**CALL NO. 307**

**CONTRACT ID. 122906**

**ANDERSON COUNTY**

**FED/STATE PROJECT NUMBER FE02 003 9002 B00007L,R**

**DESCRIPTION BLUEGRASS PARKWAY (MP 61.895)**

**WORK TYPE BRIDGE DECK RESTORATION & WATERPROOFING**

**PRIMARY COMPLETION DATE 11/15/2012**

**LETTING DATE: May 18, 2012**

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME May 18, 2012. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

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

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# PART I

# SCOPE OF WORK

CONTRACT ID - 122906 ADMINISTRATIVE DISTRICT - 07

PROJECT(S) IDENTIFICATION AND DESCRIPTION:

COUNTY - ANDERSON PCN - MB00390021201
FE02 003 9002 B00007L,R
BLUEGRASS PARKWAY (MP 61.895) BRIDGE OVER KENTUCKY RIVER; WOODFORD-ANDERSON COUNTY LINE.
BRIDGE DECK RESTORATION & WATERPROOFING.
GEOGRAPHIC COORDINATES LATITUDE 37^59'06" LONGITUDE 84^49'23"

COMPLETION DATE(S):

COMPLETION DATE - November 15, 2012
APPLIES TO ENTIRE CONTRACT

30 CALENDAR DAYS
APPLIES TO 003B00007L

30 CALENDAR DAYS
APPLIES TO 003B00007R

# 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 Bid Express website (www.bidx.com) to prepare a bid packet for submission to the Department. The bidder must submit electronically using Bid Express.

## JOINT VENTURE BIDDING

Joint venture bidding is permissible. All companies in the joint venture must be prequalified in one of the work types in the Qualifications for Bidders for the project. The bidders must get a vendor ID for the joint venture from the Division of Construction Procurement and register the joint venture as a bidder on the project. Also, the joint venture must obtain a digital ID from Bid Express to submit a bid. A joint bid bond of 5% may be submitted for both companies or each company may submit a separate bond of 5%.

## UNDERGROUND FACILITY DAMAGE PROTECTION

The contractor 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.

## REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

Pursuant to KRS 176.085(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by KRS 14A.9-010 to obtain a certificate of authority to transact business in the Commonwealth ("certificate") from the Secretary of State under KRS 14A.9-030 unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. If the foreign entity is not required to obtain a certificate as provided in KRS 14A.9-010, the foreign entity should identify the applicable exception. Foreign entity is defined within KRS 14A.1-070.

**For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.**

Businesses can register with the Secretary of State at https://secure.kentucky.gov/sos/ftbr/welcome.aspx .

## SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

Questions about projects during the advertisement should be submitted in writing to the Division of Construction Procurement. This may be done by fax (502) 564-7299 or email to kytc.projectquestions@ky.gov. The Department will attempt to answer all submitted questions. The Department reserves the right not to answer if the question is not pertinent or does not aid in clarifying the project intent.

The deadline for posting answers will be 3:00 pm Eastern Daylight Time, the day preceding the Letting. Questions may be submitted until this deadline with the understanding that the later a question is submitted, the less likely an answer will be able to be provided.

The questions and answers will be posted for each Letting under the heading "Questions & Answers" on the Construction Procurement website (www.transportation.ky.gov/contract). The answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

## ACCESS TO RECORDS

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for

production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004. (See attachment)

10/18/2011

Commonwealth of Kentucky
Finance and Administration Cabinet
**OFFICE OF THE SECRETARY**
Room 383, Capitol Annex
702 Capital Avenue
Frankfort, KY 40601-3462
(502) 564-4240
Fax (502) 564-6785

**Steven L. Beshear**
Governor

**Lori H. Flanery**
Secretary

**SECRETARY'S ORDER 11-004**

FINANCE AND ADMINISTRATION CABINET

**Vendor Document Disclosure**

**WHEREAS,** in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary to conduct a review of the records of a private vendor that holds a contract to provide goods and/or services to the Commonwealth; and

**WHEREAS,** in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary during the course of an audit, investigation or any other inquiry by an Executive Branch agency that involves the review of documents; and

**WHEREAS,** KRS 42.014 and KRS 12.270 authorizes the Secretary of the Finance and Administration Cabinet to establish the internal organization and assignment of functions which are not established by statute relating to the Finance and Administration Cabinet; further, KRS Chapter 45A.050 and 45A.230 authorizes the Secretary of the Finance and Administration Cabinet to procure, manage and control all supplies and services that are procured by the Commonwealth and to intervene in controversies among vendors and state agencies; and

**NOW, THEREFORE**, pursuant to the authority vested in me by KRS 42.014, KRS 12.270, KRS 45A.050, and 45A.230, I, Lori H. Flanery, Secretary of the Finance and Administration Cabinet, do hereby order and direct the following:

I. Upon the request of an Executive Branch agency, the Finance and Administration Cabinet ("FAC") shall formally review any dispute arising where the agency has requested documents from a private vendor that holds a state contract and the vendor has refused access to said documents under a claim that said documents are not directly pertinent or relevant to the agency's inquiry upon which the document request was predicated.

II. Upon the request of an Executive Branch agency, the FAC shall formally review any situation where the agency has requested documents that the agency deems necessary to

conduct audits, investigations or any other formal inquiry where a dispute has arisen as to what documents are necessary to conclude the inquiry.

III. Upon receipt of a request by a state agency pursuant to Sections I & II, the FAC shall consider the request from the Executive Branch agency and the position of the vendor or party opposing the disclosure of the documents, applying any and all relevant law to the facts and circumstances of the matter in controversy. After FAC's review is complete, FAC shall issue a Determination which sets out FAC's position as to what documents and/or records, if any, should be disclosed to the requesting agency. The Determination shall be issued within 30 days of receipt of the request from the agency. This time period may be extended for good cause.

IV. If the Determination concludes that documents are being wrongfully withheld by the private vendor or other party opposing the disclosure from the state agency, the private vendor shall immediately comply with the FAC's Determination. Should the private vendor or other party refuse to comply with FAC's Determination, then the FAC, in concert with the requesting agency, shall effectuate any and all options that it possesses to obtain the documents in question, including, but not limited to, jointly initiating an action in the appropriate court for relief.

V. Any provisions of any prior Order that conflicts with the provisions of this Order shall be deemed null and void.

## SPECIAL NOTE FOR RECIPROCAL PREFERENCE

### Reciprocal preference to be given by public agencies to resident bidders

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

# SPECIAL NOTE FOR ASPHALT WATERPROOFING MIX

**1. DESCRIPTION.** Asphalt Waterproofing Mix (AWM) is a highly elastomeric, polymer-modified, impermeable asphalt mixture that is designed to be a one-step, waterproof, wearing course system for bridge-deck overlays and the adjacent approaches. Place AWM at a minimum thickness of 1.50 in. directly on the prepared surface using a conventional paver(s) and roller(s). Apply this material according to the lines, grades, and typical cross-sections in the plans or as established by the Engineer.

Unless otherwise noted, Section references herein are to the Department's *Standard Specifications for Road and Bridge Construction*. Conform to all requirements for CL3 ASPH SURF 0.50A PG76-22 unless specifically modified herein.

## 2. MATERIALS AND PERSONNEL.

**2.1 Aggregate.** Provide polish-resistant coarse and fine aggregate conforming to Subsection 403.03.03 for a Type A mixture. Do not use mineral aggregates that are inherently porous, such as blast-furnace slag, expanded shale, porous limestone, and lightweight aggregates, in this mixture.

**2.2 AWM Binder.** Provide a performance-graded (PG) 64-22 binder conforming to Section 806. Add 2.25 percent of a concentrated, thermoplastic, virgin polymeric material by weight of the total mixture. Ensure that the modified binder conforms to AASHTO M 320 with a high temperature of 94 °C or higher and a low temperature of -34 °C or lower. In addition, ensure that the AWM binder conforms to the following criteria:

| **Test** | **Criteria** |
|---|---|
| Elastic Recovery at 10 °C (ASTM D 6084) | 92 % (min) |
| Toughness (ASTM D 5801) | 210 in.-lbf (min) |
| Tenacity (ASTM D 5801) | 141 in.-lbf (min) |

**2.3 Edge Sealant.** Provide a material for edge sealant as recommended by the producer of the thermoplastic polymer modifier utilized in the AWM. Ensure the material is a highly thixotropic edge sealant that dries to a soft consistency and will not dry out, crack, or split under vibration or slight movement of opposing surfaces.

**2.4 Adhesive Tack Coat**. Provide a solvent-based, elastomeric primer adhesive tack coat as recommended by the producer of the thermoplastic polymer modifier utilized in the AWM.

**2.5 Joint Sealant [Rubber Expansion Joint Compound (REJC)].** Provide a flexible, cold-pour, two-part polyurethane joint sealant conforming to the Special Note for Rubber Expansion Joint Compound.

**2.6 Preconstruction Meeting.** At least two weeks prior to the anticipated start of the project, the Department will schedule a preconstruction meeting to discuss the production and placement of AWM.

**2.7 AWM Representative.** Ensure a technical representative from the producer of the thermoplastic polymer modifier utilized in the AWM is present at the preconstruction meeting, during the initial construction activities, and available upon the request of the Engineer.

## 3. CONSTRUCTION.

**3.1 Preparation of Mixture.** Submit component material samples to the thermoplastic polymer modifier manufacturer for formulation of a mix design. Ensure the AWM contains no reclaimed materials. After receiving the completed mix design from the thermoplastic polymer modifier manufacturer, submit the AWM design and component material samples to the Division of Materials according to Subsection 402.03.

**3.2 Job-Mix Formula (JMF).** Contrary to Subsection 402.03, formulate and submit a JMF conforming to the following total binder content and gradation limits.

| Sieve Size | Percent Passing | Production Tolerance (%) |
|---|---|---|
| ½ in. | 100 | --- |
| ⅜ in. | 80-100 | ± 6 |
| No. 4 | 50-76 | ± 6 |
| No. 8 | 37-54 | ± 5 |
| No. 16 | 26-40 | ± 4 |
| No. 30 | 17-29 | ± 4 |
| No. 50 | 10-21 | ± 3 |
| No. 100 | 5-16 | ± 2 |
| No. 200 | 2.0-8.0 | ± 1.5 |
| % Virgin PG binder | 5.0-7.0 | |
| % Thermoplastic Polymer | 2.25 by weight of total mixture | |
| % Total binder (Including PG binder and Thermoplastic polymer) | 7.25-9.25 | ± 0.5 |

**3.3 Mix Design Criteria.** Contrary to Subsection 403.03, using a compaction effort of $N_{des}$ = 75 gyrations, perform and submit a laboratory mix design conforming to the following mixture specifications.

| **Test** | **Criteria** |
|---|---|

| | |
|---|---|
| % Air Voids (AV) (AASHTO R 35) | $2.0 \pm 2.0$ |
| % Voids-in-Mineral Aggregate (VMA) (AASHTO R 35) | 16.0 (min) |
| Permeability (ASTM D 5084) | $10^{-8}$ to $10^{-10}$ m/s |
| Flexural Beam Fatigue (AASHTO T 321) (750 microstrains, 10 Hz, 2.0 % AV min) | 250,000 cycles (min) (average of two samples) |

The Department will not require AWM blends previously documented as satisfying the flexural beam fatigue specification to be tested again for flexural beam fatigue. Also, the Department will not require flexural beam fatigue testing for projects with a total AWM quantity of less than 1000 tons.

**3.4 Surface Preparation.** Prior to the preconstruction meeting, review the existing bridge deck(s) and approach pavement with a technical representative from the producer of the thermoplastic polymer modifier utilized in the AWM and Department personnel to develop a strategy for repairing distressed areas.

Prior to the placement of the AWM over PCC bridge deck(s) and approach pavement and as directed by the Engineer, repair any moderately or highly "D-cracked" areas, high-severity "punch-outs," "blow-ups," and other severe distresses with a doweled, full-depth patch. Ensure the patching material satisfies the applicable requirements of Section 502.

Prior to the placement of the AWM over asphalt pavement and as directed by the Engineer, fill large surface deformities, greater than 3 in. deep and 4 ft in diameter, with an approved asphalt mixture.

Immediately prior to placing the AWM, thoroughly clean the surface of all vegetation, loose materials, dirt, mud, and objectionable materials. Ensure the surface is dry. During placement of the AWM, fill smaller pavement deformities in the underlying bridge deck(s) and approach pavement with the AWM.

**3.5 Application of Edge Sealant.** Apply edge sealant, at 4 to 6 in. wide and approximately 0.03 in. thick, before and after AWM application in accordance with the guidelines from the producer of the thermoplastic polymer modifier utilized in the AWM. Apply the sealant to all perimeter surfaces adjacent to the AWM, such as curbs, parapet walls, headers, drains, scuppers, and joints, in order to reduce moisture infiltration into the AWM. Also apply edge sealant to all longitudinal or transverse joints in the AWM that have cooled below 150 °F. When practical, apply the edge sealant the day before, or as early as possible on the day of, paving to maximize drying time.

**3.6 Application of Adhesive Tack Coat.** Contrary to Subsection 406.03, cold-apply an adhesive tack coat to the existing pavement at a rate to achieve an undiluted residue of 0.10 to 0.15 gal/yd$^2$. For milled surfaces, apply the tack coat at a rate to achieve an

undiluted residue of 0.15 gal/yd$^2$. For smaller projects as defined by the Engineer, cold-apply the tack coat by hand with a brush, roller, or hand-wand sprayer. Allow the adhesive tack coat to cure for a period of at least 40 min, or until the tack coat is dry, depending on local conditions.

**3.7 Application of Joint Sealant (REJC).** For continuous paving operations over existing bridge/pavement joints, saw-cut a construction joint, 1.0 to 1.5 in. wide, in the AWM and fill the joint with joint sealant (REJC) as directed by the technical representative from the producer of the thermoplastic polymer modifier utilized in the AWM or the Engineer. Additionally, conform to the construction requirements in the Special Note for Rubber Expansion Joint Compound.

**3.8 Production, Transport, and Placement of AWM.** For batch plants, after adding the concentrated thermoplastic virgin polymeric material, dry-mix for approximately ten seconds. Next, add the asphalt binder, and wet-mix for 80 seconds to ensure a homogenous blend.

Do not use parallel-flow drum plants for production. For other types of drum plants, refer to the producer of the thermoplastic polymer modifier utilized in the AWM for mixing times.

Ensure the pavement surface or ambient air temperature is a minimum of 50 °F and rising at the time of AWM placement.

Contrary to Subsection 401.03, produce and place AWM at the following temperatures:

| | **Temperature (°F)** |
|---|---|
| Mixing | 410-450 |
| Laydown at Paver | 350-410 |
| Compaction | 250-410 |

Do not permit any truck containing AWM to leave the asphalt mixing plant without inspection and approval by the technical representative from the producer of the thermoplastic polymer modifier utilized in the AWM or by the Engineer.

Ensure that the paving process begins on the downhill side of the crown and works upward in order to keep the excess water from the rollers, which may cause the mat to blister, away from the paving process.

**3.9 Compaction of AWM.**

**3.9.1 Rollers.** Contrary to Subsection 403.03, compact the AWM only with steel, double-drum drive rollers in the static mode. Provide breakdown rollers with a static weight of approximately eight tons. Provide finish rollers with a static weight of four to eight tons and a maximum drum width of 60 in. Due to the elevated temperature of the mat, utilize approximately twice the water for the

rollers than that of standard paving. Because the rollers will require more frequent filling, provide an additional roller to replace the roller being filled with water. Also provide a small roller or vibratory plate to compact smaller areas such as headers, scuppers, expansion joints, etc. that cannot accommodate a full-size roller.

**3.9.2 Opening to Traffic.** Open lanes to traffic when the AWM pavement reaches 140 °F or a minimum of one hour after compaction is completed.

**3.10 Trial Demonstration(s).** At least two days prior to beginning mainline paving, demonstrate that satisfactory production and placement of AWM is possible. Furnish at least 50 tons for the trial demonstration. The Engineer will determine the site, outside of the driving lanes, and exact quantity of the trial placement. Perform a minimum of one volumetric analysis (two gyratory specimens and two $G_{mm}$ tests), one total binder content determination, and one gradation determination. Document that the AWM satisfies the applicable requirements of Sections 3.2 and 3.3 of this note for total binder content, gradation, AV, and VMA prior to beginning mainline paving.

Use the paver and rollers to be used on the project to construct the trial placement. Obtain and test a minimum of four roadway cores from the trial placement according to KM 64-442. Ensure the density of each core is within the range of 96.0 ± 2.0 percent of the theoretical maximum density prior to beginning mainline paving.

Furnish additional 50-ton production lots until achieving mixture properties that satisfy the requirements above. Construct additional trial sections until establishing a rolling pattern that provides the density specified above.

Also furnish an additional 50-ton production lot and construct a new trial placement whenever a change in the mix design, compaction method, or compaction equipment occurs. When directed by the Engineer, remove and replace trial sections with unacceptable results.

**3.11 Acceptance Sampling and Testing.** Contrary to Subsection 402.03.02, the Department will accept AWM as follows:

**3.11.1 Definitions for Sublot, Lot, and Minimum Level of Testing.** Contrary to Subsection 402.03.02, for projects with a total AWM quantity of less than 4000 tons, the Department will define a sublot as 250 tons and a lot as 1000 tons. For these projects, the Department will define the setup period as the first 250 tons of production. For projects with a total AWM quantity of 4000 tons or more, the Department will define a sublot, a lot, and the setup period according to Subsection 402.03.02. In either case, perform a minimum of one complete set of acceptance tests, as defined by this note, each day that any AWM is produced.

**3.11.2 Total Binder Content and Gradation.** Perform one evaluation per sublot according to Subsection 402.03.02. By the end of the setup period,

establish a JMF conforming to the total binder content and gradation limits from Section 3.2 of this note. The Department will allow the established JMF to vary within the production tolerances from Section 3.2 of this note provided the percent passing each sieve remains within the gradation limits and the total binder content remains within the specified range.

**3.11.3 AV.** Prepare and analyze one set of two gyratory specimens per sublot according to Subsection 402.03.02. By the end of the setup period, test the AWM to document that the average AV value of each set of specimens conforms to the limits from Section 3.3 of this note.

**3.11.4 VMA.** Prepare and analyze one set of two gyratory specimens per sublot according to Subsection 402.03.02. By the end of the setup period, test the AWM to document that the average VMA value of each set of specimens conforms to a minimum of 15.5 percent.

**3.11.5 Density.** For each sublot of production after the setup period, randomly select locations for four cores from the bridge approach areas, not the bridge deck itself, in order to preserve the integrity of the AWM over the bridge deck. Obtain and furnish the cores to the Engineer according to Subsection 402.03.02. The Department will test the cores to ensure that the density of each core is within the range of 96.0 ± 2.0 percent of the $G_{mm}$ value for that sublot.

**3.11.6 Unsatisfactory Work Based on Laboratory Data.** When the total binder content, gradation, AV, VMA, or density value from any test after the setup period fails to satisfy the applicable requirements of this note, cease all shipments to the project. Adjust procedures or mixture composition until all properties satisfy the applicable requirements of this note. Document acceptable materials and work before restarting operations.

**3.12 Verification Sampling and Testing.** Contrary to Subsection 402.03.03, the Department will verify AWM as follows. Using the definition for a lot from Section 3.11.1 of this note, the Department will perform a minimum of one verification test for total binder content, gradation, AV, and VMA for each lot according to Subsection 402.03.03. Provided the differences between the contractor's acceptance test and the Department's verification test are within the tolerances given in Subsection 402.03.03, the Department will accept the AWM for that lot.

When the differences between the contractor's acceptance test and the Department's verification test are not within the tolerances given in Subsection 402.03.03, cease all shipments to the project. Adjust procedures or mixture composition until the differences are within the tolerances given in Subsection 402.03.03. Document compliance with these tolerances before restarting operations.

## 4. MEASUREMENT.

**4.1 Trial Demonstrations.** The Department will measure up to 100 tons of AWM used in the Trial Demonstration. The Department will not measure quantities exceeding 100 tons for payment and will consider them incidental to the AWM.

**4.2 AWM.** The Department will measure AWM in tons. The Department will not measure the surface preparation, edge sealant, or adhesive tack coat for payment and will consider them incidental to AWM.

**4.3 Joint Sealant (REJC).** The Department will measure joint sealant (REJC) according to the Special Note for Rubber Expansion Joint Compound. The Department will not measure saw-cutting joints for payment and will consider that operation incidental to the joint sealant (REJC).

## 5. PAYMENT.

**5.1 Trial Demonstrations.** The Department will pay for the measured quantities at the Contract unit bid price for AWM.

**5.2 AWM.** The Department will consider the unit bid price per ton to include all labor, materials, and equipment necessary to complete the work. The Department will make payment for the completed and accepted quantities according to the following:

| Code | Pay Item | Pay Unit |
|---|---|---|
| 21138ED | Asphalt Waterproofing Mix | Ton |

# SPECIAL NOTE FOR REPLACING EXISTING EXPANSION JOINT WITH ASPHALT PLUG JOINTS ON BRIDGES

**I. DESCRIPTION.** Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2008 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing concrete and expansion device(s) and/or bridge ends; (3) Install asphalt plug joint as specified; (4) Maintain and control traffic; and (5) Any other work specified as part of this contract.

## II. MATERIALS.

**A. Asphalt Plug Joint System.** Use either "Wabo Expandex", "Matrix 502", or "Thorma-Joint" in accordance with the manufacturers specifications and ASTM D6297. The detailed specifications, for the chosen manufacturer, must be followed completely.

## III. CONSTRUCTION.

**A. Remove Existing Materials.** Remove the existing expansion dam and bridge end as specified. Only hammers weighing 60lbs or less shall be used. Remove debris and/or expansion joint filler as directed by the Engineer. Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Asphalt Plug Joint".

**B. Place New Asphaltic Plug Joint.** After all specified existing materials have been removed, saw cut an area 20" wide (for skews less than 45 degrees) or 12" wide (for skews greater than 45 degrees) Complete installation of asphaltic plug joint in accordance with manufacturer's specifications.

**C. Shop Plans and As-built Plans.** Shop plans will not be required. The Contractor is responsible for obtaining field measurements and supplying properly sized materials to complete the work. The Contractor shall provide as-built plans after construction is complete, showing detailed dimensions and materials used.

**D. Warranty.** Contractor shall provide a written manufacturer's warranty covering the material and installation of any deficient asphalt plug joints for a period of 3 years after the date of installation at no cost to the Cabinet.

## IV MEASUREMENT.

**A. Asphalt Plug Joint System.** The Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint.

## V. PAYMENT.

**A. Asphalt Plug Joint System.** Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the new asphaltic plug joint, providing 3 year written warranty, and all incidental items necessary to complete the work within the specified pay limits as specified by this note.

The Department will consider payment as full compensation for all work required by this note and the attached manufacturer's specifications.

# SPECIFICATION FOR THE INSTALLATION OF THE THORMA-JOINT® ASPHALTIC PLUG EXPANSION JOINT SYSTEM

## SCOPE

This work shall consist of supplying and installing a binder and aggregate system composed of specially blended polymer modified asphalt and specific aggregate placed in layers into a prepared expansion joint block-out. When properly installed, the **THORMA-JOINT** system by DSA will provide a flexible waterproof bridge joint, which will allow for a joint movement of 1" in expansion and 1" in compression.

## LIMITS OF WARRANTED WORK

The warranted work includes all **THORMA-JOINT** system joints within the project limits unless otherwise indicated on the proposal or by the manufacturer.

## WARRANTED PERIOD

The length of the warranty will be three (3) years from the date of installation, as specified in the following section of this specification.

## AMOUNT OF WARRANTY BOND

The Contractor will supply a warranty bond equal to 100% of the warranted work for the THORMA-JOINT system, as described in the above section "Limits of Warranted Work."

## MATERIALS

### BJ Super™ Binder

The bridge joint binder shall be a polymer modified asphalt, as manufactured by Dynamic Surface Applications, and shall meet the following requirements as set forth is ASTM D6297-01 and when independently tested according to those standards.

| | TEST METHOD | TYPICAL VALUES |
|---|---|---|
| Cone Penetration @ 77℉ | ASTM D5/D3407 | 7.5 Max |
| Cone Penetration @ 0℉, | ASTM D5/D3407 | 1.0 Minimum |
| Flow @ 140℉, 5 Hours, (MM) | ASTM D5329 | 3.0 Max |
| Non-Immersed Bond @ 20℉, Three Cycles | ASTM D5329 | Pass 3 cycles |
| Resilience @ 77℉ | ASTM D5329 | 40-70 |
| Asphalt Compatibility | ASTM D5329 | Pass |
| Softening Point | ASTM D36 | 180 Minimum |
| Flexibility/Pliability @ -10℉ | ASTM D5329 | Pass |
| Ductility @77°F | ASTM D113 | 400 Minimum |
| Tensile Adhesion @ 77℉ | ASTM D5329 | 700 Minimum |
| Recommended Pouring Temperature | | 390°F (199°C ) |
| Safe Heating Temperature | | 410°F (210°C) |

**Aggregate**
The stone used shall primarily consist of Granite, Basalt, Gabbro, Porphyry or Gritstones. The specified aggregate shall be crushed, double washed, and shall meet the following gradation requirements:

**GRADATION**

| Sieve Size | ¾" Percent Passing |
|---|---|
| 7/8 | 95-100 |
| 5/8 | 40-60 |
| ½ | 15-40 |
| 3/8 | 0-15 |
| ¼ | 0-7 |
| #8 | - |

**Backer Rod**
The backer rod shall be a closed cell, foam expansion joint filler, capable of withstanding the elevated temperature of the polymeric binder. The backer rod shall have the following typical physical properties using a 2" specimen and test method ASTM D545:

| | |
|---|---|
| Density: | 2.0Lbs/Cu.Ft, min |
| Tensile Strength: | 30 psi, min. |
| Compression: | 5 psi @ 25%, min |
| Water Absorption: | 0.03 g/cc by weight, min (1% Max) |
| Temperature @ 410℉ (210℃) | No Melti ng |

**Bridging Plate**
The bridging plate shall be a mild steel plate, ¼" thick by 8" wide, cut in 4' lengths. Spike holes shall be drilled on a longitudinal centerline at 1' intervals.

**INSTALLATION CREWS**
The **THORMA-JOINT** system is to be installed only by factory trained and certified installation professionals.

**EQUIPMENT**
**The equipment will consist of:**

1. Small walk-behind dry cut saw
2. Pneumatic compressor of 185 CFM capacity.
3. One Hot-Compressed Air Lance (HCA Lance), capable of delivering flame retarded air stream with a temperature of 3,000°F (1648°C), at a speed of 3,000 feet per second.
4. One (1) truck mounted 9 cubic foot rotating vented mixer and one (1) truck mounted 9 cubic foot un-vented drum type mixer with a Hot-Compressed Air Lance (HCA Lance), or a pressure – air injection torch (PAT torch).
5. Melter unit equipped with agitation and an automatic temperature control which can accurately maintain the material temperature from 100℉ - 650℉ (38℃ - 343℃). A thermometer to monitor the material temperature must be provided. The burner system shall have a safety pilot capable of shutting off the gas supply in the event of a flame-out.
6. 100 lb. bottles of propane

7. Vibratory roller or plate capable of compacting up to 1” in one pass.

8. Hand held calibrated digital temperature sensor.

9. Chop-saw with carbide blade, if needed.

10. Sandblasting equipment.

11. Safety clothing and equipment as required by OSHA.

**CONSTRUCTION METHODS**

The following procedures are to be followed to ensure a successful installation:

**Note: THORMA-JOINT** must be installed at a minimum depth of two and one quarter inches (2 1/4”) in order to perform correctly.

**Marking out**: The **THORMA-JOINT** system shall be located centrally over the deck expansion gap or fixed joint and marked out to the recommended width of 20”.

**Excavation:** The joint shall be excavated by the use of saws and pneumatic hand tools. Where possible, saws shall be set to cut the full required depth of the wearing surface and any membrane present. Variations in the depth of the wearing surface across the road should be considered to insure, where possible, that the deck is not damaged. All debris from the excavation channel shall be removed to allow the full volume of new joint to be installed.

**Cleaning:** The entire channel must be thoroughly cleaned and dried. Small debris will be removed by using compressed air. A sandblaster will then be applied throughout the length of the channel, to clean any remaining debris on the vertical walls and adjacent deck area.

**Repairs:** Spalled and defective concrete should be repaired with an approved material as agreed upon by the Project Engineer.

**Caulking:** The gap shall be caulked with the backer rod, allowing for approximately 1” of binder in the gap on top of the rod. If the previous caulking is intact and will hold the binder, it may be used to take the place of the backer rod. A small amount of hot binder should be placed onto the caulking to insure that the gap is adequately plugged.

**Tanking:** Immediately after cleaning and caulking, the entire channel shall be coated with a thin layer of hot binder. If significant delay occurs, the channel shall be inspected to determine if re-cleaning is necessary.

**Plating:** The gap shall be bridged with the steel plates centered over the gap by placing locating pins in the centerline of the plate. There must be at least 2” between the edge of the steel plate and the wall of the channel. Once the locating pins are in place, the top of the plate shall be coated with a thin layer of hot binder.

**Aggregate:** The aggregate must be heated in a vented rotating drum mixer by the use of a hot compressed air lance (HCA Lance), or a pressure air injection torch (PAT torch). Once the aggregate has been heated to a temperature of 370°- 380°F (188°- 193°C), it is then dropped into a second un-vented mixer and coated with a small quantity of binder. One gallon of binder per 100 lbs. of stone should be sufficient to coat the stone.

**Binder:** The binder shall be heated to the recommended pouring temperature, 370°- 385°F (188°- 196°C). At no time shall the recommended safe heating temperature of 400°F (204° C) be exceeded.

**Material Installation:** Layers of hot pre-coated aggregate not more than 2" thick shall be placed in the channel and immediately covered to the level of the coated aggregate. This will ensure that the 3:1 weight ratio of aggregate to binder has been achieved. Layers shall be raked to insure the aggregate is completely coated and that all air pockets are eliminated. This process shall cease approximately three-quarters of an inch (3/4") from the top of the channel.

**Surface Layer:** The surface layer shall be applied as other layers except that the pre-coated aggregate is not flooded with binder. The pre-coated aggregate shall be transferred to the joint and leveled slightly higher than the adjacent road surface. On a standard 2" deep joint, the topcoat should be one quarter inch (1/4") higher than the road surface. Deeper joints will require higher levels before tamping.

**Compaction:** Compaction should take place after the joint has cooled to approximately 225° F (107°C). The joint surface shall be made approx imately level with the existing road surface by using the vibratory plate or roller.

**Top Coating:** After compaction, lines of 3" tape are placed one inch beyond the joint width on each side of the joint to insure evenness of appearance. The joint and at least one inch of the road surface shall be top-coated with the hot binder until the surface is smooth and absent of voids.
**Note:** If it is impossible to topcoat the joint during the same working day/night, it is allowable that the topcoat step be completed on the next working day/night. However, the surface must be cleaned, dried, and heated with the HCA Lance.

**Surface Dressing:** Immediately after top-coating, an anti-skid material is spread evenly over the joint to eliminate material tracking.

**Final Preparation:** Prior to departure the crew will insure that the entire work area is clean of debris.

**Temporary Joint:** In the event of a work stoppage while constructing a joint, the following procedure can be used for low ADT roadways (<20,000). Fill the cavity with cold uncoated aggregate to the level of the road surface and top the aggregate with binder to form a temporary riding surface. Roadways with an ADT greater than 20,000 will require materials similar to a cold patch asphalt. Be sure whatever is used is approved by the controlling agency.

**QUALITY CONTROL**

Upon request, certifications of the materials will be provided.

The Project Engineer may require the contractor to provide samples during the course of the work for laboratory test of any or all of the properties specified.

Quality of every **THORMA-JOINT** system will reflect the quality put forth by Dynamic Surface Applications and shall receive the highest priority in contractual obligation.

**EVIDENCE OF COMPLIANCE**

Dynamic Surface Applications is prepared to provide with its bid evidence of successful installations of this system over the past several years.

**WARRANTY PARAMETERS**

Condition parameters are used to measure the performance of the **THORMA-JOINT** during the warranty period. Each condition parameter has a threshold limit that defines when corrective action (warranty work) is required.

**DEFINITIONS**

1. **Debonding** – Separation of the **THORMA-JOINT** from the adjacent vertical wall of the pavement or the bridge deck.
2. **Cracking** – Any open crack that extends greater than two (2) feet.
3. **Perviousness** – Absence of water tightness.
4. **Rutting** – Depression, displacement, or dislodgment of the THORMA-JOINT surface.

**CORRECTIVE ACTIONS**

The following corrective actions are required to outline typical acceptable treatments for the various condition parameters. All corrective actions include labor, equipment and materials **only** at the expense of the Contractor. Associated costs for Traffic Control are the responsibility of the Owner.

| **Condition Parameters** | **Required Action** |
|---|---|
| Debonding: | Sawcut and remove the affected area. Replace with new THORMA-JOINT material in accordance with manufacturers recommendation. |
| Cracking: | Clean and seal in accordance with manufacturers recommendation. |
| Perviousness: | Clean and seal in accordance with manufacturers recommendation. |
| Rutting: | Sawcut and remove the affected area. Replace with new THORMA-JOINT material in accordance with manufacturers recommendation. |

**Thorma-Joint® Limited Product Warranty**

**Project:** _____
**Buyer(name and address):** _____

**PRODUCT DESCRIPTION:** Thorma-Joint® is a polymer modified asphaltic plug expansion joint system composed of a specific matrix of BJ Super™, our specially formulated bridge joint binder material, and aggregate (the "Product").

**LIMITED WARRANTY:** Subject to the terms of this Limited Warranty, Dynamic Surface Applications, Ltd. ("DSA") warrants to the above-named Buyer that for a period of **THREE (3) years** upon completion of installation of the Product that it will repair or replace the Product to the extent that the Product is defective as per the conditions set forth in this specification. **DSA DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, WRITTEN OR ORAL, INCLUDING WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, NON-INFRINGEMENT CONCERNING THE PRODUCT, OR WITH RESPECT ANY TECHNICAL INFORMATION PROVIDED WITH THE PRODUCT. NO EMPLOYEE OR REPRESENTATIVE OF DSA HAS AUTHORITY TO MAKE ANY REPRESENTATIONS OTHER THAN THOSE STATED IN THIS WARRANTY. IN THE EVENT AN EXPRESS OR IMPLIED WARRANTY IS REQUIRED BY LAW DESPITE THIS DISCLAIMER, THE BUYER AGREES THAT SUCH WARRANTY AND REMEDIES FOR THE BREACH OF SUCH WARRANTY SHALL BE EXPRESSLY LIMITED TO THE TERMS OF THE WARRANTY SET FORTH IN THIS LIMITED WARRANTY.** Buyer's sole and exclusive remedy against DSA shall be replacement or repair of the non-compliant or deficient Product and the cost of reinstallation of the Product. In the event surface cracks occur, before the warranty expires, the joint manufacturer will be responsible for repairing or replacing the joint at no cost. If the joint needs to be repaired or replaced by the manufacturer before the warranty expires.

**EXCLUSIONS FROM WARRANTY:** This Limited Warranty does not cover damage to the Product as a result of: (a) failure of the material to which the Product is installed upon or adjacent to, including but not limited to, cracking or movement of vertical edges of joint cavity, cracking due to excessive movement of structure, or cracking due to vertical shifting of structure, (b) unusual weather conditions or natural disasters, including without limitation, earthquakes, flooding, hurricanes, and tornadoes, (c) acts of war or terrorism, civil disobedience, vandalism, animals or insects, (d) substances that are not deemed by DSA to be normal wear and tear such as chemicals and fire, (e) faulty or inadequate installation of the Product by Buyer or any other person or entity, (f) abuse by machinery, equipment or any persons, or (g) acts of negligence or misuse by Buyer or any other person or entity.

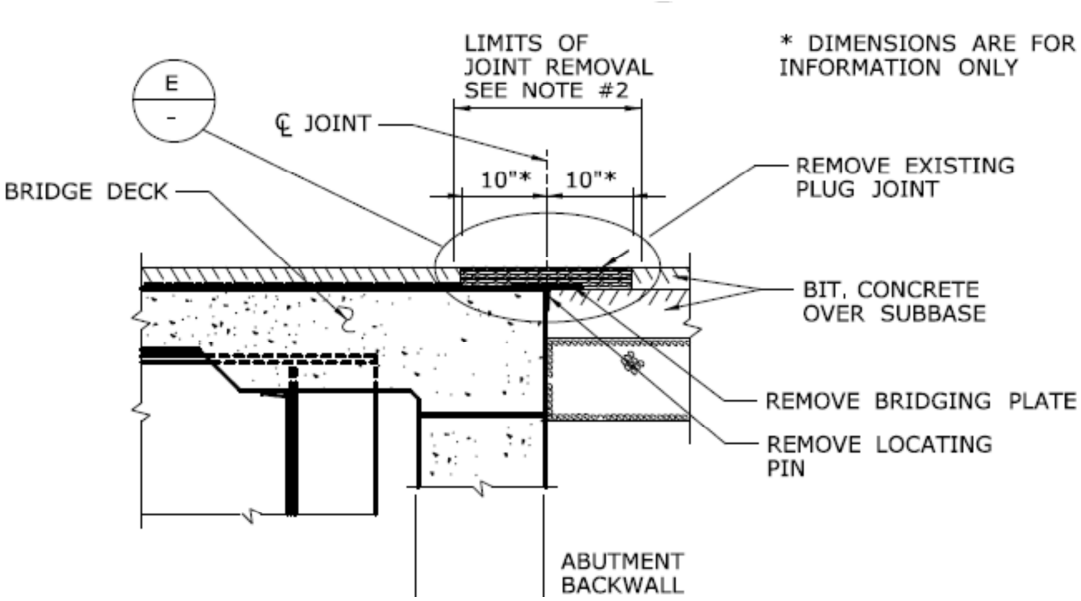
**EFFECTIVENESS OF WARRANTY:** This Limited Warranty shall not become effective unless and until DSA receives full and final payment for the Product. To assure that DSA technical representatives can determine the cause of any alleged defect or damage to the Product so that DSA can take appropriate steps for timely corrective measures, if applicable, any claim for breach of warranty hereunder shall be made and presented to DSA in writing within a period of 30 days following the discovery of the alleged defect or damage, failing which the foregoing warranty shall be void and of no effect whatever. Furthermore, DSA shall be entitled to inspect the Product at any time during the lifetime of the foregoing warranty upon reasonable notice to the Buyer or its end user, it being understood that said warranty shall be invalid and of no effect in the event DSA shall be denied such right of inspection.

**LIMITATION OF LIABILITY: DSA SHALL NOT BE LIABLE TO BUYER OR ANY OTHER PERSON OR ENTITY FOR ANY INCIDENTAL, SPECIAL, EXCEPTIONAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFITS,**

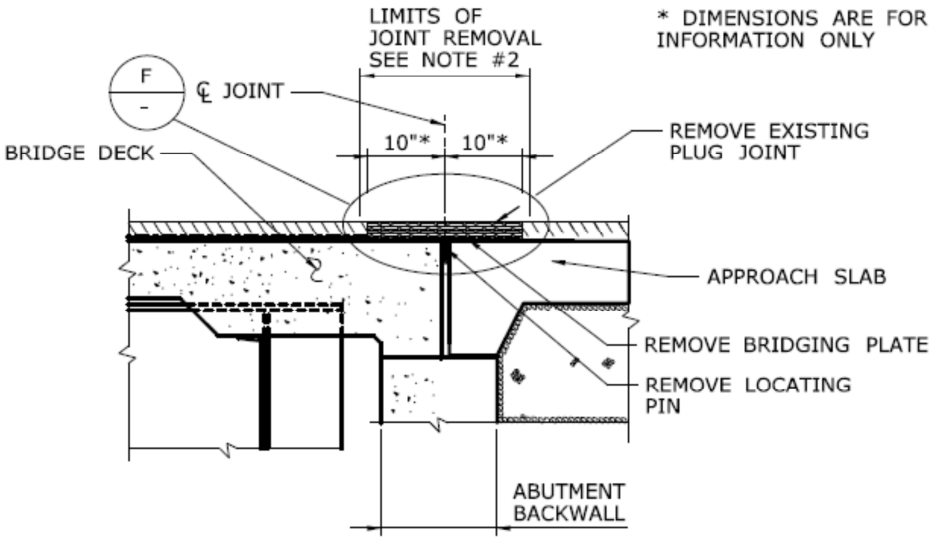
**PERSONAL INJURY, DEATH, OR PROPERTY DAMAGE, UNDER ANY LEGAL THEORY, EVEN IF DSA HAS BEEN ADVISED OF THE POSSIBILITY OF DAMAGES.**

**MISCELLANEOUS**: Rights under this Limited Warranty may be transferable by Buyer to a third party only with the prior written consent of DSA and the payment of the then-current transfer fees, inspections services and subsequent repair or replacement of the Product, if necessary, by Buyer. Failure by DSA to enforce any of the terms or conditions in this Limited Warranty shall not be interpreted to be a waiver of any terms and conditions of this Limited Warranty. If any portion of this Limited Warranty is unenforceable under applicable law, such portion shall be deemed reformed or deleted, but only to the extent necessary to comply with such law, and the remaining provisions shall remain in full force and effect. This warranty shall be construed in accordance with, and shall be governed by, the laws of the State of Ohio without reference to its conflict of law principles and Buyer agrees to submit to the exclusive jurisdiction of the appropriate state or federal court within Cuyahoga County, OH or purpose of resolving any dispute or claim arising in connection with this Limited Warranty.

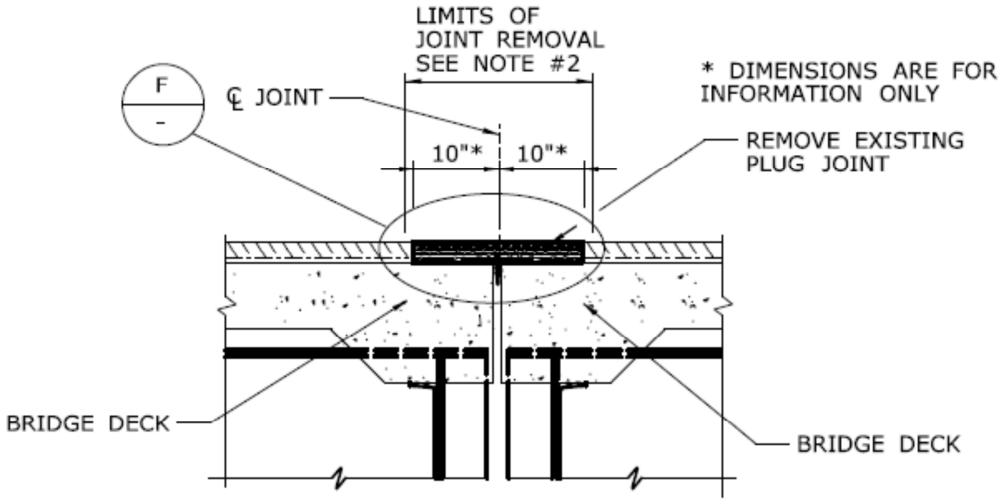
# COMMON ASPHALTIC PLUG JOINT DETAILS




**ASHALTIC PLUG JOINT AT BRIDGE DECK AND ROADWAY (TYPICAL BOX BEAM)**




**ASPHALTIC PLUG JOINT AT BRIDGE DECK AND APPROACH**




**ASPHALTIC PLUG JOINT AT PIER**

**Please call DSA at 800-491-5663 with any questions.**

# INSTALLATION PROCEDURE

**Wabo®Expandex**
Asphaltic Plug Joint System
for Bridge & Highway Applications

## A. General

The work shall consist of furnishing and installing a Wabo®Expandex joint system in accordance with the details shown on the plans and the requirements of the specifications. Placement of the Wabo®Expandex joint system shall consist of proper surface preparations, material and application of materials. The Wabo®Expandex joint system is shipped by length and volume of joint. The steel traffic wearing plates are cut and shipped 8"(203 mm) wide by 72"(1828 mm) lengths. The elastomeric binder and granite aggregate are calculated on a volume basis and shipped by weight. One kit of Wabo®Expandex is comprised of 30 lb. (13.6 kg) elastomeric binder, 40 lb. (18 kg) bag of B granite aggregate and 40 lb. (18 kg) bag of C granite aggregate.

## B. Joint Preparation

The blockout shall be constructed to the dimensions on the drawings. The blockout base shall be of sound material with no vertical misalignment and parallel with the plane of the roadway. Should repairs be required to the blockout an agency approved repair material shall be used.

Minimum blockout width is to be 20" (500 mm) but not exceeding 24" (610 mm).
Minimum blockout depth is to be 2" (50 mm).

Before installation of the Wabo®Expandex material, all blockout surfaces shall be dry, then abrasive-blasted to remove contaminants and loose aggregate. Blockout should then be heated and cleaned using a hot compressed air lance capable of producing 3000°F (1648°C) and a directional velocity of 90,000 cps (3000 fps) to insure the removal of any residue from the abrasive-blast operation. Care should be taken to insure that the abrasive blast and compressed air cleaning does not contaminate the blockout.

Note: Installation of the Wabo®Expandex should not be done unless the deck temperature is a minimum of 40°F (5°C) and rising.

## C. Backer Rod Placement

Once the joint opening and blockout have been properly prepared, the backer rod is placed in the joint opening to a depth of approximately 1" (25mm). A closed-cell, high temperature, expanded polyethylene foam rod is recommended. The size of the backer rod should be 25% greater than the joint opening to be sealed.

# INSTALLATION PROCEDURE

**Wabo®Expandex**
Asphaltic Plug Joint System
for Bridge & Highway Applications

## D. Modified Elastomeric Binder Placement

Melt the elastomeric binder in a double jacketed kettle and heat to a minimum of 380°F (193°C) but Do Not exceed 400°F (204°C). Pour the heated binder over the backer rod in the joint opening to seal the gap. This binder shall be poured level with the base of the blockout. Apply the heated binder over the entire blockout (base and sidewalls) to form a monolithic membrane approximately 1/16" (1.5 mm) to 1/8" (3 mm) thick.

## E. Traffic Wearing Plate Placement

The steel traffic wearing plates are centered over the joint opening end-to-end along the joint with no overlapping. Centering pins (16D common nail is recommended) are installed in the pre-drilled holes and inserted directly into the modified elastomeric binder plug. These pins are designed to hold the plates in place. The heated binder shall be poured over the closure plate to encapsulate it.

## F. Binder and Granite Aggregate Placement

Pre-measured granite aggregate, one 40 lb (18 kg) bag B and one pre-measured granite aggregate 40 lb. (18 kg) bag C is placed in a rotating drum mixer and heated to a minimum of 250°F (121°C) not exceeding 375°F (190°C). A correct volume, 2.5 gallons (9.5 Liters), of heated Wabo®Expandex binder, 380°F (193°C) not exceeding 400°F (204°C), is added to this heated granite aggregate.

This blend of elastomeric binder and granite aggregate is mixed for approximately 3 minutes or until all granite aggregate is coated and there are no "dry pockets" of aggregate. A hot air lance may be used to maintain the mix temperature on cooler days. Do not let the mix temperature exceed 400°F (204°C) if applying heat. Never apply direct flame to the liquid binder. The mixture is ready for placement in the blockout. Pour the Wabo®Expandex into the blockout to the road surface and level with rakes.

Once the blockout is filled, the Wabo®Expandex is to be compacted perpendicular to the joint. A minimum two-ton, water cooled drum roller is acceptable for this work. Care shall be taken to insure that the compaction process does not transfer material to the roller. Water can be used to prevent this should material transfer occur. The application of water should be kept to a minimum. Do not allow the material mixture to cool prior to beginning the compacting operation. This step should be ongoing during the installation process. Complete final compaction process by rolling the joint longitudinally.

# INSTALLATION PROCEDURE

**Wabo®Expandex**
Asphaltic Plug Joint System
for Bridge & Highway Applications

## G. Final Treatment

After compacting, the Wabo®Expandex is ready for final treatment. The top surface shall be heated with a hot air lance until the surface becomes tacky. Duct tape should be placed 1" (25 mm) away from the joint edges and parallel to the joint. Pour heated elastomeric binder over the top surface to form a membrane.

Broadcast Black Beauty to eliminate possible tackiness. (Do not use silica sand) The installed Wabo®Expandex joint will be ready to accept traffic once the joint has cooled to the touch. Minimum cooling time 1 hour.

# MATRIX 502 ASPHALTIC PLUG BRIDGE JOINT SYSTEM

## General

The Matrix 502 Asphaltic Plug Bridge Joint System is a hot applied field molded and constructed expansion joint system that is primarily composed of a uniquely formulated polymer modified asphalt binder that is mixed with specially selected and processed aggregate. The Matrix 502 Joint provides a watertight, smooth riding joint that can accommodate up to a maximum of ± 3/4" (19 mm) of annual joint movement and can be used for expansion joint gaps up to 3" (75 mm) wide. The joint is installed in cutouts in the deck surfacing ranging from 2 to 6 inches deep (5 to 15 cm) and 20 to 24 inches (51 to 61cm) wide. The Matrix 502 Joint can be used for both expansion and fixed end joints at abutments or piers in many bridge types including concrete slab, concrete beam, prestressed concrete and steel beam, either simple or mulitspan, in both new construction and rehabilitation projects. The joint is placed in the deck-surfacing layer of either asphalt concrete or portland cement concrete to a minimum depth of 2 (5 cm). Completed joints are black in color. The Matrix 502 Joint can also be used as a pressure relief joint on bridge approach slabs. Compared to conventional anchored bridge joint systems, Matrix 502 Joints are low cost, quick and easy to install and easy to maintain. The Matrix 502 Asphaltic Bridge Joint System meets requirements of ASTM D6297, Standard Specification for Asphaltic Plug Joints for Bridges.

## Components

The Matrix 502 Asphaltic Plug Bridge Joint System is primarily composed of Matrix 502 binder and two grades of Matrix 502 aggregate. Additional components include primer, backer rod, bridging plates and locating pins. Details and specifications for these components follow.

**Matrix 502 Binder, Part No.**
A specially formulated hot applied polymer modified asphalt binder that is mixed with aggregate forming a bonded, flexible, extensible, compressible and traffic resistant joint system. Matrix 502 Binder meets the polymeric modified asphalt requirements of ASTM D6297 when sampled and heated in accordance with ASTM D5167.

| Test | ASTM D6297 Limits |
|---|---|
| Softening Point (ASTM D36) | 182°F (83°C) min. |
| Tensile Adhesion (ASTM D5329) | 700% min. |
| Ductility, 77°F (25°C) (ASTM D113) | 400 mm min. |
| Cone Penetration, 77°F (25°C) (ASTM D3407, D5329) | 7.5 mm max. |
| Low Temperature Cone Penetration 1.0 mm min. 0°F (-18°C) 200g, 60s (ASTM D6297, sec 9.1) | 1.0 mm min. |
| Flow 140°F (60°C), 5 hr. (ASTM D3407, D5329) | 3.0 mm max. |
| Resilience, 77°F (25°C) (ASTM D3407, D5329) | 40-70% |
| Asphalt Compatibility (ASTM D3407, D5329) | Pass |
| Recommended Installation Temp. Range | 360-390°F (182-199°C) |
| Safe Heating Temp. Range | 390-421°F (199-216°C) |
| Bond, +20°F (-7°C), 100% extension (ASTM D3405, D5329) | Pass 3 cycles |
| Flexibility at -10°F (-23°C) (ASTM D5329) | Pass |

Additional specific properties of Matrix 502 Binder are as follows.

| Test | ASTM D6297 Limits |
|---|---|
| Bond, 0°F (-18°C), 50% Extension (ASTM D5329) | Pass 5 cycles |
| Brookfield Viscosity, 400°F (204°C) (ASTM D4402) | 4000 cp max. |
| Installation Temperature | 380°F (193°C). |
| Safe Heating Temperature | 410°F (210°C). |
| Unit Weight at 60°F (15°C) | 9.3 lbs/gal (1.12 kg/l) |

# MATRIX 502 ASPHALTIC PLUG BRIDGE JOINT SYSTEM

**MATRIX 502 AGGREGATE SBG, Part No. 33032 and AGGREGATE D, Part No. 33030**
Specially selected igneous aggregates that are screened to specific gradations, double washed, dried and packaged in 50 lb (22.7 kg) bags. SBG aggregate is mixed with the Matrix 502 Binder to produce the mastic to fill the joint cutout. D aggregate is a finer grade, used as surface dressing for the completed joint. Gradation requirements are as seen in Table 1.

**Table 1. Matrix 502 Aggregate**

| SBG Aggregate | | D Aggregate | |
|---|---|---|---|
| **Screen Size** | **% Passing** | **Screen Size** | **% Passing** |
| 1" | 95-100% | 3/16" | 100% |
| 3/4" | 90-100% | NO 6 | 90-100% |
| 1/2" | 50-70% | NO 8 | 25-40% |
| 3/8" | 25-40% | NO 10 | 0-10% |
| 1/4" | 0-15% | | |

**BRIDGING PLATES, Part Nos. 33050, 33051, 33052, 33053**
Bridging plates are used to span the expansion joint opening, to function as a bond breaker and to support traffic loads. Four different plates are available for different specifications. All bridging plates are 8 (20.3 cm) wide and 60 (1.52 m) long, and have 3/16 (4.8 mm) diameter holes at the centerline of the plate at 1' (30.5 cm) intervals for centering over the joint. Plate details are as seen in Table 2.

**LOCATING PINS**
16D galvanized common nails are placed through the holes in the bridging plates and down into the expansion joints opening to center the plate over the opening.

**CRAFCO ASPHALT PRIMER, Part No. 33140**
A specially formulated solvent-based asphalt primer used to treat all bonding surfaces to improve adhesion. Supplied in 5 gal (17.9 l) pails. Primer exceeds requirements of ASTM D41, Type II.

**BACKER ROD, Part No. 34609**
A closed cell heat resistant backer rod used to provide back up in the expansion joint opening. Backer rod is 2" (5 cm) diameter and supplied in 6' (1.8 m) lengths. Meets requirements of ASTM D5249, "Standard Specification for Backer Material for Use with Cold and Hot Applied Joint Sealants in Portland Cement Concrete and Asphalt Joints, Type 1". If required, other diameters can be supplied.

**TYPICAL INSTALLATION**
Figure 1 shows a typical installation of the Matrix 502 Asphaltic Plug Bridge Joint System. Locations of each of the components are shown in Figure 1.

**OVERVIEW OF INSTALLATION PROCEDURES**
Following is an overview of installation procedures for the Matrix 502 Joint. For complete detailed installation procedures, refer to the"Installation Procedures for Matrix 502 Asphaltic Plug Bridge Joint System".

1. Transversely saw cut the surfacing layer full depth to the

**Table 2. Bridging Plates**

| Part Number | Material | Thickness | Specification | Typical Uses |
|---|---|---|---|---|
| 33050 | Aluminum | 18 gauge | ASTM B209/3003-H14 | Light traffic, narrow joints, corrosion resistance |
| 33051 | Steel | 1/8" (3.2mm) | ASTM A36 (36m) | Standard |
| 33052 | Steel | 1/4" (6.4mm) | ASTM A36 (36m) | Heavy traffic, wide joints |
| 33053 | Galvanized Steel | 1/4" (6.4mm) | ASTM A36 (36m), ASTM A123 | Heavy traffic, wide joints, corrosion resistance |

# MATRIX 502 ASPHALTIC PLUG BRIDGE JOINT SYSTEM

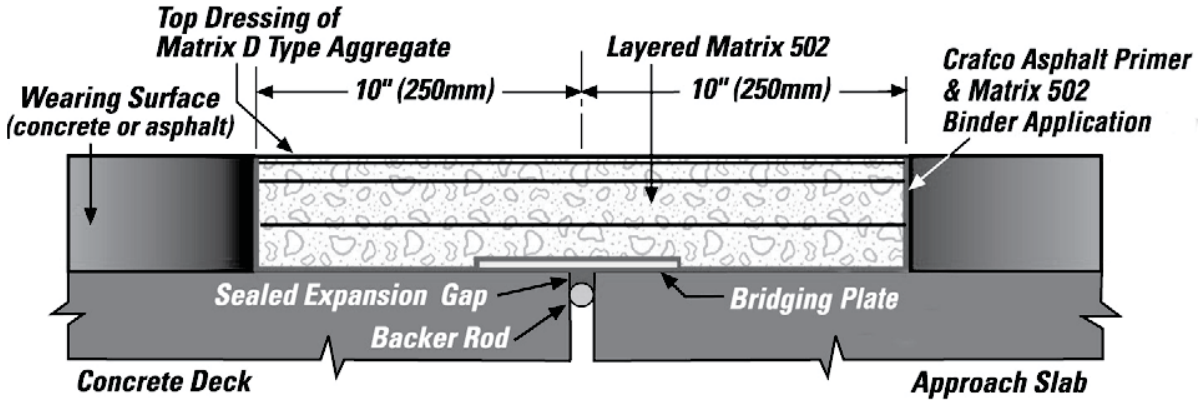



Figure 1. Typical Matrix 502 Asphaltic Plug Bridge Joint System

deck surfacing on each side of the joint. Width between cuts is 20 to 24 inches (51 to 61 cm) and centered over the joint gap. Minimum saw cut depth is 2" (50 mm).

2. Break out and remove all material between the saw cuts, including any waterproofing if present, to the concrete deck surface.

3. Clean the cutout area and thoroughly dry with a hot air lance.

4. Prime all vertical and horizontal surfaces with Crafco Asphalt Primer and allow to cure.

5. Place backer rod into the expansion gap to the appropriate depth.

6. Fill the expansion gap with heated Matrix 502 Binder and overfill onto the deck surface.

7. Place bridging plates into the hot Matrix 502 and center over the expansion gap using centering pins. Butt the plates at ends.

8. Coat all vertical and horizontal surfaces, including the bridging plate with hot Matrix 502 Binder.

9. Heat the Matrix SBG aggregate to 275-375°F (135-163°C) in an appropriate rotating drum mixer. Heat Matrix 502 Binder to 380-410°F (193-210°C) in a double-jacketed melter.

10. Add the appropriate quantity of Matrix 502 Binder to the hot aggregate and mix in the mixer to thoroughly coat the aggregate.

11. Place the hot aggregate-binder mixture in the joint cutout in layers between 3/4" and 1 1/2" (19-38 mm) thick. Rake the mixture to level in the cutout.

12. Flood the bonded mixture surface with Matrix 502 Binder to fill voids before placing the next layer.

13. For the last layer, slightly overfill the joint cutout by approximately 1/4” to 1/2” (6 – 12 mm) and compact to surface level.

14. Carefully heat the top surface of the compacted mixture with a heat lance and spread a thin layer of Matrix 502 Binder over the mixture surface.

15. Immediately apply a layer of D aggregate onto the hot binder and compact the aggregate into the surface.

16. Allow the joint to cool, sweep any loose aggregate, clean up the job site and open to traffic.

## WARRANTY

The D.S. Brown Company warrants that D.S. Brown products meet applicable ASTM, AASHTO, Federal or State specifications at time of shipment. Techniques used for the preparation and installation are beyond our control as are the use and application of the products; therefore, D.S. Brown shall not be responsible for improperly applied or misused products. Remedies against The D.S. Brown Company, as agreed to by D.S. Brown, are limited to replacing nonconforming product or refund (full or partial) of purchase price from The D.S. Brown Company. All claims for breach of this warranty must be made within three (3) months of the date of use or twelve (12) months from the date of delivery by D.S. Brown whichever is earlier. There shall be no other warranties expressed or implied. For optimum performance, follow D.S. Brown recommendations for product installation.

# NOTES FOR BRIDGE ABUTMENT CONCRETE PATCHING

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

**I. DESCRIPTION.** Perform all work in accordance with the Department's 2008 Standard Specifications, and applicable Supplemental Specifications, the attached sketches, and these Notes. Section references are to the Standard Specifications.

This work consists of: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing spalled/delaminated concrete; (3) Prepare the existing surface for concrete patching; (4) Place hook fasteners and welded wire fabric over surfaces to be repaired (where applicable); (5) Apply concrete patching as specified by this note and as shown on the attached detail drawings; (6) Finish and cure the new Concrete Patches; (7) Maintain & control traffic; and, (8) Any other work specified as part of this contract.

**II. MATERIALS**.

**A. Concrete.** Approved Concrete Product for Vertical and Overhead Repair Patch.

**B. Steel Reinforcement.** Use Grade 60. See Section 602

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

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

**III. CONSTRUCTION.**

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

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

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

After all deteriorated concrete has been removed; the repair surface to receive concrete patching shall be prepared by abrasive blast cleaning. Abrasive blast

cleaning shall remove all fractured surface concrete and all traces of any unsound material or contaminants such as oil, grease, dirt, slurry, or any materials which could interfere with the bond of freshly placed concrete.

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

**B.** **Steel Reinforcement.** All corroded reinforcing steel exposed during concrete removal shall have corrosion products removed by abrasive grit blasting or wire brush whichever is more appropriate. Furnish for replacement, as directed by the Engineer, additional steel reinforcing bars ½" diameter by 20-foot lengths. Place these bars in areas deemed by the Engineer to require additional reinforcement. Field cutting and bending is permitted. Deliver unused bars to the nearest County Maintenance Barn. Payment will be made in accordance with Section 602.

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

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

Welded wire fabric (WWF) shall be provided as shown on the attached sketches and at each repair area larger than 1 square foot if the depth of the repair exceeds 3 inches from the original dimension of the repaired member. Sheets of adjoining WWF shall be lapped by at least one and one-half spaces at all intersections, in both directions, and be securely fastened. WWF fabric shall be supported no closer than ½ inch to the prepared concrete surface and shall have a minimum concrete cover of 1.5 inches.

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

**C.** **Hook Fasteners.** Hook fasteners shall be positioned at the spacing as stated above or as directed by the Engineer. Any given area shall have a minimum of four anchors. The WWF shall not move or deform excessively during concrete patching. Maximum hook fastener spacing shall not exceed 2 feet on a grid pattern over the entire repair area.

Hook fasteners shall be of commercial grade galvanized steel with a minimum diameter of 3/16". They may be mechanically set or grouted, as approved by the Engineer.

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

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

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

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

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

## IV. MEASUREMENT

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

**B.** **Steel Reinforcement.** See Section 602.

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

## V. PAYMENT

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

**B.** **Steel Reinforcement.** See Section 602.

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

## SPECIAL NOTE FOR BRIDGE CONCRETE CURB REPAIR

**I. DESCRIPTION**. Contrary to Section 606.03.03, "Concrete Curb Repair" is to be completed as per the attached detail drawing(s) and in accordance with this Note.

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2008 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove existing concrete curb marked by engineer; (3) Form and place new concrete curb as specified by this note and as shown on the attached detail drawing(s); (4) Finish and cure the new curb; (5) Maintain and control traffic; and (6) Any other work specified as part of this contract.

**II. MATERIALS.**

**Latex Concrete.** See Section 606.03.17.
**AA Concrete**. See Standard Specifications
**Steel Reinforcement.** Use Grade 60. See Section 602.
**Epoxy Bond Coat.** See Section 511.

**III. CONSTRUCTION.**

**A. Remove Existing Materials.** Remove existing concrete curb 9 - 18 inches (13.5” Average) across the front face and down to the original deck (10”) using hammers weighing 40 pounds or less. Dispose of all removed material entirely away from the job site as approved by the Engineer. Clean and leave existing steel reinforcement in place. This work is incidental to the contract unit price for "Concrete Curb Repair". Clean and leave all existing steel reinforcement encountered in place. Damaged steel reinforcement will be repaired/replaced as directed by the Engineer. Protect the plinths from damage throughout the life of the project.

**B. Placing New Concrete.** After removing the existing curb face, repair and/or re-tie existing steel reinforcement as directed by the Engineer and form the curb to the original dimensions. Blast clean all areas of existing concrete and structural steel to come in contact with new concrete until free of all laitance and deleterious substances immediately prior to the placement of the new curb. The interfaces of the new and old concrete shall be as nearly vertical and horizontal as possible. The surface areas of existing concrete to come in contact with the new Class "M" Concrete are to be coated with an epoxy bond coat immediately prior to placing new concrete in accordance with Section 511. Place latex concrete or Class AA Concrete for the curb in accordance with Section 606.03.17 and as shown on the attached detail drawing(s).

**C. Joints for Curb.** Joints in the curb shall match the slab joints at the proposed bridge expansion dams and eliminated transverse joints as shown on the attached detail drawings. Curb repair incorporated into the 1'-6” on either side of a joint shall be incidental to the pay items "Expansion Joint Replacement" or "Eliminate Transverse Joint". The Department will **NOT** measure these areas for payment under "Concrete Curb Repair".

**D. Curb Finish.** Finish and cure in accordance with Section 606.03.17.

**IV. MEASUREMENT.**

**A. Concrete Curb Repair.** The Department will measure the quantity in linear feet of curb repaired. The Department shall **NOT** measure the lengths of curb that fall into the pay limits of the pay items "Expansion Joint Replacement" or "Eliminate Transverse Joint".

**B. Steel Reinforcement.** See Section 602.

**V. PAYMENT.**

**A. Concrete Curb Repair.** Payment at the contract unit price per linear foot is full compensation for removing and disposing of specified existing materials, blast cleaning, concrete, steel reinforcement, and all incidental items necessary to complete the work within the specified pay limits as specified by this note and as shown on the attached detail drawing(s).

**B. Steel Reinforcement.** See Section 602.

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

## 003B00007R - curb and plinth wall patching as measured in direction of traffic flow

CURB

| | slow lane | | FT | fast lane | | FT |
|---|---|---|---|---|---|---|
| STA | 942 | 940 | 2 | 927 | 915 | 12 |
| | 835 | 826 | 9 | 907 | 901 | 6 |
| | 582 | 573 | 9 | 285 | 279 | 6 |
| | 516 | 511 | 5 | 270 | 262 | 8 |
| | 508 | 496 | 12 | 249 | 246 | 3 |
| | 491 | 472 | 19 | 236 | 220 | 16 |
| | 412 | 405 | 7 | | | **51** |
| | 365 | 358 | 7 | | | |
| | 321 | 315 | 6 | | | |
| | 312 | 302 | 10 | | | |
| | 295 | 285 | 10 | | | |
| | 255 | 245 | 10 | | | |
| | 240 | 224 | 16 | | | |
| | | | **122** | | | |

PLINTH

| | | | |
|---|---|---|---|
| 947 | 941 | 6 | |

## 003B00007L - curb and plinth wall patching as measured in direction of traffic flow

CURB

| | slow lane | | FT | fast lane | | FT |
|---|---|---|---|---|---|---|
| STA | 952 | 921 | 31 | 932 | 917 | 15 |
| | 896 | 892 | 4 | 679 | 667 | 12 |
| | 834 | 806 | 28 | 647 | 637 | 10 |
| | 791 | 759 | 32 | 277 | 269 | 8 |
| | 498 | 484 | 14 | 257 | 247 | 10 |
| | 428 | 412 | 16 | 219 | 210 | 9 |
| | 408 | 388 | 20 | 165 | 154 | 11 |
| | 383 | 338 | 45 | 138 | 128 | 10 |
| | 334 | 307 | 27 | 114 | 106 | 8 |
| | 261 | 247 | 14 | 47 | 38 | 9 |
| | 219 | 210 | 9 | | | **102** |
| | 150 | 141 | 9 | | | |
| | 125 | 117 | 8 | | | |
| | 110 | 76 | 34 | | | |
| | | | **291** | | | |

PLINTH

| | | |
|---|---|---|
| 875 | 885 | **10** |

end of bridge = STA 1087

# SPECIAL NOTE FOR USE OF HYDRODEMOLITION METHOD

To be used if the Contractor chooses to use Hydrodemolition method to complete partial and full depth removal. Also see Section 606.03.03.

## Description

This work consists of bridge surface deck preparation using Hydrodemolition to provide a uniform depth, highly bondable surface and to remove all variable depth, unsound material. This item also includes the removal and disposal of all concrete and debris, vacuuming, shielding, water control, additional jack hammering and all other aspects of work necessary to prepare the deck for the placement of the new latex modified concrete overlay.

## Equipment

Sawing Equipment. Sawing equipment shall be a concrete saw capable of sawing concrete to the specified depth.

Mechanical Scarifying Equipment. The scarifying equipment shall be a power operated mechanical scarifier capable of uniformly scarifying or removing the old concrete or asphalt wearing surface from the bridge deck to the depths required in the plans or as directed by the Engineer. The equipment shall be self-propelled with sufficient power, traction and stability to maintain accurate depth of cut and slope. The equipment shall be capable of accurately and automatically establishing profile grades along each edge of the machine by referencing the existing bridge deck by means of a ski or matching shoe, or from an independent grade control; in addition, it shall be equipped with an integral loading means to remove the material being cut from the bridge deck and to discharge the cuttings into a truck all in a single operation.

Hydro-Demolition Equipment. The Hydrodemolition equipment shall consist of a filtering and pumping unit operating with a self-propelled computerized robot that utilizes a high pressure water jet capable of removing concrete to the depth specified on the plans or as directed by the Engineer and be capable of removing rust and concrete particles from reinforcing steel. The equipment shall provide a rough and bondable surface and remove all unsound concrete during the initial pass. The minimum water usage shall be 43 gal/min operating at 13,000 psi minimum.

Vacuum Cleanup Equipment. The vacuum cleanup equipment shall be equipped with fugitive dust control devices and be capable of removing wet debris and water all in the same pass. Provide equipment capable of washing the deck with pressurized water prior to the vacuum operation to dislodge all debris and slurry from the deck surface.

Hand Held Blast Cleaning Equipment. Hand held blast shall be either sand or water as necessary to expose fine and coarse aggregates; thoroughly clean all exposed reinforcing steel; and remove any unsound concrete or laitance layers from the proposed concrete overlay surface. If sand blasting equipment is utilized, the equipment shall have oil traps. If water blasting equipment is utilized, the equipment must be capable of delivering a minimum of 5,000 psi.

Power Driven Hand Tools. Power driven hand tools and jackhammers will be permitted, but shall not be heavier than the nominal 35 lb class. Chipping hammers shall not be heavier than the nominal 15 lb class. Only hand chipping tools shall be used when removing concrete within 1 in. of reinforcing steel. Mechanically driven tools shall be operated at a maximum angle of 45 degrees from the bridge floor surface.

## Construction Methods

General: Perform Hydrodemolition surface preparation over the entire top surface of the reinforced concrete bridge deck to provide a rough and bondable surface and to remove all unsound concrete during the initial Hydrodemolition surface preparation pass. The use of hand chipping tools, either hand or mechanically driven, shall be limited to trim work and areas inaccessible or inconvenient for the hydro-demolition equipment.

Description: This work shall consist of furnishing the necessary labor, materials and equipment to completely remove the top surface of the Portland cement concrete bridge deck surface in accordance with these Specifications and in reasonably close conformity with the grades, thickness, or sections shown on the Plans or as directed by the Engineer. This work shall include the removal of patches other than sound Portland cement concrete and all loose and unsound concrete by Hydrodemolition; preparation of the sound existing concrete surface; removal, forming and concrete for full depth repairs; blast cleaning or high pressure water cleaning the existing deck prior to placement of the modified concrete overlay; and all other operations necessary to complete this work according to these specifications and to the satisfaction of the Engineer.

### Preparation of Existing Deck

No operations without reasonably available engineering controls that limit fugitive dust will be acceptable.

The Contractor shall be aware that there are federal, state, regional, and local government agencies that have requirements regarding the control of fugitive dust generated by concrete removal and blasting operations.

The Contractor is responsible for protecting traffic traveling adjacent to and under the work zone while removing bridge deck concrete.

Where the deck is sound for less than one third of its original depth, the concrete shall be removed full depth for limited areas as designated by the Engineer. Full depth repairs shall be completed as specified for Full Depth Repair.

## Removal of Existing Asphaltic Concrete Overlays

If an existing asphaltic concrete overlay is present upon the original bridge deck surface to be prepared by Hydrodemolition, the overlay and any waterproofing material that was part of the deck must be removed, and the bridge deck cleaned, prior to commencement of the Hydrodemolition operation. The Contractor may utilize conventional scarifying equipment conforming to these specifications to remove the existing bituminous overlay and waterproofing material from the original bridge deck. Acceptable depth of scarification shall be the overlay and waterproofing material thickness plus ¼“ below the original bridge deck surface. Additional removal depth of existing deck concrete is permitted by mechanical scarification provided. Total surface Hydrodemolition is used to provide a highly bondable surface and to remove partial depth deteriorated concrete.

If the use of mechanical scarifying equipment results in the snagging of the top mat of steel reinforcement, the scarifying equipment shall be immediately stopped and the depth of removal adjusted. Damaged or dislodged reinforcing steel shall be repaired or replaced at the Contractor's expense. Replacement shall include the removal of any additional concrete required to position the new reinforcing steel at the correct height and required lap splice lengths.

## Removal of Existing Modified Concrete Overlays

If an existing modified concrete overlay is present upon the original bridge deck surface to be prepared by Hydrodemolition, the overlay material that was part of the deck must be removed, and the bridge deck cleaned, prior to commencement of the Hydrodemolition operation. The Contractor may utilize conventional scarifying equipment conforming to these specifications to remove the existing concrete overlay from the original bridge deck. Acceptable depth of scarification shall be the overlay thickness plus ¼” below the original bridge deck surface. Additional removal depth of existing deck concrete is permitted by mechanical scarification provided. Total surface Hydrodemolition is used to provide a highly bondable surface and to remove partial depth deteriorated concrete.

Existing overlay material which is sound and bonded may be left in patch areas with approval of the Project Engineer. If determined the existing patches are to be removed, jackhammers, not to be heavier than the nominal 35 lb class shall be used to remove debonded areas.

If the use of mechanical scarifying equipment results in the snagging of the top mat of steel reinforcement, the scarifying equipment shall be immediately stopped and the depth of removal adjusted. Damaged or dislodged reinforcing steel shall be repaired or replaced at the Contractor's expense. Replacement shall include the removal of any additional concrete.

## Bridge Decks with No Existing Concrete Overlay

If Hydrodemolition is to be performed on an original bridge deck surface without a bituminous or concrete bridge deck overlay, the Contractor may use mechanical scarification equipment conforming to these specifications to remove an initial portion of the hydro-demolition depth. The scarification depth shall be ¼”. Total surface Hydrodemolition is used to provide a highly bondable surface and to remove partial depth deteriorated concrete.

If the use of mechanical scarifying equipment results in the snagging of the top mat of steel reinforcement, the scarifying equipment shall be immediately stopped and the depth of removal adjusted. Damaged or dislodged reinforcing steel shall be repaired or replaced at the Contractor's expense. Replacement shall include the removal of any additional concrete required to position the new reinforcing steel at the correct height and required lap splice lengths.

## Concrete Removal by Hydro-Demolition

General: The total surface area of the reinforced concrete bridge deck shall be completely prepared by Hydrodemolition as necessary to provide a highly roughened and bondable surface prior to placement of the proposed bridge deck overlay while removing any deteriorated and unsound concrete in the initial pass. Unsound concrete is defined as existing bridge deck concrete that is deteriorated, spalled, or determined by the engineer to be unsound.

With the use of Hydrodemolition surface preparation, the requirement to provide a minimum ¼" clearance around all reinforcing bars that are more than ½" diameter exposed is waived, providing that the existing concrete is sound. The amount of steel exposed shall be kept to a minimum.

Damaged or dislodged reinforcing steel shall be repaired or replaced at the Contractor's expense. Replacement shall include the removal of any additional concrete required to position the new reinforcing steel at the correct height and to provide the required lap splice lengths as required.

Calibration: Prior to commencement of the Hydrodemolition removal operation, the Hydrodemolition equipment shall be calibrated on an existing sound concrete surface as designated by the Engineer. The calibration area shall be a minimum of 7 feet wide by 7 feet long to demonstrate the desired result of this specification.

Move the Hydrodemolition equipment to a second area (7'x7') that is unsound as designated by the Engineer to demonstrate the desired result of this specification which is providing a highly rough and bondable surface and removing all unsound concrete during the initial pass is being achieved.

The Engineer shall verify the following settings:

1. Water pressure gauge (13,000 psi minimum)
2. Machine staging control (step)
3. Nozzle size
4. Nozzle speed (travel)
5. Depth of removal
6. Minimum water usage (43 gallons per minute)

During the Hydrodemolition operations of any or all of the above settings may be modified in order to achieve removal of all unsound concrete and to provide a highly bondable surface. The settings may be changed by the Contractor to achieve total removal of unsound concrete, but the Engineer must be notified of all changes. The Engineer may change any or all of the settings in order to achieve the desired results with Hydrodemolition. The removals and depth shall be verified, as necessary, and at least every

30 feet along the cutting path. The readings shall be documented and, if necessary, the equipment re-calibrated to insure the Hydrodemolition process achieves the desired results and removal of unsound concrete.

Calibration shall be required on each structure; each time Hydrodemolition is performed and as required to achieve the results specified by the plan.

Debris and Fluid Containment: Prior to commencement of the Hydrodemolition operation, the Contractor shall submit a plan for approval to the engineer for control and filtering of all water discharged during operation. The Contractor, at a minimum, shall block all drains on the deck and install aggregate dams every 150 feet; 6 inches high by 1 foot wide minimum, to strain runoff. The deck shall be used as a settlement basin within itself unless an alternate method of water control, satisfactory to the Engineer and meeting the environmental requirements of any associated Regulatory Agency, is required.

The Contractor shall provide shielding, as necessary, to insure containment of all dislodged concrete within the removal area in order to protect the public from flying debris both on and under the work site.

## Cleaning

Cleaning shall be performed with a vacuum system capable of removing wet debris and water all in the same pass. The vacuum equipment shall be capable of washing the deck with pressurized water prior to the vacuum operation to dislodge all debris and slurry from the deck surface. Cleaning shall be done in a timely manner, before debris and water is allowed to dry on the deck surface.

## Resounding

After the Hydrodemolition operation has completed the removal, and the deck is cleaned and allowed to dry, the deck shall be resounded to assure that the all unsound concrete deck material has been removed. The final sounding of the deck shall be done by the Engineer and shall be performed only when the entire deck is completely dry. In no case shall the final sounding be made unless the deck is dry and frost-free. Final sounding shall consist of as many successive resounding as required to ensure that all deteriorated and fractured concrete has been removed. Additional removal shall be performed with 35 lb maximum weight jackhammers operated at an angle of no more than 45 degrees from horizontal. Aerosol spray paint for outlining and sounding chains shall be provided by the Contractor.

## Full Depth Repair

Where the deck is sound for less than one third of its original depth, the concrete shall be removed full depth except for limited areas as may be designated by the Engineer. Forms shall be provided to support concrete placed in full depth repair areas. The forms for areas of up to 4 square feet may be suspended from wires from the reinforcing steel. For areas greater than 4 square feet, the forms shall be suspended from the primary members of the superstructure or by shoring below. Areas of full depth repair shall have the concrete faces and reinforcing steel cleaned. Only those areas marked in the field by the Engineer as full depth repair will be paid for as full depth repair.

## Preparation Prior to Overlay Placement

Vehicles other than approved construction equipment will not be permitted on those sections of the deck where Hydrodemolition has begun. Contamination of the deck by construction equipment or from any other source shall be prevented.

## Method of Measurement

Wearing Course Removed Asphalt shall be measured as the actual square yards of the existing asphalt wearing course and waterproofing material removed and shall include all labor, materials and equipment required to complete the work.

Existing Modified Concrete Overlay Removed shall be measured as the actual square yards of the existing concrete overlay removed and shall include all labor, materials and equipment required to complete the work.

Surface Preparation Using Hydrodemolition shall be measured as the actual deck area in square yards overlaid and shall include the costs of surface preparation, Hydrodemolition, ¼" (min.) milling into the original concrete bridge deck surface, removal of the surface preparation debris, cleaning, any incidental materials, and all labor and equipment as necessary to complete the work as described in this specification, but not specifically included in other items for payment.

Full Depth Repair when encountered on a bridge deck and marked in the field by the Engineer, full depth repair shall be paid for per Cubic Yard of Class M Concrete used.

## Basis of Payment

Payment for completed and accepted quantities as measured above will be made at the contract price for one of the following:

| Item | Unit | Description |
|---|---|---|
| 24094EC | Cubic Yard | Partial Depth Patching |
| 08510 | Square yard | Rem Epoxy Bit Foreign Overlay |

Removal of existing flexible (asphalt) concrete overlays and rigid modified concrete overlays are included as parts of this work if the above bid items are part of the project plans:

# SPECIAL NOTE FOR ASPHALT MIXTURES USING RECLAIMED MATERIALS

**** The Contractor may elect to use this Special Note in lieu of Section 409 of the 2008 Standard Specifications for Road and Bridge Construction. The Contractor must notify the Department in writing of which specification they plan to use prior to beginning work.**

**2012-409.01 DESCRIPTION.** 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. For other sources to be approved, satisfactorily establish to the Engineer that the quality of the material is acceptable.

Use either pre-consumer (manufacturer waste or new) or post-consumer reclaimed asphalt shingles (RAS) that are processed such that all the material passes the 3/8-in. sieve. Ensure pre-consumer RAS is free of deleterious materials. Ensure post-consumer RAS does not contain more than 1.5 percent wood by mass or more than 3.0 percent deleterious materials by mass.

**2012-409.02 MATERIALS AND EQUIPMENT.** Conform to the guidelines in Subsection 2012-409.03.03 for the required grade of asphalt binder which is based on the percentage of effective binder content of the mixture.

**2012-409.03 CONSTRUCTION.** Keep reclaimed material of different gradation, asphalt binder content, asphalt binder properties, and aggregate properties separate at all times, including when stockpiling and feeding. The Department may approve other methods and procedures provided that all characteristics of the reclaimed material remain uniform.

**2012-409.03.01 Polish-Resistant Aggregate.** When electing to utilize polish-resistant aggregate in reclaimed material to satisfy a portion of the polish-resistant aggregate requirements for the mix, provide documentation to the Engineer's satisfaction that the reclaimed material consists of the specified amount of polish-resistant aggregate. Provide samples of the reclaimed material to the Engineer for verification testing.

**2012-409.03.02 Asphalt Binder Content Adjustment for RAS.** Recognizing that not all asphalt binder in RAS is activated during the mixing operation to fully blend with the virgin materials, the Department will reduce the asphalt binder content determined by Kentucky Method 64-405 for RAS by 25 percent.

**2012-409.03.03 Preparation of Mixture.**

**A) Mix Requirements.** Conform to the Contract requirements for each mixture produced using reclaimed material consisting of RAP, RAS, or a combination of RAP and RAS. Conform to the following table to select the appropriate grade of virgin asphalt binder to blend with the reclaimed material. Calculate the percentage of effective binder content as follows:

*Percentage of effective binder content = [(A*B) + (0.75*C*D)]/E*, where

A = Asphalt binder content of the RAP (%);
B = Percentage of RAP in the mix (%);
C = Asphalt binder content of the RAS (%);
D = Percentage of RAS in the mix (%); and
E = Effective binder content of the mix (%).

| ASPHALT MIXTURES WITH NOMINAL-MAXIMUM AGGREGATE SIZE OF 0.5 in., 0.38 in., and No. 4 | | |
|---|---|---|
| ASPHALT BINDER SPECIFIED IN MIXTURE BID ITEM | VIRGIN ASPHALT BINDER | |
| | RAP | |
| | ≤ 20 % Effective Binder Content | 21-30 % Effective Binder Content |
| PG 64-22 | PG 64-22 | PG 58-28 |
| PG 76-22 | PG 76-22 | ----- |
| | RAS | |
| | ≤ 13 % Effective Binder Content | 14-20 % Effective Binder Content |
| PG 64-22 | PG 64-22 | PG 58-28 |
| PG 76-22 | ----- | ----- |
| | RAP and RAS | |
| | ≤ 15 % Effective Binder Content | 16-25 % Effective Binder Content |
| PG 64-22 | PG 64-22 | PG 58-28 |
| PG 76-22 | ----- | ----- |

| ASPHALT MIXTURES WITH NOMINAL-MAXIMUM AGGREGATE SIZE OF 1.50 in., 1.00 in., and 0.75 in. | | |
|---|---|---|
| ASPHALT BINDER SPECIFIED IN MIXTURE BID ITEM | VIRGIN ASPHALT BINDER | |
| | RAP | |
| | ≤ 25 % Effective Binder Content | 26-35 % Effective Binder Content |
| PG 64-22 | PG 64-22 | PG 58-28 |
| PG 76-22 | PG 76-22 | ----- |
| | RAS | |
| | ≤ 16 % Effective Binder Content | 17-24 % Effective Binder Content |
| PG 64-22 | PG 64-22 | PG 58-28 |
| PG 76-22 | ----- | ----- |
| | RAP and RAS | |
| | ≤ 18 % Effective Binder Content | 19-30 % Effective Binder Content |
| PG 64-22 | PG 64-22 | PG 58-28 |
| PG 76-22 | ----- | ----- |

**B) Mixing.** Obtain the Engineer's approval for the method of incorporating the reclaimed material into the mixture. Thoroughly mix the new and reclaimed materials into a uniform mass. Ensure that the final mixture conforms to all requirements of the Contract. Ensure that the moisture content of the final mixture is not detrimental to the handling, hauling, placing, or compacting of the mixture.

**2012-409.04 MEASUREMENT.** The Department will not measure reclaimed material separately but will include it in the measured quantities of asphalt mixture produced.

**2012-409.05 PAYMENT.** The Department will make payment for the completed and accepted quantities under the appropriate pay item for the asphalt mixture being produced.

The Department will not make separate payment for incorporating reclaimed material. The Department will not increase or decrease the Contract unit prices for any asphalt mixture on the project as a result of using, or not using, reclaimed material in the asphalt mixtures.

# SPECIAL NOTE FOR CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES ON BRIDGE REPAIR CONTRACTS

**I. COMPLETION DATE.** The Contractor has the option of selecting the starting date for this Contract. Once selected, notify the Department in writing of the date selected at least two weeks prior to beginning work. All work is to be completed by November 15, 2012. An allotted number of Calendar days are assigned to each structure in this contract as shown below.

| STRUCTURE | NO. OF CALENDAR DAYS | COMPLETION DATE |
|---|---|---|
| 003B00007L | 30 | November 15, 2012 |
| 003B00007R | 30 | November 15, 2012 |

Contrary to Section 108.07.02, the Engineer will begin charging calendar days for a structure on the day the Contractor starts work or sets up traffic control on that particular structure.

**II. LIQUIDATED DAMAGES**. Liquidated damages will be assessed the Contractor in accordance with the Transportation Cabinet, Department of Highway's 2008 Standard Specifications for Road and Bridge Construction, Section 108.09, when either the allotted number of calendar days or the November 15, 2012 date is exceeded.

Contrary to the Standard Specifications, liquidated damages will be assessed the Contractor during the months of December, January, February and March when the contract time has expired on any individual bridge or bridges. Contract time will be charged during these months.

All construction must be completed in accordance with the weather limitations specified in Section 606 and/or Section 601 as applicable. No extension of Contract time will be granted due to inclement weather or temperature limitations that occur due to starting work on the Contract or a structure late in the construction season.

# SPECIAL NOTE FOR TRAFFIC CONTROL ON BRIDGE REPAIR CONTRACTS

## I. TRAFFIC CONTROL GENERAL

Except as provided herein, traffic shall be maintained in accordance with the 2008 Standard Specifications, Section 112. 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 new condition, at the beginning of the work and maintained in like new condition until completion of the work.

## II. TRAFFIC COORDINATOR

Furnish a Traffic Coordinator as per Section 112. The Traffic Coordinator shall inspect the project maintenance of traffic, at least three times daily, or as directed by the Engineer, during the Contractor's operations and at any time a lane closure is in place. The personnel shall have access on the project to a radio or telephone to be used in case of emergencies or accidents.

The Traffic Coordinator shall report all incidents throughout the work zone to the Engineer on the project. The Contractor shall furnish the name and telephone number where the Traffic Coordinator can be contacted at all times.

## III. SIGNS

Contrary to Section 112.04.02, only long term signs (sign 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.

The contractor is to install warning signs for wide loads in advance of the bridge under the direction of the Engineer. The Department will not measure installation, maintenance, or removal for payment, and will consider these incidentals to Maintain and Control Traffic.

## IV. TEMPORARY PAVEMENT STRIPING

Skip lines and/or solid lines through the length of the tapers for lane closures and other striping as directed by the Engineer shall be temporarily covered with 6" black removable tape. Permanent removal of all other pavement striping for traffic control shall be considered incidental to Maintain and Control Traffic. Temporary pavement striping shall be paid only once per course in accordance with Section 112.04.07. The Contractor shall replace any temporary striping that becomes damaged or fails to adhere to the pavement before dark on the day of the notification. Liquidated damages shall be assessed to the Contractor at a rate of $500 per day for failing to replace temporary striping within this time limit.

## V. PROJECT PHASING & CONSTRUCTION PROCEDURES

The Contractor shall maintain one lane of traffic on the Parkway at all times in accordance with Standard Drawing No. TTC-120 and the attached detail drawings. The clear lane width required is:

| Structure | Clear Lane Width |
|---|---|
| 003B00007L | 13 feet |
| 003B00007R | 13 feet |

Parkway lane closures will not be permitted on these days:

Easter Weekend (Thursday-Sunday)
Memorial Day Weekend (Friday-Monday)
Independence Day, when July 4th is on Tuesday, Wednesday, or Thursday; or
Independence Day Weekend, when July 4th is on Monday (Saturday-Monday) or Friday (Friday-Sunday)
Labor Day Weekend (Friday-Monday)

## VI. BARRIER WALL

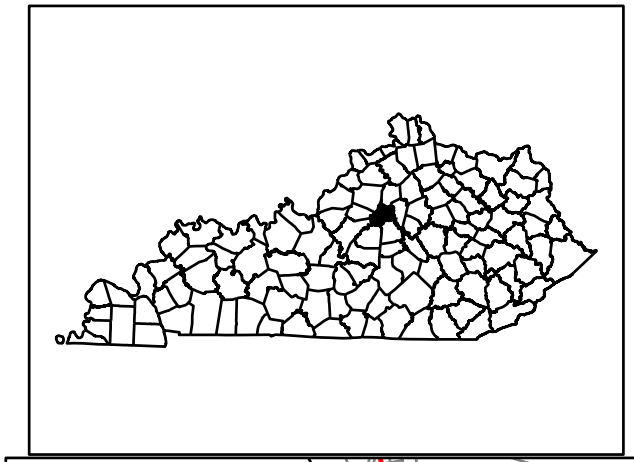
Payment of the contract unit price per linear foot for "CONCRETE BARRIER WALL TYPE 9T" shall be full compensation for furnishing, installing, maintaining, adjusting alignment as needed, removing the barrier when no longer needed, and all incidental items necessary to complete the work.

Provide one side mounted barrier wall delineator per each section of barrier. See Standard Drawing RBM-020 for types. No direct payment allowed for delineators.

## VII. CRASH CUSHION / END TREATMENTS

To the satisfaction of the Engineer extend Barrier wall out of the clear zone. If Barrier wall is not extended out of the clear zone to the satisfaction of the engineer provide crash cushions / end treatments for the barrier wall.

Provide Barrier end treatments that comply with NCHRP 350 LEVEL 3.



# ANDERSON COUNTY

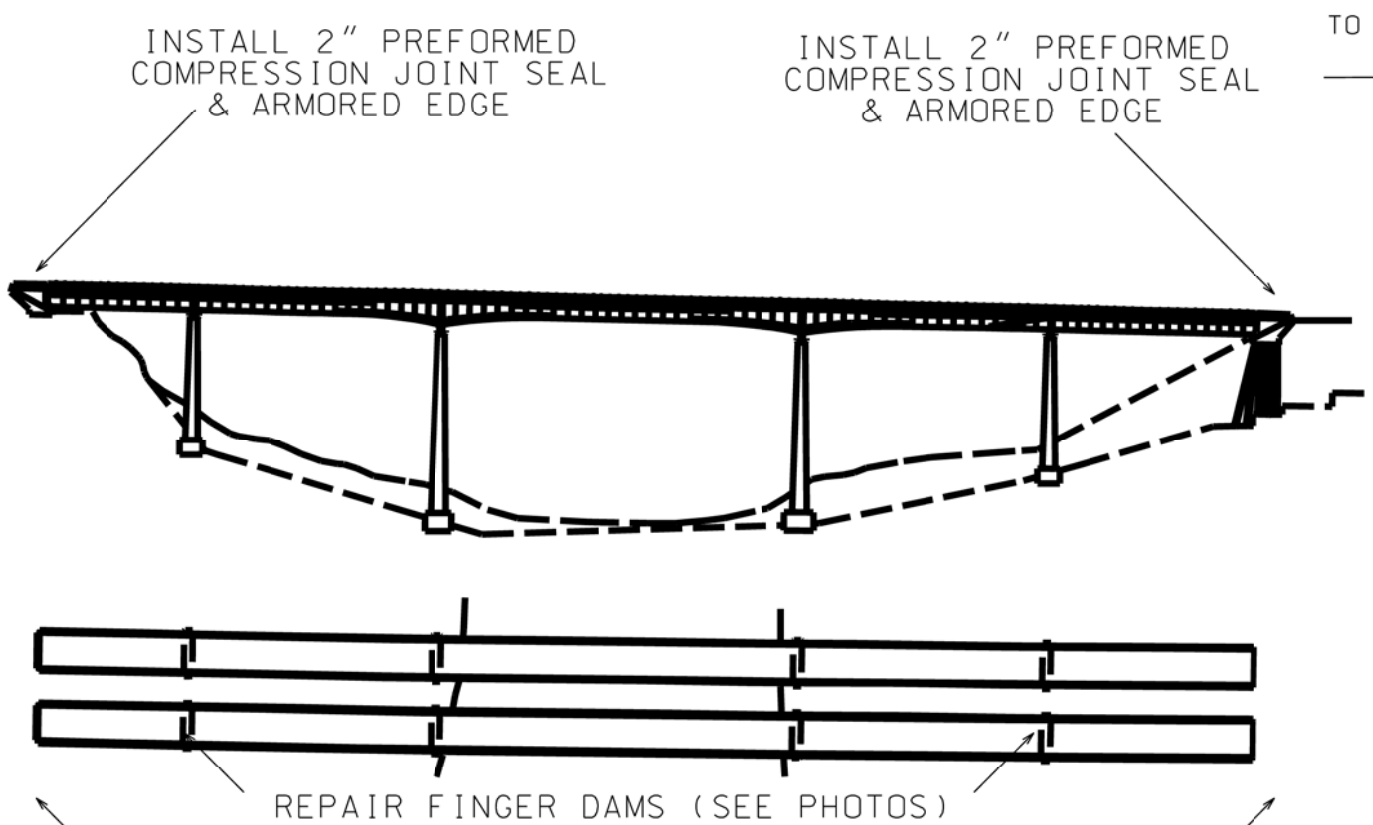
BRIDGE 003B00007L,R
BLUEGRASS PARKWAY (MP 61.9)
OVER KENTUCKY RIVER
LatDD=37.9851, LonDD=-84.8231

# 003B00007L,R

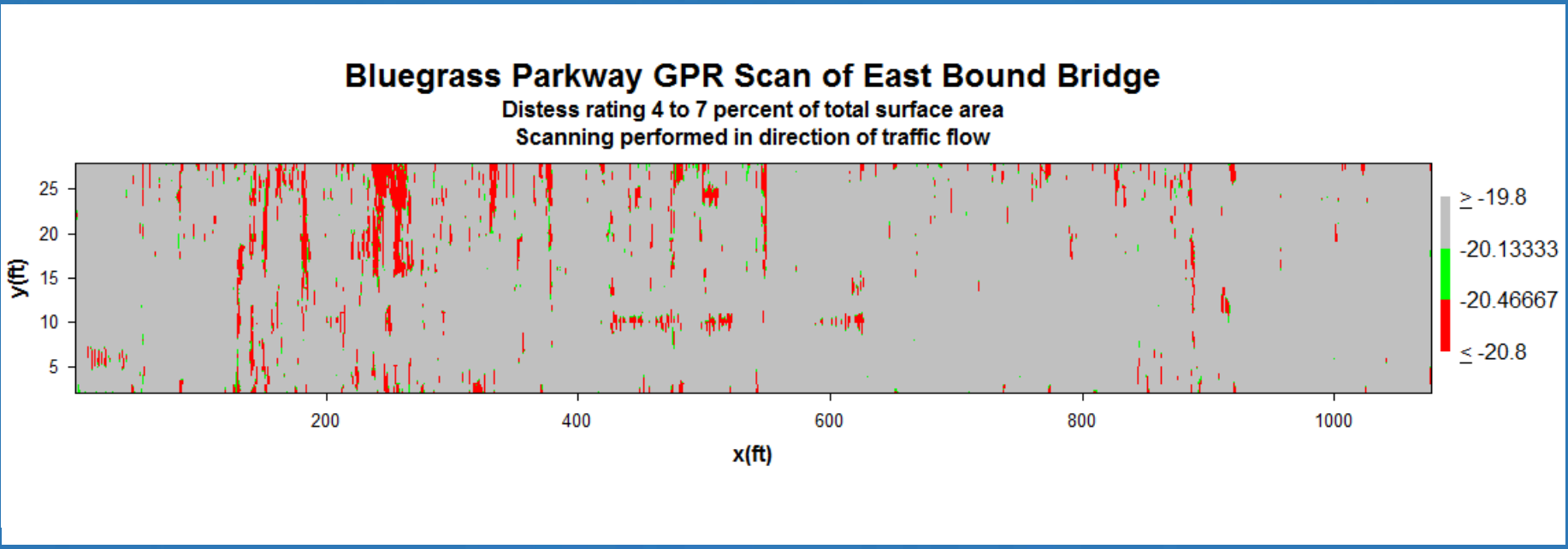
## TWIN, 130' SIMPLE, 220'-320'-220' CONTINUOUS, 184' SIMPL

## WELDED PLATE GIRDER SPANS

## 1087' TOTAL LENGTH, 30' CURB TO CURB, NO SKEW



# Deterioration noted as Red/Green



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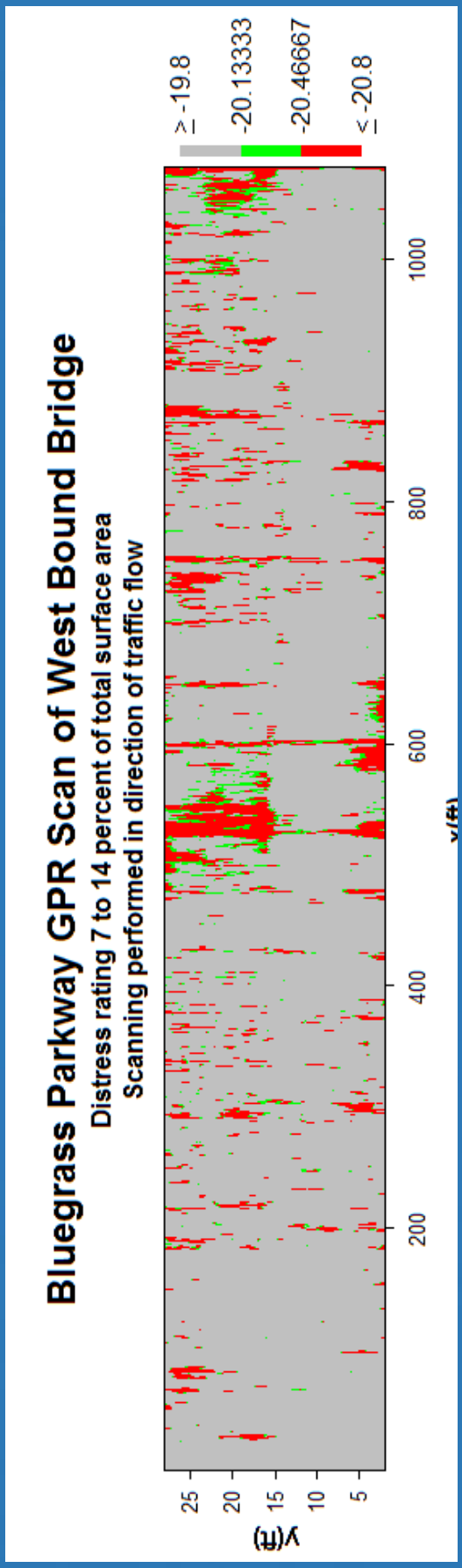
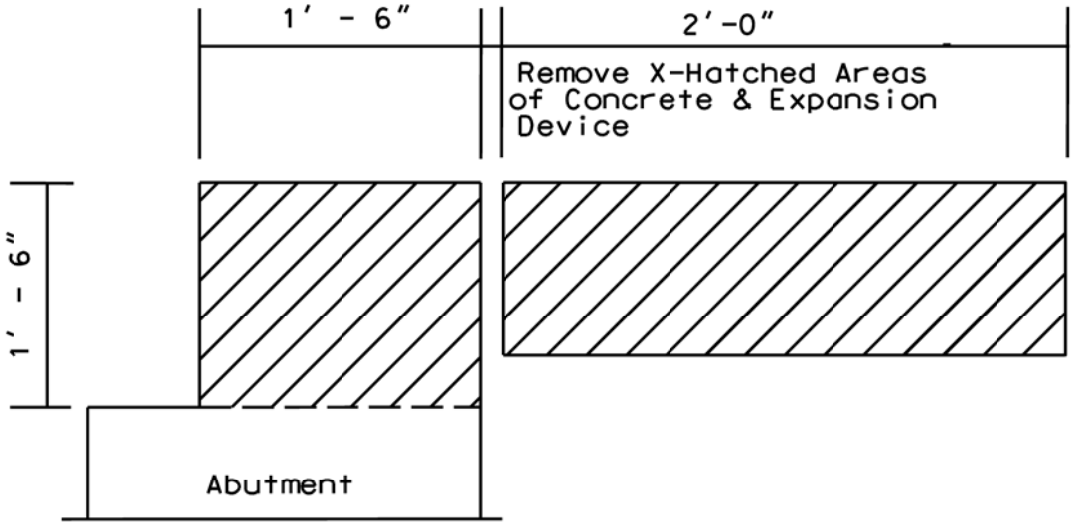



UK UNIVERSITY OF KENTUCKY
seeblue.

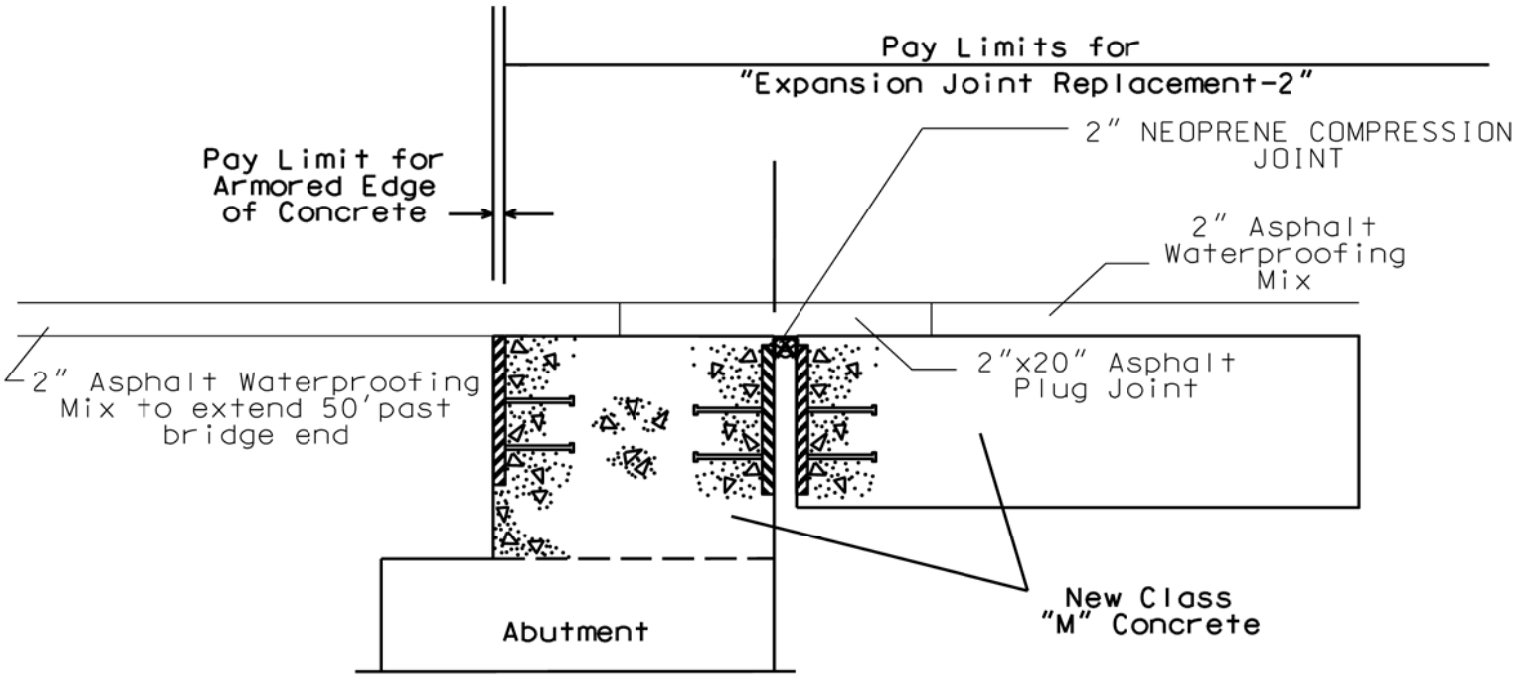
# EXPANSION DAM DETAIL

## Abutments #1 and #2




Clean & Leave Steel Reinf. in place.

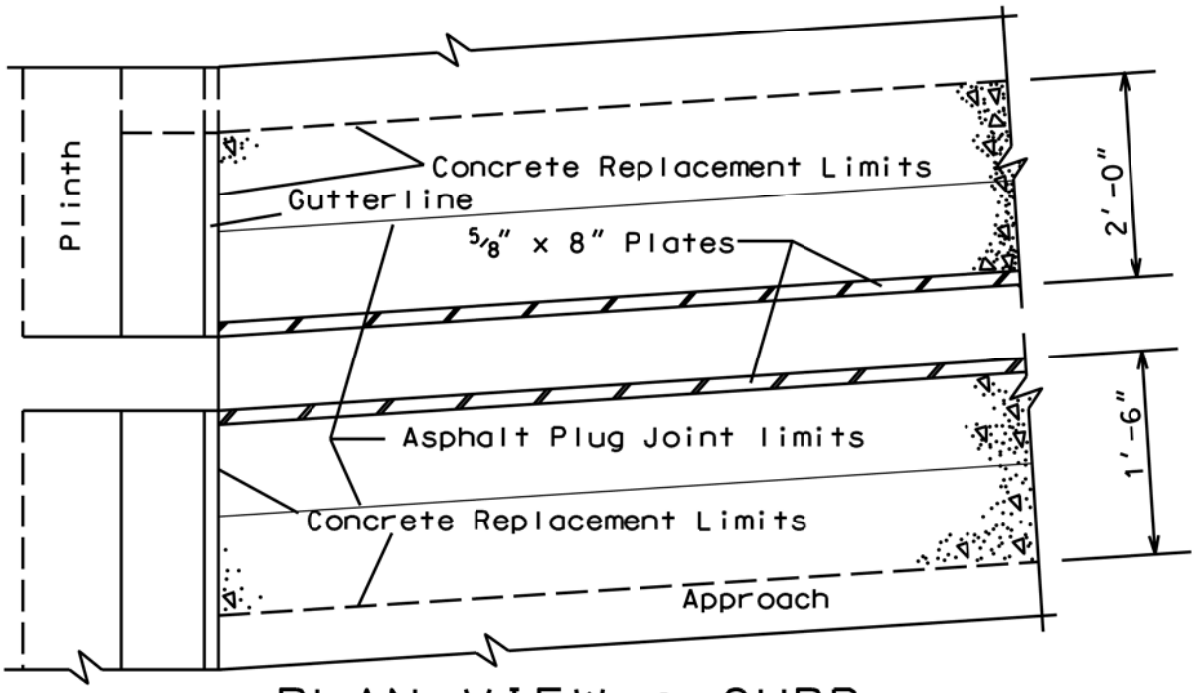
## EXISTING SECTION



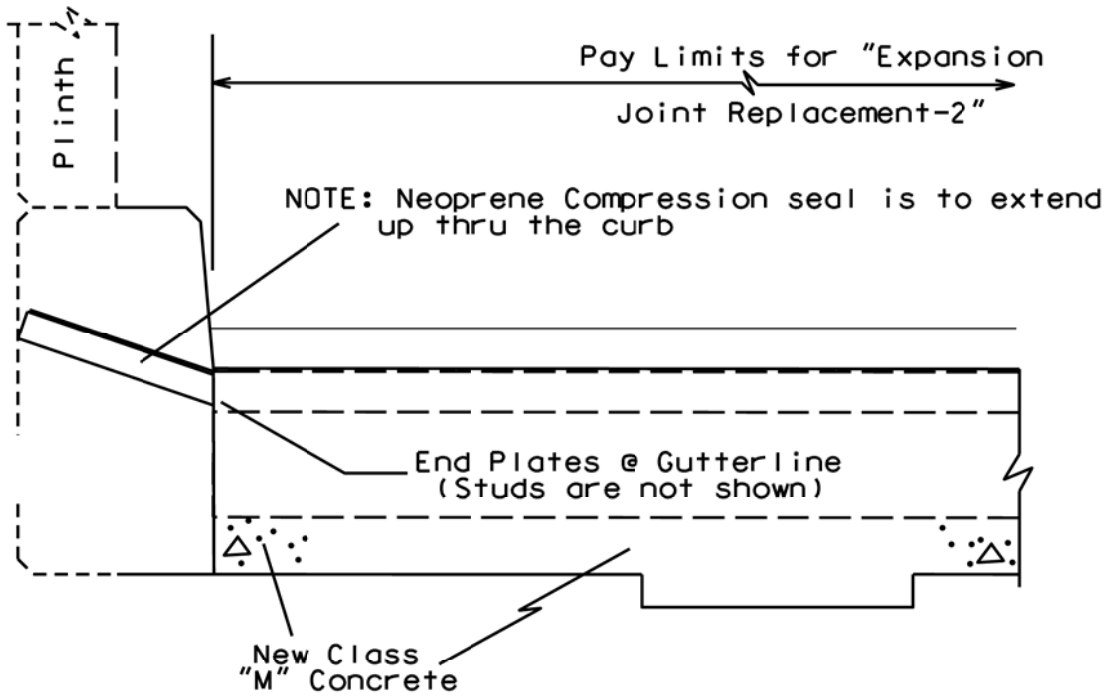

## PROPOSED SECTION

# CURB SECTION

Abutments #1 and #2

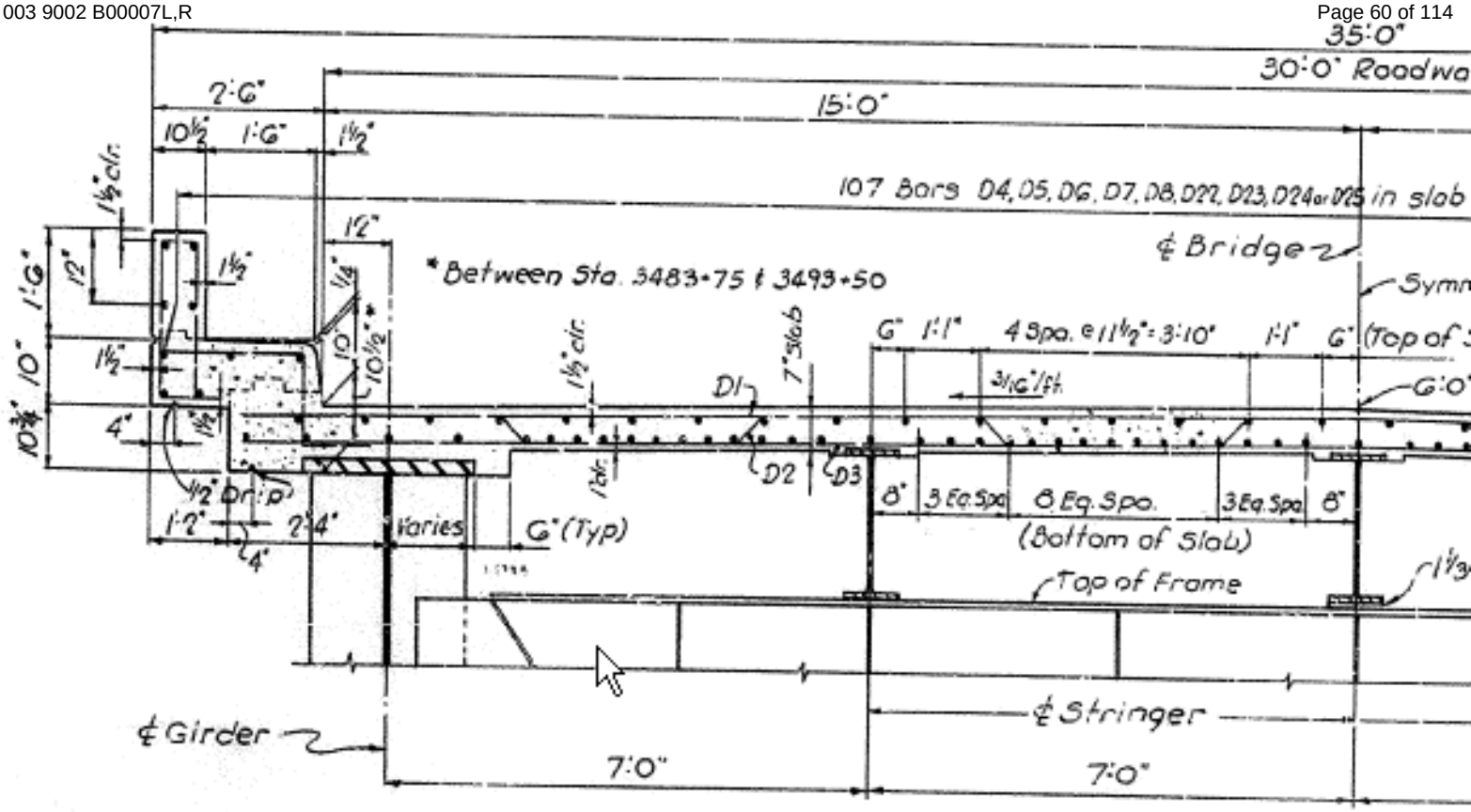



## PLAN VIEW @ CURB

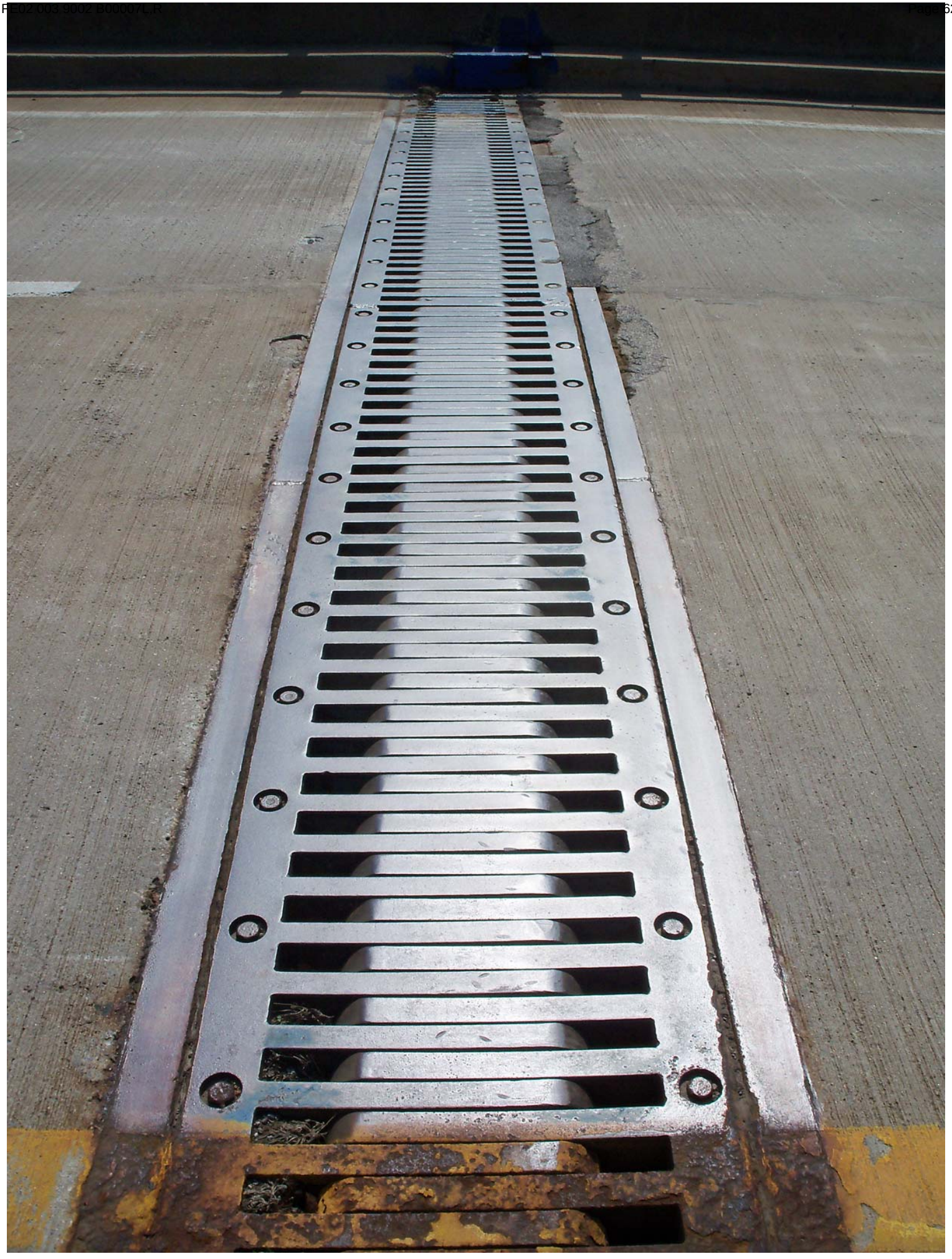



## PROPOSED SECTION @ CURB

PLAN SPAN 3




TYPICAL SECTI



# 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 for Road and Bridge Construction, 2008 Edition

(Effective with the July15, 2011 Letting)

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| **SUBSECTION:**<br>**REVISION:** | 101.02 Abbreviations.<br>Insert the following abbreviation and text into the section:<br><br>KEPSC Kentucky Erosion Prevention and Sediment Control |
| **SUBSECTION:**<br>**REVISION:** | 101.03 Definitions.<br>Replace the definition for Specifications – *Special Provisions* with the following:<br><br>Additions and revisions to the Standard and Supplemental Specifications covering conditions peculiar to an individual project. |
| **SUBSECTION:**<br>**REVISION:** | 102.03 Contents of the Bid Proposal Form.<br>Replace the first sentence of the first paragraph with the following:<br>The Bid Proposal form will be available on the Department internet website (http://transportation.ky.gov/contract/).<br><br>Delete the second paragraph.<br><br>Delete the last paragraph. |
| **SUBSECTION:**<br>**REVISION:** | 102.04 Issuance of Bid Proposal Form.<br>Replace Heading with the following:<br><br>102.04 Bidder Registration.<br><br>Replace the first sentence of the first paragraph with the following:<br><br>The Department reserves the right to disqualify or refuse to place a bidder on the eligible bidder's list for a project for any of the following reasons:<br><br>Replace the last sentence of the subsection with the following:<br><br>The Department will resume placing the bidder on the eligible bidder's list for projects after the bidder improves his operations to the satisfaction of the State Highway Engineer. |
| **SUBSECTION:**<br>**REVISION:** | 102.06 Examination of Plans, Specifications, Special Provisions, Special Notes, and Site of Work.<br>Replace the first paragraph with the following:<br><br>Examine the site of the proposed work, the Bid Proposal, Plans, specifications, contract forms, and bulletins and addendums posted to the Department's website and the Bid Express Bidding Service Website before submitting the Bid Proposal. The Department considers the submission of a Bid Proposal prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the Contract. |
| **SUBSECTION:**<br>**REVISION:** | 102.07.01 General.<br>Replace the first sentence with the following:<br><br>Submit the Bid Proposal on forms furnished on the Bid Express Bidding Service website (www.bidx.com).<br><br>Replace the first sentence of the third paragraph with the following:<br><br>Bid proposals submitted shall use an eligible Digital ID issued by Bid Express. |

# Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

(Effective with the July15, 2011 Letting)

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| **SUBSECTION:**<br>**REVISION:** | 102.07.02 Computer Bidding.<br>Replace the first paragraph with the following:<br><br>Subsequent to registering 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 Bid Express Bidding Service Website to prepare a Bid Proposal for submission to the Department. Submit Bid Proposal electronically through Bid Express Bidding Service.<br><br>Delete the second and third paragraph. |
| **SUBSECTION:**<br>**REVISION:** | 102.08 Irregular Bid Proposals.<br>Delete the following from the first paragraph: 4) fails to submit a disk created from the Highway Bid Program.<br><br>Replace the second paragraph with the following:<br>The Department will consider Bid Proposals irregular and may reject them for the following reasons:<br><br>1) when there are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the Bid Proposal incomplete, indefinite, or ambiguous as to its meaning; or<br>2) when the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a Contract pursuant to an award; or<br>3) any failure to comply with the provisions of Subsection 102.07; or<br>4) Bid Proposals in which the Department determines that the prices are unbalanced; or when the sum of the total amount of the Bid Proposal under consideration exceeds the bidder's Current Capacity Rating. |
| **SUBSECTION:**<br>**REVISION:** | 102.09 Bid Proposal Guaranty.<br>Insert the following after the first sentence:<br><br>Bid Proposals must have a bid proposal guaranty in the amount indicated in the bid proposal form accompany the submittal. A guaranty in the form of a paper bid bond, cashier's check, or certified check in an amount no less than the amount indicated on the submitted electronic bid is required when the electronic bid bond was not utilized with the Bid Express Bidding Service. Paper bid bonds must be delivered to the Division of Construction Procurement prior to the time of the letting. |
| **SUBSECTION:**<br>**REVISION:** | 102.10 Delivery of Bid Proposals.<br>Replace paragraph with the following:<br><br>Submit all Bid Proposals prior to the time specified in the Notice to Contractors. All bids shall be submitted electronically using Bid Express Bidding Services. Electronically submitted bids must be done in accordance with the requirements of the Bid Express Bidding Service. |
| **SUBSECTION:**<br>**REVISION:** | 102.11 Withdrawal or Revision of Bid Proposals.<br>Replace the paragraph with the following:<br><br>Bid Proposals can be withdrawn in accordance the requirements of the Bid Express Bidding Service prior to the time of the Letting. |

# Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

(Effective with the July15, 2011 Letting)

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| **SUBSECTION:**<br>**REVISION:** | 102.13 Public Opening of Bid Proposals.<br>Replace Heading with the following:<br>102.13 Public Announcement of Bid Proposals.<br><br>Replace the paragraph with the following:<br>The Department will publicly announce all Bid Proposals at the time indicated in the Notice to Contractors. |
| **SUBSECTION:**<br>**REVISION:** | 103.02 Award of Contract.<br>Replace the first sentence of the third paragraph with the following:<br><br>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. |
| **SUBSECTION:**<br>**REVISION:** | 105.02 Plans and Working Drawings.<br>Insert the following after the fourth paragraph:<br><br>Submit electrical shop drawings, design data, and descriptive literature for materials in electronic format to the Division of Traffic Operations for approval. Drawings and literature shall be submitted for lighting and signal components. Notify the Engineer when submitting information to the Division of Traffic Operations. Do not begin work until shop drawings are approved.<br><br>Submit shop drawings for traffic counting equipment and materials in electronic format to the Engineer or the Division of Planning. Notify the Engineer when submitting information directly to the Division of Planning. Do not begin work until shop drawings are reviewed and approved. |
| **SUBSECTION:**<br>**REVISION:** | 105.03 Record Plans.<br>Replace the section with the following:<br><br>Record Plans are those reproductions of the original Plans on which the accepted Bid Proposal was based and, and signed by a duly authorized representative of the Department. The Department will make these plans available for inspection in the Central Office at least 24 hours prior to the time of opening bids and up to the time of letting of a project or projects. The quantities appearing on the Record Plans are the same as those on which Bid Proposals are received. The Department will use these Record Plans as the controlling plans in the prosecution of the Contract. The Department will not make any changes on Record Plans subsequent to their issue unless done so by an approved contract modification. The Department will make 2 sets of Record Plans for each project, and will maintain one on file in the Central Office and one of file in the District Office. The Department will furnish the Contractor with the following: 1 full size, 2 half size and an electronic file copy of the Record Plans at the Pre-Construction conference. |

# Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

(Effective with the July15, 2011 Letting)

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| **SUBSECTION:**<br>**REVISION:** | 105.12 Final Inspection and Acceptance of Work.<br>Insert the following paragraphs after the first paragraph:<br><br>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.<br>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.<br>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.<br>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.<br>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.<br><br>Replace the following in the second sentence of the second paragraph:<br><br>Replace Section 213 with Section 212.<br><br>Delete the fifth paragraph from the section. |
| **SUBSECTION:**<br>**REVISION:** | 105.13 Claim Resolution Process.<br>Replace the last sentence of the 3. Bullet with the following:<br><br>If the Contractor did not submit an as-bid schedule at the Pre-Construction Meeting or a written narrative in accordance with Subsection 108.02, the Cabinet will not consider the claim for delay.<br><br>Delete the last paragraph from the section. |

# Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

(Effective with the July15, 2011 Letting)

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| **SUBSECTION:**<br>**REVISION:** | 106.04 Buy America Requirement.<br>Replace the section with the following:<br><br>**106.04 Buy America Requirement.** Follow the "Buy America" provisions as required by Title 23 Code of Federal Regulations § 635.410. Except as expressly provided herein all manufacturing processes of steel or iron materials including but not limited to structural steel, guardrail materials, corrugated steel, culvert pipe, structural plate, prestressing strands, and steel reinforcing bars shall occur in the United States of America, including the application of:<br>• Coating,<br>• Galvanizing,<br>• Painting, and<br>• Other coating that protects or enhances the value of steel or iron products.<br><br>The following are exempt, unless processed or refined to include substantial amounts of steel or iron material, and may be used regardless of source in the domestic manufacturing process for steel or iron material:<br>• Pig iron,<br>• Processed, pelletized, and reduced iron ore material, or<br>• Processed alloys.<br><br>The Contractor shall submit a certification stating that all manufacturing processes involved with the production of steel or iron materials occurred in the United States.<br><br>Produce, mill, fabricate, and manufacture in the United States of America all aluminum components of bridges, tunnels, and large sign support systems, for which either shop fabrication, shop inspection, or certified mill test reports are required as the basis of acceptance by the Department.<br><br>Use foreign materials only under the following conditions:<br><br>1) When the materials are not permanently incorporated into the project; or<br>2) When the delivered cost of such materials used does not exceed 0.1 percent of the total Contract amount or $2,500.00, whichever is greater.<br><br>The Contractor shall submit to the Engineer the origin and value of any foreign material used. |
| **SUBSECTION:**<br>**REVISION:** | 106.10 Field Welder Certification Requirements.<br>Insert the following sentence before the first sentence of the first paragraph:<br><br>All field welding must be performed by a certified welder unless otherwise noted. |
| **SUBSECTION:**<br>**REVISION:** | 108.02 Progress Schedule.<br>Insert the following prior to the first paragraph:<br><br>Specification 108.02 applies to all Cabinet projects except the following project types:<br>• Right of Way Mowing and/or Litter Removal<br>• Waterborne Paint Striping<br>• Projects that contain Special Provision 82<br>• Projects that contain the Special Note for CPM Scheduling<br><br>Insert the following paragraph after paragraph two:<br><br>Working without the submittal of a Written Narrative is violation of this specification and additionally voids the Contractor's right to delay claims.<br><br>Insert the following paragraph after paragraph six:<br><br>The submittal of bar chart or Critical Path Method schedule does not relieve the Contractor's requirement to submit a Written Narrative schedule. |

# Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

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| | Insert the following at the beginning of the first paragraph of A) Written Narrative.:<br><br>Submit the Written Narrative Schedule using form TC 63-50 available at the Division of Construction's website (http://www.transportation.ky.gov/construction/ResCenter/ResCenter.htm).<br><br>Replace Part A) Written Narrative 1. And 2. with the following:<br><br>1. Provide a description that includes how the Contractor will sequence and stage the work, how the Contractor plans to maintain and control traffic being specific and detailed, and what equipment and crew sizes are planned to execute the work.<br>2. Provide a list of project milestones including, if applicable, winter shut-downs, holidays, or special events. The Contractor shall describe how these milestones and other dates effect the prosecution of the work. Also, include start date and completion date milestones for the contract, each project if the contract entails multiple projects, each phase of work, site of work, or segment of work as divided in the project plans, proposal, or as subdivided by the Contractor. |
| **SUBSECTION:**<br>**REVISION:** | 109.07.01 Liquid Asphalt.<br>Add the following to the Adjustable Contract Items:<br>• Stone Matrix Asphalt for Base<br>• Stone Matrix Asphalt for Surface |
| **SUBSECTION:**<br>**REVISION:** | 110.01 Mobilization.<br>Replace paragraph three with the following:<br><br>Do not bid an amount for Mobilization that exceeds 5 percent of the sum of the total amounts bid for all items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives. The Department will automatically adjust any Bid Proposals that are in excess of this amount down to 5 percent to compare Bid Proposals and award the Contract. The Department will award a Contract for the actual amount bid when the amount bid for Mobilization is less than 5 percent, or the Department will award the Contract for the adjusted bid amount of 5 percent when the amount bid for Mobilization is greater than 5 percent. If any errors in unit bid prices for other Contract items in a Contractor's Bid Proposal are discovered after bid opening and such errors reduce the total amount bid for all other items, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives, so that the percent bid for Mobilization is larger than 5 percent, the Department will adjust the amount bid for Mobilization to 5 percent of the sum of the corrected total bid amounts. |
| **SUBSECTION:**<br>**REVISION:** | 110.02 Demobilization.<br>Replace the third paragraph with the following:<br><br>Bid an amount for Demobilization that is a minimum of $1,000 or 1.5 percent of the sum of the total amounts bid for all other items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives. The Department will automatically adjust any Bid Proposal that is less than this amount up to $1,000 or 1.5 percent to compare Bid Proposals and award the Contract. The Department will award a Contract for the actual amount bid when the amount bid for demobilization exceeds 1.5 percent, or the Department will award the Contract for the adjusted bid amount when the amount bid for demobilization is less than the minimum of $1,000 or less than 1.5 percent of the sum of the total amounts bid for all other items in the Bid Proposal, excluding Mobilization, Demobilization, and contingent amounts established for adjustments and incentives. |
| **SUBSECTION:**<br>**REVISION:** | 110.04 Payment.<br>Insert the following paragraph following the demobilization payment schedule (4th paragraph):<br><br>The Department will withhold an amount equal to $1,000 for demobilization, regardless of the schedule listed above. The $1,000 withheld for demobilization will be paid when the final estimate is paid. |

# Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

(Effective with the July15, 2011 Letting)

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| **SUBSECTION:**<br>**REVISION:** | 112.03.01 General Traffic Control.<br>Replace paragraph three with the following:<br><br>All flaggers shall be trained in current MUTCD flagging procedures. Proof of training must be available for review at the Department's request. Flagging credentials must be current within the last 5 years. |
| **SUBSECTION:**<br>**PART:**<br>**REVISION:** | 112.03.11 Temporary Pavement Markings.<br>B) Placement and Removal of Temporary Striping.<br>Replace the 2nd sentence of the first paragraph with the following:<br><br>On interstates and parkways, and other roadways approved by the State Highway Engineer, install pavement striping that is 6 inches in width. |
| **SUBSECTION:**<br>**REVISION:** | 112.03.12 Project Traffic Coordinator (PTC).<br>Add the following at the end of the subsection:<br><br>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. |
| **SUBSECTION:**<br>**REVISION:** | 112.03.15 Non-Compliance of Maintain and Control of Traffic.<br>Add the following section:<br><br>**112.03.15 Non-Compliance of Maintain and Control of Traffic.** It is the Contractor's responsibility to conform to the traffic control requirements in the TCP, Proposal, plan sheets, specifications, and the Manual on Uniform Traffic Control Devices.<br><br>Unless specified elsewhere in the contract, a penalty will be assessed in the event of non-compliance with Maintain and Control of Traffic requirements. These penalties will be assessed when the Contractor fails to correct a situation or condition of non-compliance with the contract traffic control requirements after being notified by the Engineer. The calculation of accrued penalties for non-compliance will be based upon the date/time of notification by the Engineer.<br><br>The amount of the penalty assessed for non-compliance will be determined based upon the work zone duration, as defined by the MUTCD, and will be the greatest of the different calculation methods indicated below:<br><br>A) Long-term stationary work that occupies a location more than 3 days.<br><br>Correct the non-compliant issue within 24 hours from initial notification by the Engineer. If the issue is not corrected within 24 hours from the initial notification, a penalty for non-compliance will be assessed on a daily basis beginning from the initial notification of non-compliance. The Contractor will be assessed a $1,000 daily penalty or the amount equal to the contract liquidated damages in Section 108.09, whichever of the 2 is greater. The penalty for non-compliance will escalate as follows for continued non-compliance after the initial notification.<br><br>3 Days after Notification<br>$1,500 daily penalty or 1.5 times the contract liquidated damages daily charge rate in Section 108.09, whichever is greater.<br><br>7 Days after Notification<br>$2,000 daily penalty or double the contract liquidated damages daily charge rate in Section 108.09, whichever is greater. |

**Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition**
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|---|---|
| | B) Intermediate-term stationary work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour.<br><br>Correct the non-compliant issue within 4 hours from initial notification by the Engineer. If the issue is not corrected within 4 hours from notification, a penalty for non-compliance will be assessed on an hourly basis beginning from the initial notification of non-compliance. The penalty for non-compliance will be assessed at $200 per hour.<br><br>C) Short-term stationary is work that occupies a location for more than 1 hour within a single 24-hour period.<br><br>Correct the non-compliant issue within 1 hour from initial notification by the Engineer. If the issue is not corrected within 1 hour from notification, a penalty for non-compliance will be assessed on an hourly basis beginning from the initial notification of non-compliance. The penalty for non-compliance will be assessed at $200 per hour.<br><br>If the Contractor remains in violation of the Maintain and Control of Traffic requirements, or if the Department determines it to be in the public's interest, work will be suspended in accordance with Section 108.08 until the deficiencies are corrected. The Department reserves the right to correct deficiencies by any means available and charge the Contractor for labor, equipment, and material costs incurred in emergency situations. |
| **SUBSECTION:**<br>**REVISION:** | 206.03.02 Embankment<br>Replace the last paragraph with the following:<br><br>When rock roadbed is specified, construct the upper 2 feet of the embankment according to Subsection 204.03.09 A). |
| **SUBSECTION:**<br>**REVISION:** | 213.03.03 Inspection and Maintenance.<br>Replace the last sentence of the second paragraph with the following:<br><br>Initiate corrective action within 24 hours of any noted deficiency and complete the work within 7 calendar days of receipt of the report. The Contractor shall make a concentrated effort to complete any corrective action required prior to the next predicted rainfall event.<br><br>Insert the following paragraph after the second paragraph:<br><br>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 7calendar days of receipt of the report. The Contractor shall make a concentrated effort to complete any corrective action required prior to the next predicted rainfall event. |

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| **SUBSECTION:**<br>**PART:**<br>**REVISION:** | 213.03.05 Temporary Control Measures.<br>E) Temporary Seeding and Protection.<br>Replace the first paragraph with the following:<br><br>Apply an Annual Rye seed mix at a rate of 100 pounds per acre during the months of March through August. In addition to the Annual Rye, add 10 pounds of German Foxtail-Millet (Setaria italica), when performing temporary seeding during the months of June through August. During the months of September through February, apply Winter Wheat or Rye Grain at a rate of 100 pounds per acre. Obtain the Engineer's approval prior to the application of the seed mixture. |
| **SUBSECTION:**<br>**PART:**<br>**REVISION:** | 213.03.05 Temporary Control Measures.<br>F) Temporary Mulch.<br>Replace the last sentence with the following:<br><br>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. |
| **SUBSECTION:**<br>**REVISION:** | 303.05 Payment.<br>Replace the second paragraph of the section with the following:<br><br>The Department will make payment for Drainage Blanket-Type II (ATDB) according to the Lot Pay Adjustment Schedule for Specialty Mixtures in Section 402. |
| **SUBSECTION:**<br>**PART:**<br>**REVISION:** | 401.02.04 Special Requirements for Dryer Drum Plants.<br>F) Production Quality Control.<br>Replace the first sentence with the following:<br><br>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. |
| **SUBSECTION:**<br>**REVISION:** | 401.02.04 Special Requirements for Dryer Drum Plants.<br>Add the following:<br><br>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).<br>Ensure the equipment for water injection meets the following requirements:<br>1) Injection equipment computer controls are automatically coupled to the plants controls (manual operation is not permitted);<br>2) Injection equipment has variable controls that introduce water ratios based on production rates of mixtures;<br>3) Injects water into the flow of asphalt binder prior to contacting the aggregate;<br>4) Provides alarms on the water injection system that operate when the flow of water is interrupted or deviates from the prescribed water rate. |
| **SUBSECTION:**<br>**REVISION:** | 401.03.01 Preparation of Mixtures.<br>Replace the last sentence of the second paragraph with the following:<br><br>Do not use asphalt binder while it is foaming in a storage tank. |

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**SUBSECTION:** 401.03.01 Preparation of Mixtures.
**REVISION:** Replace the third paragraph and Mixing and Laying Temperature table with the following:

Maintain the temperature of the component materials and asphalt mixture within the ranges listed in the following 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 |

**SUBSECTION:** 402.01 Description.
**REVISION:** Replace the paragraph with the following:

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.

**SUBSECTION** 402.01.01 Warm Mix Asphalt (WMA) Evaluation and Approval.
**REVISION:** Add the following subsection:

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.

**SUBSECTION:** 402.05.02 Asphalt Mixtures and Mixtures With RAP.
**REVISION:** Replace Subsection Title as below:

402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.

**SUBSECTION:** 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
**REVISION:** Replace the paragraph with the following:

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 sublot and average the sublot 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.

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**SUBSECTION:** 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
**PART:** C) Conventional and RAP Mixtures Placed on Shoulders.
**REVISION:** Replace Title and Text with the following:

C) HMA, WMA and RAP Mixtures Placed on Shoulders or Placed as Asphalt Pavement Wedge.

1) Placed monolithically with the Mainline – Width of 4 feet or less. The Department will pay as mainline mixture.
2) Placed monolithically with the Mainline – Width of greater than 4 feet. The Department will pay as mainline mixture but use 1.00 for the Lane and Joint Density Pay Value for shoulder or Asphalt Pavement Wedge quantities.
3) Placed Separately. The Department will use 1.00 for the Lane and Joint Density Pay Value.

**SUBSECTION:** 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
**PART:** D) Conventional and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge.
**REVISION:** Replace the title with the following:
D) HMA, WMA, and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge.

Delete the following:
D) HMA, WMA, and RAP Mixtures Placed Monolithically as Asphalt Pavement Wedge. The Department will pay as mainline mixture but use a 1.00 pay value for all properties.

**SUBSECTION:** 402.05.02 Asphalt Mixtures for Temporary Pavement.
**PART:** E) Asphalt Mixtures for Temporary Pavement.
**REVISION:** Replace E) Asphalt Mixtures for Temporary Pavement with the following:

D) Asphalt Mixtures for Temporary Pavement.

**SUBSECTION:** 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
**PART:** Lot Pay Adjustment Schedule, Compaction Option A, Base and Binder Mixtures
**TABLES:** VMA
**REVISION:** Replace the VMA table with the following:

| 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. |

**SUBSECTION:** 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
**PART:** Lot Pay Adjustment Schedule, Compaction Option A, Surface Mixtures
**TABLES:** VMA
**REVISION:** Replace the VMA table with the following:

| 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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**SUBSECTION:** 402.05.02 Asphalt Mixtures, HMA and WMA, Including Mixtures With RAP.
**PART:** Lot Pay Adjustment Schedule, Compaction Option B Mixtures
**TABLE:** VMA
**REVISION:** Replace the VMA table with the following:

| VMA | |
|---|---|
| Pay Value | Deviation From Minimum |
| 1.00 | ≥min. VMA |
| 0.95 | 0 1-0.5 bel w min. |
| 0.9 | 0.6-1.0 below min. |
| (2) | > 1.0 below min. |

**SUBSECTION:** 403.03.03 Preparation of Mixture.
**PART:** C) Mix Design Criteria.
**NUMBER:** 1) Preliminary Mix Design.
**REVISION:** Replace the last two sentences of the paragraph and table with the following:

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:

| | | Number of Gyrations | | |
|---|---|---|---|---|
| **Class** | **ESAL's (millions)** | $N_{initial}$ | $N_{design}$ | $N_{max}$ |
| 2 | < 3.0 | 6 | 50 | 75 |
| 3 | 3.0 to < 30.0 | 7 | 75 | 115 |
| 4 | ≥ 30.0 | 8 | 100 | 160 |

**SUBSECTION:** 403.03.09 Leveling and Wedging, and Scratch Course.
**PART:** A) Leveling and Wedging.
**REVISION:** Replace the first sentence of the first paragraph with the following:

Conform to the gradation requirements (control points) of AASHTO M 323 for base, binder, or surface as the Engineer directs.

**SUBSECTION:** 403.03.09 Leveling and Wedging, and Scratch Course.
**PART:** B) Scratch Course.
**REVISION:** Replace the second sentence of the first paragraph with the following:

Conform to the gradation requirements (control points) of AASHTO M 323 for base, binder, or surface as the Engineer directs.

**SUBSECTION:** 407.01 DESCRIPTION.
**REVISION:** Replace the first sentence of the paragraph with the following:

Construct a pavement wedge composed of a hot-mixed or warm-mixed asphalt mixture.

**SUBSECTION:** 409.01 DESCRIPTION.
**REVISION:** Replace the first sentence of the paragraph with the following:

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.

**SUBSECTION:** 410.01 DESCRIPTION.
**REVISION:** Delete the second sentence of the paragraph.

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**SUBSECTION:** 410.03.01 Corrective Work.
**REVISION:** 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.

**SUBSECTION:** 410.03.02 Ride Quality.
**PART:** B) Requirements.
**NUMBER:** 1) Category A.
**REVISION:** 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.

**SUBSECTION:** 410.03.02 Ride Quality.
**PART:** B) Requirements.
**NUMBER:** 2) Category B.
**REVISION:** 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.

**SUBSECTION:** 410.05 PAYMENT.
**REVISION:** 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.

**SUBSECTION:** 413.05.02 CL3 SMA BASE 1.00D PG76-22.
**REVISION:** 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.

**SUBSECTION:** 413.05.02 CL3 SMA BASE 1.00D PG 76-22.
**TABLE:** JOINT DENSITY TABLE
**REVISION:** Replace the joint density table with the following:

| 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 |

**SUBSECTION:** 413.05.03 CL3 SMA SURF 0.50A PG76-22 and CL3 SMA SURF 0.38A PG76-22.
**REVISION:** 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.

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**SUBSECTION:** 413.05.03 CL3 SMA SURF 0.50A PG76-22 and CL3 SMA SURF 0.38A PG76-22.
**TABLE:** JOINT DENSITY TABLE
**REVISION:** Replace the joint density table with the following:

| 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 |
| (1) | < 91.0 or > 97.5 | ---- |

**SUBSECTION:** 501.05.02 Ride Quality.
**REVISION:** 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.

**SUBSECTION:** 505.03.04 Detectable Warnings.
**REVISION:** 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.

**SUBSECTION:** 505.04.04 Detectable Warnings.
**REVISION:** 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.

**SUBSECTION:** 505.05 PAYMENT.
**REVISION:** Add the following to the bid item table:

| Code | Pay Item | Pay Unit |
|---|---|---|
| 23158ES505 | Detectable Warnings | Square Foot |

**SUBSECTION:** 509.01 DESCRIPTION.
**REVISION:** 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.)

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| **SUBSECTION:**<br>**REVISION:** | 601.03.02 Concrete Producer Responsibilities.<br>Replace the first sentence with the following:<br><br>Obtain the concrete from producers that are in compliance with KM 64-323 and on the Department's List of Approved Materials.<br><br>Add the following to the first paragraph:<br><br>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. |
| **SUBSECTION:**<br>**PART:**<br>**REVISION:** | 601.03.02 Concrete Producer Responsibilities.<br>B) Certified Personnel.<br>Replace the second sentence with the following:<br><br>Ensure that the concrete technicians are certified as ACI Level I (Level I) and KRMCA Level II (Level II). |
| **SUBSECTION:**<br>**PART:**<br>**REVISION:** | 601.03.02 Concrete Producer Responsibilities.<br>C) Quality Control.<br>Replace the second sentence with the following:<br><br>Ensure that the Level II concrete technician is present when work is in progress and is responsible for inspecting trucks, batch weight calculations, monitoring batching, making mixture adjustments, reviewing the slump, air content, unit weight, temperature, and aggregate tests, all to provide conforming concrete to the project. |
| **SUBSECTION:**<br>**PART:**<br>**REVISION:** | 601.03.02 Concrete Producer Responsibilities.<br>D) Producer Testing.<br>Replace with the following:<br><br>When producing for state work, have a Qualified Concrete Aggregate Technician or KYTC Qualified Aggregate Technician perform, at a minimum, weekly gradations and minus 200 wash tests and daily moisture contents of coarse and fine aggregate (Fine aggregates will not require a minus 200 wash test). Using the daily moisture contents, adjust the approved mix design accordingly prior to production. Ensure that the Level II concrete technician is present when work is in progress and is responsible for inspecting trucks, batch weight calculations, monitoring batching, making mixture adjustments, reviewing the slump, air content, unit weight, temperature, and aggregate tests, all to provide conforming concrete to the project. |
| **SUBSECTION:**<br>**PART:**<br>**REVISION:** | 601.03.02 Concrete Producer Responsibilities.<br>E) Trip Tickets.<br>Replace the second sentence with the following:<br><br>Include on the trip ticket the Sample ID for the approved mix design and a statement certifying that the data on the ticket is correct and that the mixture conforms to the mix design. |
| **SUBSECTION:**<br>**PART:**<br>**NUMBER:**<br>**REVISION:** | 601.03.03 Proportioning and Requirements.<br>C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures<br>2) Mineral Admixtures.<br>Replace the second sentence with the following:<br><br>Reduction of the total cement content by a combination of mineral admixtures will be allowed, up to a maximum of 40 percent. |

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| **SUBSECTION:**<br>**PART:**<br>**NUMBER:**<br>**LETTER:**<br>**REVISION:** | 601.03.03 Proportioning and Requirements.<br>C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures<br>2) Mineral Admixtures.<br>a) Fly Ash.<br>Delete the last sentence of the third paragraph. |
| **SUBSECTION:**<br>**PART:**<br>**NUMBER:**<br>**LETTER:**<br>**REVISION:** | 601.03.03 Proportioning and Requirements.<br>C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures<br>2) Mineral Admixtures.<br>b) Ground Granulated Blast Furnace Slag (GGBF Slag).<br>Delete the second sentence of the third paragraph. |
| **SUBSECTION:**<br>**PART:**<br>**REVISION:** | 601.03.03 Proportioning and Requirements.<br>E) Measuring.<br>Add the following sentence:<br><br>Conform to the individual ingredient material batching tolerances in Appendix A. |
| **SUBSECTION:**<br>**PART:**<br>**REVISION:** | 601.03.09 Placing Concrete.<br>A) General.<br>Replace the last sentence of the fourth paragraph with the following:<br><br>Do not use aluminum or aluminum alloy troughs, pipes, or chutes that have surface damage or for lengths greater than 20 feet.<br><br>Replace the second sentence of the fifth paragraph with the following:<br><br>When pumping, equip the delivery pipe with a nozzle, having a minimum of 2 right angles, at the discharge end. Alternate nozzles or restriction devices may be allowed with prior approval by the Engineer. |
| **SUBSECTION:**<br>**REVISION:** | 605.02.05 Forms.<br>Delete the last sentence. |
| **SUBSECTION:**<br>**REVISION:** | 605.03.04 Tack Welding.<br>Replace with the following:<br><br>The Department does not allow tack welding. |
| **SUBSECTION:**<br>**REVISION:** | 606.02.11 Coarse Aggregate.<br>Replace with the following:<br><br>Conform to Section 805, size No. 8 or 9-M. |
| **SUBSECTION:**<br>**PART:**<br>**REVISION:** | 609.03.04 Expansion and Fixed Joints.<br>D) Preformed Neoprene Joint Seals.<br>Replace the last sentence of paragraph seven with the following:<br><br>Field splices will not be allowed during partial width construction. It is Contractor's responsibility to determine and install the length of seal required for the joint to barrier wall as per the standard drawing. |
| **SUBSECTION:**<br>**REVISION:** | 609.03.09 Finish with Burlap Drag.<br>Delete the entire section. |
| **SUBSECTION:**<br>**REVISION:** | 609.04.06 Joint Sealing.<br>Replace Subsection 601.04 with the following:<br><br>Subsection 606.04.08. |

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| **SUBSECTION:**<br>**REVISION:** | 609.05 Payment.<br>Replace the Pay Unit for Joint Sealing with the following:<br><br>See Subsection 606.05. |
| **SUBSECTION:**<br>**REVISION:** | 701.03.06 Initial Backfill.<br>Replace the first sentence of the last paragraph with the following:<br><br>When the Contract specifies, perform quality control testing to verify compaction according to KM 64-512. |
| **SUBSECTION:**<br>**REVISION:** | 701.03.08 Testing of Pipe.<br>Replace and rename the subsection with the following:<br><br>**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.<br>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.<br>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.<br>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.<br>The Cabinet may elect to conduct Quality Assurance verifications of any pipe inspections. |
| **SUBSECTION:**<br>**REVISION:** | 701.04.07 Testing.<br>Replace and rename the subsection with the following:<br><br>**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. |

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**SUBSECTION:** 701.05 PAYMENT.
**REVISION:** Add the following pay item to the list of pay items:

| Code | Pay Item | Pay Unit |
|---|---|---|
| 23131ER701 | Pipeline Video Inspection | Linear Foot |

**SUBSECTION:** 701.05 PAYMENT
**TABLE:** PIPE DEFLECTION DETERMINED BY CAMERA TESTING
**REVISION:** Replace this table with the following table and note:

| 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 |

*(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.*

**SUBSECTION:** 701.05 PAYMENT
**TABLE:** PIPE DEFLECTION DETERMINED BY MANDREL TESTING
**REVISION:** Delete this table.

**SUBSECTION:** 713.02.01 Paint.
**REVISION:** Replace with the following:

Conform to Section 842 and Section 846.

**SUBSECTION:** 713.03 CONSTRUCTION.
**REVISION:** 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:** 713.03.03 Paint Application.
**REVISION:** Replace the second paragraph with the following 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 |

**SUBSECTION:** 713.03.04 Marking Removal.
**REVISION:** Replace the last sentence of the paragraph with the following:

Vacuum all marking material and removal debris concurrently with the marking removal operation.

**SUBSECTION:** 713.05 PAYMENT.
**REVISION:** Insert the following codes and pay items below the Pavement Striping – Permanent Paint:

| Code | Pay Item | Pay Unit |
|---|---|---|
| 24189ER | Durable Waterborne Marking – 6 IN W | Linear Foot |
| 24190ER | Durable Waterborne Marking – 6 IN Y | Linear Foot |
| 24191ER | Durable Waterborne Marking – 12 IN W | Linear Foot |

# Supplemental Specifications to The Standard Specifications for Road and Bridge Construction, 2008 Edition

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| | |
|---|---|
| **SUBSECTION:**<br>**REVISION:** | 714.03 CONSTRUCTION.<br>Insert the following paragraph at the end of the third paragraph:<br><br>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:**<br>**REVISION:** | 714.03.07 Marking Removal.<br>Replace the third sentence of the paragraph with the following:<br><br>Vacuum all marking material and removal debris concurrently with the marking removal operation. |
| **SUBSECTION:**<br>**REVISION:** | 716.01 DESCRIPTION.<br>Insert the following after the first sentence:<br><br>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:**<br>**REVISION:** | 716.02.01 Roadway Lighting Materials.<br>Replace the last two sentences of the paragraph with the following:<br><br>Submit for material approval an electronic file of descriptive literature, drawings, and any requested design data to the Division of Traffic Operations. Do not begin work until shop drawings are approved. Notify the Engineer when submitting any information to the Division of Traffic Operations. Do not make substitutions for approved materials without written permission as described above. |
| **SECTION:**<br>**REVISION:** | 717 – THERMOPLASTIC INTERSECTION MARKINGS.<br>Replace the section name with the following:<br><br>INTERSECTION MARKINGS. |
| **SUBSECTION:**<br>**REVISION:** | 717.01 DESCRIPTION:<br>Replace the paragraph with the following:<br><br>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:**<br>**REVISION:** | 717.02 MATERIALS AND EQUIPMENT.<br>Insert the following subsection:<br><br>717.02.06 Type I Tape. Conform to Section 836. |
| **SUBSECTION:**<br>**REVISION:** | 717.03.03 Application.<br>Insert the following part to the subsection:<br><br>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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**SUBSECTION:** 717.03.05 Proving Period.
**PART:** A) Requirements.
**REVISION:** Insert the following to this section:

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.

**SUBSECTION:** 717.03.06 Marking Removal.
**REVISION:** Replace the third sentence of the paragraph with the following:

Vacuum all marking material and removal debris concurrently with the marking removal operation.

**SUBSECTION:** 717.05 PAYMENT.
**REVISION:** Insert the following bid item codes:

| Code | Pay Unit | Pay Item |
|---|---|---|
| 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 |

**SUBSECTION:** 725.02.02 Type VI Class C & CT.
**REVISION:** Replace bullet 2) with the following:

2) The SCI100GM System as developed by SCI Products, Inc. of St. Charles, Illinois. For all miscellaneous metal work conform to ASTM A 36 and galvanize according to ASTM A 123. For the SCI100GM fender panels conform to AASHTO 180. Galvanize the SCI100GM fender panels and SCI100GM -beam connectors after fabrication according to ASTM A 123.

**SUBSECTION:** 725.02.04 Type VII Class C.
**REVISION:** Replace bullet 2) with the following:

2) The SCI100GM System as developed by SCI Products, Inc. of St. Charles, Illinois. For all miscellaneous metal work conform to ASTM A 36 and galvanize according to ASTM A 123. For the SCI100GM fender panels conform to AASHTO 180. Galvanize the SCI100GM fender panels and SCI100GM-beam connectors after fabrication according to ASTM A 123.

**SUBSECTION:** 801.01 REQUIREMENTS.
**REVISION:** Delete the fourth sentence of the first paragraph and add the following to the second paragraph.

When supplying cement with a $SO_3$ content above the value in table I of ASTM C 150, include supportive ASTM C 1038 14-day expansion test data for the supplied $SO_3$ content on the certification.

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| | |
|---|---|
| **SUBSECTION:**<br>**REVISION:** | 805.01 GENERAL.<br>Replace the second paragraph with the following:<br><br>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. |
| **SUBSECTION:**<br>**REVISION:** | 805.04 CONCRETE.<br>Delete footnote (1) The permissible lightweight particle content of gravel coarse aggregate for reinforced concrete box culvert sections, concrete pipe, pipe arches, or for use only in concrete that will be permanently protected from freezing by 2 feet or more of cover is 10.0 percent. |
| **SUBSECTION:**<br>**REVISION:** | 805.04 CONCRETE.<br>Replace the "AASHTO T 160" reference in first sentence of the third paragraph with "KM 64-629" |
| **SUBSECTION:**<br>**TABLE:**<br>**PART:**<br>**REVISION:** | 805.15 GRADATION ACCEPTANCE OF NON-SPECIFICATION COARSE AGGREGATE.<br>AGGREGATE SIZE USE<br>Cement Concrete Structures and Incidental Construction<br>Replace "9-M for Waterproofing Overlays" with "8 or 9-M for Waterproofing Overlays" |

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

**SIZES OF COARSE AGGREGATES**

| | Sieve | AMOUNTS FINER THAN EACH LABORATORY SIEVE (SQUARE OPENINGS) PERCENTAGE BY WEIGHT | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aggregate Size | Nominal [3] Maximum Aggregate Size | 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 |
| 1 | 3 ½ inch | 100 | 90-100 | | 25-60 | | 0-15 | | 0-5 | | | | | | | | |
| 2 | 2 ½ inch | | | 100 | 90-100 | 35-70 | 0-15 | | 0-5 | | | | | | | | |
| 23 | 2 inch | | | 100 | | 40-90 | | 0-15 | | 0-5 | | | | | | | |
| 3 | 2 inch | | | | 100 | 90-100 | 35-70 | 0-15 | | 0-5 | | | | | | | |
| 357 | 2 inch | | | | 100 | 95-100 | | 35-70 | | 10-30 | | 0-5 | | | | | |
| 4 | 1 ½ inch | | | | | 100 | 90-100 | 20-55 | 0-15 | | 0-5 | | | | | | |
| 467 | 1 ½ inch | | | | | 100 | 95-100 | | 35-70 | | 10-30 | 0-5 | | | | | |
| 5 | 1 inch | | | | | | 100 | 90-100 | 20-55 | 0-10 | 0-5 | | | | | | |
| 57 | 1 inch | | | | | | 100 | 95-100 | | 25-60 | | 0-10 | 0-5 | | | | |
| 610 | 1 inch | | | | | | 100 | 85-100 | | 40-75 | | 15-40 | | | | | |
| 67 | 3/4 inch | | | | | | | 100 | 90-100 | | 20-55 | 0-10 | 0-5 | | | | |
| 68 | 3/4 inch | | | | | | | 100 | 90-100 | | 30-65 | 5-25 | 0-10 | 0-5 | | | |
| 710 | 3/4 inch | | | | | | | 100 | 80-100 | | 30-75 | 0-30 | | | | | |
| 78 | 1/2 inch | | | | | | | | 100 | 90-100 | 40-75 | 5-25 | 0-10 | 0-5 | | | |
| 8 | 3/8 inch | | | | | | | | | 100 | 85-100 | 10-30 | 0-10 | 0-5 | | | |
| 9-M | 3/8 inch | | | | | | | | | 100 | 75-100 | 0-25 | 0-5 | | | | |
| 10[2] | No. 4 | | | | | | | | | | 100 | 85-100 | | | | 10-30 | |
| 11[2] | No. 4 | | | | | | | | | | 100 | 40-90 | 10-40 | | | 0-5 | |
| DENSE GRADED AGGREGATE [1] | 3/4 inch | | | | | | | 100 | 70-100 | | 50-80 | 30-65 | | | 10-40 | | 4-13 |
| CRUSHED STONE BASE [1] | 1 ½ inch | | | | 100 | | 90-100 | | 60-95 | | 30-70 | 15-55 | | | 5-20 | | 0-8 |

(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.

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**SUBSECTION:** 805.16 SAMPLING AND TESTING.
**REVISION:** 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.

**SUBSECTION:** 810.04.01 Coating Requirements.
**REVISION:** Replace the "Subsection 806.07" references with "Subsection 806.06"

**SUBSECTION:** 810.06.01 Polyvinyl Chloride (PVC) Pipe.
**PART:** B) Culvert and Entrance Pipe.
**REVISION:** Replace the title with the following:

B) Culvert Pipe, Storm Sewer, and Entrance Pipe.

**SUBSECTION:** 823.02 LIQUID MEMBRANE FORMING COMPOUNDS.
**REVISION:** Add the following:

Effective July 1, 2011, to remain on or be added to the Department's approved list, products must have completed testing or been submitted for testing through the National Transportation Product Evaluation Program (NTPEP) for Concrete Curing Compounds.

**SUBSECTION:** 837.03 APPROVAL.
**REVISION:** 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.

**SUBSECTION:** 837.03.01 Composition.
**REVISION:** COMPOSITION Table:

Replace

| | | |
|---|---|---|
| Lead Chromate | 0.0 max. | 4.0 min. |

with

| | |
|---|---|
| Heavy Metals Content | Comply with 40 CFR 261 |

**SUBSECTION:** 842.02 APPROVAL.
**TABLE:** PAINT COMPOSITION
**REVISION:** Revise the following in the table:

Replace the 2.0ΔE* values in the table with 4.0ΔE* for both Yellow and White Paint on both the Daytime and Nighttime Color Spectrophotometer.

**SECTION:** DIVISION 800 MATERIAL DETAILS
**REVISION:** 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

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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.

| PAINT COMPOSITION | | |
|---|---|---|
| Property and Test Method | Yellow | White |
| Daytime Color (CIELAB) Spectrophotometer using illuminant D65 at 45º illumination and 0º viewing with a 2º observer | L* 81.76<br>a* 19.79<br>b* 89.89<br>Maximum allowa le variation 4.0ΔE* | L* 93.51<br>a* -1.01<br>b* 0.70<br>Maximum allowable variation 4.0ΔE* |
| Nighttime Color (CIELAB) Spectrophotometer using illuminant A at 45º illumination and 0º viewing with a 2º observer | L* 86.90<br>a* 24.80<br>b* 95.45<br>Maximum allowable variation 4.0ΔE* | L* 93.45<br>a* -0.79<br>b* 0.43<br>Maximum allowable variation 4.0ΔE* |
| 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 l /gal ma . |
| 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 | $TiO_2$ | VOC | Heavy Metals Content |
| Reduction Rate | 60% | 10% | 10% | 10% | 60% | 60% |

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|---|---|
| **APPENDIX A:** | TABLUATION OF CONSTRUCTION TOLERANCES. |
| **PART:** | 601.03.03 |
| **REVISION:** | Replace with the following:<br><br>Concrete accuracy of individual ingredient material for each batch.<br>± 2.0% for aggregates<br>± 1.0% for water<br>± 1.0% for cement in batches of 4 cubic yards or greater<br>± 1.0% for total cementitious materials in batches of 4 cubic yards or greater<br>0.0% to + 4.0% for cement in batches less than 4 cubic yards<br>0.0% to + 4.0% for total cementitious materials in batches less than 4 cubic yards<br>± 3.0% for admixtures |
| **APPENDIX A:** | TABLUATION OF CONSTRUCTION TOLERANCES. |
| **PART:** | 601.03.03 C) 2) |
| **REVISION:** | Delete |

# STANDARD DRAWINGS THAT APPLY

## ROADWAY

### ~ *BARRIERS* ~

#### CONCRETE MEDIAN BARRIERS

| | |
|---|---|
| DELINEATORS FOR CONCRETE BARRIERS (Payment Incidental to Barrier Wall 9T) | RBM-020-08 |
| CONCRETE BARRIER WALL 9T | RBM-115-08 |
| CRASH CUSHION IX-T | RBE-100-09 |

## TRAFFIC

### ~ *TEMPORARY* ~

#### TRAFFIC CONTROL

| | |
|---|---|
| LANE CLOSURE MULTI-LANE HIGHWAY CASE II | TTC-120 |

#### DEVICES

| | |
|---|---|
| POST SPLICING DETAIL | TTD-110 |
| ARROW PANEL | TTD-115 |

## BRIDGES

#### MISCELLANEOUS STANDARDS

| | |
|---|---|
| BRIDGE RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS | BGX-009-04 |

#### JOINTS

| | |
|---|---|
| NEOPRENE EXPANSION DAMS AND ARMORED EDGES | BJE-001-11 |

# PART III

# EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

# TRANSPORTATION CABINET
# DEPARTMENT OF HIGHWAYS

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



### I. APPLICATION

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

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

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

### II. NONDISCRIMINATION OF EMPLOYEES

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

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

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (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 administrating 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.

General Decision Number: KY120125 04/13/2012  KY125

Superseded General Decision Number: KY20100211

State: Kentucky

Construction Type: Highway

Counties: Anderson, Bath, Bourbon, Boyd, Boyle, Bracken, Breckinridge, Bullitt, Carroll, Carter, Clark, Elliott, Fayette, Fleming, Franklin, Gallatin, Grant, Grayson, Greenup, Hardin, Harrison, Henry, Jefferson, Jessamine, Larue, Lewis, Madison, Marion, Mason, Meade, Mercer, Montgomery, Nelson, Nicholas, Oldham, Owen, Robertson, Rowan, Scott, Shelby, Spencer, Trimble, Washington and Woodford Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

| Modification Number | Publication Date |
|---|---|
| 0 | 01/06/2012 |
| 1 | 01/13/2012 |
| 2 | 01/20/2012 |
| 3 | 04/13/2012 |

BRIN0004-003 06/01/2011

BRECKENRIDGE COUNTY

| | Rates | Fringes |
|---|---|---|
| BRICKLAYER | $ 24.11 | 10.07 |

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BRKY0001-005 06/01/2011

BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, & TRIMBLE COUNTIES:

| | Rates | Fringes |
|---|---|---|
| BRICKLAYER | $ 24.11 | 10.07 |

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BRKY0002-006 06/01/2011

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

| | Rates | Fringes |
|---|---|---|
| BRICKLAYER | $ 26.57 | 10.26 |

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BRKY0007-004 06/01/2011

BOYD, CARTER, ELLIOT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:

| | Rates | Fringes |
|---|---|---|
| BRICKLAYER | $ 28.29 | 16.80 |

BRKY0017-004 06/01/2009

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, OWEN, SCOTT, WASHINGTON & WOODFORD COUNTIES:

| | Rates | Fringes |
|---|---|---|
| BRICKLAYER | $ 24.11 | 9.97 |

CARP0064-001 07/01/2011

| | Rates | Fringes |
|---|---|---|
| CARPENTER | $ 25.95 | 13.26 |
| Diver | $ 39.30 | 13.26 |
| PILEDRIVERMAN | $ 26.20 | 13.26 |

ELEC0212-008 05/31/2011

BRACKEN, GALLATIN and GRANT COUNTIES

| | Rates | Fringes |
|---|---|---|
| ELECTRICIAN | $ 26.11 | 14.94 |

ELEC0212-014 06/27/2011

BRACKEN, GALLATIN & GRANT COUNTIES:

| | Rates | Fringes |
|---|---|---|
| Sound & Communication Technician | $ 21.55 | 8.46 |

ELEC0317-012 06/01/2011

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

| | Rates | Fringes |
|---|---|---|
| Electricians: | | |
| Cable Splicer | $ 32.68 | 18.13 |
| Electrician | $ 31.87 | 19.96 |

ELEC0369-007 06/01/2011

ANDERSON, BATH, BOURBON, BOYLE, BRECKINRIDGE, BULLITT, CARROLL, CLARK, FAYETTE, FRAONKLIN, GRAYSON, HARDIN, HARRISON, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, MONTGOMERY, NELSON, NICHOLAS, OLDHAM, OWEN, ROBERTSON, SCOTT, SHELBY, SPENCER, TRIMBLE, WASHINGTON, & WOODFORD COUNTIES:

| | Rates | Fringes |
|---|---|---|
| ELECTRICIAN | $ 29.27 | 13.33 |

ELEC0575-002 05/30/2011

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

| | Rates | Fringes |
|---|---|---|
| ELECTRICIAN | $ 30.69 | 13.32 |

ENGI0181-018 07/01/2011

| | Rates | Fringes |
|---|---|---|
| Operating Engineer: | | |
| GROUP 1 | $ 26.50 | 13.00 |
| GROUP 2 | $ 24.08 | 13.00 |
| GROUP 3 | $ 24.46 | 13.00 |
| GROUP 4 | $ 23.82 | 13.00 |

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller; Batcher Plant; Bituminous Paver; Bituminous Transfer Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All Scoop; Carry Deck Crane; Central Compressor Plant; Cherry Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over); Concrete Paver; Truck-Mounted Concrete Pump; Core Drill; Crane; Crusher Plant; Derrick; Derrick Boat; Ditching & Trenching Machine; Dragline; Dredge Operator; Dredge Engineer; Elevating Grader & Loaders; Grade-All; Gurries; Heavy Equipment Robotics Operator/Mechanic; High Lift; Hoe-Type Machine; Hoist (Two or More Drums); Hoisting Engine (Two or More Drums); Horizontal Directional Drill Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau; Locomotive; Mechanic; Mechanically Operated Laser Screed; Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel Bucket; Overhead Crane; Piledriver; Power Blade; Pumpcrete; Push Dozer; Rock Spreader, attached to equipment; Rotary Drill; Roller (Bituminous); Rough Terrain Crane; Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck Crane; Tunnel Mining Machines, including Moles, Shields or similar types of Tunnel Mining Equipment

GROUP 2 - Air Compressor (Over 900 cu. ft. per min.); Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft.); Dredge Engineer; Electric Vibrator; Compactor/Self-Propelled Compactor; Elevator (One Drum or Buck Hoist); Elevator (When used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Conrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher;

Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points; & Whirley Oiler

GROUP 3 - All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES - with booms 150 ft. & Over (Including JIB), and where the length of the boom in combination with the length of the piling leads equals or exceeds 150 ft. - $1.00 over Group 1 rate

EMPLOYEES ASSIGNED TO WORK BELOW GROUND LEVEL ARE TO BE PAID 10%
ABOVE BASIC WAGE RATE. THIS DOES NOT APPLY TO OPEN CUT WORK.

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IRON0044-009 06/01/2011

BRACKEN, GALLATIN, GRANT, HARRISON, ROBERTSON,
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);
MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);
NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);
OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);
SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall)

| | Rates | Fringes |
|---|---|---|
| IRONWORKER | | |
| Fence Erector | $ 22.92 | 17.20 |
| Structural | $ 25.50 | 17.20 |

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IRON0070-006 06/01/2011

ANDERSON, BOYLE, BRECKINRIDGE, BULLITT, FAYETTE, FRANKLIN, GRAYSON, HARDIN, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON,

MARION, MEADE, MERCER, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE, WASHINGTON & WOODFORD
BOURBON (Southern two-thirds, including Townships of Austerlity, Centerville, Clintonville, Elizabeth, Hutchison, Littlerock, North Middletown & Paris);
CARROLL (Western two-thirds, including Townships of Carrollton, Easterday, English, Locust, Louis, Prestonville & Worthville);
CLARK (Western two-thirds, including Townships of Becknerville, Flanagan, Ford, Pine Grove, Winchester & Wyandotte);
OWEN (Eastern eighth, including Townships of Glenmary, Gratz, Monterey, Perry Park & Tacketts Mill);
SCOTT (Southern third, including Townships of Georgetown, Great Crossing, Newtown, Stampling Ground & Woodlake);

| | Rates | Fringes |
|---|---|---|
| IRONWORKER | $ 25.77 | 18.28 |

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* IRON0372-006 01/01/2012

BRACKEN, GALLATIN, GRANT, HARRISON and ROBERTSON
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, Excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains,
Ringos Mills, Tilton & Wallingford);
MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);
NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);
OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);
SCOTT (Northern two-thirds, including Townships of Biddle, Davis,Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall) COUNTIES

| | Rates | Fringes |
|---|---|---|
| IRONWORKER, REINFORCING | | |
| Beyond 30-mile radius of Hamilton County, Ohio Courthouse | $ 26.75 | 17.55 |
| Up to & including 30-mile radius of Hamilton County, Ohio Courthouse | $ 26.50 | 17.55 |

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IRON0769-007 06/01/2011

BATH, BOYD, CARTER, ELLIOTT, GREENUP, LEWIS, MONTGOMERY & ROWAN

CLARK (Eastern third, including townships of Bloomingdale, Hunt, Indian Fields, Kiddville, Loglick, Rightangele & Thomson);
FLEMING (Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);
MASON (Eastern third, including Townships of Helena, Marshall, Orangeburg, Plumville & Springdale);
NICHOLAS (Eastern eighth, including the Township of Moorefield Sprout)

| | Rates | Fringes |
|---|---|---|
| IRONWORKER | $ 30.96 | 18.07 |
| ZONE 1 | $ 29.59 | 18.07 |
| ZONE 2 | $ 31.36 | 18.07 |
| ZONE 3 | $ 32.96 | 18.07 |

ZONE 1 - Up to 10 mi. radius of union hall, Ashland, Ky., 1643 Greenup Avenue
ZONE 2 - 10 to 50 mi. radius of union hall;
ZONE 3 - 50 mi. radius and beyond

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LABO0189-003 07/01/2011

BATH, BOURBON, BOYD, BOYLE, BRACKEN, CARTER, CLARK, ELLIOTT, FAYETTE, FLEMING, FRANKLIN, GALLATIN, GRANT, GREENUP, HARRISON, JESSAMINE, LEWIS, MADISON, MASON, MERCER, MONTGOMERY, NICHOLAS, OWEN, ROBERTSON, ROWAN, SCOTT, & WOOLFORD COUNTIES

| | Rates | Fringes |
|---|---|---|
| Laborers: | | |
| GROUP 1 | $ 20.81 | 10.85 |
| GROUP 2 | $ 21.06 | 10.85 |
| GROUP 3 | $ 21.11 | 10.85 |
| GROUP 4 | $ 21.71 | 10.85 |

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste

- Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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LABO0189-008 07/01/2011

ANDERSON, BULLITT, CARROLL, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

| | Rates | Fringes |
|---|---|---|
| Laborers: | | |
| GROUP 1 | $ 21.26 | 10.40 |
| GROUP 2 | $ 21.51 | 10.40 |
| GROUP 3 | $ 21.56 | 10.40 |
| GROUP 4 | $ 22.16 | 10.40 |

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger;

Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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LABO0189-009 07/01/2011

BRECKINRIDGE & GRAYSON COUNTIES

| | Rates | Fringes |
|---|---|---|
| Laborers: | | |
| GROUP 1 | $ 21.51 | 10.15 |
| GROUP 2 | $ 21.76 | 10.15 |
| GROUP 3 | $ 21.81 | 10.15 |
| GROUP 4 | $ 22.41 | 10.15 |

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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PAIN0012-005 06/11/2005

BATH, BOURBON, BOYLE, CLARK, FAYETTE, FLEMING, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, ROBERTSON, SCOTT & WOODFORD COUNTIES:

| | Rates | Fringes |
|---|---|---|
| PAINTER | | |
| Bridge/Equipment Tender and/or Containment Builder | $ 18.90 | 5.90 |
| Brush & Roller | $ 21.30 | 5.90 |
| Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement | $ 22.30 | 5.90 |
| Sandblasting & Waterblasting | $ 22.05 | 5.90 |
| Spray | $ 21.80 | 5.90 |

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PAIN0012-017 05/02/2011

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

| | Rates | Fringes |
|---|---|---|
| PAINTER (Heavy & Highway Bridges - Guardrails - Lightpoles - Striping) | | |
| Bridge Equipment Tender and Containment Builder | $ 20.27 | 8.10 |
| Brush & Roller | $ 23.85 | 8.10 |
| Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement | $ 23.85 | 8.10 |
| Sandblasting & Water Blasting | $ 24.60 | 8.10 |
| Spray | $ 24.35 | 8.10 |

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PAIN0118-004 05/01/2010

ANDERSON, BRECKINRIDGE, BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES:

| | Rates | Fringes |
|---|---|---|
| PAINTER | | |
| Brush & Roller | $ 18.50 | 10.30 |
| Spray, Sandblast, Power Tools, Waterblast & Steam | | |

Cleaning.....$ 19.50 10.30

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PAIN1072-003 12/01/2011

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS and ROWAN COUNTIES

| | Rates | Fringes |
|---|---|---|
| Painters: | | |
| Bridges; Locks; Dams; Tension Towers & Energized Substations | $ 29.33 | 14.20 |
| Power Generating Facilities | $ 26.09 | 14.20 |

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PLUM0248-003 06/01/2011

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

| | Rates | Fringes |
|---|---|---|
| Plumber and Steamfitter | $ 32.00 | 16.24 |

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PLUM0392-007 09/01/2011

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN & ROBERTSON COUNTIES:

| | Rates | Fringes |
|---|---|---|
| Plumbers and Pipefitters | $ 29.30 | 15.74 |

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PLUM0502-003 08/01/2011

BRECKINRIDGE, BULLITT, CARROLL (Western Half), FRANKLIN (Western three-fourths), GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

| | Rates | Fringes |
|---|---|---|
| PLUMBER | $ 31.00 | 16.13 |

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SUKY2010-160 10/08/2001

| | Rates | Fringes |
|---|---|---|
| Truck drivers: | | |
| GROUP 1 | $ 16.57 | 7.34 |
| GROUP 2 | $ 16.68 | 7.34 |
| GROUP 3 | $ 16.86 | 7.34 |
| GROUP 4 | $ 16.96 | 7.34 |

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Mobile Batch Truck Tender

GROUP 2 - Greaser; Tire Changer; & Mechanic Tender

GROUP 3 - Single Axle Dump; Flatbed; Semi-trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Distributor; Mixer; & Truck Mechanic

GROUP 4 - Euclid & Other Heavy Earthmoving Equipment & Lowboy; Articulator Cat; 5-Axle Vehicle; Winch & A-Frame when used in transporting materials; Ross Carrier; Forklift when used to transport building materials; & Pavement Breaker

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable , i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rate.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union rates, LA

indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

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

These rates are listed pursuant to the Kentucky Determination No. CR-11-III- HWY dated August 04, 2011

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

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

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

**TO: EMPLOYERS/EMPLOYEES**

**PREVAILING WAGE SCHEDULE:**

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

**OVERTIME:**

**Overtime is to be paid 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 the undersigned.**

Ryan Griffith, Director
Division of Construction Procurement
Frankfort, Kentucky 40622

# PART IV

# INSURANCE

# INSURANCE

The Contractor shall procure and maintain the following insurance in addition to the insurance required by law:

1) Commercial General Liability-Occurrence form – not less than $2,000,000 General aggregate, $2,000,000 Products & Completed Aggregate, $1,000,000 Personal & Advertising, $1,000,000 each occurrence.

2) Automobile Liability- $1,000,000 per accident

3) Employers Liability:

   a) $100,000 Each Accident Bodily Injury
   b) $500,000 Policy limit Bodily Injury by Disease
   c) $100,000 Each Employee Bodily Injury by Disease

4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
   a) "policy contains no deductible clauses."
   b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."

5) KENTUCKY WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

The cost of insurance is incidental to all contract items. All subcontractors must meet the same minimum insurance requirements.

# PART V

# BID ITEMS

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 122906 PAGE: 1
COUNTY: ANDERSON LETTING: 05/18/12
PROPOSAL: FE02 003 9002 B00007L,R CALL NO: 307

| LINE NO | ITEM | DESCRIPTION | APPROXIMATE UNIT QUANTITY | UNIT PRICE | AMOUNT |
|---|---|---|---|---|---|
| | SECTION 0001 | BRIDGE | | | |
| 0010 | 02003 | RELOCATE TEMP CONC BARRIER | 2,608.000 LF | | |
| 0020 | 02562 | SIGNS | 298.000 SQFT | | |
| 0030 | 02650 | MAINTAIN & CONTROL TRAFFIC<br>APPLIES TO 003B00007L | ( 1.00) LS | | |
| 0040 | 02650 | MAINTAIN & CONTROL TRAFFIC<br>APPLIES TO 003B00007R | ( 1.00) LS | | |
| 0050 | 02653 | LANE CLOSURE | 4.000 EACH | | |
| 0060 | 02671 | PORTABLE CHANGEABLE MESSAGE SIGN | 2.000 EACH | | |
| 0070 | 02775 | ARROW PANEL | 2.000 EACH | | |
| 0080 | 02898 | RELOCATE CRASH CUSHION | 2.000 EACH | | |
| 0090 | 02900 | INSTALL TEMP CRASH CUSHION | 2.000 EACH | | |
| 0100 | 03171 | CONCRETE BARRIER WALL TYPE 9T | 2,608.000 LF | | |
| 0110 | 03295 | EXPAN JOINT REPLACE 2 IN | 120.000 LF | | |
| 0120 | 03299 | ARMORED EDGE FOR CONCRETE | 120.000 LF | | |
| 0130 | 03301 | REPAIR CONCRETE HANDRAIL | 16.000 LF | | |
| 0140 | 03302 | REPAIR CONCRETE CURB | 566.000 LF | | |
| 0150 | 06550 | PAVE STRIPING-TEMP REM TAPE-W | 2,000.000 LF | | |
| 0160 | 08150 | STEEL REINFORCEMENT | 532.000 LB | | |
| 0170 | 08504 | EPOXY SAND SLURRY | 1,612.000 SQYD | | |
| 0180 | 08510 | REM EPOXY BIT FOREIGN OVERLAY | 7,254.000 SQYD | | |
| 0190 | 08526 | CONC CLASS M FULL DEPTH PATCH | 45.000 CUYD | | |
| 0200 | 08549 | BLAST CLEANING | 8,866.000 SQYD | | |

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 122906 PAGE: 2
COUNTY: ANDERSON LETTING: 05/18/12
PROPOSAL: FE02 003 9002 B00007L,R CALL NO: 307

| LINE NO | ITEM | DESCRIPTION | APPROXIMATE UNIT QUANTITY | UNIT PRICE | AMOUNT |
|---|---|---|---|---|---|
| 0210 | 21138ED | ASPHALT WATERPROOFING MIX | 654.000 TON | | |
| 0220 | 21529ND | FINGER DAM REPAIR | ( 1.00) LS | | |
| 0230 | 22146EN | CONCRETE PATCHING REPAIR | 400.000 SQFT | | |
| 0240 | 23159EN | DURABLE WATERBORNE MARKING-6 IN W | 3,160.000 LF | | |
| 0250 | 23160EN | DURABLE WATERBORNE MARKING-6 IN Y | 2,376.000 LF | | |
| 0260 | 24094EC | PARTIAL DEPTH PATCHING | 200.000 CUYD | | |
| 0270 | 24105EC | ASPHALT PLUG JOINT | 120.000 LF | | |
| | SECTION 0002 | DEMOBILIZATION | | | |
| 0280 | 02569 | DEMOBILIZATION (AT LEAST 1.5%) | LUMP | | |
| | | TOTAL BID | | | |