CALL NO. 407

CONTRACT ID. 122451

CARROLL - GALLATIN COUNTIES

FED/STATE PROJECT NUMBER 121GR12P112-FD04 SPP

DESCRIPTION INTERSTATE 71 IN GALLATIN AND CARROLL COUNTY

WORK TYPE ASPHALT SURFACE WITH GUARDRAIL

PRIMARY COMPLETION DATE 6/30/2013

LETTING DATE: September 14, 2012

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME September 14, 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 - 122451 ADMINISTRATIVE DISTRICT - 06

PROJECT(S) IDENTIFICATION AND DESCRIPTION:

COUNTY - CARROLL, GALLATIN
121GR12P112-FD04 SPP INTERSTATE 71 IN GALLATIN AND CARROLL COUNTY

COUNTY - CARROLL PES - MP021007112R1
FD04 SPP 021 0071 038-054
COVINGTON-LOUISVILLE ROAD (I-71) FROM TRIMBLE COUNTY LINE (MP 38.808) EXTENDING NORTH TO GALLATIN COUNTY LINE (MP 53.433), A DISTANCE OF 14.63 MILES. ASPHALT SURFACE WITH GUARDRAIL. SYP NO. 06-02037.00.
GEOGRAPHIC COORDINATES LATITUDE 38^39'10" LONGITUDE 85^05'55"
AVERAGE DAILY TRAFFIC - 35542 AVERAGE MAINLINE WIDTH - 48.0 FEET

COUNTY - GALLATIN PES - MP039007112R1
FD04 SPP 039 0071 053-057
COVINGTON-LOUISVILLE ROAD (I-71) FROM CARROLL COUNTY LINE (MP 53.433) EXTENDING NORTH TO THE BEGINNING OF THE THREE LANE SECTION (MP 56.763), A DISTANCE OF 3.33 MILES. ASPHALT SURFACE WITH GUARDRAIL. SYP NO. 06-02037.00.
GEOGRAPHIC COORDINATES LATITUDE 38^41'32" LONGITUDE 84^56'13"
AVERAGE DAILY TRAFFIC - 29521 AVERAGE MAINLINE WIDTH - 48.0 FEET

COMPLETION DATE(S):
COMPLETION DATE - June 30, 2013
APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

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

The Bidder must download the bid file located on the 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.

SPECIAL NOTE FOR PIPE INSPECTION

Contrary to Section 701.03.08 of the 2012 Standard Specifications for Road and Bridge Construction and Kentucky Method 64-114, certification by the Kentucky Transportation Center for prequalified Contractors to perform laser/video inspection is not required on this contract. It will continue to be a requirement for the Contractor performing any laser/video pipe inspection to be prequalified for this specialized item with the Kentucky Transportation Cabinet-Division of Construction Procurement.

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

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.

NATIONAL HIGHWAY

Be advised this project is on the NATIONAL HIGHWAY SYSTEM.

PROJECT TRAFFIC COORDINATOR (PTC)

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

SURFACING AREAS (CARROLL COUNTY)

The Department estimates the mainline surfacing width including inside shoulder to be 52 feet.
The Department estimates the total mainline and inside shoulder area to be surfaced to be 443,987 square yards.
The Department estimates the outside shoulder width to be 10 feet on each side.
The Department estimates the total shoulder area to be surfaced to be 179,225 square yards.
SURFACING AREAS (GALLATIN COUNTY)
The Department estimates the mainline surfacing width including inside shoulder to be 52 feet.
The Department estimates the total mainline and inside shoulder area to be surfaced to be 132,570 square yards.
The Department estimates the outside shoulder width to be 10 feet on each side.
The Department estimates the total shoulder area to be surfaced to be 43,080 square yards.

ASPHALT MIXTURE

Unless otherwise noted, the Department estimates the rate of application for all asphalt mixtures to be 110 lbs/sy per inch of depth.

DGA BASE FOR SHOULDERS

Unless otherwise noted, the Department estimates the rate of application for DGA Base for Shoulders to be 115 lbs/sy per inch of depth. The Department will not measure necessary grading and/or shaping of existing shoulders prior to placing of DGA Base, but shall be incidental to the Contract unit price per ton for DGA Base.
Accept payment at the Contract unit price per ton as full compensation for all labor, materials, equipment, and incidentals for grading and/or shaping of existing shoulders and furnishing, placing, and compacting the DGA Base.

ASPHALT PAVEMENT RIDE QUALITY CATEGORY B

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

OPTION A

Be advised that the Department will accept compaction of asphalt mixtures furnished for driving lanes and ramps, at 1 inch (25mm) or greater, on this project according to OPTION A in accordance with Section 402 and Section 403 of the current Standard Specifications. The Department will require joint cores as described in Section 402.03.02 for surface mixtures only. The Department will accept compaction of all other asphalt mixtures according to OPTION B.

MATERIAL TRANSFER VEHICLE (MTV)

Provide and use a MTV in accordance with Sections 403.02.10 and 403.03.05.

SPECIAL NOTES FOR CHAIN LINK FENCE

Except as provided herein, perform all work in accordance with the Department's 2012 Standard Specifications, interim Supplemental Specifications, Standard and Sepia Drawings, and Special Notes and Special Provisions, current editions. Article references are to the Standard Specifications. This project shall consist of furnishing all labor, equipment, materials, and incidentals for the following:

(1) Maintaining and Controlling Traffic; (2) Construct Chain Link Fence; and (3) any other work as specified by this contract.

II. MATERIALS

Provide for sampling and testing of all materials in accordance with the Department's Sampling Manual. Make materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing unless otherwise specified in these notes.

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

B. Remove and Replace Chain Link Fence. Furnish 10’ High Chain Link Fence meeting the requirements of Sections 721 and 817.

III. CONSTRUCTION METHODS

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

B. Site Preparation. Be responsible for all site preparation, including but not limited to clearing and grubbing, and incidental excavation and backfilling; final dressing and cleanup; and disposal of materials. Perform all site preparation only as approved or directed by the Engineer.

C. Remove and Replace Chain Link Fence. Remove existing chain link fence at the locations noted on the summary. The Engineer will determine the actual locations at the time of construction. Construct the new 10’ high chain link fence according to Standard Drawing RFC-002-04. Contrary to the Standard Drawing, do not construct the three strands of barbed wire.

D. Final Dressing, Clean Up, Seeding and Protection, and Restoration. After all work is completed, remove all waste and debris from the job site. Grade all disturbed areas to blend with the adjacent roadway features and to provide a suitable seed bed. Perform Class A Final dressing on all disturbed areas.

E. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Repair or replace damaged roadway features in like kind materials

and design as directed by the Engineer at no additional cost to the Department. Repair or replace damaged private property in like kind materials and design to the satisfaction of the owner and the Engineer at no additional cost to the Department.

F. Disposal of Waste. Dispose of all debris, excess excavation, and all other waste at approved sites off the right of way obtained by the Contractor at no additional cost to the Department (see Special Note for Waste and Borrow).

G. On-Site Inspection. Before submitting a bid for the work, make a thorough inspection of the site and determine existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid to be evidence of this inspection having been made. The Department will not honor any claims for money or time extension resulting from site conditions.

H. Right-of-Way Limits. All work is located within the existing right of way. Limit work activities to the Right-of-Way and work and staging areas secured by the Contractor at no additional cost to the Department. Be responsible for all encroachments onto private lands.

I. Caution. The information in this proposal and shown on the plans and the type of work listed herein are approximate only and are not to be taken as an accurate evaluation of the materials and conditions to be encountered during construction; the bidder must draw his own conclusions. The Department does not give any guarantee as to the accuracy of the data and no claim for money or time extension will be considered if the conditions encountered are not in accordance with the information shown.

J. Control. Perform all work under the absolute control of the Department of Highways. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. The Department will not honor any claims for money or time extension created by the operations of such other parties.

Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the Department's work in general harmony and in a satisfactory manner, and his decision shall be final and binding upon the Contractor.

IV. METHOD OF MEASUREMENT

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

B. Site Preparation. Other than the bid items listed, site preparation will not be measured

for payment, but shall be incidental to culvert pipe.

C. Remove and Replace Chain Link Fence. Remove and Replace Chain Link Fence will be paid by linear foot.

V. BASIS OF PAYMENT

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

B. Remove and Replace Chain Link Fence. Payment at the Contract unit price per linear foot shall be full compensation for furnishing all labor, materials, equipment and incidentals for removing and replacing 10’ high chain link fence.

SPECIAL NOTE FOR STAKING

Perform Contractor Staking according to Section 201, except:

1. Contrary to Section 201, perform items 1-4 usually performed by the Engineer; and
2. Prepare a Pavement Drainage Development Plan to ensure positive drainage; and
3. Prepare Culvert Pipe sections and revise as necessary to provide proper alignment of culvert and reconstructed median box inlet to conform to the development plan, accommodate existing site conditions, make best use of existing drainage swales, and minimize disturbance of vegetation for median ditches; and
4. Produce and furnish to the Engineer "As Built" plans; and
5. Perform any and all other staking operations required to control and construct the work; and
6. Contrary to Section 201.04, the Department will not measure Staking for payment, but shall be incidental to other items of work.

SPECIAL NOTE FOR LIQUIDATED DAMAGES

In addition to the requirements of Section 108.09 of the 2012 Standard Specifications, if a lane closure remains in place during hours prohibited by the Traffic Control Plan the Department will assess Liquidated Damages in the amount of $1,000.00 for the first half hour or part of a half hour and $5,000.00 for each subsequent hour or part of an hour that the lane closure remains in place during prohibited hours.

Milled surfaces must be followed by paving in a continuous operation. If a breakdown occurs and traffic must be placed on milled surfaces, liquidated damages of $5,000 per occurrence will be assessed.

Contrary to Section 108.09, liquidated damages will be assessed regardless of whether seasonal limitations or restrictions in the Traffic Control Plan prohibit the Contractor from performing work on the controlling operation.

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

All liquidated damages will be applied cumulatively.

All other applicable portions of Section 108 apply.

SPECIAL PROVISION FOR WASTE AND BORROW SITES

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

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

COORDINATION OF WORK WITH OTHER CONTRACTS

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

1-3193 Coordination Contracts
01/02/2012

SPECIAL NOTES FOR GUARDRAIL

I. DESCRIPTION

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

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

(1) Site preparation; (2) Remove existing guardrail systems; (3) Construct Guardrail, End Treatments, Bridge End Connectors, and Terminal Sections, as applicable; (4) Delineators for guardrail; (5) Maintain and control traffic; and (6) all other work specified as part of this contract.

II. MATERIALS

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

A Maintain and Control Traffic. See Traffic Control Plan.

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

C. Delineators for Guardrail. Furnish white and/or yellow Delineators for Guardrail according to the Delineators for Guardrail Sepia Drawing.

III. CONSTRUCTION METHODS

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

B. Site Preparation. Remove existing guardrail system including the guardrail end treatments, Bridge End connectors and all other elements of the existing guardrail system as per Section 719, except that the Contractor will take possession of all concrete posts and all concrete associated with existing bridge and/or guardrail end treatments. Locate all disposal areas off the Right of Way. Be responsible for all site preparation, including but not limited to, clearing and grubbing, excavation, embankment, and removal of all obstructions or any other items; regrading, reshaping, adding and compacting of suitable materials on the existing shoulders to provide proper template or foundation for the guardrail and end treatments; filling voids left as the result of removing existing guardrail and guard posts with dry sand; temporary pollution and erosion control; disposal, of excess

and waste materials and debris; and final dressing, cleanup, and seeding and protection. Perform all site preparation as approved or directed by the engineer.

C. Guardrail. Except as specified herein, construct guardrail system according to Section 719 and the Standard Drawings. Locations listed on the summary and/or shown on the drawings are approximate only. The Engineer will determine the exact termini for individual guardrail installations at the time of construction. Unless directed otherwise by the Engineer, provide a minimum two (2) foot shoulder width. Construct radii at entrances and road intersections as directed by the Engineer.

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

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

D. Guardrail Connector to Bridge End Type A. Construct Guardrail Connector to Bridge End Type A according to Standard Drawings RBC-001-10, RBC-002-02 and RBC-003-07. Contrary to Standard Drawings RBC-001-10, island curb will not be paid for but will be incidental to the Guardrail Connector to Bridge End Type A.

E. Delineators for Guardrail. Construct Delineators for Guardrail according to the Delineators for Guardrail Sepia Drawing.

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

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

H. Right of Way Limits. The Department has not established exact limits of the Right-of-Way. Limit work activities to obvious Right-of-Way, permanent or temporary easements,

and work areas secured by the Department through consent and release of the adjacent property owners. Be responsible for all encroachments onto private lands.

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

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

IV. METHOD OF MEASUREMENT

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

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

C. Guardrail. See Section 719.04.

D. Delineators for Guardrail. See Delineators for Guardrail Sepia Drawing.

V. BASIS OF PAYMENT

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

B. Guardrail. See Section 719.05.

C. Delineators for Guardrail. See Delineators for Guardrail Sepia Drawing.

SPECIAL NOTE FOR
ASPHALT MILLING AND TEXTURING

Begin paving operations immediately after the commencement of the milling operation. Continue paving operations continuously until completed. Do not allow public to drive on milled surfaces. If paving operations are not begun within this time period, the Department will assess liquidated damages at the rate prescribed by Section 108.09 until such time as paving operations are begun.

Deliver 2,500 tons each to the Carroll, Owen and Gallatin County Maintenance Facilities. Take possession of the remaining millings and recycle the millings or dispose of the millings off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department.

NOTICE TO CONTRACTOR: The Department considers transfer of millings to the state maintenance facility to be a part of the construction project, therefore truck operators are subject to receiving prevailing wages.

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

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

1-3725 Typical Section Dimensions
01/02/2012

TRAFFIC CONTROL PLAN

THIS PROJECT IS A FULLY CONTROLLED ACCESS HIGHWAY

TRAFFIC CONTROL GENERAL

Except as provided herein, traffic shall be maintained in accordance with the 2012 Standard Specifications and the Standard Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic". All lane closures used on the project will be in compliance with the appropriate Standard Drawings.

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

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

PROJECT PHASING & CONSTRUCTION PROCEDURES

No lane closures will be allowed during the following days and hours:

10:00 a.m. to 7:00 p.m.	Monday through Friday
November 19th -25th, 2012	Thanksgiving
December 21, 2012 - January 1, 2013	Christmas / New Years
May 24 – 27, 2013	Memorial Day Weekend
All Kentucky Speedway Events	To Be Determined

Asphalt Milling and Resurfacing. Mill and Inlay with asphalt surface. Milled surfaces must be followed by paving in a continuous operation. If a breakdown occurs and traffic must be placed on milled surfaces, liquidated damages of $5,000 per occurrence will be assessed. At the discretion of

the Engineer, additional days and hours may be added when lane closures will not be allowed due to special events or other occasions when traffic congestion is anticipated.

The clear lane width shall be 11 feet however make provisions for passage of vehicles of up to 16 feet in width. A lane closure shall be used at all times when work is performed in the lane or the adjacent shoulder. If traffic should be stopped due to construction operations, and a school bus on an official run arrives on the scene, make provisions for the passage of the bus as quickly as possible.

SHOULDER PREPARATION AND RESTORATION

Prior to placing any lane closures that require shifting traffic onto existing shoulders, patch the shoulder as directed by the Engineer. Removal of failed materials and additional patching shall be performed by the Contractor as directed by the Engineer during the time the shoulder is used as a travel lane. Shoulder preparation and restoration will be incidental to other items of work. Any removal of patching material shall be incidental to other items of work.

LANE CLOSURES

During construction of this project, the Contractor may close lanes according to pre-approved plan. The lengths of lane closures shall be only that needed for actual operations. Lane closures shall be left in place only long enough to complete work. Lane closures shall not exceed 6 miles in length. Only one lane closure in each directions of travel will be allowed at the same time. Contrary to Section 112 lane closures will **NOT** be measured for payment but will be incidental to Maintain and Control Traffic.

SIGNS

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

Contrary to Section 112, only long term signs (signs intended to be continuously in place for more than 3 days) will be measured for payment; short term signs (signs intended to be left in place for 3 days or less) will not be measured for payment but will be incidental to Maintain and Control Traffic.

Individual signs will be measured only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. Replacements for

damaged signs or signs directed to be replaced by the Engineer due to poor legibility or reflectivity will not be measured for payment.

A quantity of signs has been included for detours, lane shifts, “Roadwork Ahead” signs on entrance ramps, and extra Double Fine signs and Speed Limit signs between interchanges to be paid only once no matter how many times they are moved or relocated.

BARRICADES

Barrels shall be used at all lane closure tapers. Barricades used in lieu of barrels for channelization or delineation will be incidental to Maintain and Control Traffic according to Section 112.04.01. Contrary to Section 112.04.04, barricades used to protect pavement removal areas will be incidental to Maintain and Control Traffic.

CHANGEABLE MESSAGE SIGNS

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

ARROW PANELS

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

TRAFFIC COORDINATOR

Designate an employee to be traffic coordinator. The designated Traffic Coordinator must be certified by the American Traffic Safety Services Association (ATSAA). The Traffic Coordinator shall provide for inspection of the project maintenance of traffic once every two hours during the Contractor's operations and at any time a lane closure is in place. 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.

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

PAVEMENT MARKINGS & RAISED PAVEMENT MARKERS

Remove or cover the lenses of raised pavement markers that do not conform to the traffic control scheme in use, or as directed by the Engineer. Replace or uncover lenses before reopening a closed lane to traffic. No direct payment will be made for removing and replacing or covering and uncovering the lenses, but shall be incidental to "Maintain and Control Traffic."

Permanent and Temporary Striping shall be in accordance with Section 112, except that:

(1) Temporary Striping shall be 6" painted or removable tape
(2) If the contractor's operations or phasing requires temporary markings which must be subsequently removed from the ultimate pavement, an approved "Removable Lane Tape" shall be used; (however removable tape will not be measured for payment but will be incidental to maintain and control traffic); and
(3) Edge lines will be required for temporary striping; and
(4) Existing, temporary, or permanent striping shall be in place before a lane is opened to traffic; and
(5) Place Permanent Striping on bridge decks and pavement within the project limits;

PAVEMENT EDGE DROP-OFFS

A pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation shall not have an elevation difference greater than 1½”. Warning signs (MUTCD W8-11 or W8-9A) shall be placed in advance of and at 1500’ intervals throughout the drop-off area. Dual posting on both sides of the traveled way shall be required. All transverse

transitions between resurfaced and unresurfaced areas which traffic may cross shall be wedged with asphalt mixture for leveling and wedging. The wedges shall be removed prior to placement of the final surface course.

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

Less than 2" –protection with lane closure

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

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

USE AND PLACEMENT OF CHANGEABLE MESSAGE SIGNS

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

Application

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

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

CMS should not be used for:

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

Messages

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

- Visible for at least ½ mile under ideal daytime and nighttime conditions
- Legible from all lanes a minimum of 650 feet
- Entire message readable twice while traveling at the posted speed

- Nor more than two message panels should be used (three panels may be used on roadways where vehicles are traveling less than 45 mph). A panel is the message that fits on the face of the sign without flipping or scrolling.
- Each panel should convey a single thought; short and concise
- Do not use two unrelated panels on a sign
- Do not use the sign for two unrelated messages
- Should not scroll text horizontally or vertically
- Should not contain both the words left and right
- Use standardized abbreviations and messages
- Should be accurate and timely
- Avoid filler/unnecessary words and periods (hazardous, a, an, the)
- Avoid use of speed limits
- Use words (not numbers) for dates

Placement

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

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

Standard Abbreviations

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

Word	Abbrev.	Example
Access	ACCS	ACCIDENT AHEAD/USE ACCS RD NEXT RIGHT
Alternate	ALT	ACCIDENT AHEAD/USE ALT RTE NEXT RIGHT
Avenue	AVE	FIFTH AVE CLOSED/DETOUR NEXT LEFT
Blocked	BLKD	FIFTH AVE BLKD/MERGE LEFT
Boulevard	BLVD	MAIN BLVD CLOSED/USE ALT RTE
Bridge	BRDG	SMITH BRDG CLOSED/USE ALT RTE
Cardinal Directions	N, S, E, W	N I75 CLOSED/ DETOUR EXIT 30
Center	CNTR	CNTR LANE CLOSED/MERGE LEFT

Commercial	COMM	OVRSZ COMM VEH/USE I275
Condition	COND	ICY COND POSSIBLE
Congested	CONG	HVY CONG NEXT 3 MI
Construction	CONST	CONST WORK AHEAD/EXPECT DELAYS
Downtown	DWNTN	DWNTN TRAF USE EX 40
Eastbound	E-BND	E-BND I64 CLOSED/DETOUR EXIT 20
Emergency	EMER	EMER VEH AHEAD/PREPARE TO STOP
Entrance, Enter	EX, EXT	DWNTN TRAF USE EX 40
Expressway	EXPWY	WTRSN EXPWY CLOSED/DETOUR EXIT 10
Freeway	FRWY, FWY	GN SYNDR FWY CLOSED/DETOUR EXIT 15
Hazardous Materials	HAZMAT	HAZMAT IN ROADWAY/ALL TRAF EXIT 25
Highway	HWY	ACCIDENT ON AA HWY/EXPECT DELAYS
Hour	HR	ACCIDENT ON AA HWY/2 HR DELAY
Information	INFO	TRAF INFO TUNE TO 1240 AM
Interstate	I	E-BND I64 CLOSED/DETOUR EXIT 20
Lane	LN	LN CLOSED/MERGE LEFT
Left	LFT	LANE CLOSED/MERGE LFT
Local	LOC	LOC TRAF USE ALT RTE
Maintenance	MAINT	MAINT WRK ON BRDG/SLOW
Major	MAJ	MAJ DELWAYS I75/USE ALT RTE
Mile	MI	ACCIDENT 3 MI AHEAD/ USE ALT RTE
Minor	MNR	ACCIDENT 3 MI MNR DELAY
Minutes	MIN	ACCIDENT 3 MI/30 MIN DELAY
Northbound	N-BND	N-BND I75 CLOSED/ DETOUR EXIT 50
Oversized	OVRSZ	OVRSZ COMM VEH/USE I275 NEXT RIGHT
Parking	PKING	EVENT PKING NEXT RGT
Parkway	PKWY	CUM PKWAY TRAF/DETOUR EXIT 60
Prepare	PREP	ACCIDENT 3 MIL/PREP TO STOP
Right	RGT	EVENT PKING NEXT RGT
Road	RD	HAZMAT IN RD/ALL TRAF EXIT 25
Roadwork	RDWK	RDWK NEXT 4 MI/POSSIBLE DELAYS
Route	RTE	MAJ DELAYS I75/USE ALT RTE
Shoulder	SHLDR	SHLDR CLOSED NEXT 5 MI
Slippery	SLIP	SLIP COND POSSIBLE/ SLOW SPD
Southbound	S-BND	S-BND I75 CLOSED/DETOUR EXIT 50
Speed	SPD	SLIP COND POSSIBLE/ SLOW SPD
Street	ST	MAIN ST CLOSED/USE ALT RTE
Traffic	TRAF	CUM PKWAY TRAF/DETOUR EXIT 60
Vehicle	VEH	OVRSZ COMM VEH/USE I275 NEXT RIGHT
Westbound	W-BND	W-BND I64 CLOSED/DETOUR EXIT 50
Work	WRK	CONST WRK 2MI/ POSSIBLE DELAYS

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

Abbrev.	**Intended Word**	**Word Erroneously Given**
ACC	Accident	Access (Road)
CLRS	Clears	Colors
DLY	Delay	Daily
FDR	Feeder	Federal
L	Left	Lane (merge)

LOC	Local	Location
LT	Light (traffic)	Left
PARK	Parking	Park
POLL	Pollution (index)	Poll
RED	Reduce	Red
STAD	Stadium	Standard
TEMP	Temporary	Temperature
WRNG	Warning	Wrong

TYPICAL MESSAGES

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

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

NO SHOULDER
ONE LANE BRIDGE
PEOPLE CROSSING
RAMP CLOSED
RAMP (SLIPPERY, ICE, ETC.)
RIGHT LANE CLOSED
RIGHT LANE NARROWS
RIGHT SHOULDER CLOSED
ROAD CLOSED
ROAD CLOSED XX MILES
ROAD (SLIPPERY, ICE, ETC.)
ROAD WORK
ROAD WORK (OR CONSTRUCTION) (TONIGHT, TODAY, TOMORROW, DATE)
ROAD WORK XX MILES
SHOULDER (SLIPPERY, ICE, SOFT, BLOCKED, ETC.)
NEW SIGNAL XX MILES
SLOW 1 (OR 2) - WAY TRAFFIC
SOFT SHOULDER
STALLED VEHICLES AHEAD
TRAFFIC BACKUP
TRAFFIC SLOWS
TRUCK CROSSING
TRUCKS ENTERING
TOW TRUCK AHEAD
UNEVEN LANES
WATER ON ROAD
WET PAINT
WORK ZONE XX MILES
WORKERS AHEAD

1/16/10

use and placement of changeable message signs.docx

TRAFFIC CONTROL FOR RAISED PAVEMENT MARKER INSTALLATIONS

Except as provided herein, maintain and control traffic in accordance with the Standard and Supplemental Specifications and the Standard and Sepia Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic". Contrary to Section 106.01, furnish new, or used in like new condition, traffic control devices at the beginning of the work and maintain in like new condition until completion of the work. Do not install Type V Raised Pavement Markers on bridge Decks. If raised pavement markers are specified for bridge decks, use flush-mounted Type IV-A markers. Install all necessary traffic control devices before beginning work. Provide egress and ingress to all ramps, side roads, and entrances at all times. After the pavement markers have been placed on the roadway, leave traffic control devices in place to protect the markers from damage by traffic until the Engineer determines the adhesive epoxy has sufficiently hardened. When work is suspended or completed and the Engineer determines the pavement markers are completely bonded to the pavement, immediately remove the traffic control devices.

TWO-LANE, TWO-WAY ROADWAYS:

The Department will consider installation of raised pavement markers on two-lane, two-way roadway sections to be short-duration operations. Accomplish the work in only one lane and affect the adjacent lane as little as possible. Sign approaches to the immediate work area in accordance with Standard Drawings TTC-100-03 and TTC-105-02. Install the signs on approved temporary mountings.

As a minimum, equip all work vehicles used in the roadway with strobe lights or rotating beacons. If a flashing arrow board is mounted directly on a work vehicle, operate the board in caution mode only; do not use a flashing arrow indication. The Department will not require the use of a Truck Mounted Attenuator (TMA) on two-lane, two-way roadway sections.

MULTI-LANE ROADWAYS:

Place raised pavement markers behind stationary lane closures. Obtain the Engineer’s approval for stationary lane closures prior to use. Sign approved stationary lane closures according to Standard Drawings TTC-115-02 and TTC-125-02. If the Contractor desires an interior lane closure, prepare a plan and obtain the Engineer’s approval prior to use. Install all necessary traffic control devices before beginning work.

Protect the work zone with a TMA conforming to Sections 725.02.05 and 725.03.03. Place the TMA within the lane closure at locations approved by the Engineer. Contrary to Section 725.03.03, retain possession of the TMA upon completion of the work.

Restrict the work area to not more than one lane of traffic plus 24 inches maximum of only one adjacent lane in each direction of travel. Provide a minimum lane width of 10 feet; however, provide for passage of vehicles of up to 16 feet in width. Limit the length of a lane closure to not exceed 1 mile in urban areas or 3 miles in rural areas as designated by the Engineer. Do not erect more than one lane closure in each direction of travel unless there is at least 2 miles separation between lane closures and both lane closures are in the same lane.

PERMANENT TRAFFIC DATA ACQUISITION STATIONS
ESTIMATE OF QUANTITIES

Bid Item Code	Description	Unit	Quantity
2562	SIGNS	SQ FT	
2650	MAINTAIN AND CONTROL TRAFFIC	LP SUM	
2775	FLASHING ARROW	EACH	
4791	CONDUIT ¾ INCH	LIN FT	
4793	CONDUIT 1 ¼ INCH	LIN FT	80
4795	CONDUIT 2 INCH	LIN FT	10
4810	JUNCTION BOX	EACH	
4811	JUNCTION BOX TYPE B	EACH	1
4820	TRENCHING AND BACKFILLING	LIN FT	85
4821	OPEN CUT ROADWAY	LIN FT	
4829	PIEZOELECTRIC SENSOR	EACH	10
4830	LOOP WIRE	LIN FT	3750
4850	CABLE NO. 14/1 PAIR	LIN FT	
4871	POLE – 35’ WOODEN	EACH	
4895	LOOP SAW SLOT AND FILL	LIN FT	905
4899	ELECTRICAL SERVICE	EACH	
4901	TELEPHONE SERVICE	EACH	
20213EC	INSTALL PAD MOUNT ENCLOSURE	EACH	
20359EC	GALV STEEL CABINET	EACH	1
20360ES818	WOOD POST	EACH	2
20391ES835	JUNCTION BOX TYPE A	EACH	
20392ES835	JUNCTION BOX TYPE C	EACH	
20468EC	JUNCTION BOX 10x8x4	EACH	
21543EN	BORE AND JACK PIPE – 2 IN	LIN FT	
23206EC	INSTALL CONTROLLER CABINET	EACH	

MATERIAL, INSTALLATION, AND BID ITEM NOTES FOR PERMANENT TRAFFIC DATA ACQUISITION STATIONS

1. DESCRIPTION

Except as specified in these notes, all work shall consist of furnishing and installing all materials necessary for permanent data acquisition station equipment installation(s) and shall be performed in accordance with the current editions of:

- The Contract
- Division of Planning Standard Detail Sheets
- Kentucky Transportation Cabinet, Department of Highways, *Standard Specifications for Road and Bridge Construction*
- Kentucky Transportation Cabinet, Department of Highways, Standard Drawings
- National Fire Protection Association *(NFPA) 70: National Electrical Code*
- Institute of Electrical and Electronic Engineers (IEEE), *National Electrical Safety Code*
- Federal Highway Administration, *Manual on Uniform Traffic Control Devices*
- American Association of State Highway and Transportation Officials (AASHTO), *Roadside Design Guide*.
- Standards of the utility company serving the installation, if applicable

The permanent traffic data acquisition station layout(s) indicate the extent and general arrangement of the proposed installation and are for general guidance. Any omission or commission shown or implied shall not be cause for deviation from the intent of the plans and specifications. Information shown on the plans and in this proposal and the types and quantities of work listed are not to be taken as an accurate or complete evaluation of the material and conditions to be encountered during construction. The bidder must draw his own conclusion as to the conditions encountered. The Department of Highways (Department) does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the conditions encountered are not in accordance with the information shown. If any modifications of the plans or specifications are considered necessary by the Contractor, details of such modifications and the reasons, therefore, shall be submitted in writing to the Engineer for written approval prior to beginning such modified work.

The Contractor shall contact all utility companies and the district utility agent prior to beginning construction to insure proper clearance and shielding from existing and proposed utilities. The Contractor shall use all possible care in excavating on this project so as not to disturb any existing utilities whether shown on the plans or not shown on the plans. Any utilities disturbed or damaged by the Contractor during construction shall be replaced or repaired to original condition by the Contractor at no cost to the department. If necessary, to avoid existing utilities, the Contractor shall hand dig areas where poles or conduit cross utilities.

The Contractor shall be responsible for all damage to public and/or private property resulting from his work.

The Contractor shall inspect the project site prior to submitting a bid and shall be thoroughly familiarized with existing conditions. Submission of a bid will be considered an affirmation of this inspection having been completed. The Department will not honor any claims resulting from site conditions.

2. MATERIALS

All proposed materials shall be approved prior to being utilized. The Contractor shall submit for material approval an electronic file of descriptive literature, drawings and any requested design data for the proposed materials. After approval, no substitutions of any approved materials may be made without the written approval of the Engineer.

Materials requiring sampling shall be made available a sufficient time in advance of their use to allow for necessary testing.

2.1. Anchoring

2.1.1. Anchor and Anchor Rod

Anchor, except rock anchor, shall be expanding type, with a minimum area of 135 square inches.

Anchor rod shall be galvanized steel, double-eye, have a minimum diameter of 5/8 inches, and a minimum length of 84 inches. Minimum holding capacity shall be 15,400 lbs.

Rock anchor shall be galvanized steel, triple-eye, expanding type, with a minimum diameter of ¾ inch, a minimum 53 inches long, and a minimum tensile strength of 23,000 lb.

2.1.2. Guy Wire and Guy Guard

Guy wire shall be Class A, Zinc-coated, 3/8 inch diameter, high strength grade steel (minimum 10,800 lb.) and galvanized per ASTM A475. Guy guard shall be 8’ long, fully-rounded, yellow, and able to be securely attached to the guy wire.

2.1.3. Strandvise for Guy Wire

Strandvise for guy wire shall be 3/8 inch and rated to hold a minimum of 90% of the rated breaking strength (RBS) of the strand used.

2.2. Asphalt

Asphalt shall be a minimum CL2 Asph Surf 0.38C PG64-22 and conform to the *Standard Specifications for Road and Bridge Construction.*

2.3. Backer Rod

Backer rod shall be ½ inch diameter, closed cell polyethylene foam and shall meet or exceed the following physical properties:

- Density (average): 2.0 lbs/cu.ft. (minimum): ASTM D 1622 test method
- Tensile Strength: 50 PSI (minimum): ASTM D 1623 test method
- Compression Recovery: 90% (minimum): ASTM D 5249 test method
- Water Absorption: 0.03 gm/cc (maximum): ASTM C 1016 test method

2.4. Cabinets

2.4.1. Galvanized Steel Cabinet

Galvanized Steel Cabinet shall be constructed of 16 or 14 gauge galvanized steel and shall meet or exceed the industry standards set forth by UL 50 and NEMA 3R. The finish shall be an ANSI 61 gray polyester powder finish inside and out over the galvanized steel. Cabinet shall have minimum inside dimensions of 20 inches high by 20 inches wide by 8 inches deep.

The cabinet shall be equipped with the following:

- Drip shield top
- Seam-free sides, front, and back, to provide protection in outdoor installations against rain, sleet, and snow
- Hinged cover with 16 gauge galvanized steel continuous stainless steel pin.
- Cover fastened with captive plated steel screws, knob or latch
- Hasp and staple for padlocking
- No gaskets or knockouts
- Back panel for terminal block installation
- Post mounting hardware
- Terminal Blocks

2.4.2. Anchor Bolt for Pad Mounted Cabinet

Anchor bolt for pad mounted cabinet shall be galvanized steel with minimum dimensions of 3/8 inch by 6 inches.

2.5. Concrete

Concrete shall be Class A and conform to the *Standard Specifications for Road and Bridge Construction.*

2.6. Conduit and Conduit Fittings

Conduit and conduit fittings shall be rigid steel unless otherwise specified.

Conduit shall be zinc galvanized inside and out and conform to the NEC, UL Standard 6, and ANSI C-80.1.

Rigid Steel Conduit Fittings shall be galvanized inside and out and conform to the NEC, UL Standard 514B, and ANSI C-80.4. Intermediate Metal Conduit (IMC) will not be approved as an acceptable alternative to rigid steel conduit.

2.7. Conduit sealant

Conduit sealant shall be weather-, mold-, and mildew-resistant and chemically resistant to gasoline, oil, dilute acids and bases. Conduit sealant shall be closed cell type and shall meet or exceed the following properties:

- Cure Time — 20 minutes max.
- Density — 64.4 kg/m3; 6 lbs/ft3
- Compressive Strength (ASTM 1691) — 13.8 MPa; 330 or 300 psi

- Tensile Strength (ASTM 1623) 15.9 MPa; 270 or 250 psi
- Flexural Strength (ASTM D790) 14.5 MPa; 460 or 450 psi
- Service Temperature -20 to 200 F

2.8. Electrical Service Meter Base

Electrical service meter base shall meet or exceed all requirements of the National Electrical Code and the local utility providing the electrical service.

2.9. Electrical Service Disconnect

Electrical service disconnect shall meet or exceed all requirements of the National Electrical Code and the local utility providing the electrical service.

2.10. Flashing Arrow

Flashing Arrow shall conform to the *Standard Specifications for Road and Bridge Construction.*

2.11. Ground Fault Circuit Interrupter (GFCI) Receptacle

Ground Fault Circuit Interrupter Receptacle shall be 2-pole, 3-wire, 20 Amp, 125 Volt, 60 Hz, NEMA 5-20R configuration and meet or exceed the following standards and certifications:

- NEMA WD-1 and WD-6
- UL 498 and 943
- NOM 057
- ANSI C-73

This item shall include a UL listed, 4 inch x4 inch x $2^1/_8$ inch box with ¾ inch side and end knockouts and a 1½ inches deep, single-receptacle cover to house the GFCI receptacle. Box and cover shall be hot rolled, galvanized steel with a minimum thickness of 0.62 inches.

2.12. Grounding

2.12.1. Ground Rod

Ground Rod shall be composite shaft consisting of a pure copper exterior (5 mil minimum) that has been inseparably molten welded to a steel core. Ground Rod shall have a minimum diameter of 5/8 inch, a minimum length of 8 feet and shall be manufactured for the sole purpose of providing electrical grounding.

2.12.2. Ground Rod Clamp

Ground rod shall be equipped with a one piece cast copper or bronze body with a non-ferrous hexagonal head set screw and designed to accommodate a 10 AWG solid through 2 AWG stranded grounding conductor.

2.13. Grout

2.13.1. Grout for Inductive Loop Installation

Grout for inductive loop installation shall be non-shrink, shall meet the requirements of the *Standard Specifications for Road and Bridge Construction*,

and shall be included on the KYTC Division of Materials, *List of Approved Materials*.

2.13.2. Grout for Piezoelectric Sensor Installation

Grout for piezoelectric sensor installation shall be per the piezoelectric sensor manufacturer's recommendation. Grout shall be suitable for installation in both asphalt and Portland cement pavements. Grout shall have a short curing time (tack free in ten minutes; open to traffic in forty minutes; and fully cured within sixty minutes) to prevent unnecessary lane closure time and should be of sufficient consistency to prevent running when applied on road surfaces with a drainage cross slope. Particulate matter within the grout shall not separate or settle and the grout shall not shrink during the curing process.

2.14. Hardware

Except where specified otherwise, all hardware such as nuts, bolts, washers, threaded ends of fastening devices, etc. with a diameter less than 5/8 inch shall be passivated stainless steel, alloy type 316 or type 304. Stainless steel hardware shall meet ASTM F593 and F594 for corrosion resistance. All other nuts and bolts shall meet ASTM A307 and shall be galvanized.

2.14.1. Conduit Strap

Conduit strap shall be double-hole, stainless steel, and sized to support specified conduit. Conduit strap shall attach to wood pole or post with two 2 ¼ inch wood screws.

2.14.2. Mounting Strap for Pole Mount Cabinet

Mounting strap for pole mount cabinet shall be ¾ inch x 0.03 inch stainless steel; equipped with clips or buckles to securely hold strap

2.14.3. Metal Framing Channel and Fittings

Metal framing channel shall be 1 5/8 inches wide galvanized steel that conforms to ASTM A1011 and ASTM A653. One side of the channel shall have a continuous slot with in-turned edges to accommodate toothed fittings.

Fittings shall be punch pressed from steel plates and conform to ASTM A575 and the physical requirements of ASTM A1011.

2.15. Junction Box

2.15.1. Junction Box Type A, B, or C

Junction Box Type A, B, or C shall meet or exceed ANSI/SCTE 77-2007, Tier 15. Box shall have an open bottom. A removable, non-slip cover marked "PLANNING" shall be equipped with a lifting slot and attached with a minimum of two 3/8 inch stainless steel hex bolts and washers. Type A Box shall have nominal inside dimensions of 13 inches wide by 24 inches long by 18 inches deep. Type B Box shall have nominal inside dimensions of 11 inches wide by 18 inches long by 12

inches deep. Type C Box shall have nominal inside dimensions of 24 inches wide by 36 inches long by 30 inches deep.

2.15.2. Aggregate for Junction Box Type A, B, or C

Aggregate for junction box type A, B, or C shall be gradation size no. 57 and conform to the *Standard Specifications for Road and Bridge Construction*.

2.15.3. Junction Box 10x8x4

Junction Box Type 10x8x4 shall be constructed of a UV-stabilized, nonmetallic material or non-rusting metal and be weatherproof in accordance with NEMA 4X. Box shall be equipped with an overhanging door with a continuous durable weatherproof gasket between the body and door. Door shall be hinged with stainless steel screws, hinge(s) and pin(s) and shall be equipped with a stainless steel padlockable latch on the side opposite the hinge(s). Junction Box 10x8x4 shall have minimum inside dimensions of 10 inches high by 8 inches wide by 4 inches deep.

2.16. Maintain and Control Traffic

Materials for the bid item Maintain and Control Traffic shall conform to the *Standard Specifications for Road and Bridge Construction,* and the KYTC Department of Highways *Standard Drawings.*

2.17. Piezoelectric Sensor

Piezoelectric sensor (piezo) shall provide a consistent level voltage output signal when a vehicle axle passes over it, shall have a shielded transmission cable attached, and shall meet the following requirements:

- Dimensions: such that sensor will fit in a ¾ inch wide by 1 inch deep saw cut. Total length shall be as specified.
- Output uniformity: ± 7% (maximum)
- Typical output level range: 250mV (minimum) from a wheel load of 400 lbs.
- Working temperature range: -40° to 160° F.
- Sensor life: 30 million Equivalent Single Axle Loadings (minimum)

Shielded transmission cable shall be coaxial and shall meet the following requirements:

- RG 58C/U with a high density polyethylene outer jacket rated for direct burial
- Length shall be a minimum of 100 feet. Installations may exceed 100 feet so the piezo shall be supplied with a lead-in of appropriate length so that the cable can be installed splice-free from the piezo to the cabinet.
- Soldered, water resistant connection to the sensor.

One installation bracket for every 6 inches of sensor length shall also be supplied. Piezo shall be a RoadTrax BL Class I or approved equal.

2.18. Saw Slot Sealant

Saw Slot Sealant shall be non-shrink, non-stringing, moisture cure, polyurethane encapsulant suitable for use in both asphalt and concrete pavements. It shall provide a void-free encapsulation for detector loop cables and adequate compressive yield strength and flexibility to withstand heavy vehicular traffic and normal pavement movement.

The cured encapsulant shall meet or exceed the following:

- Hardness (Indentation): 35-65 Shore A, ASTM D2240
- Tensile Strength: 150 psi minimum, ASTM D412
- Elongation: 125% minimum 2 inch/minute pull, ASTM D412
- Tack-free Drying Time: 24 hours maximum, ASTM C679
- Complete Drying Time: 30 hours maximum, KM 64-447
- Chemical Interactions (seven day cure at room temperature, 24-hour immersion, KM 64-446):
  - Motor Oil: No effect
  - Deicing Chemicals: No effect
  - Gasoline: Slight swell
  - Hydraulic Brake Fluid: No effect
  - Calcium Chloride (5%): No effect

2.19. Seeding and Protection

Material for Seeding and Protection shall be Seed Mixture Type I and conform to the *Standard Specifications for Road and Bridge Construction.*

2.20. Signs

Materials for signs shall conform to the *Standard Specifications for Road and Bridge Construction.*

2.21. Splicing Materials

2.21.1. Electrical Tape

Electrical tape shall be a premium grade, UL-listed, all-weather, vinyl-insulating tape with a minimum thickness of 7 mil. Tape shall be flame retardant and resistant to abrasion, moisture, alkalis, acids, corrosion, and weather (including ultraviolet exposure).

2.21.2. Splice Kit

Splice kit shall be inline resin-type and rated for a minimum of 600V. Resin shall be electrical insulating-type and shall provide complete moisture and insulation resistance.

2.22. Steel Reinforcing Bar

Steel reinforcing bar shall be #5 and shall conform to the *Standard Specifications for Road and Bridge Construction.*

2.23. Terminal Block

Terminal block shall be rated for a minimum of 300 V and have a minimum of six terminal pairs with 9/16-inch nominal spacing (center to center) for connecting loop and piezoelectric sensor wires to cable assemblies. Terminal block shall have screw type terminal strips to accommodate wire with spade-tongue ends.

2.24. Warning Tape

Warning tape shall be acid and alkali resistant formulated for direct burial. Tape shall be a minimum of 3 inches wide by 4.0 mils (nominal) thick, and shall be permanently imprinted with a minimum 1 inch black legend on a red background warning of an electric line. Tape shall meet or exceed the following industry specifications:

- American Gas Association (AGA) 72-D-56
- American Petroleum Institute (API) RP 1109
- American Public Works Association (APWA) Uniform Color Code
- Department of Transportation (DOT) Office of Pipeline Safety USAS B31.8
- Federal Gas Safety Regulations S 192-321 (e)
- General Services Administration (GSA) Public Buildings Service Guide: PBS 4-1501, Amendment 2
- National Transportation Safety Board (NTSB) PSS 73-1
- Occupational Safety and Health Administration (OSHA) 1926.956 (c) (1)

2.25. Wire and Cable

All cable and wire shall be plainly marked in accordance with the National Electrical Code (NEC).

2.25.1. Loop Wire

Loop wire shall be 14 AWG, stranded, copper, single conductor, and shall conform to the International Municipal Signal Association (IMSA) Specification No. 51-7.

2.25.2. Cable No. 14/1 Pair

Cable No. 14/1 pair loop lead-in cable shall be 14 AWG, stranded, copper paired, electrically shielded conductors, and shall conform to IMSA 19-2.

2.25.3. Grounding conductor

Grounding conductor and bonding jumper shall be solid or stranded, 4 AWG bare copper.

2.25.4. Service Entrance Conductor

Service entrance conductor shall be stranded, copper, Type USE-2, sized as required to comply with the NEC.

2.25.5. Telephone Wire

Telephone wire shall be Category 3 (Cat 3) or Category 5 (Cat 5) and shall be equipped with an RJ-11 modular plug.

2.25.6. Terminal for electrical wire or cable

Terminal for electrical wires or cables shall be insulated, solderless, spade tongue terminals of correct wire and stud size. Terminal for electrical wires or cables shall be incidental to the wire or cable (including piezoelectric sensor transmission cable) to be connected to terminal strips.

2.26. Wood Post

Wood post shall be pretreated to conform to the American Wood Preservers' Association (AWPA) C-14 and shall have minimum dimensions of 4 inches by 4 inches by 8 feet long (for Galvanized Steel Cabinet) or 4 feet long (for Junction Box 10x8x4), sawed on all four sides with both ends square.

2.27. Wooden Pole

Wooden pole shall be a Class IV wood pole of the length specified and shall conform to the *Standard Specifications for Road and Bridge Construction* except the pole shall be treated in accordance with AWPA P9 Type A.

3. CONSTRUCTION METHODS

The plans indicate the extent and general arrangement of the installation and are for guidance. When the Contractor deems any modifications to the plans or specifications necessary, details of such changes and the reasons shall be submitted in writing to the engineer for written approval prior to beginning the modified work.

After the project has been let and awarded, the Division of Construction shall notify the Division of Planning of the scheduled date for a Pre-Construction meeting so that prior arrangements can be made to attend. This will allow the Division of Planning an opportunity to address any concerns and answer any questions that the Contractor may have before beginning the work.

The Division of Planning Equipment Management Team (502-564-7183) shall be notified a minimum of seven days before any work pertaining to these specifications begins to allow their personnel the option to be present during installation.

Unless otherwise specified, installed materials shall be new.

Construction involving the installation of loops or piezoelectric sensors shall not be performed when the temperature of the pavement is less than 38ºF.

A final inspection will be performed by a member of the Central Office Division of Planning equipment staff after the installation is complete to verify that the installation is in compliance with the plans and specifications.

Any required corrective work shall be performed per the *Standard Specifications for Road and Bridge Construction.*

3.1. Anchoring

Furnish: Anchor, anchor rod, guy wire, strand vise, guy guard.

Anchor shall be installed in relatively dry and solid soil. Rock anchor shall be installed in solid rock. Excavate the hole at a 45° to 60° angle in line with the guy (hole size shall be slightly larger than the expanded anchor – see manufacturer's recommendation). Attach rod to anchor, install assembly into hole, and expand anchor. Backfill and tamp entire disturbed area. The effectiveness of the anchor is dependent upon the thoroughness of backfill tamping. Attach guy to strand vise on pole and anchor rod and tighten to required tension. Install guy guard on guy.

3.2. Bore and Jack Pipe – 2"

Furnish: Steel Encasement Pipe, 2"

Bore and jack pipe – 2" shall conform to the Section 706 of the *Standard Specifications for Road and Bridge Construction.*

3.3. Cleanup and Restoration

Furnish: Seed Mix Type 1 (as required); fertilizer (as required); agricultural limestone (as required); mulch or hydromulch (as required); tackifier (as required).

The Contractor shall be responsible for repairing any damage to public and/or private property resulting from his work. Upon completion of the work, restore all disturbed highway features in like kind design and materials. This shall include filling any ruts and leveling ground appropriately. Contractor shall dispose of all waste and debris off the project. Sow all disturbed earthen areas with Seed Mix Type 1 per Section 212 of the *Standard Specifications for Road and Bridge Construction*. All materials and labor necessary for cleanup and restoration shall be considered incidental to other bid items.

3.4. Conduit

Furnish: Conduit; conduit fittings; bushings (grounding where required); LB condulets (as required); weatherheads (as required); conduit straps; hardware; conduit sealant.

Conduit that may be subject to regular pressure from traffic shall be laid to a minimum depth of 24 inches below grade. Conduit that will not be subject to regular pressure from traffic shall be laid to a minimum depth of 18 inches below grade.

Conduit ends shall be reamed to remove burrs and sharp edges. Cuts shall be square and true so that the ends will butt together for the full circumference of the conduit. Tighten couplings until the ends of the conduit are brought together. Do not leave exposed threads. Damaged portions of the galvanized surfaces and untreated threads resulting from field cuts shall be painted with an Engineer-approved, rust inhibitive paint. Conduit bends shall have a radius of no less than 12 times the nominal diameter of the conduit, unless otherwise shown on the plans.

Contractor shall install a bushing (grounding bushing where required) on both ends of all conduits. Cap spare conduits on both ends with caps or conduit sealant.

Conduit openings in junction boxes and cabinets shall be waterproofed with a flexible, removable conduit, working it around the wires, and extending it a minimum 1 inch into the end of the conduit.

After the conduit has been installed and prior to backfilling, the conduit installation shall be inspected and approved by the Engineer.

3.5. Electrical Service

Furnish: Meter base, service disconnect, wire, GFCI AC duplex receptacle with box and cover; conduit, conduit fittings, bushings (grounding where required); LB condulets (as required); weatherhead; conduit straps; hardware; conduit sealant; ground rod with clamp; grounding conductor.

Prior to any construction, the Contractor shall initiate a work order with the local power

company for the installation of electrical service to the site. A representative from the Division of Planning and the local power company shall be consulted prior to choosing an exact location for the pole. The Contractor shall clear the right-of-way for the electrical service drop.

Contractor shall obtain electrical inspections, memberships, meter base, service disconnect and any other requirements by the utility serving the installation and pay all fees as required.

Install meter-base and disconnect panel with a 30-ampere, fused, circuit breaker inside. Install a manufactured weatherproof hub connectors to connect the conduit to the top of the meter base and service disconnect.

Install a rigid ¾ inch conduit with three 8 AWG service conductors from the cabinet, through the service disconnect to the meter base and a 1¼" conduit with three 8 AWG service conductors from the meter base to a weatherhead two feet from the top of the electrical service pole. Install conduit straps 30 inches on center and provide a drip loop where the wire enters the weatherhead. Splice electric drop with service entrance conductors at the top of the pole.

The limit of conduit incidental to "Install Electrical Service" for a pad mounted cabinet is 24 inches beyond face of service pole.

Install a 120-volt, 20-amp GFCI AC duplex receptacle with box and cover in the automatic data recorder (ADR) cabinet.

Install a ground rod with clamp. Install a grounding conductor wire from the meter base, through the disconnect panel, to the ground rod clamp. Install grounding conductor in 1-¾" conduit from service disconnect to ground rod.

After completing the installation and before the electrical service is connected, obtain a certificate of compliance from the Kentucky Department of Housing, Buildings and Construction, Electrical Inspection Division.

3.6. Flashing Arrow

Furnish: Arrow Panel

Construction of Flashing Arrow shall conform to the *Standard Specifications for Road and Bridge Construction.*

3.7. Galvanized Steel Cabinet

Furnish: Cabinet; wood posts; concrete; conduit fittings; metal framing channel; pipe clamp; terminal block(s); spade tongue wire terminals; wire labels; hardware.

Where right-of-way allows, locate the cabinet such that it is outside the clear zone in accordance with the *Roadside Design Guide*. Install Cabinet such that the door of the

cabinet faces the roadway.

Excavate as required and install wood posts to a depth of 36 inches and place concrete around posts as shown on the standard detail sheets. Install metal framing channel with pipe clamp between posts.

Install Cabinet on wood posts 38 inches above the finished grade as shown on the standard detail sheets. Install a unistrut between posts when two posts are specified.

Install the required number of terminal blocks on the cabinet back plate. Install a spade tongue terminal on each loop and piezo sensor wire entering the cabinet and connect wires to terminal block(s). Wiring shall be neat and orderly. Label all wires and cables inside cabinet.

Install conduit from ground to cabinet and attach to pipe clamp. Install locknuts to attach conduit to cabinet and install a conduit bushing as shown on the standard detail sheets.

3.8. Grounding

Furnish: Ground rod with clamp; grounding conductor.

At sites with electrical or solar service, all conduits, poles, and cabinets shall be bonded to ground rods and the electrical system ground to form a complete grounded system.

Install such that top of ground rod is a minimum of 3 inches below finished grade.

Grounding systems shall have a maximum 25 ohms resistance to ground. If the resistance to ground is greater than 25 ohms, two or more ground rods connected in parallel shall be installed. Adjacent ground rods shall be separated by a minimum of 6 feet.

3.9. Install Pad Mount Enclosure

Furnish: Concrete; anchor bolts with washers and nuts; conduit; conduit fittings; conduit grounding bushings; ground rod with clamp; grounding conductor; conduit sealant; wooden stakes (where required); wire labels; hardware.

The Contractor shall be responsible for securing the enclosure from the Central Office Division of Planning Warehouse in Frankfort and transporting it to the installation site.

Where right-of-way allows, locate the enclosure such that it is outside the clear zone in accordance with the *Roadside Design Guide*.

Excavate as required, and place concrete to construct the enclosure foundation as specified on the standard detail sheets. Install enclosure on the concrete base such that the door(s) of the enclosure opens away from traffic (hinges away from traffic). Install anchor bolts, washers, and nuts to secure the enclosure to the foundation.

Install ground rod with clamp and install one ¾ inch rigid conduit from enclosure base to

ground rod. Install a grounding conductor from ground rod to enclosure base and bond to each conduit bushing in the base.

Install two ¾ inch rigid steel conduits: one for electrical service and one for telephone service from the base of the enclosure to 24 inches beyond the concrete base. Make all field wiring connections to the electrical service and/or telephone service, as applicable.

If electrical and/or telephone service are not provided as bid items in the contract, plug conduit on both ends with a cap, conduit sealant, or electrical tape. Mark the location of the buried conduit end(s) with a wooden stake labeled "3/4 in. conduit."

Install specified rigid steel conduit(s) into the base of the enclosure for sensor wire entry. Install one spare 2 inch conduit from the enclosure base to 2 feet beyond the concrete base. Plug spare conduit on both ends with a cap, conduit sealant or electrical tape.

The limit of all conduits incidental to "Install Pad Mount Enclosure" is 24 inches beyond the edge of the concrete base.

Wiring in enclosure shall be neat and orderly. Label all wires and cables inside enclosure. KYTC personnel will furnish and install terminal blocks and connect sensors to terminal blocks.

3.10. Install Controller Cabinet

Furnish: Mounting brackets; mounting straps; conduit; LB condulets; conduit fittings; conduit grounding bushings; ground rod with clamp; grounding conductor; cable staples; conduit sealant; wooden stakes (where required); wire labels; hardware.

The Contractor shall be responsible for securing the cabinet from the Central Office Division of Planning Warehouse in Frankfort and transporting it to the installation site. Any existing holes in the cabinet not to be reused shall be covered or plugged to meet NEC requirements.

Install mounting brackets and secure cabinet to pole with mounting straps.

Install a ground rod with clamp. Install grounding conductor in 1-¾" conduit form cabinet to ground rod.

Install one ¾ inch rigid steel conduit with two lb condulets from cabinet to electrical service disconnect box. Install one ¾ inch rigid steel conduit with two LB condulets from cabinet to telephone network interface device box. Make all field wiring connections to the electrical service and/or telephone service, as applicable.

If electrical and/or telephone service are not provided as bid items in the contract, plug conduit on both ends with cap, plumbers putty, conduit sealant, or electrical tape. Mark the location of the buried conduit end(s) with a wooden stake labeled "3/4 in. conduit".

Install specified rigid steel conduit(s) and type LB condulet(s) into the bottom of the cabinet for sensor wire entry. The limit of conduits incidental to "Install Controller Cabinet" is 24 inches beyond the face of the pole.

Wiring in cabinet shall be neat and orderly. Label all wires and cables inside cabinet. KYTC personnel will furnish and install terminal blocks and connect sensors to terminal blocks.

3.11. Junction Box Type 10x8x4

Furnish: Junction box; wood post; conduit fittings; wire labels; hardware.

Where right-of-way allows, locate the junction box such that it is outside the clear zone in accordance with the Roadside Design Guide.

Excavate as required and install wood post(s) to a depth of 18 inches. Install junction box on wood post such that the bottom of the box is 18 inches above the finished grade as shown on the standard detail sheets. Box shall be installed with four (4) 2½ inch wood screws and washers.

Install locknuts to attach conduit to junction box and install a conduit bushing as shown on the standard detail sheets.

Wiring inside box shall be neat and orderly. Label all wires and cables inside box.

3.12. Junction Box Type A, B, or C

Furnish: Junction box, No. 57 aggregate; grounding conductor

Excavate as required and place approximately 12 inches of No. 57 aggregate beneath the proposed junction box to allow for drainage. Install specified junction box type A, B, or C near the edge of pavement, flush with finished grade per the detail sheets. Where required, orient the box so that the dimensions comply with the National Electrical Code. Stub conduits with grounding bushings into junction box at its base to accommodate wires and connect grounding conductor to all grounding bushings. Backfill to existing grade, and restore disturbed area to the satisfaction of the Engineer.

Wiring inside box shall be neat and orderly. Label all wires and cables inside box.

3.13. Loops

Furnish: Wire; saw slot sealant; backer rod; grout; conduit sealant.

The plans and notes specify the approximate location for loop installations. Prior to sawing slots or drilling cores, the Contractor shall meet with a representative of the Division of Planning to verify the precise layout locations on site. Avoid expansion joints and pavement sections where potholes, cracks, or other roadway flaws exist.

Upon completion of this meeting, the Contractor shall measure out and mark the

proposed loop locations with spray paint or chalk such that the saw slots will be parallel and perpendicular to the direction of traffic. Marked lines shall be straight and exact to the locations determined and sized as shown on the plans. Unless indicated otherwise, loops shall be 6 feet by 6 feet square and loops in the same lane shall be spaced 16 feet from leading edge to leading edge.

On resurfacing, rehabilitation, and new construction projects that include new asphalt pavement, the Contractor shall install loops prior to laying the final surface course. On projects with milling and texturing, the Contractor may install the loops prior to or after the milling operation; however, if installed prior to milling, the Contractor shall be responsible for ensuring that the loops are installed at a depth such that the milling operation will not disturb the newly installed loops. The Contractor shall correct damage caused by the milling operations to newly installed loops prior to placement of the final surface course at no additional cost to the Cabinet.

For projects that include the installation of new asphalt and piezoelectric sensors, the Contractor shall mark or otherwise reference all loops installed prior to the final surface course such that the loops can be accurately located when the piezoelectric sensors are installed after placement of the final surface course.

For projects that do not have asphalt surfacing, the Contractor shall install the loops in the surface of the pavement.

The Prime Contractor shall coordinate the installation of loops with the electrical sub-Contractor and the Engineer to ensure correct operation of the completed installation.

The following is a typical step by step procedure for the installation of a loop.

- Carefully mark the slot to be cut, perpendicular to the flow of traffic and centered in the lane.
- Make each saw-cut 3/8-inch wide and at a depth such that the top of the backer rod is a minimum of 2 inches below the surface of rigid (PCC/Concrete) pavement or 4 inches below the surface of asphalt pavement.
- Drill a 1½ inch core hole at each corner and use a chisel to smooth corners to prevent sharp bends in the wire.
- Clean ALL foreign and loose matter out of the slots and drilled cores and within 1 foot on all sides of the slots using a high pressure washer.
- Completely dry the slots and drilled cores and within 1 foot on all sides of the slots using oil-free forced air, torpedo heaters, electric heaters, or natural evaporation, depending on weather conditions. Be very careful not to burn the asphalt if heat is used.
- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45º angle to the conduit adjacent to the roadway.

- Closely inspect all cuts, cores, and slots for jagged edges or protrusions prior to the placement of the wire. All jagged edges and protrusions shall be ground or re-cut and cleaned again.
- Place the loop wire splice-free from the termination point (cabinet or junction box) to the loop, continue around the loop for four turns, and return to the termination point.
- Push the wire into the saw slot with a blunt object such as a wooden stick. Make sure that the loop wire is pushed fully to the bottom of the saw slot.
- Install conduit sealant to a minimum of 1" deep into the cored 1½ inch hole.
- Apply loop sealant from the bottom up and fully encapsulate the loop wires in the saw slot. The wire should not be able to move when the sealant has set.
- Cover the encapsulated loop wire with a continuous layer of backer rod along the entire loop and home run saw slots such that no voids are present between the loop sealant and backer rod.
- Finish filling the saw cut with non-shrinkable grout per manufacturer's instructions. Alleviate all air pockets and refill low spaces. There shall be no concave portion to the grout in the saw slot. Any excess grout shall be cleaned from the roadway to alleviate tracking.
- Clean up the site and dispose of all waste off the project.
- Ensure that the grout has completely cured prior to subjecting the loop to traffic. Curing time varies with temperature and humidity.

Exceptions to installing loop wire splice-free to the junction box or cabinet may be considered on a case-by-case basis and must be pre-approved by the Engineer. If splices are allowed, they shall be located in a junction box and shall conform to the construction note for Splicing.

If loop lead-in cable (Cable No. 14/1 Pair) is specified, cable shall be installed splice free to the cabinet ensuring that extra cable is left in each junction box or cabinet. All wires and cables shall be labeled in each junction box and cabinet.

Loop inductance readings shall be between 100 and 300 microhenries. The difference of the loop inductance between two loops in the same lane shall be ±20 microhenries. Inductance loop conductors shall test free of shorts and grounds. Upon completion of the project, all loops must pass an insulation resistance test of at least 100 million ohms to ground when tested with a 500 Volt direct current potential in a reasonably dry atmosphere between conductors and ground.

3.14. Maintain and Control Traffic

Furnish (all as required): Drums, traffic cones, barricades used for channelization purposes, delineators, and object markers.

Maintain and Control Traffic shall conform to the plans, the Standard Specifications for Road and Bridge Construction, and the KYTC Department of Highways Standard Drawings.

3.15. Open Cut Roadway

Furnish: Concrete, reinforcing bars.

Excavate trench by sawing and chipping away roadway to dimensions as indicated on the detail sheets. After placing conduit, install concrete and steel reinforcing bars per the *Standard Specifications for Road and Bridge Construction*. Restore any disturbed sidewalk to its original condition.

3.16. Piezoelectric Sensor

Furnish: Piezoelectric sensor and cable; sensor support brackets; saw slot sealant; backer rod; grout; conduit sealant.

The plans and notes specify the approximate location for piezoelectric sensor (piezo) installations. Prior to sawing slots or drilling cores, the Contractor shall meet with a representative of the Division of Planning to verify the final layout on site. Avoid expansion joints and pavement sections where potholes, cracks, or other roadway flaws exist. Roadway ruts at the proposed piezo location shall not be in excess of ½ inch under a 4-foot straight edge.

Install the piezo perpendicular to traffic in the final surface course of the pavement. Locate the sensor in the lane as shown on the site layout drawing. Eleven-foot length sensors shall be centered in the lane.

The following is a typical step by step procedure for the installation of a piezo. Refer specifically to the manufacturer's instructions provided with the sensor prior to installation.

- Carefully mark the slot to be cut, perpendicular to the flow of traffic and properly positioned in the lane.
- It is strongly recommended that a ¾ inch wide diamond blade be used for cutting the slot, or that blades be ganged together to provide a single ¾ inch wide cut. The slot shall be wet cut to minimize damage to the pavement.
- Cut a slot ¾ inch wide (±1/16 inch) by 1 inch minimum deep. The slot should be a minimum of 2 inches longer than the sensor (including the lead attachment). Drop the saw blade an extra ½ inch down on both ends of the sensor. The lead out of the passive cable should be centered on the slot.
- Cut the slot for the passive cable ¼ inch wide and at a depth so that the top of the backer rod is a minimum of 2 inches below the road surface.
- Clean ALL foreign and loose matter out of the slot and within 1 foot on all sides of the slot using a high pressure washer.
- Completely dry the slot and within 1 foot on all sides of the slot using oil-free forced air, torpedo heaters, electric heaters, or natural evaporation, depending on weather conditions. Be very careful not to burn the asphalt if heat is used.

- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45º angle to the conduit adjacent to the roadway.
- Place strips of 2-4 inch wide tape strips on the pavement along the lengths of both sides of the sensor slot, 1/8 inch away from the slot.
- Wear clean, protective latex (or equivalent) gloves at all times when handling sensors. Visually inspect sensor to ensure it is straight. Check lead attachment and passive cable for cuts, gaps, cracks and/or bare wire. Verify that the correct sensor type and length is being installed by checking the data sheet. Verify there is sufficient cable to reach the cabinet. Piezo lead-in cable shall not be spliced.
- Test the sensor for capacitance, dissipation factor and resistance, according to the directions enclosed with the sensor. Capacitance and dissipation should be within ±20% of the piezo data sheet. Resistance (using the 20M setting) should be infinite. Record the sensor serial number and the test results and label "pre-installation." This information should be stored in the counter cabinet and/or returned to Department Planning personnel.
- Lay the sensor next to the slot and ensure that it is straight and flat.
- Clean the sensor with steel wool or an emery pad and wipe with alcohol and a clean, lint-free cloth.
- Place the installation bracket clips every 6 inches along the length of the sensor.
- Bend the tip of the sensor downward at a 30° angle. Bend the lead attachment end down at a 15° angle and then 15° back up until level (forming a lazy Z).
- Place the sensor in the slot, with the brass element 3/8 inch below the road surface along the entire length. The tip of the sensor should be a minimum of 2 inches from the end of the slot and should not touch the bottom of the slot. The top of the plastic installation bracket clips should be 1/8 inch below the surface of the road. The lead attachment should not touch the bottom or sides of the slot. Ensure the sensor ends are pushed down per the manufacturer's instructions.
- Visually inspect the length of the sensor to ensure it is at uniform depth along its length and it is level (not twisted, canted or bent).
- On the passive cable end, block the end of the slot approximately 3-5 inches beyond the end of the lead attachment area creating an adequate "dam" so that the sensor grout does not flow out.
- Use one bucket of sensor grout per piezo installation. Overfill the slot with sensor grout and allow to cure for a minimum of 10 minutes before continuing with the installation. Ensure that sensor grout fills around and beneath the sensor completely and that there is not a trough on top.
- Remove the tape along the sides of the saw slot when the adhesive starts to cure.
- Carefully remove the dam from the end of the sensor.
- Route the lead-in cable through the saw slot
- Install conduit sealant to a minimum of 1" deep into the cored 1½ inch hole.
- Cover the lead-in cable with encapsulant, backer rod, and grout.
- If necessary, after the grout has hardened, grind with an angle grinder until the profile is a 1/16 inch mound. There shall be no concave portion to the mound.

- Clean up the site and dispose of all waste off the project.
- Ensure that the sensor grout has completely cured prior to subjecting the sensor to traffic. Curing time will vary with temperature and humidity.

Upon installation, test the sensor for capacitance, dissipation factor and resistance, according to the directions enclosed with the sensor. Capacitance and dissipation should be within +20% of the piezo data sheet. Resistance (using the 20M setting) should be infinite. Perform a functional test of the piezo with an oscilloscope to ensure that the sensor is generating a proper response to the passage of vehicles.

Record the sensor serial number and the test results and label "post-installation." This information should be stored in the counter cabinet and/or returned to Department Planning personnel.

3.17. Pole – Wooden

Furnish: Pole; anchoring equipment (as required); hardware (as required).

Excavate and install wood pole to a minimum depth of one-sixth the total pole height. Place backfill material in hole and compact until flush with existing grade. Install guy wire, guy guard, anchor, anchor rod, and strand vise, if necessary. Anchor shall be a minimum of one-third the pole height from the face of the pole. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer.

3.18. Removal of Existing Equipment

The Contractor shall remove existing materials (including but not limited to: poles, anchors, cabinets, junction boxes, conduit and wire) not to be reused. Contractor shall dispose of all removed materials off the project. All materials and labor necessary for the removal of existing equipment shall be considered incidental to other bid items.

3.19. Signs

Furnish: Signs; sign standards; hardware.

Construction of **s**igns shall conform to the *Standard Specifications for Road and Bridge Construction.*

3.20. Splicing

Furnish: Splice kit; solder.

These notes describe the splicing process (if permitted) and are not intended to grant permission to splice. Permission to splice shall be determined by the Division of Planning and the locations shall be shown on the layout sheet. If splicing is needed but not shown on the layout sheet, the Contractor shall receive prior written approval from the Division of Planning.

All splices shall conform to the provisions of the NEC.

Splices for loop and loop lead-in wire shall be twisted and soldered. Abrade the outer jacket of both wires to promote good adhesion and prevent capillary leak paths. Seal the splice with an electrical sealing resin. Spliced loop conductors shall test free of shorts and unauthorized grounds and shall have an insulating resistance of at least 100 megohms when tested with a 500 volt direct current potential in a reasonably dry atmosphere between conductors and ground.

For piezos, the same type coax cable, supplied by the manufacturer, shall be used to splice to the sensor's lead-in cable. Cables shall be soldered. Abrade the outer jacket of both cables to promote good adhesion and prevent capillary leak paths. Seal the splice with an electrical sealing resin. Spliced piezo cables shall be tested and have a minimum resistance of 20 megohms, a maximum dissipation factor of 0.03, a capacitance within the manufacturer's recommended range based upon the length of additional cable. A functional test of the piezo shall be performed to ensure that the sensor is generating a proper response to the passage of vehicles.

3.21. Telephone Service

Furnish: Conduit; conduit fittings; grounding bushings; LB condulets (as required); weatherhead; conduit straps; hardware; conduit sealant.

The Contractor shall contact the local telephone company for the installation of telephone service to the site. Telephone Company will install service to a telephone network interface device (NID) on the pole.

Install rigid ¾ inch conduit with weatherhead from the cabinet to 72 inches above the finished grade and install conduit straps every 30 inches on center. Install telephone cable with and RJ-11 modular plug from NID to cabinet. Leave eight feet of additional telephone cable coiled inside cabinet.

The limit of conduit incidental to "Install Telephone Service" for a pad mounted cabinet is 24 inches beyond face of service pole.

3.22. Trenching and Backfilling

Furnish: Warning tape; seed mix type I; cereal rye or German foxtail-millet; mulch; concrete (as required); asphalt (as required).

Excavate trench and provide required cover as shown on the standard detail sheets. After placing conduit, backfill material shall be placed and compacted in lifts of 9 inches or less. Install warning tape as shown on the detail sheet. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer. This item shall include concrete, asphalt or approved replacement material for sidewalks, curbs, roadways, etc. (if required).

3.23. Wiring

Furnish: Wire; wire labels; spade tongue wire terminals (as required).

Installation of all wiring shall conform to the NEC. Permanent identification numbers shall be affixed to all wires in all junction boxes and cabinets (see Layout(s) for loop and piezo numbers).

Additional lengths of each loop and piezo sensor wire shall be neatly coiled in all cabinets and junction boxes as follows:

Enclosure Type	Additional length of each wire
Galvanized Steel Cabinet	2’
Pad Mount Cabinet (332)	8’
Pole Mount Cabinet (336)	4’
Junction Box Type 10x8x4	2’
Junction Box Type A, B, or C	2’

3.24. Wood Post

Furnish: Wood post; concrete (as required); seed mix type I; cereal rye or German foxtail-millet; mulch.

Excavate hole to specified depth and place concrete, if required. Install post, backfill to existing grade, and tamp backfill. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer.

4. BID ITEM NOTES AND METHOD OF MEASUREMENT FOR PAYMENT

Only the bid items listed will be measured for payment. All other items required to complete the vehicle detection installation shall be incidental to other items of work. Payment at the contract unit price shall be full compensation for all materials, labor, equipment and incidentals to furnish and install these items.

4.1. Bore and Jack Pipe – 2”

Bore and jack pipe – 2” shall be furnished, installed, and measured for payment per the *Standard Specifications for Road and Bridge Construction*.

4.2. Conduit

Conduit shall include furnishing and installing specified conduit in accordance with the specifications. This item shall include conduit fittings, bodies, boxes, weatherheads, expansion joints, couplings, caps, conduit sealant, electrical tape, clamps, bonding straps and any other necessary hardware. Conduit will be measured in linear feet.

4.3. Electrical Service

Electrical Service shall include furnishing and installing all necessary materials and payment of all fees toward the complete installation of an electrical service which has passed all required inspections. Incidental to this item shall be furnishing and installing:

- Meter-base per utility company’s specifications
- Service disconnect panel per utility company’s specifications
- Meter base and service disconnect entrance hubs, waterproof
- Service entrance conductors
- Rigid steel conduit
- Rigid steel conduit fittings
- Conduit straps
- Weatherhead
- Duplex GFCI receptacle, 120-volt, 20-amp
- Ground rod with clamp
- Grounding conductor

Also incidental to this item shall be any necessary clearing of right of way for the electrical service drop.

Electrical service will be measured in individual units each.

4.4. Flashing Arrow

Flashing Arrow shall be furnished, installed, and measured for payment per the *Standard Specifications for Road and Bridge Construction.*

4.5. Galvanized Steel Cabinet

Galvanized Steel Cabinet shall include furnishing and installing galvanized steel cabinet on post as specified. Incidental to this item shall be furnishing and installing grounding hardware, and any necessary post/pole mounting hardware. Also incidental to this item shall be furnishing and installing the required number of terminal blocks and connection of all

sensors to the terminal blocks. Galvanized Steel Cabinet will be measured in individual units each.

4.6. Install Pad Mount Enclosure

Install Pad Mount Enclosure shall include installing a Department-furnished enclosure as specified on the detail sheets.

This item shall include obtaining the enclosure from KYTC and transporting it to the installation site and furnishing and installing the following:

- Concrete foundation (including any excavation necessary)
- Anchor bolts, lock washers, and nuts
- Conduit
- Conduit fittings (including grounding bushings)
- Weatherhead
- Terminal Strip(s)
- Ground rod with clamp
- Grounding conductor

Install Pad Mount Enclosure will be measured in individual units each.

4.7. **Install Controller Cabinet**

Install Controller Cabinet shall include installing a Department-furnished cabinet as specified on the detail sheets.

This item shall include obtaining the cabinet from KYTC and transporting it to the installation site and furnishing and installing the following:

- Conduit
- Conduit Fittings
- Terminal Strip(s)
- Ground rod with clamp
- Grounding conductor

Install Controller Cabinet will be measured in individual units each.

4.8. Junction Box Type 10" x 8" x 4"

Junction Box Type 10”x8”x4” shall include furnishing and installing specified junction box in accordance with the specifications. This item shall include connectors, splice sleeves, conduit fittings, mounting materials and any other items required to complete the installation. Incidental to this item shall be furnishing and installing specified post (wood, channel, metal, etc.) as required for the installation. Junction Box Type 10”x8”x4” will be measured in individual units each.

4.9. Junction Box Type A, B, or C

Junction Box Type A, B, or C shall include furnishing and installing specified junction box in accordance with the specifications. This item shall include excavation, furnishing and installing #57 aggregate, backfilling around the box, and restoration of disturbed areas to

the satisfaction of the Engineer. Incidental to this item shall be furnishing and installing a grounding conductor bonding all conduit grounding bushings in the box. Junction Box Type A, B, or C will be measured in individual units each.

4.10. Loop Saw Slot and Fill

Loop Saw Slot and Fill shall include sawing and cleaning saw slots and furnishing and installing conduit sealant, loop sealant, backer rod, grout, or other specified material. Loop Saw Slot and Fill will be measured in linear feet of sawed slot.

4.11. Maintain and Control Traffic

Maintain and Control Traffic shall be measured for payment per the *Standard Specifications for Road and Bridge Construction.*

4.12. Open Cut Roadway

Open Cut Roadway shall include excavating trench (sawing and chipping roadway) to dimensions as indicated on the detail sheets and furnishing and placing concrete, steel reinforcing bars, and asphalt. This item also includes restoring any disturbed sidewalk to its original condition. Open Cut Roadway will be measured in linear feet.

4.13. Piezoelectric Sensor

Piezoelectric sensor (piezo) shall include sawing and cleaning saw slots and furnishing and installing piezo in accordance with the specifications. This item shall include furnishing and installing lead-in wire, conduit sealant, encapsulation material, backer rod, grout, testing, and accessories. Piezo will be measured in individual units each.

4.14. Pole – 35’ Wooden

Pole – 35’ Wooden shall include excavation, furnishing and installing specified wood pole, backfilling and restoring disturbed areas to the satisfaction of the Engineer. Incidental to this item shall be furnishing and installing guy wire, anchor and anchor rod, strand vise, and guy guard, if specified.

Pole – 35’ Wooden will be measured in individual units each.

4.15. Signs

Signs shall be furnished, installed, and measured for payment per the *Standard Specifications for Road and Bridge Construction.*

4.16. Telephone Service

Telephone Services shall include furnishing and installing all necessary materials and payment of all fees toward the complete installation of a telephone service, which has passed all required inspections. Incidental to this item shall be furnishing and installing:

- Telephone cable with an RJ-11 modular plug
- Rigid steel conduit
- Rigid steel conduit fittings
- Conduit straps
- Weatherhead

Telephone service will be measured in individual units each.

4.17. Trenching and Backfilling

Trenching and Backfilling shall include excavation, warning tape, backfilling, temporary erosion control, seeding, protection and restoration of disturbed areas to original condition. This item shall include concrete, asphalt or approved replacement material for sidewalks, curbs, roadways, etc. (if required). Trenching and backfilling will be measured in linear feet.

4.18. Wire or Cable

Wire or cable shall include furnishing and installing specified wire or cable within saw slot, conduit, junction box, cabinet, or overhead as indicated on the detail sheets. Incidental to this item shall be the labeling of all wires and cables in each junction box, cabinet and splice box, and furnishing and installing other hardware required for installing cable. Wire or Cable will be measured in linear feet.

4.19. Wood Post

Wood Post shall include furnishing and installing wood post as specified. This item shall include excavation, furnishing and placing concrete (if required), backfilling around the post, and restoration of disturbed areas to the satisfaction of the engineer. Wood Post will be measured in individual units each.

SPECIAL NOTE FOR AUTOMATIC TRAFFIC RECORDER INDUCTANCE LOOPS

Be advised, existing traffic counting inductance loops are within the construction limits of this project. Notify the Engineer in writing, a minimum of 14 days prior to beginning any work. Install and test the new inductance loops and axle sensors according to the detail drawings and the Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors.

The Engineer will contact and maintain liaison with the District Planning Engineer and the Division of Planning in order to coordinate any necessary work.

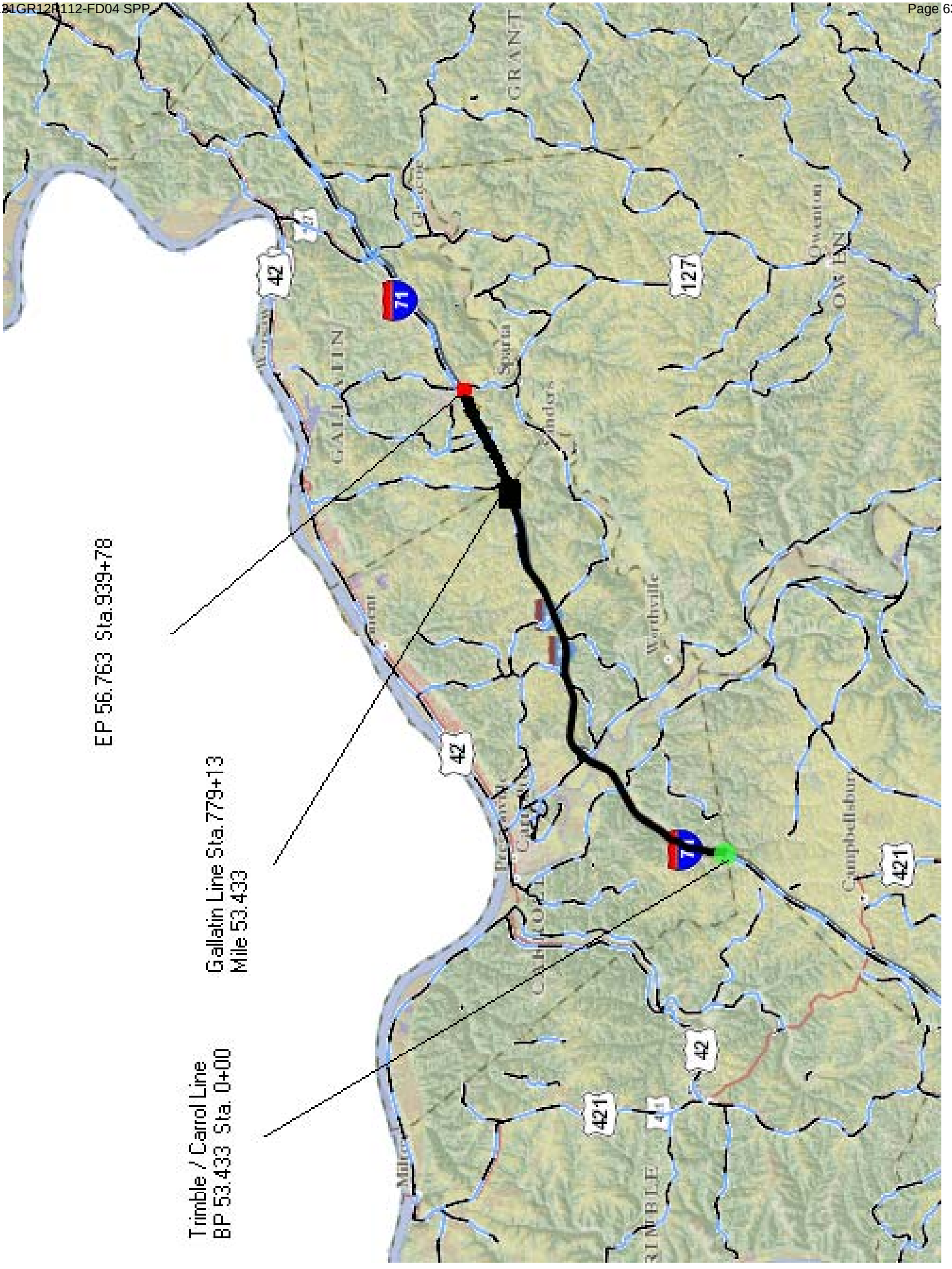
On projects that include milling of roadways with existing traffic counting inductance loops and if after milling the remnant contents of the existing saw slot (grout, loop wires, backer rod, and/or loop sealant) are not intact and flush with or below the top of the milled portion of the asphalt and with the saw slot completely filled with fines from the milling operation, clear the saw slot of loose remnant contents and refill the saw slot with natural sand. Obtain the Engineer's approval of the stabilized saw slot prior to resurfacing. The Department will not measure for separate payment clearing the saw slot and refilling with natural sand, but shall be incidental to Asphalt Pavement Milling and Texturing.

1-3891 ATR Inductance Loops
01/02/2012

SPECIAL NOTE FOR TRENCHING

Trench shoulders as shown on the typical section. Waste the excess and/or unsuitable materials off the right-of-way at sites obtained by the Contractor at no additional cost to the Department. See Special Note for Waste and Borrow.

The Department will measure "Trenching" in linear feet at the pavement/shoulder edge. Accept payment at the contract unit price per linear feet shall as full compensation for all labor, materials, equipment and incidentals for excavating the shoulder trench and reuse and/or disposal of the material.


EP 56.763 Sta.939+78
Gallatin Line Sta.779+13
Mile 53.433
Trimble / Carrol Line
BP 53.433 Sta. 0+00
GRANT
GALLATIN
OWEN
Sparta
Sanders
Warsaw
Worthville
Campbellsburg
Milton
TRIMBLE
42
71
127
421

MATERIAL SUMMARY CONTRACT ID: 122451

FD04 SPP 021 0071 038-054 PES NO: MP021007112R1
COVINGTON-LOUISVILLE ROAD (I-71) FROM TRIMBLE COUNTY LINE (MP 38.808) EXTENDING NORTH TO GALLATIN COUNTY LINE (MP 53.433), A DISTANCE OF 14.630000 MILES.

LINE NO	BID CODE	DESCRIPTION	QUANTITY	UNIT
0010	00001	DGA BASE	14,000.00	TON
0020	00100	ASPHALT SEAL AGGREGATE	1,862.00	TON
0030	00190	LEVELING & WEDGING PG64-22	3,900.00	TON
0040	00291	EMULSIFIED ASPHALT RS-2	223.00	TON
0050	00339	CL3 ASPH SURF 0.38D PG64-22	14,786.00	TON
0060	00342	CL4 ASPH SURF 0.38A PG76-22	36,630.00	TON
0070	01897	ASPHALT WEDGE CURB	10,280.00	LF
0080	01982	DELINEATOR FOR GUARDRAIL M/W	1,230.00	EACH
0090	01983	DELINEATOR FOR GUARDRAIL M/Y	224.00	EACH
0100	02014	BARRICADE-TYPE III	10.00	EACH
0110	02268	REMOVE & REPLACE FENCE	3,185.00	LF
0120	02351	GUARDRAIL-STEEL W BEAM-S FACE	112,300.00	LF
0130	02352	GUARDRAIL-STEEL W BEAM-D FACE	1,100.00	LF
0140	02355	GUARDRAIL-STEEL W BEAM-S FACE A	137.50	LF
0150	02360	GUARDRAIL TERMINAL SECTION NO 1	9.00	EACH
0160	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	14.00	EACH
0170	02365	CRASH CUSHION TYPE IX-A	9.00	EACH
0180	02367	GUARDRAIL END TREATMENT TYPE 1	82.00	EACH
0190	02369	GUARDRAIL END TREATMENT TYPE 2A	81.00	EACH
0200	02381	REMOVE GUARDRAIL	113,520.00	LF
0210	02562	SIGNS	360.00	SQFT
0220	02650	MAINTAIN & CONTROL TRAFFIC CARROLL	1.00	LS
0230	02671	PORTABLE CHANGEABLE MESSAGE SIGN	5.00	EACH
0240	02676	MOBILIZATION FOR MILL & TEXT CARROLL	1.00	LS
0250	02677	ASPHALT PAVE MILLING & TEXTURING	50,875.00	TON
0260	02696	SHOULDER RUMBLE STRIPS-SAWED	285,000.00	LF
0270	03240	BASE FAILURE REPAIR	12,542.00	SQYD
0280	04793	CONDUIT-1 1/4 IN	20.00	LF
0290	04795	CONDUIT-2 IN	10.00	LF
0300	04811	ELECTRICAL JUNCTION BOX TYPE B	1.00	EACH
0310	04820	TRENCHING AND BACKFILLING	25.00	LF
0320	04829	PIEZOELECTRIC SENSOR	2.00	EACH
0330	04830	LOOP WIRE	750.00	LF
0340	04895	LOOP SAW SLOT AND FILL	181.00	LF
0350	06427	TRENCHING	320,000.00	LF
0360	06511	PAVE STRIPING-TEMP PAINT-6 IN	162,000.00	LF
0370	06592	PAVEMENT MARKER TYPE V-B W/R	1,640.00	EACH
0380	06600	REMOVE PAVEMENT MARKER TYPE V	1,640.00	EACH
0390	10020NS	FUEL ADJUSTMENT	99,640.00	DOLL
0400	10030NS	ASPHALT ADJUSTMENT	165,161.00	DOLL
0410	20192ED	REM ASPHALT WEDGE CURB	10,280.00	LF
0420	20359NN	GALVANIZED STEEL CABINET	1.00	EACH
0430	20360ES818	WOOD POST	2.00	EACH
0440	24189ER	DURABLE WATERBORNE MARKING-6 IN W	195,177.00	LF
0450	24190ER	DURABLE WATERBORNE MARKING-6 IN Y	159,100.00	LF
0460	24191ER	DURABLE WATERBORNE MARKING-12 IN W	3,000.00	LF
0470	02569	DEMOBILIZATION	1.00	LS

MATERIAL SUMMARY CONTRACT ID: 122451

FD04 SPP 039 0071 053-057 PES NO: MP039007112R1
COVINGTON-LOUISVILLE ROAD (I-71) FROM CARROLL COUNTY LINE (MP 53.433) EXTENDING NORTH TO THE BEGINNING OF THE THREE LANE SECTION (MP 56.763), A DISTANCE OF 3.330000 MILES.

LINE NO	BID CODE	DESCRIPTION	QUANTITY	UNIT
0010	00001	DGA BASE	4,000.00	TON
0020	00100	ASPHALT SEAL AGGREGATE	465.00	TON
0030	00190	LEVELING & WEDGING PG64-22	1,100.00	TON
0040	00291	EMULSIFIED ASPHALT RS-2	56.00	TON
0050	00339	CL3 ASPH SURF 0.38D PG64-22	3,554.00	TON
0060	00342	CL4 ASPH SURF 0.38A PG76-22	10,937.00	TON
0070	01897	ASPHALT WEDGE CURB	3,515.00	LF
0080	01982	DELINEATOR FOR GUARDRAIL M/W	186.00	EACH
0090	01983	DELINEATOR FOR GUARDRAIL M/Y	5.00	EACH
0100	02014	BARRICADE-TYPE III	6.00	EACH
0110	02351	GUARDRAIL-STEEL W BEAM-S FACE	14,862.50	LF
0120	02352	GUARDRAIL-STEEL W BEAM-D FACE	137.50	LF
0130	02360	GUARDRAIL TERMINAL SECTION NO 1	1.00	EACH
0140	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	3.00	EACH
0150	02365	CRASH CUSHION TYPE IX-A	1.00	EACH
0160	02367	GUARDRAIL END TREATMENT TYPE 1	14.00	EACH
0170	02369	GUARDRAIL END TREATMENT TYPE 2A	12.00	EACH
0180	02381	REMOVE GUARDRAIL	15,000.00	LF
0190	02562	SIGNS	248.00	SQFT
0200	02650	MAINTAIN & CONTROL TRAFFIC GALLATIN	1.00	LS
0210	02671	PORTABLE CHANGEABLE MESSAGE SIGN	3.00	EACH
0220	02676	MOBILIZATION FOR MILL & TEXT GALLATIN	1.00	LS
0230	02677	ASPHALT PAVE MILLING & TEXTURING	14,550.00	TON
0240	02696	SHOULDER RUMBLE STRIPS-SAWED	92,980.00	LF
0250	03240	BASE FAILURE REPAIR	3,307.00	SQYD
0260	04793	CONDUIT-1 1/4 IN	60.00	LF
0270	04820	TRENCHING AND BACKFILLING	60.00	LF
0280	04829	PIEZOELECTRIC SENSOR	8.00	EACH
0290	04830	LOOP WIRE	3,000.00	LF
0300	04895	LOOP SAW SLOT AND FILL	724.00	LF
0310	06427	TRENCHING	92,980.00	LF
0320	06511	PAVE STRIPING-TEMP PAINT-6 IN	35,164.00	LF
0330	06592	PAVEMENT MARKER TYPE V-B W/R	440.00	EACH
0340	06600	REMOVE PAVEMENT MARKER TYPE V	440.00	EACH
0350	10020NS	FUEL ADJUSTMENT	28,139.00	DOLL
0360	10030NS	ASPHALT ADJUSTMENT	46,542.00	DOLL
0370	20192ED	REM ASPHALT WEDGE CURB	3,515.00	LF
0380	24189ER	DURABLE WATERBORNE MARKING-6 IN W	59,260.00	LF
0390	24190ER	DURABLE WATERBORNE MARKING-6 IN Y	46,490.00	LF
0400	24191ER	DURABLE WATERBORNE MARKING-12 IN W	2,000.00	LF
0410	02569	DEMOBILIZATION	1.00	LS

Guardrail station to station	steel w beam Guardrail				Guardrail end treatment		term. Sect. NO.1	Bridge End conn TyA	remove exist. G.R.	remove wedge curb	asphalt wedge curb	Crash cushion TY. IX A	delineator for GR white	delineator for GR yellow
	SF	DF	SFA	SFB	1	2A								
	Linear Feet				EACH				LINEAR FT			EACH		
Begin Const. @ 0+00 CARROLL/TRIMBLE LINE														
18+16-28+01 NB RT.	987.5				1	1			987.5				13	
25+39-28+11 NB LT.	100	137.5					1	1	237.5			1		
31+46-35+64 NB RT.	412.5				1				412.5				6	
31+46-35+64 NB LT.	412.5				1				412.5					6
39+09-143+24 NB RT.	10412.5				1	1			10412.5				139	
147+80-177+56 NB RT.	2975				1	1			2975				40	
187+71-196+40 NB RT. (start ramp)	875				1				875				12	
196+40-198+93 NB LT.	250				1	1			250					3
204+15-217+93 NB RT.	1387.5				1	1			1387.5				18	
230+99-244+44 NB RT.	1350				1	1			1350				18	
249+49-273+15 NB RT.	2362.5				1	1			2362.5				31	
270+35-273+15 NB LT.	100	137.5					1	1	237.5			1		
281+30-293+11 NB RT.	1187.5				1	1			1187.5	620	620		15	
290+59-293+11 NB LT.	100	137.5					1	1	237.5			1		
327+73-349+13 NB RT.	2137.5				1	1			2137.5				28	
361+60-382+88 NB RT.	2137.5				1	1			2137.5	785	785		28	
392+11-400+16 NB RT.	812.5				1	1			812.5				10	
412+55-416+95 NB RT.	437.5				1	1			437.5	260	260		5	
422+68-428+24 NB RT.	562.5				1	1			562.5				7	
425+66-428+49 NB LT.	100	137.5					1	1	237.5			1		
438+86-443+92 NB RT.	512.5				1	1			512.5	315	315		6	
454+47-470+21 NB RT.	1575				1	1			1575	610	610		21	
480+59-492+74 NB RT.	1212.5				1	1			1212.5				16	
506+96-517+84 NB RT.	1087.5				1	1			1087.5				14	
524+94-547+64 NB RT.	2275				1	1			2275				30	
545+36-546+86 NB LT.	150				1	1			150					2
553+13-556+26 NB RT.	312.5				1	1			312.5				4	
587+60-603+42 NB RT.	1587.5				1	1			1587.5				21	
608+46-618+71 NB RT.	1025				1	1			1025				13	
629+96-635+74 NB RT.	575				1	1			575				7	
643+44-651+83 NB RT.	837.5				1	1			837.5				11	
659+62-670+20 NB LT.	1062.5				1	1			1062.5					14
675+57-687+62 NB LT.	1212.5				1	1			1212.5					16
682+55-687+10 NB RT.	462.5				1	1			462.5				6	
694+39-697+74 NB RT.	337.5				1	1			337.5				4	
694+86-698+47 NB LT.	362.5				1	1			362.5				4	
701+31-710+96 NB LT.	962.5				1	1			962.5				12	
701+68-711+71 NB RT.	1012.5				1	1			1012.5				13	
717+26-725+39 NB RT.	812.5				1	1			812.5	600	600		10	
717+26-725+39 NB LT.	812.5				1	1			812.5					10
746+85-756+83 NB RT.	1000				1	1			1000	735	735		13	
766+96-769+65 NB RT.	275				1	1			275				3	
772+47-780+16 NB RT.	775				1	1			775	600	600		10	
777+33-780+16 NB LT.	100	137.5					1	1	237.5			1		
CARROLL COUNTY									0					
0+00-5+23 SB LT.	525					1			525				7	

11+27-28+11 SB LT.	1687.5					1		1	1687.5				22	
31+46-35+64 SB RT.	412.5						1	1	412.5				5	
41+14	100		137.5						100			1		
39+00-55+51 SB LT.	1650					1		1	1650				22	
68+87-107+48 SB LT.	3862.5				1	1			3862.5				51	
116+17-124+08 SB LT.	800				1	1			800				10	
133+43-136+32 SB LT.	287.5				1	1			287.5				3	
156+46-203+04 SB LT.	4662.5				1	1			4662.5				62	
211+83-220+60 SB LT.	875				1	1			875				11	
233+18-240+52 SB LT.	737.5				1	1			737.5				9	
252+36-273+44 SB LT.	2112.5					1		1	2112.5				28	
281+30-284+00 SB RT.	100	137.5					1	1	237.5			1		
281+30-293+11 SB LT.	1187.5				1			1	1187.5				15	
295+57-297+36 SB RT.	100	137.5					1	1	237.5			1		
316+18-344+69 SB LT.	2850				1				2850				38	
350+06-353+37 SB LT.	337.5				1	1			337.5				5	
362+27-365+20 SB LT.	300				1	1			300				4	
375+07-385+64 SB LT.	1062.5				1	1			1062.5	680	680		14	
393+36-398+16 SB LT.	487.5				1	1			487.5				6	
415+15-417+82 SB LT.	275				1	1			275				3	
426+97-429+05 SB LT.	212.5				1	1			212.5				2	
431+93-434+58 SB RT.	100	137.5					1	1	237.5			1		
432+88-444+73 SB LT.	1187.5				1			1	1187.5				15	
459+55-464+69 SB LT.	512.5				1	1			512.5				6	
485+29-491+13 SB LT.	587.5				1	1			587.5	325	325		7	
504+02-511+92 SB LT.	787.5				1	1			787.5				10	
524+21-531+17 SB LT.	700				1	1			700				9	
538+88-551+64 SB LT.	1275				1	1			1275				17	
554+80-558+00 SB LT.	325				1	1			325				4	
568+01-577+38 SB LT.	937.5				1	1			937.5				12	
630+44-635+98 SB LT.	550				1	1			550				7	
643+24-653+27 SB LT.	1000				1	1			1120				13	
645+16-728+44 SB RT.	8337.5				1	1			8337.5					111
672+89-675+66 SB LT.	275				1	1			275				3	
682+63-686+73 SB RT.	412.5				1	1			412.5				5	
696+63-706+21 SB LT.	962.5				1	1			962.5	650	650		12	
717+70-734+24 SB LT.	1662.5				1	1			1662.5	690	690		22	
739+33-741+58 SB LT.	225				1	1			225				3	
751+91-759+95 SB LT.	812.5				1	1			812.5	580	580		10	
772+76-779+64 SB LT.	687.5					2			687.5	475	475		9	
TOTAL	**95400**	**1100**	**137.5**	**0**	**70**	**70**	**9**	**14**	**96620**	**7925**	**7925**	**9**	**1069**	**162**

Guardrail station to station	steel w beam Guardrail				Guardrail end treatment		term. Sect. NO.1	Bridge End conn Ty A	Bridge End conn Ty A-1	remove exist. G.R.	remove wedge curb	asphalt wedge curb	Crash cushion TY. IX A	delineator for GR white	delineator for GR yellow
	SF	DF	SFA	SFB	1	2A									
	Linear Feet				EACH					LINEAR FEET			EACH		
779+13 GALLATIN CO LINE															
781+71-791+76 NB RT.	1012.5				1	1				1012.5	700	700		13	
797+14-814+57 NB RT.	1750				1	1				1750				23	
825+30-839+55 NB RT.	1425				1	1				1425	425	425		19	
851+51-861+84 NB RT.	1037.5				1	1				1037.5				13	
881+50-917+84 NB RT.	3637.5				1	1				3637.5	1130	1130		48	
939+78 END CONSTRUCTION										0					
										0					
781+60-792+43 SB LT.	1087.5				1			1		1087.5	720	720		14	
781+60-784+26 SB RT.	100	137.5					1	1		237.5			1		
798+04-802+01 SB LT.	400				1	1				400				5	
860+96-864+01 SB LT.	312.5				1	1				312.5				4	
888+77-893+27 SB LT.	450				1	1				450				6	
905+00-922+14 SB LT.	1712.5				1	1				1712.5				22	
Total	**12925**	**137.5**	**0**	**0**	**10**	**9**	**1**	**2**	**0**	**13062.5**	**2975**	**2975**	**1**	**167**	**0**

Guardrail station to station	steel w beam Guardrail				Guardrail end treatment		term. Sect.	Bridge End conn	Bridge End conn	remove	remove wedge	asphalt wedge	Crash cushion	delineator for GR	delineator for GR
	SF	DF	SFA	SFB	1	2A	NO.1	TyA	TyA-1	exist. G.R.	curb	curb	TY. IX A	white	yellow
	Linear Feet				EACH					LINEAR FEET			EACH		
English Ramps/ KY 389															
RAMP A 0+00-16+10 RT	1612.5									1612.5				21	
RAMP A 6+12-18+05 LT	1200				1			1		1200					16
										0					
RAMP B 0+00-17+36 RT	1737.5				1	1				1737.5				23	
RAMP B 0+00-7+51 LT	750					1		1		750					10
										0					
RAMP C 0+00-16+80 RT	1687.5				1	1				1687.5				22	
RAMP C 8+92-18+68 LT	975				1			1		975					13
										0					
										0					
Carrollton Ramps/ KY 227										0					
RAMP A 0+00-7+38 RT	737.5					1		1		737.5				9	
RAMP A 16+33-25+07 RT	875				1					875				11	
RAMP A 12+18-17+58 LT	537.5				1	1				537.5					11
										0					
RAMP B 0+00-8+83 RT	887.5				1	1				887.5	820	820		11	
RAMP B 15+84-28+91 RT	1312.5				1	1				1312.5	1035	1035		17	
										0					
RAMP C 0+00-6+27 RT	625					1				625	500	500		8	
RAMP C 10+46-24+15 RT	1375				1	1				1375				18	
										0					
RAMP D 2+75-12+63 RT	987.5				1	1				987.5				13	
RAMP D 15+12-21+60 RT	650				1			1		650				8	
RAMP D 2+65-12+11 LT	950				1	1				950					12
Carroll County Total	**16900**	**0**	**0**	**0**	**12**	**11**	**0**	**5**	**0**	**16900**	**2355**	**2355**	**0**	**161**	**62**
Ky Speedway Ramps / KY 1039										0					
RAMP B 2+30-11+01 RT	875				1	1				875	540	540		11	
										0					
RAMP C 16+57-20+08 RT	350				1	1				350				4	
										0					
RAMP D 0+00-3+33 RT	337.5				1	1				337.5				4	
RAMP D 0+00-3+70 LT	375				1			1		375					5
Gallatin County Total	**1937.5**	**0**	**0**	**0**	**4**	**3**	**0**	**1**	**0**	**1937.5**	**540**	**540**	**0**	**19**	**5**

NORTHBOUND						NORTHBOUND						NORTHBOUND				
#	STATION	LENGTH	WIDTH	SY		#	STATION	LENGTH	WIDTH	SY		#	STATION	LENGTH	WIDTH	SY
1	1+90	40	24	106.67		38	126+10	104	24	277.33		75	412+35	40	24	106.67
2	4+61	40	24	106.67		39	127+85	40	24	106.67		76	425+05	40	24	106.67
3	7+79	40	24	106.67		40	128+65	40	24	106.67		77	434+70	40	24	106.67
4	10+62	40	24	106.67		41	130+60	40	24	106.67		78	456+80	40	24	106.67
5	12+77	40	24	106.67		42	131+70	40	24	106.67		79	485+55	40	24	106.67
6	15+37	40	24	106.67		43	134+50	40	24	106.67		80	487+05	40	24	106.67
7	17+28	40	24	106.67		44	138+10	40	24	106.67		81	500+75	40	24	106.67
8	20+70	85	24	226.67		45	141+50	40	24	106.67		82	737+35	40	24	106.67
9	26+80	40	24	106.67		46	144+30	40	24	106.67		83	741+95	40	24	106.67
10	35+00	90	24	240.00		47	145+20	40	24	106.67		84	751+05	40	24	106.67
11	43+50	105	24	280.00		48	147+50	40	24	106.67		85	752+10	40	24	106.67
12	44+65	40	24	106.67		49	148+15	40	24	106.67		86	753+60	40	24	106.67
13	45+40	40	24	106.67		50	151+75	40	24	106.67		87	755+70	40	24	106.67
14	47+50	40	24	106.67		51	161+60	40	24	106.67		88	757+60	40	24	106.67
15	49+75	40	24	106.67		52	163+70	40	24	106.67		89	762+60	40	24	106.67
16	50+70	40	24	106.67		53	167+85	40	24	106.67		90	766+75	40	24	106.67
17	53+36	75	24	200.00		54	170+35	40	24	106.67		91	769+75	40	24	106.67
18	55+85	40	24	106.67		55	171+30	40	24	106.67		92	771+15	40	24	106.67
19	57+70	85	24	226.67		56	176+30	40	24	106.67		93	773+25	40	24	106.67
20	58+95	40	24	106.67		57	182+50	40	24	106.67						
21	61+28	40	24	106.67		58	184+25	77	24	205.33		**TOTAL CARROLL CO NB**				11688.00
22	63+95	40	24	106.67		59	188+15	40	24	106.67						
23	66+57	40	24	106.67		60	189+35	40	24	106.67		**SOUTHBOUND**				
24	69+25	40	24	106.67		61	192+70	40	24	106.67		#	STATION	LENGTH	WIDTH	SY
25	82+50	40	24	106.67		62	197+10	40	24	106.67		18	442+00	40	24	106.67
26	85+75	40	24	106.67		63	203+65	40	24	106.67		17	475+00	40	24	106.67
27	88+15	40	24	106.67		64	209+55	40	24	106.67		16	696+00	40	24	106.67
28	90+85	40	24	106.67		65	212+05	40	24	106.67		15	697+50	40	24	106.67
29	93+70	40	24	106.67		66	225+65	40	24	106.67		14	712+50	40	24	106.67
30	97+70	40	24	106.67		67	227+40	40	24	106.67		13	720+00	40	24	106.67
31	101+30	40	24	106.67		68	230+80	40	24	106.67		12	740+00	40	24	106.67
32	105+95	90	24	240.00		69	233+65	74	24	197.33		11	759+00	40	24	106.67
33	109+70	40	24	106.67		70	262+60	40	24	106.67						
34	113+65	40	24	106.67		71	265+45	40	24	106.67		**TOTAL CARROLL CO SB**				853.33
35	115+50	40	24	106.67		72	269+45	40	24	106.67						
36	117+85	40	24	106.67		73	272+50	144	24	384.00						
37	122+00	174	24	464.00		74	340+05	40	24	106.67		**TOTAL CARROLL CO**				12541.33

NORTHBOUND

#	STATION	LENGTH	WIDTH	SY
95	788+35	40	24	106.67
96	789+10	40	24	106.67
97	789+60	40	24	106.67
98	791+50	40	24	106.67
99	813+40	40	24	106.67
100	823+45	40	24	106.67
101	835+50	40	24	106.67
102	845+00	40	24	106.67
103	887+85	40	24	106.67
104	889+00	40	24	106.67
105	902+55	40	24	106.67
106	903+50	40	24	106.67
107	909+30	40	24	106.67
108	913+50	40	24	106.67
109	922+20	40	24	106.67
110	923+30	40	24	106.67
111	924+75	40	24	106.67
112	926+35	40	24	106.67
113	927+75	40	24	106.67
114	930+00	40	24	106.67
115	930+50	40	24	106.67

TOTAL GALLATIN CO NB	2240.00

SOUTHBOUND

#	STATION	LENGTH	WIDTH	SY
10	816+00	40	24	106.67
9	861+50	40	24	106.67
8	890+00	40	24	106.67
7	914+85	40	24	106.67
6	922+10	40	24	106.67
5	924+74	40	24	106.67
4	929+50	40	24	106.67
3	932+35	40	24	106.67
2	933+98	40	24	106.67
1	935+79	40	24	106.67

TOTAL GALLATIN CO SB	1066.67

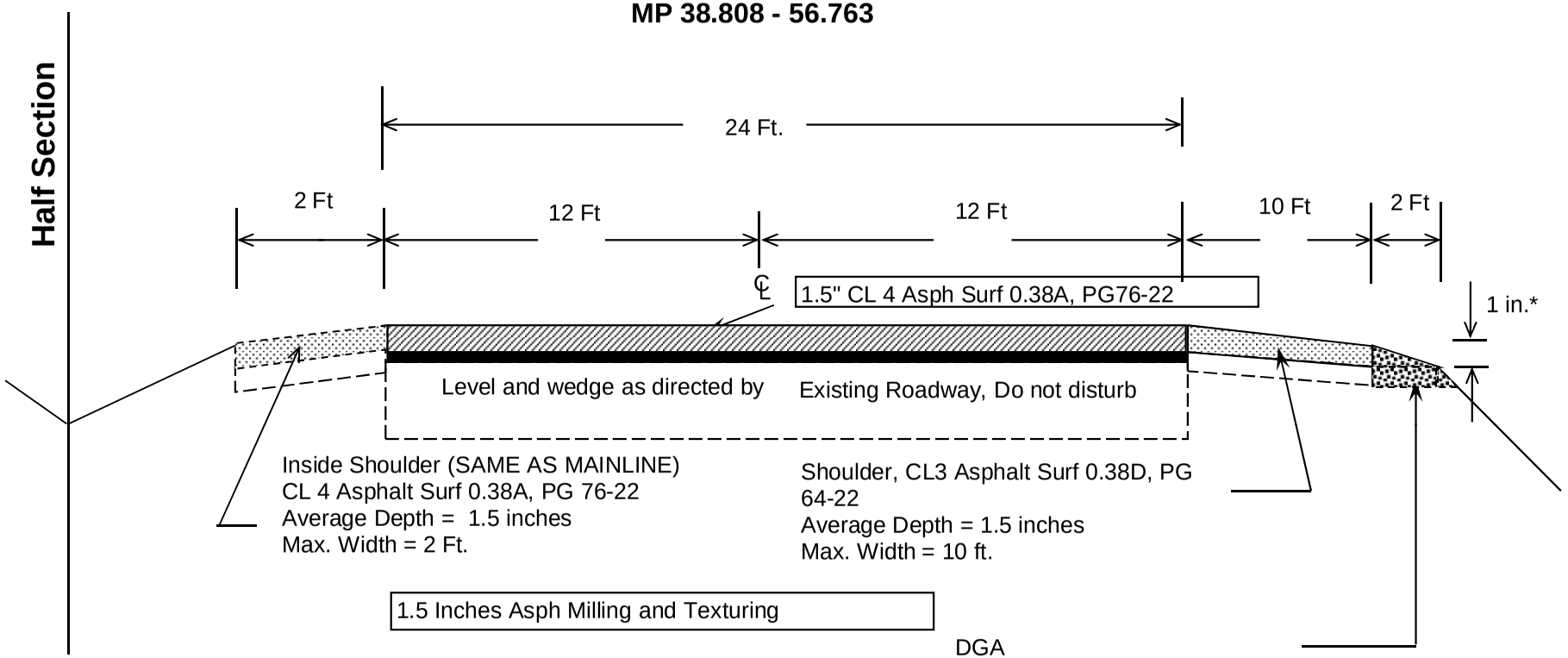
TOTAL GALLATIN CO	3306.67

REMOVE AND REPLACE 10' HIGH CHAIN LINK FENCE

BEGIN MP	END MP	LINEAR FEET
39.616	39.775	840
40.213	40.412	1051
42.102	42.347	1294
	TOTAL	**3185**

CARROLL AND GALLATIN COUNTIES
I-71 NB TYPICAL HALF SECTION

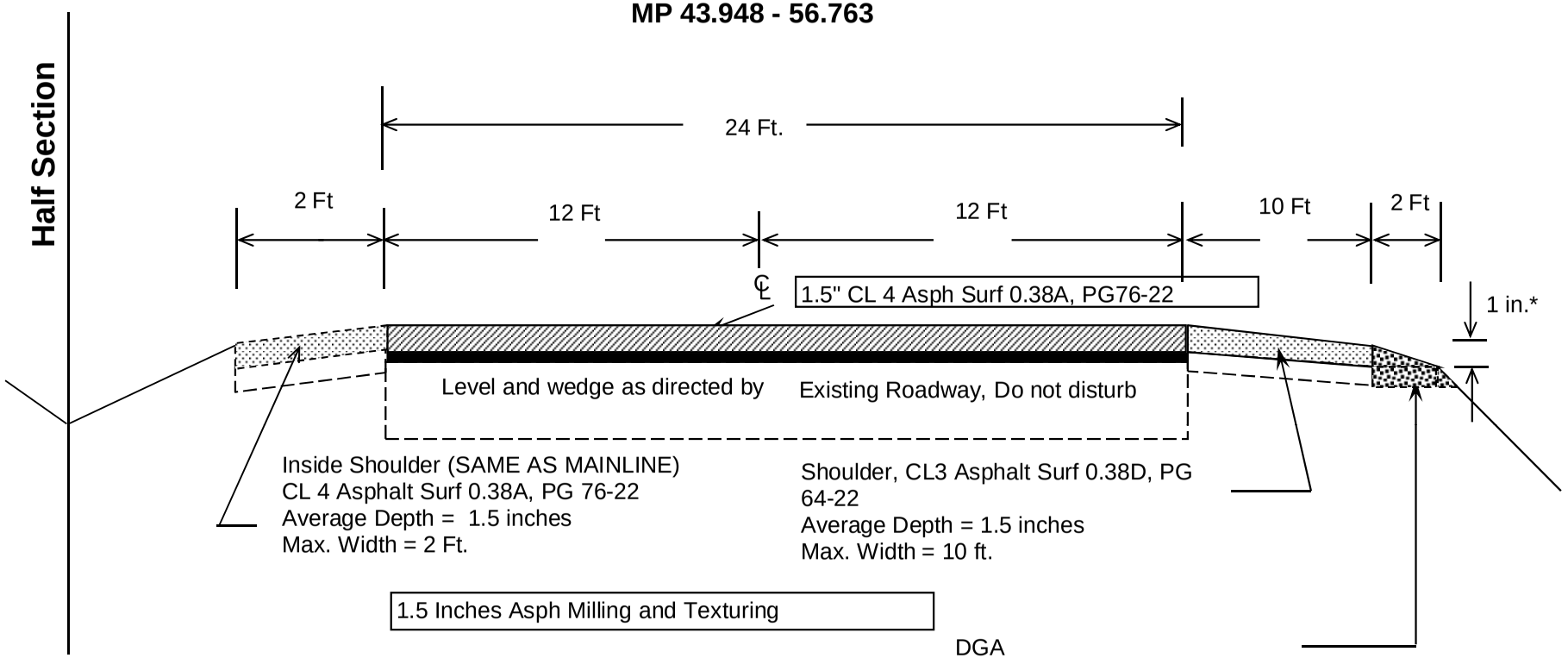
MP 38.808 - 56.763



***Where Existing Site Conditions Permit**

CARROLL AND GALLATIN COUNTIES
I-71 SB TYPICAL HALF SECTION

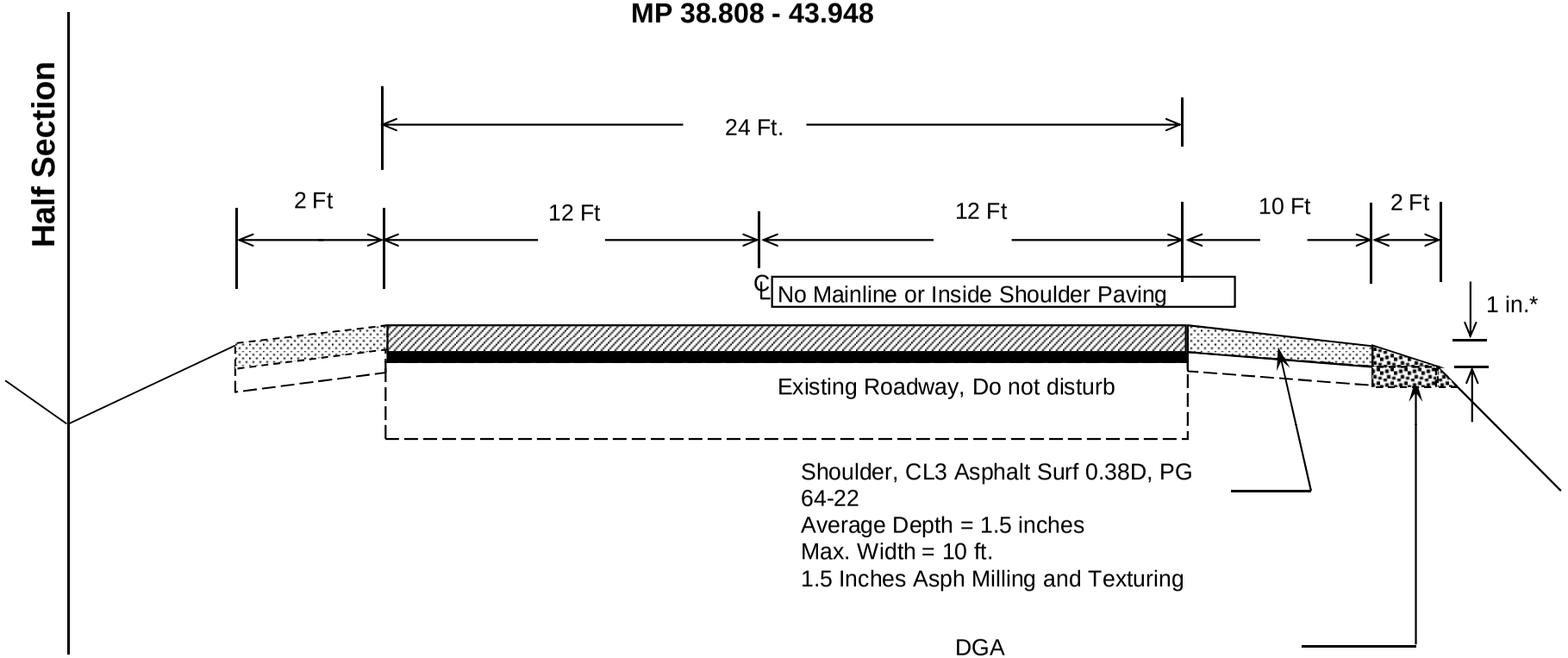
MP 43.948 - 56.763



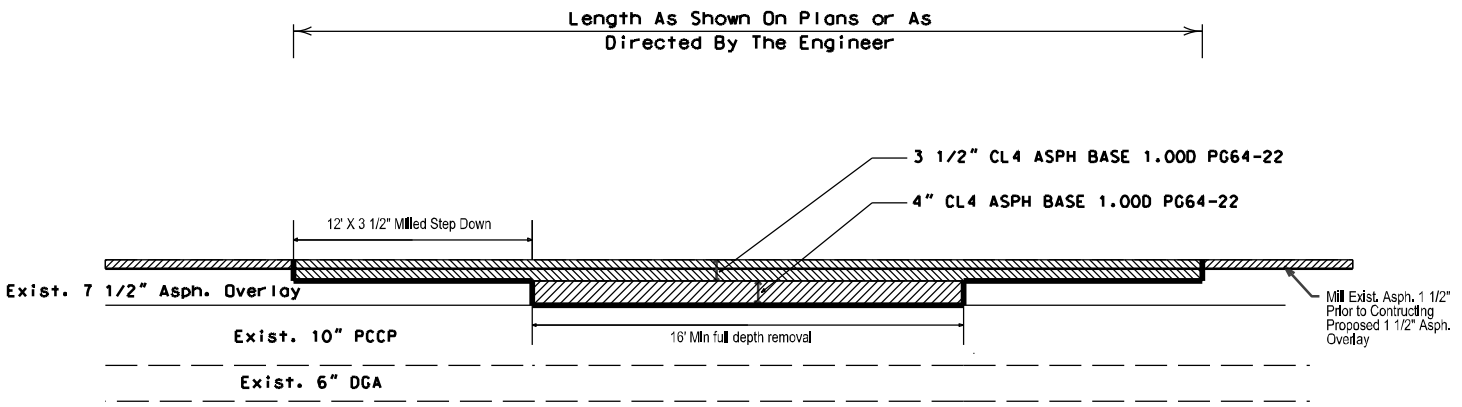
***Where Existing Site Conditions Permit**

CARROLL COUNTY
I-71 SB TYPICAL HALF SECTION

MP 38.808 - 43.948



***Where Existing Site Conditions Permit**



BASE FAILURE REPAIR PROFILE DETAIL

"BASE FAILURE"locations and widths are to be determined by the engineer. Breaking and seating of existing JCP Pavement shall be done in accordance with Section 504 of the 2012 Standard Specifications.

The contract unit bid price per SQYD for "Base Failure"shall include removing pavement, breaking and seating the PCCP, asphalt base 1.00D PG 64-22, and all incidentals necessary to complete the installation as detailed.

The Contractor shall allow 2 weeks minimum between completing the BASE FAILURE and the asphalt overlay construction to allow for settlement. Leveling and wedging shall be used to bring the repaired area back to existing grade if settlement occurs.

GUARDRAIL DELIVERY VERIFICATION SHEET

CONTRACT ID _____

DESCRIPTION	UNIT	QUANTITIES FIELD VERIFIED	QUANTITIES DELIVERED
GUARDRAIL STEEL W BEAM	LF		
GUARDRAIL STEEL THRIE BEAM	LF		
GUARDRAIL THRIE BEAM-W BEAM CONNECTOR	EA		
GUARDRAIL TERMINAL SECTION No. 1	EA		
GUARDRAIL TERMINAL SECTION No. 2	EA		
GUARDRAIL TERMINAL SECTION No. 3	EA		
GUARDRAIL THRIE BEAM TERMINAL SECTION	EA		
CRASH CUSHION TYPE VI	EA		
CRASH CUSHION TYPE VII	EA		
CRASH CUSHION TYPE IX/IX-A	EA		
GUARDRAIL END TREATMENT TYPE 1	EA		
GUARDRAIL END TREATMENT TYPE 2A	EA		
GUARDRAIL END TREATMENT TYPE 3	EA		
GUARDRAIL END TREATMENT TYPE 4A	EA		
GUARDRAIL END TREATMENT TYPE 7	EA		
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A/A-1	EA		
GUARDRAIL CONNECTOR TO BRIDGE END TYPE E/E-1	EA		
GUARDRAIL CONNECTOR TO BRIDGE END TYPE C	EA		
GUARDRAIL CONNECTOR TO BRIDGE END TYPE D	EA		
GUARDRAIL CONNECTOR TO CONC MED PIER	EA		
GUARDRAIL CONNECTOR TO CONC SHLDR PIER	EA		
GUARDRAIL POSTS-STEEL	EA		
GUARDRAIL OFFSET BLOCK TYPE 4	EA		
GUARDRAIL OFFSET BLOCK STEEL	EA		
GUARDRAIL OFFSET BLOCK THRIE BEAM	EA		
GUARDRAIL BACK-UP PLATE W BEAM	EA		
GUARDRAIL BACK-UP PLATE THRIE BEAM	EA		
GUARDRAIL NUTS, BOLTS, & WASHERS	BAG		

NOTES:

1. Dispose of concrete foundations and timber posts off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department.
2. Salvage and deliver removed guardrail system components, other than concrete foundations and timber posts, according to Section 719.03.07.
3. Prior to removing the materials from the project site, obtain the Contractor's and Engineer's representativ's signatures.
4. Upon delivery, obtain the Bailey Bridge Lot's representative's signature and submit this completed form to the Engineer.
5. The Department will not measure removed guardrail components for payment without completed delivery verification sheet(s).

	PRINTED NAME	SIGNATURE	DATE
RESIDENT ENGINEER'S REPRESENTATIVE	_____	_____	_____
CONTRACTOR'S REPRESENTATIVE	_____	_____	_____
BAILEY BRIDGE LOT'S REPRESENTATIVE	_____	_____	_____

CARROLL CO. I-71 m.p. 43.2
STATION 279 (NORTHBOUND)
Figure 1

SITE LOCATION IS APPROXIMATE AND WILL BE DETERMINED IN THE FIELD AND APPROVED BY DIVISION OF PLANNING PERSONNEL PRIOR TO ANY CONSTRUCTION.

ALL LOOPS SHALL BE 6'X6' SQUARE AND SHALL BE INSTALLED 16' FROM LEADING EDGE TO LEADING EDGE AS SHOWN. PIEZOELECTRIC SENSORS (PIEZOS) SHALL BE INSTALLED 5' FROM THE EDGE OF LOOPS WITH THE EDGE OF EACH PIEZO FLUSH WITH THE EDGE OF THE CORRESPONDING DRIVING LANE. LOOPS AND PIEZOS SHALL BE INSTALLED SPLICE-FREE TO THE CABINET AND A MINIMUM OF 2' OF WIRE FOR EACH SENSOR SHALL BE COILED INSIDE EACH JUNCTION BOX AND CABINET. ALL LOOPS AND PIEZOS SHALL BE LABELED IN ALL JUNCTION BOXES AND CABINET. DIVISION OF PLANNING PERSONNEL WILL CONNECT THE LOOPS AND PIEZOS INSIDE THE CABINET.

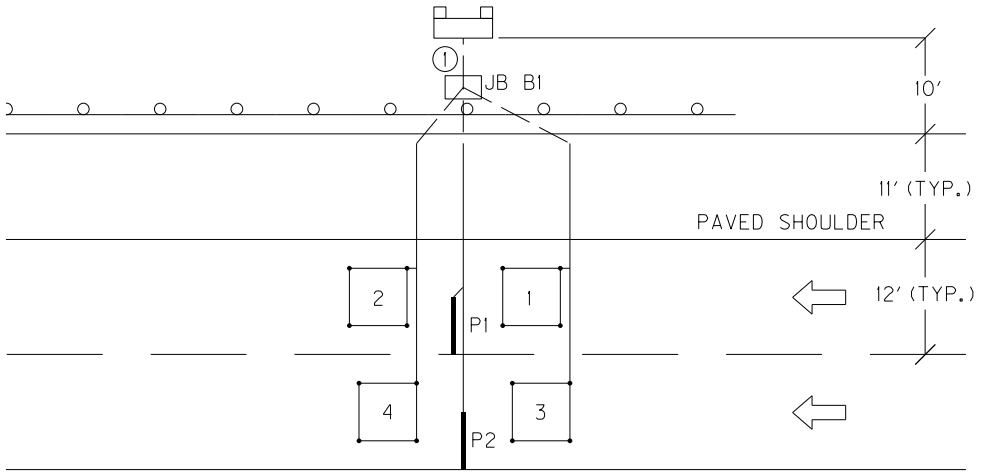
INSTALL ONE (1) 1¼" CONDUIT FROM EACH SAW SLOT TO NEAREST JUNCTION BOX.

INSTALL ONE (1) TYPE B JUNCTION BOX (JB B1).

INSTALL ONE (1) 20"X20"X8" CABINET MOUNTED TO TWO (2) WOOD POSTS.

CODED NOTE:

① INSTALL ONE (1) 2" CONDUIT.



SCALE 1"=20'

GALLATIN CO. I-71 m.p. 53.5
STATION 525
FIGURE 2

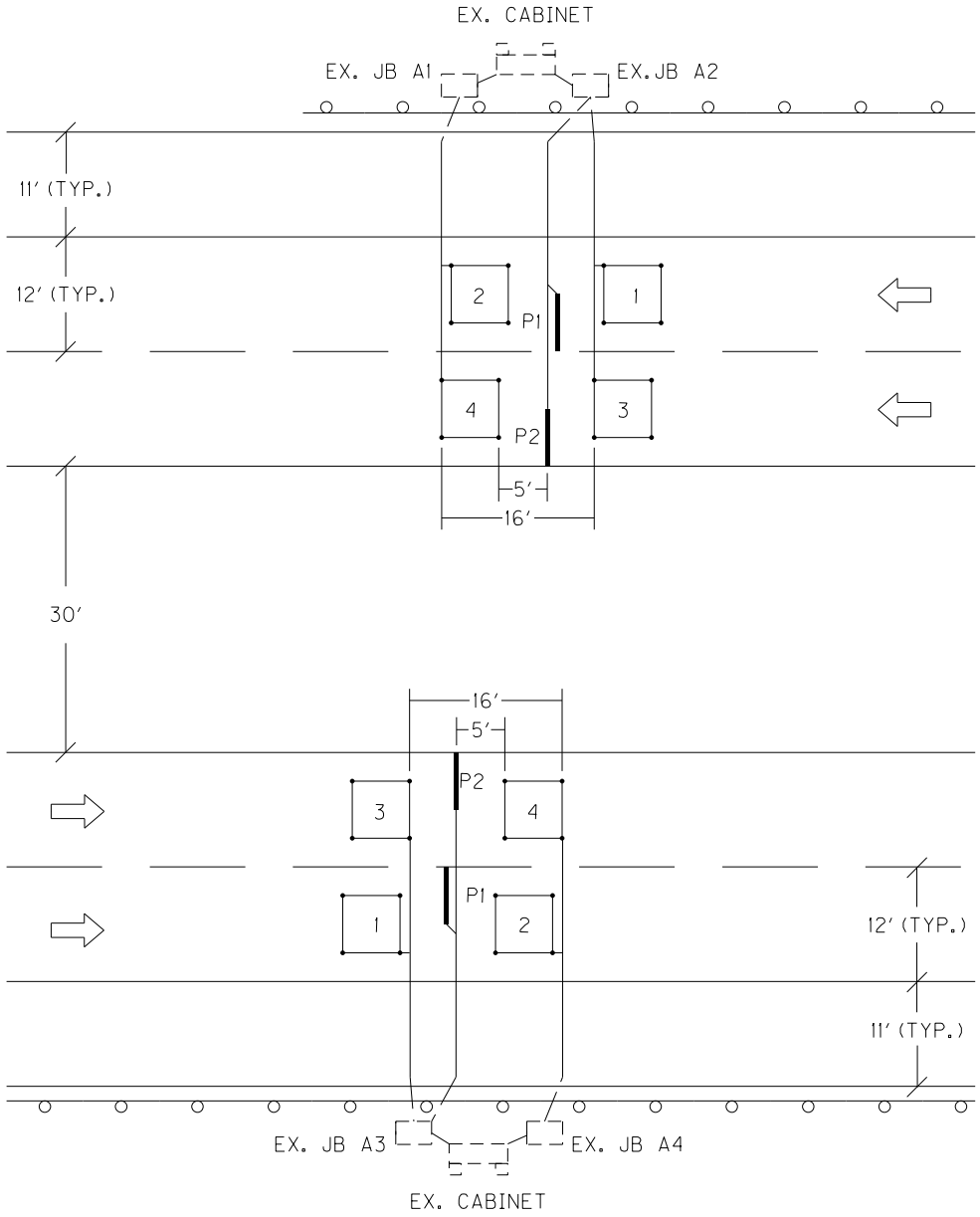
SITE LOCATION IS APPROXIMATE AND WILL BE DETERMINED IN THE FIELD AND APPROVED BY DIVISION OF PLANNING PERSONNEL PRIOR TO ANY CONSTRUCTION.

ALL LOOPS SHALL BE 6'X6' SQUARE AND SHALL BE INSTALLED 16' FROM LEADING EDGE TO LEADING EDGE AS SHOWN. PIEZOELECTRIC SENSORS (PIEZOS) SHALL BE INSTALLED 5' FROM THE EDGE OF LOOPS WITH THE EDGE OF EACH PIEZO FLUSH WITH THE EDGE OF THE CORRESPONDING DRIVING LANE. LOOPS AND PIEZOS SHALL BE INSTALLED SPLICE-FREE TO THE CABINET AND A MINIMUM OF 2' OF WIRE FOR EACH SENSOR SHALL BE COILED INSIDE EACH JUNCTION BOX AND EACH CABINET. ALL LOOPS AND PIEZOS SHALL BE LABELED IN ALL JUNCTION BOXES AND CABINETS. DIVISION OF PLANNING PERSONNEL WILL CONNECT THE LOOPS AND PIEZOS INSIDE THE CABINETS.

INSTALL NEW 1¼" CONDUIT FROM EACH SAW SLOT TO NEAREST JUNCTION BOX AND USE EXISTING CONDUIT FROM JUNCTION BOX ONTO THE CABINET.

USE EXISTING TYPE A JUNCTION BOXES (JB A1, A2, A3 AND A4).

USE EXISTING 20"X20"X8" CABINETS.



SCALE 1"=20'

GALLATIN CO. I-71 m.p. 55.3
STATION 537
FIGURE 3

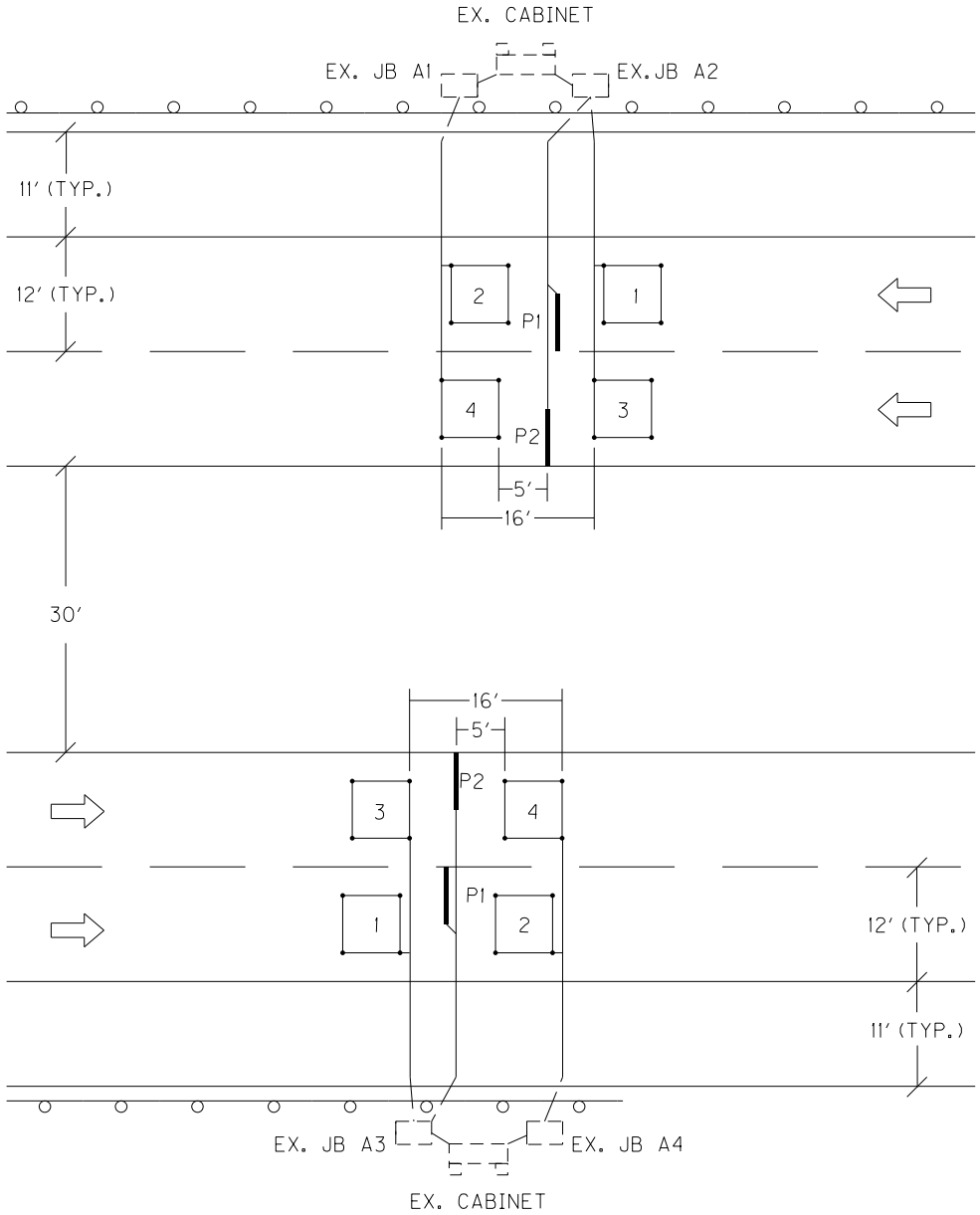
SITE LOCATION IS APPROXIMATE AND WILL BE DETERMINED IN THE FIELD AND APPROVED BY DIVISION OF PLANNING PERSONNEL PRIOR TO ANY CONSTRUCTION.

ALL LOOPS SHALL BE 6'X6' SQUARE AND SHALL BE INSTALLED 16' FROM LEADING EDGE TO LEADING EDGE AS SHOWN. PIEZOELECTRIC SENSORS (PIEZOS) SHALL BE INSTALLED 5' FROM THE EDGE OF LOOPS WITH THE EDGE OF EACH PIEZO FLUSH WITH THE EDGE OF THE CORRESPONDING DRIVING LANE. LOOPS AND PIEZOS SHALL BE INSTALLED SPLICE-FREE TO THE CABINET AND A MINIMUM OF 2' OF WIRE FOR EACH SENSOR SHALL BE COILED INSIDE EACH JUNCTION BOX AND EACH CABINET. ALL LOOPS AND PIEZOS SHALL BE LABELED IN ALL JUNCTION BOXES AND CABINETS. DIVISION OF PLANNING PERSONNEL WILL CONNECT THE LOOPS AND PIEZOS INSIDE THE CABINETS.

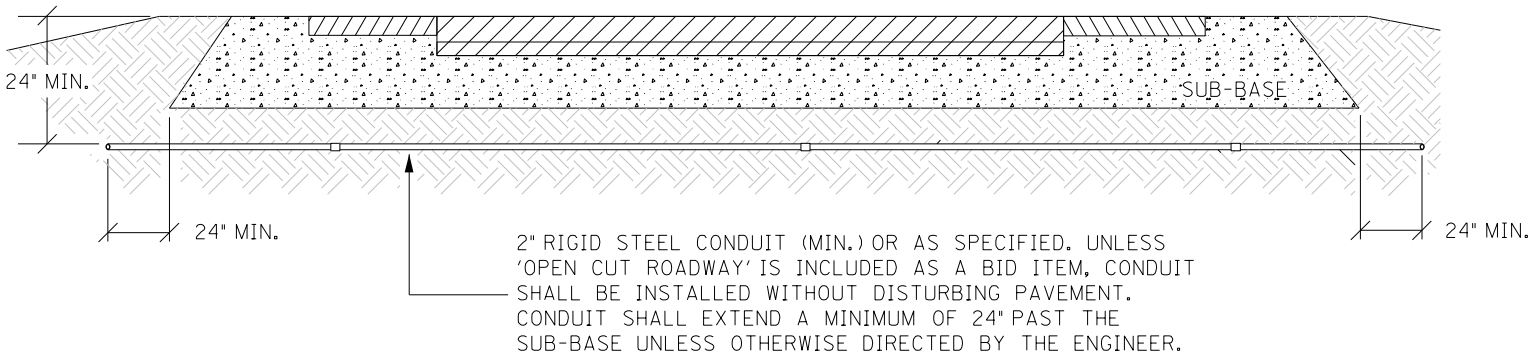
INSTALL NEW 1¼" CONDUIT FROM EACH SAW SLOT TO NEAREST JUNCTION BOX AND USE EXISTING CONDUIT FROM JUNCTION BOX ONTO THE CABINET.

USE EXISTING TYPE A JUNCTION BOXES (JB A1, A2, A3 AND A4).

USE EXISTING 20"X20"X8" CABINETS.



SCALE 1"=20'

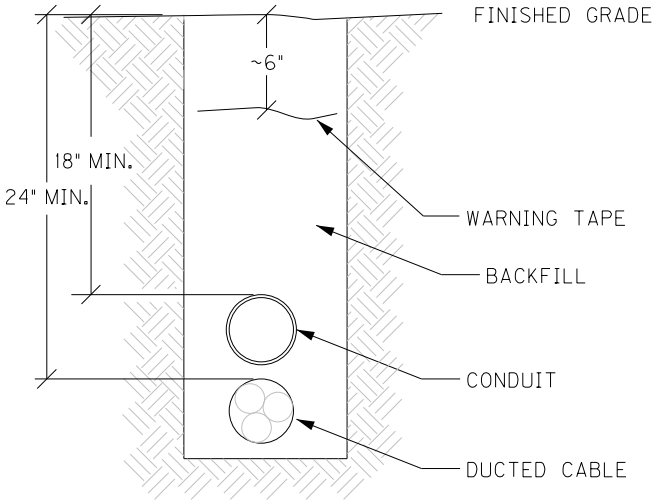


CONDUIT UNDER PAVEMENT

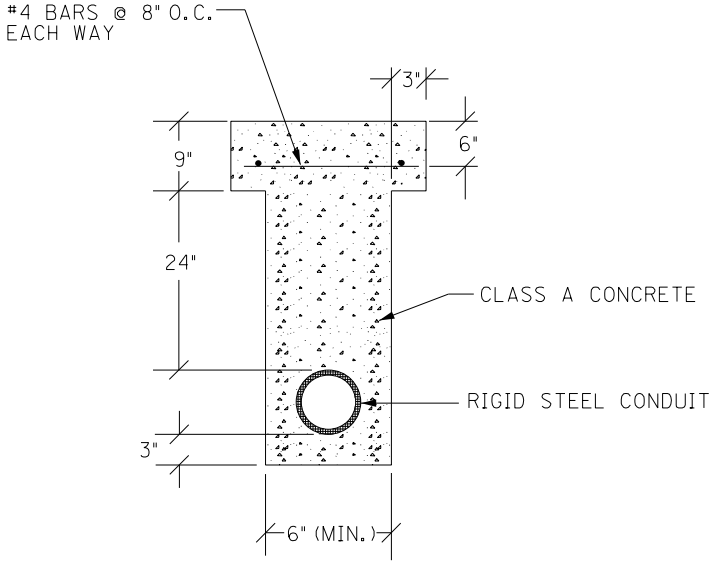
TOTAL TRENCH WIDTH SHALL BE 3" (NOM.) WIDER THAN THE SUM OF THE OUTSIDE DIAMETER(S) OF THE CONDUIT(S) INSTALLED. CONDUIT(S) SHALL BE CENTERED IN TRENCH.

CONTRACTOR SHALL PLACE BACKFILL IN LIFTS (9" MAX.) COMPACT BACKFILL, AND RESTORE DISTURBED AREA TO THE SATISFACTION OF THE ENGINEER

CONTRACTOR SHALL INSTALL UNDERGROUND UTILITY WARNING TAPE ABOVE CONDUIT AS SHOWN.



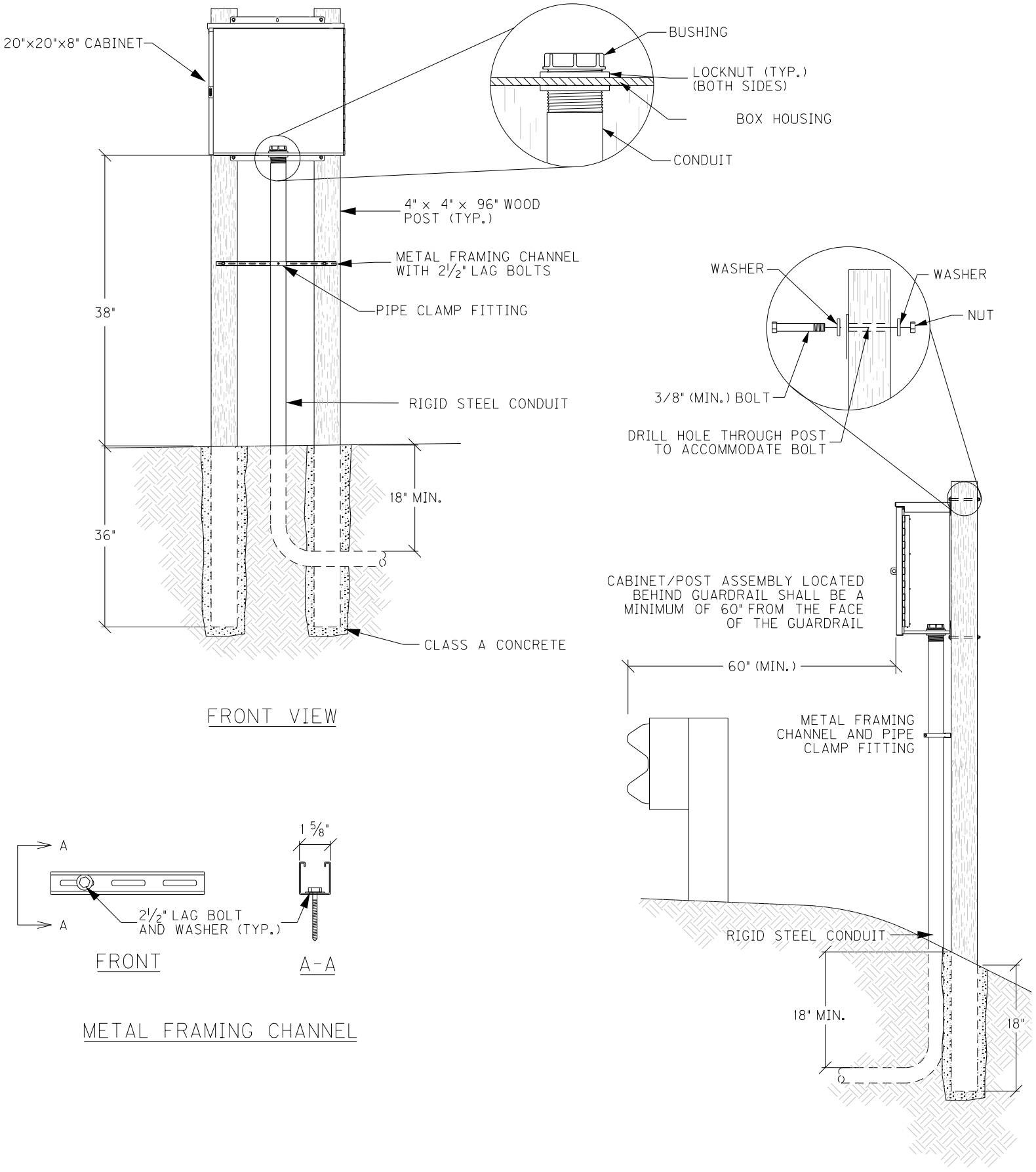
CONDUIT TRENCH



OPEN CUT PAVEMENT DETAIL

CONDUIT INSTALLATION

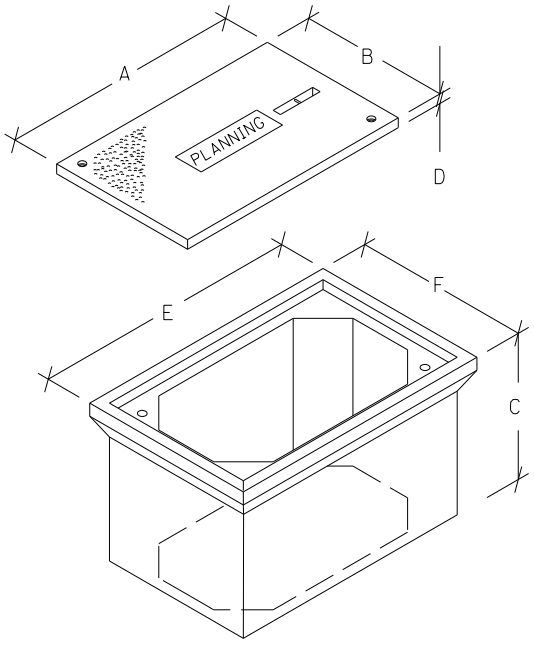
NOT TO SCALE



GALVANIZED STEEL CABINET
DOUBLE POST ASSEMBLY

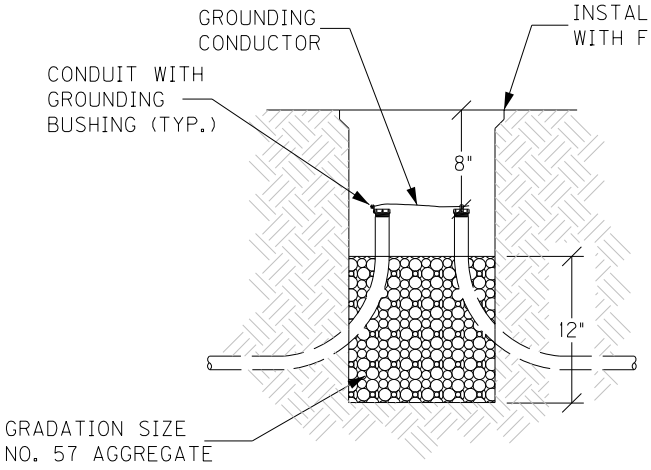
LEFT VIEW

NOT TO SCALE



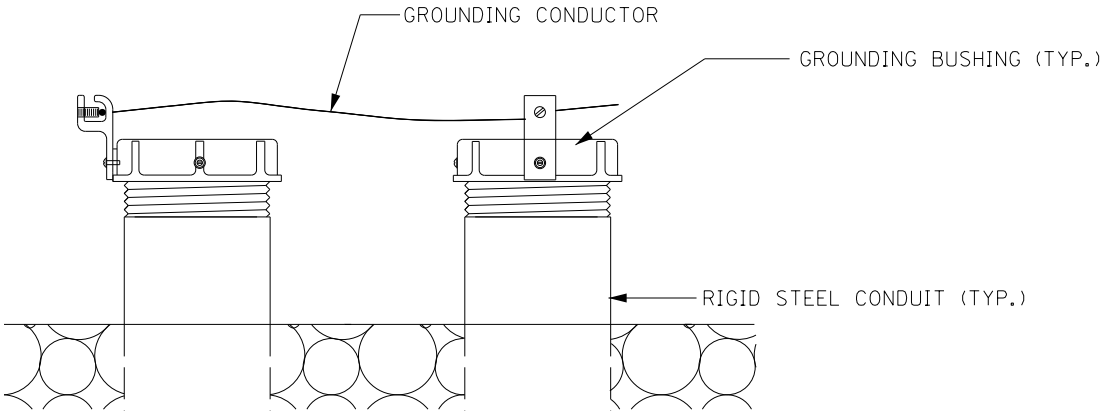
JUNCTION BOX DIMENSIONS (NOMINAL)						
	A	B	C	D*	E	F
TYPE A	23"	14"	18"	2"	25"	16"
TYPE B	18"	11"	12"	1¾"	20"	13"
TYPE C	36"	24"	30"	3"	38"	26"

* MINIMUM
STACKABLE BOXES ARE PERMITTED



WHERE REQUIRED, JUNCTION BOX SHALL BE ORIENTED SUCH THAT THE DIMENSIONS COMPLY WITH THE NATIONAL ELECTRICAL CODE.

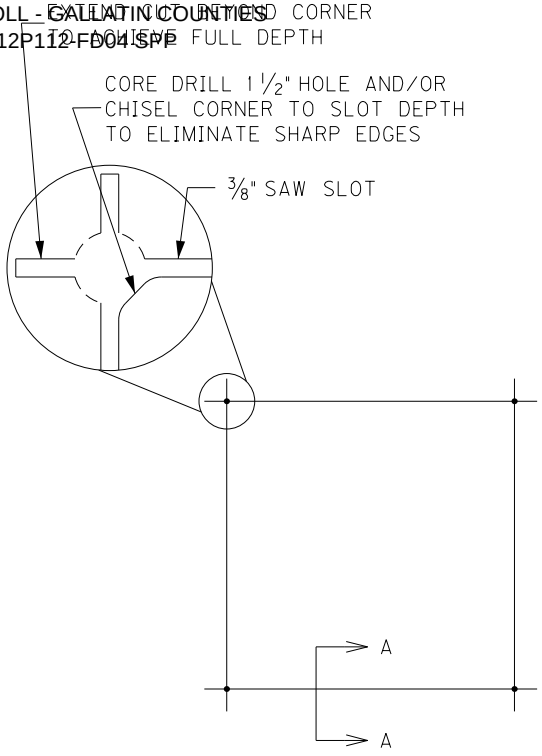
ELEVATION



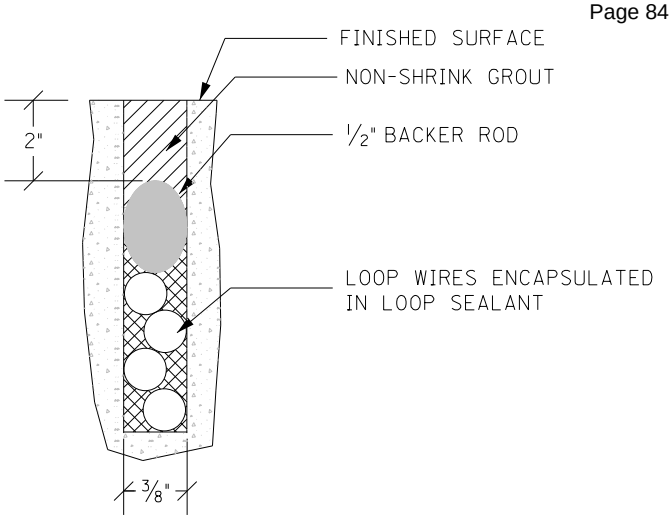
GROUNDING DETAIL

JUNCTION BOX - TYPE A, TYPE B, TYPE C

NOT TO SCALE



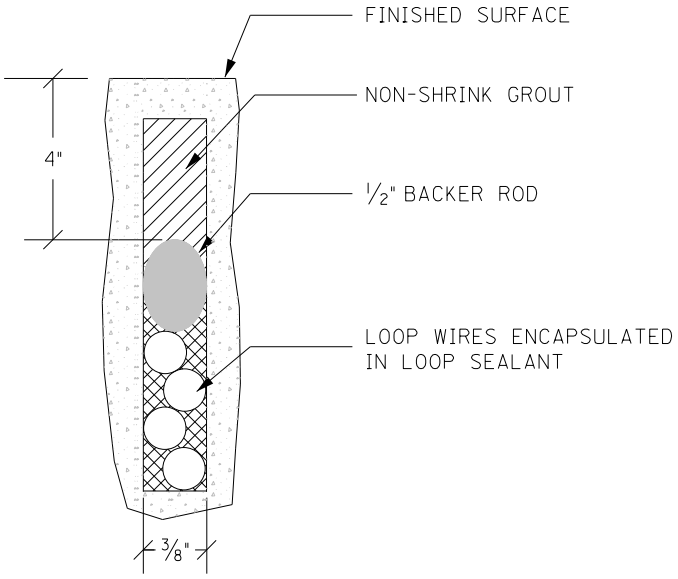
SAW CUT PLAN



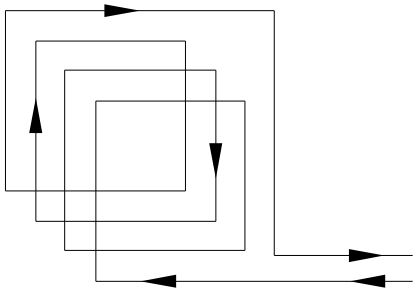
SECTION A-A (CONCRETE)

UNLESS SPECIFIED OTHERWISE, ALL LOOPS SHALL BE 6' x 6' SQUARE, CENTERED IN EACH LANE, WITH FOUR TURNS OF 14 AWG LOOP WIRE.

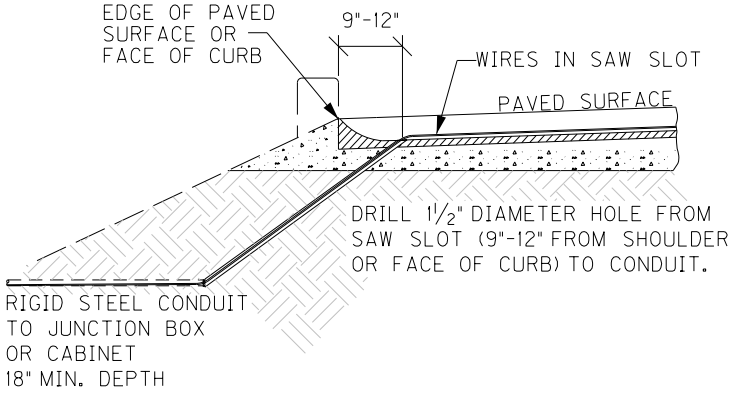
ADJACENT SAW SLOTS SHALL BE A MINIMUM OF 12" APART.



SECTION A-A (ASPHALT)



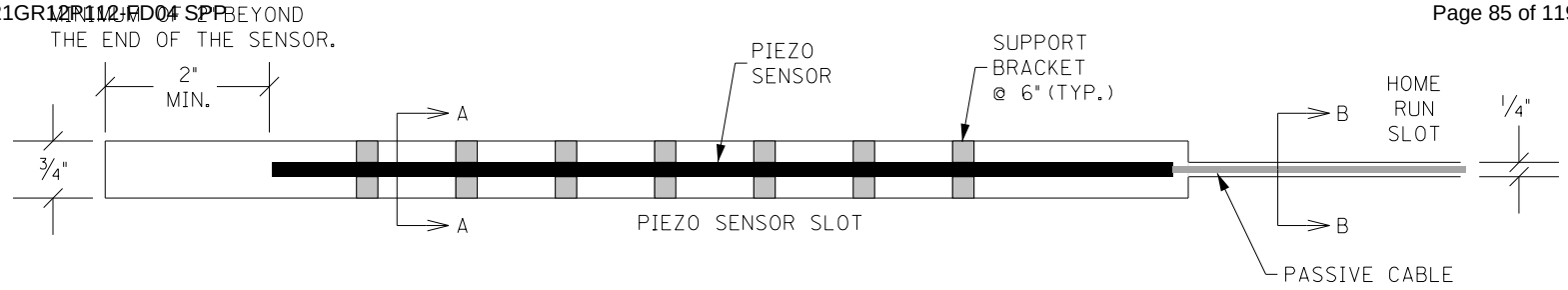
WIRING PLAN



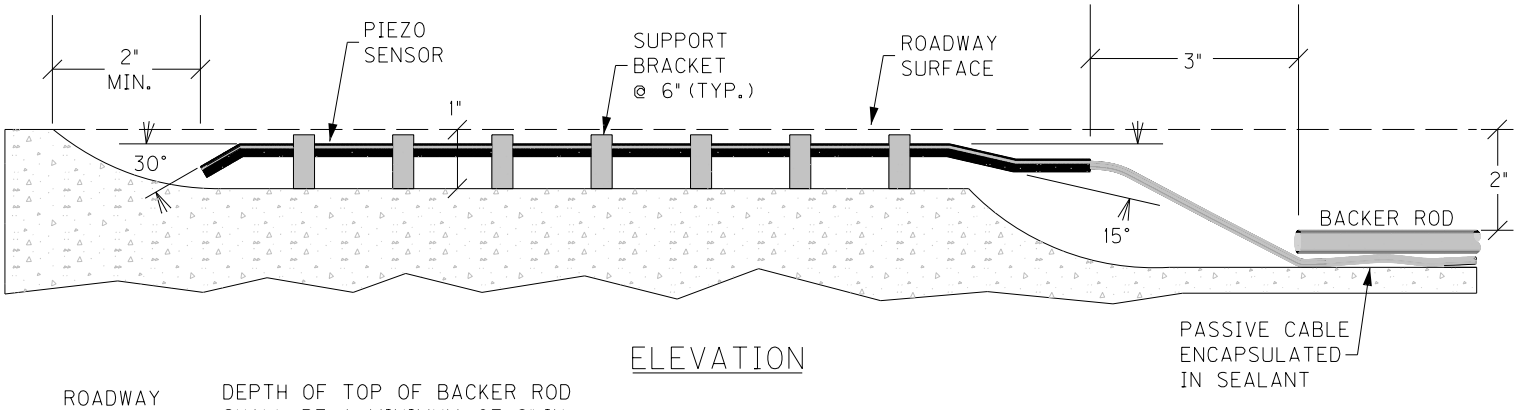
SAW SLOT EDGE OF PAVEMENT TRANSITION

INDUCTIVE LOOP DETECTOR

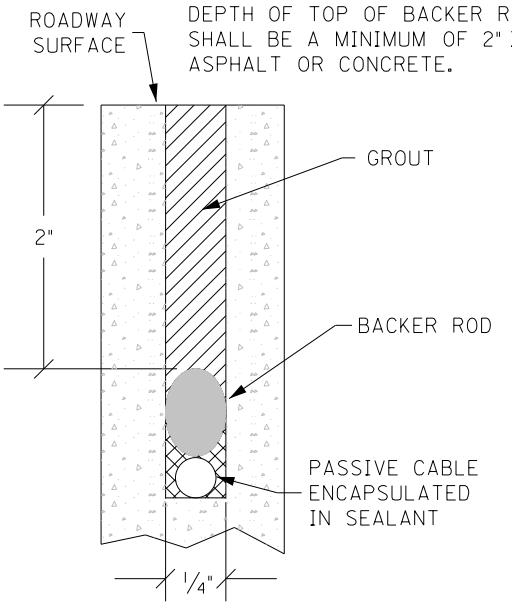
NOT TO SCALE



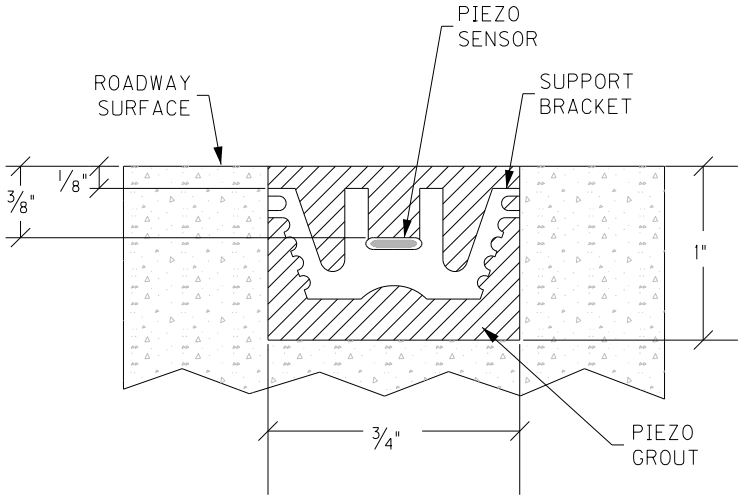
PLAN



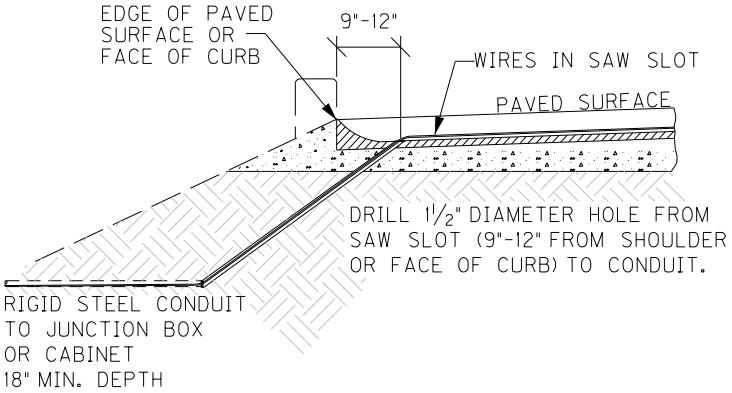
ELEVATION



SECTION B-B



SECTION A-A



SAW SLOT EDGE OF PAVEMENT TRANSITION

PIEZOELECTRIC SENSOR INSTALLATION

NOT TO SCALE

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2012* and *Standard Drawings, Edition of 2012 with the 2012 Revision.*

Supplemental Specifications to the Standard Specifications for Road and Bridge Construction, 2012 Edition

(Effective with the August 17, 2012 Letting)

Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	D) Testing Responsibilites.
Number:	4) Density.
Revision:	Replace the second sentence of the Option A paragraph with the following: Perform coring by the end of the following work day.
Subsection:	606.03.17 Special Requirements for Latex Concrete Overlays.
Part:	A) Existing Bridges and New Structures.
Number:	1) Prewetting and Grout-Bond Coat.
Revision:	Add the following sentence to the last paragraph: Do not apply a grout-bond coat on bridge decks prepared by hydrodemolition.
Subsection:	609.03 Construction.
Revision:	Replace Subsection 609.03.01 with the following: 609.03.01 A) Swinging the Spans. Before placing concrete slabs on steel spans or precast concrete release the temporary erection supports under the bridge and swing the span free on its supports. 609.03.01 B) Lift Loops. Cut all lift loops flush with the top of the precast beam once the beam is placed in the final location and prior to placing steel reinforcement. At locations where lift loops are cut, paint the top of the beam with galvanized or epoxy paint.

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SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

This Special Note will apply when indicated on the plans or in the proposal.

1.0 DESCRIPTION. Furnish, install, operate, and maintain variable message signs at the locations shown on the plans or designated by the Engineer. Remove and retain possession of variable message signs when they are no longer needed on the project.

2.0 MATERIALS.

2.1 General. Use LED Variable Message Signs Class I, II, or III, as appropriate, from the Department's List of Approved Materials.

Unclassified signs may be submitted for approval by the Engineer. The Engineer may require a daytime and nighttime demonstration. The Engineer will make a final decision within 30 days after all required information is received.

2.2 Sign and Controls. All signs must:

1) Provide 3-line messages with each line being 8 characters long and at least 18 inches tall. Each character comprises 35 pixels.
2) Provide at least 40 preprogrammed messages available for use at any time. Provide for quick and easy change of the displayed message; editing of the message; and additions of new messages.
3) Provide a controller consisting of:
   a) Keyboard or keypad.
   b) Readout that mimics the actual sign display. (When LCD or LCD type readout is used, include backlighting and heating or otherwise arrange for viewing in cold temperatures.)
   c) Non-volatile memory or suitable memory with battery backup for storing pre-programmed messages.
   d) Logic circuitry to control the sequence of messages and flash rate.
4) Provide a serial interface that is capable of supporting complete remote control ability through land line and cellular telephone operation. Include communication software capable of immediately updating the message, providing complete sign status, and allowing message library queries and updates.
5) Allow a single person easily to raise the sign to a satisfactory height above the pavement during use, and lower the sign during travel.
6) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
7) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
8) Provide the driver board as part of a module. All modules are interchangeable, and have plug and socket arrangements for disconnection and reconnection. Printed circuit boards associated with driver boards have a conformable coating to protect against moisture.
9) Provide a sign case sealed against rain, snow, dust, insects, etc. The lens is UV stabilized clear plastic (polycarbonate, acrylic, or other approved material) angled to prevent glare.
10) Provide a flat black UV protected coating on the sign hardware, character PCB, and appropriate lens areas.
11) Provide a photocell control to provide automatic dimming.

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12) Allow an on-off flashing sequence at an adjustable rate.
13) Provide a sight to aim the message.
14) Provide a LED display color of approximately 590 nm amber.
15) Provide a controller that is password protected.
16) Provide a security device that prevents unauthorized individuals from accessing the controller.
17) Provide the following 3-line messages preprogrammed and available for use when the sign unit begins operation:

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

*Insert numerals as directed by the Engineer.
Add other messages during the project when required by the Engineer.

2.3 Power.

1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. Provide direct wiring for operation of the sign or arrow board from an external power source to provide energy backup for 21 days without sunlight and an on-board system charger with the ability to recharge completely discharged batteries in 24 hours.

3.0 CONSTRUCTION. Furnish and operate the variable message signs as designated on the plans or by the Engineer. Ensure the bottom of the message panel is a minimum of 7 feet above the roadway in urban areas and 5 feet above in rural areas when operating. Use Class I, II, or III signs on roads with a speed limit less than 55 mph. Use Class I or II signs on roads with speed limits 55 mph or greater.

Maintain the sign in proper working order, including repair of any damage done by others, until completion of the project. When the sign becomes inoperative, immediately repair or replace the sign. Repetitive problems with the same unit will be cause for rejection and replacement.

Use only project related messages and messages directed by the Engineer, unnecessary messages lessen the impact of the sign. Ensure the message is displayed in either one or 2 phases with each phase having no more than 3 lines of text. When no message is needed, but it is necessary to know if the sign is operable, flash only a pixel.

When the sign is not needed, move it outside the clear zone or where the Engineer directs. Variable Message Signs are the property of the Contractor and shall be removed from the project when no longer needed. The Department will not assume ownership of these signs.

4.0 MEASUREMENT. The final quantity of Variable Message Sign will be

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the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

5.0 PAYMENT. The Department will pay for the Variable Message Signs at the unit price each. The Department will not pay for signs replaced due to damage or rejection. Payment is full compensation for furnishing all materials, labor, equipment, and service necessary to, operate, move, repair, and maintain or replace the variable message signs. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

2012 STANDARD DRAWINGS THAT APPLY

GUARDRAIL CONNECTOR TO BRIDGE END TYPE A AND A-1 ..... RBC-001-10
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A AND A-1 COMPONENTS RBC-002-02
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A AND A-1 COMPONENTS RBC-003-07
CRASH CUSHION TYPE IX-A RBE-205-05
TYPICAL GUARDRAIL INSTALLATIONS RBI-001-10
TYPICAL GUARDRAIL INSTALLATIONS RBI-002-06
INSTALLATION OF GUARDRAIL END TREATMENT TYPE 1 ..... RBI-004-04
STEEL BEAM GUARDRAIL (W-BEAM) RBR-001-11
GUARDRAIL TERMINAL SECTIONS RBR-010-05
GUARDRAIL POSTS RBR-015-04
GUARDRAIL POSTS RBR-016-04
GUARDRAIL END TREATMENT TYPE 1 ..... RBR-020-05
GUARDRAIL END TREATMENT TYPE 2A RBR-025-03
TEMPORARY SILT FENCE RDX-210-02
TEMPORARY SILT FENCE WITH WOVEN WIRE FENCE FABRIC RDX-215
SILT TRAP - TYPE B RDX-225
SILT TRAP - TYPE C RDX-230
CHAIN LINK FENCE 8’ TO 12’ HIGH RFC-002-04
FENCING DETAILS RFW-001-05
CURVE WIDENING AND SUPERELEVATION TRANSITIONS RGS-001-06
SUPERELEVATION FOR MULTILANE PAVEMENTS RGS-002-05
MISCELLANEOUS STANDARDS PART 1 ..... RGX-001-05
NETTING RRE-002-04
PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS TPM-100-02
PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS TPM-105-02
PAVEMENT MARKER ARRANGEMENTS MULTI-LANE ROADWAYS TPM-110-02
PAVEMENT MARKER ARRANGEMENT EXIT-GORE AND OFF-RAMP TPM-125-02
PAVEMENT MARKER ARRANGEMENTS ON-RAMP WITH TAPERED ACCELERATION LANE TPM-130-02
PAVEMENT MARKER ARRANGEMENT ON-RAMP WITH PARALLEL ACCELERATION LANE TPM-135-02
LANE CLOSURE MULTI-LANE HIGHWAY CASE I TTC-115-02
LANE CLOSURE MULTI-LANE HIGHWAY CASE II TTC-120-02
SHOULDER CLOSURE TTC-135-01
TEMPORARY PAVEMENT MARKER ARRANGEMENTS FOR CONSTRUCTION ZONES TTC-155-01
TEMPORARY PAVEMENT MARKER ARRANGEMENTS FOR LANE CLOSURES TTC-160-01
POST SPLICING DETAIL TTD-110-01
WORK ZONE SPEED LIMIT AND DOUBLE FINE SIGNS TTD-120-01
PAVEMENT CONDITION WARNING SIGNS TTD-125-01
MOBILE OPERATION FOR PAINT STRIPING CASE III TTS-110-01
MOBILE OPERATION FOR PAINT STRIPING CASE IV TTS-115-01

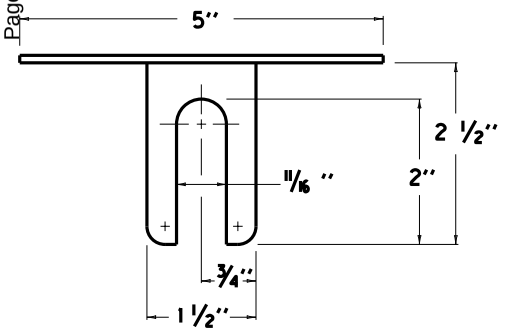
COUNTY OF	ITEM NO.	SHEET NO.

NOTES

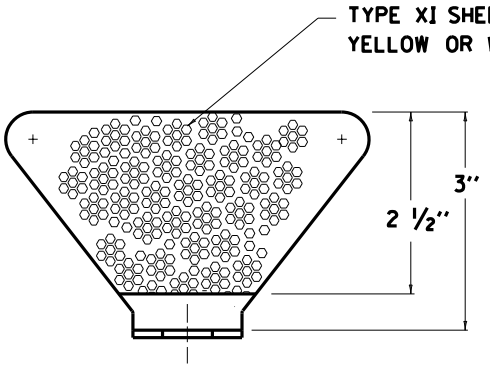
1. THE DELINEATOR'S SHAPE AND DIMENSIONS ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY. TYPES OF DELINEATORS PERMITTED SHALL BE FROM THE LIST OF APPROVED MATERIALS.
2. DELINEATOR SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE EACH AND SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR ONE COMPLETE INSTALLATION.
3.

CODE	PAY ITEM	PAY UNIT
1982	DELINEATOR FOR GUARDRAIL - MONO DIRECTIONAL WHITE	EACH
1983	DELINEATOR FOR GUARDRAIL - MONO DIRECTIONAL YELLOW	EACH
1987	DELINEATOR FOR GUARDRAIL - BI-DIRECTIONAL WHITE	EACH

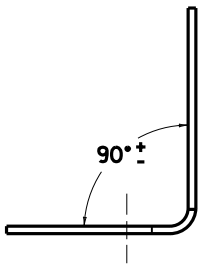
4. GUARDRAIL DELINEATORS SHALL BE REQUIRED ON ALL GUARDRAIL.
5. DELINEATORS SHALL BE MANUFACTURED FROM 12 GA. GALVANIZED STEEL.
6. DIMENSIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MANUFACTURER'S TOLERANCES.
7. WHEN CONCRETE BARRIERS EXTEND ACROSS BRIDGE STRUCTURES IN LIEU OF STEEL BEAM GUARDRAIL, DELINEATORS SHALL BE INSTALLED AT SAME VERTICAL ALIGNMENT AS ON THE GUARDRAIL, AND DELINEATORS SHALL COMPLY WITH CURRENT SEPIA DRAWING 004.
8. DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



PLAN VIEW

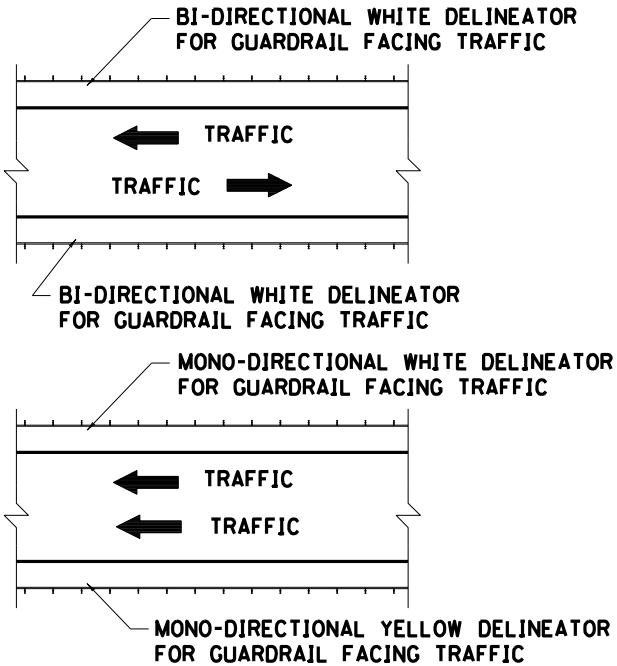


FRONT VIEW

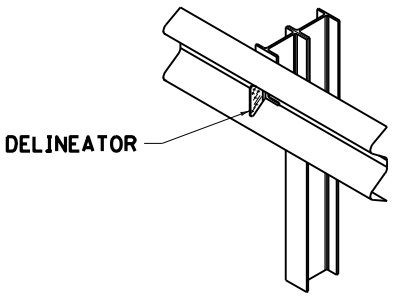


SIDE VIEW

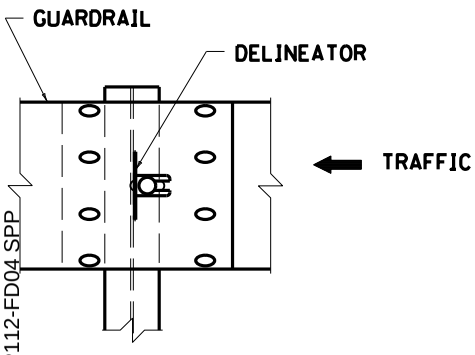
NOTE: DIMENSIONS SHOWN ARE FOR ONE VERSION OF A WEB-MOUNTED GUARDRAIL DELINEATOR. DELINEATORS WITH ALTERNATE DIMENSIONS MAY BE CONSIDERED FOR INCLUSION ON THE APPROVED PRODUCTS LIST.



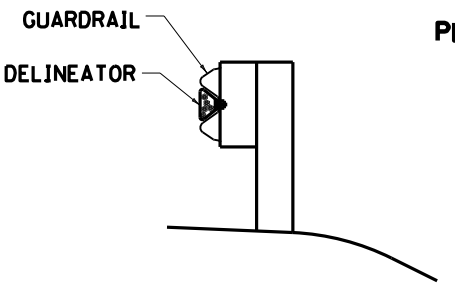
PLACEMENT OF DELINEATORS FOR GUARDRAIL



ISOMETRIC VIEW



FRONT VIEW



SIDE VIEW

APPROXIMATE DELINEATOR SPACING	
TANGENT	100'
CURVE	50'

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

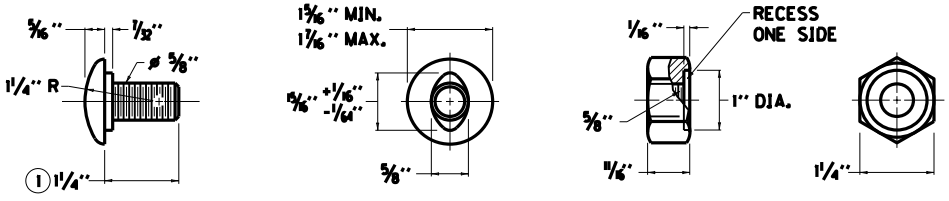
KENTUCKY DEPARTMENT OF HIGHWAYS

DELINEATORS FOR GUARDRAIL

SUBMITTED Jeff Jasper 6-15-2012
DIRECTOR DIVISION OF DESIGN — DATE

002

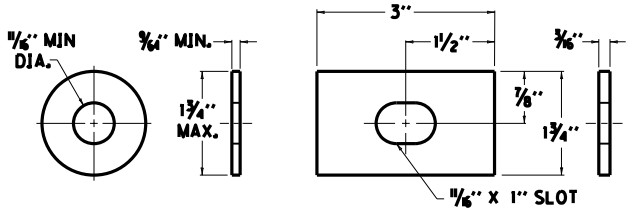
COUNTY OF	ITEM NO.	SHEET NO.



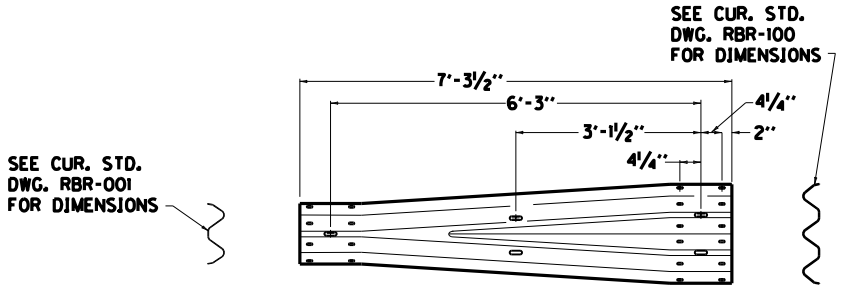
5/8" BUTTON HEAD BOLT AND RECESSED NUT

NOTES

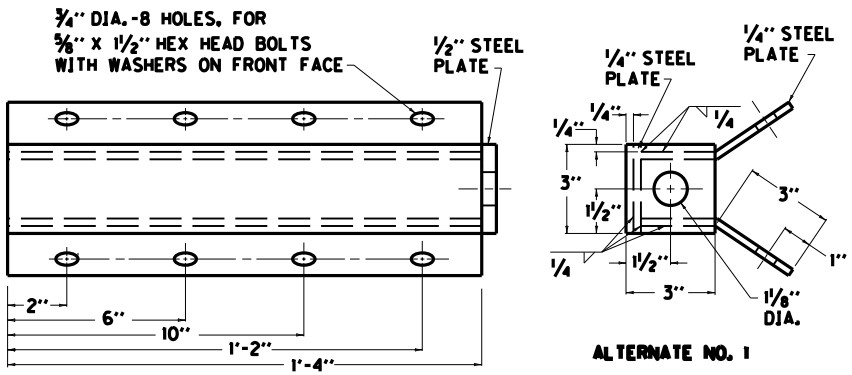
1. RAIL BOLT SIMILAR EXCEPT LENGTH.
2. THE THRIE BEAM TO "W" BEAM CONNECTOR SHALL COMPLY WITH AASHTO M-180 CLASS A, TYPE 2 EXCEPT WHERE IN CONFLICT WITH THIS DETAIL.



ROUND WASHER AND RECTANGULAR PLATE WASHER



THRIE BEAM TO "W" BEAM CONNECTOR (2)



ALTERNATE NO. 1

ALTERNATE NO. 2

RAIL ANCHOR ASSEMBLY

KENTUCKY
DEPARTMENT OF HIGHWAYS

GUARDRAIL COMPONENTS

SUBMITTED: TEBM DIVISION OF DESIGN — DATE: 6-15-2012

008

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 08/24/2012 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
4	05/11/2012
5	05/25/2012
6	06/01/2012
7	06/22/2012
8	06/29/2012
9	07/13/2012
10	07/20/2012
11	08/03/2012
12	08/10/2012
13	08/17/2012
14	08/24/2012

BRIN0004-003 06/01/2011

BRECKENRIDGE COUNTY

	Rates	Fringes
BRICKLAYER	$ 24.11	10.07

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

BRKY0002-006 06/01/2011

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 26.57	10.26

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 07/01/2012

	Rates	Fringes
CARPENTER	$ 26.40	13.91
Diver	$ 39.98	13.91
PILEDRIVERMAN	$ 26.65	13.91

ELEC0212-008 05/28/2012

BRACKEN, GALLATIN and GRANT COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 26.11	15.42

ELEC0212-014 06/27/2011

BRACKEN, GALLATIN & GRANT COUNTIES:

	Rates	Fringes
Sound & Communication Technician	$ 21.55	8.46

ELEC0317-012 05/30/2012

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

	Rates	Fringes
Electricians:		
Cable Splicer	$ 32.68	18.13

Electrician.....$ 32.22 20.09

ELEC0369-007 05/30/2012

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	$ 29.32	13.78

ELEC0575-002 05/30/2011

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 30.69	13.32

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* ENGI0181-018 07/01/2012

	Rates	Fringes
Operating Engineer:		
GROUP 1	$ 27.35	13.40
GROUP 2	$ 24.87	13.40
GROUP 3	$ 25.26	13.40
GROUP 4	$ 24.60	13.40

OPERATING ENGINEER CLASSIFICATIONS

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

GROUP 2 - Air Compressor (Over 900 cu. ft. per min.);

Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft.); Dredge Engineer; Electric Vibrator; Compactor/Self-Propelled Compactor; Elevator (One Drum or Buck Hoist); Elevator (When used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Conrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points; & Whirley Oiler

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

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

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

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

IRON0044-009 06/01/2012

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	$ 22.50	15.10
Structural	$ 24.80	15.10

IRON0070-006 06/01/2012

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	$ 26.34	18.58

IRON0372-006 06/01/2012

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.....$ 26.59 18.58
Up to & including 30-mile radius of Hamilton County, Ohio Courthouse.....$ 26.34 18.58

IRON0769-007 06/01/2012

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

	Rates	Fringes
IRONWORKER		
ZONE 1	$ 30.52	20.08
ZONE 2	$ 30.92	20.08
ZONE 3	$ 32.52	20.08

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

LABO0189-003 07/01/2012

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	$ 21.15	11.41
GROUP 2	$ 21.40	11.41
GROUP 3	$ 21.45	11.41
GROUP 4	$ 22.05	11.41

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 07/01/2012

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

	Rates	Fringes
Laborers:		
GROUP 1	$ 21.61	10.95
GROUP 2	$ 21.86	10.95
GROUP 3	$ 21.91	10.95
GROUP 4	$ 22.51	10.95

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 07/01/2012

BRECKINRIDGE & GRAYSON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 21.96	10.60
GROUP 2	$ 22.21	10.60
GROUP 3	$ 22.26	10.60
GROUP 4	$ 22.86	10.60

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

PAIN0012-017 05/01/2012

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

	Rates	Fringes
PAINTER (Heavy & Highway Bridges - Guardrails - Lightpoles - Striping)		
Bridge Equipment Tender and Containment Builder	$ 20.49	8.33
Brush & Roller	$ 23.10	8.33
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 24.10	8.33
Sandblasting & Water Blasting	$ 23.85	8.33
Spray	$ 23.60	8.33

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

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

PLUM0248-003 06/01/2012

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

	Rates	Fringes
Plumber and Steamfitter	$ 33.00	16.93

PLUM0392-007 06/01/2012

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

	Rates	Fringes
Plumbers and Pipefitters	$ 29.30	16.59

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

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)).

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.

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: 122451 PAGE: 1
COUNTY: CARROLL, GALLATIN LETTING: 09/14/12
PROPOSAL: 121GR12P112-FD04 SPP CALL NO: 407

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
	SECTION 0001	ROADWAY			
0010	00001	DGA BASE	18,000.000 TON		
0020	00100	ASPHALT SEAL AGGREGATE	2,327.000 TON		
0030	00190	LEVELING & WEDGING PG64-22	5,000.000 TON		
0040	00291	EMULSIFIED ASPHALT RS-2	279.000 TON		
0050	00339	CL3 ASPH SURF 0.38D PG64-22	18,340.000 TON		
0060	00342	CL4 ASPH SURF 0.38A PG76-22	47,567.000 TON		
0070	01897	ASPHALT WEDGE CURB	13,795.000 LF		
0080	01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONA	WHITE416.000 EACH		
0090	01983	DELINEATOR FOR GUARDRAIL MONO DIRECTIONA	YELLOW29.000 EACH		
0100	02014	BARRICADE-TYPE III	16.000 EACH		
0110	02268	REMOVE & REPLACE FENCE	3,185.000 LF		
0120	02351	GUARDRAIL-STEEL W BEAM-S FACE	127,162.500 LF		
0130	02352	GUARDRAIL-STEEL W BEAM-D FACE	1,237.500 LF		
0140	02355	GUARDRAIL-STEEL W BEAM-S FACE A	137.500 LF		
0150	02360	GUARDRAIL TERMINAL SECTION NO 1	10.000 EACH		
0160	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	17.000 EACH		
0170	02365	CRASH CUSHION TYPE IX-A	10.000 EACH		
0180	02367	GUARDRAIL END TREATMENT TYPE 1	96.000 EACH		
0190	02369	GUARDRAIL END TREATMENT TYPE 2A	93.000 EACH		
0200	02381	REMOVE GUARDRAIL	128,520.000 LF		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 122451 PAGE: 2
COUNTY: CARROLL, GALLATIN LETTING: 09/14/12
PROPOSAL: 121GR12P112-FD04 SPP CALL NO: 407

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0210	02562	SIGNS	608.000	SQFT		
0220	02650	MAINTAIN & CONTROL TRAFFIC CARROLL	(1.00)	LS		
0230	02650	MAINTAIN & CONTROL TRAFFIC GALLATIN	(1.00)	LS		
0240	02671	PORTABLE CHANGEABLE MESSAGE SIGN	8.000	EACH		
0250	02676	MOBILIZATION FOR MILL & TEXT CARROLL	(1.00)	LS		
0260	02676	MOBILIZATION FOR MILL & TEXT GALLATIN	(1.00)	LS		
0270	02677	ASPHALT PAVE MILLING & TEXTURING	65,425.000	TON		
0280	02696	SHOULDER RUMBLE STRIPS-SAWED	377,980.000	LF		
0290	03240	BASE FAILURE REPAIR	15,849.000	SQYD		
0300	04793	CONDUIT-1 1/4 IN	80.000	LF		
0310	04795	CONDUIT-2 IN	10.000	LF		
0320	04811	ELECTRICAL JUNCTION BOX TYPE B	1.000	EACH		
0330	04820	TRENCHING AND BACKFILLING	85.000	LF		
0340	04829	PIEZOELECTRIC SENSOR	10.000	EACH		
0350	04830	LOOP WIRE	3,750.000	LF		
0360	04895	LOOP SAW SLOT AND FILL	905.000	LF		
0370	06427	TRENCHING	412,980.000	LF		
0380	06511	PAVE STRIPING-TEMP PAINT-6 IN	197,164.000	LF		
0390	06592	PAVEMENT MARKER TYPE V-B W/R	2,080.000	EACH		
0400	06600	REMOVE PAVEMENT MARKER TYPE V	2,080.000	EACH		
0410	10020NS	FUEL ADJUSTMENT	127,779.000	DOLL	1.00	127,779.00

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 122451 PAGE: 3
COUNTY: CARROLL, GALLATIN LETTING: 09/14/12
PROPOSAL: 121GR12P112-FD04 SPP CALL NO: 407

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
0420	10030NS	ASPHALT ADJUSTMENT	211,703.000 DOLL	1.00	211,703.00
0430	20192ED	REM ASPHALT WEDGE CURB	13,795.000 LF		
0440	20359NN	GALVANIZED STEEL CABINET	1.000 EACH		
0450	20360ES818	WOOD POST	2.000 EACH		
0460	24189ER	DURABLE WATERBORNE MARKING-6 IN W	254,437.000 LF		
0470	24190ER	DURABLE WATERBORNE MARKING-6 IN Y	205,590.000 LF		
0480	24191ER	DURABLE WATERBORNE MARKING-12 IN W	5,000.000 LF		
	SECTION 0002	DEMOBILIZATION			
0490	02569	DEMOBILIZATION (AT LEAST 1.5%)	LUMP		
		TOTAL BID			