoulders

JPC RIDE QUALITY

JPC Pavement Smoothness requirements shall apply on this project in accordance with the Special Note for Diamond Grinding Ride Quality elsewhere in this proposal.

Special Note for Expediting Project Work Order

Please be advised that the Department intends to 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, the Contractor is required to "hand carry" all required project information to facilitate the process. Please be advised that the Department's ability to expedite this project is dependent on the Contractor submitting accurate paperwork.

SPECIAL NOTES FOR PCC PATCHING & DIAMOND GRINDING
FE01 005-0068-012-014
FE01 005-0068-013-015

I. DESCRIPTION

Except as specified herein, perform all work in accordance with the Department's 2008 Standard Specifications, and applicable interim Supplemental Specifications, Special Provisions and Special Notes, and Standard and Sepia Drawings, current editions. Take note that Special Provision 76 is not applicable to this project. Furnish all materials, labor, equipment, and incidentals for the following work:

(1) Remove and replace PCC Pavement at the locations listed and/or as directed by the Engineer; (2) Maintain and Control Traffic; (3) Diamond Grinding and (4) All other work specified as part of this contract.

II. MATERIALS

The Department will sample and test all materials according to 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. Dense Graded Aggregate. Contrary to Special Note for Full Depth Concrete Pavement Repair, use DGA; do not use Crushed Stone Base in lieu of DGA.

C. Portland Cement Concrete Pavement. Use non-reinforced JPC Pavement/24 for full depth replacement of concrete pavement meeting the requirements of the Special Note for Full Depth Concrete Pavement Repair. At the Contractor's option, with no additional cost to the Department, use other high early strength rapid setting concrete; however, obtain the Engineer's approval prior to use. Do not use chloride accelerators. Furnish all other materials according to the Standard Specifications or Special Note for Full Depth Concrete Pavement Repair, as applicable..

D. Pavement Markings. See Traffic Control Plan.

E. Remove Type V Pavement Markers. For Type V Pavement Markers removed from asphalt pavement to be milled and textured, see 403.03.02. For Type V Pavement Markers to be removed from concrete pavement see, Special Note for Removing Existing Pavement Markers On Portland Cement Pavement, low slump or latex.

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F. Joint and Crack Sealing. See Special Note for Full Depth Concrete Pavement Repair.

G. Partial Depth Patching. See Special note for Partial Depth Patching.

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, incidental excavation and backfilling; removal of all obstructions or any other items; disposal of waste materials, sweeping and removal of debris; temporary and permanent erosion and water pollution control; restoration; and any other incidentals. Perform all site preparation operations only as approved or directed by the Engineer.

C. Asphalt Pavement Milling and Texturing. Prior to performing PCC patching, remove existing asphalt pavement between milepoints 12.812 and 13.236 in accordance with Section 408. Take care to not groove or texture the underlying PCC Pavement. Do not remove asphalt pavement between milepoints 13.981 and 14.387.

D. Remove Type V Pavement Markers. Prior to milling, remove Type V Pavement Markers in the asphalt pavement to be milled and textured according to Section 403.03.02. Prior to diamond grinding, remove Type V pavement Markers in PCC Pavement according to the Special Note for Removing Existing Pavement Markers on Portland Cement Pavement, low slump or latex. Replace any repaired divots damaged by the diamond grinding operations at no additional cost to the Department.

E. Concrete Pavement Removal and Replacement. Except as specified in these notes, remove and replace full depth concrete pavement in accordance with Special Note for Full Depth Concrete Pavement Repair. Removal locations listed in the summaries are approximate only; the Engineer will determine actual locations at the time of construction. The Engineer may add additional locations within the project limits at any time prior to completion. Contrary to the Special Note for Full Depth Concrete Pavement Repair, the Engineer may designate non-standard distances from the joint to be used. Remove pavement according to Special Note for Full Depth Concrete Pavement Repair by a saw cut and lift method without unnecessarily disturbing the underlying base. Double sawing of large slab removal limits will be allowed to facilitate removal. Place PCC Pavement with nominal depth of 9 inches; however, transition the finished grade of the PCC Pavement to match the adjacent pavement that is to remain in place; therefore, the actual thickness of the pavement may be greater than existing in some areas. Install tie and dowel bars according to Special Note for Full Depth Concrete Pavement Repair using gang drills, capable of drilling a minimum of four holes at a time.

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Perform concrete pavement removal and replacement in such a manner that removal and replacement are accomplished on the same day at each location. Once the removal of pavement has begun, work continuously until the new PCC Pavement is placed to eliminate the hole. The Engineer will allow hand finishing; however, perform initial strike-off with a rotary drum screed. Contrary to Section 501.03.13, do not texture the by the formation of transverse grooves. All other applicable sections of Special Note for Full Depth Concrete Pavement Repair shall apply except as specified herein.

F. PCC Pavement Diamond Grinding. Begin Diamond Grinding within seven (7) calendar days after the placement of the full depth patches. Complete diamond grinding according to Section 503 of the Standard Specifications. See Special Note For Diamond Grinding Ride Quality.

G. Partial Depth Patching. After diamond grinding, perform partial depth patching according to the Special note for Partial Depth Patching.

H. Joint and Crack Sealing. Seal joints in the new PCC pavement according to Special Note for Full Depth Concrete Pavement Repair. Saw-cut, clean, and seal all transverse joints, longitudinal joints, pavement shoulder joints, and random cracks designated by the Engineer in the existing pavement areas according to section 501.03.17.

I. Disposal of Waste. Dispose of all removed concrete, asphalt materials, debris, excess excavation, and other waste 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.

J. Final Dressing, Clean Up, and Seeding and Protection. See Special Note for Erosion Control.

K. Restoration. Restore any roadway features or private property disturbed by the work or the Contractor's operations in like kind materials and design as directed by the Engineer at no additional cost to the Department or the owner.

L. Pavement Striping and Pavement Markers. See Traffic Control Plan.

M. On-Site Inspection. Make a thorough inspection of the site prior to submitting a bid and become 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. The Department will not consider any claims for money or grant time extension resulting from site conditions.

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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 will for direct payment, but shall be incidental to the other items of the work.

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

D. Remove Type V Pavement Markers. The Department will measure Type V pavement Markers removed from asphalt pavement according to Section 403.04.01. The Department will measure Type V pavement Markers removed from concrete pavement according to the Special Note for Removing Existing Pavement Markers on Portland Cement Pavement, latex or low slump. The Department will not measure repairing divots damaged by diamond grinding operations.

E. Partial Depth Patching. See Special note for Partial Depth Patching.

F. Remove PCC Pavement. See Special Note for Full Depth Concrete Pavement Repair.

G. JPC Pavement/24. See Special Note for Full Depth Concrete Pavement Repair.

H. Smooth Dowels and Deformed Tie Bars. See Special Note for Full Depth Concrete Pavement Repair.

I. Joint and Crack Sealing. For joints in new pavement, see Special Note for Full Depth Concrete Pavement Repair. The Department will measure joints and random cracks sealed in existing pavement in linear feet.

J. PCC Pavement Diamond Grinding. See Special Note For Diamond Grinding Ride Quality.

K. Pavement Striping and Pavement markings. See Traffic Control Plan.

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

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V. BASIS OF PAYMENT

The Department will not make direct payment, other than for the bid items listed. The Department will consider all other items required to complete the construction as incidental to the bid items listed.

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

B. Remove Cement Concrete Pavement. See Special Note for Full Depth Concrete Pavement Repair.

C. JPC Pavement/24. See Special Note for Full Depth Concrete Pavement Repair.

D. Partial Depth Patching. See Special note for Partial Depth Patching.

E. PCC Pavement Diamond Grinding. See Special Note For Diamond Grinding Ride Quality.

F. Remove Type V Pavement Markers. For Type V pavement Markers removed from asphalt pavement, see Section 403.04.01. For Type V pavement Markers removed from concrete pavement, see Special Note for Removing Existing Pavement Markers on Portland Cement Pavement, latex or low slump.

SPECIAL NOTE FOR DIAMOND GRINDING RIDE QUALITY

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Conform to Section 503.03.09, with the following exceptions:

The Department will determine existing IRI and evaluate the profile data to determine projected IRI values to be obtained after grinding. The Department will provide bidders with the results of the simulation prior to bid letting.

The Department will apply a Ride Quality Adjustment for each lane tested. The Department will calculate the adjustment by multiplying the diamond grinding payment for each lane tested by its appropriate ride quality pay value found in the Ride Quality Adjustment Schedule below.

When requesting tests on partially completed pavement, the Department will perform one test at no charge. The Department will perform additional requested testing and retesting for corrective work or pavement replacement at a cost of \$150 per lane-mile. The Department will deduct charges for additional requested testing and retesting for corrective work from monies due on the Contract.

RIDE QUALITY ADJUSTMENT SCHEDULE

<u>IRI</u>	<u>Pay Value Adjustment (1)</u>
TBA	+0.15
TBA	= 0.015 x (47 – IRI)
TBA	0.000
TBA	= 0.015 x (125 – IRI)
TBA	Corrective work or replacement required

(1) The Department will not apply a positive pay value for corrective work other than removal and replacement to achieve the IRI.

SPECIAL NOTE FOR FULL DEPTH CONCRETE PAVEMENT REPAIR
FE01 005-0068-012-014
FE01 005-0068-013-015

This Special Note applies to full depth repairs of existing PCC pavement on US 68 in Barren County and supersedes Special Provision 76 in the 2008 Standard Specifications. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Remove and replace concrete pavement. Except as specifically superseded herein, comply with the applicable Standard Specifications, and interim Supplemental Specifications and Standard and Sepia Drawings, current editions.

2.0 MATERIALS AND EQUIPMENT.

2.1 JPC Pavement. Conform to Sections 501, 502, and 601 except that concrete compressive must achieve 3000 pounds per square inch (psi) in accordance with Section 4.4 of this note. Test concrete materials according to Section 601.03.03. The Engineer may allow pavement to be opened to traffic at less than 3,000 psi subject to the deductions described in Section 4.4 of this note.

2.2 Dowel Bars and Sleeves. Conform to Sections 501 and 811

2.3 Tie Bars. Conform to Sections 501 and 811.

2.4 Joint Materials. Conform to Subsections 501.02.02 and 807.03.01 or 807.03.05.

2.5 Grout Adhesives and Epoxy Resin Systems. Conform to Section 826.

2.6 Dense Graded Aggregate (DGA) and Crushed Stone Base (CSB). Conform to Section 805.

2.7 Geotextile Fabric. Conform to Section 843.

2.8 Drills. Drill holes using a gang drill, capable of drilling a minimum of four holes simultaneously. Do not allow misalignment of holes to exceed 1/4 inch in the vertical, horizontal, or oblique plane.

2.9 Hammers. Only use chisel point hammers weighing less than 40 pounds to remove deteriorated concrete.

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3.0 CONSTRUCTION.

3.1 Removal of Existing Pavement. Remove existing pavement to the extent the Contract specifies or as the Engineer directs. Provide a minimum length of patches measured along centerline of 3 feet on each side of an existing joint. When working with pavements with non-skewed transverse joints, if it is necessary to remove existing pavement closer than 6 feet to a transverse joint, remove the pavement 3 feet beyond that joint. When working with pavements with skewed transverse joints, if it is necessary to remove existing pavement closer than 3 feet to a transverse joint, remove the pavement 3 feet beyond that joint. See details of configurations of pavement and joints for various situations are depicted in the drawings herein.

When small areas of removal and replacement are performed at bridge ends, maintain or reconstruct existing expansion joints at their existing location. When the Engineer determines extensive full width removal and replacement is required, construct new expansion joints at the locations shown on Standard Drawing No. RPN-010.

In the removal operation, make a full depth saw cut longitudinally along the centerline joint and shoulder joint and transversely along the area marked for removal. To prevent damage to the subbase, do not allow the saw to penetrate more than 1/2" into the subbase. The Engineer may direct or approve additional cuts within the removal area for ease of removal of the damaged slab and to prevent damage to adjacent pavement to remain in place. Keep overcutting beyond the limits of the removal area to a minimum. Prevent saw slurry from entering existing joints and cracks. Clean all saw slurry and other contaminants from overcutting area. Repair overcut area with a low viscosity epoxy compound. To avoid pumping and erosion beneath the slab, do not allow traffic on sawed pavement for more than 48 hours before beginning removal procedures, unless directed by the Engineer.

Lift out the deteriorated concrete vertically with lift pins if at all possible. If approved by the Engineer, use other methods that do not damage the base, shoulder, or sides of pavement that is to be left in place. If any damage does occur, repair as the Engineer directs and use an acceptable alternative method for the removal process. Do not damage the pavement base during these operations.

3.2 Pavement Replacement. Perform base preparation and JPC Pavement replacement in such a manner that pavement is replaced on the same day as removed (see Traffic Control Plan).

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3.2.1 Preparation of Base. Do not damage the pavement base during these operations. 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 or replace unsuitable materials, excluding bridge ends, use 12 inches of Crushed Limestone Size No. 2 aggregate wrapped in geotextile fabric topped with 4 inches of DGA or CSB. Use either Type III or Type IV geotextile fabric. The Contractor may permit use of Flowable Fill and cement stabilization 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 prior to use.. The Engineer may also direct using only DGA or CSB to correct base deficiencies. At bridge ends, treat existing base and subgrade as the Contract specifies. During compaction, wet the base as the Engineer directs. Compact areas not accessible to mechanical compaction equipment by hand tamping as directed by the engineer.

3.2.2 Underdrains. Repair damage to existing pavement edge drains or other underdrains, if existing and exposed by the work according to Section 704.

3.2.3 Pavement Replacement. Using load transfer assemblies with dowel joints as a template, drill into the existing slab according to the details shown herein and on the Standard Drawings. Use plain epoxy coated dowels of the size specified on the standard drawings based on the pavement thickness for contraction and expansion joints. Drill holes for dowel bars and tie bars into the face of the existing slab, at diameters as specified below. Drill the dowel bar holes and tie bar holes to a depth equal to 1/2 the length of the bars. Anchor tie bars into the existing pavement using an epoxy resin. Anchor dowel bars into the existing pavement using either an epoxy resin or an adhesive grout. For tie bars and dowel bars where an epoxy resin is to be used, drill the holes 1/8 inch larger than the bar diameter. For dowel bars where an adhesive grout is to be used, drill holes 1/4 inch larger than the bar diameter. Use a clear or opaque grout retention disk in both resin and grout applications. Operate the equipment so as to prevent damage to the pavement being drilled. Obtain the Engineer's approval of the drilling procedure. Install load transfer assemblies according to the Standard Drawings and Standard Specifications.

In longitudinal joints, when indicated herein or in the Standard Drawings, install 1 inch diameter deformed tie bars, 18 inches long on 30-inch centers, starting and ending 20 inches inside each end of the repair area. In transverse construction joints, install 1 inch diameter deformed tie bars, or 1 inch diameter plain dowel bars, 18 inches long on 12 inch centers starting and ending 12 inches inside each edge of the repair area.

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Except as specified herein or the Engineer directs otherwise, install the dowels and tie bars according to Section 511. Ensure the holes are dry and free of dust and debris. Use a nozzle to insert the grout or epoxy starting at the back of the drilled hole to allow for full coating of the dowel or tie bar. After placement, use a bond breaker on the section of the dowel bar that is protruding from the hole.

Mix, place, finish, and cure concrete according to Section 501 with the exception that the Department will allow truck mixing, 2-bag mixers, and hand finishing.

When required, use a form on the side of the slab at longitudinal joints. When the adjacent traffic lane is not closed to traffic or the drop-off is not protected, temporarily fill the space between the form and the adjacent pavement with DGA. After placing the slab, remove the DGA and form. Fill the hole with concrete and thoroughly consolidate by rodding, spading, and sufficient vibration to form a dense homogeneous mass. Use a form on the side of the slab adjacent to shoulders. Excavate and backfill as shown on Section F'-F'.

For patches less than 25 feet in length, use a bond breaker and do not install tie bars at the longitudinal joint. Bond breakers should not exceed 1/8 inch in thickness, e.g. tar paper.

Broom finish or, when the adjacent surface has a grooved finish, texture the surface according to Subsection 501.03.13 H). Finish the surface, including joints, to meet a surface tolerance of 1/8 inch in 10 feet that will be verified by straightedge. Cure the pavement and apply curing membranes according to 501.03.15.

Keep all pavement surfaces adjacent to this operation reasonably clean of excess grout and other materials at all times. Maintain all original longitudinal joints. Place transverse joints according to the details shown herein and on the Standard Drawings.

3.3 Joint Sealing. Seal all new or partially new joints with silicone rubber sealant or hot-poured elastic joint sealant according to Subsection 501.03.18.

4.0 MEASUREMENT.

4.1 Remove JPC Pavement. The Department will measure the quantity in square yards of surface area of pavement and curbs. The Department will not measure removal of underlying base material or curbs for payment and will consider it incidental to Remove JPC Pavement.

4.2 DGA or CSB. The Department will measure the quantity used to stabilize the existing base or to replace unsuitable material in tons. The Department will not measure removal of

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existing base material or underlying material for payment and will consider such removal incidental to DGA or CSB. The Department will not measure DGA used for the drop-off protection and will consider it incidental to JPC Pavement .

4.3 Non-Reinforced JPC Pavement. When listed as a bid item, the Department will measure the quantity according to Subsection 501.04.01. The Department will not measure dowels, tie bars, hook bolts, or joint sealing for payment and will consider it incidental to Non-Reinforced JPC Pavement.

4.4 JPC Pavement. When listed as a bid item, the Department will measure according to Subsection 501.04.01. The Department will not measure dowels, tie bars, hook bolts, or joint sealing for payment and will consider it incidental to Non-Reinforced JPC Pavement. When not listed as a bid item, the Department will measure the quantity as Non-Reinforced JPC Pavement and make no additional payment for its use. JPC Pavement will be paid according to Section 5.0 below and according to the following payment schedule based on the compressive strength. The cylinders for payment will be tested two hours prior the scheduled opening of traffic.

3000 PSI and up	100% payment
2750 to 3000 PSI	75% payment and approval from the Engineer to open to traffic*
2500 to 2750 PSI	50% payment and approval from the Engineer to open to traffic*
2250 to 2500 PSI	25% payment and approval from the Engineer to open to traffic*
Below 2500 PSI	10% payment and no potential to open to traffic. Maintain traffic closure until concrete reaches a minimum of 2250 PSI*.

*If the Engineer approves opening to traffic below 3000 PSI, the Engineer will evaluate the concrete at 28 days (or sooner) to determine if the removal and replacement of the concrete is necessary due to pavement distress induced by the early opening (i.e. noticeable cracking). If required by the Engineer, remove and replace those slabs showing distress at no additional cost to the Department.

4.5 Underdrains. If listed as a bid item, the Department will measure the quantity according to Subsection 704.04. The Department will not measure lateral drains for payment and will consider them incidental to the Underdrains. If not listed as a bid item, but required by the Engineer at the time of construction, the Department will pay for Underdrains as Extra Work according to Sections 104.03 and 109.04.,

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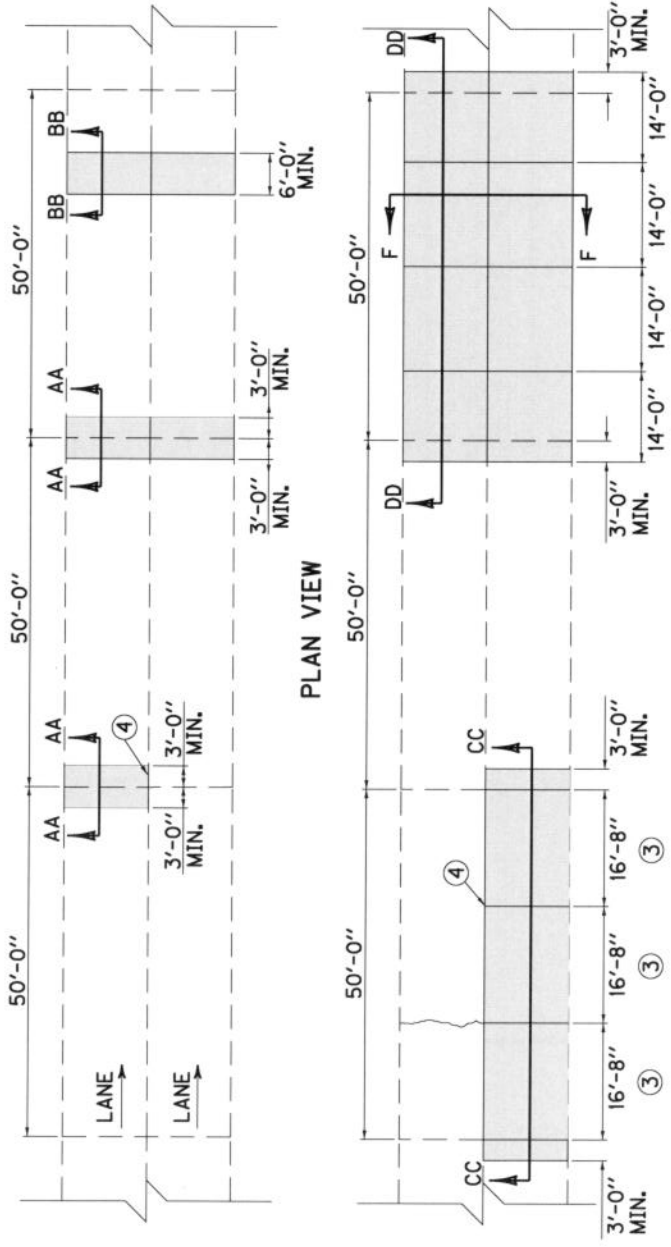
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5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
----	Remove JPC Pavement	Square Yard
00001	DGA Base	Ton
00003	Crushed Stone Base	Ton
02069-02071, 02073, 02075, 02084, 02086, 02088	JPC Pavement Non-Reinforced, thickness See Subsection 501.05	
01000	Perforated Pipe, 4-inch	Linear Foot
02598, 02599	Fabric-Geotextile, Type	Square Yard

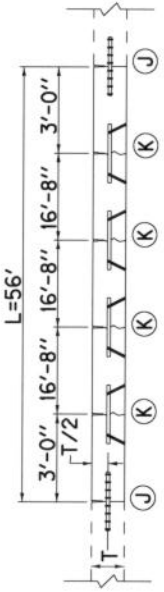
Payment at the Contract unit prices per cubic foot shall be full compensation for all labor, equipment, materials, and incidentals full depth concrete pavement repair as specified herein and to the satisfaction of the Engineer.

1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (OR TIE BARS FOR SECTION CC), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION CC) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION CC) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND CONSTRUCT CONTRACTION JOINTS SUCH THAT THE DISTANCE BETWEEN JOINTS IN THE REPLACED SECTION IS NO LESS THAN 10 FEET OR MORE THAN 20 FEET. TRANSVERSE JOINTS SHALL BE SPACED APPROXIMATELY 15' EQUIDISTANT, BUT NOT LESS THAN 10 FEET OR NO MORE THAN 20 FEET. ADJUST JOINTS TO PROVIDE THE MINIMUM NUMBER OF JOINTS WITHOUT EXCEEDING THE 10-20 FOOT RANGE. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH AN EXISTING JOINT OR CRACK IN THE ADJACENT SLAB IF ONLY ONE LANE IS BEING REPLACED.
4. IF ONLY ONE LANE IS REMOVED, AND L225', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L225', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONSTRUCTION JOINTS AT LOCATIONS "J". SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.

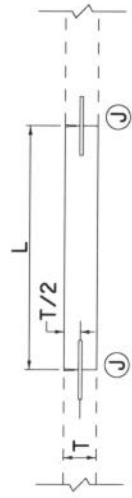


PLAN VIEW

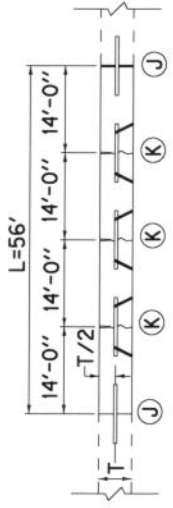
■ JPC PAVEMENT TO BE REMOVED



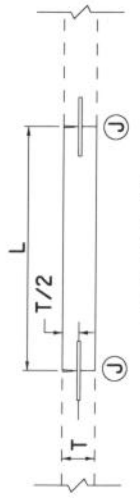
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SECTION AA



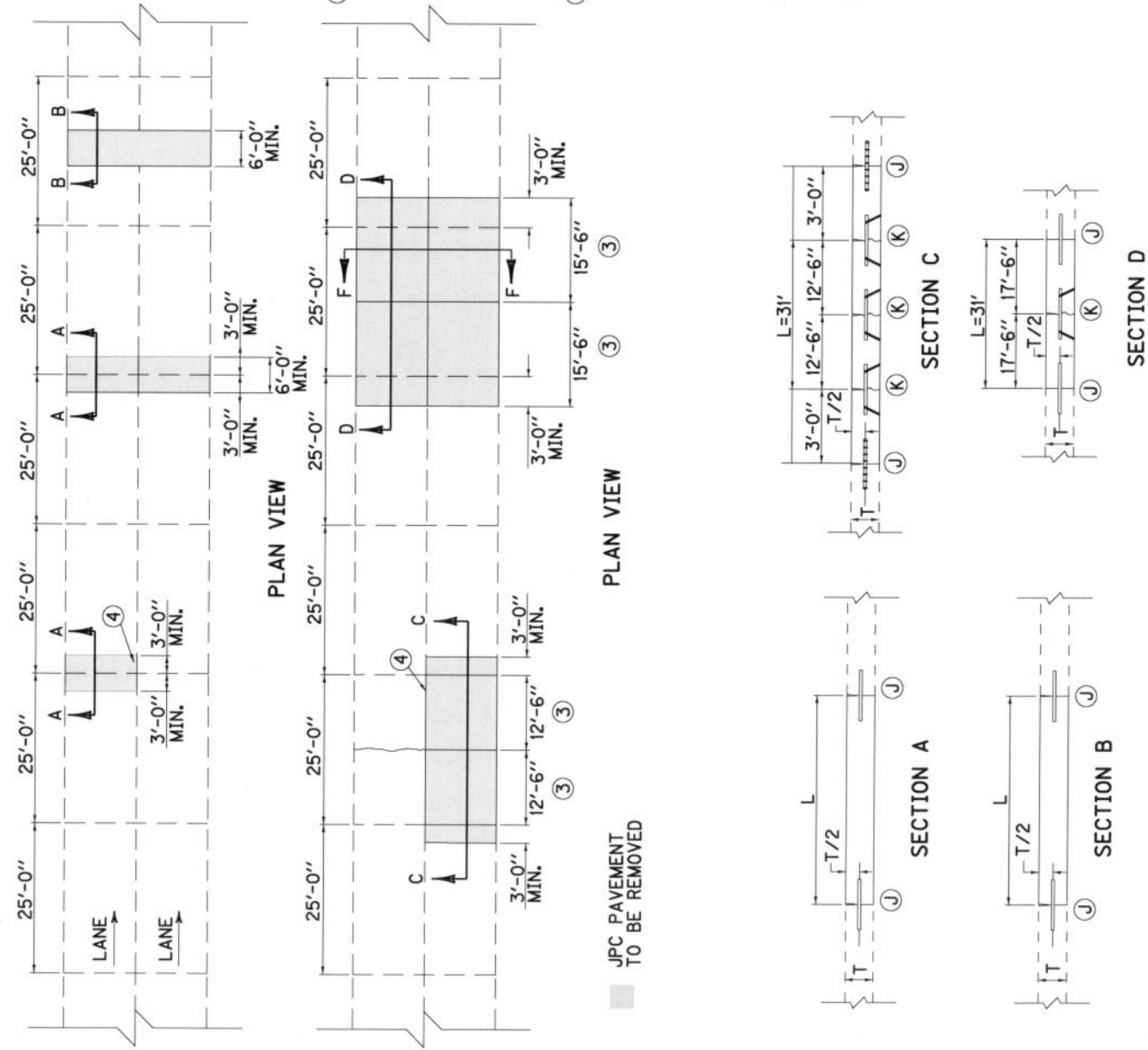
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SECTION BB

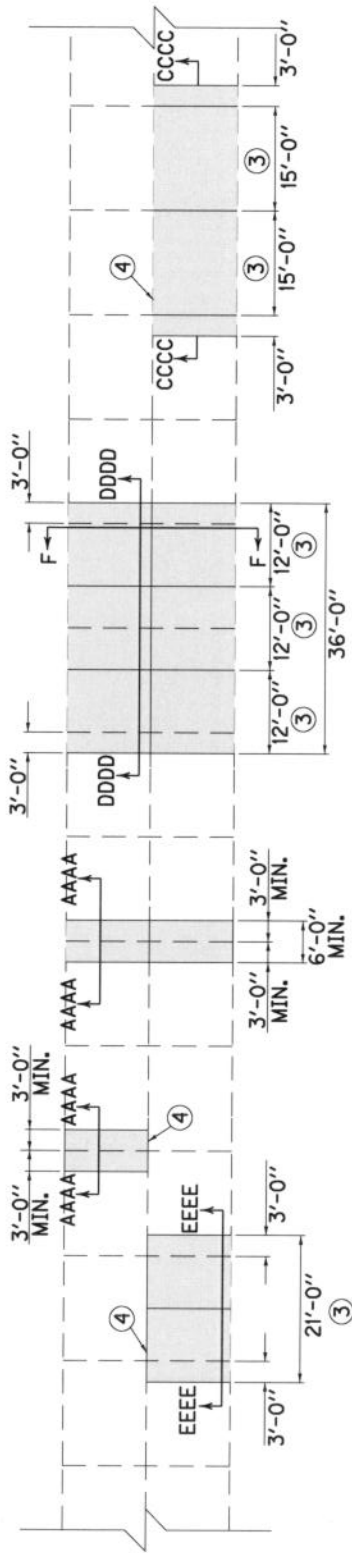
KENTUCKY DEPARTMENT OF HIGHWAYS
50' JOINT SPACING
SUBMITTED: _____ TEAM DIVISION OF DESIGN _____ DATE _____

1. SAW AT LOCATIONS "J," AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (OR TIE BARS FOR SECTION C), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION C) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION C) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND CONSTRUCT CONTRACTION JOINTS SUCH THAT THE DISTANCE BETWEEN JOINTS IN THE REPLACED SECTION IS NO LESS THAN 10 FEET OR MORE THAN 20 FEET. TRANSVERSE JOINTS SHALL BE SPACED APPROXIMATELY 15' EQUIDISTANT, BUT NOT LESS THAN 10 FEET OR NO MORE THAN 20 FEET. ADJUST JOINTS TO PROVIDE THE MINIMUM NUMBER OF JOINTS WITHOUT EXCEEDING THE 10-20 FOOT RANGE. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH AN EXISTING JOINT OR CRACK IN THE ADJACENT SLAB IF ONLY ONE LANE IS BEING REPLACED.
4. IF ONLY ONE LANE IS REMOVED, AND $L > 25'$, INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF $L \leq 25'$, DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONSTRUCTION JOINTS AT LOCATIONS "J". SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.



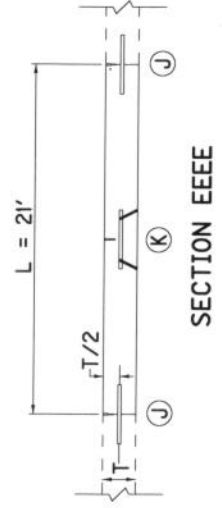
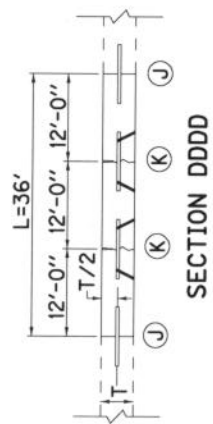
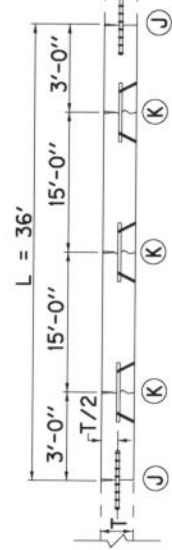
KENTUCKY DEPARTMENT OF HIGHWAYS
25' JOINT SPACING
APPROVED _____ DATE _____ <small>TECH DIVISION OF DESIGN</small>

KENTUCKY DEPARTMENT OF HIGHWAYS
15' JOINT SPACING
APPROVED _____ DATE _____ TECHNICAL DIVISION OF DESIGN



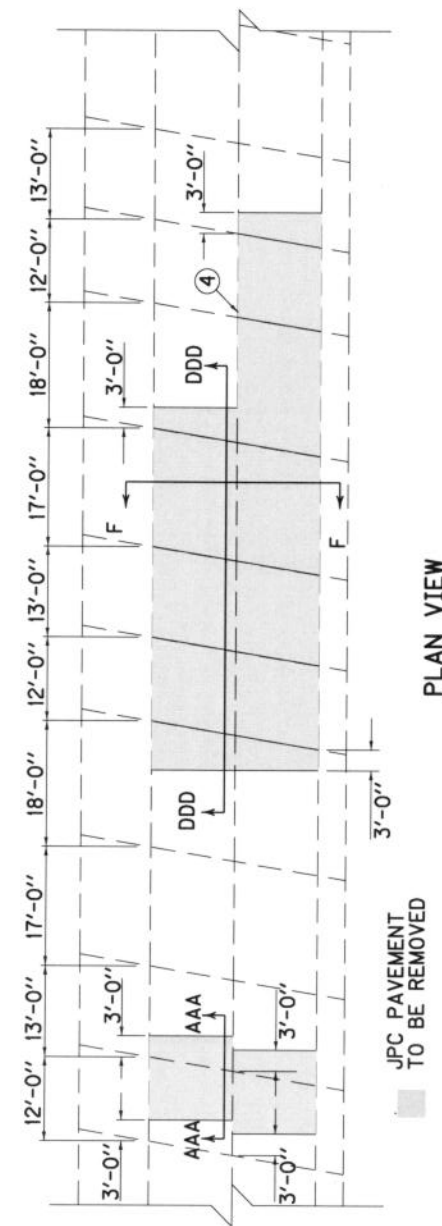
JPC PAVEMENT
TO BE REMOVED

PLAN VIEW

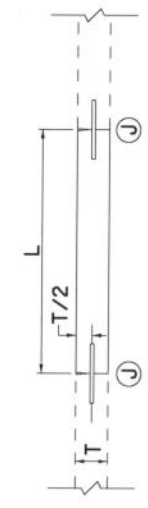


1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (OR TIE BARS FOR SECTION CCCC), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION CCCC) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION CCCC) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND CONSTRUCT CONTRACTION JOINTS SUCH THAT THE DISTANCE BETWEEN JOINTS IN THE REPLACED SECTION IS NO LESS THAN 10 FEET OR MORE THAN 20 FEET. TRANSVERSE JOINTS SHALL BE SPACED APPROXIMATELY 15' EQUIDISTANT, BUT NOT LESS THAN 10 FEET OR NO MORE THAN 20 FEET. ADJUST JOINTS TO PROVIDE THE MINIMUM NUMBER OF JOINTS WITHOUT EXCEEDING THE 10-20 FOOT RANGE. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH AN EXISTING JOINT OR CRACK IN THE ADJACENT SLAB IF ONLY ONE LANE IS BEING REPLACED.
4. IF ONLY ONE LANE IS REMOVED, AND L > 25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L < 25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONSTRUCTION JOINTS AT LOCATIONS "J". SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.

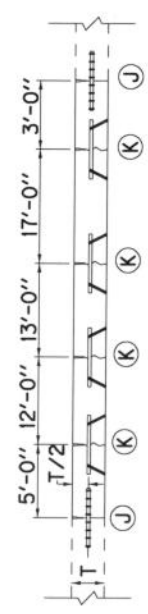
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2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (OR TIE BARS FOR SECTION DDD), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION DDD) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION DDD) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND MATCH EXISTING JOINTS. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH EXISTING JOINTS IN ADJACENT SLABS.
- ④ IF ONLY ONE LANE IS REMOVED, AND $L > 25'$, INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF $L < 25'$, DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
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6. SEE "CROSS SECTION" FOR SECTION F.



PLAN VIEW

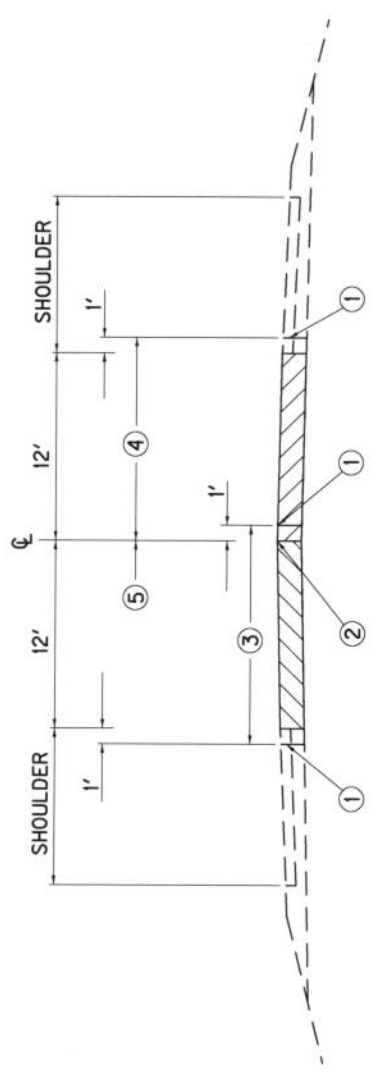


SECTION AAA



SECTION DDD

KENTUCKY DEPARTMENT OF HIGHWAYS
RANDOM SKEWED
APPROVED _____ DATE _____ TECHNICAL DIVISION OF DESIGN



SECTION F

- ① SAW-CUT LINE. THIS ONE FOOT IS TO ALLOW FOR A FORM AND THE REMOVAL AND REPLACEMENT SHALL BE INCIDENTAL TO THE WORK, EXCEPT NEW ASPHALT MIXTURE SHALL BE PAID DIRECT ON A TONNAGE BASIS, AND NEW JPC PAVEMENT WILL BE PAID BY THE SQUARE YARD. COMPACT THE DGA BASE BY MECHANICAL TAMPERS TO THE ENGINEER'S SATISFACTION.
- ② EXISTING LONGITUDINAL JOINT.
- ③ FIRST SLAB REMOVAL LIMITS AND REPLACE 12-FOOT LANE.
- ④ SECOND SLAB REMOVAL LIMITS AND REPLACE 12-FOOT LANE.
- ⑤ THIS ONE FOOT IS TO ALLOW FOR A FORM ON THE FIRST POUR, AND A TEMPORARY PAVEMENT IS REQUIRED. THE DEPARTMENT WILL NOT REQUIRE REMOVAL OF THIS ONE FOOT IF THE GRADE OF THE EXISTING PAVEMENT IS ADEQUATE TO ENSURE THE NEW CONCRETE CAN BE PLACED AND FINISHED TO THE SATISFACTION OF THE ENGINEER.
6. THE ABOVE DRAWING DEPICTS THE ORDER OF SLAB REMOVAL WHEN BOTH ARE TO BE REMOVED AT THE SAME LOCATION. WHEN ONLY ONE SLAB OR LANE IS TO BE REMOVED, REMOVE AND REPLACE ACCORDING TO SECTION C, CC, CCC OR CCCC. TRAFFIC CONTROL WILL SPECIFY WHICH LANE TO REMOVE FIRST.

KENTUCKY DEPARTMENT OF HIGHWAYS
CROSS SECTION
APPROVED _____ DATE _____ TECH DIVISION OF DESIGN

SPECIAL NOTE FOR PARTIAL DEPTH PATCHING
FE01 005-0068-012-014
FE01 005-0068-013-015

This Special Note applies to partial depth repairs of existing PCC pavement on US 68 in Barren County and supersedes Special Provision 76 in the 2008 Standard Specifications. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction. Except as specifically superseded herein, comply with the applicable Standard Specifications, and interim Supplemental Specifications and Standard and Sepia Drawings, current editions.

1.0 DESCRIPTION. Remove and replace small, shallow areas of deteriorated concrete that extend no deeper than 3 inches. The Engineer may permit small corner breaks and punch outs greater than 3 inches to be repaired as partial depth patching. The Engineer will make the determination as to whether to use a full depth or partial depth patch at each such location.

2.0 MATERIALS AND EQUIPMENT.

2.1 Patching Materials. Use Fibrecrete or Crafcro Polypatch.

2.2 Overcutting Repair. Use a low viscosity epoxy compound selected by the contractor and approved by the Engineer.

2.2 Joint Seals. Use Hot-Poured Elastic or Silicone Rubber Sealant conforming to Section 807.03.01 or 807.03.05.

2.4 Hammers. Only use chisel point hammers weighing less than 15 pounds to remove deteriorated concrete.

3.0 CONSTRUCTION.

3.1 Repair Dimension Selection. Locations and dimensions listed in the summary are approximate only. The Engineer will determine actual locations for partial-depth patching at the time of construction. Identify the repair boundaries of locations determined by the Engineer by sounding the surrounding concrete with a solid steel rod, a heavy chain, or a ball peen hammer. Extend the repair boundaries a minimum of 3 inches outside unsound areas.

3.2 Concrete Removal. Saw the holes to be patched to the configuration the Engineer directs and with a vertical face to a 2-inch minimum depth. After sawing, keep exposure to traffic to a minimum until patching. If the area to be patched is deeper than 3 inches, the Engineer will determine whether to use full depth or partial depth patching methods at each

Partial Depth Patching
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location. Keep overcutting beyond the limits of the removed area to a minimum. Prevent saw slurry from entering existing joints and cracks.

3.3 Repair Area Preparation. Following the removal of the concrete, prepare the surface of the repair area to provide a clean, irregular surface for the development of a good bond between the repair material and the existing slab. Clean the repair area by sandblasting followed by compressed air blasting to remove dirt, oil, thin layers of unsound concrete, and laitance. Before air blasting for the final cleaning, check that the compressed air used is free of oil by placing a cloth over the air compressor nozzle and visually inspecting for oil. Conform to any additional manufacturer's for preparation. In case of conflict between these notes and the manufacturer's recommendations, the Engineer will determine which to apply.

3.4 Joint Preparation. If transverse or longitudinal joints are immediately adjacent to partial-depth repairs, prepare the joint by use of an insert to act as a bondbreaker or joint reformer. Place the insert so that it prevents intrusion of repair material into the joint opening. Insure the compressible insert extends 1 inch below and 3 inches beyond the repair boundaries. Prior to placement, score the insert at the appropriate depth to accommodate removal of the insert and installation of the joint sealant material to be used. Once the patch has cured or set, remove the scored top strip to allow for the joint sealant to be placed.

3.5 Patching Material and Placement. Install repair materials according to the manufacturer's recommendations. Remove and replace all areas of the patches that display shoving, rutting, or are not bonded to the underlying pavement.

3.6 Joint Sealing. After partial depth patches are cured, clean all saw slurry and other contaminants from overcutting, and repair overcut areas with a low viscosity epoxy compound. Remove the bondbreaker insert and seal all joints with hot-poured elastic or silicone rubber sealant according to the Special Note for Full Depth Concrete Pavement Repair.

4.0 MEASUREMENT.

4.1 Partial Depth Patching. The Department will measure partial depth patching in cubic feet, either from field measurements or the metered quantity from the mixer, as the Engineer determines.

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Page 3 of 3

5.0 PAYMENT. 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>
	Partial Depth Patching (Polymer Modified)	Cubic Foot

Payment at the Contract unit price per cubic foot shall be full compensation for all labor, equipment, materials, and incidentals for sounding and sawcutting pavement, removing PCC Pavement and existing asphalt patching materials, and constructing the partial depth patch as specified herein and to the satisfaction of the Engineer.

FIBRECRETE FLEXIBLE REPAIR MATERIALS

DESCRIPTION

Fibrecrete Flexible Repair Material is a flexible repair for joint/large crack, spalls and pot-hole repairs in asphalt and concrete. It is a hot-applied mastic asphalt binder with 36% bitumen content, polymers mixed with graded filler, recycled steel fibers (less than 1% total weight), aggregates and recycled tire rubber (no less than 3% of total weight).

APPLICATIONS

Fibrecrete is designed to replace traditional asphaltic repairs, which are prone to failure due to their stiffness. Fibrecrete exceeds the requirements of most asphaltic joint seals due to its flexibility. The installed product is a load-bearing repair that has superior tensile strength and flexibility to accommodate limited thermal expansion and contraction. Fibrecrete has exceptional resistance to water intrusion and to a broad range of salts, bases and organic materials, making the repair a long-term solution for highway maintenance projects.

MATERIAL SPECIFICATIONS

Fibrecrete is an electrometric polymer modified binder. Installed in accordance with the manufacturer's specifications, the installed product will conform to the following properties:

<u>BINDER PROPERTIES</u>	<u>METHOD</u>	<u>REQUIREMENT</u>
Bond	ASTM D 1190	Pass, 3 cycles @ -20 ⁰ C, 50%
Penetration	ASTM D 5329	1 mm min @ -18 ⁰ C, 200g, 60 sec 9 mm max @ 25 ⁰ C, 150g, 5 sec
Ductility	ASTM D113	40 cm min @ 25 ⁰ C
Flexibility	ASTM D5329	Pass @ -12 ⁰ C
Flow	ASTM D5329	3 mm max @ 60 ⁰ C @ 5 hours
Resilience	ASTM D5329	40% min @ 25 ⁰ C
Softening Point	ASTM D36	82 ⁰ C min
Elongation	FTL	200% min
Wheel tracking @ 122 ⁰ F	BS598	4.8mm/h
Safe Heating Temperature		230 ⁰ C (440 ⁰ F)
Recommended Pouring Temperature		185 ⁰ C to 199 ⁰ C (365 ⁰ F-390 ⁰ F)

Fibrecrete
Page 2 of 2

SITE PREPARATION

The joint/cracking shall be filled with a mechanical planner to the specified width and depth (if required) all spalls and pot holes shall be milled or saw cut or jack hammered at the engineers discretion. The repair surfaces will be cleaned and dried with a hot air lance capable of producing temperatures in excess of 1400⁰C and directional velocities exceeding 750 meter per second. The recessed area and vertical walls will be treated with a primer agent to promote adhesion and prevent moister intrusion (for concrete applications only). Where required, polyethylene backer rod will be placed in bottom of the repair and a bridging plate (per specification) installed over the bottom gap.

INSTALLATION

Installation of the Fibrecrete material shall be by factory trained and certified installation professionals. The Fibrecrete material will be heated in a thermostatically controlled mixer, having a horizontal agitator that ensures complete mixing. Once the material has reached approximately 300⁰F, the molten Fibrecrete will be introduced into the prepared repair area, sealing the bottom of the repair from water intrusion. For depths greater than 1 inch heated ¾” granite aggregate shall be added at a rate of 25% - 35% by volume. The final ¾” of the repair will be Fibrecrete material for optimum flexibility of the repair. Once this top layer has been screeded to a level grade, a high PSV aggregate will be applied to the top the repair to ensure proper skid resistance. Depending on the depth of the repair, the Fibrecrete material will be ready for traffic return between 30 minutes to 1 hour.

All removed materials and residual repair materials will be recovered and disposed of away from the site according to the client’s specifications.

WARRANTY

Fibrecrete Technologies, LLC. warrants that Fibrecrete products meet applicable specifications provided they are installed in accordance with the manufacturer’s guidance and specifications. Marketing Associates, Inc. and the applicator shall warrant that the work performance and materials furnished shall perform for 1 year from date of installation when installed by the materials supplier’s certified applicator and installed to the manufacturers specifications.

Distributed in the United States under license from Fibrecrete Technologies, LLC. by:

Marketing Associates, Inc.
131 St. James Way
Mount Airy, North Carolina 27030
336-789-7259
www.marketingassociatesinc.com

CRAFCO POLYPATCH POLYMER PATCHING REPAIR

Description

This work consists of milling or routing, cleaning and patching pot holes, transverse and longitudinal cracks reflected in the existing bituminous surface or longitudinal shoulder joints, transverse and longitudinal random cracks, centerline joints contraction joints, longitudinal and transverse expansion joints or spalled areas in Portland cement concrete pavement.

Materials

The material shall be a hot, pourable, self-adhesive pavement repair material, which has no voids and requires no compaction. The material shall contain a highly polymer modified binder and an aggregate ratio that allows for sufficient load bearing characteristics at high ambient temperatures yet maintains flexibility in cold temperatures.

Aggregate shall be lightweight and from a select source capable of passing a maximum 28% L.A. abrasion test results. The material shall weight 10.4 pounds per gallon. It shall be able to be reheated to application temperature at least once after the initial heat up without degradation of product. Product shall have a minimum pot life of 12 hours, which can be extended by adding fresh product to the melter. Material shall be supplied in solid form in self-release strippable kegs not exceeding 40 lbs. Material shall be a thick grainy appearing slurry at application temperature which requires no compaction.

The material shall have the following properties when heated in accordance with ASTM D5167:

Climatic Temperature	Moderate
Pourability (viscosity @ 400 ⁰ F) (PTM 1)	1000-1400gm
Stability @ 158 ⁰ F (PTM2)	0.5" max.
Flexibility @ Low Temperature (PTM3)	Pass @ 0 ⁰ F
Tensile Adhesion @ 77 ⁰ F (PTM4)	20 psi min
Specific Gravity (ASTM D792)	1.35 max.
Skid Resistance BPM (ASTM E303)	40 min
Minimum Application Temperature	375 ⁰ F
Maximum Application Temperature	410 ⁰ F

Note: Due to unique characteristics of material, modified test procedures are required to indicate properties. Test methods PTM 1, 2, 3 and 4 are available upon request.

Crafco Polypatch
Page 2 of 3

General

Concrete Pavement

Spalled areas are to be milled, routed or sawed and chipped out to sound pavement. Transverse cracks 1 ½" or greater without surface depressions shall be routed ½" deep and no less than 3" to either side of the crack. An additional 1 ½" (min) deep by 2" wide route shall be provided at the crack location to insure that all unstable material is removed. Longitudinal cracks or joints may be prepared by milling out the edges 1" beyond the crack and minimum 1 ½" deep to sound pavement. The area is to be filled from bottom to top then struck off at the surface. If depth is greater than 2" the area is to be filled in two lifts to accommodate for material shrinkage. This milling, chipping or routing operation shall be performed to create a reservoir for the filler product and to insure surrounding surface is intact for product adhesion.

Bituminous Surface

Pot holes are to be prepared to sound pavement and cleaned and dried. If the depth is greater than 2" two lifts of material shall be applied. Cracks 1" wide or greater with depressions on either side of the crack shall be milled or routed ½" deep and no less than 3" to either side of the crack. An additional 1 ½" (min) deep by 2" wide rout shall be provided at the crack location to insure that all unstable material is removed.

Concrete Pavement and Bituminous Surfaces

The area to be filled shall be cleaned to the satisfaction of the Engineer. Cleaning shall consist of removing all dirt, incompressibles and vegetation from existing area. This shall be accomplished with sufficient compressed air and a hand tool if necessary. Following the cleaning operation, all area shall be heat lanced to clean and remove moisture and any remaining dust. Heat lancing shall proceed just ahead of the filling operations. On concrete pavements, a primer shall be applied prior to the placement of the patching material. Primer shall be TechPrime that meets or exceeds PolyPatch manufactures requirements.

The primer shall be applied evenly using a clean, well-coated brush. Do no over apply. Surface temperature shall be between 5⁰C and 80⁰C. Primer may be sprayed on at an application rate of 50 to 75 SF/Gal. Any puddles of the primer will be broomed out. The primer shall be dried until tacky before the product can be applied.

The patching material container shall be stripped from the product and the material placed in the melter/applicator. If the area is greater than 2" in depth the material shall be applied in two separate lifts. With the first lift, the area shall be filled from bottom to top, to within ½" of surrounding surfaces. After the material has cooled somewhat, a second lift shall be applied. The material shall be leveled to surrounding pavement surface with an appropriate leveling device. The material may be placed at just the edge of the repair or a tight band-aid of material on the edges of the repair will be needed. The two-lift approach is to allow for approximate 5% shrinkage of material. The material shall be vigorously agitated in the applicator at all times.

Crafco Polypatch
Page 3 of 3

Equipment

The crack routing machine shall be a Crafco Model 200 Crack Cleaner or equal. The machine shall be portable and capable of routing the existing bituminous and concrete surfaces along and adjacent to the joint and crack. The unit shall be capable of following random cracks. The unit shall have an adjustable depth control and be capable of cutting width modification. The machine shall be capable of cutting approximately 1,000 to 1,200 lin ft / hour of cracks or joints with an experienced operator. Planer shall be a 6" to 12" milling head mounted on a skid steer capable of milling up to 6" deep.

The heat lance shall be capable of producing air temperatures up to 2500⁰F and be constructed of stainless steel. It shall have separate valves to control propane, burner air and lance air. The fuel and the burner air shall be mixed only at the point of combustion before leaving the burner tube. A separate air lance tube shall pass inside the burner chamber and be orificed to a maximum of ¼". At the fuel source, the propane shall be controlled by a high-pressure regulator to control fuel pressure from 5 PSI to 30 PSI and to prevent flashback. Burner BTU should range from 20,000 to 450,000 BTU. A wheel kit constructed to keep the unit at the proper height and angle from the pavement and to prevent debris from striking the operator shall be used.

The material melter/applicator shall be designed to effectively melt, heat and apply the product. Melters other than that described shall not be used due to application difficulties, pump systems damage and extreme wear. Standard crack sealing melter or any other unproven applicator shall not be used unless approved by the Engineer.

Method of Measurement

Prepared areas will be measured for payment in cubic foot.

**SPECIAL NOTE FOR LIP CURB
FE01 005-0068-012-014**

Replace curbs in PCC pavement removal areas with Lip Integral Curb modified to match the shape of the existing adjacent curb remaining in place. The Department will not measure Lip Integral Curb, but shall be incidental to JPC Pavement/24/9 Inch.

Sawcut pavement and remove damaged and deteriorated curbs in other locations designated by the Engineer. Replace removed curbs with Lip Header Curb, modified to match the shape of the existing adjacent curb remaining in place and matching the depth of the existing PCC pavement; contrary to Standard Drawing RPM-100-09, 12 inch minimum depth will not be required. Prior to Diamond Grinding, the Engineer will designate the locations to be replaced outside PCC repair areas. The Department will measure and pay Lip Header Curb (Modified) according to Section 506.04.02. Payment at the Contract unit price per linear foot shall be full compensation for all labor, materials, equipment, and incidentals for sawcutting pavement, removing existing curb, and placing the Modified Lip Header Curb.

**SPECIAL NOTE FOR STANDARD CURB
FE01 005-0068-013-015**

Replace curbs in PCC pavement removal areas with Standard Integral Curb modified to match the shape of the existing adjacent curb remaining in place and omitting steel reinforcement. The Department will not measure Standard Integral Curb, but shall be incidental to JPC Pavement/24/9 Inch.

Sawcut pavement and remove damaged and deteriorated curbs in other locations designated by the Engineer. Replace removed curbs with Standard Header Curb, modified to match the shape of the existing adjacent curb remaining in place and matching the depth of the existing PCC pavement; contrary to Standard Drawing RPM-100-09, 12 inch minimum depth will not be required. Prior to Diamond Grinding, the Engineer will designate the locations to be replaced outside PCC repair areas. The Department will measure and pay Standard Header Curb (Modified) according to Section 506.04.02. Payment at the Contract unit price per linear foot shall be full compensation for all labor, materials, equipment, and incidentals for sawcutting pavement, removing existing curb, and placing the Modified Standard Header Curb.

**SPECIAL NOTE FOR RECONSTRUCTING CATCH BASIN
FE01 005-0068-012-014**

Reconstruct existing catch basins at the approximate locations listed on the summary. Remove the existing grates and frames and deliver to the Department's Barren County Maintenance Headquarters. Remove the top portion of the existing catch basin and reconstruct to revised dimensions listed and elevation such that the PCC Pavement after diamond grinding will have positive drainage into the grate. Provide a new frame and grate with security device in general conformance to Standard Drawing RDB-014-05 modified as necessary to conform to the nominal dimensions listed. Vary dimensions of the proposed reconstructed catch basin to match proposed curb flow lines and pavement elevations. Obtain Engineer's approval of proposed dimensions, grades, and inlet elevations before placing concrete and setting frame. Provide erosion control according to the Special Note for Erosion Control. Provide positive drainage of the PCC pavement and lip curb after during construction and after diamond grinding into the reconstructed MBI.

The Department will measure Reconstruct Catch Basin as a single individual unit, each. The Department will not measure furnishing and installing frame, grate, and security device for the grate, but shall be incidental to Reconstruct Catch Basin. Payment at the Contract unit price each shall be full compensation for all labor, equipment, materials, and incidentals for reconstructing the catch basin; furnishing and installing the frame, grate, and security device; and all other work required to reconstruct the catch basin according to these notes and to the satisfaction of the Engineer.

SPECIAL NOTE FOR EROSION CONTROL

I. DESCRIPTION

Perform all erosion and water pollution control work in accordance with the Department's 2008 Standard Specifications, these notes, 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 and the supplemental specifications. 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 Section 1251 et seq.), the 404 Permit, the 401 Water Quality

Erosion Control

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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 and 213.04, 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; and Temporary Ditches and clean Temporary Ditches; 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
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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; and Temporary Ditches and clean Temporary Ditches; and all other erosion and water pollution control items required by the BMP or the Engineer

SPECIAL NOTE FOR LIQUIDATED DAMAGES
FE01 005-0068-012-014
FE01 005-0068-013-015

In addition to the Liquidated Damages specified in Section 108.09, Liquidated Damages in the amount \$500.00 per hour, not to exceed \$5,000.00 per day, will be assessed for each day or part of a day a lane closure remains in place during the prohibited dates or hours as specified in the Traffic Control Plan, excluding delays caused by inclement weather. If work is delayed by inclement weather, the minimum work required to allow removal of the lane closure shall be resumed immediately as soon as weather permits.

In addition to the Liquidated Damages specified in Section 108.09, Liquidated damages in the amount of \$500.00 per hour, not to exceed \$5,000.00 per day, will be assessed for each excavated area for each day or part of a day beyond one (1) calendar day an excavated area remains open without the PCC Pavement being placed, excluding delays caused by inclement weather. If work is delayed by inclement weather, the work required to place the new PCC Pavement shall be resumed immediately as soon as weather permits.

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

All liquidated damages will be applied accumulatively.

All other applicable portions of Section 108 apply.

SPECIAL PROVISION FOR WASTE AND BORROW SITES

The contractor is advised that it is their responsibility to gain U.S. Army Corp of Engineer's approval before utilizing a waste or borrow site that involves "Waters of the United States". "Waters of the United States" are defined as perennial or intermittent streams, ponds or wetlands. Ephemeral streams are also considered jurisdictional waters, and are typically dry except during rainfall, but have a defined drainage channel. Questions concerning any potential impacts to "Waters..." should be brought to the attention of the appropriate District Office for the Corps of Engineers for a determination, prior to disturbance. Any fees associated with obtaining approval from the U.S. Army Corp of Engineer or other appropriate regulatory agencies for waste and borrow sites is the responsibility of the contractor.

01/01/2009

SPECIAL NOTE FOR MANHOLE ADJUSTMENTS

Manhole adjustments are the responsibility of the City of Glasgow. Notify the Engineer a minimum of 15 calendar days prior to beginning any work on the project. Unless directed otherwise by the Engineer, do not begin asphalt milling or diamond grinding until the manhole adjustments are completed by the City. The Engineer will coordinate the work between the Contractor and City.

COORDINATION OF WORK WITH OTHER CONTRACTS

The Contractor is advised there may be an active project adjacent to or within this project. The Engineer will coordinate the work of the Contractors. See Section 105.06.

1-3193 coordination.contractors
01/01/2009

SPECIAL NOTE FOR ASPHALT MILLING AND TEXTURING

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

Contrary to Section 408 of the current Standard Specifications, the material obtained from the milling operations shall become the property of the Department. Deliver this material to the nearest State Maintenance facility in the County where the project is located unless otherwise stated in the contract. The Contractor, at his option, may elect to keep this material at an agreed cost of \$10.00 per ton. The cost to the Contractor for this material will be deducted from money due on the Contract.

Notice to Contractor

Transfer of millings to the state maintenance facility is considered a part of the construction project, therefore truck operators are subject to receiving prevailing wages.

1-3525 milling48hrcontractoroptionrev21109.doc
2/11/2009

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

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

1-3725 typical section
01/01/2009

SPECIAL NOTE FOR SIDEWALK RAMPS & DETECTABLE WARNINGS

GENERAL

Unless otherwise stated in the contract, or as directed by or with prior approval from the Engineer, construct Sidewalk Ramps and Detectable Warnings in general accordance with Section 505 of the 2008 Standard Specifications; Supplemental Specifications, current edition; Standard Drawings RPM-160 and RPM-172, current editions; and Sepia Drawings 012, 013, 014, and 015, current editions. Saw cut existing sidewalks, curb and gutter, and pavement, if present, as directed by the Engineer. The sidewalk thickness specified in the contract is the nominal minimum required thickness; transition the thickness as directed by the Engineer if the existing sidewalk thickness is found to be greater or less than the thickness specified.

Except as required by the work, do not disturb drainage pipe, catch basins, and other roadway features, appurtenances and installations. Restore any roadway features, appurtenances and installations damaged by the work in like kind materials and design at no additional cost to the Department. Dispose of all waste 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).

MEASUREMENT & PAYMENT

SIDEWALK RAMPS – The Department will measure Sidewalk Ramps as Sidewalk - 4 Inch Concrete in accordance with Section 505.04. Payment at the Contract unit price per square yard shall be full compensation for all labor, materials, equipment, and incidentals required for saw cutting, removal and disposal of existing sidewalk, curb and gutter, and pavement; undercut excavation, backfill, and embankment; construction of the sidewalk ramps, reconstruction of the adjacent curb and/or sidewalk as necessary to install the sidewalk ramps; and restoration of disturbed features in accordance with these notes or as directed by the Engineer.

DETECTABLE WARNINGS EXISTING RAMPS – The Department will measure Detectable Warnings in accordance with the Supplemental Specifications and Sepia Drawing 015, current editions. Payment at the Contract unit price per square foot shall be full compensation for all labor, materials, equipment, and incidentals required for saw cutting, removal and disposal of existing side walk, curb and gutter; under cut excavation and backfill if required; construction of the detectable warnings in the existing sidewalk ramps; and restoration of disturbed features in accordance with these notes or as directed by the Engineer

DETECTABLE WARNINGS NEW RAMPS – The Department will measure and pay for Detectable Warnings in accordance with the Supplemental Specifications and Sepia Drawing 015, current editions.

Revised 05/11/2009

TRAFFIC CONTROL PLAN
FE01 005-0068-012-014
FE01 005-0068-013-015

TRAFFIC CONTROL GENERAL

Except as provided herein, maintain and control traffic in accordance with the 2008 Standard Specifications and interim Supplemental specifications, Special Notes and Special Provisions, 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, traffic control devices used on this project may be new, or used in like new condition, at the beginning of the work and maintained in like new condition until completion of the work.

If requested by the Contractor and approved by the Engineer, establish zones for double fines for speeding violations when workers are present. Notify the Engineer a minimum of 12 hours prior to using the double fine signs. Dual mount "WARNING FINE DOUBLED IN WORK ZONE" signs and "END DOUBLE FINE" signs. Remove or cover the double fine signs when workers are not present in the double fine zone for more than a two hour period of time. The Department will not measure furnishing, erecting, covering and uncovering, and maintaining double fine work zone signs for separate payment but shall be incidental to Maintain and Control Traffic.

PROJECT PHASING & CONSTRUCTION PROCEDURES

Do not erect lane closures and maintain all lanes open to traffic on the following days:

May 28, 2008 – May 31, 2009 Glasgow Highland Games

On days Glasgow Independent Schools or Barren County Schools are in regular session, maintain all lanes open to traffic during the following hours:

7:00 a.m. – 8:30 a.m.	East and West Bound
2:00 p.m. – 3:30 p.m.	East and West Bound

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

On allowable days and hours and as required by the work, in areas with 3 or more lanes maintain a minimum of one lane of traffic in each direction at all times during construction. On allowable days and hours and as required by the work, in areas with 2 lanes, maintain alternating one way traffic during construction (see drawings for additional phasing details). Provide a minimum clear lane

Traffic Control Plan
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width of 10 feet; however, provide for passage of vehicles up to 16 feet in width through the work zone. If traffic should be stopped due to construction operations, and a school bus on an official run arrives on the scene, make provisions for the passage of the bus as quickly as possible.

Night work will be allowed on this project. Obtain the Engineer's approval of the method of lighting prior to use.

Take these restrictions into account when preparing bid. The Department will not consider any claims for money or allow time extensions for any delays to the Contractor as a result of these restrictions.

LANE & SHOULDER CLOSURES

Do not establish more than one lane closure concurrently in each direction of travel. Limit the length of a lane closure to one half mile. In sections with 4 lanes, erect lane closure for the 2 inside lanes de lanes e for Complete all PCC Repairs within that lane closure before removing that lane closure and erecting a second lane closure in the same direction of travel. The Engineer will allow lane and shoulder closures during non-working hours for PCC repairs and concrete curing; however do not park equipment or store materials on a closed shoulder or lane during non-working hours. The Engineer will not allow lane closures during nonworking hours for Diamond Grinding Operations or installation of pavement marking.

Two weeks prior to beginning work, provide the Engineer a proposed schedule of lane closures for approval. The Department will provide public notification.

Contrary to Section , the Department will only measure one lane closure per lane and in sections with 4 lanes, the in

ACCESS TO PROPERTY

With prior permission from the Engineer, the Contractor may close access to side streets and roads, schools, churches, commercial, and residential properties only when required by active work in progress, as determined by the Engineer, in the immediate vicinity of the approaches or entrances subject to the following conditions:

1. If streets and roads, schools, churches, commercial, and residential properties have multiple access points to US 68 or other public streets, do not close more than one access point at the same time.

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2. With prior approval from the Engineer, the Contractor may close streets and roads, schools, churches, commercial, and residential properties with only a single access point during working hours and for the minimum length of time for concrete curing, if curing is required during non-working hours. However, provide reasonable egress and ingress to each such property when actual operations requiring a closure are not in progress at that location. Close each such access for the absolute minimum length of time required for actual operations or concrete curing. The Engineer will not allow the time of closure to be extended for the Contractor's convenience. The Engineer may require partial width construction, temporary entrances, and other accommodations to maintain minimum levels of access and public safety.
3. Notify all residents, property owners, and city public safety and public works officials twenty-four hours in advance of any approach or entrance closings and make any accommodations necessary to meet the access needs of disabled residents.
4. The Department will make payment at the Contract unit prices for DGA and asphalt materials required to construct and maintain any temporary entrances; however, no direct payment will be allowed for pipe, excavation, and/or embankment needed, 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 approach or entrance.

PROJECT TRAFFIC COORDINATOR

Furnish a Project Traffic Coordinator as per Section 112.03.12 for an unclassified project. In addition to the requirements of Section 112.03.02(B), the Traffic Coordinator shall provide for inspection of the project's maintenance of traffic once every two hours during the Contractor's operations and at any time a lane closure is in place. Provide the personnel access on the project to a radio or telephone to be used in case of emergencies or accidents.

SIGNS

Contrary to Section 112.04.02, only long term signs (signs intended to be continuously in place for more than 3 days) will be measured for payment. Short term signs (signs intended to be left in place for 3 days or less) will not be measured for payment but will be incidental to Maintain and Control Traffic. Contrary to Section 112.04.02, the Department will measure individual signs only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for signs directed by the Engineer to be replaced due to damage, poor condition, readability, or reflectivity will not be measured for payment. Retain possession of signs after construction is complete.

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BARRICADES

Barricades used in lieu of barrels and cones for channelization or delineation will be incidental to Maintain and Control Traffic according to Section 112.04.01. Barricades used to protect pavement removal areas will be bid as each according to Section 112.04.04. 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. Individual barricades will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for barricades directed by the Engineer to be replaced due to damage, poor condition, or reflectivity will not be measured for payment. Retain possession of barricades after construction is complete.

CHANGEABLE MESSAGE SIGNS

Provide changeable message signs in advance of and within the project at locations to be determined by the Engineer. If work is in progress concurrently in both directions, provide additional changeable message signs as directed by the Engineer. Place changeable message signs at locations designated by the Engineer. As the actual queue lengthens and/or shortens relocate or provide additional changeable message signs as directed by the Engineer. The locations designated may vary as the work progresses. The messages required to be provided shall be designated by the Engineer. Operate the Changeable Message Signs at all times. 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. Individual changeable message signs will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for changeable message signs directed by the Engineer to be replaced due to damage, poor condition, or readability will not be measured for payment. Retain possession of changeable message signs after construction is complete.

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. Individual arrow panels will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for arrow panels directed by the Engineer to be replaced due to damage, poor condition, or readability will not be measured for payment. Retain possession of arrow panels after construction is complete.

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PAVEMENT MARKINGS

Coordinate the installation of all temporary and permanent striping with the Engineer and the District Traffic Engineer. If the Engineer determines that the final striping will vary from the existing, the District traffic Engineer will provide a Striping Plan prior to diamond Grinding operations.

Place Temporary Striping in accordance with section 112 except:

1. Temporary or Permanent striping shall be in place before a lane is opened to traffic; and
2. If the Contractor's operations or phasing requires temporary markings that must subsequently be removed from the final surface, remove the temporary striping by an approved "Waterblastng" method. Prior to placing temporary striping paint in such areas, demonstrate to the satisfaction of the Engineer that the Contractor's waterblasting removal methods can remove the temporary striping tape without scarring the pavement surface. If the Contractor's methods do not meet the Engineer's approval, then use an approved "Removable Lane Tape" rather than temporary striping paint; however, The Department will not measure removable lane tape for separate payment; but the Department will measure removable lane tape, if used, as both temporary striping paint and striping removal.

PAVEMENT EDGE DROP-OFFS

A pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation shall not have an elevation difference greater than 1½". Warning signs (MUTCD W8-9 or W8-9A, or W8-11) shall be placed in advance of and at 1500' intervals throughout the drop-off area. Dual posting on both sides of the traveled way shall be required. All transverse transitions between the newly surfaced area and the existing surface areas that traffic may cross shall be wedged with asphalt mixture for leveling and wedging. The wedges shall be removed prior to placement of the final surface course.

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

Less than 2" - No protection required.

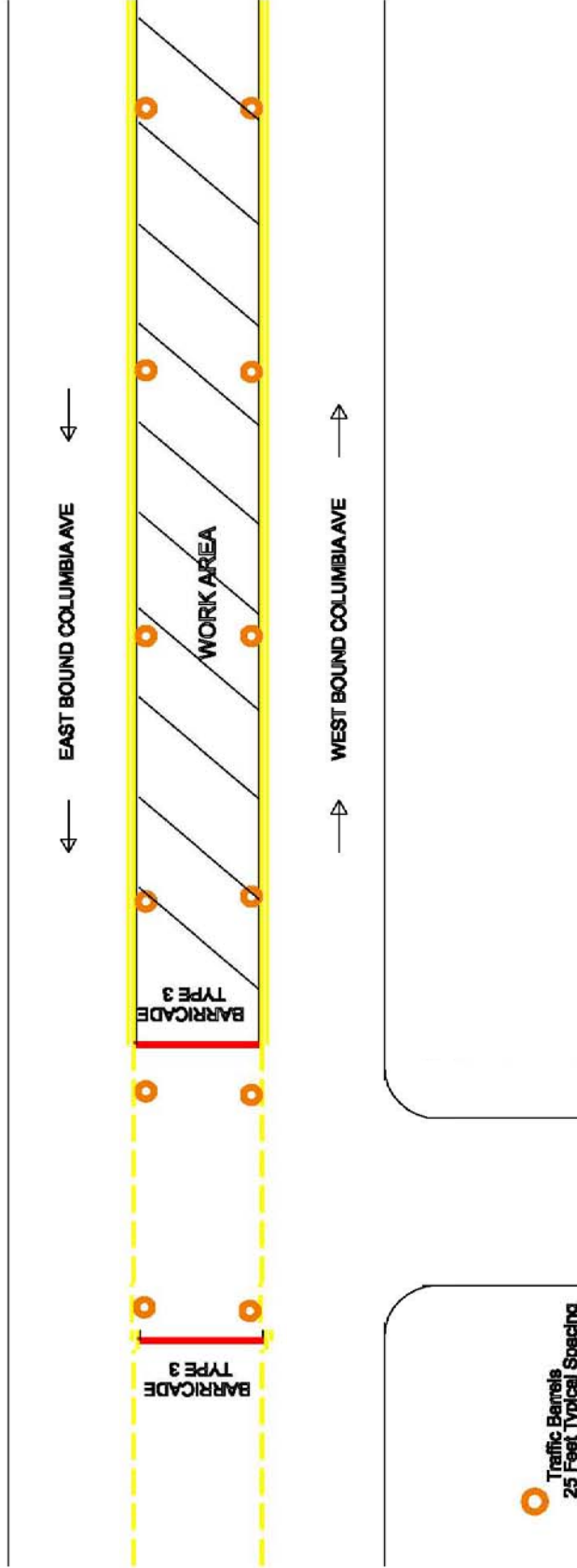
2" to 4" - Place plastic drums, vertical panels, or barricades every 50 feet. Cones may be used in place of plastic drums, panels, and barricades during daylight working hours only. Wedge with asphalt mixture for leveling and wedging with a 1:1 or flatter slope in daylight hours, or 3:1 or flatter slope during nighttime hours, when work is not active in the drop-off area.

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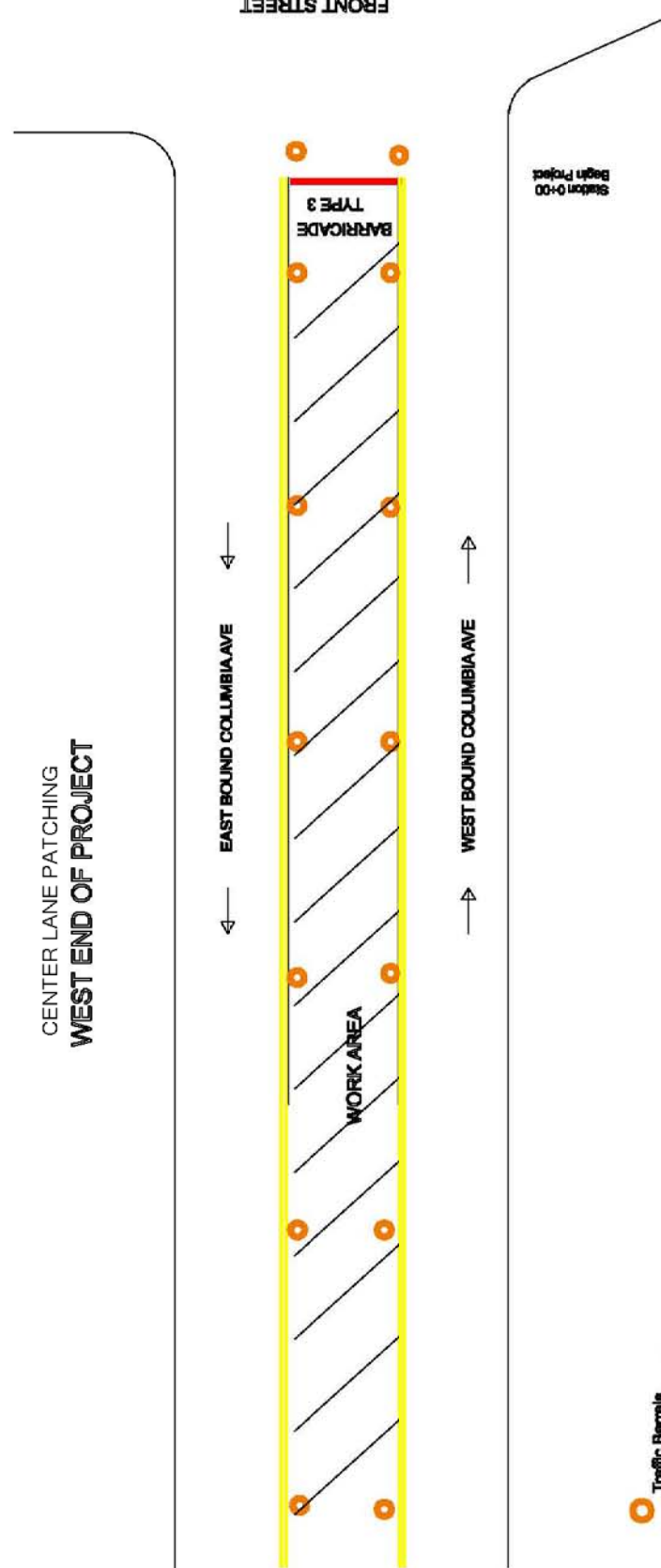
Greater than 4 inches - The Engineer will allow drop-offs exceeding 4 inches only during active operations during the interval between removal of PCC Pavement and the placement of the new PCC pavement in the removal areas. Place plastic drums, vertical panels or barricades every 25 feet. Place Type III Barricades facing oncoming traffic in both directions. Remove the PCC Pavement, stabilize the base, and replace the PCC pavement in such a manner that the PCC pavement is replaced on the same day as removed. If operations are not active at individual drop-off areas, wedge with DGA with 3:1 or flatter slope. Remove the wedge and place new PCC Pavement in the drop-off area as soon as possible, but no later than the same day as removed..

In lieu of a wedge, drop-offs at lateral trenches may be covered by a 1" thick steel plate when work is not actively in progress at the pavement removal area; the plate shall be anchored to the pavement by any method approved by the Engineer that will prevent it being dislodged by accidental impact. If for any reason, it is necessary to excavate small areas, any holes adjacent to traffic where there exists a possibility that a vehicle may drop a wheel into the holes shall be filled with asphalt or plated. No direct payment will be made for the wedge or steel plates, but shall be incidental to other items of work.

TRAFFIC CONTROL DURING CENTER LANE PATCHING



-  Traffic Bumples
25 Feet Typical Spacing
-  Double Yellow Line
Sta. 0+00 to 22+39



CENTER LANE PATCHING
WEST END OF PROJECT

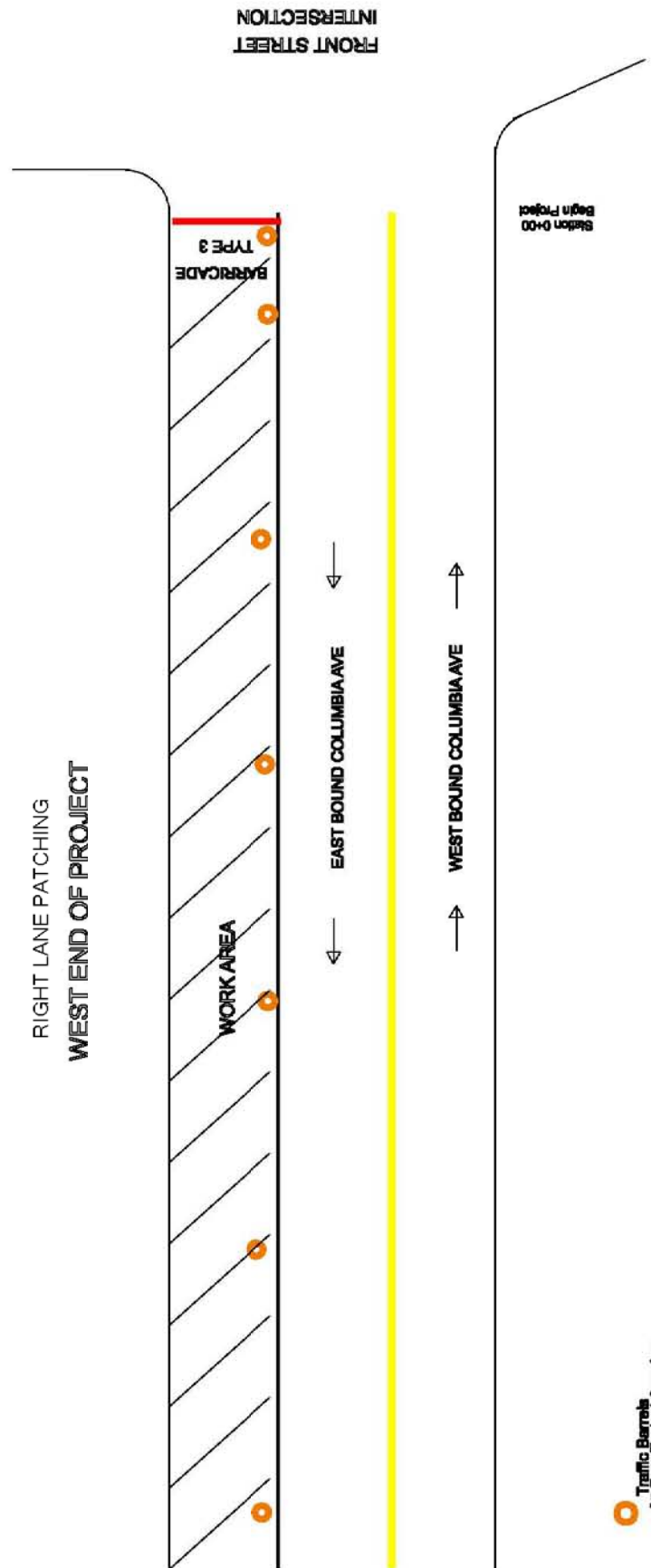
EAST BOUND COLUMBIA AVE ←

WEST BOUND COLUMBIA AVE →

FRONT STREET
INTERSECTION

Station 0+00
Begin Project

-  Traffic Barrels
26 Feet Typical Spacing
-  Double Yellow Line
Sta. 0+00 to 2+38



RIGHT LANE PATCHING
WEST END OF PROJECT

BARRICADE
TYPE 3

WORK AREA

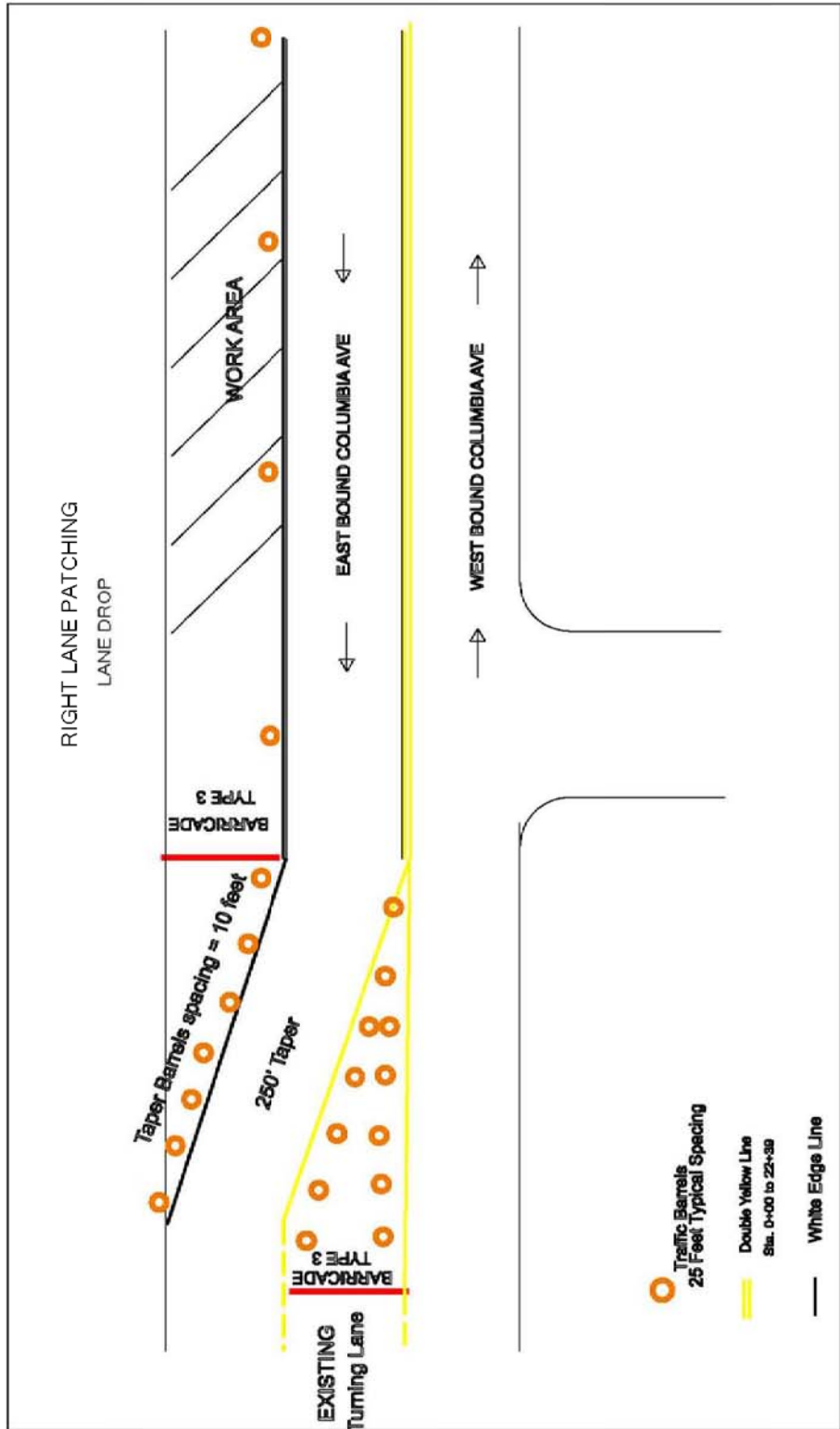
FRONT STREET
INTERSECTION

EAST BOUND COLUMBIA AVE

WEST BOUND COLUMBIA AVE

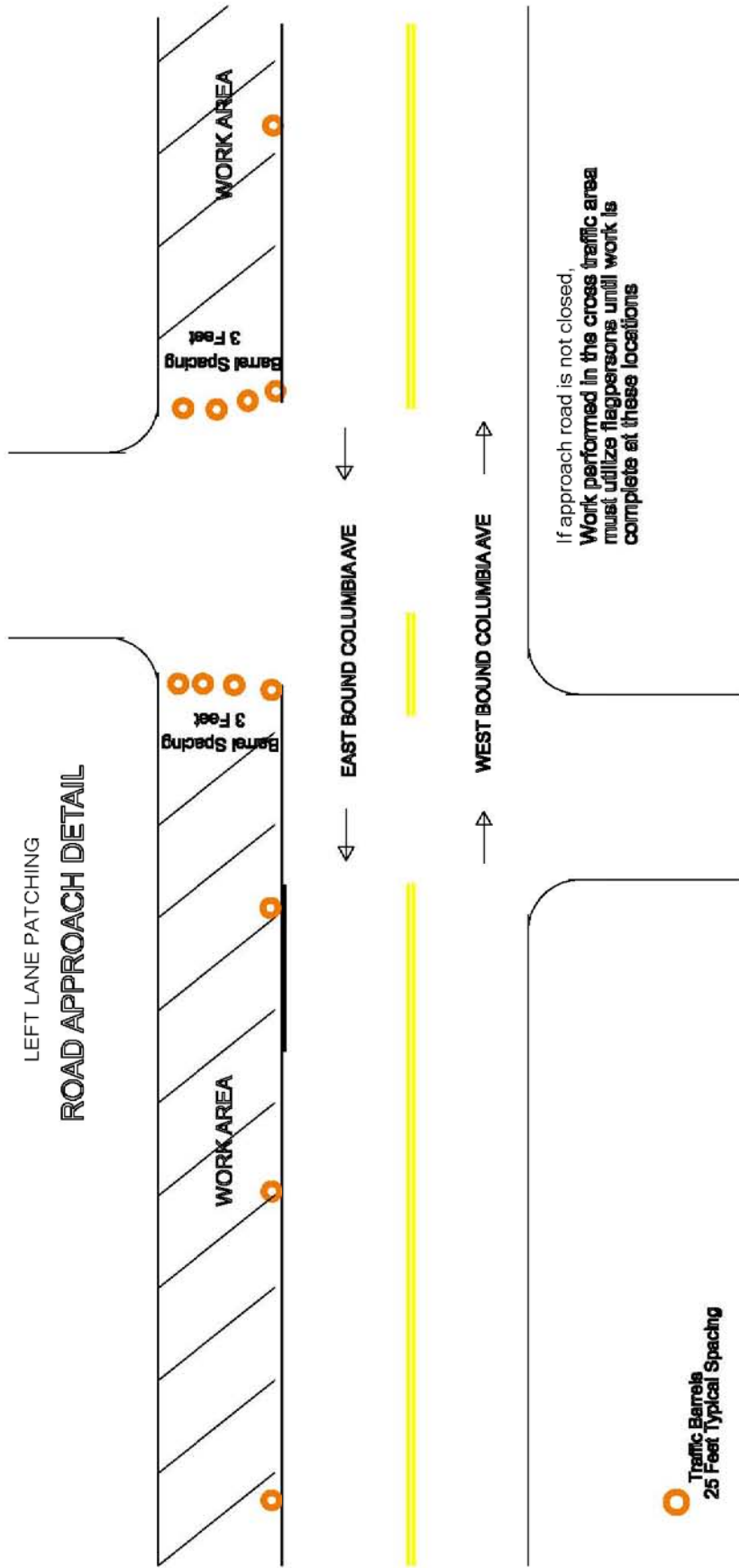
Station 0+00
Begin Project

- Traffic Barrels
25 Feet Typical Spacing
- Double Yellow Line
Sta. 0+00 to 25+39
- White Edge Line

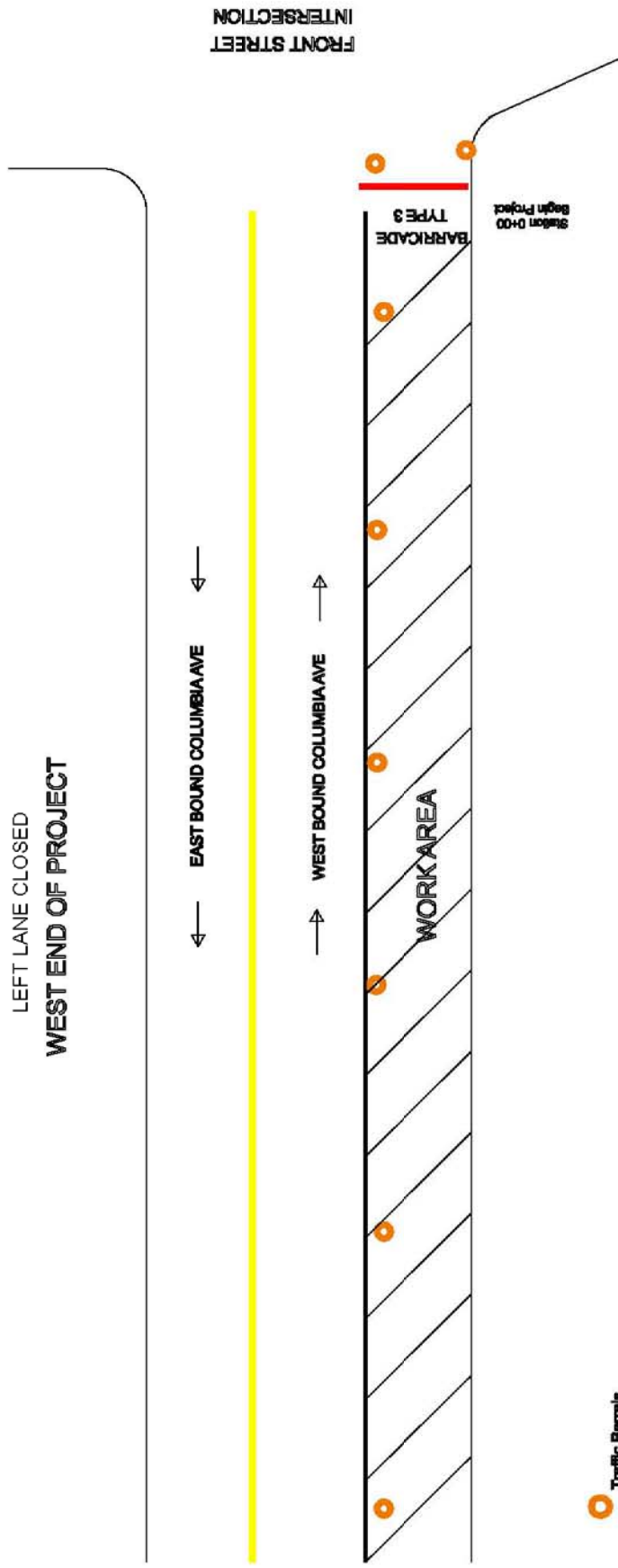


FD05.005 0068.dgn 3/17/2009 6:43:55 AM

LEFT LANE PATCHING
ROAD APPROACH DETAIL

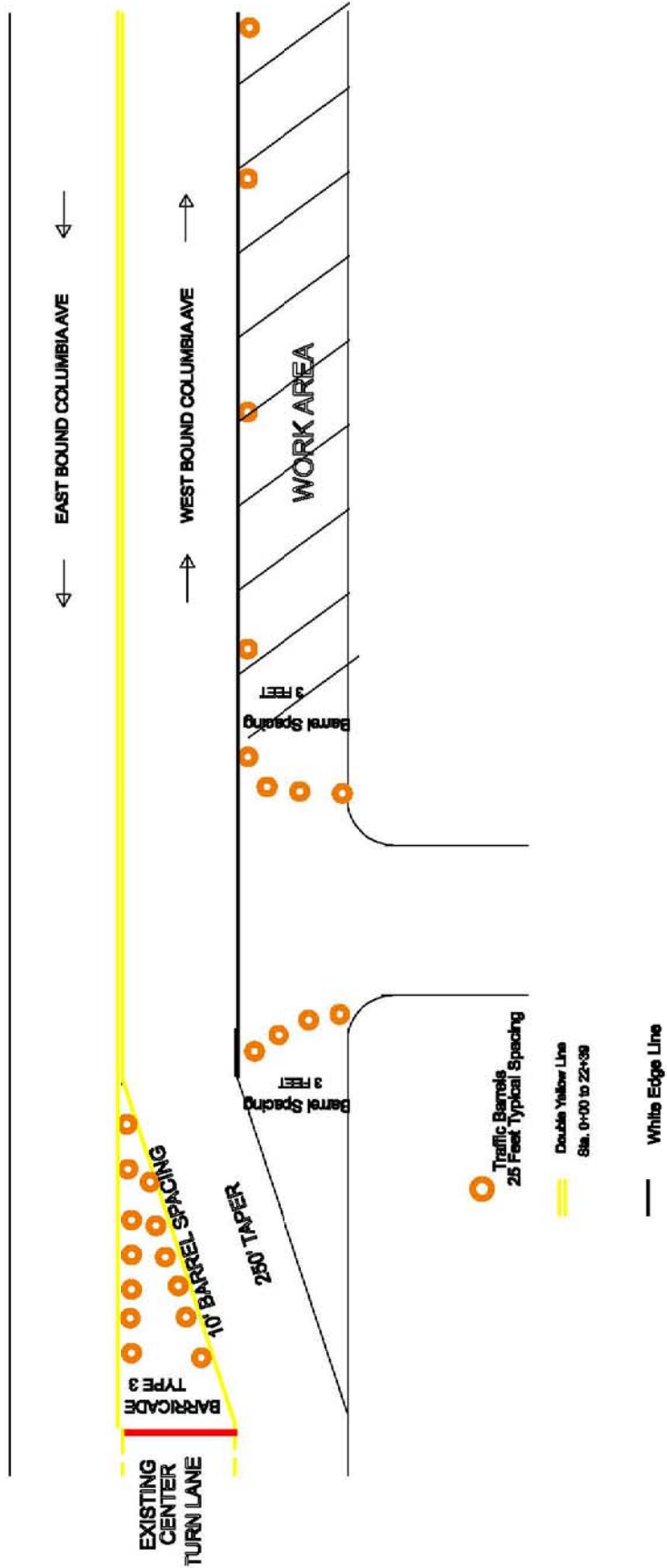


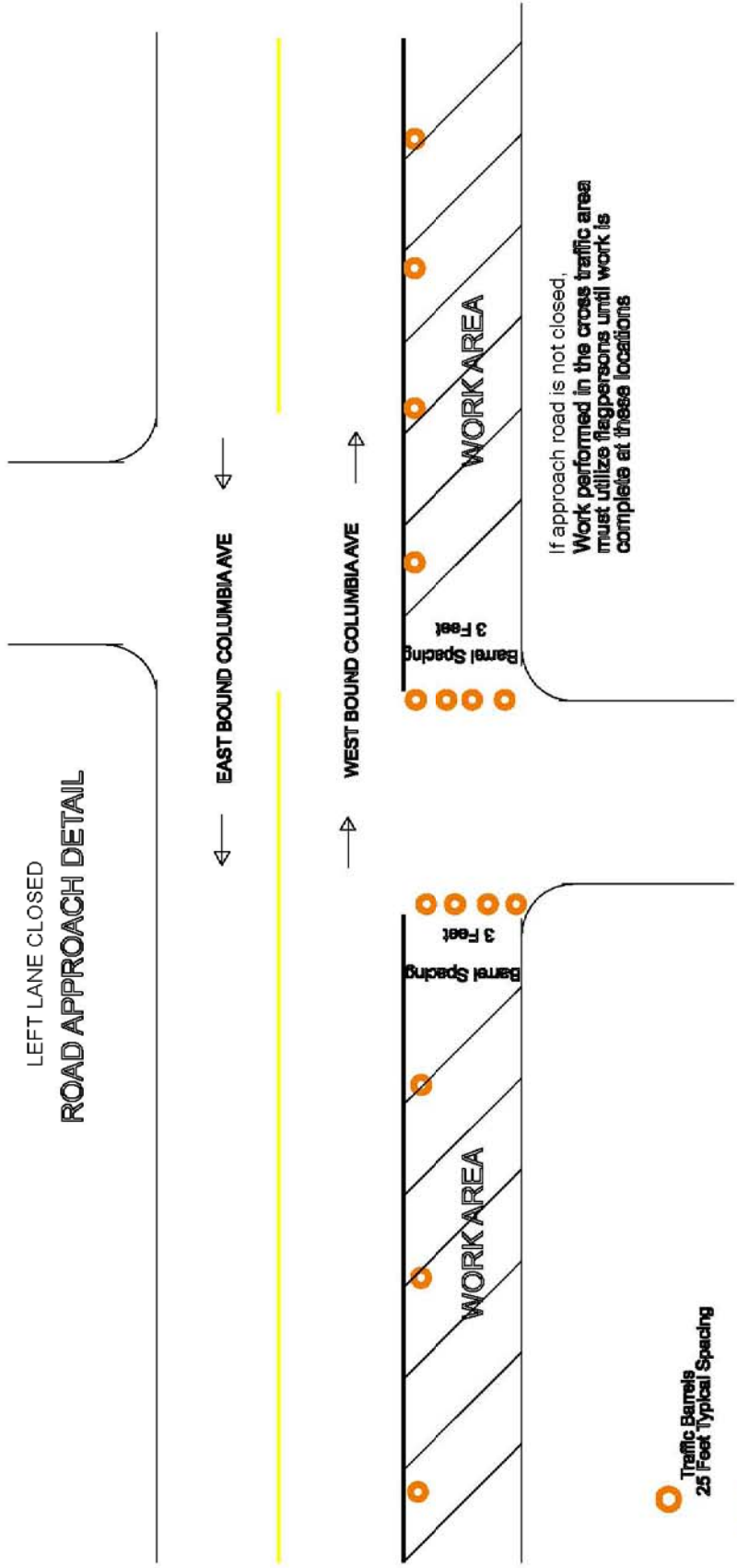
-  Traffic Barrels
25 Feet Typical Spacing
-  Double Yellow Line
Sta. 0+00 to 2+39
-  White Edge Line



-  Traffic Barrels
26 Feet Typical Spacing
-  Double Yellow Line
Sta. 0+00 to 22+39
-  White Edge Line

LEFT LANE CLOSED
LANE DROP





POLICY FOR THE 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 judgement.

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 / alternate routes
- ◆ Special events with traffic and safety implications
- ◆ Crash / incidents
- ◆ Vehicle restrictions (width, height, weight, flammable)
- ◆ Advance notice of new traffic control device
- ◆ Real-time traffic conditions (must be kept up-to-date)
- ◆ Weather/driving conditions, environmental conditions, Roadway Weather Information Systems
- ◆ *Public Service Announcements that improve highway safety
- ◆ Emergency situations
- ◆ Referral to Highway Advisory Radio (if available)
- ◆ Messages as approved by the State Highway Engineer's Office

* Use the CMS for special campaigns that will have a specified beginning and ending date. The CMS should not be used for more than three weeks with any special campaign.

CMS should not be used for:

- ◆ Replacement of static signs (e.g. road work ahead), regulatory signs (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)

Changeable Message Sign Policy Page 2 of 6

Messages

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

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

Placement

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

- ◆ When 2 signs are needed, place on same side of roadway and at least 1,000 feet apart
- ◆ Place behind semi-rigid/rigid protection (guardrail, barrier) or outside of the clear zone
- ◆ Place 1,000 feet in advance of work zone; at least one mile ahead of decision point
- ◆ Normally place on right side of roadway, but should be place closest to affected lane so 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 crests
- ◆ Check for reflection of sun to prevent the blinding of motorists
- ◆ Should be turned ~3° outward from perpendicular to the edge of pavement
- ◆ Bottom of sign should be 7 feet above the elevation of edge of roadway
- ◆ Should be removed when not in use

STANDARD ABBREVIATIONS

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

<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, E, S, 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 3MI
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	ENT	TRUCK ENT NEXT RIGHT
Exit	EX, EXT	DWNTN TRAF USE EX 40
Expressway	EXPWY	WTRSN EXPWY CLOSED/DETOUR EXIT 10
Freeway	FRWY, FWY	GN SNYDR 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 1240AM
Interstate	I	E-BND I64 CLOSED/DETOUR EXIT 20
Lane	LN	LN CLOSED /MERGE LEFT
Left	LFT	LANE CLOSED /MERGE LFT
Local	LOC	LOC TRAF USE ALT RTE
Maintenance	MAINT	MAINT WRK ON BRDG/SLOW
Major	MAJ	MAJ DELAYS I75/USE ALT RTE
Mile	MI	ACCIDENT 3 MI AHEAD/USE ALT RTE
Minor	MNR	ACCIDENT 3 MI MNR DELAY
Minutes(s)	MIN	ACCIDENT 3 MI /30 MIN DELAY
Northbound	N-BND	N-BND I75 CLOSED/DETOUR EXIT 50
Oversized	OVRSZ	OVRSZ COMM VEH/USE I275 NEXT RIGHT
Parking	PKING	EVENT PKING NEXT RGT
Parkway	PKWY	CUM PKWAY TRAF/DETOUR EXIT 60
Prepare	PREP	ACCIDENT 3 MI/PREP TO STOP
Right	RGT	EVENT PKING NEXT RGT
Road	RD	HAZMAT IN RD/ALL TRAF EXIT 25
Roadwork	RDWK	RDWK NEXT 4 MI/POSSIBLE DELAYS

Changeable Message Sign Policy

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Route	RTE	MAJ DELAYS I75/USE ALT RTE
Shoulder	SHLDR	SHLDR CLOSED NEXT 5 MI
Slippery	SLIP	SLIP COND POSSIBLE/SLOW SPD
Southbound	S-BND	S-BND I75 CLOSED/DETOUR EXIT 50
Speed	SPD	SLIP COND POSSIBLE/SLOW SPD
Street	ST	MAIN ST CLOSED/USE ALT RTE
Traffic	TRAF	CUM PKWAY TRAF/DETOUR EXIT 60
Vehicle	VEH	OVRSZ COMM VEH/USE I275 NEXT RIGHT
Westbound	W-BND	W-BND I64 CLOSED/DETOUR EXIT 50
Work	WRK	CONST WORK 2 MI/POSSIBLE DELAYS

Certain abbreviations are prone to inviting confusion because another word is abbreviated or could be abbreviated in the same way. DO NOT USE THESE ABBREVIATIONS.

<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

TYPICAL MESSAGES

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

Reason / Problem

- ACCIDENT
- ACCIDENT/xx MILES
- xx ROAD CLOSED
- xx EXIT CLOSED
- BRIDGE CLOSED
- BRIDGE/(SLIPPERY, ICE, etc.)
- CENTER/LANE/CLOSED

Changeable Message Sign Policy
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DELAY(S), MAJOR/DELAYS
DEBRIS AHEAD
DENSE FOG
DISABLED/VEHICLE
EMER/VEHICLES/ONLY
EVENT PARKING
EXIT xx/CLOSED
FLAGGER/xx MILES
FOG/xx MILES
FREEWAY CLOSED
FRESH/OIL
HAZMAT/SPILL
ICE
INCIDENT AHEAD
LANES/(NARROW, SHIFT, MERGE, etc.)
LEFT LANE CLOSED
LEFT LANE NARROWS
LEFT/2 LANES/CLOSED
LEFT/SHOULDER/CLOSED
LOOSE/GRAVEL
MEDIAN/WORK/xx MILES
MOVING/WORK/ZONE, WORKERS/IN/ROADWAY
NEXT EXIT CLOSED
NO/OVERSIZED/LOADS
NO/PASSING
NO/SHOULDER
ONE/LANE/BRIDGE
PEOPLE/CROSSING
RAMP CLOSED
RAMP/(SLIPPERY, ICE, etc.)
RIGHT/LANE/CLOSED
RIGHT/2 LANES/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, etc.)
ROAD/WORK/xx MILES
SHOULDER/(SLIPPERY, ICE, SOFT, BLOCKED, etc.)
NEW SIGNAL/xx MILES
SINGLE LANE
SLOW/1 (or 2) -WAY/TRAFFIC
SOFT/SHOULDER
STALLED VEHICLES AHEAD

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TRAFFIC/BACKUP
TRAFFIC/SLOWS
TRUCK/CROSSING
TRUCKS/ENTERING
TOW TRUCK AHEAD
UNEVEN/LANES
WATER/ON/ROAD
WET PAINT
WORK/ZONE/xx MILES
WORKERS AHEAD

Action

ALL/TRAFFIC/ EXIT RT
AVOID/DELAYS/USE xx
CONSIDER/ALT/ROUTE
DETOUR
DETOUR/xx MILES
DO NOT/PASS
EXPECT/DELAYS
FOLLOW/ALT/ROUTE
KEEP LEFT
KEEP RIGHT
MERGE/xx MILES
MERGE/LEFT
MERGE/RIGHT
ONE-WAY/TRAFFIC
PASS/TO/LEFT
PASS TO/RIGHT
PREPARE/TO/STOP
REDUCE/SPEED
SLOW
SLOW/DOWN
STAY IN/LANE
STAY ON/xx
STOP/AHEAD
STOP/xx MILES
TUNE/RADIO/1610 AM
USE/nn/ROAD
USE/CENTER/LANE
USE/DETOUR/ROUTE
USE/LEFT/LANE
USE/NEXT/EXIT
USE/RIGHT/LANE
WATCH/FOR/FLAGGER

**SPECIAL NOTE FOR REMOVING EXISTING PAVEMENT MARKERS
ON PORTLAND CEMENT PAVEMENT**

Before diamond grinding, remove existing Type V Snow-Plowable pavement markers (iron castings) by a clean saw cut and repair the divot with latex PCC partial depth patching material. The castings shall become the property of the Contractor. Dispose of the removed castings off the Right-of-way at sites obtained by the contractor at no additional cost to the Department.

Removal of Type V markers will be paid at the contract unit price each, which shall be full compensation for removing and disposing of the markers, placing Latex PCC pavement patching in the resulting recess, and disposing of any debris. The quantity will be determined by dividing the length of each run of markers by their average spacing, plus one.

1-3861 removepavementmarkerspcclatex
01/01/2009

SPECIAL NOTE FOR REMOVING EXISTING PAVEMENT MARKERS ON PORTLAND CEMENT PAVEMENT

Before diamond grinding, remove existing Type V Snow-Plowable pavement markers (iron castings) by a clean saw cut and repair the divot with Low Slump Concrete partial depth patching material.

The castings will become the property of the Contractor. Dispose of the removed castings off the Right-of-way at sites obtained by the contractor at no additional cost to the Department.

Removal of Type V markers will be paid at the contract unit price each, which shall be full compensation for removing the markers, disposing of the markers, placing Low Slump Concrete patching material in the resulting recess, and disposing of any debris. The quantity will be determined by dividing the length of each run of markers by their average spacing, plus one.

1-3862 removepavementmarkerspcclowslump
01/01/2009

TRAFFIC CONTROL FOR RAISED PAVEMENT MARKER INSTALLATIONS

TWO-LANE, TWO-WAY ROADWAYS:

On two-lane, two-way roadway sections, lane closures shall be considered short-duration operations. All work shall be accomplished in only one lane and shall affect the adjacent lane as little as possible. Egress and ingress shall be provided to all ramps, side roads, and entrances at all times.

Approaches to the immediate work area shall be signed in accordance with Lane Closure Case I and Case II. All signs may be installed on temporary mountings.

All work vehicles used in the roadway shall be equipped, as a minimum, with strobe lights or rotating beacons. If equipped with a flashing arrow board, the board shall be used in caution mode, but shall not indicate a flashing arrow. The use of a truck-mounted attenuator will not be required on two-lane, two-way roadway sections.

When the pavement markers have been placed on the roadway, traffic cones shall be used to protect the markers from traffic until the adhesive epoxy has hardened.

MULTI-LANE ROADWAYS:

On multi-lane roadway sections, all operations shall be performed behind stationary lane closures. Stationary lane closures shall be approved by the Engineer and shall be signed in accordance with Std Drawings for Multi-Lane Case I, Double Lane Closure or Interior Lane closure as applicable. Egress and ingress shall be provided to all ramps, side roads, and entrances at all times.

A truck-mounted attenuator that complies with SP 13 shall be required on multi-lane roadways. Contrary to SP 13, the Contractor will retain ownership of the Crash Cushion Type VIII. The location of the TMA within the lane closure shall be as specified by the Engineer.

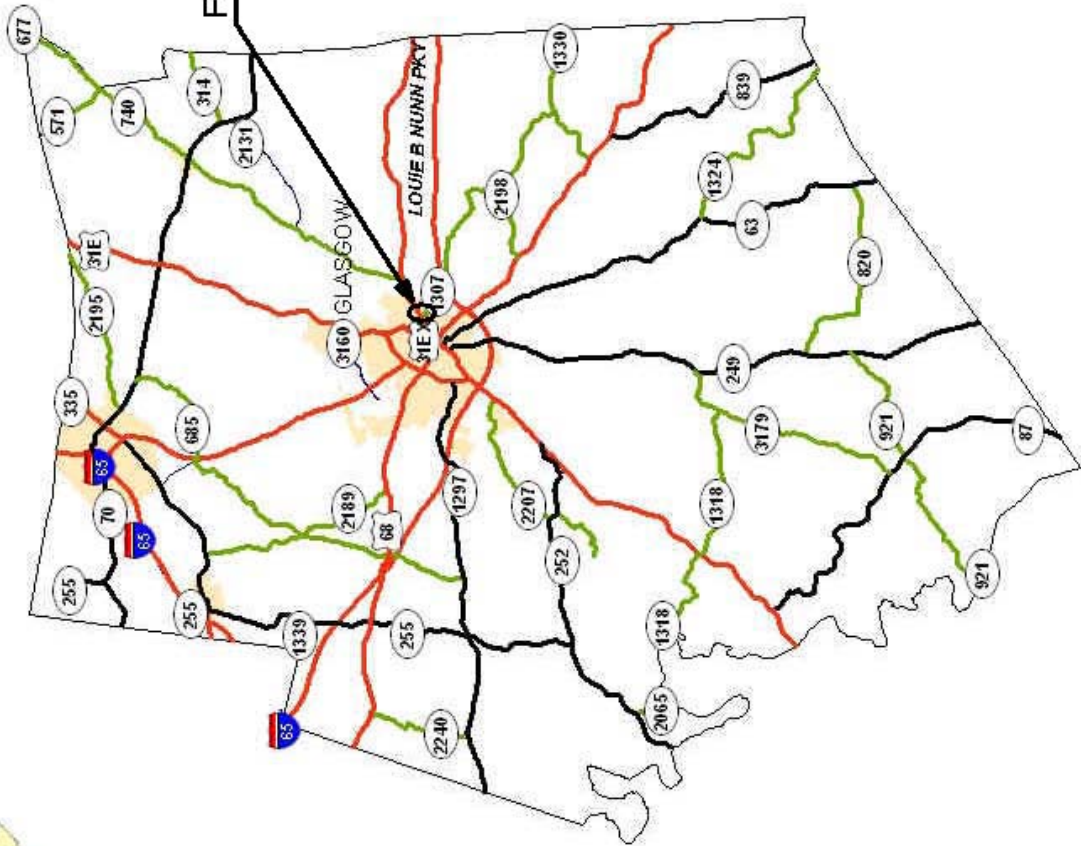
No more than one lane of traffic plus 24 inches maximum of only one adjacent lane shall be closed per direction of travel. A minimum lane width of 10 feet should be maintained. The length of a lane closure shall not exceed 1 mile in urban areas or 3 miles in rural areas. Consecutive lane closures shall be permitted only if separated by a minimum of 2 miles and must be affecting the same lane.

Provide for the installation of all necessary traffic control devices before beginning work and their immediate removal as soon as work is suspended or completed and the pavement markers are completely bonded to the pavement.

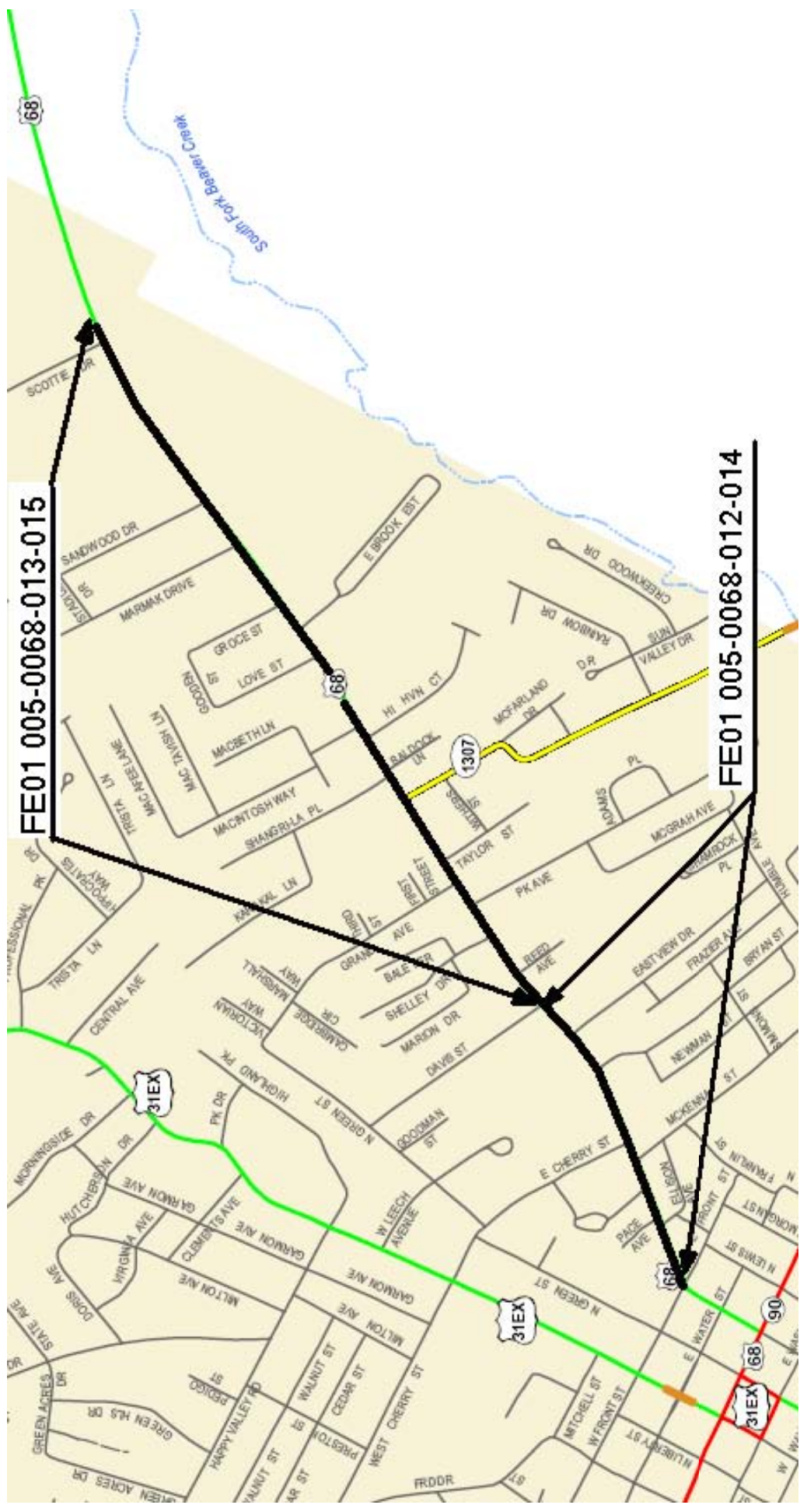
Flush-mounted Type IV-A markers shall be used to delineate the lane lines, centerlines and edgelines when pavement markers are to be installed on bridge decks. Do not install Type V markers on bridge decks.

DEPARTMENT OF HIGHWAYS
MAP OF
BARREN COUNTY
SHOWING
STATE MAINTAINED SYSTEM

FE GROUP 75



BARREN COUNTY FE GROUP 75



FE01 005-0068-013-015

FE01 005-0068-012-014

MATERIAL SUMMARY

CONTRACT ID: 092187

FE01 005 0068 012-014 PES NO: MP00500680901
COLUMBIA AVENUE (US 68) FROM 65 FEET EAST OF FRONT STREET (MP 12.812) EXTENDING EAST
TO DAVIS STREET (MP 13.236), A DISTANCE OF 0.420000 MILES.

LINE NO	BID CODE	DESCRIPTION	QUANTITY	UNIT
0320	00001	DGA BASE	162.00	TON
0310	01708	RECONSTRUCT CATCH BASIN	11.00	EACH
0405	01885	LIP HEADER CURB MODIFIED	1,030.00	LF
0110	02014	BARRICADE-TYPE III	20.00	EACH
0330	02023	JPC PAVEMENT-9 IN/24	3,808.00	SQYD
0220	02058	REMOVE PCC PAVEMENT	3,808.00	SQYD
0400	02060	PCC PAVEMENT DIAMOND GRINDING	9,150.00	SQYD
0340	02110	PARTIAL DEPTH PATCHING POLYMER MODIFIED	100.00	CUFT
0410	02115	SAW-CLEAN-RESEAL TVERSE JOINT	3,600.00	LF
0420	02116	SAW-CLEAN-RESEAL LONGIT JOINT	4,500.00	LF
0130	02562	SIGNS	500.00	SQFT
0100	02650	MAINTAIN & CONTROL TRAFFIC FRONT STREET TO DAVIS STREET	1.00	LS
0120	02653	LANE CLOSURE	3.00	EACH
0105	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH
0210	02676	MOBILIZATION FOR MILL & TEXT	1.00	LS
0200	02677	ASPHALT PAVE MILLING & TEXTURING	750.00	TON
0700	02720	SIDEWALK-4 IN CONCRETE	55.00	SQYD
0500	06510	PAVE STRIPING-TEMP PAINT-4 IN	5,000.00	LF
0510	06514	PAVE STRIPING-PERM PAINT-4 IN	18,000.00	LF
0600	06568	PAVE MARKING-THERMO STOP BAR-24IN	70.00	LF
0610	06574	PAVE MARKING-THERMO CURV ARROW	12.00	EACH
0620	06589	PAVEMENT MARKER TYPE V-MW	10.00	EACH
0630	06591	PAVEMENT MARKER TYPE V-BY	100.00	EACH
0640	06600	REMOVE PAVEMENT MARKER TYPE V ASPHALT PAVEMENT	70.00	EACH
0430	21173EC	SAW-CLEAN-RESEAL RANDOM CRACKS	500.00	LF
0800	21415ND	EROSION CONTROL FRONT STREET TO DAVIS STREET	1.00	LS
0710	23158ES505	DETECTABLE WARNINGS	96.00	SQFT
0520	23237EN10W	WATERBLAST STRIPE REMOVAL	10,000.00	LF
1000	02569	DEMOBILIZATION	1.00	LS

MATERIAL SUMMARY

CONTRACT ID: 092187

FE01 005 0068 013-015

PES NO: MP00500680902

COLUMBIA AVENUE-EDMONTON ROAD (US 68) FROM DAVIS STREET (MP 13.236) EXTENDING EAST TO NEW ASPHALT PAST GLASGOW HIGH SCHOOL (MP 14.470), A DISTANCE OF 1.230000 MILES.

LINE NO	BID CODE	DESCRIPTION	QUANTITY	UNIT
0320	00001	DGA BASE	50.00	TON
0405	01875	STANDARD HEADER CURB MODIFIED	100.00	LF
0110	02014	BARRICADE-TYPE III	20.00	EACH
0330	02023	JPC PAVEMENT-9 IN/24	1,284.00	SQYD
0220	02058	REMOVE PCC PAVEMENT	1,284.00	SQYD
0400	02060	PCC PAVEMENT DIAMOND GRINDING	30,064.00	SQYD
0340	02110	PARTIAL DEPTH PATCHING POLYMER MODIFIED	115.00	CUFT
0410	02115	SAW-CLEAN-RESEAL TVERSE JOINT	5,000.00	LF
0420	02116	SAW-CLEAN-RESEAL LONGIT JOINT	19,642.00	LF
0130	02562	SIGNS	500.00	SQFT
0100	02650	MAINTAIN & CONTROL TRAFFIC EAST OF DAVIS STREET	1.00	LS
0115	02653	LANE CLOSURE	3.00	EACH
0120	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH
0700	02720	SIDEWALK-4 IN CONCRETE	100.00	SQYD
0125	02775	ARROW PANEL	2.00	EACH
0500	06510	PAVE STRIPING-TEMP PAINT-4 IN	21,000.00	LF
0510	06514	PAVE STRIPING-PERM PAINT-4 IN	25,000.00	LF
0610	06574	PAVE MARKING-THERMO CURV ARROW	14.00	EACH
0620	06589	PAVEMENT MARKER TYPE V-MW	40.00	EACH
0630	06591	PAVEMENT MARKER TYPE V-BY	228.00	EACH
0640	06600	REMOVE PAVEMENT MARKER TYPE V CONCRETE PAVEMENT	268.00	EACH
0425	21173EC	SAW-CLEAN-RESEAL RANDOM CRACKS	1,000.00	LF
0800	21415ND	EROSION CONTROL EAST OF DAVIS STREET	1.00	LS
0710	23158ES505	DETECTABLE WARNINGS	100.00	SQFT
0520	23237EN10W	WATERBLAST STRIPE REMOVAL	10,000.00	LF
1000	02569	DEMOBILIZATION	1.00	LS

FULL DEPTH PATCHING SUMMARY
FE01 005-0068-012-014

<u>STATION</u>	<u>WIDTH</u>	<u>LENGTH</u>
0+25	36	10
0+50	36	10
0+75	36	10
1+00	36	10
1+25	36	16
1+85	36	16
2+00	36	14
2+25	36	10
2+50	36	10
2+75	36	10
3+00	36	10
3+25	36	10
3+50	36	10
3+75	36	10
4+00	36	10
4+25	36	16
4+50	36	16
4+75	36	16
5+00	36	16
5+25	36	10
5+50	36	10
5+75	36	10
6+00	36	10
6+25	36	10
6+50	36	10
6+75	36	10
7+00	36	10
7+25	36	10
7+50	36	16
7+75	36	10
8+00	36	10
8+25	36	16
8+50	36	10
9+00	36	10
9+25	36	10
9+50	36	10
9+80	36	10
10+10	36	10
10+40	36	16
10+75	36	16
11+00	36	10
11+25	36	10
11+50	36	10
11+75	36	10
12+00	36	10
12+25	36	16

FULL DEPTH PATCHING SUMMARY
FE01 005-0068-012-014

<u>STATION</u>	<u>WIDTH</u>	<u>LENGTH</u>
12+50	36	16
12+75	36	16
13+00	36	16
13+25	36	10
13+50	36	10
13+75	36	16
14+00	36	10
14+25	36	10
14+50	36	10
14+75	36	10
15+00	36	10
15+25	36	10
15+50	36	10
15+75	36	16
16+25	36	10
16+50	36	10
16+75	36	16
17+00	36	10
17+25	36	10
17+50	36	16
17+75	36	16
18+00	36	16
18+25	36	10
18+50	36	10
18+75	36	16
19+00	36	16
19+25	36	10
19+50	36	10
19+75	36	10
20+00	36	10
20+25	36	10
20+50	36	16
20+75	36	10
21+00	36	10
21+25	36	10
21+50	36	10
21+75	36	10
22+00	36	10

- NOTES:** 1. Stations measured from west end of project.
2. Locations are approximate only.
The Engineer will determine exact locations after asphalt pavement is removed.

FULL DEPTH PAVEMENT PATCHING SUMMARY
FE01 005-0068-013-015

MILEPOINT	LOCATION	WIDTH	LENGTH
13.258	EB outer	8	10
13.261	WB outer	8	10
13.28	WB outer	8	10
13.289	Full width EB and WB	40	10
13.299	WB full width	20	10
13.308	WB full width	20	10
13.317	EB outer	8	10
13.327	WB full width	20	10
13.353	EB outer	8	10
13.373	WB full width	20	10
13.393	WB outer	8	10
13.413	Full width EB and WB	40	10
13.422	WB full width	20	10
13.451	EB outer	8	10
13.454	EB outer	8	10
13.459	EB outer	8	10
13.479	EB outer	8	10
13.487	WB inner	12	10
13.508	WB outer	8	10
13.528	WB full width	20	10
13.53	EB outer	8	10
13.537	EB inner	12	10
13.546	WB full width	20	10
13.576	WB inner	12	10
13.582	WB inner	12	10
13.591	WB inner	12	10
13.593	WB inner and EB full width	32	10
13.604	WB inner	12	10
13.614	WB inner	12	10
13.661	WB inner	12	10
13.688	EB full width	20	10
13.709	EB inner	12	10
13.719	EB full width	20	10
13.738	EB full width	20	10
13.785	EB full width	20	10
13.842	EB inner	12	10
13.853	EB full width	20	10
13.871	EB inner	12	10
13.881	EB inner	12	10
13.938	EB inner	12	10
13.948	EB inner	12	10
13.957	EB inner	12	10
14	Full width EB and WB	48	10
14.01	WB full width	24	10
14.019	Full width EB and WB	48	10
14.029	WB full width	24	10
14.038	Full width EB and WB	48	10
14.048	EB inner	12	10
14.057	Full width EB and WB	48	10
14.076	WB full width and EB inner	36	10
14.085	WB outer and EB outer	24	10
14.105	EB outer	12	10
14.114	WB full width and EB outer	36	10
14.124	WB full width and EB outer	36	10
14.134	Full width EB and WB	48	10
14.153	EB full width	24	10
14.172	EB inner	12	10
14.181	WB full width	24	10
14.223	EB outer	12	10
14.45	WB lane	12	10

PARTIAL DEPTH PATCHING SUMMARY
FE01 005-0068-012-014

To be determined after asphalt milling and texturing.

PARTIAL DEPTH PAVEMENT PATCHING SUMMARY
FE01 005-0068-013-015

MILEPOINT	LOCATION	DIMENSIONS
13.338	existing patch	5' X 4'
13.384	existing patch	20' X 4'
13.511	patch bored hole	2' X 2'
13.7	transverse crack full width	2' X 40'
13.721	crack in EB	2' X 20'
14.065	cracks	3' X 3'
14.167	crack in WB	2' X 24'

MODIFY CATCH BASIN SUMMARY FE01 005-0068-012-014

LOCATION		EXISTING	PROPOSED
STATION	SIDE	DIMENSIONS	DIMENSIONS
1+05	Left	48" x 36"	48" x 24"
1+05	Right	48" x 36"	48" x 24"
1+77	Left	32" x 24"	32" x 24"
4+31	Right	28" x 24"	28" x 24"
4+48	Left	28" x 24"	28" x 24"
7+42	Left	28" x 24"	28" x 24"
7+60	Right	28" x 24"	28" x 24"
10+25	Right	28" x 24"	28" x 24"
10+39	Left	28" x 24"	28" x 24"
21+36	Left	48" x 24"	48" x 24"
21+50	Right	48" x 24"	48" x 24"

- NOTES:**
1. Stations in feet measured from west end of project.
 2. No modifications for the curb box drains at.
Station 22+31 Left and Right

LIP HEADER CURB SUMMARY
FE01 005-0068-012-014

	BEGIN STATION	END STATION
LEFT	0+50	2+25
	2+70	3+40
	4+15	4+30
	4+95	5+25
	6+50	7+25
	7+60	8+00
	15+50	15+80
	18+25	18+50
	20+20	20+50
	21+25	21+35
RIGHT	0+00	0+50
	1+75	2+00
	2+55	2+65
	4+70	4+80
	5+95	6+05
	8+95	9+05
	12+80	12+90
	13+15	13+50
	16+30	16+75
	17+20	17+40
	17+75	18+25
	18+60	19+00
	19+40	19+75
	20+00	20+65
	21+15	21+75

STANDARD HEADER CURB SUMMARY
FE01 005-0068-013-015

BEGIN	END
STATION	STATION

LEFT To be determined at time of construction

RIGHT To be determined at time of construction

SIDEWALK RAMPS AND DETECTABLE WARNINGS SUMMARY

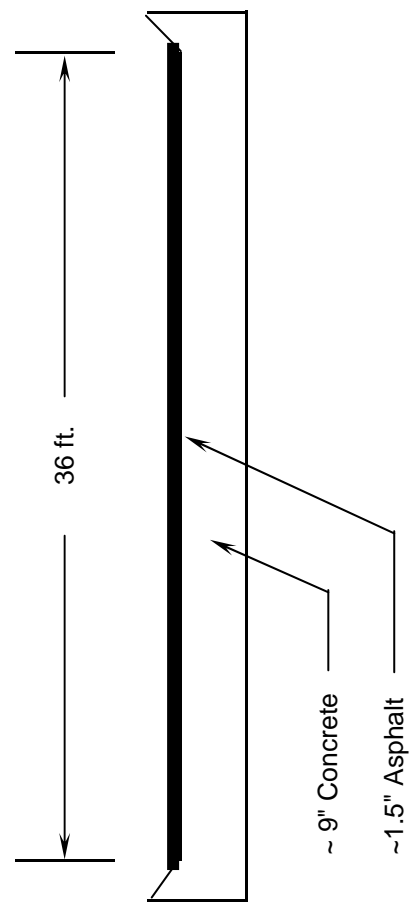
FE01 005 0068 012-014

Street	Side	4" Conc Sidewalk SQ.YDS	Detectable Warnings SQ. FT
Ellison Ave	Lt.	4	8
Ellison Ave	Rt.	4	8
Pace Ave	Lt.	4	8
Pace Ave	Rt.	4	8
McKenna St.	Lt.	5	8
McKenna St.	Rt.	5	8
Cherry St.	Lt.	6	8
Cherry St.	Rt.	6	8
Bryan St.	Lt.	4	8
Bryan St.	Rt.	5	8
Eastview St	Lt.	4	8
Eastview St	Rt.	4	8

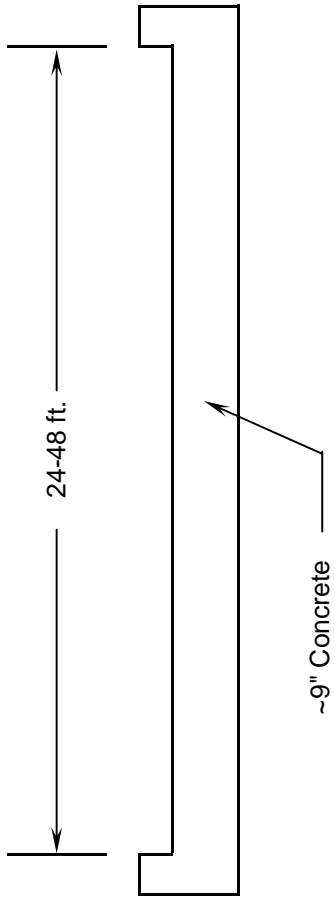
FE01 005 0068 012-014

To be determined by Engineer at time of construction.

TYPICAL SECTION
FE01 005-0068-012-014



**TYPICAL SECTION
FE01 005-0068-013-015**



Omit asphalt pavement section milepoint 14.224-14.387

PART II
SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to the *Standard Specifications for Road and Bridge Construction, Edition of 2004*, and *Standard Drawings, Edition of 2000* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2008* and *Standard Drawings, Edition of 2003 with the 2008 Revision*.

**Supplemental Specifications to The Standard Specifications
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(Effective with the May 22, 2009 Letting)

<p>SUBSECTION; REVISION:</p>	<p>101.03 Definitions. Replace the definition for Specifications – <i>Special Provisions</i> with the following:</p> <p>Additions and revisions to the Standard and Supplemental Specifications covering conditions peculiar to and individual project.</p>
<p>SUBSECTION; REVISION:</p>	<p>102.07.01 General. Replace the first sentence with the following:</p> <p>Submit the Bid Proposal on forms furnished on the Department internet website (http://transportation.ky.gov/contract/), including the Bid Packet and disk created from the Expedite Bidding Program.</p>
<p>SUBSECTION; REVISION:</p>	<p>102.07.02 Computer Bidding. Replace the first paragraph with the following:</p> <p>Subsequent to ordering a Bid Proposal for a specific project, use the Department’s Expedite Bidding Program on the internet website of the Department of Highways, Division of Construction Procurement (http://transportation.ky.gov/contract/). Download the bid file from the Department’s website to prepare a Bid Proposal for submission to the Department. Include the completed Bid Packet produced by the Expedite Bidding Program in the Bid Proposal and submit it along with the disk created by said program.</p> <p>Replace the second paragraph with the following:</p> <p>In case of a dispute, the printed Bid Proposal and bid item sheets created by the Expedite Bidding Program take precedence over any bid submittal.</p>
<p>SUBSECTION; REVISION:</p>	<p>102.08 IRREGULAR BID PROPOSALS. Replace point four of the first paragraph with the following:</p> <p>4) fails to submit a disk created from the Expedite Bidding Program.</p> <p>Replace point one of the second paragraph with the following:</p> <p>1) when the Bid Proposal is on a form other than that furnished by the Department or printed from other than the Expedite Bidding Program, or when the form is altered or any part is detached; or</p>
<p>SUBSECTION; REVISION:</p>	<p>103.02 AWARD OF CONTRACT. Replace the first sentence of the third paragraph with the following:</p> <p>The Department will normally award the Contract within 10 working days after the date of receiving Bid Proposals unless the Department deems it best to hold the Bid Proposals of any or all bidders for a period not to exceed 60 calendar days for final disposition of award.</p>

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<p>SUBSECTION: 105.12 FINAL INSPECTION AND ACCEPTANCE OF WORK. REVISION:</p>	<p>Insert the following paragraphs after the first paragraph:</p> <p>Notify the Engineer when all electrical items are complete. A notice of the electrical work completion shall be made in writing to the Contractor. Electrical items will be inspected when the electrical work is complete and are not subject to waiting until the project as a whole has been completed. The Engineer will notify the Division of Traffic Operations within 3 days that all electrical items are complete and ready for a final inspection. A final inspection will be completed within 90 days after the Engineer notifies the Division of Traffic Operations of the electrical work completion.</p> <p>Energize all electrical items prior to notifying the Engineer that all electrical items are complete. Electrical items must remain operational until the Division of Traffic Operations has inspected and accepted the electrical portion of the project. Payment for the electrical service is the responsibility of the Contractor from the time the electrical items are energized until the Division of Traffic Operations has accepted the work.</p> <p>Complete all corrective work within 90 calendar days of receiving the original electrical inspection report. Notify the Engineer when all corrective work is complete. The Engineer will notify the Division of Traffic Operations that the corrective work has been completed and the project is ready for a follow-up inspection. Upon re-inspection, if additional corrective work is required, complete within the same 90 calendar day allowance. The Department will not include time between completion of the corrective work and the follow up electrical inspection(s). The 90 calendar day allowance is cumulative regardless of the number of follow-up electrical inspections required.</p> <p>The Department will assume responsibility for the electrical service on a project once the Division of Traffic Operations gives final acceptance of the electrical items on the project. The Department will also assume routine maintenance of those items. Any damage done to accepted electrical work items by other Contractors shall be the responsibility of the Prime Contractor. The Department will not be responsible for repairing damage done by other contractors during the construction of the remaining project.</p> <p>Failure to complete the electrical corrective work within the 90 calendar day allowance will result in penalties assessed to the project. Penalties will be assessed at ½ the rate of liquidated damages established for the contract.</p> <p>Delete the fifth paragraph from the section.</p>
<p>SUBSECTION: 105.13 CLAIM RESOLUTION PROCESS. REVISION:</p>	<p>Delete the last paragraph from the section.</p>
<p>SUBSECTION: 106.10 FIELD WELDER CERTIFICATION REQUIREMENTS. REVISION:</p>	<p>Insert the following sentence before the first sentence of the first paragraph:</p> <p>All field welding must be performed by a certified welder unless otherwise noted.</p>
<p>SUBSECTION: 112.03.11 Temporary Pavement Markings. PART: B) Placement and Removal of Temporary Striping. REVISION:</p>	<p>Replace the 2nd sentence of the first paragraph with the following:</p> <p>On interstates and parkways, and other roadways approved by the State Highway Engineer, install pavement striping that is 6 inches in width.</p>
<p>SUBSECTION: 112.03.12 Project Traffic Coordinator (PTC). REVISION:</p>	<p>Add the following at the end of the subsection:</p> <p>After October 1, 2008 the Department will require the PTC to have successfully completed the applicable qualification courses. Personnel that have not successfully completed the applicable courses by that date will not be considered qualified. Prior to October 1, 2008, conform to Subsection 108.06 A) and ensure the designated PTC has sufficient skill and experience to properly perform the task.</p>

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<p>SUBSECTION: REVISION:</p>	<p>206.03.02 Embankment Replace the last paragraph with the following: When rock roadbed is specified, construct the upper 2 feet of the embankment according to Subsection 204.03.09 A).</p>
<p>SUBSECTION: REVISION:</p>	<p>213.03.03 Inspection and Maintenance. Insert the following paragraph after the second paragraph: When the Contractor is required to obtain the KPDES permit, it is their responsibility to ensure compliance with the inspection and maintenance requirements of the permit. The Engineer will perform verification inspections a minimum of once per month and within 7 days of a ½ inch or greater rainfall event. The Engineer will document these inspections using Form TC 63-61 A. The Engineer will provide copies of the inspection only when improvements to the BMP's are required. Verification inspections performed by the Engineer do not relieve the Contractor of any responsibility for compliance with the KPDES permit. Initiate corrective action within 24 hours of any noted deficiency and complete the work within 5 days.</p>
<p>SUBSECTION: PART: REVISION:</p>	<p>213.03.05 Temporary Control Measures. F) Temporary Mulch. Replace the last sentence with the following: Place temporary mulch to an approximate 2-inch loose depth (2 tons per acre) and anchor it into the soil by mechanically crimping it into the soil surface or applying tackifier to provide a protective cover. Regardless of the anchoring method used, ensure the protective cover holds until disturbance is required or permanent controls are in installed.</p>
<p>SUBSECTION: REVISION:</p>	<p>303.05 PAYMENT. Replace the second paragraph of the section with the following: The Department will make payment for Drainage Blanket-Type II (ATDB) according to the Lot Pay Adjustment Schedule for Specialty Mixtures in Section 402.</p>
<p>SUBSECTION: PART: REVISION:</p>	<p>401.02.04 Special Requirements for Dryer Drum Plants. F) Production Quality Control. Replace the first sentence with the following: Stop mixing operations immediately if, at any time, a failure of the automatic electronic weighing system of the aggregate feed, asphalt binder feed, or water injection system control occurs.</p>
<p>SUBSECTION: REVISION:</p>	<p>401.02.04 Special Requirements for Dryer Drum Plants. Add the following: Part G) Water Injection System. Provided each system has prior approval as specified in Subsection 402.01.01, the Department will allow the use of water injection systems for purposes of foaming the asphalt binder and lowering the mixture temperature for production of Warm Mix Asphalt (WMA). Ensure the equipment for water injection meets the following requirements: 1) Injection equipment computer controls are automatically coupled to the plants controls (manual operation is not permitted); 2) Injection equipment has variable controls that introduce water ratios based on production rates of mixtures; 3) Injects water into the flow of asphalt binder prior to contacting the aggregate; 4) Provides alarms on the water injection system that operate when the flow of water is interrupted or deviates from the prescribed water rate.</p>
<p>SUBSECTION: REVISION:</p>	<p>401.03.01 Preparation of Mixtures. Replace the last sentence of the second paragraph with the following: Do not use asphalt binder while it is foaming in a storage tank.</p>

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<p>SUBSECTION: 401.03.01 Preparation of Mixtures. REVISION: Replace the third paragraph and Mixing and Laying Temperature table with the following:</p> <p>Maintain the temperature of the component materials and asphalt mixture within the ranges listed in the following table:</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">MIXING AND LAYING TEMPERATURES (°F)</th> </tr> <tr> <th colspan="2" style="text-align: left;">Material</th> <th style="text-align: center;">Minimum</th> <th style="text-align: center;">Maximum</th> </tr> </thead> <tbody> <tr> <td colspan="2">Aggregates</td> <td style="text-align: center;">240</td> <td style="text-align: center;">330</td> </tr> <tr> <td colspan="2">Aggregates used with Recycled Asphalt Pavement (RAP)</td> <td style="text-align: center;">240</td> <td style="text-align: center;">—</td> </tr> <tr> <td rowspan="2">Asphalt Binders</td> <td>PG 64-22</td> <td style="text-align: center;">230</td> <td style="text-align: center;">330</td> </tr> <tr> <td>PG 76-22</td> <td style="text-align: center;">285</td> <td style="text-align: center;">350</td> </tr> <tr> <td rowspan="4">Asphalt Mixtures at Plant (Measured in Truck)</td> <td>PG 64-22 HMA</td> <td style="text-align: center;">250</td> <td style="text-align: center;">330</td> </tr> <tr> <td>PG 76-22 HMA</td> <td style="text-align: center;">310</td> <td style="text-align: center;">350</td> </tr> <tr> <td>PG 64-22 WMA</td> <td style="text-align: center;">230</td> <td style="text-align: center;">275</td> </tr> <tr> <td>PG 76-22 WMA</td> <td style="text-align: center;">250</td> <td style="text-align: center;">300</td> </tr> <tr> <td rowspan="4">Asphalt Mixtures at Project (Measured in Truck When Discharging)</td> <td>PG 64-22 HMA</td> <td style="text-align: center;">230</td> <td style="text-align: center;">330</td> </tr> <tr> <td>PG 76-22 HMA</td> <td style="text-align: center;">300</td> <td style="text-align: center;">350</td> </tr> <tr> <td>PG 64-22 WMA</td> <td style="text-align: center;">210</td> <td style="text-align: center;">275</td> </tr> <tr> <td>PG 76-22 WMA</td> <td style="text-align: center;">240</td> <td style="text-align: center;">300</td> </tr> </tbody> </table>	MIXING AND LAYING TEMPERATURES (°F)				Material		Minimum	Maximum	Aggregates		240	330	Aggregates used with Recycled Asphalt Pavement (RAP)		240	—	Asphalt Binders	PG 64-22	230	330	PG 76-22	285	350	Asphalt Mixtures at Plant (Measured in Truck)	PG 64-22 HMA	250	330	PG 76-22 HMA	310	350	PG 64-22 WMA	230	275	PG 76-22 WMA	250	300	Asphalt Mixtures at Project (Measured in Truck When Discharging)	PG 64-22 HMA	230	330	PG 76-22 HMA	300	350	PG 64-22 WMA	210	275	PG 76-22 WMA	240	300
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<p>SUBSECTION: 402.01 Description. REVISION: Replace the paragraph with the following:</p>	<p>Provide the process control and acceptance testing of all classes and types of asphalt mixtures which may be furnished either as hot mix asphalt (HMA) or warm mix asphalt (WMA) produced with water injection systems.</p>																																																	
<p>SUBSECTION: 402.01.01 Warm Mix Asphalt (WMA) Evaluation and Approval. REVISION: Add the following subsection:</p>	<p>402.01.01 Warm Mix Asphalt (WMA) Evaluation and Approval. The Department will evaluate trial production of WMA by use of a water injection system provided the system is installed according to the manufacturer's requirements and satisfies the requirements of Section 401. Evaluation will include production and placement of WMA to demonstrate adequate mixture quality including volumetric properties and density by Option A as specified in Subsection 402.03.02 D). Do not place WMA for evaluation on Department projects. Provided production and placement operations satisfy the applicable quality levels, the Department will approve WMA production on Department projects using the water injection system as installed on the specific asphalt mixing plant evaluated.</p>																																																	
<p>SUBSECTION: 402.05.02 Asphalt Mixtures and Mixtures With RAP. REVISION: Replace Subsection Title as below:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.</p>																																																	
<p>SUBSECTION: 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. REVISION: Replace the paragraph with the following:</p>	<p>The Department will pay for the mixture at the Contract unit bid price and apply a Lot Pay Adjustment for each lot placed based on the degree of compliance with the specified tolerances. Using the appropriate Lot Pay Adjustment Schedule, the Department will assign a pay value for the applicable properties within each subplot and average the subplot pay values to determine the pay value for a given property for each lot. The Department will apply the Lot Pay Adjustment for each lot to a defined unit price of \$50.00 per ton. The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.</p>																																																	

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<p>SUBSECTION: PART: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. C) Conventional and RAP Mixtures Placed on Shoulders. Replace title with the following: HMA, WMA, and RAP Mixtures Placed on Shoulders.</p>												
<p>SUBSECTION: PART: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. D) Conventional and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge. Replace the title with the following: HMA, WMA, and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge.</p>												
<p>SUBSECTION: PART: TABLES: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. Lot Pay Adjustment Schedule, Compaction Option A, Base and Binder Mixtures VMA Replace the VMA table with the following:</p> <table border="1" data-bbox="755 766 1117 982"> <thead> <tr> <th colspan="2">VMA</th> </tr> <tr> <th>Pay Value</th> <th>Deviation From Minimum</th> </tr> </thead> <tbody> <tr> <td>1.00</td> <td>≥ min. VMA</td> </tr> <tr> <td>0.95</td> <td>0.1-0.5 below min.</td> </tr> <tr> <td>0.90</td> <td>0.6-1.0 below min.</td> </tr> <tr> <td>⁽¹⁾</td> <td>> 1.0 below min.</td> </tr> </tbody> </table>	VMA		Pay Value	Deviation From Minimum	1.00	≥ min. VMA	0.95	0.1-0.5 below min.	0.90	0.6-1.0 below min.	⁽¹⁾	> 1.0 below min.
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<p>SUBSECTION: PART: TABLES: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. Lot Pay Adjustment Schedule, Compaction Option A, Surface Mixtures VMA Replace the VMA table with the following:</p> <table border="1" data-bbox="738 1218 1101 1470"> <thead> <tr> <th colspan="2">VMA</th> </tr> <tr> <th>Pay Value</th> <th>Deviation From Minimum</th> </tr> </thead> <tbody> <tr> <td>1.00</td> <td>≥ min. VMA</td> </tr> <tr> <td>0.95</td> <td>0.1-0.5 below min.</td> </tr> <tr> <td>0.90</td> <td>0.6-1.0 below min.</td> </tr> <tr> <td>⁽¹⁾</td> <td>> 1.0 below min.</td> </tr> </tbody> </table>	VMA		Pay Value	Deviation From Minimum	1.00	≥ min. VMA	0.95	0.1-0.5 below min.	0.90	0.6-1.0 below min.	⁽¹⁾	> 1.0 below min.
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<p>SUBSECTION: PART: TABLE: REVISION:</p>	<p>402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP. Lot Pay Adjustment Schedule, Compaction Option B Mixtures VMA Replace the VMA table with the following:</p> <table border="1" data-bbox="743 390 1107 642" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" style="text-align: center;">VMA</th> </tr> <tr> <th style="text-align: center;">Pay Value</th> <th style="text-align: center;">Deviation From Minimum</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.00</td> <td style="text-align: center;">≥min. VMA</td> </tr> <tr> <td style="text-align: center;">0.95</td> <td style="text-align: center;">0.1-0.5 below min.</td> </tr> <tr> <td style="text-align: center;">0.90</td> <td style="text-align: center;">0.6-1.0 below min.</td> </tr> <tr> <td style="text-align: center;">⁽²⁾</td> <td style="text-align: center;">> 1.0 below min.</td> </tr> </tbody> </table>	VMA		Pay Value	Deviation From Minimum	1.00	≥min. VMA	0.95	0.1-0.5 below min.	0.90	0.6-1.0 below min.	⁽²⁾	> 1.0 below min.											
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<p>SUBSECTION: PART: NUMBER: REVISION:</p>	<p>403.03.03 Preparation of Mixture. C) Mix Design Criteria. 1) Preliminary Mix Design. Replace the last two sentences of the paragraph and table with the following:</p> <p>Complete the volumetric mix design at the appropriate number of gyrations as given in the table below for the number of 20-year ESAL's. The Department will define the relationship between ESAL classes, as given in the bid items for Superpave mixtures, and 20-year ESAL ranges as follows:</p> <table border="1" data-bbox="566 968 1273 1121" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Class</th> <th rowspan="2" style="text-align: center;">ESAL's (millions)</th> <th colspan="3" style="text-align: center;">Number of Gyration</th> </tr> <tr> <th style="text-align: center;">$N_{initial}$</th> <th style="text-align: center;">N_{design}</th> <th style="text-align: center;">N_{max}</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">< 3.0</td> <td style="text-align: center;">6</td> <td style="text-align: center;">50</td> <td style="text-align: center;">75</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">3.0 to < 30.0</td> <td style="text-align: center;">7</td> <td style="text-align: center;">75</td> <td style="text-align: center;">115</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">≥ 30.0</td> <td style="text-align: center;">8</td> <td style="text-align: center;">100</td> <td style="text-align: center;">160</td> </tr> </tbody> </table>	Class	ESAL's (millions)	Number of Gyration			$N_{initial}$	N_{design}	N_{max}	2	< 3.0	6	50	75	3	3.0 to < 30.0	7	75	115	4	≥ 30.0	8	100	160
Class	ESAL's (millions)			Number of Gyration																				
		$N_{initial}$	N_{design}	N_{max}																				
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3	3.0 to < 30.0	7	75	115																				
4	≥ 30.0	8	100	160																				
<p>SUBSECTION: PART: REVISION:</p>	<p>403.03.09 Leveling and Wedging, and Scratch Course. A) Leveling and Wedging. Replace the first sentence of the first paragraph with the following:</p> <p>Conform to the gradation requirements (control points) of AASHTO M 323 for base, binder, or surface as the Engineer directs.</p>																							
<p>SUBSECTION: PART: REVISION:</p>	<p>403.03.09 Leveling and Wedging, and Scratch Course. B) Scratch Course. Replace the second sentence of the first paragraph with the following:</p> <p>Conform to the gradation requirements (control points) of AASHTO M 323 for base, binder, or surface as the Engineer directs.</p>																							
<p>SUBSECTION: REVISION:</p>	<p>407.01 DESCRIPTION. Replace the first sentence of the paragraph with the following:</p> <p>Construct a pavement wedge composed of a hot-mixed or warm-mixed asphalt mixture.</p>																							
<p>SUBSECTION: REVISION:</p>	<p>409.01 DESCRIPTION. Replace the first sentence of the paragraph with the following:</p> <p>Use reclaimed asphalt pavement (RAP) from Department projects or other approved sources in hot mix asphalt (HMA) or warm mix asphalt (WMA) provided mixture requirements are satisfied.</p>																							
<p>SUBSECTION: REVISION:</p>	<p>410.01 DESCRIPTION. Delete the second sentence of the paragraph.</p>																							

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<p>SUBSECTION: REVISION:</p>	<p>410.03.01 Corrective Work. Replace the last sentence of the paragraph with the following: Provide a final surface comparable to the adjacent pavement that does not require corrective work in respect to texture, appearance, and skid resistance.</p>														
<p>SUBSECTION: PART: NUMBER: REVISION:</p>	<p>410.03.02 Ride Quality. B) Requirements. 1) Category A. Replace the last sentence of the first paragraph with the following: At the Department's discretion, a pay deduction of \$1200 per 0.1-lane-mile section may be applied in lieu of corrective work.</p>														
<p>SUBSECTION: PART: NUMBER: REVISION:</p>	<p>410.03.02 Ride Quality. B) Requirements. 2) Category B. Replace the second and third sentence of the first paragraph with the following: When the IRI is greater than 90 for a 0.1-mile section, perform corrective work, or remove and replace the pavement to achieve the specified IRI. At the Department's discretion, a pay deduction of \$750 per 0.1-lane-mile section may be applied in lieu of corrective work.</p>														
<p>SUBSECTION: REVISION:</p>	<p>410.05 PAYMENT. Add the following sentence to the end of the first paragraph: The sum of the pay value adjustments for ride quality shall not exceed \$0 for the project as a whole.</p>														
<p>SUBSECTION: REVISION:</p>	<p>413.05.02 CL3 SMA BASE 1.00D PG76-22. Insert the following sentence between the first and second sentence of the first paragraph: The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.</p>														
<p>SUBSECTION: TABLE: REVISION:</p>	<p>413.05.02 CL3 SMA BASE 1.00D PG 76-22. JOINT DENSITY TABLE Replace the joint density table with the following:</p> <table border="1" data-bbox="696 1350 1141 1614"> <thead> <tr> <th colspan="2">LANE DENSITY</th> </tr> <tr> <th>Pay Value</th> <th>Test Result (%)</th> </tr> </thead> <tbody> <tr> <td>1.05</td> <td>95.0-96.5</td> </tr> <tr> <td>1.00</td> <td>93.0-94.9</td> </tr> <tr> <td>0.95</td> <td>92.0-92.9 or 96.6-97.0</td> </tr> <tr> <td>0.90</td> <td>91.0-91.9 or 97.1-97.5</td> </tr> <tr> <td>(1)</td> <td>< 91.0 or > 97.5</td> </tr> </tbody> </table>	LANE DENSITY		Pay Value	Test Result (%)	1.05	95.0-96.5	1.00	93.0-94.9	0.95	92.0-92.9 or 96.6-97.0	0.90	91.0-91.9 or 97.1-97.5	(1)	< 91.0 or > 97.5
LANE DENSITY															
Pay Value	Test Result (%)														
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(1)	< 91.0 or > 97.5														
<p>SUBSECTION: REVISION:</p>	<p>413.05.03 CL3 SMA SURF 0.50A PG76-22 and CL3 SMA SURF 0.38A PG76-22. Insert the following sentence between the first and second sentence of the first paragraph: The Department will calculate the Lot Pay Adjustment using all possible incentives and disincentives but will not allow the overall pay value for a lot to exceed 1.00.</p>														

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<p>SUBSECTION: TABLE: REVISION:</p>	<p>413.05.03 CL3 SMA SURF 0.50A PG76-22 and CL3 SMA SURF 0.38A PG76-22. JOINT DENSITY TABLE Replace the joint density table with the following:</p> <table border="1" data-bbox="581 388 1258 709" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3" style="text-align: center;">DENSITY</th> </tr> <tr> <th style="text-align: center;">Pay Value</th> <th style="text-align: center;">Lane Density Test Result (%)</th> <th style="text-align: center;">Joint Density Test Result (%)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.05</td> <td style="text-align: center;">95.0-96.5</td> <td style="text-align: center;">92.0-96.0</td> </tr> <tr> <td style="text-align: center;">1.00</td> <td style="text-align: center;">93.0-94.9</td> <td style="text-align: center;">90.0-91.9</td> </tr> <tr> <td style="text-align: center;">0.95</td> <td style="text-align: center;">92.0-92.9 or 96.6-97.0</td> <td style="text-align: center;">89.0-89.9 or 96.1-96.5</td> </tr> <tr> <td style="text-align: center;">0.90</td> <td style="text-align: center;">91.0-91.9 or 97.1-97.5</td> <td style="text-align: center;">88.0-88.9 or 96.6-97.0</td> </tr> <tr> <td style="text-align: center;">0.75</td> <td style="text-align: center;">----</td> <td style="text-align: center;">< 88.0 or > 97.0</td> </tr> <tr> <td style="text-align: center;"><i>(1)</i></td> <td style="text-align: center;">< 91.0 or > 97.5</td> <td style="text-align: center;">----</td> </tr> </tbody> </table>	DENSITY			Pay Value	Lane Density Test Result (%)	Joint Density Test Result (%)	1.05	95.0-96.5	92.0-96.0	1.00	93.0-94.9	90.0-91.9	0.95	92.0-92.9 or 96.6-97.0	89.0-89.9 or 96.1-96.5	0.90	91.0-91.9 or 97.1-97.5	88.0-88.9 or 96.6-97.0	0.75	----	< 88.0 or > 97.0	<i>(1)</i>	< 91.0 or > 97.5	----
DENSITY																									
Pay Value	Lane Density Test Result (%)	Joint Density Test Result (%)																							
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<i>(1)</i>	< 91.0 or > 97.5	----																							
<p>SUBSECTION: REVISION:</p>	<p>501.05.02 Ride Quality. Add the following sentence to the end of the first paragraph: The sum of the pay value adjustments for the ride quality shall not exceed \$0 for the project as a whole.</p>																								
<p>SUBSECTION: REVISION:</p>	<p>505.03.04 Detectable Warnings. Replace the first sentence with the following: Install detectable warning pavers at all sidewalk ramps and on all commercial entrances according to the Standard Drawings.</p>																								
<p>SUBSECTION: REVISION:</p>	<p>505.04.04 Detectable Warnings. Replace the paragraph with the following: The Department will measure the quantity in square feet. All retrofit applications for maintenance projects will require the removal of existing sidewalks to meet the requirements of the standard drawings applicable to the project. The cost associated with the removal of the existing sidewalk will be incidental to the detectable warnings bid item or incidental to the bid item for the construction of the concrete sidewalk unless otherwise noted.</p>																								
<p>SUBSECTION: REVISION:</p>	<p>505.05 PAYMENT. Add the following to the bid item table:</p> <table border="1" data-bbox="381 1375 1006 1438" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"><u>Code</u></th> <th style="text-align: left;"><u>Pay Item</u></th> <th style="text-align: left;"><u>Pay Unit</u></th> </tr> </thead> <tbody> <tr> <td>23158ES505</td> <td>Detectable Warnings</td> <td>Square Foot</td> </tr> </tbody> </table>	<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>	23158ES505	Detectable Warnings	Square Foot																		
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23158ES505	Detectable Warnings	Square Foot																							
<p>SUBSECTION: REVISION:</p>	<p>509.01 DESCRIPTION. Replace the second paragraph with the following: The Department may allow the use of similar units that conform to the National Cooperative Highway Research Program (NCHRP) 350 Test Level 3 (TL-3) requirements and the typical features depicted by the Standard Drawings. Obtain the Engineers approval prior to use. Ensure the barrier wall shape, length, material, drain slot dimensions and locations typical features are met and the reported maximum deflection is 3 feet or less from the NCHRP 350 TL-3 for Test 3 – 11 (pickup truck impacting at 60 mph at a 25-degree angle.)</p>																								
<p>SUBSECTION: REVISION:</p>	<p>601.03.02 Concrete Producer Responsibilities. Add the following to the first paragraph: If a concrete plant becomes unqualified during a project and there are no other qualified plants in the region, the Department will provide qualified personnel to witness and ensure the producer follows the required specifications. The Department will assess the Contractor a \$100 per hour charge for this service.</p>																								

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<p>SUBSECTION: REVISION:</p>	<p>606.02.11 Coarse Aggregate. Replace with the following: Conform to Section 805, size No. 8 or 9-M.</p>
<p>SUBSECTION: REVISION:</p>	<p>609.04.06 Joint Sealing. Replace Subsection 601.04 with the following: Subsection 606.04.08.</p>
<p>SUBSECTION: REVISION:</p>	<p>609.05 Payment. Replace the Pay Unit for Joint Sealing with the following: See Subsection 606.05.</p>
<p>SUBSECTION: REVISION:</p>	<p>701.03.06 Initial Backfill. Replace the first sentence of the last paragraph with the following: When the Contract specifies, perform quality control testing to verify compaction according to KM 64-512.</p>
<p>SUBSECTION: REVISION:</p>	<p>701.03.08 Testing of Pipe. Replace and rename the subsection with the following:</p> <p>701.03.08 Inspection of Pipe. The engineer will visually inspect all pipe. The Department will require camera/video inspection on a minimum of 50 percent of the linear feet of all installed pipe structures. Conduct camera/video inspection according to KM 64-114. The pipe to be installed under pavement will be selected first. If the total linear feet of pipe under pavement is less than 50 percent of the linear feet of all pipe installed, the Engineer will randomly select installations from the remaining pipe structures on the project to provide for the minimum inspection requirement. The pipe will be selected in complete runs (junction-junction or headwall-headwall) until the total linear feet of pipe to be inspected is at least 50 percent of the total linear feet of all installed pipe on the project.</p> <p>Unless the Engineer directs otherwise, schedule the inspections no sooner than 30 days after completing the installation and completion of earthwork to within 1 foot of the finished subgrade. When final surfacing conflicts with the 30-day minimum, conduct the inspections prior to placement of the final surface. The contractor must ensure that all pipe are free and clear of any debris so that a complete inspection is possible.</p> <p>Notify the Engineer immediately if distresses or locations of improper installation are discovered. When camera testing shows distresses or improper installation in the installed pipe, the Engineer may require additional sections to be tested. Provide the video and report to the Engineer when testing is complete in accordance with KM 64-114.</p> <p>Pipes that exhibit distress or signs of improper installation may necessitate repair or removal as the Engineer directs. These signs include, but are not limited to: deflection, cracking, joint separation, sagging or other interior damage. If corrugated metal or thermoplastic pipes exceed the deflection and installation thresholds indicated in the table below, provide the Department with an evaluation of each location conducted by a Professional Engineer addressing the severity of the deflection, structural integrity, environmental conditions, design service life, and an evaluation of the factor of safety using Section 12, "Buried Structures and Tunnel Liners," of the AASHTO LRFD Bridge Design Specifications. Based on the evaluation, the Department may allow the pipe to remain in place at a reduced unit price as shown in the table below. Provide 5 business days for the Department to review the evaluation. When the pipe shows deflection of 10 percent or greater, remove and replace the pipe. When the camera/video or laser inspection results are called into question, the Department may require direct measurements or mandrel testing.</p> <p>The Cabinet may elect to conduct Quality Assurance verifications of any pipe inspections.</p>

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SUBSECTION: REVISION:	701.04.07 Testing. Replace and rename the subsection with the following: 701.04.07 Pipeline Video Inspection. The Department will measure the quantity in linear feet along the pipe invert of the structure inspected. When inspection above the specified 50 percent is performed due to a disagreement or suspicion of additional distresses and the Department is found in error, the Department will measure the quantity as Extra Work according to Subsection 104.03. However, if additional distresses or non-conformance is found, the Department will not measure the additional inspection for payment.												
SUBSECTION: REVISION:	701.05 PAYMENT. Add the following pay item to the list of pay items: <table border="0" style="width: 100%;"><tr><td style="text-align: left;"><u>Code</u> 23131ER701</td><td style="text-align: center;"><u>Pay Item</u> Pipeline Video Inspection</td><td style="text-align: right;"><u>Pay Unit</u> Linear Foot</td></tr></table>	<u>Code</u> 23131ER701	<u>Pay Item</u> Pipeline Video Inspection	<u>Pay Unit</u> Linear Foot									
<u>Code</u> 23131ER701	<u>Pay Item</u> Pipeline Video Inspection	<u>Pay Unit</u> Linear Foot											
SUBSECTION: TABLE: REVISION:	701.05 PAYMENT PIPE DEFLECTION DETERMINED BY CAMERA TESTING Replace this table with the following table and note: <table border="1" style="margin: 10px auto; width: 80%;"><thead><tr><th colspan="2" style="text-align: center;">PIPE DEFLECTION</th></tr><tr><th style="text-align: center;">Amount of Deflection (%)</th><th style="text-align: center;">Payment</th></tr></thead><tbody><tr><td style="text-align: center;">0.0 to 5.0</td><td style="text-align: center;">100% of the Unit Bid Price</td></tr><tr><td style="text-align: center;">5.1 to 9.9</td><td style="text-align: center;">50% of the Unit Bid Price ⁽¹⁾</td></tr><tr><td style="text-align: center;">10 or greater</td><td style="text-align: center;">Remove and Replace</td></tr></tbody></table> <p>⁽¹⁾ Provide Structural Analysis as indicated above. Based on the structural analysis, pipe may be allowed to remain in place at the reduced unit price.</p>	PIPE DEFLECTION		Amount of Deflection (%)	Payment	0.0 to 5.0	100% of the Unit Bid Price	5.1 to 9.9	50% of the Unit Bid Price ⁽¹⁾	10 or greater	Remove and Replace		
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SUBSECTION: TABLE: REVISION:	701.05 PAYMENT PIPE DEFLECTION DETERMINED BY MANDREL TESTING Delete this table.												
SUBSECTION: REVISION:	713.02.01 Paint. Replace with the following: Conform to Section 842 and Section 846.												
SUBSECTION: REVISION:	713.03 CONSTRUCTION. Replace the first sentence of the second paragraph with the following: On interstates and parkways, and other routes approved by the State Highway Engineer, install pavement striping that is 6 inches in width.												
SUBSECTION: REVISION:	713.03.03 Paint Application. Replace the second paragraph with the following table: <table border="1" style="margin: 10px auto; width: 80%;"><thead><tr><th style="text-align: center;">Material</th><th style="text-align: center;">Paint Application Rate</th><th style="text-align: center;">Glass Beads Application Rate</th></tr></thead><tbody><tr><td style="text-align: center;">4 inch waterborne paint</td><td style="text-align: center;">Min. of 16.5 gallons/mile</td><td style="text-align: center;">Min. of 6 pounds/gallon</td></tr><tr><td style="text-align: center;">6 inch waterborne paint</td><td style="text-align: center;">Min. of 24.8 gallons/mile</td><td style="text-align: center;">Min. of 6 pounds/gallon</td></tr><tr><td style="text-align: center;">6 inch durable waterborne paint</td><td style="text-align: center;">Min. of 36 gallons/mile</td><td style="text-align: center;">Min. of 6 pounds/gallon</td></tr></tbody></table>	Material	Paint Application Rate	Glass Beads Application Rate	4 inch waterborne paint	Min. of 16.5 gallons/mile	Min. of 6 pounds/gallon	6 inch waterborne paint	Min. of 24.8 gallons/mile	Min. of 6 pounds/gallon	6 inch durable waterborne paint	Min. of 36 gallons/mile	Min. of 6 pounds/gallon
Material	Paint Application Rate	Glass Beads Application Rate											
4 inch waterborne paint	Min. of 16.5 gallons/mile	Min. of 6 pounds/gallon											
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SUBSECTION: REVISION:	713.03.04 Marking Removal. Replace the last sentence of the paragraph with the following: Vacuum all marking material and removal debris concurrently with the marking removal operation.									
SUBSECTION: REVISION:	713.05 PAYMENT. Insert the following codes and pay items below the Pavement Striping – Permanent Paint: <table border="0"> <thead> <tr> <th><u>Code</u></th> <th><u>Pay Item</u></th> <th><u>Pay Unit</u></th> </tr> </thead> <tbody> <tr> <td>23159EN</td> <td>Durable Waterborne Marking – 6 IN W</td> <td>Linear Foot</td> </tr> <tr> <td>23160EN</td> <td>Durable Waterborne Marking – 6 IN Y</td> <td>Linear Foot</td> </tr> </tbody> </table>	<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>	23159EN	Durable Waterborne Marking – 6 IN W	Linear Foot	23160EN	Durable Waterborne Marking – 6 IN Y	Linear Foot
<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>								
23159EN	Durable Waterborne Marking – 6 IN W	Linear Foot								
23160EN	Durable Waterborne Marking – 6 IN Y	Linear Foot								
SUBSECTION: REVISION:	714.03 CONSTRUCTION. Insert the following paragraph at the end of the third paragraph: Use Type I Tape for markings on bridge decks, JPC pavement and JPC intersections. Thermoplastic should only be used for markings on asphalt pavement									
SUBSECTION: REVISION:	714.03.07 Marking Removal. Replace the third sentence of the paragraph with the following: Vacuum all marking material and removal debris concurrently with the marking removal operation.									
SUBSECTION: REVISION:	716.01 DESCRIPTION. Insert the following after the first sentence: Energize lighting as soon as it is fully functional and ready for inspection. Ensure that lighting remains operational until the Division of Traffic Operations has provided written acceptance of the electrical work.									
SUBSECTION: REVISION:	716.02.01 Roadway Lighting Materials. Replace the third sentence of the paragraph with the following: Submit for material approval an electronic file of descriptive literature, drawings, and any requested design data.									
SECTION: REVISION:	717 – THERMOPLASTIC INTERSECTION MARKINGS. Replace the section name with the following: INTERSECTION MARKINGS.									
SUBSECTION: REVISION:	717.01 DESCRIPTION: Replace the paragraph with the following: Furnish and install thermoplastic or Type I tape intersection markings (Stop Bars, Crosswalks, Turn Arrows, etc.) Thermoplastic markings may be installed by either a machine applied, screed extrusion process or by applying preformed thermoplastic intersection marking material.									
SUBSECTION: REVISION:	717.02 MATERIALS AND EQUIPMENT. Insert the following subsection: 717.02.06 Type I Tape. Conform to Section 836.									
SUBSECTION: REVISION:	717.03.03 Application. Insert the following part to the subsection: B) Type I Tape Intersection Markings. Apply according to the manufacturer’s recommendations. Cut all tape at pavement joints when applied to concrete surfaces.									

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<p>SUBSECTION: PART: REVISION:</p>	<p>717.03.05 Proving Period. A) Requirements. Insert the following to this section:</p> <p>2) Type I Tape. During the proving period, ensure that the pavement marking material shows no signs of failure due to blistering, excessive cracking, bleeding, staining, discoloration, oil content of the pavement materials, drippings, chipping, spalling, poor adhesion to the pavement, loss of retroreflectivity, vehicular damage, and normal wear. Type I Tape is manufactured off site and warranted by the manufacturer to meet certain retroreflective requirements. As long as the material is adequately bonded to the surface and shows no signs of failure due to the other items listed in Subsection 714.03.06 A) 1), retroreflectivity readings will not be required. In the absence of readings, the Department will accept tape based on a nighttime visual observation.</p>																																							
<p>SUBSECTION: REVISION:</p>	<p>717.03.06 Marking Removal. Replace the third sentence of the paragraph with the following:</p> <p>Vacuum all marking material and removal debris concurrently with the marking removal operation.</p>																																							
<p>SUBSECTION: REVISION:</p>	<p>717.05 PAYMENT. Insert the following bid item codes:</p> <table border="0" data-bbox="386 800 1446 1184"> <thead> <tr> <th><u>Code</u></th> <th><u>Pay Unit</u></th> <th><u>Pay Item</u></th> </tr> </thead> <tbody> <tr> <td>06563</td> <td>Pave Marking – R/R X Bucks 16 IN</td> <td>Linear Foot</td> </tr> <tr> <td>20782NS714</td> <td>Pave Marking Thermo – Bike</td> <td>Each</td> </tr> <tr> <td>23251ES717, 23264ES717</td> <td>Pave Mark TY I Tape X-Walk, Size</td> <td>Linear Foot</td> </tr> <tr> <td>23252ES717, 23265ES717</td> <td>Pave Mark TY I Tape Stop Bar, Size</td> <td>Linear Foot</td> </tr> <tr> <td>23253ES717</td> <td>Pave Mark TY I Tape Cross Hatch</td> <td>Square Foot</td> </tr> <tr> <td>23254ES717</td> <td>Pave Mark TY I Tape Dotted Lane Extension</td> <td>Linear Foot</td> </tr> <tr> <td>23255ES717</td> <td>Pave Mark TY I Tape Arrow, Type</td> <td>Each</td> </tr> <tr> <td>23268ES717-23270ES717</td> <td></td> <td></td> </tr> <tr> <td>23256ES717</td> <td>Pave Mark TY I Tape- ONLY</td> <td>Each</td> </tr> <tr> <td>23257ES717</td> <td>Pave Mark TY I Tape- SCHOOL</td> <td>Each</td> </tr> <tr> <td>23266ES717</td> <td>Pave Mark TY 1 Tape R/R X Bucks-16 IN</td> <td>Linear Foot</td> </tr> <tr> <td>23267ES717</td> <td>Pave Mark TY 1 Tape-Bike</td> <td>Each</td> </tr> </tbody> </table>	<u>Code</u>	<u>Pay Unit</u>	<u>Pay Item</u>	06563	Pave Marking – R/R X Bucks 16 IN	Linear Foot	20782NS714	Pave Marking Thermo – Bike	Each	23251ES717, 23264ES717	Pave Mark TY I Tape X-Walk, Size	Linear Foot	23252ES717, 23265ES717	Pave Mark TY I Tape Stop Bar, Size	Linear Foot	23253ES717	Pave Mark TY I Tape Cross Hatch	Square Foot	23254ES717	Pave Mark TY I Tape Dotted Lane Extension	Linear Foot	23255ES717	Pave Mark TY I Tape Arrow, Type	Each	23268ES717-23270ES717			23256ES717	Pave Mark TY I Tape- ONLY	Each	23257ES717	Pave Mark TY I Tape- SCHOOL	Each	23266ES717	Pave Mark TY 1 Tape R/R X Bucks-16 IN	Linear Foot	23267ES717	Pave Mark TY 1 Tape-Bike	Each
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<p>SUBSECTION: REVISION:</p>	<p>805.01 GENERAL. Replace the second paragraph with the following:</p> <p>The Department’s List of Approved Materials includes the Aggregate Source List, the list of Class A and Class B Polish-Resistant Aggregate Sources, and the Concrete Restriction List.</p>																																							
<p>SUBSECTION: REVISION:</p>	<p>805.04 CONCRETE. Replace the “AASHTO T 160” reference in first sentence of the third paragraph with “KM 64-629”</p>																																							
<p>SUBSECTION: TABLE: PART: REVISION:</p>	<p>805.15 GRADATION ACCEPTANCE OF NON-SPECIFICATION COARSE AGGREGATE. AGGREGATE SIZE USE Cement Concrete Structures and Incidental Construction Replace “9-M for Waterproofing Overlays” with “8 or 9-M for Waterproofing Overlays”</p>																																							

Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition (Effective with the May 22, 2009 Letting)

SUBSECTION: 805.15 GRADATION ACCEPTANCE OF NON-SPECIFICATION COARSE AGGREGATE.
REVISION: Replace the "SIZES OF COARSE AGGREGATES" table in with the following:

Aggregate Size		AMOUNTS FINER THAN EACH LABORATORY SIEVE (SQUARE OPENINGS) PERCENTAGE BY WEIGHT																
		Sieve	4 inch	3 1/2 inch	3 inch	2 1/2 inch	2 inch	1 1/2 inch	1 inch	3/4 inch	1/2 inch	3/8 inch	No. 4	No. 8	No. 16	No. 30	No. 100	No. 200
Nominal ⁽¹⁾ Maximum Aggregate Size		100	90-100	100	25-60	35-70	0-15	0-15	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
1	3 1/2 inch	100	90-100	100	25-60	35-70	0-15	0-15	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
2	2 1/2 inch			100	90-100	40-90	0-15	0-15	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
23	2 inch			100	100	90-100	35-70	0-15	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
3	2 inch				100	90-100	35-70	0-15	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
357	2 inch				100	95-100	90-100	20-55	0-15	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
4	1 1/2 inch				100	95-100	90-100	20-55	0-15	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
467	1 1/2 inch				100	95-100	90-100	20-55	0-15	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
5	1 inch				100	90-100	90-100	20-55	0-10	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
57	1 inch				100	95-100	95-100	25-60	0-10	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
610	1 inch				100	85-100	40-75	15-40	0-10	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
67	3/4 inch				100	90-100	90-100	20-55	0-10	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
68	3/4 inch				100	90-100	90-100	30-65	5-25	0-10	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
710	3/4 inch				100	80-100	30-75	0-30	0-10	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
78	1/2 inch				100	90-100	40-75	5-25	0-10	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
8	3/8 inch				100	85-100	10-30	0-10	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
9-M	3/8 inch				100	75-100	0-25	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
10 ⁽²⁾	No. 4				100	85-100	100	40-90	10-40	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
11 ⁽²⁾	No. 4				100	40-90	10-40	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
DENSE GRADED AGGREGATE ⁽³⁾	3/4 inch			100	70-100	50-80	30-65	10-40	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5
CRUSHED STONE BASE ⁽⁴⁾	1 1/2 inch			100	60-95	30-70	15-55	5-20	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5	0-5

⁽¹⁾ Gradation performed by wet sieve KM 64-620 or AASHTO T 11/T 27.

⁽²⁾ Sizes shown for convenience and are not to be considered as coarse aggregates.

⁽³⁾ Nominal Maximum Size is the largest sieve on the gradation table for an aggregate size on which any material may be retained.

Note: The Department will allow blending of same source/same type aggregate when precise procedures are used such as cold feed, belt, or equivalent and combining of sizes or types of aggregate using the weigh hopper at concrete plants or controlled feed belts at the pugmill to obtain designated sizes.

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
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<p>SUBSECTION: REVISION:</p>	<p>805.16 SAMPLING AND TESTING. Replace the "AASHTO T 160" method with the "KM 64-629" method for the Concrete Beam Expansion Test. Replace the "ASTM D 3042" method with the "KM 64-625" method for Insoluble Residue.</p>									
<p>SUBSECTION: REVISION:</p>	<p>810.04.01 Coating Requirements. Replace the "Subsection 806.07" references with "Subsection 806.06"</p>									
<p>SUBSECTION: PART: REVISION:</p>	<p>810.06.01 Polyvinyl Chloride (PVC) Pipe. B) Culvert and Entrance Pipe. Replace the title with the following: B) Culvert Pipe, Storm Sewer, and Entrance Pipe.</p>									
<p>SUBSECTION: REVISION:</p>	<p>837.03 APPROVAL. Replace the last sentence with the following: The Department will sample and evaluate for approval each lot of thermoplastic material delivered for use per contract prior to installation of the thermoplastic material. Do not allow the installation of thermoplastic material until it has been approved by the Division of Materials. Allow the Department a minimum of 10 working days to evaluate and approve thermoplastic material.</p>									
<p>SUBSECTION: REVISION:</p>	<p>837.03.01 Composition. COMPOSITION Table: Replace <table border="1" data-bbox="391 909 1289 997"> <tr> <td>Lead Chromate</td> <td>0.0 max.</td> <td>4.0 min.</td> </tr> <tr> <td>with</td> <td></td> <td></td> </tr> <tr> <td>Heavy Metals Content</td> <td colspan="2">Comply with 40 CFR 261</td> </tr> </table> </p>	Lead Chromate	0.0 max.	4.0 min.	with			Heavy Metals Content	Comply with 40 CFR 261	
Lead Chromate	0.0 max.	4.0 min.								
with										
Heavy Metals Content	Comply with 40 CFR 261									
<p>SECTION: REVISION:</p>	<p>DIVISION 800 MATERIAL DETAILS Add the following section in Division 800 SECTION 846 – DURABLE WATERBORNE PAINT 846.01 DESCRIPTION. This section covers quick-drying durable waterborne pavement striping paint for permanent applications. The paint shall be ready-mixed, one-component, 100% acrylic waterborne striping paint suitable for application on such traffic-bearing surfaces as Portland cement concrete, bituminous cement concrete, asphalt, tar, and previously painted areas of these surfaces. 846.02 Approval. Select materials that conform to the composition requirements below. Provide independent analysis data and certification for each formulation stating the total concentration of each heavy metal present, the test method used for each determination, and compliance to 40 CFR 261 for leachable heavy metals content. Submit initial samples for approval before beginning striping operations. The initial sample may be sent from the manufacture of the paint. The Department will randomly sample and evaluate the paint each week that the striping operations are in progress. The non-volatile portion of the vehicle shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis. The acrylic resin used shall be a 100% cross-linking acrylic as evidenced by infrared peaks at wavelengths 1568, 1624, and 1672 cm-1 with intensities equal to those produced by an acrylic resin known to be 100% cross-linking.</p>									

**Supplemental Specifications to The Standard Specifications
for Road and Bridge Construction, 2008 Edition**
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PAINT COMPOSITION		
Property and Test Method	Yellow	White
Daytime Color (CIELAB) Spectrophotometer using illuminant D65 at 45° illumination and 0° viewing with a 2° observer	L* 81.76 a* 19.79 b* 89.89 Maximum allowable variation 2.0ΔE*	L* 93.51 a* -1.01 b* 0.70 Maximum allowable variation 2.0ΔE*
Nighttime Color (CIELAB) Spectrophotometer using illuminant A at 45° illumination and 0° viewing with a 2° observer	L* 86.90 a* 24.80 b* 95.45 Maximum allowable variation 2.0ΔE*	L* 93.45 a* -0.79 b* 0.43 Maximum allowable variation 2.0ΔE*
Heavy Metals Content	Comply with 40 CFR 261	Comply with 40 CFR 261
Titanium Dioxide ASTM D 4764	NA	10% by weight of pigment min.
VOC ASTM D 2369 and D 4017	1.25 lb/gal max.	1.25 lb/gal max.
Contrast Ratio (at 15 mils wft)	0.97	0.99

846.02.01 Manufacturers Certification. Provide a certification of analysis for each lot of traffic paint produced stating conformance to the requirements of this section. Report the formulation identification, traffic paint trade name, color, date of manufacturer, total quantity of lot produced, actual quantity of traffic paint represented, sampling method utilized to obtain the samples, and data for each sample tested to represent each lot produced.

846.03 ACCEPTANCE PROCEDURES FOR NON-SPECIFICATION DURABLE WATERBORNE PAVEMENT STRIPING PAINT. When non-specification paint is inadvertently incorporated into the work the Department will accept the material with a reduction in pay. The percentage deduction is cumulative based on its compositional properties, but will not exceed 60 percent. The Department will calculate the payment reduction on the unit bid price for the routes where the non-specification paint was used.

DURABLE WATERBORNE PAVEMENT STRIPING PAINT REDUCTION SCHEDULE						
Non-conforming Property	Resin	Color	Contrast	TiO₂	VOC	Heavy Metals Content
Reduction Rate	60%	10%	10%	10%	60%	60%

10W

SPECIAL NOTE FOR WATERBLASTING STRIPING REMOVAL

This Special Note will apply where indicated on the plans or in the proposal. Section references herein are to the Department’s 2008 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Remove pavement striping, temporary or permanent, from asphalt or concrete pavement using ultra-high pressure water.

2.0 MATERIALS AND EQUIPMENT.

2.1 Truck Mounted Ultra-high Pressure Pump and Water Tank. Use a truck having a separate hydrostatic transmission capable of speed increments of ±1 foot per minute at operator’s discretion. Use a pump capable of delivering a minimum of 30,000 psi to a bumper mounted deck containing an operator controlled rotating manifold that is speed variable up to at least 3,000 rpm and accepts interchangeable waterjet nozzles. Provide all necessary waterjet nozzle setups and patterns to ensure clean sufficient removal. Ensure the deck’s discharge directs the water and removal material in a manner that is not hazardous to vehicles or pedestrians.

2.2 Water. Conform to Section 803.

3.0 CONSTRUCTION. Before starting work, provide the Engineer with a contractor work history of 2 projects where striping removal was completed acceptably for a similar type of pavement. If no history is available, complete 1,000 linear feet of striping removal and obtain the Engineer’s approval before continuing.

Conduct striping removal under lane closures meeting the conditions of the MUTCD and Kentucky Standard Drawings and Specifications. Waterblast to remove temporary or permanent striping completely as the Engineer directs. Do not damage the pavement in any way and protect all joint seals. If damage is observed, stop the removal process until the operator can make changes and demonstrate acceptable striping removal. Repair any damage to the pavement. Vacuum all marking material and removal debris concurrently with the blasting operation.

4.0 MEASUREMENT. The Department will measure the quantity in linear feet. When the removal area’s width exceeds 8 inches and a second pass is required, the Department will measure the length of the additional pass for Payment. The Department will not measure for payment additional passes for widths of 8 inches or less or passes to further eradicate markings. The Department will not measure repair of damaged pavement for payment and will consider it incidental to this item of work.

5.0 PAYMENT. 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>
---	Waterblast Stripe Removal	Linear Foot

The Department will consider payment as full compensation for all work required under this note.

January 1, 2008

STANDARD DRAWINGS THAT APPLY
FE01 005-0068-012-014
FE01 005-0068-013-015

DROP BOX INLET TYPE 13 AND TYPE 16 (FRAME & GRATE DETAILS)	RDB-014-05
SECURITY DEVICES FOR FRAMES, GRATES AND LIDS	RDX-160-05
SILT TRAP - TYPE A	RDX-220-04
SILT TRAP - TYPE B	RDX-225
SILT TRAP - TYPE C	RDX-230
CURVE WIDENING AND SUPERELEVATION TRANSITIONS	RGS-001-06
SUPERELEVATION FOR MULTILANE PAVEMENTS	RGS-002-05
MISCELLANEOUS STANDARDS PART 1	RGX-001-05
CURB AND GUTTER, CURBS AND VALLEY GUTTER.....	RPM-100-09
CONCRETE ENTRANCE PAVEMENT AND SIDEWALK.....	RPM-150-06
CONCRETE ENTRANCE PAVEMENT AND SIDEWALK.....	RPM-152-06
TYPICAL INSTALLATIONS FOR SIDEWALK RAMPS	RPM-160-03
NON-REINFORCED CONCRETE PAVEMENT.....	RPN-015-04
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPN-020-03
CONCRETE PAVEMENT JOINT DETAILS.....	RPS-010-10
EXPANSION AND CONTRACTION JOINTS - LOAD TRANSFER ASSEMBLIES	RPS-020-13
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-030-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-031-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-032-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-033-06
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-034-06
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-035-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-036-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-037-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-038-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING.....	RPS-039-05
HOT POURED ELASTIC JOINT SEALS FOR CONCRETE PAVEMENT.....	RPX-015-03
SILICONE RUBBER SEALS USED IN PORTLAND CONCRETE PAVEMENT	RPX-020-05
NETTING.....	RRE-002-04
PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS	TPM-100-01
PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS	TPM-105-01
PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS	TPM-110-01
PAVEMENT MARKER ARRANGEMENTS TWO-LANE TWO-WAY ROADWAYS.....	TPM-115-01
PAVEMENT MARKER ARRANGEMENT TWO-LANE TO FOUR-LANE TRANSITION.....	TPM-120-01
PAVEMENT MARKER ARRANGEMENTS TWO-WAY LEFT TURN LANE	TPM-140-01
PAVEMENT MARKER ARRANGEMENT CHANNELIZED INTERSECTION	TPM-145-01
LANE CLOSURE TWO-LANE HIGHWAY CASE I.....	TTC-100-01
LANE CLOSURE TWO-LANE HIGHWAY CASE II.....	TTC-105-01
LANE CLOSURE MULTI-LANE HIGHWAY CASE I.....	TTC-115-01

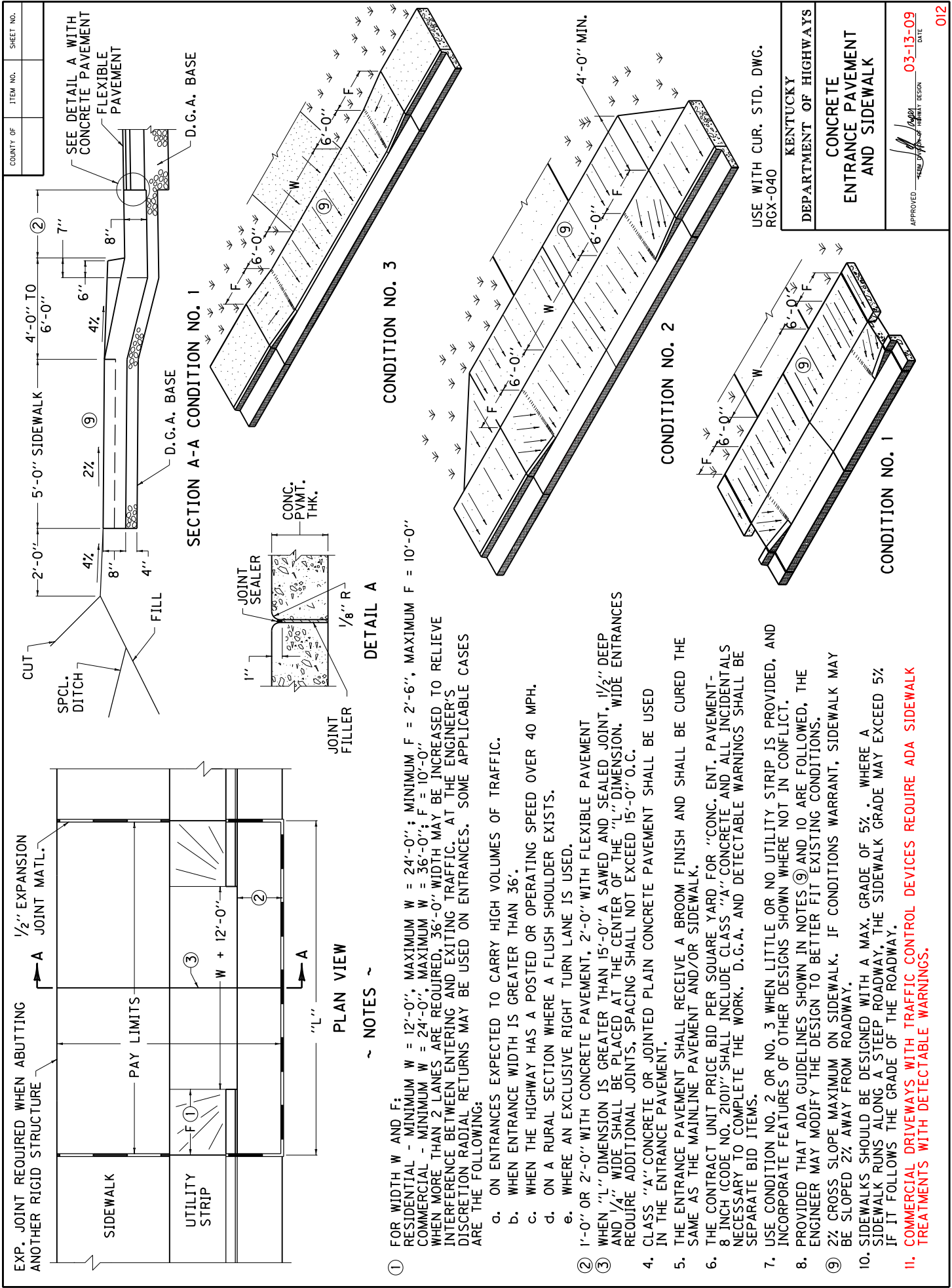
Standard Drawings that Apply

FE01 005-0068-012-014

FE01 005-0068-013-015

Page 2 of 2

SHOULDER CLOSURE.....	TTC-135-01
POST SPLICING DETAIL	TTD-110-01
WORK ZONE SPEED LIMIT AND DOUBLE FINE SIGNS.....	TTD-120
PAVEMENT CONDITION WARNING SIGNS.....	TTD-125
MOBILE OPERATION FOR PAINT STRIPING CASE I.....	TTS-100-01
MOBILE OPERATION FOR PAINT STRIPING CASE II.....	TTS-105-01
MOBILE OPERATION FOR PAINT STRIPING CASE III	TTS-110-01
MOBILE OPERATION FOR PAINT STRIPING CASE IV	TTS-115-01



USE WITH CUR. STD. DWG.
RGX-040

KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE
ENTRANCE PAVEMENT
AND SIDEWALK

APPROVED: *[Signature]* DATE: 03-13-09
012

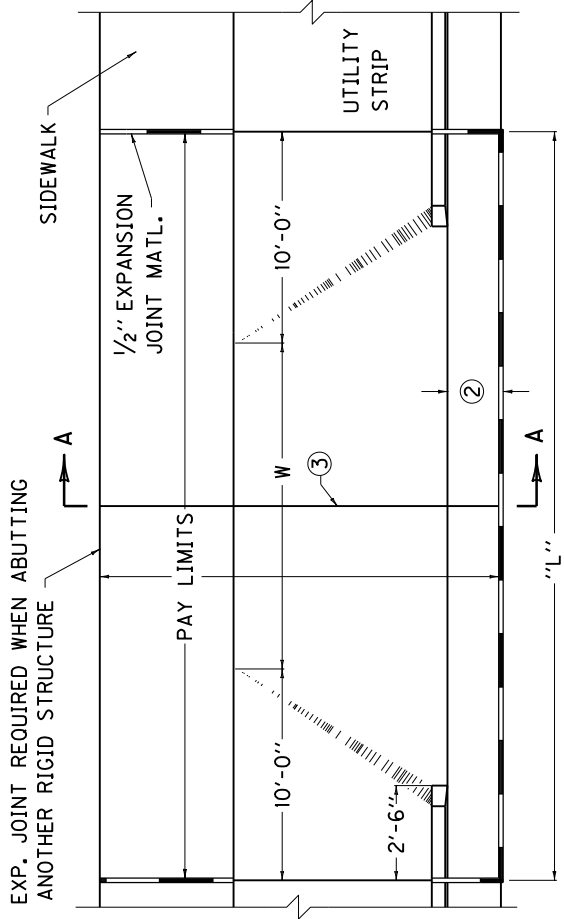
NOTES ~

- ① FOR WIDTH W AND F:
RESIDENTIAL - MINIMUM W = 12'-0", MAXIMUM W = 24'-0"; MINIMUM F = 2'-6", MAXIMUM F = 10'-0"
COMMERCIAL - MINIMUM W = 24'-0", MAXIMUM W = 36'-0"; F = 10'-0"
WHEN MORE THAN 2 LANES ARE REQUIRED, 36'-0" WIDTH MAY BE INCREASED TO RELIEVE INTERFERENCE BETWEEN ENTERING AND EXITING TRAFFIC. AT THE ENGINEER'S DISCRETION RADIAL RETURNS MAY BE USED ON ENTRANCES. SOME APPLICABLE CASES ARE THE FOLLOWING:
 - a. ON ENTRANCES EXPECTED TO CARRY HIGH VOLUMES OF TRAFFIC.
 - b. WHEN ENTRANCE WIDTH IS GREATER THAN 36'.
 - c. WHEN THE HIGHWAY HAS A POSTED OR OPERATING SPEED OVER 40 MPH.
 - d. ON A RURAL SECTION WHERE A FLUSH SHOULDER EXISTS.
 - e. WHERE AN EXCLUSIVE RIGHT TURN LANE IS USED.
 - ② 1'-0" OR 2'-0" WITH CONCRETE PAVEMENT, 2'-0" WITH FLEXIBLE PAVEMENT
 - ③ WHEN "L" DIMENSION IS GREATER THAN 15'-0" A SAWED AND SEALED JOINT, 1/2" DEEP AND 1/4" WIDE SHALL BE PLACED AT THE CENTER OF THE "L" DIMENSION. WIDE ENTRANCES REQUIRE ADDITIONAL JOINTS, SPACING SHALL NOT EXCEED 15'-0" O.C.
 4. CLASS "A" CONCRETE OR JOINTED PLAIN CONCRETE PAVEMENT SHALL BE USED IN THE ENTRANCE PAVEMENT.
 5. THE ENTRANCE PAVEMENT SHALL RECEIVE A BROOM FINISH AND SHALL BE CURED THE SAME AS THE MAINLINE PAVEMENT AND/OR SIDEWALK.
 6. THE CONTRACT UNIT PRICE BID PER SQUARE YARD FOR "CONC. ENT. PAVEMENT-8 INCH (CODE NO. 210)" SHALL INCLUDE CLASS "A" CONCRETE AND ALL INCIDENTALS NECESSARY TO COMPLETE THE WORK. D.G.A. AND DETECTABLE WARNINGS SHALL BE SEPARATE BID ITEMS.
 7. USE CONDITION NO. 2 OR NO. 3 WHEN LITTLE OR NO UTILITY STRIP IS PROVIDED, AND INCORPORATE FEATURES OF OTHER DESIGNS SHOWN WHERE NOT IN CONFLICT.
 8. PROVIDED THAT ADA GUIDELINES SHOWN IN NOTES ⑨ AND 10 ARE FOLLOWED, THE ENGINEER MAY MODIFY THE DESIGN TO BETTER FIT EXISTING CONDITIONS.
 - ⑨ 2% CROSS SLOPE MAXIMUM ON SIDEWALK. IF CONDITIONS WARRANT, SIDEWALK MAY BE SLOPED 2% AWAY FROM ROADWAY.
 10. SIDEWALKS SHOULD BE DESIGNED WITH A MAX. GRADE OF 5%. WHERE A SIDEWALK RUNS ALONG A STEEP ROADWAY, THE SIDEWALK GRADE MAY EXCEED 5% IF IT FOLLOWS THE GRADE OF THE ROADWAY.
- 11. COMMERCIAL DRIVEWAYS WITH TRAFFIC CONTROL DEVICES REQUIRE ADA SIDEWALK TREATMENTS WITH DETECTABLE WARNINGS.**

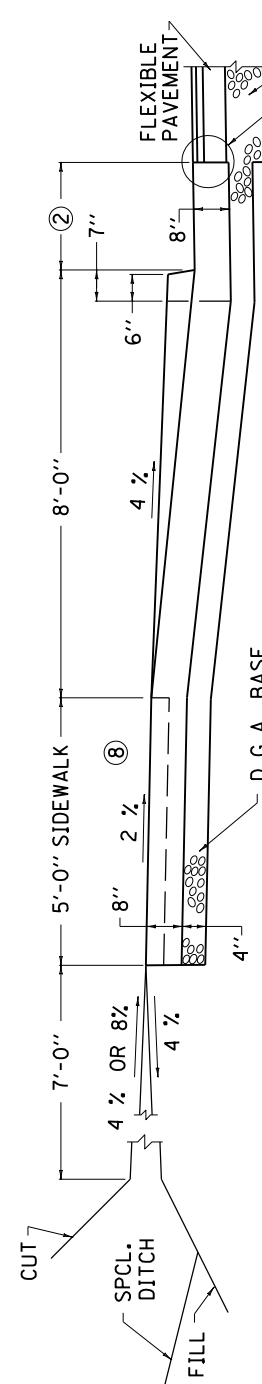
COUNTY OF	ITEM NO.	SHEET NO.

~ NOTES ~

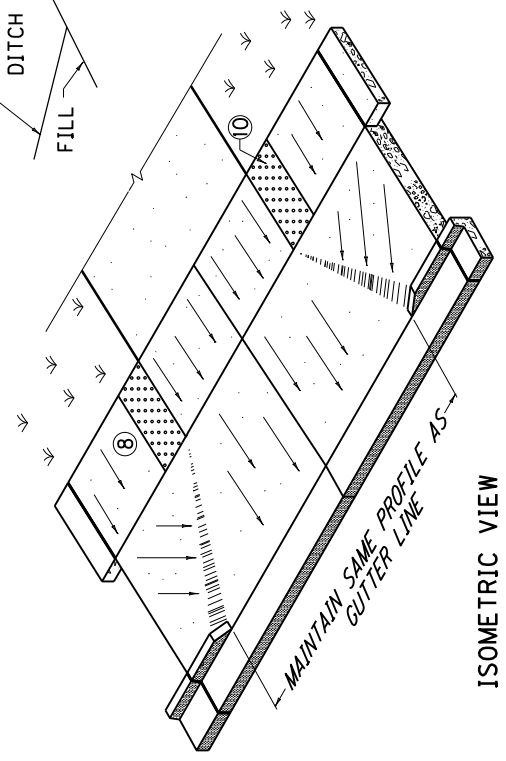
- ① FOR WIDTH W: COMMERCIAL - MINIMUM W = 24'-0", MAXIMUM W = 36'-0" WHEN MORE THAN 2 LANES ARE REQUIRED, 36'-0" WIDTH MAY BE INCREASED TO RELIEVE INTERFERENCE BETWEEN ENTERING AND EXITING TRAFFIC. AT THE ENGINEER'S DISCRETION RADIAL RETURNS MAY BE USED ON ENTRANCES. SOME APPLICABLE CASES ARE THE FOLLOWING:
 - a. ON ENTRANCES EXPECTED TO CARRY HIGH VOLUMES OF TRAFFIC.
 - b. WHEN ENTRANCE WIDTH IS GREATER THAN 36'.
 - c. WHEN THE HIGHWAY HAS A POSTED OR OPERATING SPEED OVER 40 MPH.
 - d. ON A RURAL SECTION WHERE A FLUSH SHOULDER EXISTS.
 - e. WHERE AN EXCLUSIVE RIGHT TURN LANE IS USED.
- ② 1'-0" OR 2'-0" WITH CONCRETE PAVEMENT, 2'-0" WITH FLEXIBLE PAVEMENT.
- ③ WHEN "L" DIMENSION IS GREATER THAN 15'-0" A SAWED AND SEALED JOINT, 1/2" DEEP AND 1/4" WIDE SHALL BE PLACED AT THE CENTER OF THE "L" DIMENSION. WIDE ENTRANCES REQUIRE ADDITIONAL JOINTS, SPACING SHALL NOT EXCEED 15'-0" O.C. CLASS "A" CONCRETE OR JOINTED PLAIN CONCRETE PAVEMENT SHALL BE USED IN THE ENTRANCE PAVEMENT.
5. THE ENTRANCE PAVEMENT SHALL RECEIVE A BROOM FINISH AND SHALL BE CURED THE SAME AS THE MAINLINE PAVEMENT AND/OR SIDEWALK.
6. THE CONTRACT UNIT PRICE BID PER SQUARE YARD FOR "CONC. ENT. PAVEMENT-8 INCH (CODE NO. 2101)" SHALL INCLUDE CLASS "A" CONCRETE AND ALL INCIDENTALS NECESSARY TO COMPLETE THE WORK, D.G.A. AND DETECTABLE WARNINGS SHALL BE SEPARATE BID ITEMS.
7. PROVIDING THAT ADA GUIDELINES SHOWN IN NOTE ⑧ AND 9 ARE FOLLOWED, THE ENGINEER MAY MODIFY THE DESIGN TO BETTER FIT EXISTING CONDITIONS.
- ⑧ 2% CROSS SLOPE MAXIMUM ON SIDEWALK.
9. SIDEWALKS SHOULD BE DESIGNED WITH A MAX. GRADE OF FIVE PERCENT. WHERE A SIDEWALK RUNS ALONG A STEEP ROADWAY, THE SIDEWALK GRADE MAY EXCEED FIVE PERCENT IF IT FOLLOWS THE GRADE OF THE ROADWAY.
- ⑩ COMMERCIAL DRIVEWAYS WITH TRAFFIC CONTROL DEVICES REQUIRE ADA SIDEWALK TREATMENTS WITH DETECTABLE WARNINGS.



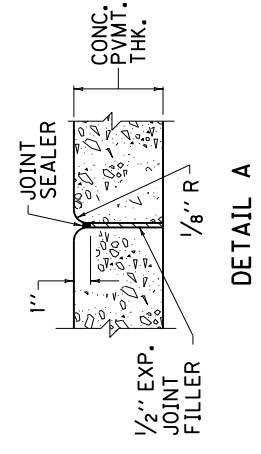
PLAN VIEW



SECTION A-A



ISOMETRIC VIEW

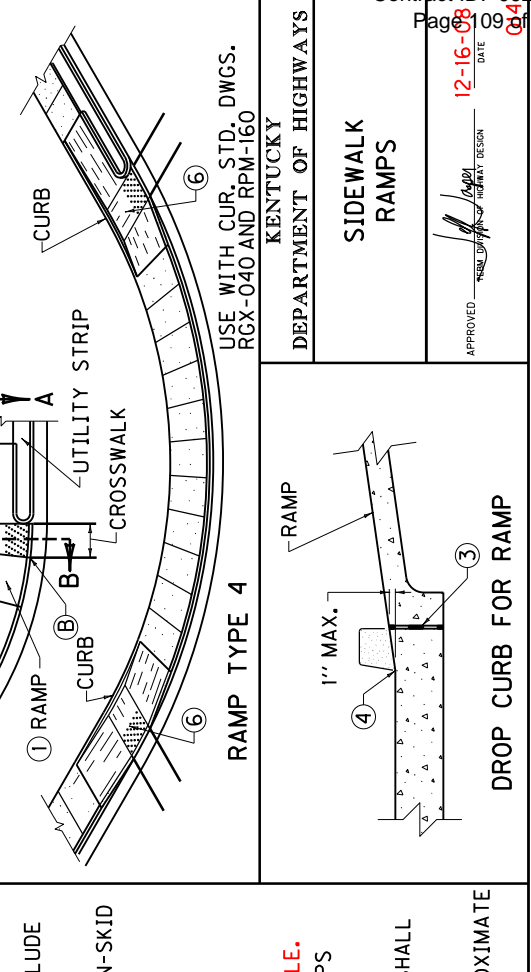
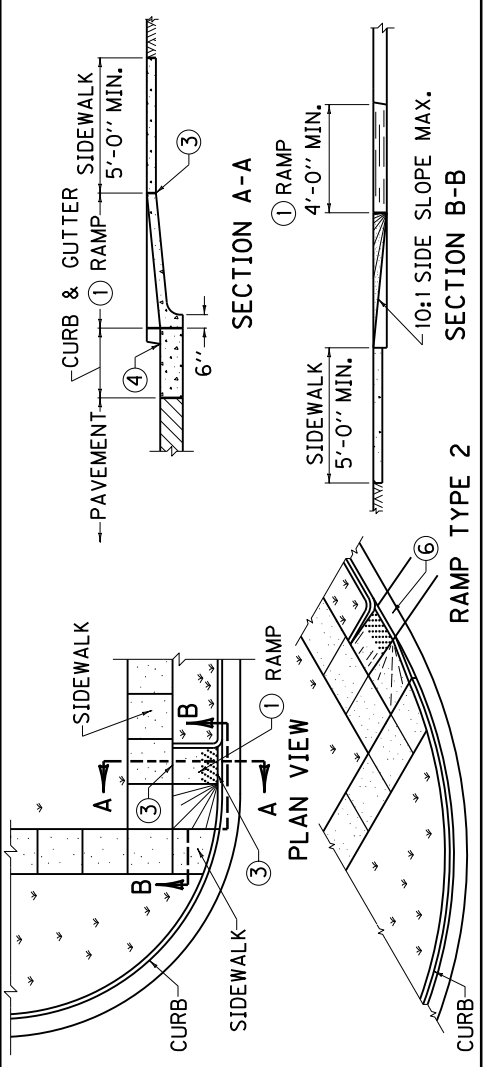
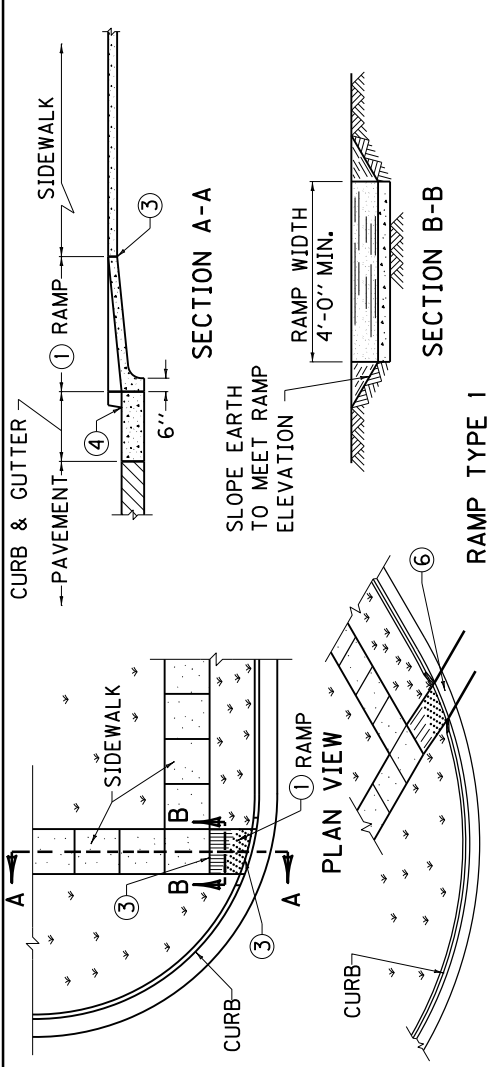
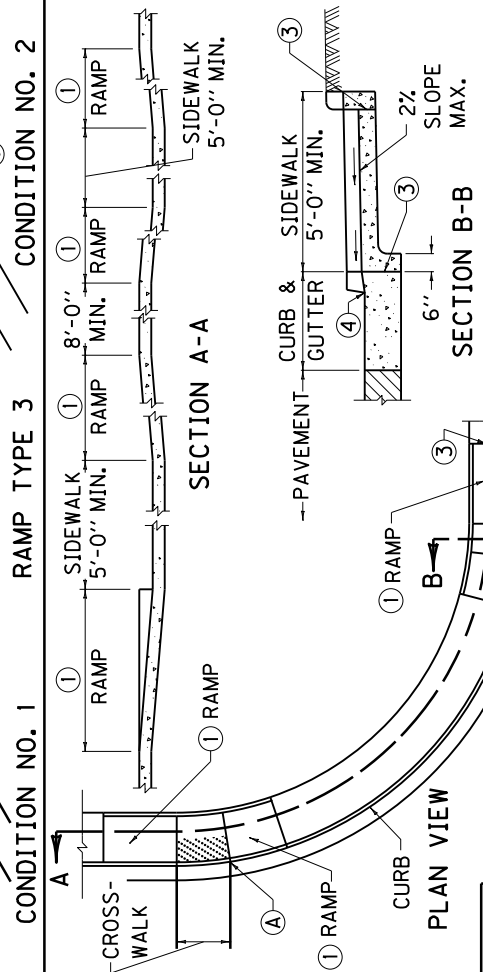
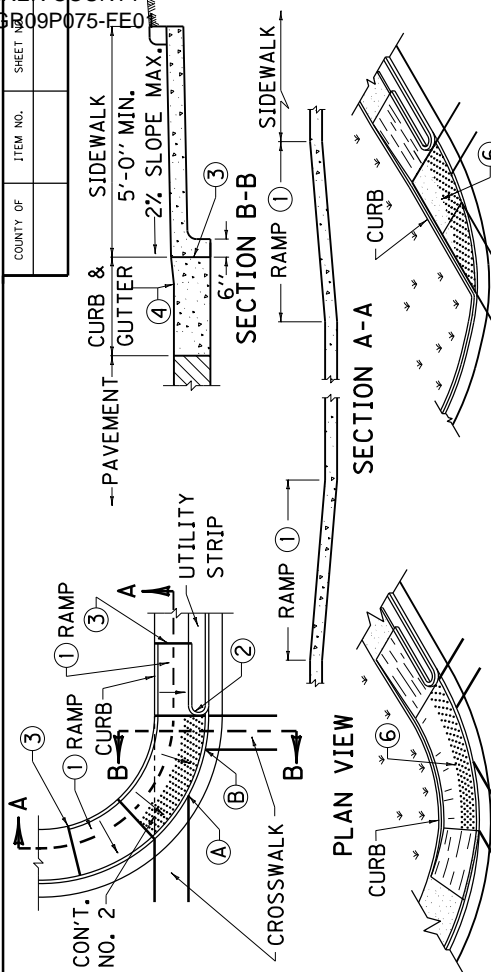


DETAIL A

SEE DETAIL A WITH CONCRETE PAVEMENT D.G.A. BASE
USE WITH CUR. STD. DWG. RCX-040

KENTUCKY
DEPARTMENT OF HIGHWAYS
CONCRETE ENTRANCE PAVEMENT AND SIDEWALK

APPROVED: *[Signature]* DATE: 03-13-06
DESIGNED BY: *[Signature]* DATE: 03-13-06



NOTES

RAMPS SHALL BE PAID PER SQ. YARD OF 4" CONC. SIDEWALK AND THE UNIT PRICE SHALL INCLUDE ALL MATERIALS, FORMS, CURB BEHIND RAMP AND LANDING, AND INCIDENTALS NECESSARY FOR CONSTRUCTION.

THE RAMP SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE. A BROOM FINISH OR EQUAL NON-SKID FINISH IS REQUIRED. **DETECTABLE WARNINGS SHALL BE A SEPARATE BID ITEM.**

THE NORMAL GUTTER LINE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP. RAMPS SHOULD BE LOCATED WITHIN MARKED LIMITS OF CROSSWALKS.

USE RAMP TYPE 3 WHEN POINT A TO B IS LESS THAN 20 FEET.

USE RAMP TYPE 4 WHEN POINT A TO B IS 20 FEET OR MORE.

① CURB RAMP GRADE SHALL NOT EXCEED 12:1, CROSS SLOPE SHALL NOT EXCEED 2%.

ON RETROFIT CURB RAMPS, GRADES OF 12.5% FOR 2'-0" OR 10% FOR 5'-0" ARE PERMISSIBLE.

② CURB RETURN REQUIRED WHEN UTILITY STRIP IS 4 FEET OR GREATER. FOR UTILITY STRIPS LESS THAN 4 FEET, THE AREA IS TO BE SURFACED WITH SIDEWALK WITHIN THE RAMP.

③ 1/2" EXPANSION JOINT AT BACK OF CURB LINE AND AT SIDEWALK LINE.

④ NO BUMP PERMITTED. SAME SLOPE AS RAMP AND NOT TO EXCEED 1" IN HEIGHT. RAMPS SHALL BE CONSTRUCTED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES.

5. ALL SIDEWALK RAMPS REQUIRE DETECTABLE WARNINGS.

⑥ LANDINGS WILL PROVIDE A LEVEL AREA (LESS THAN 2% GRADE OR CROSS SLOPE) AT APPROXIMATE STREET ELEVATION. A 4 FOOT SQUARE LEVEL LANDING IS THE REQUIRED MINIMUM.

COUNTY OF	ITEM NO.	SHEET NO.

USE WITH CUR. STD. DWGS. RGX-040 AND RPM-160

KENTUCKY DEPARTMENT OF HIGHWAYS

SIDEWALK RAMPS

APPROVED [Signature] KENTUCKY DEPARTMENT OF HIGHWAYS

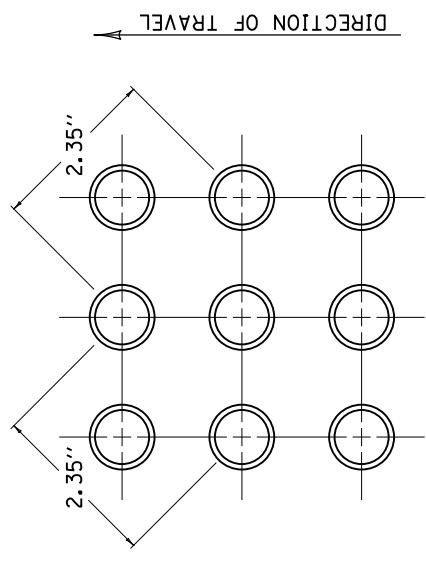
DATE 12-16-08

CON'T. NO. 2

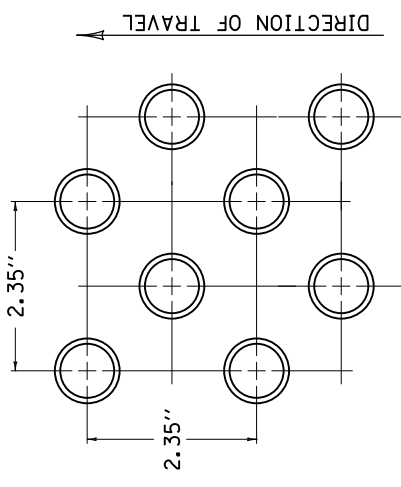
CON'T. NO. 2

CON'T. NO. 2

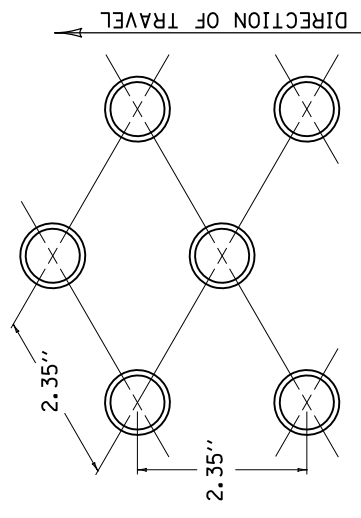
COUNTY OF	ITEM NO.	SHEET NO.



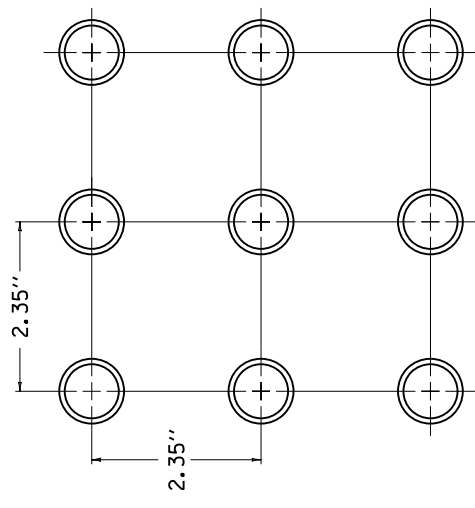
SQUARE PATTERN (PARALLEL ALIGNMENT)



SQUARE PATTERN (DIAGONAL ALIGNMENT)



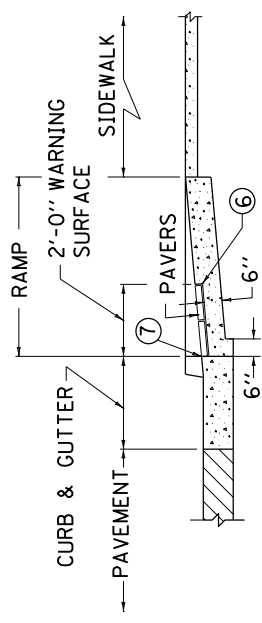
TRIANGULAR PATTERN



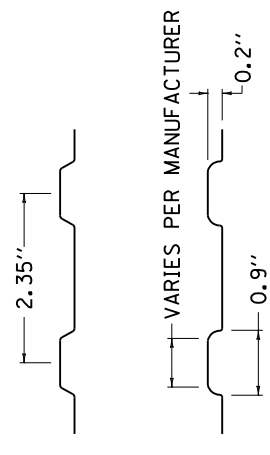
SQUARE PATTERN

NOTES

- BID ITEM AND UNIT TO BID.
DETECTABLE WARNINGS - SQ. FT.
- 1. LANDINGS WILL PROVIDE A LEVEL AREA (LESS THAN 2% GRADE OR CROSS SLOPE) AT APPROXIMATE STREET ELEVATION. A 4 FOOT SQUARE LEVEL LANDING IS THE REQUIRED MINIMUM.
- 2. ALL SIDEWALK RAMPS REQUIRE DETECTABLE WARNINGS.
- 3. **COMMERCIAL DRIVEWAYS WITH TRAFFIC CONTROL DEVICES REQUIRE ADA SIDEWALK TREATMENTS WITH DETECTABLE WARNINGS.**
- 4. PAVERS SHALL BE CONCRETE WITH A MINIMUM THICKNESS OF 2".
- 5. PAVERS SHALL BE A COLOR HOMOGENOUS THROUGHOUT THE PAVER, THAT COLOR SHALL CONTRAST VISUALLY WITH THE ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE DEPARTMENT WILL ALLOW EITHER YELLOW OR RED AS COLORS.
- ⑥ PAVERS TO BE SET IN MORTAR.
- ⑦ DETECTABLE WARNING SURFACE BEGINS AT BACK OF CURB.



TYPICAL DETECTABLE WARNING INSTALLATION

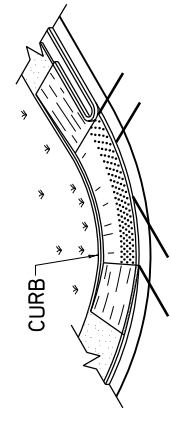


DETECTABLE WARNINGS PROFILE

USE WITH CUR. STD. DWGS.
RPM-160 AND RPM-170

KENTUCKY
DEPARTMENT OF HIGHWAYS
DETECTABLE
WARNINGS

APPROVED: [Signature]
DATE 03-13-09
DESIGN



TYPICAL PLACEMENT PARALLEL CURB RAMPS

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)
- III. Payment of Predetermined Minimum Wages
- IV. Statements and Payrolls

I. APPLICATION

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

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

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

II. NONDISCRIMINATION OF EMPLOYEES

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

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

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (between forty and seventy); 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 (between forty and seventy). 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, disability or age (between forty and seventy), except that such notice or advertisement may indicate a preference, limitation, or specification based on religion, or national origin when religion, or national origin is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual

because of his race, color, religion, national origin, sex, disability or age (between forty and seventy), 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.

III. PAYMENT OF PREDETERMINED MINIMUM WAGES

1. These special provisions are supplemented elsewhere in the contract by special provisions which set forth certain predetermined minimum wage rates. The contractor shall pay not less than those rates.

2. The minimum wage determination schedule shall be posted by the contractor, in a manner prescribed by the Department of Highways, at the site of the work in prominent places where it can be easily seen by the workers.

IV. STATEMENTS AND PAYROLLS

1. All contractors and subcontractors affected by the terms of KRS 337.505 to 337.550 shall keep full and accurate payroll records covering all disbursements of wages to their employees to whom they are required to pay not less than the prevailing rate of wages. Payrolls and basic records relating thereto will be maintained during the course of the work and preserved for a period of one (1) year from the date of completion of this contract.

2. The payroll records shall contain the name, address and social security number of each employee, his correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid.

3. The contractor shall make his daily records available at the project site for inspection by the State Department of Highways contracting office or his authorized representative.

Periodic investigations shall be conducted as required to assure compliance with the labor provisions of the contract. Interrogation of employees and officials of the contractor shall be permitted during working hours.

Aggrieved workers, Highway Managers, Assistant District Engineers, Resident Engineers and Project Engineers shall report all complaints and violations to the Division of Contract Procurement.

The contractor shall be notified in writing of apparent violations. The contractor may correct the reported violations and notify the Department of Highways of the action taken or may request an informal hearing. The request for hearing shall be in writing within ten (10) days after receipt of the notice of the reported violation. The contractor may submit

records and information which will aid in determining the true facts relating to the reported violations.

Any person or organization aggrieved by the action taken or the findings established as a result of an informal hearing by the Division of Contract Procurement may request a formal hearing.

4. The wages of labor shall be paid in legal tender of the United States, except that this condition will be considered satisfied if payment is made by a negotiable check, on a solvent bank, which may be cashed readily by the employee in the local community for the full amount, without discount or collection charges of any kind. Where checks are used for payments, the contractor shall make all necessary arrangements for them to be cashed and shall give information regarding such arrangements.

5. No fee of any kind shall be asked or accepted by the contractor or any of his agents from any person as a condition of employment on the project.

6. No laborers shall be charged for any tools used in performing their respective duties except for reasonably avoidable loss or damage thereto.

7. Every employee on the work covered by this contract shall be permitted to lodge, board, and trade where and with whom he elects and neither the contractor nor his agents, nor his employees shall directly or indirectly require as a condition of employment that an employee shall lodge, board or trade at a particular place or with a particular person.

8. Every employee on the project covered by this contract shall be an employee of either the prime contractor or an approved subcontractor.

9. No charge shall be made for any transportation furnished by the contractor or his agents to any person employed on the work.

10. No individual shall be employed as a laborer or mechanic on this contract except on a wage basis, but this shall not be construed to prohibit the rental of teams, trucks or other equipment from individuals.

No Covered employee may be employed on the work except in accordance with the classification set forth in the schedule mentioned above; provided, however, that in the event additional classifications are required, application shall be made by the contractor to the Department of Highways and (1) the Department shall request appropriate classifications and rates from the proper agency, or (2) if there is urgent need for additional classification to avoid undue delay in the work, the contractor may employ such workmen at rates deemed comparable to rates established for similar classifications provided he has made written application through the Department of Highways, addressed to the proper agency, for the supplemental rates. The contractor shall retroactively adjust, upon receipt of the supplemental rates schedule, the wages of any employee paid less than the established rate and may adjust the wages of any employee overpaid.

11. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic in any work-week in which he is employed on such work, to work in excess of eight hours in any calendar day or in excess of forty hours in such work-week unless such laborer or mechanic receives compensation at a rate not less than one and one half times his basic rate of pay for all hours worked in excess of eight hours in any calendar day or in excess of forty hours in such work-week. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. This agreement shall be in writing and shall be executed prior to the employee working in excess of eight (8) hours, but not more than ten (10) hours, in any one (1) calendar day.

12. Payments to the contractor may be suspended or withheld due to failure of the contractor to pay any laborer or

mechanic employed or working on the site of the work, all or part of the wages required under the terms of the contract. The Department may suspend or withhold payments only after the contractor has been given written notice of the alleged violation and the contractor has failed to comply with the wage determination of the Department of Highways.

13. Contractors and subcontractors shall comply with the sections of Kentucky Revised Statutes, Chapter 337 relating to contracts for Public Works.

Revised 2-16-95

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 (6) provides:

No present or former public servant shall, within six (6) months of 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 the state in matters in which he was directly involved during 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, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved 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.

KRS 11A.040 (8) states:

A former public servant shall not represent a person in a matter before a state agency in which the former public servant was directly involved, 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, Room 136, Capitol Building, 700 Capitol Avenue, Frankfort, Kentucky 40601; telephone (502) 564-7954.

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.

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

	BASIC HOURLY RATES	FRINGE BENEFIT PAYMENTS COMBINED
--	-----------------------------------	-------------------------------------------------

CRAFTS:

Boilermakers	24.65.....	12.94
Bricklayers.....	20.35.....	7.80
Stone Mason	18.95.....	7.80
Carpenters.....	20.60.....	8.30
Cement Masons	18.70	7.80
Electricians.....	*26.36	10.04

*When workmen are required to work from bosum chairs, trusses, stacks, tanks, scaffolds, catwalks, radio and T.V. towers, structural steel (open, unprotected, unfloored raw steel), and bridges or similar hazardous locations where workmen are subject to a direct fall, except where using JLG's and bucket trucks up to 75 feet: Add 25% to workman's base rate for 50 to 75 feet, and add 50% to workman's base rate for over 75 feet.

Ironworkers: Structural.....	20.70.....	8.30
Ironworkers: Reinforcing.....	20.50.....	8.30
Painters:		
All Excluding Bridges	19.92.....	9.57
Bridges	23.92.....	10.07
Piledrivers.....	20.25	8.30
Plumbers.....	22.52.....	7.80
Sheet Metal	20.40.....	7.80
Welders- Receive rate for craft in which welding is incidental.		

LABORERS:

General laborer, flagman, steam jenny.	BASE RATE	18.65
	FRINGE BENEFITS	8.30

Batch truck dumper, deck hand or scow man, Hand blade operator.	BASE RATE	18.90
	FRINGE BENEFITS	8.30

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

LABORERS: (continued)

Power driven tool operator of the following: wagon drill, chain saw, sand blaster, concrete chipper, pavement breaker, vibrator, power wheelbarrow, power buggy, sewer pipe layer, bottom men, dry cement handler, concrete rubber, mason tender.

BASE RATE19.00
FRINGE BENEFITS.....8.30

Asphalt lute and rakerman, side rail setter.

BASE RATE19.05
FRINGE BENEFITS.....8.30

Gunnite nozzle man, gunnite operator.

BASE RATE19.15
FRINGE BENEFITS.....8.30

Tunnel laborer (free air).

BASE RATE19.20
FRINGE BENEFITS.....8.30

Tunnel mucker (free air).

BASE RATE19.25
FRINGE BENEFITS.....8.30

Tunnel miner, blaster and driller (free air).

BASE RATE19.60
FRINGE BENEFITS.....8.30

Caisson worker

BASE RATE20.15
FRINGE BENEFITS.....8.30

Powderman

BASE RATE20.25
FRINGE BENEFITS.....8.30

Drill operator of percussion type drills which are both powered and propelled by an independent air supply.

BASE RATE21.45
FRINGE BENEFITS.....8.30

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

TRUCK DRIVERS AND RELATED CLASSIFICATIONS:

Truck helper and warehouseman.	BASE RATE18.90 FRINGE BENEFITS8.30
Driver, winch truck and A-Frame when used in transporting materials.	BASE RATE19.00 FRINGE BENEFITS8.30
Driver (semi-trailer or pole trailer), driver (dump truck, tandem axle), driver of distributor.	BASE RATE19.10 FRINGE BENEFITS 8.30
Driver on mixer trucks (all types).	BASE RATE19.15 FRINGE BENEFITS 8.30
Truck mechanic	BASE RATE19.20 FRINGE BENEFITS 8.30
Driver (3 tons and under), tire changer and truck mechanic helper.	BASE RATE19.23 FRINGE BENEFITS 8.30
Driver on pavement breakers.	BASE RATE19.25 FRINGE BENEFITS8.30
Driver (over 3 tons), driver (truck mounted rotary drill).	BASE RATE19.44 FRINGE BENEFITS8.30
Driver, Euclid and other heavy earth moving equipment and Low Boy.	BASE RATE20.01 FRINGE BENEFITS8.30
Greaser on greasing facilities.	BASE RATE20.10 FRINGE BENEFITS8.30

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

OPERATING ENGINEERS:

GROUP A:

Auto patrol, batcher plant, bituminous paver, cable-way, clamshell, concrete mixer (21 cu. ft. or over), concrete pump, crane, crusher plant, derrick, derrick boat, ditching and trenching machine, dragline, dredge engineer, elevator (regardless of ownership when used for hoisting any building material), elevating grader and all types of loaders, hoe-type machine, hoisting engine, locomotive, LeTourneau or carry-all scoop, bulldozer, mechanic, orangepeel bucket, piledriver, power blade, roller (bituminous), roller (earth), roller (rock), scarifier, shovel, tractor shovel, truck crane, well points, winch truck, push dozer, grout pump, high lift, fork lift (regardless of lift height), all types of boom cats, multiple operator, core drill, tow or push boat, A-Frame winch truck, concrete paver, gradeall, hoist, hyster, material pump, pumpcrete, ross carrier, sheep foot, sideboom, throttle-valve man, rotary drill, power generator, mucking machine, rock spreader attached to equipment, scoopmobile, KeCal loader, tower cranes (French, German and other types), hydrocrane, tugger, backfiller, guries, self-propelled compactor, self-contained hydraulic percussion drill.

**BASE RATE23.30
FRINGE BENEFITS8.30**

GROUP B:

All air compressors (200 cu. ft. per min. or greater capacity), bituminous mixer, concrete mixer (under 21 cu. ft.), welding machine, form grader, tractor (50 H.P. and over), bull float, finish machine, outboard motor boat, brakeman, mechanic helper, whirley oiler, tractair and road widening trencher, articulating trucks.

**BASE RATE20.40
FRINGE BENEFITS..... 8.30**

GROUP B2:

Greaser on grease facilities servicing heavy equipment.

**BASE RATE20.60
FRINGE BENEFITS.....8.30**

GROUP C:

Bituminous distributor, cement gun, conveyor, mud jack, paving joint machine, pump, tamping machine, tractors (under 50 H.P.), vibrator, oiler, air compressors (under 200 cu. ft. per min. capacity), concrete saw, burlap and curing machine, hydro seeder, power form handling equipment, deckhand oiler, hydraulic post driver.

**BASE RATE19.99
FRINGE BENEFITS..... 8.30**

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

No laborer, workman or mechanic shall be paid at a rate less than that of the General Laborer except those classified as bona fide apprentices registered with the Kentucky State Apprenticeship Supervisor unless otherwise specified in this schedule of wage rates.

These rates are listed pursuant to the Kentucky Determination No. CR-07-II HWY dated July 3, 2008. Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

**TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES**

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid after an employee works eight (8) hours a day or forty (40) hours a week, whichever gives the employee the greater wages. At least time and one-half the base rate is required for all overtime. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. Wage violations or questions should be directed to the designated Engineer or to the undersigned.

Steve Waddle, Director
Division of Construction Procurement
Frankfort, Kentucky 40622

PART IV
INSURANCE

INSURANCE

The Contractor shall carry the following insurance in addition to the insurance required by law:

1. Contractor's Public Liability Insurance not less than \$100,000.00 for damages arising out of bodily injuries to or death to one person. Not less than \$300,000.00 for damages arising out of bodily injuries to or death to two or more persons.
2. Contractor's Property Damages Liability Insurance. Not less than \$100,000.00 for all damages arising out of injury or destruction of property in any one accident. Not less than \$300,000.00 for all damages during the policy period.
3. Contractor's Protective Public Liability and Property Damage Insurance. The contractor shall furnish evidence with respect to operations performed for him by subcontractors that he carries in his own behalf for the above stipulated amounts.
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. 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.

PART V
BID ITEMS

CONTRACT ID: 092187
COUNTY: BARREN
PROPOSAL: 005GR09P075-FE01

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CALL NO: 405

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
SECTION 0001 ROADWAY						
0010	00001	DGA BASE	212.000	TON		
0020	01708	RECONSTRUCT CATCH BASIN	11.000	EACH		
0030	01875	STANDARD HEADER CURB MODIFIED	100.000	LF		
0040	01885	LIP HEADER CURB MODIFIED	1,030.000	LF		
0050	02014	BARRICADE-TYPE III	40.000	EACH		
0060	02023	JPC PAVEMENT-9 IN/24	5,092.000	SQYD		
0070	02058	REMOVE PCC PAVEMENT	5,092.000	SQYD		
0080	02060	PCC PAVEMENT DIAMOND GRINDING	39,214.000	SQYD		
0090	02110	PARTIAL DEPTH PATCHING POLYMER MODIFIED	215.000	CUFT		
0100	02115	SAW-CLEAN-RESEAL TVERSE JOINT	8,600.000	LF		
0110	02116	SAW-CLEAN-RESEAL LONGIT JOINT	24,142.000	LF		
0120	02562	SIGNS	1,000.000	SQFT		
0130	02650	MAINTAIN & CONTROL TRAFFIC EAST OF DAVIS STREET	(1.00)	LS		
0140	02650	MAINTAIN & CONTROL TRAFFIC FRONT STREET TO DAVIS STREET	(1.00)	LS		
0150	02653	LANE CLOSURE	6.000	EACH		
0160	02671	PORTABLE CHANGEABLE MESSAGE SIGN	4.000	EACH		
0170	02676	MOBILIZATION FOR MILL & TEXT	(1.00)	LS		
0180	02677	ASPHALT PAVE MILLING & TEXTURING	750.000	TON		
0190	02720	SIDEWALK-4 IN CONCRETE	155.000	SQYD		
0200	02775	ARROW PANEL	2.000	EACH		

CONTRACT ID: 092187
COUNTY: BARREN
PROPOSAL: 005GR09P075-FE01

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LETTING: 06/12/09
CALL NO: 405

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0210	06510	PAVE STRIPING-TEMP PAINT-4 IN	26,000.000	LF		
0220	06514	PAVE STRIPING-PERM PAINT-4 IN	43,000.000	LF		
0230	06568	PAVE MARKING-THERMO STOP BAR-24IN	70.000	LF		
0240	06574	PAVE MARKING-THERMO CURV ARROW	26.000	EACH		
0250	06589	PAVEMENT MARKER TYPE V-MW	50.000	EACH		
0260	06591	PAVEMENT MARKER TYPE V-BY	328.000	EACH		
0270	06600	REMOVE PAVEMENT MARKER TYPE V ASPHALT PAVEMENT	70.000	EACH		
0280	06600	REMOVE PAVEMENT MARKER TYPE V CONCRETE PAVEMENT	268.000	EACH		
0290	21173EC	SAW-CLEAN-RESEAL RANDOM CRACKS	1,500.000	LF		
0300	21415ND	EROSION CONTROL EAST OF DAVIS STREET	(1.00)	LS		
0310	21415ND	EROSION CONTROL FRONT STREET TO DAVIS STREET	(1.00)	LS		
0320	23158ES505	DETECTABLE WARNINGS	196.000	SQFT		
0330	23237EN10W	WATERBLAST STRIPE REMOVAL	20,000.000	LF		
SECTION 0002 DEMOBILIZATION						
0340	02569	DEMOBILIZATION (AT LEAST 1.5%)		LUMP		
TOTAL BID						