



TRANSPORTATION CABINET

Frankfort, Kentucky 40622
www.transportation.ky.gov/

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

September 9, 2011

CALL NO. 302
CONTRACT ID NO. 112311
ADDENDUM # 1

Subject: Trigg County, FE01 111 0024 057-065
Letting September 23, 2011

- (1) Revised - Table of Contents - Page 2 of 97
- (2) Added - Significant Project - Page 8 of 97
- (3) Revised - Special Notes for PCC Patching - Pages 9-12 of 97
- (4) Revised - Full Depth Concrete Pavement Repair - Pages 13-17 of 97
- (5) Revised - Special Notes - Pages 21-25 of 97
- (6) Revised - Summary Sheets - Pages 39-43 of 97
- (7) Revised - Bid Items - Page 97 of 97

Proposal revisions are available at <http://transportation.ky.gov/contract/>.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

A handwritten signature in blue ink that reads "Ryan Griffith".

Ryan Griffith
Director
Division of Construction Procurement

RG:ks
Enclosures



An Equal Opportunity Employer M/F/D

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EXPEDITE PROJECT WORK ORDER

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

The contractor needs to deliver required project documentation to:

Division of Construction Procurement

200 Mero St.

Frankfort, KY 40602

NATIONAL HIGHWAY

This project is on the NATIONAL HIGHWAY SYSTEM.

Significant Project- Project Traffic Coordinator (PTC)

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

DGA BASE

The rate of application for DGA Base shall be estimated at 115 lbs/sy per inch of depth.

FUEL AND ASPHALT PAY ADJUSTMENT

The following contract items: Asphalt Adjustment and Fuel Adjustment, are for possible future payments. Additional monies may need to be setup with an additional change order if existing contract amount is insufficient to pay all items on the contract. Unit price is \$1.00. Quantity will be actual adjustment after work is completed.

SPECIAL NOTES FOR PCC PATCHING

I. DESCRIPTION

Perform all work shall in accordance with the Department's Current Standard Specifications, Supplemental Specifications, Special Note for Full Depth Concrete Pavement Repair, applicable Special Provisions, and applicable Standard and Sepia Drawings, except as hereafter specified. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for the following work:

- (1) Remove and replace full depth and partial depth PCC Pavement at the locations listed and/or as directed by the Engineer;
- (2) Maintain and Control Traffic; and
- (3) 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 attached Special Notes, Crushed Stone Base may not be furnished in lieu of DGA.

C. Seeding and protection. Use Seed Mixture No. I

D. Portland Cement Concrete Pavement. Use non-reinforced JPC Pavement/24 for full depth replacement of concrete pavement. At 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. Either central mixing or truck mixing will be allowed. All other materials shall be according to the attached Special Note for Full Depth Concrete Pavement Repair.

E. Pavement Markings. See Traffic Control Plan.

F. Joint and Random Crack Sealant. Use hot poured elastic, no alternates.

III. CONSTRUCTION METHODS

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

B. Site Preparation. Be responsible for all site preparation. This item shall include,

but is not limited to, incidental excavation and backfilling; removal of all obstructions or any other items; disposal of materials; sweeping and removal of debris; temporary and permanent erosion and pollution control; and any other incidentals. All site preparation shall be only as approved or directed by the Engineer. Other than the bid items listed, no direct payment will be made for site preparation, but shall be incidental to the other items of the work.

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

D. Concrete Pavement Removal, Replacement and Partial Depth Patching. Full depth concrete pavement removal and replacement shall be in accordance with the attached Special Note for Full Depth Concrete Pavement Repair. *Removal locations listed are approximate only; actual locations will be determined by the Engineer at the time of construction.* The Engineer may add additional locations within the project limits at any time prior to completion. The nominal depth of the PCC Pavement shall be 10 inches; however, the finished grade of the PCC Pavement shall be transitioned 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.

Perform concrete pavement removal and replacement in such a manner that removal and replacement shall be 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. Hand finishing will be allowed; however, the initial strike-off shall be with a rotary drum screed. Contrary to Section 501.03.13, texturing of the pavement by the formation of transverse grooves will not be required.

Partial depth concrete pavement removal and replacement shall be in accordance with the attached Special Note for Partial Depth Concrete Pavement Repair. *Repair locations listed are approximate only; actual locations will be determined by the Engineer at the time of construction.* The Engineer may add additional locations within the project limits at any time prior to completion.

E. Joint Sealing and Saw-Clean-Reseal Random Cracks. Saw-cut, clean, and seal all transverse and longitudinal joints and the pavement shoulder joints in the new pavement areas according to section 501.03.17. Saw-cut, clean and seal random cracks with hot poured elastic material as directed by the Engineer.

F. 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 cost to the Department. The Engineer will not allow

temporary openings in the right of way fence for direct access to waste sites off the right of way or for access to other public roads.

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

H. Restoration. Restore any roadway features disturbed by the work or the Contractor's operations in like kind materials and design as directed by the Engineer.

I. Pavement Striping. See Traffic Control Plan.

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

K. Coordination of Work. Be advised that other projects may be in progress within or in the near vicinity of this project. The traffic control of those projects may affect this project and the traffic control of this project may affect those projects. The Contractor shall coordinate the work on this project with the work of the other contractors. In case of conflict, the Engineer will determine the relative priority to give to work phasing on the various projects.

L. Utility Clearance. Locate all underground, above ground and overhead utilities prior to beginning construction. The Contractor shall have the responsibility for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. The Department will not charge working days for those days on which work on the controlling item is delayed, as provided in the Specifications. If the total delay exceeds ten working days, the Department will negotiate an extension of the specified completion date with the Contractor for delay to the Contractor's work. The Contractor shall be responsible for repairing all utility damage that occurs as a result of his operations at no additional cost to the Department.

IV. METHOD OF MEASUREMENT

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

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

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

D. JPC Pavement 10"/24. See Special Note for Full Depth Concrete Pavement Repair.

E. Partial Depth Repair. See Special Note for Partial Depth Concrete Pavement Repair.

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

G. Saw-Clean-Seal Joints and Random Cracks. 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.

H. Temporary and Permanent Striping. See Traffic Control Plan.

I. Final Dressing, Clean Up, and Seeding and Protection. Final Dressing, Clean Up, and Seeding and Protection will not be measured for separate payment, but shall be incidental to other items of work.

J. Restoration. All items of restoration will not be measured for payment, but shall be incidental to the other items of work.

V. BASIS OF PAYMENT

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

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

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

C. JPC Pavement 10"/24. See Special Note for Full Depth Concrete Pavement Repair.

D. Partial Depth Repair. See Special Note for Partial Depth Concrete Pavement Repair.

SPECIAL NOTE FOR FULL DEPTH CONCRETE PAVEMENT REPAIR

This Special Note applies to full depth repairs of concrete pavement. This note 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. Comply with the applicable Standard Drawings and the Standard Specifications except as specifically superseded herein.

2.0 MATERIALS AND EQUIPMENT.

2.1 JPC Pavement. Test concrete materials according to section 601.03.03. Conform to 501, 502, and 601 except that the concrete must achieve 3000 psi in accordance with Section 4.4 of this note. 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 811

2.3 Tie Bars. Conform to Section 811. Use epoxy coated tie bars in longitudinal and transverse joints.

2.4 Joint Sealants. Conform to Subsection 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 simultaneously. Misalignment of holes shall not exceed 1/4 inch in the vertical or oblique plane.

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

3.0 CONSTRUCTION.

3.1 Removal of Existing Pavement. Remove existing pavement to the extent the Contract specifies or as the Engineer directs. The minimum length of patches measured along centerline is 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.

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 ½" 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. Do not overcut beyond the limits of the removal area. Prevent saw slurry from entering existing joints and cracks. 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 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. Do not damage the pavement base during these operations.

3.2.1 Preparation of Base. Compact the new and existing aggregate base to the Engineer's satisfaction. The Engineer will accept compaction by either visual inspection or by nuclear gauge. When the Engineer deems it necessary to stabilize the existing base or replace unsuitable materials, excluding bridge ends, use 12 inches of geotextile fabric wrapped No. 2 aggregate topped with 4 inches of DGA or CSB. Use either Type III or Type IV geotextile fabric. Flowable fill and cement stabilization may be used as an alternative to stabilize the existing base or to replace unsuitable materials when a plan for such is presented to and approved by the Engineer. 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 compaction equipment by hand tamping.

3.2.2 Underdrains. Construct, or repair damage to, pavement edge drains according to Section 704. If underdrains are placed omitting areas to be patched, construct additional lateral drains as necessary to provide outlets for the installed underdrain until performing the pavement replacement and completing the underdrain system. Provide drainage for any undercut or base repair areas.

3.2.3 Pavement Replacement. Using load transfer assemblies for dowel joints 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 a diameter as specified in the following. 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 product is to be used, drill holes 1/4 inch larger than the bar diameter. Use a clear or opaque grout retention disk in both grout and epoxy applications. Operate the equipment 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.

When indicated herein or in the Standard Drawings, use 1 inch deformed tie bars, 18 inches long on 30-inch centers and starting and ending 20 inches inside the edges of the repair area in the longitudinal joint. Use 1 inch deformed tie bars, or plain epoxy coated dowel bars sized in accordance with the Standard Drawings, 18 inches long beginning 12 inches inside of each edge and on 12-inch centers in transverse construction joints.

Install the dowels and tie bars according to Section 511 unless contradicted here. 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.

When resurfacing is required, a float finish is satisfactory. Otherwise, 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. The Department will not measure removal of underlying base material 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 existing base material or underlying material for payment and will consider incidental to DGA or CSB. The quantity of DGA used for the drop-off protection shall be incidental to this work and will not be measured for payment.

4.3 JPC Pavement Non-Reinforced. The Department will measure according to 501.04.01. The Department will not measure dowels, tie bars, , or joint sealing for payment and will consider it incidental to Non-Reinforced JPC Pavement.

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 2250 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, 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 cost to the Department.

4.5 Underdrains. 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.

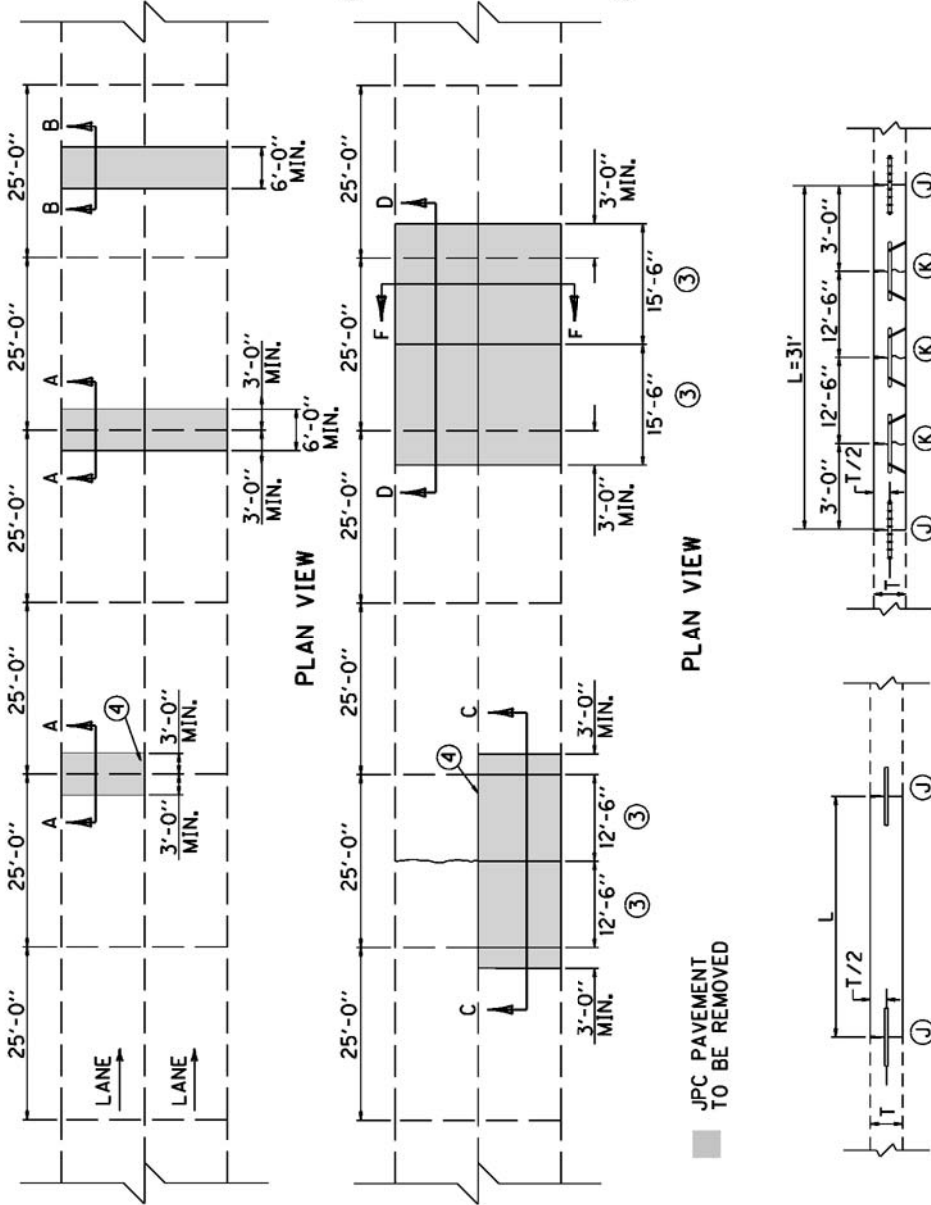
5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

<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

The Department will consider payment as full compensation for all work required in this provision.

September 9, 2010

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 (EXCEPT USE 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.
3. 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.
4. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONTRACTION JOINTS (OR A CONSTRUCTION JOINT FOR LOCATION C) AT LOCATIONS "J". SAW AND SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.



SECTION A
JOINT REPLACEMENT

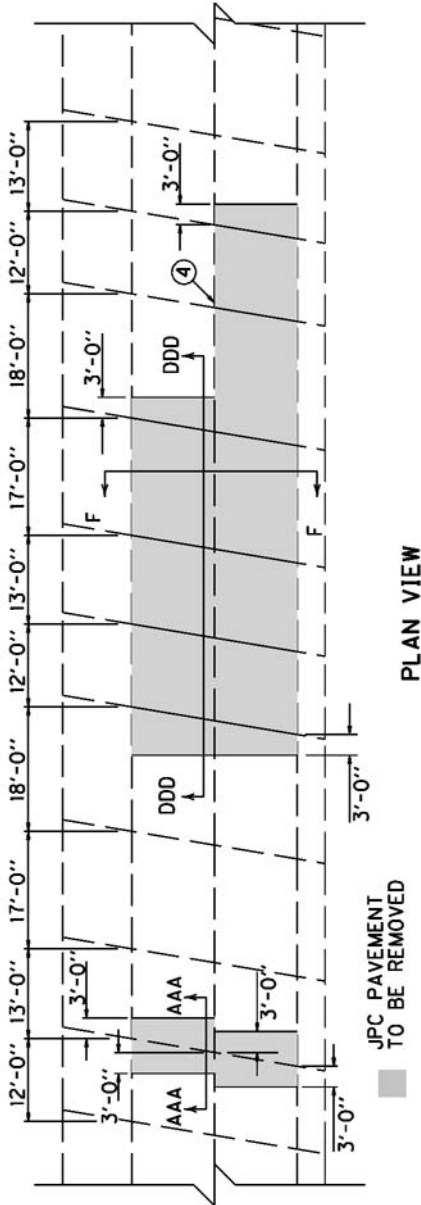
SECTION B
MID-SLAB REPLACEMENT

SECTION C
LANE REPLACEMENT WHERE ADJACENT LANES OR JPC SHOULDERS WILL REMAIN

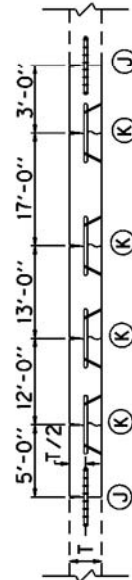
SECTION D
FULL WIDTH REPLACEMENT (INCLUDING JPC SHOULDERS)

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

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 (EXCEPT USE 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. 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.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K". AND CONTRACTION JOINTS (OR A CONSTRUCTION JOINT FOR LOCATION DDD) AT LOCATIONS "J". SAW AND SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.

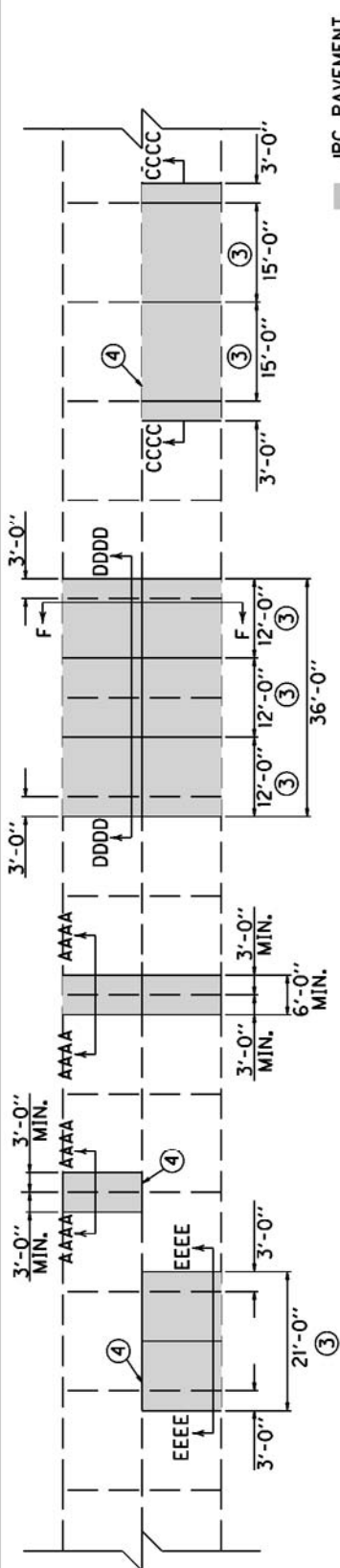


SECTION AAA
 JOINT REPLACEMENT



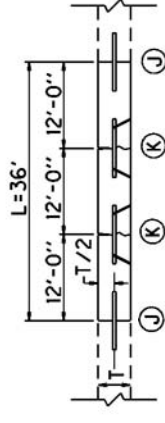
SECTION DDD
 LANE REPLACEMENT
 (ALWAYS MATCH EXISTING JOINTS)

KENTUCKY DEPARTMENT OF HIGHWAYS
RANDOM SKEWED
APPROVED _____ DATE _____ <small>TERM DIVISION OF DESIGN</small>

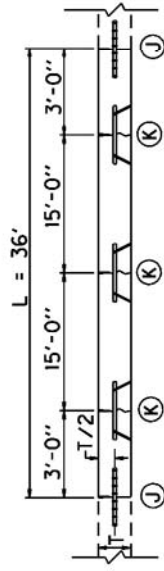
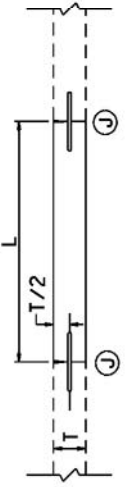


PLAN VIEW

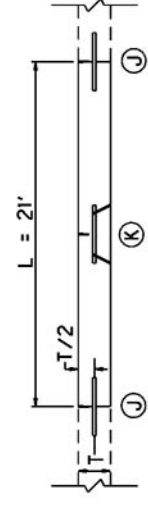
1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE; SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (EXCEPT USE 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 CONTRACTION JOINTS (OR A CONTRACTION JOINT FOR LOCATION CCCC) AT LOCATIONS "J". SAW AND SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.



SECTION DDDD
FULL WIDTH REPLACEMENT
(INCLUDING JPC SHOULDERS)

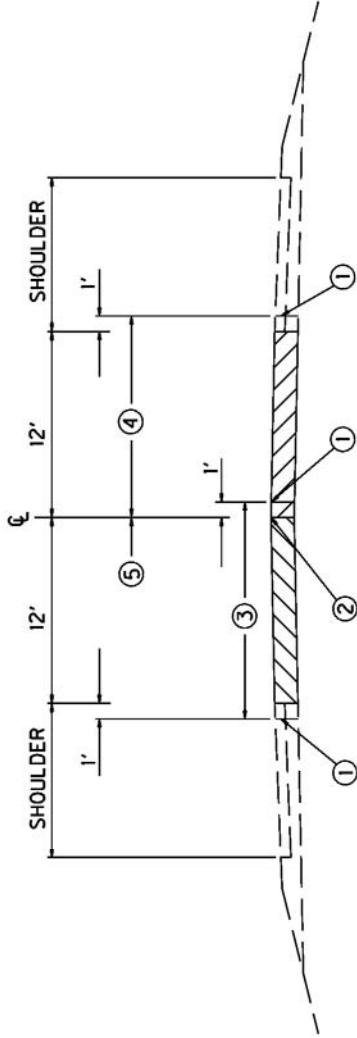


SECTION CCCC
LANE REPLACEMENT WHERE ADJACENT LANES OR JPC SHOULDERS WILL REMAIN



SECTION EEEE
LANE REPLACEMENT L<25'

KENTUCKY DEPARTMENT OF HIGHWAYS
15' JOINT SPACING
APPROVED _____ DATE _____ TECH 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. ANY TEMPORARY PAVEMENT IS INCIDENTAL TO JPC PAVEMENT.
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, OR CCCC. TRAFFIC CONTROL WILL SPECIFY WHICH LANE TO REMOVE FIRST.

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

Trigg County I-24 Concrete Replacement

Direction	Lane	MP	Length (ft)	Width (ft)	Remove (SQYD)	JPC - 10" (SQYD)
EB	Slow	58.37	6	12	8.00	8.00
EB	Slow	58.178	4	12	5.33	5.33
EB	Slow	58.235	4	12	5.33	5.33
EB	Slow	58.245	12	12	16.00	16.00
EB	Slow	58.247	6	12	8.00	8.00
EB	Slow	58.311	10	12	13.33	13.33
EB	Both	58.375	40	24	106.67	106.67
EB	Fast	58.452	20	12	26.67	26.67
EB	Slow	58.529	4	12	5.33	5.33
EB	Slow	58.547	12	12	16.00	16.00
EB	Both	58.672	6	24	16.00	16.00
EB	Fast	58.681	20	12	26.67	26.67
EB	Slow	58.687	10	12	13.33	13.33
EB	Slow	58.733	6	12	8.00	8.00
EB	Slow	58.776	12	12	16.00	16.00
EB	Slow	58.784	6	12	8.00	8.00
EB	Slow	59.383	20	12	26.67	26.67
EB	Slow	59.395	8	12	10.67	10.67
EB	Slow	59.402	20	12	26.67	26.67
EB	Slow	59.436	6	12	8.00	8.00
EB	Slow	59.554	6	12	8.00	8.00
EB	Slow	59.56	40	12	53.33	53.33
EB	Slow	59.611	4	12	5.33	5.33
EB	Both	59.633	40	24	106.67	106.67
EB	Slow	59.641	40	12	53.33	53.33
EB	Slow	59.878	20	12	26.67	26.67
EB	Slow	59.967	6	12	8.00	8.00
EB	Slow	60.153	20	12	26.67	26.67
EB	Slow	60.161	20	12	26.67	26.67
EB	Both	60.168	6	24	16.00	16.00
EB	Both	60.298	8	24	21.33	21.33
EB	Slow	60.304	10	12	13.33	13.33
EB	Slow	60.74	6	12	8.00	8.00
EB	Slow	60.871	12	12	16.00	16.00
EB	Both	61.054	12	24	32.00	32.00
EB	Both	61.131	30	24	80.00	80.00
EB	Both	61.143	10	24	26.67	26.67
EB	Slow	61.165	24	12	32.00	32.00
EB	Slow	61.523	24	12	32.00	32.00
EB	Both	61.593	8	24	21.33	21.33
EB	Slow	61.631	8	12	10.67	10.67
EB	Slow	61.654	8	12	10.67	10.67
EB	Both	61.686	40	24	106.67	106.67

EB	Slow	61.762	10	12	13.33	13.33
EB	Slow	61.793	6	12	8.00	8.00
EB	Slow	61.796	6	12	8.00	8.00
EB	Slow	61.811	10	12	13.33	13.33
EB	Slow	61.82	20	12	26.67	26.67
EB	Slow	61.99	20	12	26.67	26.67
EB	Slow	62.027	6	12	8.00	8.00
EB	Slow	62.125	10	12	13.33	13.33
EB	Fast	62.259	12	12	16.00	16.00
EB	Slow	62.34	6	12	8.00	8.00
EB	Slow	62.443	8	12	10.67	10.67
EB	Both	62.464	10	24	26.67	26.67
EB	Slow	62.548	20	12	26.67	26.67
EB	Slow	62.553	20	12	26.67	26.67
EB	Fast	62.558	8	12	10.67	10.67
EB	Slow	62.563	20	12	26.67	26.67
EB	Slow	62.584	20	12	26.67	26.67
EB	Slow	62.592	20	12	26.67	26.67
EB	Slow	62.622	50	12	66.67	66.67
EB	Slow	62.635	8	12	10.67	10.67
EB	Slow	62.643	40	12	53.33	53.33
EB	Slow	62.645	8	12	10.67	10.67
EB	Slow	62.649	8	12	10.67	10.67
EB	Slow	62.667	20	12	26.67	26.67
EB	Fast	62.673	24	12	32.00	32.00
EB	Slow	62.685	6	12	8.00	8.00
EB	Slow	62.697	12	12	16.00	16.00
EB	Slow	62.702	12	12	16.00	16.00
EB	Fast	62.712	12	12	16.00	16.00
EB	Slow	62.713	12	12	16.00	16.00
EB	Fast	62.72	12	12	16.00	16.00
EB	Slow	62.74	6	12	8.00	8.00
EB	Fast	62.743	6	12	8.00	8.00
EB	Slow	62.743	14	12	18.67	18.67
EB	Slow	62.746	6	12	8.00	8.00
EB	Slow	62.75	20	12	26.67	26.67
EB	Fast	62.763	8	12	10.67	10.67
EB	Slow	62.776	20	12	26.67	26.67
EB	Slow	62.797	20	12	26.67	26.67
EB	Both	62.806	40	24	106.67	106.67
EB	Slow	62.827	40	12	53.33	53.33
EB	Fast	62.843	6	12	8.00	8.00
EB	Slow	62.851	8	12	10.67	10.67
EB	Both	62.89	12	24	32.00	32.00
EB	Slow	63.289	10	12	13.33	13.33
EB	Fast	63.298	6	12	8.00	8.00
EB	Slow	63.323	12	12	16.00	16.00

EB	Fast	63.395	8	12	10.67	10.67
EB	Fast	63.397	4	12	5.33	5.33
EB	Slow	63.55	10	12	13.33	13.33
EB	Both	63.593	6	24	16.00	16.00
EB	Fast	63.679	6	12	8.00	8.00
EB	Slow	63.771	6	12	8.00	8.00
EB	Slow	64.155	6	12	8.00	8.00
EB	Slow	64.16	6	12	8.00	8.00
EB	Both	64.196	8	24	21.33	21.33
EB	Slow	64.215	8	12	10.67	10.67
EB	Fast	64.267	10	12	13.33	13.33
EB	Slow	64.547	30	12	40.00	40.00
			1432	1404	2277.33	2277.33

Trigg County I-24 Concrete Replacement

Direction	Lane	MP	Length (FT)	Width (FT)	Remove (SQYD)	JPC - 10" (SQYD)
WB	Slow	65	8	12	10.67	10.67
WB	Slow	64.969	10	12	13.33	13.33
WB	Fast	64.969	4	12	5.33	5.33
WB	Fast	64.942	6	12	8.00	8.00
WB	Fast	64.935	8	12	10.67	10.67
WB	Slow	64.934	8	12	10.67	10.67
WB	Slow	64.923	10	12	13.33	13.33
WB	Both	64.915	30	24	80.00	80.00
WB	Fast	64.653	10	12	13.33	13.33
WB	Slow	64.55	20	12	26.67	26.67
WB	Slow	63.412	6	12	8.00	8.00
WB	Slow	63.377	30	12	40.00	40.00
WB	Slow	63.108	4	12	5.33	5.33
WB	Both	62.641	60	24	160.00	160.00
WB	Fast	62.427	8	12	10.67	10.67
WB	Slow	62.135	10	12	13.33	13.33
WB	Both	61.797	30	24	80.00	80.00
WB	Both	61.775	30	24	80.00	80.00
WB	Fast	61.763	10	12	13.33	13.33
WB	Fast	61.754	12	12	16.00	16.00
WB	Both	61.564	30	24	80.00	80.00
WB	Slow	61.484	8	12	10.67	10.67
WB	Slow	61.378	8	12	10.67	10.67
WB	Slow	61.368	8	12	10.67	10.67
WB	Slow	61.349	8	12	10.67	10.67
WB	Both	61.343	8	24	21.33	21.33
WB	Both	61.337	30	24	80.00	80.00
WB	Both	61.328	50	24	133.33	133.33
WB	Both	61.315	20	24	53.33	53.33
WB	Both	61.309	8	24	21.33	21.33
WB	Both	61.278	20	24	53.33	53.33
WB	Slow	61.264	8	12	10.67	10.67
WB	Slow	61.239	20	12	26.67	26.67
WB	Slow	61.23	20	12	26.67	26.67
WB	Both	61.187	30	24	80.00	80.00
WB	Slow	61.135	8	12	10.67	10.67
WB	Slow	61.12	12	12	16.00	16.00
WB	Slow	61.091	12	12	16.00	16.00
WB	Both	61.083	10	24	26.67	26.67
WB	Slow	61.022	10	12	13.33	13.33
WB	Slow	60.985	10	12	13.33	13.33
WB	Slow	60.966	8	12	10.67	10.67
WB	Fast	60.936	10	12	13.33	13.33
WB	Both	60.868	10	24	26.67	26.67

WB	Slow	60.86	10	12	13.33	13.33
WB	Slow	60.838	8	12	10.67	10.67
WB	Slow	60.813	10	12	13.33	13.33
WB	Slow	60.809	10	12	13.33	13.33
WB	Slow	60.79	8	12	10.67	10.67
WB	Fast	60.777	8	12	10.67	10.67
WB	Slow	60.759	12	12	16.00	16.00
WB	Both	60.751	8	24	21.33	21.33
WB	Both	60.748	30	24	80.00	80.00
WB	Slow	60.725	8	12	10.67	10.67
WB	Slow	60.721	8	12	10.67	10.67
WB	Slow	60.707	8	12	10.67	10.67
WB	Slow	60.641	10	12	13.33	13.33
WB	Slow	60.54	12	12	16.00	16.00
WB	Both	60.506	10	24	26.67	26.67
WB	Slow	60.414	8	12	10.67	10.67
WB	Slow	60.335	12	12	16.00	16.00
WB	Slow	60.319	20	12	26.67	26.67
WB	Both	60.314	30	24	80.00	80.00
WB	Both	60.305	30	24	80.00	80.00
WB	Both	60.094	30	24	80.00	80.00
WB	Slow	60.083	20	12	26.67	26.67
WB	Both	60.077	40	24	106.67	106.67
WB	Both	60.058	30	24	80.00	80.00
WB	Slow	60.031	20	12	26.67	26.67
WB	Both	60.013	30	24	80.00	80.00
WB	Slow	60	20	12	26.67	26.67
WB	Slow	59.49	20	12	26.67	26.67
WB	Slow	59.424	10	12	13.33	13.33
WB	Slow	59.049	40	12	53.33	53.33
WB	Fast	58.79	4	12	5.33	5.33
WB	Both	58.664	8	24	21.33	21.33
WB	Slow	57.926	8	12	10.67	10.67
WB	Both	57.917	12	24	32.00	32.00
			1232	1236	2474.67	2474.67

CONTRACT ID: 112311
COUNTY: TRIGG
PROPOSAL: FE01 111 0024 057-065

PAGE: 1
LETTING: 09/23/11
CALL NO: 302

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
SECTION 0001 ROADWAY						
0010	00001	DGA BASE	20.000	TON		
0020	02014	BARRICADE-TYPE III	6.000	EACH		
0030	02024	JPC PAVEMENT-10 IN/24 (REVISED: 9-9-11)	4,752.000	SQYD		
0040	02091	REMOVE PAVEMENT	4,715.000	SQYD		
0060	02115	SAW-CLEAN-RESEAL TVERSE JOINT	1,200.000	LF		
0070	02116	SAW-CLEAN-RESEAL LONGIT JOINT	1,200.000	LF		
0080	02562	SIGNS	250.000	SQFT		
0090	02650	MAINTAIN & CONTROL TRAFFIC	(1.00)	LS		
0100	02653	LANE CLOSURE	12.000	EACH		
0110	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.000	EACH		
0120	02775	ARROW PANEL	2.000	EACH		
0130	10020NS	FUEL ADJUSTMENT	594.000	DOLL	1.00	594.00
0140	21173EC	SAW-CLEAN-RESEAL RANDOM CRACKS	1,200.000	LF		
0150	24189ER	DURABLE WATERBORNE MARKING-6 IN W	1.000	LF		
0160	24190ER	DURABLE WATERBORNE MARKING-6 IN Y	1.000	LF		
SECTION 0002 DEMOBILIZATION						
0170	02569	DEMOBILIZATION (AT LEAST 1.5%)		LUMP		
TOTAL BID						