CALL NO. 100

CONTRACT ID. 121362

JEFFERSON COUNTY

FED/STATE PROJECT NUMBER IM 2653 (035)

DESCRIPTION GENE SNYDER FREEWAY (I 265)

WORK TYPE JPC PAVEMENT REPAIRS - DIAMOND GRINDING

PRIMARY COMPLETION DATE 8/1/2013

LETTING DATE: November 16,2012

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN STANDARD TIME November 16,2012. Bids will be publicly announced at 10:00 AM EASTERN STANDARD TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

DBE CERTIFICATION REQUIRED - 13%

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

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PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 05

CONTRACT ID - 121362

IM 2653 (035)

COUNTY - JEFFERSON

PCN - DE05602651262

IM 2653 (035)

GENE SNYDER FREEWAY (I-265) REPAIR AND DIAMOND GRIND PAVEMENT ON I-265 FROM MILEPOINT 30.391 TO MILEPOINT 35.201, A DISTANCE OF 04.81 MILES.JPC PAVEMENT REPAIRS - DIAMOND GRINDING SYP NO. 05-02068.00.

GEOGRAPHIC COORDINATES LATITUDE 38:18:07.00 LONGITUDE 85:33:17.00

COMPLETION DATE(S):

COMPLETED BY 06/03/2013

SEE SPECIAL NOTES

COMPLETION DATE(S):

COMPLETED BY 08/01/2013

SEE SPECIAL NOTES

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.

HARDWOOD REMOVAL RESTRICTIONS

The Kentucky Division of Forestry has imposed a quarantine in Anderson, Boone, Bourbon, Boyd, Boyle, Bracken, Campbell, Carroll, Fayette, Franklin, Gallatin, Garrard,

Grant, Greenup, Hardin, Harrison, Henry, Jefferson, Jessamine, Kenton, Oldham, Owen, Pendleton, Scott, Shelby, Trimble, and Woodford Counties to prevent the spread of an invasive insect, the emerald ash borer. Hardwood cut in conjunction with the project may not be removed from the county of its origin. Chipping or burning on site is the preferred method of disposal.

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

Identification of excess material sites and borrow sites shall be the responsibility of the Contractor. The Contractor shall be responsible for compliance with all applicable state and federal laws and may wish to consult with the US Fish and Wildlife Service to seek protection under Section 10 of the Endangered Species Act for these activities.

ACCESS TO RECORDS

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

In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004. (See attachment)

09/26/2012

FEDERAL CONTRACT NOTES

The Kentucky Department of Highways, in accordance with the Regulations of the United States Department of Transportation 23 CFR 635.112 (h), hereby notifies all bidders that failure by a bidder to comply with all applicable sections of the current Kentucky Standard Specifications, including, but not limited to the following, may result in a bid not being considered responsive and thus not eligible to be considered for award:

102.02 Current Capacity Rating 102.10 Delivery of Proposals
102.08 Irregular Proposals 102.14 Disqualification of Bidders
102.09 Proposal Guaranty

CIVIL RIGHTS ACT OF 1964

The Kentucky Department of Highways, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Federal Department of Transportation (49 C.F.R., Part 21), issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin.

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071.

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SECOND TIER SUBCONTRACTS

Second Tier subcontracts on federally assisted projects shall be permitted. However, in the case of DBE's, second tier subcontracts will only be permitted where the other subcontractor is also a DBE. All second tier subcontracts shall have the consent of both the Contractor and the Engineer.

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

It is the policy of the Kentucky Transportation Cabinet ("the Cabinet") that Disadvantaged Business Enterprises ("DBE") shall have the opportunity to participate in the performance of highway construction projects financed in whole or in part by Federal Funds in order to create a level playing field for all businesses who wish to contract with the Cabinet. To that end, the Cabinet will comply with the regulations found in 49 CFR Part 26, and the definitions and requirements contained therein shall be adopted as if set out verbatim herein.

The Cabinet, contractors, subcontractors, and sub-recipients shall not discriminate on the basis of race, color, national origin, or sex in the performance of work performed pursuant to Cabinet contracts. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted highway construction projects. The contractor will include this provision in all its subcontracts and supply agreements pertaining to contracts with the Cabinet.

Failure by the contractor to carry out these requirements is a material breach of its contract with the Cabinet, which may result in the termination of the contract or such other remedy as the Cabinet deems necessary.

DBE GOAL

The Disadvantaged Business Enterprise (DBE) goal established for this contract, as listed on the front page of the proposal, is the percentage of the total value of the contract.

The contractor shall exercise all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises participate in a least the percent of the contract as set forth above as goals for this contract.

OBLIGATION OF CONTRACTORS

Each contractor prequalified to perform work on Cabinet projects shall designate and make known to the Cabinet a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs.

If a formal goal has not been designated for the contract, all contractors are encouraged to consider DBEs for subcontract work as well as for the supply of material and services needed to perform this work.

Contractors are encouraged to use the services of banks owned and controlled by minorities and women.

CERTIFICATION OF CONTRACT GOAL

Contractors shall include the following certification in bids for projects for which a DBE goal has been established. BIDS SUBMITTED WHICH DO NOT INCLUDE CERTIFICATION OF DBE PARTICIPATION WILL NOT BE ACCEPTED. These bids will not be considered for award by the Cabinet and they will be returned to the bidder.

"The bidder certifies that it has secured participation by Disadvantaged Business Enterprises ("DBE") in the amount of ____ percent of the total value of this contract and that the DBE participation is in compliance with the requirements of 49 CFR 26 and the policies of the Kentucky Transportation Cabinet pertaining to the DBE Program."

The certification statement is located in the electronic bid file. All contractors must certify their DBE participation on that page. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted.

DBE PARTICIPATION PLAN

Lowest responsive bidders must submit the *DBE Plan/ Subcontractor Request*, form TC 63-35 DBE, within 10 days of the letting. This is necessary before the Awards Committee will review and make a recommendation. **The project will not be considered for award prior to submission and approval of the apparent low bidder's DBE Plan/Subcontractor Request.**

The DBE Participation Plan shall include the following:

1 Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
2 Description of the work each is to perform including the work item , unit, quantity, unit price and total amount of the work to be performed by the individual DBE. The Project Code Number (PCN), Category Number, and the Project Line Number can be found in the "material listing" on the Construction Procurement website under the specific letting;
3 The dollar value of each proposed DBE subcontract and the percentage of total project contract value this represents. DBE participation may be counted as follows; a) If DBE suppliers and manufactures assume actual and contractual responsibility, the dollar value of materials to be furnished will be counted toward the goal as follows:

- The entire expenditure paid to a DBE manufacturer;
- 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to

the public, maintain an inventory and own and operate distribution equipment; and

- The amount of fees or commissions charged by the DBE firms for a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.

b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;

c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;

4 Written and signed documentation of the bidder's commitment to use a DBE contractor whose participation is being utilized to meet the DBE goal; and

5 Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment.

UPON AWARD AND BEFORE A WORK ORDER WILL BE ISSUED

Contractors must submit the signed subcontract between the contractor and the DBE contractor, the DBE's certificate of insurance, and an affidavit for bidders, offerors, and contractors from the DBE to the Division of Construction Procurement. The affidavit can be found on the Construction Procurement website. If the DBE is a supplier of materials for the project, a signed purchase order and an affidavit for bidders, offerors, and contractors must be submitted to the Division of Construction Procurement.

Changes to DBE Participation Plans must be approved by the Cabinet. The Cabinet may consider extenuating circumstances including, but not limited to, changes in the nature or scope of the project, the inability or unwillingness of a DBE to perform the work in accordance with the bid, and/or other circumstances beyond the control of the prime contractor.

CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS

If the DBE participation submitted in the bid by the apparent lowest responsive bidder does not meet or exceed the DBE contract goal, the apparent lowest responsive bidder must submit a Good Faith Effort Package to satisfy the Cabinet that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set and nine (9) copies of this information must be received in the

office of the Division of Contract Procurement no later than 12:00 noon of the tenth calendar day after receipt of notification that they are the apparent low bidder.

Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a sample representative letter along with a distribution list of the firms solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the Cabinet considers in judging good faith efforts. This documentation may include written subcontractors' quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

The Good Faith Effort Package shall include, but may not be limited to information showing evidence of the following:

1 Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
2 Whether the bidder provided solicitations through all reasonable and available means;
3 Whether the bidder provided written notice to all DBEs listed in the DBE directory at the time of the letting who are prequalified in the areas of work that the bidder will be subcontracting;
4 Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainly whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the DBE Liaison in the Office of Minority Affairs to give notification of the bidder's inability to get DBE quotes;
5 Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise perform these work items with its own forces;
6 Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
7 Whether the bidder negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached;
8 Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm's quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;
9 Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;
10 Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the

work requirements of the bid proposal; and

11 Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

FAILURE TO MEET GOOD FAITH REQUIREMENT

Where the apparent lowest responsive bidder fails to submit sufficient participation by DBE firms to meet the contract goal and upon a determination by the Good Faith Committee based upon the information submitted that the apparent lowest responsive bidder failed to make sufficient reasonable efforts to meet the contract goal, the bidder will be offered the opportunity to meet in person for administrative reconsideration. The bidder will be notified of the Committee's decision within 24 hours of its decision. The bidder will have 24 hours to request reconsideration of the Committee's decision. The reconsideration meeting will be held within two days of the receipt of a request by the bidder for reconsideration.

The request for reconsideration will be heard by the Office of the Secretary. The bidder will have the opportunity to present written documentation or argument concerning the issue of whether it met the goal or made an adequate good faith effort. The bidder will receive a written decision on the reconsideration explaining the basis for the finding that the bidder did or did not meet the goal or made adequate Good Faith efforts to do so.

The result of the reconsideration process is not administratively appealable to the Cabinet or to the United States Department of Transportation.

The Cabinet reserves the right to award the contract to the next lowest responsive bidder or to rebid the contract in the event that the contract is not awarded to the low bidder as the result of a failure to meet the good faith requirement.

SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT

Failure by the prime contractor to fulfill the DBE requirements of a project under contract or to demonstrate good faith efforts to meet the goal constitutes a breach of contract. When this occurs, the Cabinet will hold the prime contractor accountable, as would be the case with all other contract provisions. Therefore, the contractor's failure to carry our the DBE contract requirements shall constitute a breach of contract and as such the Cabinet reserves the right to exercise all administrative remedies at its disposal including, but not limited to the following:

- Disallow credit toward the DBE goal;
- Withholding progress payments;
- Withholding payment to the prime in an amount equal to the unmet portion of the contract goal; and/or
- Termination of the contract.

PROMPT PAYMENT

The prime contractor will be required to pay the DBE within seven (7) working days after he or she has received payment from the Kentucky Transportation Cabinet for work performed or materials furnished.

CONTRACTOR REPORTING

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to submit certified reports on monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal.

Payment information that needs to be reported includes date the payment is sent to the DBE, check number, Contract ID, amount of payment and the check date. Before Final Payment is made on this contract, the Prime Contractor will certify that all payments were made to the DBE subcontractor and/or DBE suppliers.

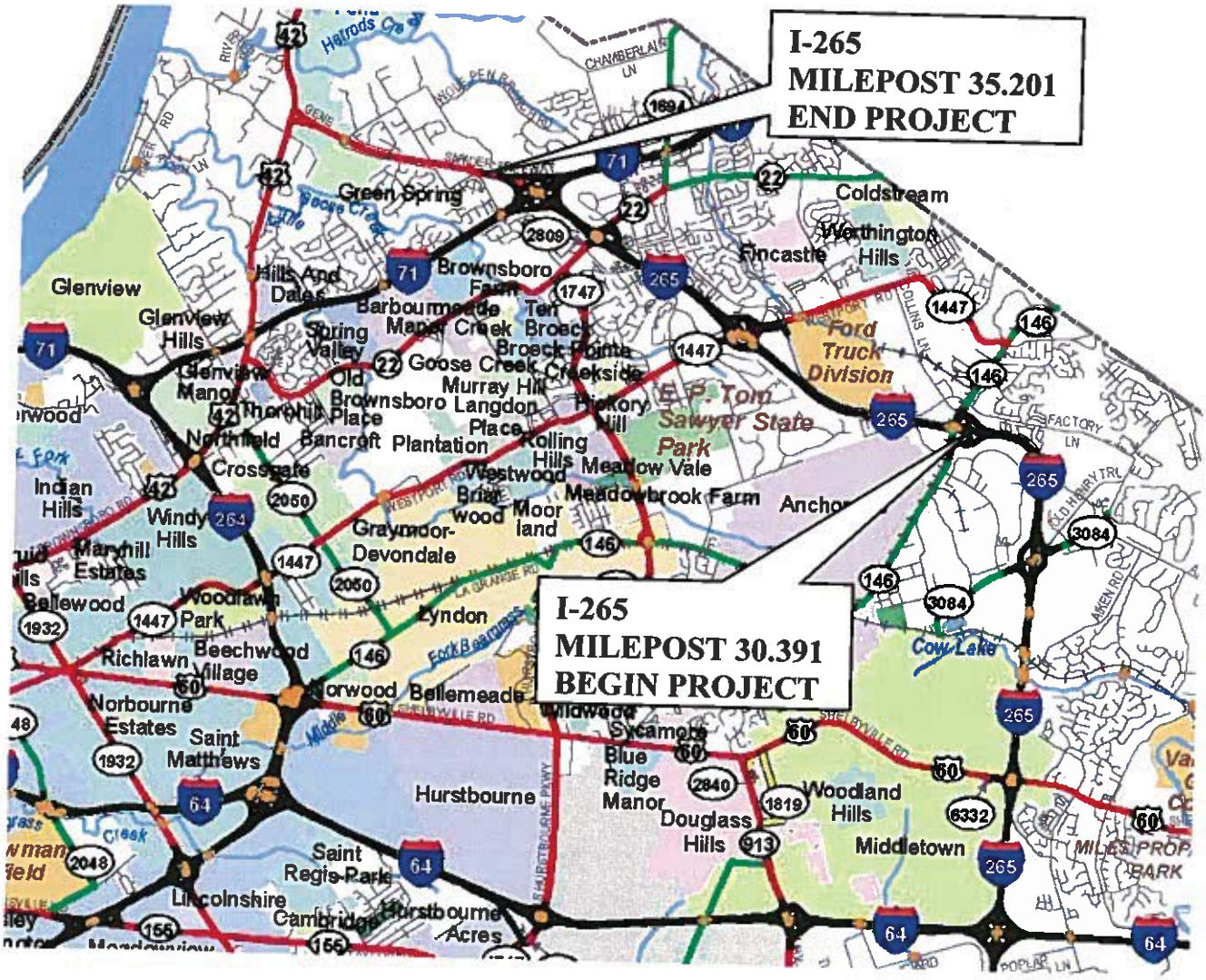
The Prime Contractor should supply the payment information at the time the DBE is compensated for their work. Form to use is located at:
http://transportation.ky.gov/Construction/Pages/Subcontracts.aspx

Photocopied payments and completed form to be submitted to: Office of Civil Rights and Small Business Development 6th Floor West 200 Mero Street Frankfort, KY 40622

DEFAULT OR DECERTIFICATION OF THE DBE

If the DBE subcontractor or supplier is decertified or defaults in the performance of its work, and the overall goal cannot be credited for the uncompleted work, the prime contractor may utilize a substitute DBE or elect to fulfill the DBE goal with another DBE on a different work item. If after exerting good faith effort in accordance with the Cabinet's Good Faith Effort policies and procedures, the prime contractor is unable to replace the DBE, then the unmet portion of the goal may be waived at the discretion of the Cabinet.

09/14/11



ITEM NUMBER: 5-2068.00

PROJECT NUMBER: FD52 056 0265 030-036

CONSTRUCTION NUMBER: STP 2653 (035)

LETTING DATE: November 16, 2012

RECOMMENDED BY: _____ DATE: 10-3-12
Project Manager

PLAN APPROVED BY: _____ DATE: 10/3/12
State Highway Engineer

FHWA APPROVED BY: _____ DATE: _____

I-265 STATIONING REFERENCES	
STATION	**FEATURE**
1344+76	MILE POST 31
1359+84	SOUTHBOUND OVERHEAD CANTILEVER TRUSS SIGN (MAINLINE)
1363+15	NORTHBOUND OVERHEAD CANTILEVER SIGN (MAINLINE)
1393+86	SOUTHBOUND MILE POST 32
1412+85.42	**BRIDGE OVER SOUTHBOUND I-265 TO EASTBOUND WESTPORT RD RAMP**
1418+72.71	**BRIDGE OVER WESTPORT RD**
1419+31	NORTHBOUND OVERHEAD TRUSS SIGN OVER MAINLINE AND RAMP
12+66	SOUTHBOUND OVERHEAD TRUSS SIGN (EXIT RAMP TO WESTPORT RD)
20+62	SOUTHBOUND OVERHEAD TRUSS SIGN (EXIT RAMP TO WESTPORT RD)
1448+40	SOUTHBOUND MILE POST 33
1449+00	NORTHBOUND MILE POST 33
1450+72	SOUTHBOUND OVERHEAD CANTILEVER TRUSS SIGN (MAINLINE)
1474+94.06	**EQUATION 1474+94.06 BK = 2445+00 AH**
2450+48	NORTHBOUND OVERHEAD TRUSS SIGN OVER MAINLINE AND RAMP
2470+19.07	**BRIDGE OVER BROWNSBORO RD**
2471+65	MILE POST 34
2479+99	SOUTHBOUND OVERHEAD TRUSS SIGN OVER MAINLINE AND EXIT RAMP
2486+44	NORTHBOUND OVERHEAD TRUSS SIGN (MAINLINE)
2487+50	**EQUATION 2487+50 BK = 1487+50 AH**
1504+09.77	**BRIDGE OVER I-71**
1502+57	SOUTHBOUND OVERHEAD TRUSS SIGN (MAINLINE AND EXIT RAMP)
1506+47	NORTHBOUND OVERHEAD CANTILEVER SIGN OVER MAINLINE AND EXIT RAMP TO I-71 SB
1518+72	MILE POST 35
1522+00	SOUTHBOUND TRUSS SIGN (MAINLINE)

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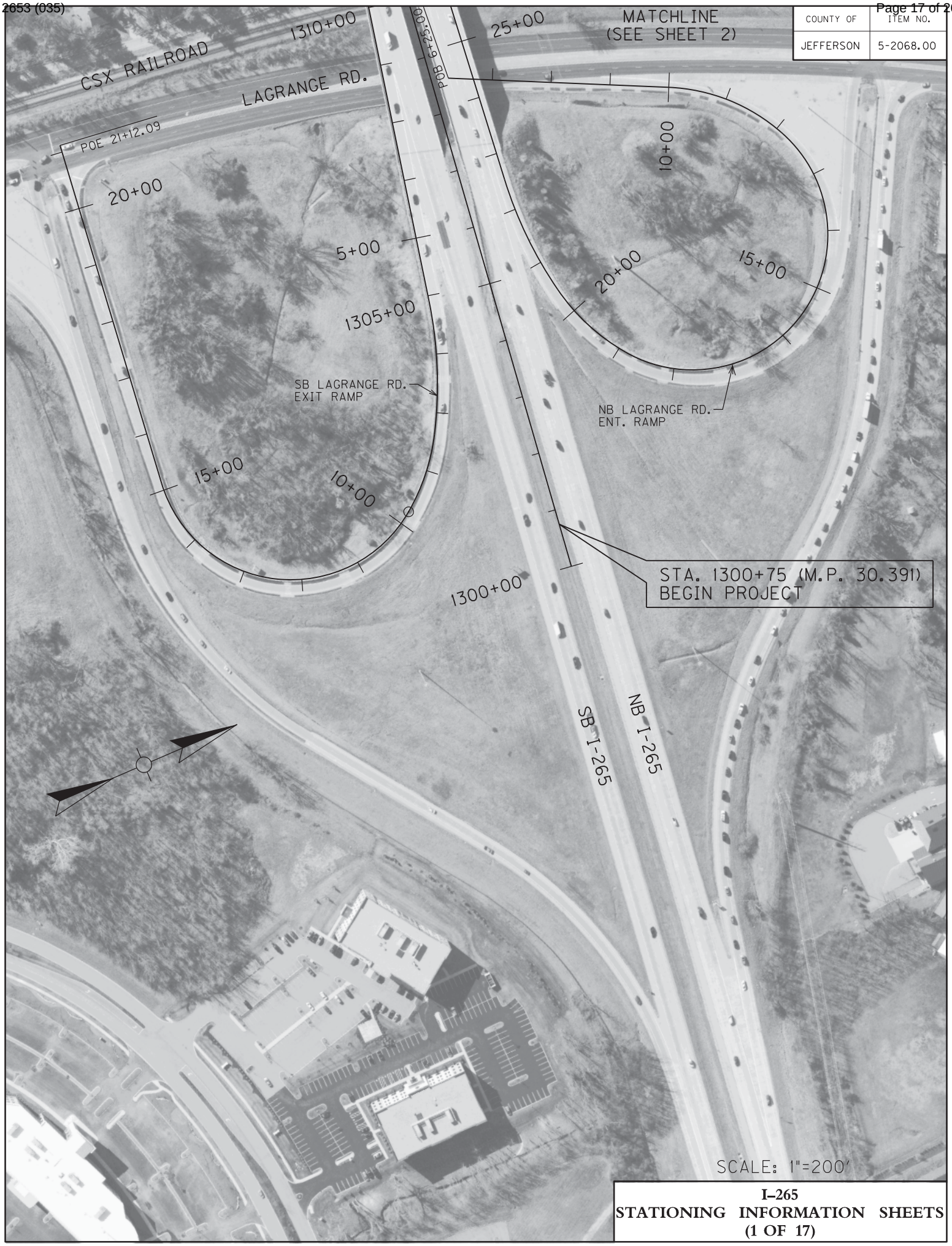

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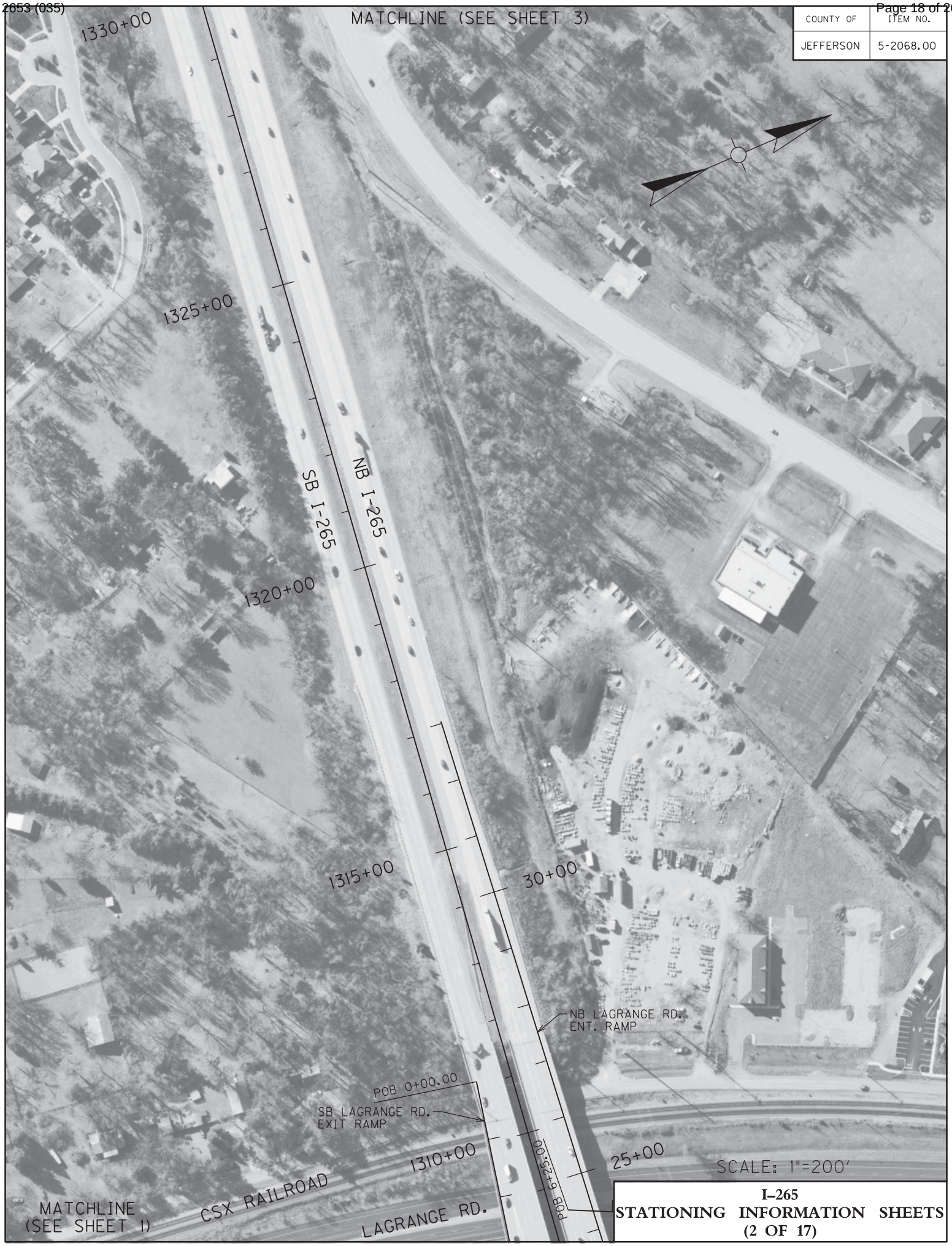

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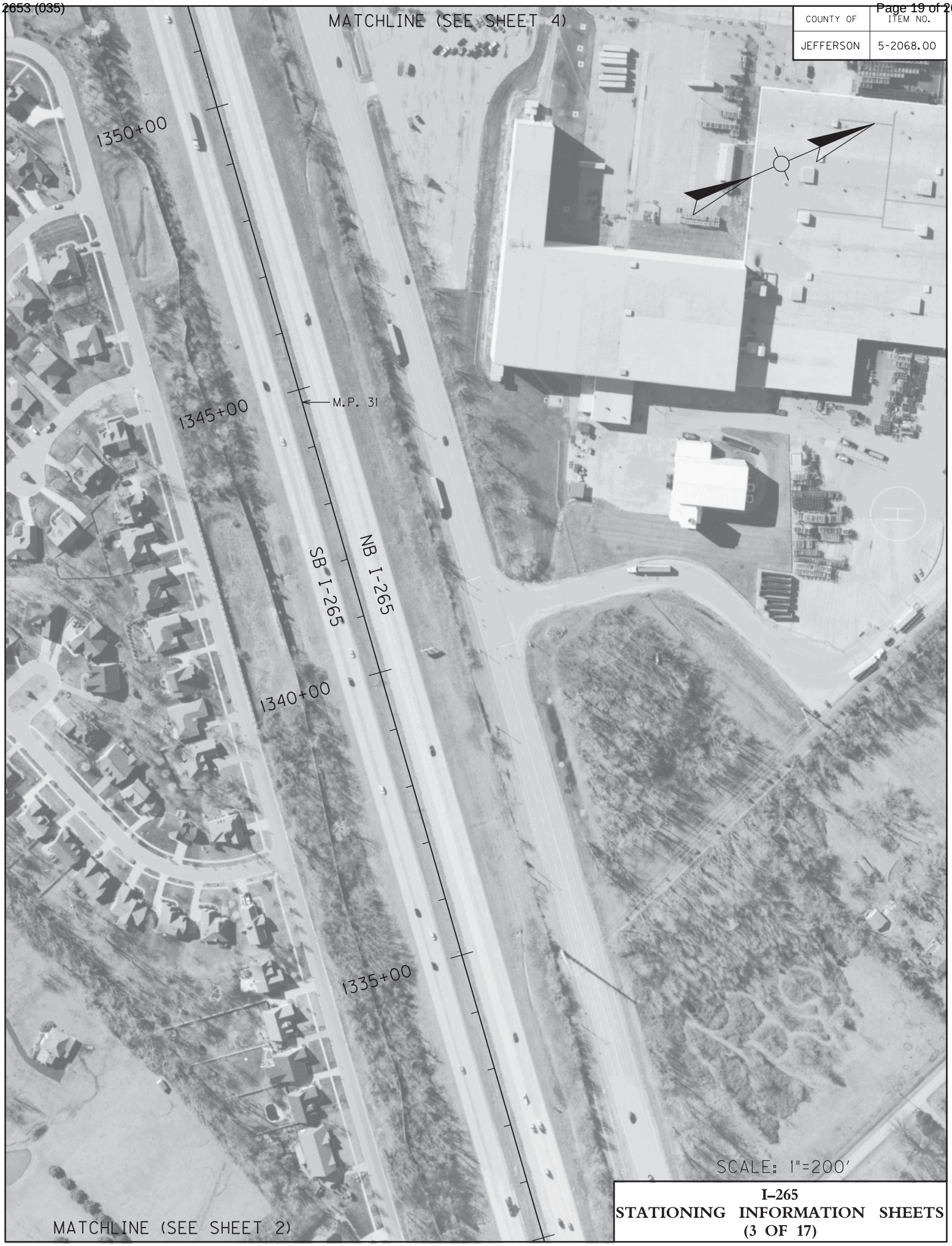

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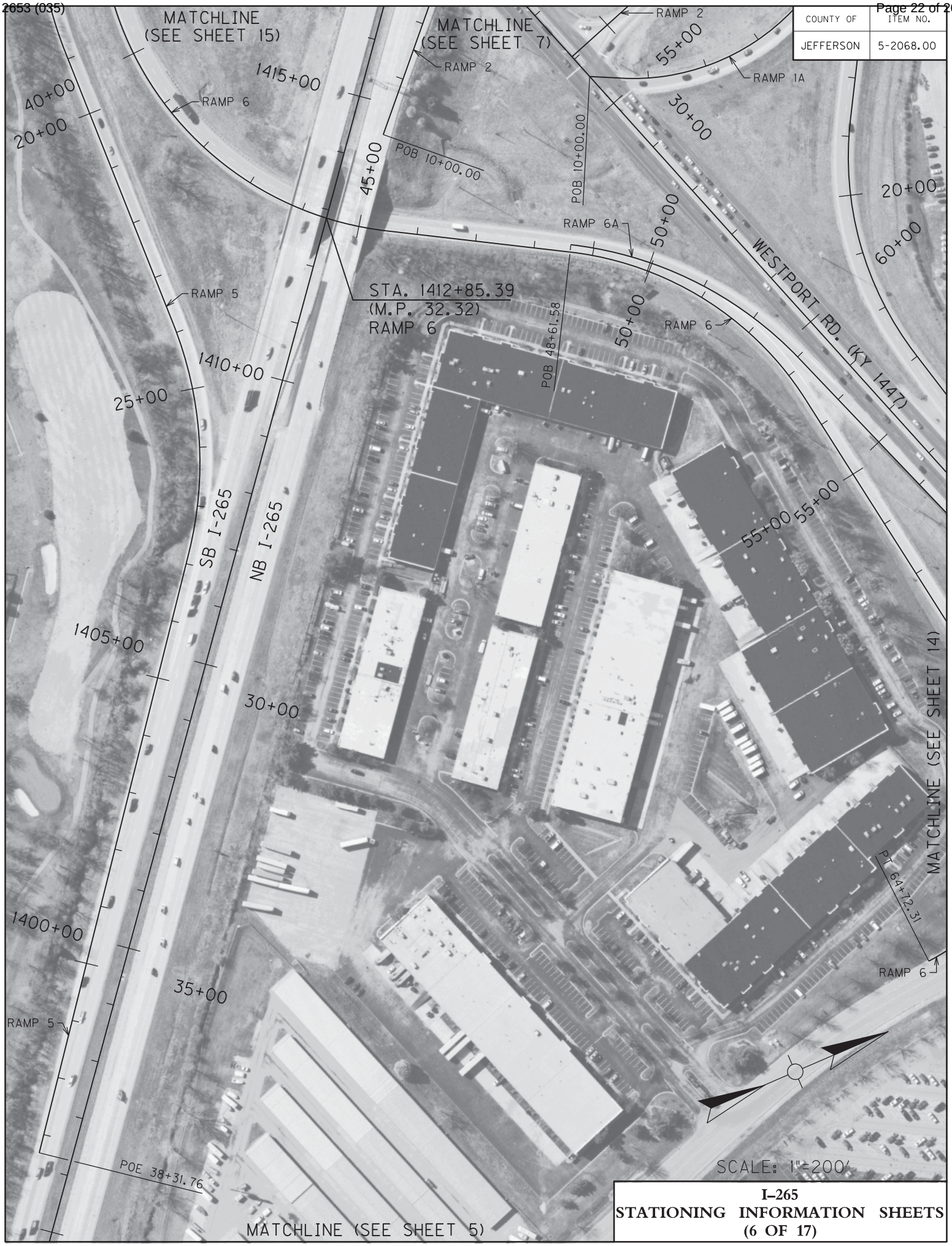

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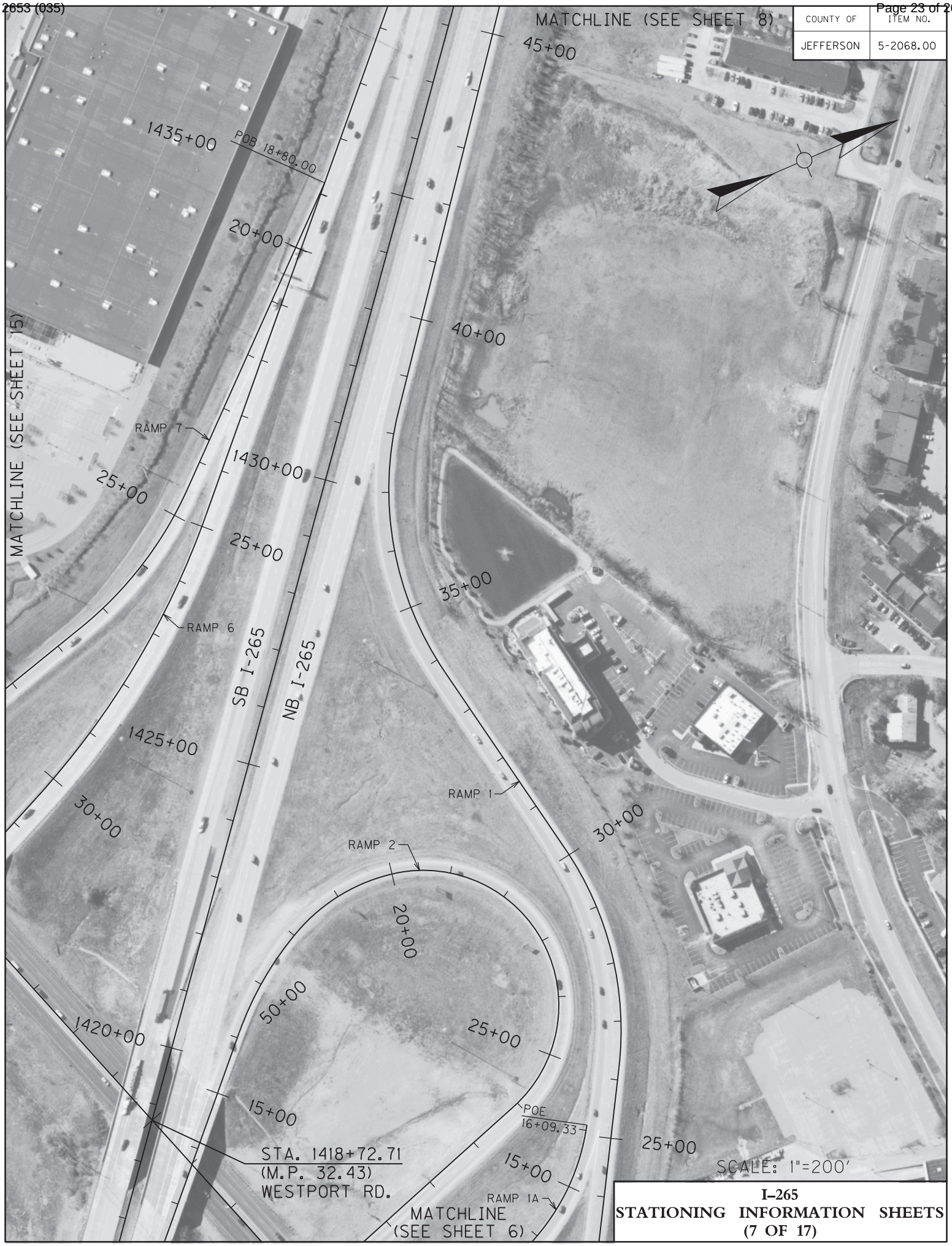

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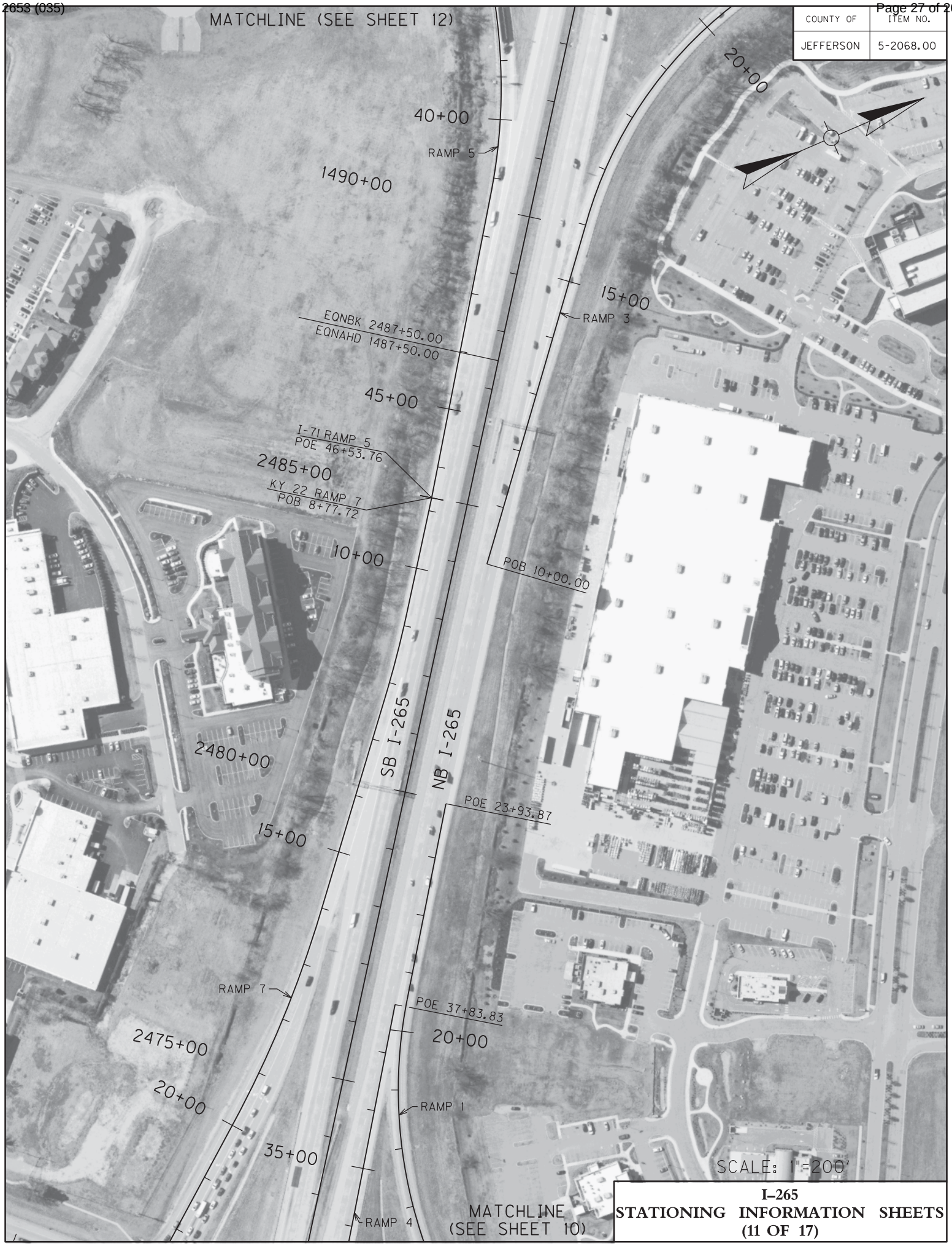

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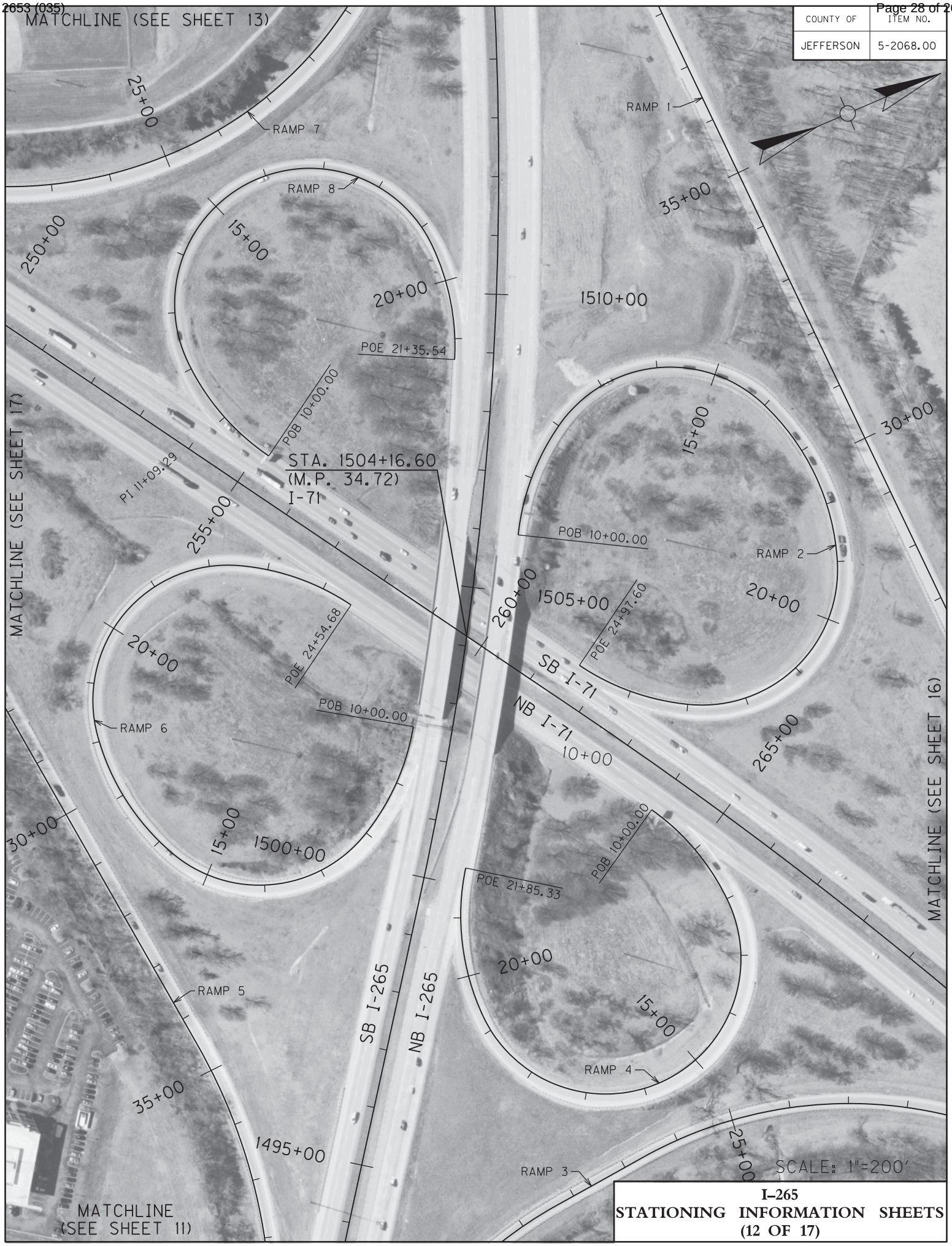

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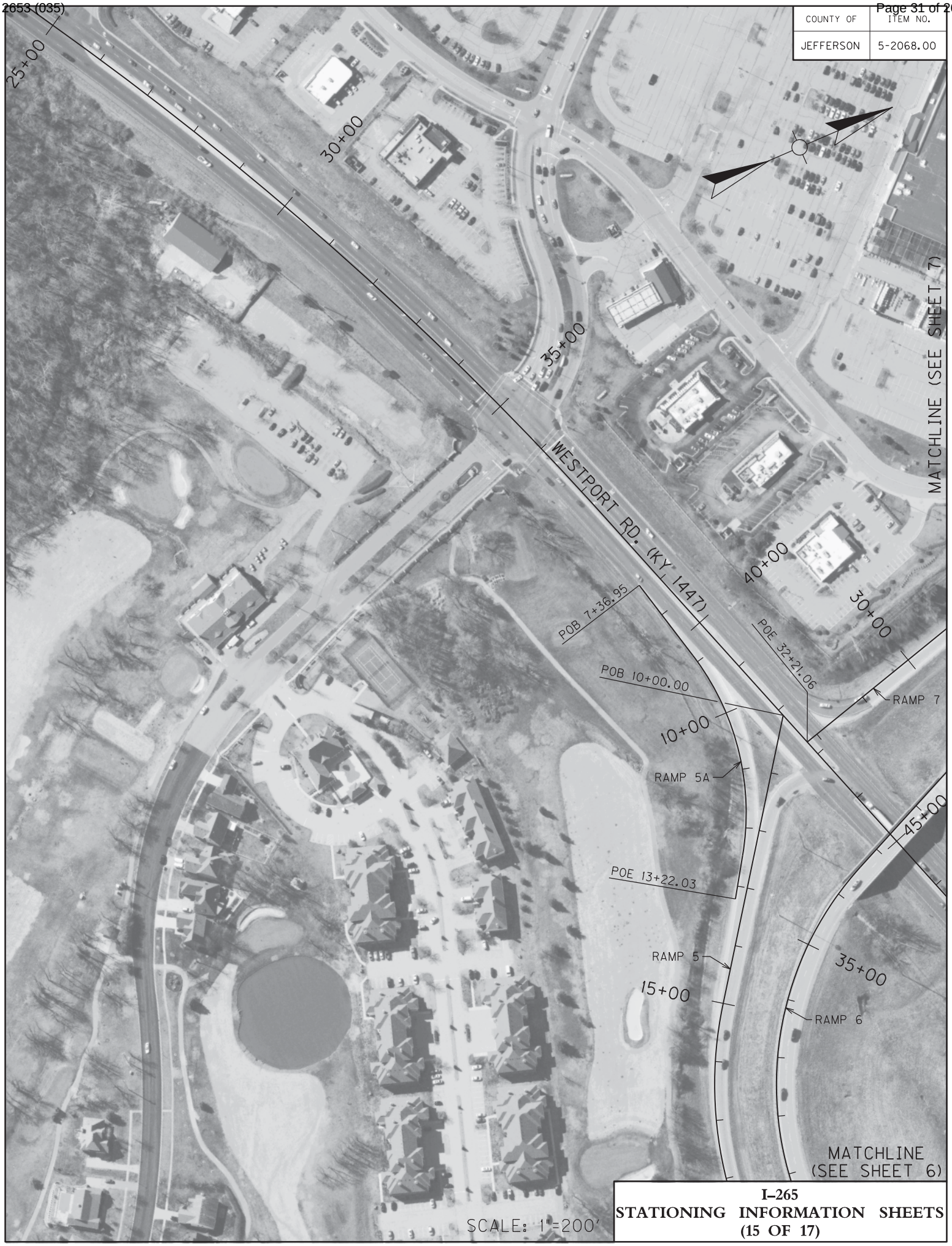

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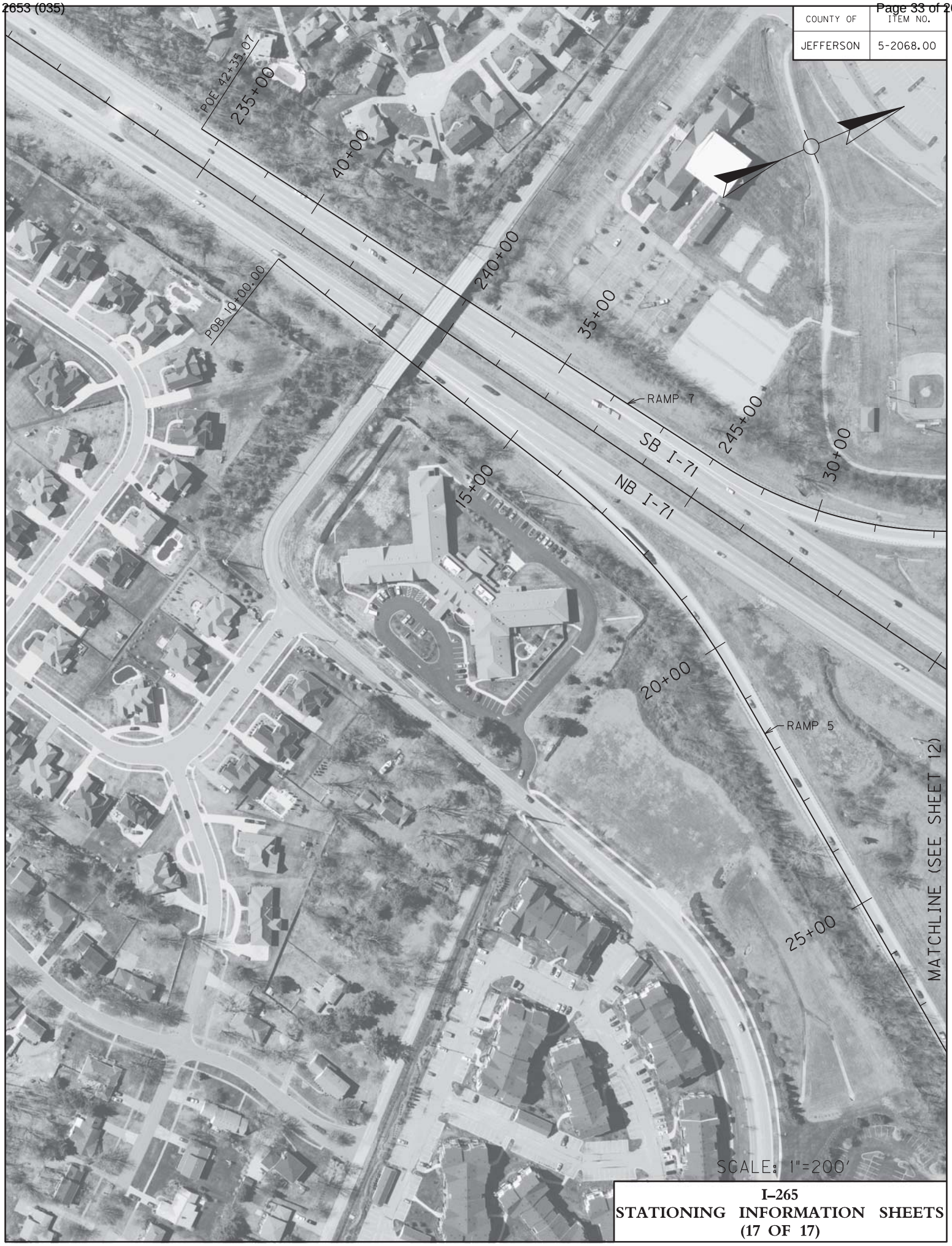

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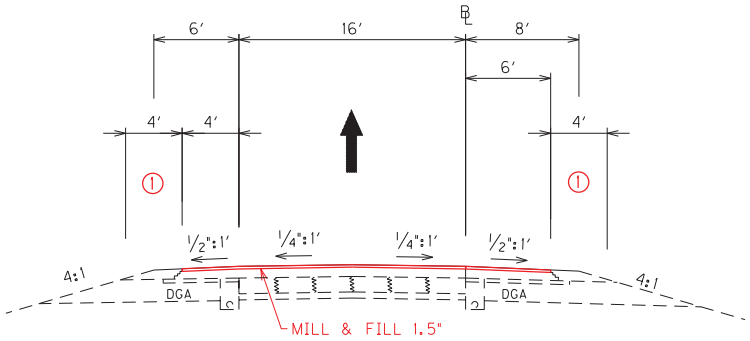
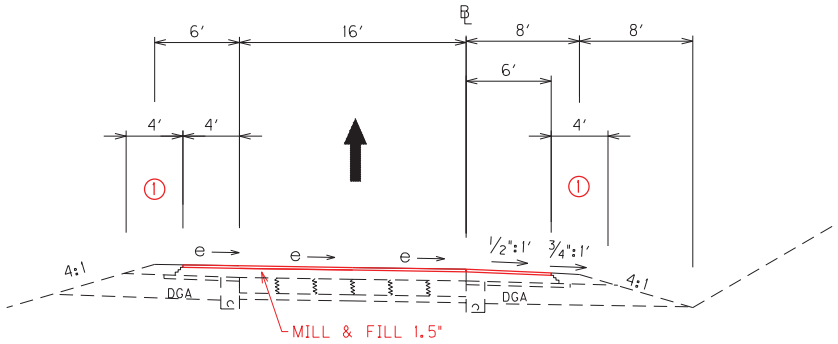
TYPICAL SECTIONS
RAMPS



NORMAL SECTION



SUPERELEVATED SECTION

PAVEMENT REHABILITATION

DRIVING LANE & BOTH SHOULDERS

SURFACE -- 1.5" CL4 ASPHALT SURFACE 0.38A PG76-22
1.5" ASPHALT MILLING AND TEXTURE

① ASPHALT SEAL
(LOCATIONS SPECIFIED IN QUANTITY SUMMARIES)
2 APPLICATIONS:
ASPHALT SEAL AGGREGATE - 20 LB/SY
ASPHALT SEAL COAT - 2.4 LB/SY

DETAIL SHEET

I-265 PAVEMENT REHABILITATION
JEFFERSON COUNTY
ITEM NUMBER: 5-2068.00
GENERAL SUMMARY

ITEM NUMBER	ITEM		QUANTITY	UNIT
1	DGA BASE		716	TON
69	CRUSHED AGGREGATE SIZE NO. 3		500	TON
100	ASPHALT SEAL AGGREGATE		2121	TON
103	ASPHALT SEAL COAT		255	TON
335	CL4 ASPH SURF 0.50A PG76-22		6902	TON
461	CULVERT PIPE - 15 IN		30	LIN FT
462	CULVERT PIPE - 18 IN		8	LIN FT
464	CULVERT PIPE - 24IN		12	LIN FT
469	CULVERT PIPE - 42 IN		24	LIN FT
1000	PERFORATED PIPE-4 IN	(4)	250	LIN FT
1010	NON-PERFORATED PIPE-4 IN	(4)	50	LIN FT
1020	PERFORATED PIPE HEADWALL TYPE 1 - 4 INCH		1	EACH
1310	REMOVE PIPE		74	LIN FT
1451	S & F BOX INLET - OUTLET - 24 INCH		1	EACH
1484	CURB BOX INLET TYPE B - T		2	EACH
1490	DROP BOX INLET TYPE 1		1	EACH
1845	ISLAND INTEGRAL CURB		275	LIN FT
1890	ISLAND HEADER CURB TYPE I		300	LIN FT
1904	REMOVE CURB		300	LIN FT
1982	DELINEATOR FOR GUARDRAIL - WHITE		193	EACH
1983	DELINEATOR FOR GUARDRAIL -YELLOW		131	EACH
1984	DELINEATORS FOR BARRIER-WHITE		16	EACH
1985	DELINEATORS FOR BARRIER-YELLOW		16	EACH
2020	JPC PAVEMENT - 6 IN/24 HR	(7)	28	SQ YD
2024	JPC PAVEMENT - 10 IN/24 HR	(7)	8639	SQ YD
2058	REMOVE PCC PAVEMENT	(7)	8667	SQ YD
2060	PCC PAVEMENT DIAMOND GRINDING		222715	SQ YD
2110	PARTIAL DEPTH PATCHING		14.56	CU FT
2115	SAW-CLEAN-RESEAL TRANSVERSE JOINT		146899	LIN FT
2116	SAW-CLEAN-RESEAL LONGITUDINAL JOINT		175004	LIN FT
2200	ROADWAY EXCAVATION		877	CU YDS
2220	FLOWABLE FILL	(5)	30	CU YD
2223	GRANULAR EMBANKMENT		945	CU YD
2237	DITCHING	(1)	25000	LIN FT
2261	WOVEN WIRE FENCE	(6)	32	LIN FT
2265	REMOVE FENCE	(9)	132	LIN FT
2274	FENCE-6 FT CHAIN LINK	(6)	100	LIN FT
21802EN	GUARDRAIL-STEEL W BEAM-S FACE (7 FT POST)		25450.5	LIN FT
2352	GUARDRAIL-STEEL W BEAM-D FACE		825.0	LIN FT
2363	GUARDRAIL CONNECTOR TO BRIDGE END TY A		15	EACH
2365	CRASH CUSHION TY IX-A		6	EACH
2367	GUARDRAIL END TREATMENT TYPE 1		24	EACH
2369	GUARDRAIL END TREATMENT TYPE 2A		29	EACH
2381	REMOVE GUARDRAIL		27775.5	LIN FT
2387	GUARDRAIL CONNECTOR TO BRIDGE END TY A-1		12	EACH
2391	GUARDRAIL END TREATMENT TYPE 4A		6	EACH
2483	CHANNEL LINING CLASS II	(2)	426	TON
2484	CHANNEL LINING CLASS III	(2)	4720	TON
2562	SIGNS	(3)	1500	SQ FT
2565	OBJECT MARKER TYPE 2		18	EACH
2568	MOBILIZATION		1	LUMP SUM
2569	DEMOBILIZATION		1	LUMP SUM
2570	PROJECT CPM SCHEDULE		1	LUMP SUM
2599	FABRIC - GEOTEXTILE TYPE IV		795	SQ YD
2650	MAINTAIN AND CONTROL TRAFFIC		1	LUMP SUM
2671	PORTABLE CHANGEABLE MESSAGE SIGN	(3)	12	EACH
2677	ASPHALT PAVE MILLING & TEXTURING		6902	TON
2714	SHOULDERING		2000	LIN FT
2775	ARROW PANEL	(3)	4	EACH

I-265 PAVEMENT REHABILITATION
JEFFERSON COUNTY
ITEM NUMBER: 5-2068.00
GENERAL SUMMARY

ITEM NUMBER	ITEM		QUANTITY	UNIT
2929	CRASH CUSHION TYPE IX		10	EACH
5950	EROSION CONTROL BLANKET	(4)	10000	SQ YD
6407	SBM ALUM SHEET SIGNS .125 IN		600	SQ FT
6410	STEEL POST TYPE 1		400	LF
6412	STEEL POST MILE MARKERS		10	EACH
6417	FLEXIBLE DELINEATOR POST-W		723	EACH
6418	FLEXIBLE DELINEATOR POST-Y		472	EACH
6511	PAVEMENT STRIPING-TEMP PAINT - 6 INCH		404000	LIN FT
6568	PAVEMENT MARKING-THERMO STOP BAR-24IN		148	LIN FT
6573	PAVEMENT MARKING-THERMO STR ARROW		3	EACH
6574	PAVEMENT MARKING - THERMO CURV ARROW		20	EACH
6592	PAVEMENT MARKER TYPE V-B W/R		1752	EACH
6593	PAVEMENT MARKER TYPE V-B Y/R		726	EACH
6600	REMOVE PAVEMENT MARKER TYPE V		2478	EACH
8100	CLASS A CONCRETE		7.00	CU YD
8150	STEEL REINFORCEMENT		500	LB
20366NN	REPLACE GRATE		12	EACH
20411ED	LAW ENFORCEMENT OFFICER		2000	HOUR
21173EC	SAW-CLEAN-RESEAL RANDOM CRACKS		58	LIN FT
23143ED	KPDES PERMIT AND TEMPORARY EROSION CONTROL		1	LUMP SUM
21533EN	EMBANKMENT	(8)	500	CU YD
23237EN10W	WATERBLAST STRIPE REMOVAL		202000	LIN FT
24189ER	DURABLE WATERBORNE MARKING - 6 IN W		97900	LIN FT
24190ER	DURABLE WATERBORNE MARKING - 6 IN Y		81850	LIN FT
24191ER	DURABLE WATERBORNE MARKING - 12 IN W		9980	LIN FT
	SPECIAL CONCRETE HEADER CURB		1000	LIN FT

(1) Ditching is intended for repair to the eroded and/or poorly draining areas throughout the project as directed by the engineer. Any embankment required is incidental to ditching. Disposal of material is also incidental to ditching.

(2) Any excavation and Fabric-Geotextile Type I required to place the Channel Lining Class III is incidental to the lining.

(3) The quantity for these items includes initial placement. Any relocation required will not be paid for directly, but will be considered incidental to maintain and control traffic.

(4) To be used as directed by the Engineer

(5) The drainage summary includes 25 CY of flowable fill to repair voids near drainage structures. The remaining quantity is to repair locations beneath the shoulder or other structures.

(6) Remove and replace damaged woven wire fence LT. I-265 Sta. 1469+35 and damaged chain link fence RT. KY 22 Ramp 7 Sta. 18+90.

(7) Includes an additional 10% for continuing pavement deterioration.

(8) Contrary to the Standard Specifications, payment will be based on calculated quantity **NOT** plan quantity.

(9) Fence removal includes both chain-link and woven wire fence.

NOTE: Quantities from all summaries have been carried over and included in this General Summary

FULL DEPTH PCC PAVEMENT REPAIRS
I-265, JEFFERSON COUNTY
ITEM NUMBER: 5-2068.00
NORTHBOUND

BEGIN STATION	END STATION	LENGTH (FT)	LANE #1*	LANE #2*	LANE #3*	LANE #4*	LANE #5*	LANE #6*	TOTAL SQ. YDS.	COMMENTS
1313+29	1313+37	8	X	X					11	
1313+34	1313+39	5		X					7	
1318+47	1318+53	6		X					8	
1322+21	1322+40	19		X					25	
1346+20	1346+26	6		X					8	
1350+70	1350+76	6		X					8	
1362+51	1362+70	19		X					25	6' OUTSIDE SHLDR
1379+75	1379+81	6		X					8	
1389+64	1389+70	6		X					8	
1392+16	1392+22	6		X					8	
1405+71	1405+77	6		X					8	
1420+31	1421+26	95		X					127	
1420+91	1421+15	24	X						32	
1422+28	1422+38	10		X					13	
1422+96	1423+08	12	X						16	
1427+08	1427+18	10		X					13	
1427+69	1428+23	54		X					72	
1429+18	1431+97	279		X					372	
1452+60	1453+01	41		X					55	
1488+59	1488+65	6		X					8	
1512+93	1513+43	50	X						67	
2445+46	2445+57	11		X					15	
2448+60	2448+70	10	X	X					26	
2464+25	2464+77	52		X					69	
2465+97	2466+34	37		X					49	
2466+83	2468+63	180		X					240	
2471+73	2476+59	486		X					648	
2473+36	2473+47	11			X				7	5.5 FT LANE
2485+97	2486+24	27	X	X	X				108	
2486+50	2486+57	7			X				9	
					NORTHBOUND TOTAL (SQ YDS.)				**2,070**	

*** LANE NUMBERS BEGIN WITH THE LANE CLOSEST TO THE I-265 CENTERLINE, AND INCREASE AS YOU MOVE AWAY FROM THE CENTERLINE. IN OTHER WORDS, LANE #3 IS THE THIRD LANE RIGHT OF THE CENTERLINE.**

FULL DEPTH PCC PAVEMENT REPAIRS
I-265, JEFFERSON COUNTY
ITEM NUMBER: 5-2068.00
NORTHBOUND RAMPS

BEGIN STATION	END STATION	LENGTH (FT)	LANE #1	LANE #2	LANE #3	LANE #4	LANE #5	LANE #6	TOTAL SQ. YDS.	COMMENTS
NORTHBOUND KY 146 TO NORTHBOUND I-265 ENTRANCE RAMP (1)										
7+15	23+20	1605							1070	RT SHOULDER
10+60	21+27	1067							474	LT SHOULDER
NORTHBOUND I-265 TO KY 1447 EXIT RAMP										
NO FULL DEPTH PAVEMENT REPAIRS										
KY 1447 TO NORTHBOUND I-265 ENTRANCE RAMP										
NO FULL DEPTH PAVEMENT REPAIRS										
NORTHBOUND I-265 TO BROWNSBORO RD EXIT RAMP										
12+10	15+77	367	X						632	15.5' LANE
EASTBOUND KY 22 TO NORTHBOUND I-265 ENTRANCE RAMP										
NO FULL DEPTH PAVEMENT REPAIRS										
WESTBOUND KY 22 TO NORTHBOUND I-265 ENTRANCE RAMP										
23+07	23+27	20	X						27	12' LANE
23+27	23+73	46	X						77	15' LANE
NORTHBOUND I-265 TO NORTHBOUND I-71 EXIT RAMP										
NO FULL DEPTH PAVEMENT REPAIRS										
NORTHBOUND I-71 TO NORTHBOUND I-265 ENTRANCE RAMP										
NO FULL DEPTH PAVEMENT REPAIRS										
NORTHBOUND I-265 TO SOUTHBOUND I-71 EXIT RAMP										
NO FULL DEPTH PAVEMENT REPAIRS										
SOUTHBOUND I-71 TO NORTHBOUND I-265 ENTRANCE RAMP										
NO FULL DEPTH PAVEMENT REPAIRS										
NORTHBOUND RAMP TOTAL (SQ YDS.)									**2,280**	

(1) Removal of exsiting asphalt shoulder will be paid for by cu yds as "Roadway Excavation"

FULL DEPTH PCC PAVEMENT REPAIRS
I-265, JEFFERSON COUNTY
ITEM NUMBER: 5-2068.00
SOUTHBOUND

BEGIN STATION	END STATION	LENGTH (FT)	LANE #1*	LANE #2*	LANE #3*	LANE #4*	LANE #5*	LANE #6*	TOTAL SQ. YDS.	COMMENTS
1313+36	1313+46	10	X	X					26	
1367+45	1367+62	17		X					23	
1390+39	1390+50	11	X						15	
1411+39	1411+45	6		X					8	
1423+75	1423+83	8	X	X					21	
1426+90	1427+15	25	X						33	
1447+37	1447+55	18			X				24	
1450+95	1451+03	8	X	X	X				32	
1497+05	1497+82	77		X					103	
1498+25	1502+90	465		X					620	
1505+90	1506+05	15		X					20	
2466+02	2469+09	307		X					409	
2471+50	2474+90	340		X					453	
2472+03	2472+28	25	X						33	
2486+14	2486+37	23	X	X	X				92	
SOUTHBOUND TOTAL (SQ YDS.)									**1,912**	

*** LANE NUMBERS BEGIN WITH THE LANE CLOSEST TO THE I-265 CENTERLINE, AND INCREASE AS YOU MOVE AWAY FROM THE CENTERLINE. IN OTHER WORDS, LANE #3 IS THE THIRD LANE RIGHT OF THE CENTERLINE.**

FULL DEPTH PCC PAVEMENT REPAIRS
I-265, JEFFERSON COUNTY
ITEM NUMBER: 5-2068.00
SOUTHBOUND RAMPS

BEGIN STATION	END STATION	LENGTH (FT)	LANE #1	LANE #2	LANE #3	LANE #4	LANE #5	LANE #6	TOTAL SQ. YDS.	COMMENTS
SOUTHBOUND I-265 TO KY 146 EXIT RAMP (1)										
6+58	20+70	1412							941	RT SHOULDER
6+58	20+70	1412							628	LT SHOULDER
KY 1447 TO SOUTHBOUND I-265 ENTRANCE RAMP										
1403+60	1403+96	36			X				48	12' LANE
SOUTHBOUND I-265 TO KY 1447 EXIT RAMP										
NO FULL DEPTH PAVEMENT REPAIRS										
KY 22 TO SOUTHBOUND I-265										
NO FULL DEPTH PAVEMENT REPAIRS										
SOUTHBOUND I-265 TO KY 22										
NO FULL DEPTH PAVEMENT REPAIRS										
NORTHBOUND I-71 TO SOUTHBOUND I-265 ENTRANCE RAMP										
NO FULL DEPTH PAVEMENT REPAIRS										
SOUTHBOUND I-265 TO NORTHBOUND I-71 EXIT RAMP										
NO FULL DEPTH PAVEMENT REPAIRS										
SOUTHBOUND I-71 TO NORTHBOUND I-265 ENTRANCE RAMP										
NO FULL DEPTH PAVEMENT REPAIRS										
SOUTHBOUND I-265 TO SOUTHBOUND I-71 EXIT RAMP										
NO FULL DEPTH PAVEMENT REPAIRS										
SOUTHBOUND RAMP TOTAL (SQ YDS.)									**1,617**	
PROJECT TOTAL (SQ YDS.)									**7,879**	

(1) Removal of exsiting asphalt shoulder will be paid for by cu yds as "Roadway Excavation"

PARTIAL DEPTH PCC PAVEMENT REPAIRS
I-265, JEFFERSON COUNTY
ITEM NUMBER: 5-2068.00
NORTHBOUND

BEGIN STATION	END STATION	TOTAL LENGTH (LF)	INSIDE SHOULER	LANE #1*	LANE #2*	LANE #3*	LANE #4*	OUTSIDE SHOULDER	APPROX. SURF AREA (SQ FT)	DEPTH (FT)	PARTIAL DEPTH PATCHING (CU FT)	SAW-CLEAN & RESEAL RANDOM CRACKS (LF)	COMMENTS
1313+87						X			1	0.28	0.28		PATCH
1331+78				X					2	0.28	0.56		PATCH
1355+30				X					1	0.28	0.28		PATCH
1372+97					X				1	0.28	0.28		PATCH
1421+87				X					1	0.28	0.28		PATCH
1422+97					X				1	0.28	0.28		PATCH
1460+91				X					1	0.28	0.28		PATCH
1495+80				X					1	0.28	0.28		PATCH
1502+04						X			2	0.28	0.56		PATCH
1505+37						X						18	R&S
1529+61						X			1	0.28	0.28		PATCH
1530+07					X				1	0.28	0.28		PATCH
2460+61				X					1	0.28	0.28		PATCH
2461+62					X				1	0.28	0.28		PATCH
2461+74					X				2	0.28	0.56		PATCH
2462+96				X					1	0.28	0.28		PATCH
2478+77					X				1	0.28	0.28		PATCH
NORTHBOUND TOTAL (CU FT)												**5.32**	
NORTHBOUND TOTAL (LF)												**18**	

*** LANE NUMBERS BEGIN WITH THE LANE CLOSEST TO THE I-265 CENTERLINE, AND INCREASE AS YOU MOVE AWAY FROM THE CENTERLINE. IN OTHER WORDS, LANE #3 IS THE THIRD LANE RIGHT OF THE CENTERLINE.**

PARTIAL DEPTH PCC PAVEMENT REPAIRS
I-265, JEFFERSON COUNTY
ITEM NUMBER: 5-2068.00
NORTHBOUND RAMPS

BEGIN STATION	END STATION	TOTAL LENGTH (FT)	LANE #1	LANE #2	LANE #3	APPROX. SURF AREA (SQ FT)	DEPTH (FT)	PARTIAL DEPTH PATCHING (CU FT)	SAW-CLEAN & RESEAL RANDOM CRACKS (LF)	COMMENTS
NORTHBOUND I-265 TO KY 1447 EXIT RAMP										
1420+78					X	1	0.28	0.28		PATCH
KY 1447 TO NORTHBOUND I-265 ENTRANCE RAMP										
NO PARTIAL DEPTH PAVEMENT REPAIRS										
NORTHBOUND I-265 TO BROWNSBORO RD EXIT RAMP										
12+92				X		3	0.28	0.84		PATCH (GORE)
EASTBOUND KY 22 TO NORTHBOUND I-265 ENTRANCE RAMP										
NO PARTIAL DEPTH PAVEMENT REPAIRS										
WESTBOUND KY 22 TO NORTHBOUND I-265 ENTRANCE RAMP										
19+25			X			2	0.28	0.56		PATCH
NORTHBOUND I-265 TO NORTHBOUND I-71 EXIT RAMP										
20+18			X			1	0.28	0.28		PATCH
21+16			X			1	0.28	0.28		PATCH
NORTHBOUND I-71 TO NORTHBOUND I-265 ENTRANCE RAMP										
NO PARTIAL DEPTH PAVEMENT REPAIRS										
NORTHBOUND I-265 TO SOUTHBOUND I-71 EXIT RAMP										
NO PARTIAL DEPTH PAVEMENT REPAIRS										
SOUTHBOUND I-71 TO NORTHBOUND I-265 ENTRANCE RAMP										
NO PARTIAL DEPTH PAVEMENT REPAIRS										

NORTHBOUND RAMP TOTAL (CU FT)	**2.24**
NORTHBOUND RAMP TOTAL (LF)	**0**
NORTHBOUND TOTAL (CU FT)	**7.56**
NORTHBOUND TOTAL (LF)	**18**

PARTIAL DEPTH PCC PAVEMENT REPAIRS
I-265, JEFFERSON COUNTY
ITEM NUMBER: 5-2068.00
SOUTHBOUND

BEGIN STATION	END STATION	TOTAL LENGTH (LF)	INSIDE SHOULER	LANE #1*	LANE #2*	LANE #3*	LANE #4*	OUTSIDE SHOULDER	APPROX. SURF AREA (SQ FT)	DEPTH (FT)	PARTIAL DEPTH PATCHING (CU FT)	SAW-CLEAN & RESEAL RANDOM CRACKS (LF)	COMMENTS
1318+95					X				2	0.28	0.56		
1327+95				X					2	0.28	0.56		
1330+17					X				1	0.28	0.28		
1362+57					X				1	0.28	0.28		
1362+57								X	2	0.28	0.56		
1367+59								X	3	0.28	0.84		
1387+10								X	1	0.28	0.28		
1400+00					X				2	0.28	0.56		PATCH (DESTROYED STAMP)
1410+89								X				7	R&S OUTSIDE SHLDR
1420+87					X			X				18	R&S
1421+17					X				3	0.28	0.84		
1450+09				X					1	0.28	0.28		
2454+23					X				2	0.28	0.56		
2459+21				X					2	0.28	0.56		
2467+26				X					1	0.28	0.28		
SOUTHBOUND TOTAL (CU FT)												**6.44**	
SOUTHBOUND TOTAL (LF)												**25**	

*** LANE NUMBERS BEGIN WITH THE LANE CLOSEST TO THE I-265 CENTERLINE, AND INCREASE AS YOU MOVE AWAY FROM THE CENTERLINE. IN OTHER WORDS, LANE #3 IS THE THIRD LANE RIGHT OF THE CENTERLINE.**

PARTIAL DEPTH PCC PAVEMENT REPAIRS
I-265, JEFFERSON COUNTY
ITEM NUMBER: 5-2068.00
SOUTHBOUND RAMPS

BEGIN STATION	END STATION	TOTAL LENGTH (FT)	LANE #1	LANE #2	LANE #3	APPROX. SURF AREA (SQ FT)	DEPTH (FT)	PARTIAL DEPTH PATCHING (CU FT)	SAW-CLEAN & RESEAL RANDOM CRACKS (LF)	COMMENTS
KY 1447 TO SOUTHBOUND I-265 ENTRANCE RAMP										
NO PARTIAL DEPTH REPAIRS										
SOUTHBOUND I-265 TO WESTBOUND KY 1447 EXIT RAMP										
20+52			X			2	0.28	0.56		PATCH
24+38			X						15	R&S
KY 22 TO SOUTHBOUND I-265										
NO PARTIAL DEPTH REPAIRS										
SOUTHBOUND I-265 TO KY 22										
NO PARTIAL DEPTH REPAIRS										
NORTHBOUND I-71 TO SOUTHBOUND I-265 ENTRANCE RAMP										
NO PARTIAL DEPTH REPAIRS										
SOUTHBOUND I-265 TO NORTHBOUND I-71 EXIT RAMP										
NO PARTIAL DEPTH REPAIRS										
SOUTHBOUND I-71 TO NORTHBOUND I-265 ENTRANCE RAMP										
NO PARTIAL DEPTH REPAIRS										

SOUTHBOUND RAMP TOTAL (CU FT)	**0.56**
SOUTHBOUND RAMP TOTAL (LF)	**15**
SOUTHBOUND TOTAL (CU FT)	**7**
SOUTHBOUND TOTAL (LF)	**40**
PROJECT TOTAL (CU FT)	**14.56**
PROJECT TOTAL (LF)	**58**

I-265
JEFFERSON COUNTY
I-265 - GENE SNYDER FREEWAY
ITEM NUMBER: 5-2068.00

RAMP PAVING AREAS

ITEM	TOTAL
SB I-265 TO NB I-71 (RAMP 1) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	7919
ASPHALT PAVE MILLING & TEXTURING	7919
NB I-265 TO NB I-71 (RAMP 3) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	3807
ASPHALT PAVE MILLING & TEXTURING	3807
NB I-71 TO NB I-265 (RAMP 4) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	2522
ASPHALT PAVE MILLING & TEXTURING	2522
NB I-71 TO SB I-265 (RAMP 5) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	6552
ASPHALT PAVE MILLING & TEXTURING	6552
SB I-265 TO NB I-71 (RAMP 6) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	2992
ASPHALT PAVE MILLING & TEXTURING	2992
SB I-265 TO SB I-71 (RAMP 7) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	3891
ASPHALT PAVE MILLING & TEXTURING	3891
KY 22 SB TO NB I-265 (RAMP 1) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	1926
ASPHALT PAVE MILLING & TEXTURING	1926
NB I-265 TO KY 22 (RAMP 3) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	5971
ASPHALT PAVE MILLING & TEXTURING	5971
NB KY 22 TO NB I-265 (RAMP 4) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	3895
ASPHALT PAVE MILLING & TEXTURING	3895
KY 22 TO SB I-265 (RAMP 5) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	3553
ASPHALT PAVE MILLING & TEXTURING	3553
SB I-265 TO KY 22 (RAMP 7) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	3628
ASPHALT PAVE MILLING & TEXTURING	3628

ITEM	TOTAL
KY 1447 TO NB I-265 (RAMP 1) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	12478
ASPHALT PAVE MILLING & TEXTURING	12478
NB I-265 TO KY 1447 (RAMP 2) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	4337
ASPHALT PAVE MILLING & TEXTURING	4337
KY 1447 TO SB I-265 (RAMP 5) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	5057
ASPHALT PAVE MILLING & TEXTURING	5057
SB I-265 TO NB KY 1447 (RAMP 6) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	12987
ASPHALT PAVE MILLING & TEXTURING	12987
SB I-265 TO SB KY 1447 (RAMP 7) - LANES & SHOULDERS	**S.Y.**
1.5" CL4 ASPH SURF 0.50A PG76-22	2148
ASPHALT PAVE MILLING & TEXTURING	2148
ASPHALT SEAL (RAMPS)	**S.Y.**
ASPHALT SEAL COAT (2 APPLICATIONS)	64395
ASPHALT SEAL AGGREGATE (2 APPLICATIONS)	64395
ASPHALT SEAL (MAINLINE)	**S.Y.**
ASPHALT SEAL COAT (2 APPLICATIONS)	41650
ASPHALT SEAL AGGREGATE (2 APPLICATIONS)	41650

PAVING SUMMARY

CODE	ITEM	NOTES	UNITS	PROJECT
335	CL4 ASPH SURF 0.50A PG76-22		TON	**6902**
2677	ASPHALT PAVE MILLING & TEXTURING		TON	**6902**
100	ASPHALT SEAL AGGREGATE		TON	**2121**
103	ASPHALT SEAL COAT		TON	**255**

ALL QUANTITIES HAVE BEEN CARRIED OVER AND INCLUDED IN THE GENERAL SUMMARY

DIAMOND GRINDING SUMMARY
JEFFERSON COUNTY
I-265 - GENE SNYDER FREEWAY
Item Number: 5-2068.00
NORTHBOUND

DIRECTION	NUMBER OF LANES	BEGIN STATION	END STATION	LINEAR LANE-FEET	* SQUARE YARDS
Northbound	2	1313+25	1412+19	9,894	35,180
Northbound	2	1413+91	1415+52	161	573
Northbound	2	1415+52	1416+57	105	373
Northbound	2	1416+57	1417+29	72	256
Northbound	2	1419+63	1432+55	1,292	4,594
Northbound	4	1432+55	1437+30	475	2,956
Northbound	3	1437+30	1465+09	2,779	13,586
Northbound	2	1465+09	1474+94	985	3,502
Northbound	2	2445+00	2449+52	452	1,607
Northbound	3	2449+52	2450+50	98	479
Northbound	2	2450+50	2466+62	1,612	5,732
Northbound	3	2466+62	2468+82	220	1,076
Northbound	2	2471+24	2477+79	655	2,329
Northbound	3	2477+79	2485+85	806	3,940
Northbound	2	2485+85	2487+50	165	587
Northbound	2	1487+50	1499+95	1,245	4,427
Northbound	3	1499+95	1502+51	256	1,252
Northbound	3	1505+38	1506+55	117	572
Northbound	2	1506+55	1523+59	1,704	6,059
Northbound	4	1523+59	1528+26	467	2,906
Northbound	3	1528+26	1532+92	466	2,278
Northbound	2	1532+92	1535+03	211	750
TOTAL NORTHBOUND LINEAR LANE-FEET				**24,238**	
NORTHBOUND TOTAL PCC PAVEMENT DIAMOND GRINDING (Item No. 2060)					**95,012**

* INCLUDES 4FT ON EACH SHOULDER

NORTHBOUND TRAFFIC LOOPS	1313+29	1313+37	**INCLUDED (LOOP TO BE REPLACED)**
	2448+60	2448+70	**INCLUDED (LOOP TO BE REPLACED)**
	2485+97	2486+24	**INCLUDED (LOOP TO BE REPLACED)**

BRIDGES (NOT INCLUDED)

Bridge over Ramp 6	1412+19.25	1413+90.75
Bridge over Westport Road	1417+29	1419+63
Bridge over Brownsboro Road	2468+82	2471+24
Bridge over I-71	1502+51	1505+38

STATION EQUATIONS

Back	Ahead
1474+94	2445+00
2487+50	1487+50

DIAMOND GRINDING SUMMARY
JEFFERSON COUNTY
I-265 - GENE SNYDER FREEWAY
Item Number: 5-2068.00
SOUTHBOUND

DIRECTION	NUMBER OF LANES	BEGIN STATION	END STATION	LINEAR LANE-FEET	* SQUARE YARDS
Southbound	2	1313+25	1400+56	8,731	31,044
Southbound	3	1400+56	1404+88	432	2,112
Southbound	2	1404+88	1412+19	731	2,600
Southbound	2	1413+91	1417+52	361	1,284
Southbound	2	1420+20	1441+35	2,115	7,520
Southbound	4	1441+35	1442+63	128	796
Southbound	3	1442+63	1466+49	2,386	11,665
Southbound	2	1466+49	1474+94	845	3,004
Southbound	2	2445+00	2455+11	1,011	3,595
Southbound	3	2455+11	2459+57	446	2,180
Southbound	2	2459+57	2469+05	948	3,371
Southbound	2	2471+45	2481+90	1,045	3,716
Southbound	3	2481+90	2487+50	560	2,738
Southbound	3	1487+50	1488+95	145	709
Southbound	2	1488+95	1501+89	1,294	4,601
Southbound	3	1501+89	1502+95	106	518
Southbound	3	1505+86	1509+50	364	1,780
Southbound	2	1509+50	1524+19	1,469	5,223
Southbound	3	1524+19	1525+83	164	802
Southbound	2	1525+83	1535+03	920	3,271
TOTAL SOUTHBOUND LINEAR LANE-FEET				**24,202**	
SOUTHBOUND TOTAL PCC PAVEMENT DIAMOND GRINDING (Item No. 2060)					**92,528**

* INCLUDES 4FT ON EACH SHOULDER

SOUTHBOUND TRAFFIC LOOPS	1313+36	1313+46	**INCLUDED (LOOP TO BE REPLACED)**
	1450+95	1451+03	**INCLUDED (LOOP TO BE REPLACED)**
	2486+14	2486+37	**INCLUDED (LOOP TO BE REPLACED)**

BRIDGES (NOT INCLUDED)

Bridge over Ramp 6	1412+19.25	1413+90.75
Bridge over Westport Road	1417+52	1420+20
Bridge over Brownsboro Road	2469+05	2471+45
Bridge over I-71	1502+95	1505+86

STATION EQUATIONS

Back	Ahead
1474+94	2445+00
2487+50	1487+50

DIAMOND GRINDING SUMMARY
JEFFERSON COUNTY
I-265 - GENE SNYDER FREEWAY
Item Number: 5-2068.00
RAMPS

DIRECTION	NUMBER OF LANES	BEGIN STATION	END STATION	LINEAR LANE-FEET	* SQUARE YARDS
NB ENT FROM KY 146 **	1	7+15	23+20	1,605	5871
SB EXIT TO KY 146**	1	3+55	20+70	1,715	6084
NB EXIT TO KY 1447 (RAMP 2)	1	12+09	12+60	51	130
NB EXIT TO KY 1447 (RAMP 2)	1	14+84	17+95	311	795
NB ENT FROM WB KY 1447 (RAMP 1)	2	36+74	39+49	275	1,161
NB EXIT TO KY 22 (RAMP 3)	1	12+65	16+96	431	1,101
NB ENT FROM EB KY 22 (RAMP 4)	1	24+99	28+02	303	774
NB ENT FROM WB KY 22 (RAMP 1)	1	18+49	21+77	328	802
NB I-265 TO NB I-71 (RAMP 3)	1	12+32	17+25	493	1,260
NB I-71 TO NB I-265 (RAMP 4)	1	19+49	21+49	200	511
SB I-71 TO NB I-265 (RAMP 1)	1	43+15	47+49	434	1,109
SB ENT FROM KY 1447 (RAMP 5)	1	22+43	29+68	725	1,853
SB EXIT TO EB KY 1447 (RAMP 6)	2	12+30	31+54	1,924	7,268
SB EXIT TO WB KY 1447 (RAMP 7)	1	18+80	24+50	570	1,457
SB ENT FROM KY 22 (RAMP 5)	1	17+25	21+43	418	1,068
SB EXIT TO KY 22 (RAMP 7)	1	11+85	16+29	444	1,135
NB I-71 TO SB I-265 (RAMP 5)	1	38+73	42+56	383	979
SB I-265 TO NB I-71 (RAMP 6)	1	10+60	12+68	208	532
SB I-71 TO SB I-265 (RAMP 8)	1	18+99	20+71	172	440
SB I-265 TO SB I-71 (RAMP 7)	1	13+25	16+56	331	846
TOTAL RAMP LINEAR LANE-FEET				**7,950**	
RAMP TOTAL PCC PAVEMENT DIAMOND GRINDING (Item No. 2060)					**35,175**

* INCLUDES 4FT ON EACH SHOULDER

** SQUARE YARDS CALCULATED BASED ON MEASURED AREA OF RAMPS

NORTHBOUND GUARDRAIL SUMMARY
JEFFERSON COUNTY
I-265 - GENE SNYDER FREEWAY
Item Number: 5-2068.00

Location	Station	Station	SINGLE FACE (7 FT POST)	DOUBLE FACE	REMOVE GUARDRAIL	END TREATMENT TYPE 1	END TREATMENT TYPE 2A	END TREATMENT TYPE 4A	BRIDGE END CON. TYPE A	BRIDGE END CON. TYPE A-1	CRASH CUSHION TYPE IX (1)	CRASH CUSHION TYPE IX-A	SPECIAL CONCRETE HEADER CURB	ISLAND INTEGRAL CURB	ISLAND HEADER CURB TYPE 1	REMOVE CURB	COMMENTS
Units			LIN. FT.			Each							LIN. FT.				
Item Number			21802EN	2352	2381	2367	2369	2391	2363	2387	2929	2365		1845	1890	1904	
Northbound	1311+59	1318+59	700.0		700.0		1			1							NB 265 (Right Side)
Northbound	1361+00	1363+38	200.0		237.5		1	1									NB 265 (Right Side)
Northbound	1409+36	1412+11	100.0	137.5	275.0							1			25	25	NB 265 (Median)
Northbound	1409+85	1412+35	212.5		250.0			1	1						25	25	NB 265 (Right Side)
Northbound	1414+13	1414+50	37.5		37.5					1							NB 265 (Right
Northbound	1414+10	1417+35	325.0		325.0									25			NB 265 (Median)
Northbound	10+00	12+50	250.0		250.0				1					25			NB 265 - KY 1447 - Ramp 2 (Right Side)
Northbound	15+13	16+88	175.0		175.0		1			1					25	25	NB 265 - KY 1447 - Ramp 2 (Right Side)
Northbound	2447+63	2450+75	262.5		312.5	1	1										NB 265 (Right Side) -- Extend GR 50' on upstream end
Northbound	2449+83	2450+39									1						NB 265 (Median)
Northbound	2466+08	2468+83	100.0	137.5	275.0				1			1		25			NB 265 (Median) -- Construct curb at bridge end
Northbound	17+75	20+38	212.5		262.5	1	1										NB KY 22 - NB 265 - Ramp 4 (Left Side)
Northbound	27+37	30+24	237.5		287.5	1			1					25			NB KY 22 - NB 265 - Ramp 4 (Right Side) -- Construct curb at bridge end
Northbound	32+72	34+97	225.0		225.0		1			1					25	25	NB KY 22 - NB 265 - Ramp 4 (Right Side)
Northbound	2471+48	2471+73													25	25	NB 265(Median) Construct curb at bridge end
Northbound	11+75	12+25									1						NB 265 - NB 71 - Ramp 3 (Right Side)
Northbound	2485+90	2486+40									1						NB 265 (Median)
Northbound	15+50	27+75	1175.0		1225.0	1	1										NB 265 - NB 71 - Ramp 3 (Right Side)
Northbound	19+13	26+13	650.0		700.0	1	1										NB 265 - NB 71 - Ramp 3 (Left Side)
Northbound	13+40	17+90	400.0		450.0	1	1										NB 71 - NB 265 - Ramp 4 (Left Side)
Northbound	14+60	21+85	675.0		725.0	1											NB 71 - NB 265 - Ramp 4 (Right Side)
Northbound	1499+70	1502+45	100.0	137.5	275.0							1		25			NB 265 (Median) -- Construct curb at bridge end
Northbound	1500+30	1502+43	212.5		212.5				1					25			NB 265 (Right Side) -- Construct curb at bridge end
Northbound	1505+38	1506+00	62.5		62.5					1							NB 265 (Right Side)
Northbound	10+00	17+00	700.0		700.0		1										NB 265 - SB 71 - Ramp 2 (Right Side)
Northbound	13+13	18+88	537.5		575.0		1	1									NB 265 - SB 71 - Ramp 2 (Left Side)
Northbound	22+63	26+38	325.5		375.5	1			1								NB 265 - SB 71 - Ramp 2 (Right Side) - Connect to Barrier Wall
Northbound	20+35	36+85	1600.0		1650.0	1	1										SB 71 - NB 265 - Ramp 1 (Left Side)
Northbound	46+08	53+45	687.5		737.5	1	1										SB 71 - NB 265 - Ramp 1 (Right Side)
NORTHBOUND TOTAL			10,163.0	412.5	11,300.5	10	13	3	6	5	3	3	0	150	125	125	

(1) REMOVAL OF EXISTING CRASH CUSHION IS INCIDENTAL TO BID ITEM "CRASH CUSHION TYPE IX"

SOUTHBOUND GUARDRAIL SUMMARY
JEFFERSON COUNTY
I-265 - GENE SNYDER FREEWAY
Item Number: 5-2068.00

Location	Station	Station	SINGLE FACE (7 FT POST)	DOUBLE FACE	REMOVE GUARDRAIL	END TREATMENT TYPE 1	END TREATMENT TYPE 2A	END TREATMENT TYPE 4A	BRIDGE END CON. TYPE A	BRIDGE END CON. TYPE A-1	CRASH CUSHION TYPE IX (1)	CRASH CUSHION TYPE IX-A	SPECIAL CONCRETE HEADER CURB	ISLAND INTEGRAL CURB	ISLAND HEADER CURB TYPE 1	REMOVE CURB	COMMENTS
		Units		LIN. FT.					Each					LIN. FT.			
		Item Number	21802EN	2352	2381	2367	2369	2391	2363	2387	2929	2365		1845	1890	1904	
Southbound	1311+72	1318+72	662.5		700.0			1		1							SB 265 (Right Side) - Extend GR 50' on upstream enc
Southbound	1359+63	1362+00	200.0		237.5		1	1									SB 265 (Median)
Southbound	1410+10	1412+10	200.0		200.0		1			1					25	25	SB 265 (Right Side)
Southbound	1414+11	1417+49	337.5		337.5				1	1				50			SB 265 (Right Side) - Construct 25' curb at bridge ends
Southbound	1414+09	1417+84	375.0		375.0				1	1				50			SB 265 (Median) - Construct 25' curb at bridge ends
Southbound	1420+13	1422+88	100.0	137.5	275.0				1			1			25	25	SB 265 (Right Side) - Construct curb at bridge end
Southbound	1420+46	1422+59	175.0		212.5			1	1						25	25	SB 265 (Median) - Construct curb at bridge end
Southbound	11+92	12+48									1						SB 265 - KY 1447 - Ramp 6 (Right Side)
Southbound	20+05	20+61									1						SB 265 - KY 1447 - Ramp 6 (Left Side)
Southbound	28+41	31+28	237.5		287.5	1			1								SB 265 - NB KY 1447 - Ramp 6 (Left Side)
Southbound	28+65	31+40	225.0		275.0	1			1								SB 265 - NB KY 1447 - Ramp 6 (Right Side)
Southbound	33+84	50+22	1637.5		1637.5		1			1							SB 265 - NB KY 1447 - Ramp 6 (Right Side)
Southbound	40+42	46+05	512.5		562.5	1	1										SB 265 - NB KY 1447 - Ramp 6 (Left Side)
Southbound	19+83	20+39									1						SB 265 - SB KY 1447 - Ramp 7 (Right Side)
Southbound	1441+63	1442+19									1						SB 265 (Right Side)
Southbound	1454+54	1465+79	1075.0		1125.0	1	1										SB 265 (Median) -- Extend GR 50' on downstream end
Southbound	2466+68	2468+93	225.0		225.0		1			1				25			SB 265 (Right Side)
Southbound	2471+55	2474+30	100.0	137.5	275.0				1			1			25	25	SB 265 (Median Side)
Southbound	2471+72	2474+35	212.5		262.5	1			1						25	25	SB 265 (Right Side)
Southbound	2480+23	2480+79									1						SB 265 (Right Side)
Southbound	13+02	13+58									1						SB 265 - KY 22 - Ramp 7 (Right Side)
Southbound	20+73	24+23	300.0		350.0	1	1										NB 71 - SB 265 - Ramp 5 (Left Side)
Southbound	20+73	41+11	1987.5		2037.5	1	1										NB 71 - SB 265 - Ramp 5 (Right Side) Extend 50' on downstream end
Southbound	28+18	34+56	587.5		637.5	1	1										NB 71 - SB 265 - Ramp 5 (Left Side)
Southbound	1494+03	1496+28	175.0		225.0	1	1										SB 265 (Median)
Southbound	1502+50	1503+00	50.0		50.0					1					25	25	SB 265 (Median) -- Construct curb at bridge end
Southbound	1502+90	1502+65													25	25	SB 265 (Right Side) -- Construct curb at bridge end
Southbound	10+00	17+25	725.0		725.0		1										SB 265 - NB 71 - Ramp 6 (Right Side)
Southbound	14+17	21+29	662.5		712.5	1	1										SB 265 - NB 71 - Ramp 6 (Left Side)
Southbound	16+24	21+36	462.5		512.5	1	1										SB 71 - SB 265 - Ramp 8 (Right Side)
Southbound	1505+90	1508+65	100.0	137.5	275.0							1					SB 265 (Right Side)
Southbound	1506+10	1508+85	275.0		275.0				1								SB 265 (Median)
Southbound	1522+09	1522+65									1						SB 265 (Right Side)
Southbound	1525+83	1530+71	487.5		487.5	1											SB 265 (Median)
Southbound	10+00	23+75	1375.0		1375.0		1										SB 265 - SB 71 - Ramp 7 (Right Side)
Southbound	18+10	29+85	1175.0		1175.0	1	1										SB 265 - SB 71 - Ramp 7 (Left Side)
Southbound	25+86	32+36	650.0		650.0	1	1										SB 265 - SB 71 - Ramp 7 (Right Side)
SOUTHBOUND TOTAL			15,287.5	412.5	16,475	14	16	3	9	7	7	3	0	125	175	175	
PROJECT TOTAL			25,450.5	825.0	27,775.5	24	29	6	15	12	10	6	1,000	275	300	300	

(1) REMOVAL OF EXISTING CRASH CUSHION IS INCIDENTAL TO BID ITEM "CRASH CUSHION TYPE IX"

PIPE AND DRAINAGE SUMMARY
JEFFERSON COUNTY
I-265 - GENE SNYDER FREEWAY
Item Number: 5-2068.00

Location	Station	Type	Pipe Size	Reset Grate*	Replace Grate	Channel Lining CL III	Channel Lining CL II	Flowable Fill	Embankment	Clean Inlet/ Outlet*	Clean Pipe*	Clean Ditch*	42" CULVERT PIPE	24" CULVERT PIPE	18" CULVERT PIPE	15" CULVERT PIPE	S & F BOX INLET-OUTLET-24 IN	DROP BOX INLET - TYPE 1	CURB BOX INLET TYPE B-T	CLASS A CONCRETE	STEEL REINFORCEMENT	REMOVE PIPE	COMMENTS
Units				Each		Ton	Ton	CY	CY	Each	Each	Lin. Ft.					Each			CY	LBS	Lin. Ft.	
Item Number					20366NN	2484	2483	2220		Incidental			469	464	462	461	1451	1490	1484	8100	8150	1310	
RT I-265	1314+41	FLUME					1			1													
RT I-265	1316+26	2' F.B. DITCH										200											
RT I-265	1319+47	PERF HDWL	4"							1													
RT I-265	1322+62	PERF HDWL	4"							1													
RT I-265	1324+54	PERF HDWL	4"							1													
RT I-265	1325+64	HEADWALL	18"							1													
RT I-265	1327+03	PERF HDWL	4"							1													
RT I-265	1329+53	PERF HDWL	4"							1													
RT I-265	1332+14	PERF HDWL	4"							1													
RT I-265	1333+75	2' F.B. DITCH										200											
RT I-265	1334+54	PERF HDWL	4"							1													
RT I-265	1335+08	HEADWALL	15"				1			1		100											
RT I-265	1337+05	PERF HDWL	4"							1													
RT I-265	1339+55	PERF HDWL	4"							1													
RT I-265	1342+03	HEADWALL	18"							1													
RT I-265	1342+11	PERF HDWL	4"							1													
RT I-265	1344+54	PERF HDWL	4"							1													
RT I-265	1347+02	PERF HDWL	4"							1													
RT I-265	1348+18	2' F.B. DITCH					1																
RT I-265	1349+53	PERF HDWL	4"							1													
RT I-265	1352+04	PERF HDWL	4"							1													
RT I-265	1354+13	PERF HDWL	4"							1													
RT I-265	1357+03	PERF HDWL	4"							1													
RT I-265	1359+53	PERF HDWL	4"							1													
RT I-265	1362+04	PERF HDWL	4"							1													
RT I-265	1365+03	PERF HDWL	4"							1													
RT I-265	1365+52	HEADWALL	15"		1																		
RT I-265	1367+51	PERF HDWL	4"							1													
RT I-265	1367+90	HEADWALL	15"							1		75											
RT I-265	1370+00	PERF HDWL	4"							1													
RT I-265	1372+52	PERF HDWL	4"				1			1													
RT I-265	1376+01	PERF HDWL	4"				1		5	1													
RT I-265	1377+51	PERF HDWL	4"							1													
RT I-265	1380+02	PERF HDWL	4"							1													
RT I-265	1382+51	PERF HDWL	4"							1													
RT I-265	1385+01	PERF HDWL	4"							1													
RT I-265	1387+51	PERF HDWL	4"									50											
RT I-265	1390+00	PERF HDWL	4"				1			1													
RT I-265	1392+52	PERF HDWL	4"							1													
RT I-265	1395+62	PERF HDWL	4"							1													
RT I-265	1395+46	HEADWALL	24"		1							100											
RT I-265	1399+83	PERF HDWL	4"							1													
RT I-265	1402+35	PERF HDWL	4"							1													
RT I-265	1405+00	HEADWALL	30"		1					1										0.10			REPAIR WING WALL
RT I-265	1405+08	PERF HDWL	4"							1													
RT I-265	1407+04	PERF HDWL	4"							1													
RT I-265	1409+23	PERF HDWL	4"				1			1													
Westport Rd (KY 1447)	69+77	HEADWALL	30"							1		100											
KY 1447 Ramp 6	61+28	HEADWALL	30"			170				1													
Westport Rd (KY 1447)	55+77	HEADWALL	18"				90			1		200											
KY 1447 Ramp 6	47+64	HEADWALL	30"		1	350				1		150											
KY 1447 Ramp 6	46+07	HEADWALL	48"							1													
Westport Rd (KY 1447)	52+67	HEADWALL	36"			50				1		200											
KY 1447 Ramp 6	41+35	HEADWALL	42"			250							24							2.68	215	24	CONCRETE PIPE ONLY
KY 1447 Ramp 6	40+74	HEADWALL	48"			50																	
KY 1447 Ramp 6	35+61	HEADWALL	60"				50																
Westport Rd (KY 1447)	47+21	HEADWALL	30"									200											
KY 1447 Ramp 6	34+12	HEADWALL	18"									200											
KY 1447 Ramp 6	48+09	DBI					1																
KY 1447 Ramp 6	61+24	DBI						2															
KY 1447 Ramp 6	63+88	HEADWALL	30"		1																		
KY 1447 Ramp 2	12+61	PERF HDWL	4"							1													
RT KY 1447 Ramp 2	29+05	HEADWALL	18"			300						50											

PIPE AND DRAINAGE SUMMARY
JEFFERSON COUNTY
I-265 - GENE SNYDER FREEWAY
Item Number: 5-2068.00

Location	Station	Type	Pipe Size	Reset Grate*	Replace Grate	Channel Lining CL III	Channel Lining CL II	Flowable Fill	Embankment	Clean Inlet/ Outlet*	Clean Pipe*	Clean Ditch*	42" CULVERT PIPE	24" CULVERT PIPE	18" CULVERT PIPE	15" CULVERT PIPE	S & F BOX INLET-OUTLET-24 IN	DROP BOX INLET - TYPE 1	CURB BOX INLET TYPE B-T	CLASS A CONCRETE	STEEL REINFORCEMENT	REMOVE PIPE	COMMENTS
Units				Each		Ton	Ton	CY	CY	Each	Each	Lin. Ft.					Each			CY	LBS	Lin. Ft.	
Item Number					20366NN	2484	2483	2220		Incidental			469	464	462	461	1451	1490	1484	8100	8150	1310	
RT KY 1447 Ramp 2	14+62	FLUME						5		1													
RT KY 1447 Ramp 2	17+81	PERF HDWL	4"							1													
RT KY 1447 Ramp 2	26+07	HEADWALL	24"				1					450											
LT KY 1447 Ramp 2	26+02	2' F.B. DITCH					100																
RT I-265	1422+97	PERF HDWL	4"							1													
RT I-265	1424+78	PERF HDWL	4"							1													
	1426+00	DBI	18" & 24"						5	1				8	8			1				16	
RT I-265	1426+89	PERF HDWL	4"							1													
RT I-265	1428+72	PERF HDWL	4"							1													
LT KY 1447 Ramp 1A	11+90	DBI	18"					3	3														
LT Westport Rd (KY 1447)	67+74	DBI	42"/30"/24"					4															
RT KY 1447 Ramp 1	34+61	HEADWALL	18"							1													
RT KY 1447 Ramp 1	36+52	PERF HDWL	4"							1													
RT I-265	1435+01	PERF HDWL	4"							1													
RT I-265	1437+51	PERF HDWL	4"							1													
RT I-265	1440+01	PERF HDWL	4"							1													
RT I-265	1442+50	PERF HDWL	4"							1													
RT I-265	1444+97	PERF HDWL	4"							1													
RT I-265	1447+49	PERF HDWL	4"							1													
RT I-265	1450+00	PERF HDWL	4"							1													
RT I-265	1452+50	PERF HDWL	4"							1													
RT I-265	1455+03	PERF HDWL	4"							1													
RT I-265	1457+51	PERF HDWL	4"							1													
RT I-265	1460+00	PERF HDWL	4"							1													
RT I-265	1462+49	PERF HDWL	4"							1													
RT I-265	1463+43	2' F.B. DITCH										100											
RT I-265	1464+98	PERF HDWL	4"							1													
RT I-265	1467+50	PERF HDWL	4"							1													
RT I-265	1469+99	PERF HDWL	4"							1													
RT I-265	1472+48	PERF HDWL	4"				1			1													
RT I-265	2445+06	PERF HDWL	4"				1			1													
RT I-265	2447+48	PERF HDWL	4"							1													
RT I-265	2449+22	2' F.B. DITCH										300											
RT I-265	2450+94	HEADWALL					2			1													
RT I-265	2452+48	PERF HDWL	4"							1													
RT KY 22 RAMP 3	16+83	PERF HDWL	4"							1													
RT KY 22 RAMP 3	17+06	PERF HDWL	4"							1	1												
RT KY 22 RAMP 3	22+35	HEADWALL					5			1													
RT KY 22 RAMP 3	24+71	HEADWALL					5			1	1												
RT KY 22 RAMP 3	27+03	2' F.B. DITCH										100											
RT KY 22 RAMP 3	28+06	2' F.B. DITCH								1													
RT KY 22 RAMP 4	18+45	HEADWALL	33"X54" / 15"				10			2													
RT KY 22 RAMP 4	24+77	PERF HDWL	4"							1													
RT I-265	2462+84	PERF HDWL	4"							1													
RT I-265	2459+80	HEADWALL	24"				1			1													
RT I-265	2460+00	PERF HDWL	4"							1													
RT KY 22 RAMP 1	15+38	2' F.B. DITCH										50											
RT KY 22 RAMP 1	18+02	PERF HDWL	4"							1													
RT I-265	2471+56	CBI								1													
RT I-265	2471+45	PERF HDWL	4"							1													
RT I-265	2479+99	PERF HDWL	4"							1													
RT I-265	2480+66	2' F.B. DITCH										700											
RT I-265	2484+97	PERF HDWL	4"							1													
RT I-265	2487+48	PERF HDWL	4"				1			1													
RT I-71 RAMP 3	17+14	PERF HDWL	4"							1													
RT I-71 RAMP 3	25+57	HEADWALL	42"							1		75											
RT I-71 RAMP 3	34+06	PERF HDWL	4"							1													
RT I-71	268+80	2' F.B. DITCH										200											
RT I-71	268+63	HEADWALL	15"							1													
RT I-71	266+76	HEADWALL	24"		1																		
LT I-71 RAMP 3	25+28	HEADWALL	42"			100				1		50											
RT I-265	1492+50	PERF HDWL	4"							1													
RT I-265	1494+90	PERF HDWL	4"							1													
RT I-265	1496+80	PERF HDWL	4"							1													

PIPE AND DRAINAGE SUMMARY
JEFFERSON COUNTY
I-265 - GENE SNYDER FREEWAY
Item Number: 5-2068.00

Location	Station	Type	Pipe Size	Reset Grate*	Replace Grate	Channel Lining CL III	Channel Lining CL II	Flowable Fill	Embankment	Clean Inlet/ Outlet*	Clean Pipe*	Clean Ditch*	42" CULVERT PIPE	24" CULVERT PIPE	18" CULVERT PIPE	15" CULVERT PIPE	S & F BOX INLET-OUTLET-24 IN	DROP BOX INLET - TYPE 1	CURB BOX INLET TYPE B-T	CLASS A CONCRETE	STEEL REINFORCEMENT	REMOVE PIPE	COMMENTS
Units				Each		Ton	Ton	CY	CY	Each	Each		Lin. Ft.				Each			CY	LBS	Lin. Ft.	
Item Number					20366NN	2484	2483	2220		Incidental			469	464	462	461	1451	1490	1484	8100	8150	1310	
LT I-71 RAMP 4	12+68	HEADWALL	24"	1						1													
LT I-71 RAMP 4	10+20	PERF HDWL	4"							1													
RT I-71	262+20	HEADWALL	56"			100																	
RT I-71 RAMP 4	14+08	HEADWALL	42"									450											
RT I-71 RAMP 4	17+58	HEADWALL	24"							1													
RT I-71 RAMP 6	10+00	HEADWALL	15"							1													
RT I-71 RAMP 6	12+65	PERF HDWL	4"							1													REATTACH HEADWALL TO PIPE OUTLET
RT I-71 RAMP 6	13+23	HEADWALL	24"							1													
LT KY 22 RAMP 5	15+74	2' F.B. DITCH										250											
LT I-265	2464+93	PERF HDWL	4"							1													
LT I-265	2459+99	PERF HDWL	4"							1													
LT I-265	2454+96	PERF HDWL	4"							1													
LT I-265	2459+11	HEADWALL	24"				1																
LT I-265	2452+45	PERF HDWL	4"							1													
LT I-265	2451+89	HEADWALL	18"				1																
RT KY 1447 RAMP 5A	11+75	2' F.B. DITCH				250																	
RT KY 1447 RAMP 5A	12+22	2' F.B. DITCH				1,000																	
RT KY 1447 RAMP 5A	12+37	HEADWALL	60"							1										3.56	278		REMOVE AND REPLACE WINGWALL ONLY
RT KY 1447 RAMP 5	15+05	2' F.B. DITCH								1													
RT KY 1447 RAMP 5	21+51	HEADWALL	42"			350				1		500											
RT KY 1447 RAMP 5	23+97	PERF HDWL	4"							1													
RT KY 1447 RAMP 5	26+53	PERF HDWL	4"							1													
LT I-265	1409+21	PERF HDWL	4"							1													
LT I-265	1411+93	CBI																					
LT I-265	1411+89	HEADWALL	15"													30				0.75	7	30	CONST. 30' OF PIPE AND ONE (1) 15" S & F HEADWALL
RT KY 1447 RAMP 6	41+58	HEADWALL	42"							1													
RT KY 1447 RAMP 6	41+82	HEADWALL	42"			350				1													
RT KY 1447 RAMP 6	33+48	DBI	18"							1													
LT I-265	1405+56	PERF HDWL	4"							1													
LT I-265	1400+52	PERF HDWL	4"							1													
LT I-265	1399+52	HEADWALL	18"			350																	
LT I-265	1397+49	PERF HDWL	4"							1													
LT I-265	1391+50	HEADWALL	15"					1	1														
LT I-265	1390+02	PERF HDWL	4"							1													
LT I-265	1387+53	PERF HDWL	4"							1													
LT I-265	1385+03	PERF HDWL	4"							1													
LT I-265	1382+53	PERF HDWL	4"							1													
LT I-265	1380+05	PERF HDWL	4"							1													
LT I-265	1377+55	PERF HDWL	4"							1													
LT I-265	1375+06	PERF HDWL	4"							1													
LT I-265	1372+59	PERF HDWL	4"							1													
LT I-265	1370+15	PERF HDWL	4"							1													
LT I-265	1373+01	DBI	12"					1															
LT I-265	1380+51	DBI	18"						1														
LT I-265	1391+51	DBI	(3) 15"					2	2														REMOVE BROKEN APRON, REGRADE AND PLACE EROSION CONTROL BLANKET
LT I-265	1402+02	PERF HDWL	4"							1													
LT I-265	1404+52	PERF HDWL	4"							1													
LT I-265	1367+69	PERF HDWL	4"							1													
LT I-265	1368+23	PERF HDWL	4"							1													
LT I-265	1362+77	PERF HDWL	4"							1													
LT I-265	1360+33	PERF HDWL	4"							1													
LT I-265	1360+84	2' F.B. DITCH										300											
LT I-265	1359+00	2' F.B. DITCH										20											
LT I-265	1357+88	HEADWALL	15"							1													
LT I-265	1357+88	PERF HDWL	4"							1													
LT I-265	1355+43	PERF HDWL	4"							1													
LT I-265	1352+92	PERF HDWL	4"							1													
LT I-265	1350+54	HEADWALL	15"							1		20											
LT I-265	1350+45	PERF HDWL	4"							1													
LT I-265	1349+01	HEADWALL	24"		1					1													
LT I-265	1347+96	PERF HDWL	4"							1													
LT I-265	1345+47	PERF HDWL	4"							1													
LT I-265	1343+66	HEADWALL	24"	1			1			1													

PIPE AND DRAINAGE SUMMARY
JEFFERSON COUNTY
I-265 - GENE SNYDER FREEWAY
Item Number: 5-2068.00

Location	Station	Type	Pipe Size	Reset Grate*	Replace Grate	Channel Lining CL III	Channel Lining CL II	Flowable Fill	Embankment	Clean Inlet/ Outlet*	Clean Pipe*	Clean Ditch*	42" CULVERT PIPE	24" CULVERT PIPE	18" CULVERT PIPE	15" CULVERT PIPE	S & F BOX INLET-OUTLET-24 IN	DROP BOX INLET - TYPE 1	CURB BOX INLET TYPE B-T	CLASS A CONCRETE	STEEL REINFORCEMENT	REMOVE PIPE	COMMENTS
Units				Each		Ton	Ton	CY	CY	Each	Each	Lin. Ft.					Each			CY	LBS	Lin. Ft.	
Item Number					20366NN	2484	2483	2220		Incidental			469	464	462	461	1451	1490	1484	8100	8150	1310	
LT I-265	1342+97	PERF HDWL	4"							1													
LT I-265	1342+04	HEADWALL	18"					2		1													
LT I-265	1340+50	PERF HDWL	4"							1													
LT I-265	1338+00	PERF HDWL	4"							1													
LT I-265	1335+53	PERF HDWL	4"							1													
LT I-265	1333+02	PERF HDWL	4"							1													
LT I-265	1330+03	PERF HDWL	4"							1													
LT I-265	1328+03	PERF HDWL	4"							1													
LT I-265	1325+54	PERF HDWL	4"							1													
LT I-265	1325+04	HEADWALL	?							1													
LT I-265	1323+05	PERF HDWL	4"							1													
LT I-265	1320+54	PERF HDWL	4"							1													
LT I-265	1319+54	HEADWALL	15"		1					1													
LT I-265	1318+79	PERF HDWL	4"							1													
LT I-265	1311+97	HEADWALL	15"				2			1													
LT I-265	1311+56	HEADWALL	30"							1													
LT I-265	1314+67	PERF HDWL	4"							1													
LT I-265	1365+50	DBI	15"					1	3	1													
LT I-265	1358+02	DBI	15"							1													
LT I-265	1350+53	DBI	15"							1													
RT I-265	1346+23	PERF HDWL	4"							1													
LT I-265	1345+57	PERF HDWL	4"							1													
RT I-265	1344+19	PERF HDWL	4"							1													
LT I-265	1342+03	DBI	18"						2	1													
LT I-265	1339+80	PERF HDWL	4"							1													
RT I-265	1339+80	PERF HDWL	4"							1													
LT I-265	1337+55	PERF HDWL	4"							1													
RT I-265	1337+55	PERF HDWL	4"							1													
LT I-265	1335+08	DBI	15"					1	2														
LT I-265	1332+54	PERF HDWL	4"							1													
RT I-265	1332+54	PERF HDWL	4"							1													
LT I-265	1330+05	PERF HDWL	4"							1													
RT I-265	1330+05	PERF HDWL	4"							1													
LT I-265	1324+94	PERF HDWL	4"							1													
RT I-265	1324+94	PERF HDWL	4"							1													
LT I-265	1322+50	PERF HDWL	4"							1													
LT I-265	1322+21	PERF HDWL	4"							1													
LT I-265	1319+55	DBI	15"					1	2														
LT I-265	1311+86	CBI																					
RT I-265	1311+82	CBI								1													
RT I-71	255+31	2' F.B. DITCH										125											
RT I-71	248+78	PERF HDWL	4"							1													
RT I-71	248+34	HEADWALL	48"X72"			400						600											
RT I-71	245+00	PERF HDWL	4"							1													
RT I-71	245+86	2' F.B. DITCH										200											
RT I-71	233+71	HEADWALL	42"			300																	
RT I-71	250+14	HEADWALL	42"				50																
RT I-71 RAMP 5	23+42	HEADWALL	36"				5																
RT I-71 RAMP 5	38+76	PERF HDWL	4"							1													
RT I-71 RAMP 5	44+01	PERF HDWL	4"							1													
RT I-71 RAMP 5	45+03	PERF HDWL	4"							1													
RT I-71 RAMP 5	45+13	HEADWALL	24"		1																		
RT I-71 RAMP 5	46+52	PERF HDWL	4"							1													
RT KY 22 RAMP 7	13+88	PERF HDWL	4"							1													
RT KY 22 RAMP 7	14+82	HEADWALL	18"				50																
RT KY 22 RAMP 7	22+46	DBI	?									200											
LT I-265	2471+72	CBI																	1				REPLACE TOP PHASE ONLY
RT I-265	2479+00	DBI								1													
RT I-265	2486+45	DBI								1													
RT I-265	1492+98	DBI								1													
LT I-265	1496+77	PERF HDWL	4"							1													
LT I-265	1498+02	HEADWALL	24"	1																			
RT I-265	1502+58	PERF HDWL	4"							1													
LT I-265	1464+97	PERF HDWL	4"							1													
LT I-265	1464+25	2' F.B. DITCH										100											

PIPE AND DRAINAGE SUMMARY
JEFFERSON COUNTY
I-265 - GENE SNYDER FREEWAY
Item Number: 5-2068.00

Location	Station	Type	Pipe Size	Reset Grate*	Replace Grate	Channel Lining CL III	Channel Lining CL II	Flowable Fill	Embankment	Clean Inlet/ Outlet*	Clean Pipe*	Clean Ditch*	42" CULVERT PIPE	24" CULVERT PIPE	18" CULVERT PIPE	15" CULVERT PIPE	S & F BOX INLET-OUTLET-24 IN	DROP BOX INLET - TYPE 1	CURB BOX INLET TYPE B-T	CLASS A CONCRETE	STEEL REINFORCEMENT	REMOVE PIPE	COMMENTS
Units					Each	Ton	Ton	CY	CY	Each	Each	Lin. Ft.					Each			CY	LBS	Lin. Ft.	
Item Number					20366NN	2484	2483	2220		Incidental			469	464	462	461	1451	1490	1484	8100	8150	1310	
LT I-265	1463+97	HEADWALL	18"							1													
LT I-265	1462+52	PERF HDWL	4"							1													
LT I-265	1457+40	PERF HDWL	4"							1													
LT I-265	1454+90	HEADWALL	48"X76"			150																	
LT I-265	1452+43	PERF HDWL	4"							1													
LT I-265	1451+78	2' F.B. DITCH										50											
LT I-265	1449+97	PERF HDWL	4"							1													
LT I-265	1448+98	HEADWALL	18"							1													
LT I-265	1447+45	PERF HDWL	4"							1													
LT I-265	1444+99	HEADWALL	15"							1													
LT I-265	1442+47	PERF HDWL	4"							1													
LT I-265	1441+99	HEADWALL	15"							1													
LT I-265	1439+99	PERF HDWL	4"							1													
LT I-265	1435+63	PERF HDWL	4"							1													
LT I-265	1435+00	HEADWALL	18"							1													
RT KY1447 RAMP 7	20+88	PERF HDWL	4"							1													
RT KY1447 RAMP 7	22+65	HEADWALL	24"							1													
RT KY1447 RAMP 7	24+50	PERF HDWL	4"							1													
LT KY1447 RAMP 7	31+46	HEADWALL	18"							1													
LT I-265	1431+62	DBI	?							1													
LT I-265	1428+00	HEADWALL	18"							1		375											
LT I-265	1426+92	PERF HDWL	4"							1													
LT KY1447 RAMP 6	31+55	PERF HDWL	4"							1													
LT I-265	1421+05	HEADWALL	30"			200				1													
LT I-265	1420+85	HEADWALL	15"					2		1													
LT I-265	1422+97	PERF HDWL	4"				20			1													
LT I-265	1427+98	DBI	?							1													
RT I-265	1435+00	DBI	?							1													
RT I-265	1442+00	DBI	?							1													
RT I-265	1445+00	DBI	?							1													
RT I-265	1448+98	DBI	?							1													
RT I-265	1454+97	DBI	?							1													
RT I-265	1413+98	DBI	?							1													
LT I-265	2449+98	PERF HDWL	4"							1													
LT I-265	2447+30	PERF HDWL	4"							1													
LT I-265	2445+00	PERF HDWL	4"							1													
LT I-265	1474+00	HEADWALL	18"							1													
LT I-265	1473+61	2' F.B. DITCH										100											
LT I-265	1472+50	PERF HDWL	4"							1													
RT I-71 RAMP 2	18+04	HEADWALL	15"		1		1																
RT I-71 RAMP 2	22+84	HEADWALL	24"				1																
RT I-71 RAMP 2	24+98	2' F.B. DITCH										20											
RT I-71 RAMP 2	24+98	HEADWALL	24"							1													
RT I-71 RAMP 2	13+76	HEADWALL	?							1	1												
RT I-71 RAMP 2	15+18	HEADWALL	18"				1			1													
LT I-71 RAMP 2	22+68	HEADWALL	24"											4			1					4	
LT I-71 RAMP 2	22+71	PERF HDWL	4"							1													
RT I-265	1514+95	PERF HDWL	4"							1													
RT I-265	1519+09	DBI	18"		1																		
LT I-71 RAMP 1	35+96	HEADWALL	30"							1													
LT I-71 RAMP 1	34+02	2' F.B. DITCH										200											
LT I-71 RAMP 1	29+21	HEADWALL	18"				1			1													
LT I-71 RAMP 1	23+47	HEADWALL	24"				1			1													
RT I-71 RAMP 1	23+47	HEADWALL	24"							1		200											
RT I-71 RAMP 1	42+96	HEADWALL	18"		1					1		175											
RT I-71 RAMP 1	46+08	2' F.B. DITCH										50											
RT I-71 RAMP 1	48+91	PERF HDWL	4"				1			1													
RT I-265	1528+97	DBI	18"							1													
RT I-265	1526+48	DBI	18"							1													
RT I-265	1518+96	DBI	15"							1													
RT I-265	1511+95	DBI	15"							1													
LT I-265	1532+48	PERF HDWL	4"							1													
LT I-265	1529+92	PERF HDWL	4"							1													
LT I-265	1529+00	HEADWALL	15"							1													
LT I-265	1526+99	PERF HDWL	4"							1													

PIPE AND DRAINAGE SUMMARY
JEFFERSON COUNTY
I-265 - GENE SNYDER FREEWAY
Item Number: 5-2068.00

Location	Station	Type	Pipe Size	Reset Grate*	Replace Grate	Channel Lining CL III	Channel Lining CL II	Flowable Fill	Embankment	Clean Inlet/ Outlet*	Clean Pipe*	Clean Ditch*	42" CULVERT PIPE	24" CULVERT PIPE	18" CULVERT PIPE	15" CULVERT PIPE	S & F BOX INLET-OUTLET-24 IN	DROP BOX INLET - TYPE 1	CURB BOX INLET TYPE B-T	CLASS A CONCRETE	STEEL REINFORCEMENT	REMOVE PIPE	COMMENTS
Units				Each		Ton	Ton	CY	CY	Each	Each	Lin. Ft.					Each			CY	LBS	Lin. Ft.	
Item Number					20366NN	2484	2483	2220		Incidental			469	464	462	461	1451	1490	1484	8100	8150	1310	
LT I-265	1524+99	HEADWALL	48"									25											
LT I-265	1524+93	PERF HDWL	4"							1													
LT I-265	1518+96	DBI	18"							1													
LT I-265	1514+90	PERF HDWL	4"							1													
LT I-265	1506+53	HEADWALL	15"									500											
LT I-265	1506+16	CBI																	1				REPLACE TOP PHASE ONLY
LT I-265	1511+50	HEADWALL	24"							1													
RT I-71 RAMP 7	28+99	HEADWALL	18"							1													
RT I-71 RAMP 7	30+36	HEADWALL	48"X72"				15																
LT I-71 RAMP 7	28+61	HEADWALL	18"							1													
LT I-71 RAMP 7	21+93	HEADWALL	24"							1													
PROJECT TOTALS				3	12	4,720	426	25	26	261	3	8,310	24	12	8	30	1	1	2	7	500	74	

*** Quantities for "Reset Grate", "Clean Inlet/Outlet", "Clean Pipe" and "Clean Ditch" quantities are shown for information purposes only and are considered incidental to the bid item "Ditching".**

SPECIAL NOTES FOR JPC PAVEMENT
DIAMOND GRINDING REHABILITATION
JEFFERSON COUNTY
I-265 GENE SNYDER FREEWAY

FD52 056 0265 030-036
STP 2653 (035)
Item No. 5-2068.00

THIS PROJECT IS A FULLY CONTROLLED ACCESS HIGHWAY

I. DESCRIPTION

Perform all work in accordance with the Department's 2012 Standard Specifications, Supplemental Specifications, other applicable Special Provisions, and applicable Standard and Sepia Drawings, except as hereafter specified. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for the following work:

(1) Maintain and Control Traffic; (2) Remove and replace JPC Pavement at the locations listed and/or as directed by the Engineer; (3) Diamond Grinding JPC Pavement and Permanent Striping; (4) Re-saw and seal joint seals; (5) Remove and replace Guardrail and Guardrail End treatments at the locations listed and/or as directed by the Engineer; (6) Type V pavement markers; and (7) All other work specified as part of this contract.

II. MATERIALS

Except as specified in these notes or on the drawings, all materials will be according to the Standard Specifications and applicable Special Provisions and Special Notes. The Department will sample and test all materials according to Department's Sampling Manual and the Contractor will have the. materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing, unless otherwise specified in these notes.

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

B. **Joint and Crack Sealing.** For joints and cracks, use Hot-Poured Elastic Joint Sealant conforming to section 807.03.01.

C. **Dense Graded Aggregate.** Crushed Stone Base may not be furnished in lieu of DGA.

D. **Jointed Plain Concrete Pavement 10"/24 HR.** Use Jointed Plain Concrete Pavement 10"/24 HR for full depth replacement of concrete pavement in mainline driving lanes and ramp shoulders for the LaGrange Road Interchange. Either central mixing or truck mixing will be allowed.

E. **Jointed Plain Concrete Pavement 6”/24HR**. Use Jointed Plain Concrete Pavement 6"/24 HR for full depth replacement of concrete pavement in mainline shoulders. Either central mixing or truck mixing will be allowed.

F. **Partial Depth Patching.** Use Polymer Patch Repair for Partial Depth Patching.

G. **Pavement Markings -6 inch Paint.** Use Durable Waterborne 6-inch Paint for permanent striping (12 inch at entrance and exit ramp tapers).

H. **Crushed Aggregate Size No. 3.** Crushed Aggregate Size No. 3 shall be limestone.

I. **Channel Lining Class II and III.** Channel lining shall be limestone and is to be placed at pipe outlets with significant erosion as noted and/or as directed by the Engineer.

J. **Erosion Control Blanket.** Erosion control blanket is to be placed in all ditching areas when ditching is complete, on slope stabilization areas, or as directed by the Engineer. Use Seed Mixture No. 1.

III. CONSTRUCTION METHODS

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

B. **Site Preparation.** Be responsible for all site preparation. Do not disturb existing signs unless otherwise directed and or approved by the Engineer. This item will include, but is not limited to, incidental excavation and backfilling; removal of all obstructions or any other items; disposal of materials; sweeping and removal of debris; shoulder preparation and restoration; temporary and permanent erosion and pollution control; and all incidentals. Site preparation will be only as approved or directed by the Engineer. Other than the bid items listed, no direct payment will be made for site preparation, but will be incidental to the other items of work.

C. **Concrete Pavement Removal and Replacement.** Except as specified in these notes, perform full depth concrete pavement removal and replacement in accordance with the Special Note for Full Depth Concrete Pavement Repair. Approximate removal locations are listed in the proposal. The Engineer will determine actual locations at the time of construction, and may add to the listed repairs if deemed necessary. Remove pavement for full depth repairs by a saw cut and lift method without disturbing the underlying base or damaging the adjacent pavement remaining in place. Do not "pre-saw" in advance until ready for slab removal within 48 hours of removal. (The Engineer will not allow the slab to be sawed and then to remain under traffic for more than 48 hours after sawing.) Pre-saw only in locations directed by the Engineer. Do not hammer or break pavement by other means to facilitate removal. Do not oversaw into existing JPC Pavement not intended to be removed. The original nominal depth of the mainline JPC pavement is 10 inches. However, the finished grade will be transitioned to match the adjacent pavement to remain in place. Gang drills, capable of drilling a minimum of four holes at a time, are required for dowel, hook bolt, and tie bar placement, unless otherwise approved by the Engineer.

It is intended to not disturb the underlying soil; however, a quantity of DGA, Crushed Aggregate #3, Geotextile Fabric Type IV, 4" Perforated pipe and 4" Non- perforated pipe (to drain the aggregate) and Perforated Pipe Headwalls is included for undercutting very poor, soft, wet soils - to be used sparingly and only as directed by the Engineer. Undercutting will not be measured as a bid item and will be considered incidental to the items of work listed above.

Use of a maturity meter is permitted to verify that JPC is ready for traffic, but is considered incidental to the appropriate JPC Pavement bid item.

D. **Partial Depth Patching.** Except as specified in these notes, perform Partial Depth Patching in accordance with Special Note for Partial Depth Concrete Pavement Repair. The Engineer will determine the removal locations. It is intended that the Polymer Patching material be used to fill these corner breaks without grinding and preparing the hole. The Engineer will determine actual locations at the time of construction. The holes left from the removal of Type V Pavement Markers are

included in the Partial Depth Patching Quantity. This material may be Diamond Ground.

E. **Diamond Grinding.** See Special Note for Ride Quality Adjustment for Diamond Grinding.

F. **Joint and Crack Sealing.** See Special Note for Sealing Existing Transverse and Longitudinal Joints and Random Cracks.

G. **Disposal of Waste.** Dispose of all cuttings, debris, and other waste off the right-of-way at approved sites obtained by the Contractor at no additional cost to the Department. The contractor will be responsible for obtaining any necessary permits for this work. Temporary openings in the right of way fence for direct access to waste sites off the right of way or for access to other public roads will not be allowed. No separate payment will be made for the disposal of waste and debris from the project or obtaining the necessary permits, but will be incidental to the other items of the work.

H. **Final Dressing, Clean Up, and Seeding and Protection.** After all work is completed, completely remove all debris from the job site. Perform Class A Final Dressing on all disturbed areas. Sow disturbed earthen areas with Seed Mixture No. I. These items are incidental to other items in the contract.

I. **Guardrail.** Remove and replace guardrail and guardrail end treatments listed in the Guardrail Summary or as directed by the Engineer. Quantities are approximate only. Actual locations will be determined by the Engineer at the time of construction. Grade and reshape shoulders to proper template for new End Treatment. Utilize DGA for embankment when required for new end treatments. Deliver removed rail to the Central Sign Shop and Recycle center at 1224 Wilkinson Blvd in Frankfort, KY. There is a guardrail delivery verification sheet which must be completed prior to delivery.

J. **Pavement Striping and Pavement Markers.** Permanent striping will be in accordance with Section 112 and section 714, except that:

(1). Striping will be 6" in width;
(2). Permanent striping will be in place before a lane is opened to traffic; and
(3). Permanent striping will be 6" Durable Waterborne Paint.

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

L. **Caution:** Information shown on the drawings 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 conclusions as to the conditions encountered. The Department does not

give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the conditions encountered are not in accordance with the information above.

M. **Utility Clearance.** It is not anticipated that utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities.

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 will be incidental to the other items of work.

C. **Crushed Aggregate Size No. 3.** Crushed Aggregate will be used in the event it is necessary to stabilize under any of the full depth slab removal. Payment will be based on the tons used for stabilization and the tons used around the perforated pipe outlet headwalls.

D. **Dense Graded Aggregate.** DGA will be used in the event it is necessary to stabilize under any of the full depth slab removal. A compacted 4 inch lift will be placed on the Crushed Aggregate No. 3s.

E. **Remove JPC Pavement.** Cement concrete pavement removed in full depth pavement repair areas will be measured in square yards, regardless of thickness. See Special Note for Full Depth Concrete Pavement Repair.

F. **JPC Pavement -10"-24 HR.** See Special Note for Full Depth Concrete Pavement Repair. No additional payment will be made for any additional concrete required due to a depth beyond 10". If any rumble strips are required on any of the shoulders, they shall be considered incidental to this work.

G. **JPC Pavement -6”-24HR.** See Special Note for Full Depth Concrete Pavement Repair. No additional payment will be made for any additional concrete required due to a depth beyond 6". If any rumble strips are required on any of the shoulders, they shall be considered incidental to this work.

H. **Saw Clean Seal Joints.** Longitudinal and transverse cracks sawed, cleaned, and sealed will be measured in linear feet.

I. **Epoxy Resin Systems.** Epoxy Resin Systems will not be measured for payment, but will be incidental to JPC Pavement 10”-24HR and JPC Pavement 6”-24HR.

J. **Partial Depth Patching.** Partial Depth Patching is measured by the cubic foot according to Special Note for Partial Depth Concrete Pavement Repair and includes

areas repaired from removing Type V Pavement Markers.

K. **Smooth Dowels, Deformed Tie Bars and Hook Bolts.** Smooth dowels, deformed tie bars, hook bolts, and joint sealing at JPC pavement repair areas will not be measured for payment, but will be incidental to JPC Pavement 10"-24HR and JPC Pavement 6”–24HR.

L. **Raised Pavement Markers and Permanent Striping.** Permanent striping paint (6" and 12") is measured per linear foot. See Traffic Control Plan. Type V Pavement Markers are measured as each.

M. **Erosion Control.** Erosion control items not listed as bid items will not be measured for payment, but will be considered incidental to the “lump sum” price for the bid item “Erosion Control”.

N. **Fabric Geotextile Type IV.** Fabric Geotextile Type IV will be measured per square yard and is to be used to wrap crushed aggregate No. 3 for stabilization after slab removal.

O. **Erosion Control Blanket.** Erosion Control Blanket is measured by square yard and is to be used in ditching areas and slope stabilization areas as directed by the Engineer.

P. **Undercutting.** Undercutting will not be measured for payment, but will be incidental to other items of work.

Q. **Embankment.** Embankment is measured by cubic yard and is to be placed in pipe extension locations, slope stabilization areas and as directed by the Engineer.

V. BASIS OF PAYMENT

No direct payment will be made other than for the bid items listed. All other items required to complete the construction will be incidental to the bid items listed. Existing signs damaged by the Contractor will be replaced by the Contractor at his expense.

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

B. **Site Preparation.** Other than the bid items listed, no direct payment will be allowed for site preparation, but will be incidental to the other items of work.

C. **Dense Grade Aggregate.** See Section 302 of the Standard Specifications.

D. **Remove JPC Pavement.** See Special Note for Full Depth Concrete Pavement Repair.

E. **JPC Pavement -10"/24 HR.** See Special Note for Full Depth Concrete Pavement Repair. No additional payment will be made for any additional concrete required due to a depth beyond 10".

F. **JPC Pavement 6”/24HR.** See Special Note for Full Depth Concrete Pavement Repair. No additional payment will be made for any additional concrete required due to a depth beyond 6".

G. **Raised Pavement Markers and Permanent Striping.** See Traffic Control Plan.

H. **Embankment** Contrary to the Standard Specifications, payment will be based on calculated quantity **NOT** plan quantity.

NOTES APPLICABLE TO PROJECT
DIAMOND GRINDING REHABILITATION
JEFFERSON COUNTY
I-265 GENE SNYDER FREEWAY

FD52 056 0265 030-036
STP 2653 (035)
Item No. 5-2068.00

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1. There is a summary of full depth concrete repair locations. Also, because of continuing deterioration of the pavement, there is an additional quantity of repairs included in the bid total. The Engineer will determine the ultimate locations that will be repaired based upon the condition of the pavement at the time the repairs are accomplished. The repair locations listed may be lengthened, shortened, or eliminated completely if the conditions are such that modification of the locations would be deemed desirable by the Department. Any asphalt patches removed and its disposal will be incidental to the underlying "Remove PCC Pavement" bid item.

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

3. The contractor is to be advised of the locations of low wires on the project. These locations include approximate STA. 1327+50, 1417+00, 2468+40 and 2468+75. Other locations may exist. These and all other utilities should be avoided on this project. If any utility is impacted, it will be the contractor’s responsibility to contact the affected utility and cover any costs associated with the impact.

4. Any delineator posts or roadway signs that are damaged during construction are to be replaced at the contractor's expense. Signs that appear to have no visible damage but that are leaning are to be reset as directed by the Engineer. Payment for this work will be considered incidental to the contract.

5. All “green” milepost signs shall be replaced with this project. Payment for these signs will be made by “each” for the bid item “Steel Milepost Marker”.

6. The proposed striping for this project shall be as directed and/or approved by the Engineer. The existing striping layout may be modified in several locations according to the current MUTCD manual. The contractor is to provide a diagram of existing striping layout.

7. A quantity of “Shouldering” has been included to clear road debris from shoulder edges to allow water to sheet flow over the shoulder. Payment for this work shall be by “linear foot” of the bid item “Shouldering”. Payment for this work shall include all materials, labor and

equipment necessary to remove all foreign debris from the shoulders and reshape the shoulders to “normal” condition as directed by the Engineer. Removing guardrail, DGA, Asphalt Seal Coat, and Asphalt Seal Aggregate will be paid separately from this item of work. Any other items of work necessary to complete this item of work as directed by the Engineer will be considered incidental to “Shouldering”.

Existing signs should not be disturbed unless directed and or approved by the Engineer. Any signs damaged during shouldering activities will be replaced or reset as directed by the Engineer at the contractor’s expense.

8. Several areas throughout the project have fill slopes that are beginning to fail or slip due to poor drainage. These areas shall be ditched as directed by the Engineer. The degrading slopes shall be regraded and dressed as directed by the Engineer. Payment for this work will be measured by linear foot of “ditching”, cubic yard of “embankment” and square yard of “erosion control blanket”.

9. A quantity of “flowable fill” is provided to fill locations on the project that have erosion under the existing pavement or other structures. These and any other areas with similar erosion issues shall be filled with “flowable fill” as directed by the Engineer. Payment for this work shall be per cubic yard of “flowable fill” and will be based on quantities measured by the field Engineer. Any form work required to contain the “flowable fill” will be considered incidental to this item of work.

10. Removed guardrail shall be delivered to the Guardrail and Sign Recycling Center in Frankfort and shall be coordinated with the Resident Engineer. A “Guardrail Delivery Verification Sheet” has been included in this proposal and must be completed prior to delivery for verification of the components delivered.

11. The drainage summary lists locations where the existing grates have been dislodged from their proper position. The contractor will be required to "re-set" the existing grates. “Resetting Grates” will be considered incidental to the bid item “Ditching”. Grates that have been damaged and will need to be replaced and will be paid for under the bid item "Replace Grate" and will be paid for by “each”. The “Replace Grate” bid item will be paid one each per headwall but may include multiple grate segments.

12. Delineators shall meet the requirements of Section 830 and 838 of the Standard Specifications. Delineators shall be placed in accordance with Section 3F of the M.U.T.C.D.

13. Existing pavement markers in the mainline concrete will be removed. A partial depth patch will be included to repair the pavement at the removal locations and will be paid for under the bid item “Remove Pavement Marker Type V”. See “Special Note for Removing Existing Pavement Markers on Portland Cement Pavement”.

14. The existing edge drain system is to be preserved. Care should be taken when the deteriorated concrete is removed and replaced. Additionally, there is a quantity of perforated

pipe, non-perforated pipe and pipe headwalls set-up to be used at the engineer's discretion. Payment will be based on the actual quantities measured in the field by the Engineer.

15. DGA, flowable fill, crushed aggregate No. 3 and geotextile fabric used to backfill the proposed perforated and non-perforated pipe trench will be incidental to the price of the 4" perforated and 4" non-perforated pipe and no additional pay will be permitted.

16. All pipe connections in the edge drain system will be rigid.

17. Edge drains damaged during placement of additional outlets will be replaced at the contractor's expense.

18. A quantity of Channel Lining Class II and Class III has been included to be applied to eroded areas around the drainage outlets and for some of the areas that will need to be ditched. The Engineer will make the determination whether a ditch receives ditching and/or channel lining. Geotextile Fabric Type I will not be measured for payment, but will be considered incidental to the bid item “Channel Lining Class II” and “Channel Lining Class III”.

19. The cleaning of existing pipe culvert inlets and outlets 36 inches or less in diameter are incidental to the bid item for "Ditching" in accordance with Section 209.03.01 of the 2012 Edition of the Standard Specifications for Road and Bridge Construction. There is a list of locations that have been identified to be cleaned. This list may not be complete and therefore there may be additional outlets which require cleaning. The Engineer will determine any additional outlets to be cleaned.

20. Some damaged signs on the project shall be replaced with this project. The following signs shall be replaced:

    a. Northbound “Exit 35A” sign for I-71 Ramp 3 at approximate Sta. 16+85 LT (Aluminum Panel Sign - 9’ W X 5’ H). The Sign is damaged.

    b. Southbound “Exit 32” sign for KY 1447 Ramp 6 at approximate Sta. 16+75 LT (Aluminum Panel Sign - 6’-6” W X 5’ H). Both posts are detached from the breakaway sign base.

    Any other damaged or missing signs shall be replaced as directed by the Engineer. Per Section 715 of the 2012 Edition of the Standard Specifications for Road and Bridge Construction, payment for sign replacement will be made by “square feet” of “SBM Aluminum Sheet Signs” or “SBM Aluminum Panel Signs” and shall include all materials including ground mounted supports, footings, posts, and/or beams, labor and equipment necessary to complete the installation of the new signs unless otherwise noted in this proposal or directed by the Engineer. Removal of the existing signs will be considered incidental to bid items to construct new signs.

21. A severely eroded area is located in the ditch at KY 1447 Ramp 5 Sta. 28+80 RT. Another severely eroded are is located I-71 Southbound Ramp to KY 841 Northbound LT Sta. 32+50. A quantity of Granular Embankment and Geotextile Fabric Type IV has been included to treat these areas as an open sinkhole, and Class III channel lining is to be applied to the resulting ditch. The sinkhole treatment shall be coordinated as directed or approved by the Engineer. Any additional items of work will be considered incidental to "Granular Embankment" and "Geotextile Fabric Type IV". Reference Condition No. 3 on Active Sepia #3 - Treatment of Open Sinkholes.

22. A rock check is located on southbound I-71 Ramp 1 at Sta. 35+95 LT. The aggregate surrounding the existing headwall is to be removed and the ditch reshaped to allow for proper drainage. Payment for this task shall be incidental to the unit bid price for "ditching".

23. Any roadway signs that are damaged during construction are to be replaced at the contractor's expense.

24. Any light poles that are damaged during construction are to be replaced at the contractor's expense.

25. The existing cable median barrier is not to be disturbed with this project. In accordance with Section 107.12 of the Standard Specifications for Road and Bridge Construction, Current Edition, the Contractor will be responsible for the cost to repair any cable rail that is damaged due to the operations of the Contractor. The Department will make any necessary repairs at the Contractor's expense.

26. A quantity of "Roadway Excavation" has been included on the general summary for the removal of the existing shoulders on the I-265 Northbound entrance ramp from KY 146 LaGrange Road and the I-265 Southbound Exit Ramp to KY 146 LaGrange Road.

TRAFFIC CONTROL PLAN
DIAMOND GRINDING REHABILITATION
I-265 JEFFERSON COUNTY
ITEM NO. 5-2068.00

THIS PROJECT IS A FULLY CONTROLLED ACCESS HIGHWAY

TRAFFIC CONTROL GENERAL

Except as provided herein, maintain and control traffic 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. Do NOT use cones for lane closures or shoulder closures.

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 (Ramps may be reduced to 35mph) and establish double fines for work zone speeding violations. The extent of these 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. All signs shall be placed as directed and/or approved by the Engineer. 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.

Night work is required on this project. Obtain approval from the Engineer for the method of lighting prior to its use.

PROJECT PHASING & CONSTRUCTION PROCEDURES

No lane closures will be allowed during the following days:

December 22-26, 2012	Christmas Weekend
December 28, 2012-January 1, 2013	New Years Weekend
March 28-31, 2013	Easter Weekend
April 19-21, 2013	Thunder Over Louisville
April 26, 2013-May 5, 2013	Kentucky Derby Week
May 24-27, 2013	Memorial Day Weekend
July 4-7, 2013	Independence Day Weekend
6:00 a.m. to 8:00 p.m.	**Monday - Friday**

Traffic may be reduced to one lane in each direction during the following times:

Weeknights from 8 PM until 6 AM the following morning
Weekends from 8 PM Friday night until 6 AM the following Monday morning

The normal two lane traffic configuration must be maintained at all other times unless otherwise directed by the Engineer.

Use only one lane closure in each direction of travel at the same time during the hours specified. Lane closures may only be in the active work area. The clear lane width will be 11 feet; however, make provisions for the passage of wide loads up to 16 feet in width. Use a lane closure all times when work is performed in the lane or adjacent shoulder. Remove existing striping by water blasting. Remove edge lines throughout the project as directed and/or approved by the Engineer. Paint temporary edge lines through the lane closure.

Approximate full depth pavement repair locations are listed in the proposal. The Engineer will determine the exact location at the time of construction. Once removal of pavement at a particular repair location has begun, work continuously within the parameters outlined above to complete the work and eliminate the “hole”. Place Type III Barricades immediately in front of each pavement removal area, if not protected from traffic behind temporary concrete barrier wall, until the new JPC Pavement achieves 3000PSI compressive strength. Payment for Type III Barricades will be considered incidental to the bid item “Maintain and Control Traffic”.

The Contractor will only be allowed to have traffic utilizing a portion of the shoulders as a driving lane while work is ongoing. If the Contractor suspends work for more than seven (7) days for any reason, traffic shall be placed back in the original lane configuration, with all lanes operational. These traffic shifts, due to non-working days, shall be considered incidental to the bid item, “Maintain and Control Traffic.” The Department reserves the right to place traffic into its original configuration at anytime and will reimburse the Contractor for the cost of doing so.

Access to all ramps at all interchanges on the project shall be maintained at all times unless otherwise noted or directed by the Engineer.
Note that Lane shifts are required throughout the project. See the Exhibits for lane locations and

widths. Stripe according to the MUTCD.

During the days and hours when a lane closure is allowed, implement the following procedures: Maintain traffic as specified in the phasing notes. Maintain at least 5 feet of lateral clearance between the traveled lanes and any drop off resulting from pavement removal if not protected with temporary barrier wall. Please refer to the "Special Note for Fixed Completion Date and Liquidated Damages" for damage rates per hour associated with failure to maintain the required number of lanes during the specified time periods or if the project is not completed by the fixed completion date. Once pavement removal at a site has begun, full depth replacement must be completed within the time a lane closure is allowed.

SHOULDER PREPARATION AND RESTORATION

Shoulders used as temporary roadways will be inspected by the Engineer and if deemed necessary by the Engineer, repaired with Asphalt Mixture for Level & Wedging as directed prior to opening to traffic. Patch and remove any foreign debris on the shoulders 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.

The stabilized shoulders are to be inspected and low spots refilled to the satisfaction of the Engineer prior to placing traffic on the shoulders. A quantity of DGA, Crushed Aggregate No. 2, and Flowable Fill has been estimated for repairing the shoulders and is provided in the "Shoulder Repair Summary". The actual quantities used may vary, use only as approved or directed by the Engineer. DGA, Crushed Aggregate No. 2, and Flowable Fill will be paid at the Contract unit bid prices; all other shoulder preparation, maintenance, and restoration shall be incidental to other items of work. Daytime shoulder closures will be permitted to repair the stabilized shoulders. Install delineators for the existing guardrail and bridges before shifting traffic onto the shoulders. All work required for shoulder preparation and restoration is incidental to Maintenance of Traffic.

I-265 PHASE I - JPC PAVEMENT REMOVAL AND REPLACEMENT, OUTSIDE LANES

Utilize a lane closure and move I-265 traffic to the inside lane and inside shoulder during removal and construction of the outside lane and shoulder. Remove the JPC pavement, prepare the subbase if necessary, pour the new JPC Pavement 10"/24 HR. Complete any other miscellaneous patching in the specified lane as directed by the Engineer. Complete any roadside work including guardrail installation. All work should be completed during the time allotted unless otherwise directed by the Engineer.

I-265 PHASE II – JPC PAVEMENT REMOVAL AND REPLACEMENT, INSIDE LANES

Utilize a lane closure and move I-265 traffic to the outside lane and outside shoulder during removal and construction of the inside lane. Remove the JPC pavement, prepare the subbase if necessary and pour the new JPC Pavement 10"/24 HR. Remove all existing Type V pavement markers in the specified lanes and patch the residual hole for each marker. Complete any other miscellaneous patching in the specified lanes as directed by the Engineer. All work should be completed during the time allotted.

I-265 PHASE III – DIAMOND GRIND, OUTSIDE LANES

Utilize a lane closure and move I-265 traffic to the inside lane and inside shoulder during diamond grinding of the outside lane. Diamond Grind the JPC Pavement the full lane width when strength is achieved using appropriate lane configurations. The clear lane width will be 11 feet; however, make provisions for the passage of wide loads up to 16 feet in width. Lane closures will be permitted only during hours of actual operations. Lane closures will be shortened, reduced to a shoulder closure, or removed as appropriate, when the Contractor does not have active operations requiring a lane closure. Limit the length of the lane closure to no more than can be completed during the specified time period

Diamond Grind the full lane width when strength is achieved. The diamond grinding area will also include at least four feet of the outside shoulder to allow for surface water runoff from the pavement. The diamond grind area is to include that portion of all ramps to the point where they diverge from the mainline pavement (ramp gore). The diamond grind area will not include bridge decks or traffic loops.

I-265 PHASE IV – DIAMOND GRIND, INSIDE LANES

Utilize a lane closure and move I-265 traffic to the outside lane and outside shoulder during diamond grinding of the inside lane and shoulder. Diamond Grind the JPC Pavement the full lane width when strength is achieved using appropriate lane configurations. The clear lane width will be 11 feet; however, make provisions for the passage of wide loads up to 16 feet in width. Lane closures will be permitted only during hours of actual operations. Lane closures will be shortened, reduced to a shoulder closure, or removed as appropriate, when the Contractor does not have active operations requiring a lane closure. Limit the length of the lane closure to no more than can be completed during the specified time period.

Diamond Grind the full lane width when strength is achieved. The diamond grinding area will also include at least four feet of the inside shoulder to allow for surface water runoff from the pavement. The diamond grind area will not include bridge decks or traffic loops.

I-265 PHASE V – SAW AND SEAL JOINTS

Saw and seal the concrete pavement. Seal the joints between the mainline driving lanes and shoulders using appropriate lane configurations as directed by the Engineer. Close one lane, in the direction of work only, using drums and flashing arrows in accordance with the Standard Drawings and these notes. The clear lane width will be 11 feet; however, make provisions for the passage of wide loads up to 16 feet in width. Lane closures will be permitted only during hours of actual operations. Lane closures will be shortened, reduced to a shoulder closure, or removed as appropriate, when the Contractor does not have active operations requiring a lane closure.

LANE CLOSURES

Limit the lengths of lane closures to only that needed for actual operations in accordance with the phasing specified herein, or as directed by the Engineer. Contrary to Section 112, lane closures will **NOT** be measured for payment, but are considered incidental to Maintain and Control Traffic.

RAMP CLOSURES

All ramp access is to be maintained except when the ramp is closed. The contractor will be allowed to close each of the ramps listed for one weekend.

The following ramp will need to be closed to complete the proposed full depth repairs on the respective ramp:

NB I-265 Exit Ramp at KY 22 Brownsboro Road

Only one ramp closure will be allowed at any one time throughout the project with the Engineer's approval. Ramp closures shall be completed on weekends during times of adjacent lane closures on the mainline. Once pavement removal at a ramp site has begun, all full depth pavement repairs, guardrail work, sawing and sealing all joints and random cracks, and repairing the DGA portion of the shoulders where specified for that particular ramp must be completed and restriped within the time a ramp closure is allowed. Liquidated Damages, at the rate specified per hour in the "Special Note for Fixed Completion Date and Liquidated Damages", will be assessed for each hour beyond the specified time a ramp closure is permitted. Detour signing plan exhibits are attached for each ramp closure. The sign locations shown on the exhibits are approximate. The location and type of sign used shall be as directed or approved by the Engineer prior to any ramp closure. All messages to be used on Portable Changeable Message Signs shall be approved by the Engineer prior to any ramp or lane closure.

Contrary to section 112, ramp/lane closures will **NOT** be measured for payment, but are considered incidental to Maintain and Control Traffic.

RAMP CLOSURES, LANE CLOSURES AND LANE SHIFTS

All lane closures, lane shifts and tapers shall be in accordance with the standard drawings or the Manual of Uniform Traffic Control Devices (M.U.T.C.D.). Any ramp closure, lane closure or lane shift must be approved by the Engineer prior to the closure or lane shift. The Contractor must notify the Engineer as least five (5) days prior to any proposed closure or traffic pattern shift.

SIGNS

Additional traffic control signs in addition 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, 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.

FLASHING ARROWS

Flashing arrows will be paid for once, no matter how many times they are moved or relocated.

PORTABLE CHANGEABLE MESSAGE SIGNS

Provide Portable Changeable Message Signs in advance of and within the project at locations to be determined by the Engineer. If work is in progress concurrently in both directions provide additional Portable Changeable Message Signs. Place Portable 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 Portable 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 locations designated may vary as the work progresses. The messages required to be provided will be designated by the Engineer. The Portable

Changeable Message Signs will be in operation at all times. In the event of damage or mechanical/electrical failure, the Contractor will repair or replace the Portable Changeable Message Sign immediately. Portable Changeable Message Signs will be paid for once, no matter how many times they are moved or relocated. The Department **WILL NOT** take possession of the signs upon completion of the work.

TRUCK MOUNTED ATTENUATORS

Furnish and install MUTCD approved Truck Mounted Attenuators (TMA) in advance of work areas not protected by temporary concrete barrier wall, when workers are present less than 12 feet from traffic. If there is less than 500 feet between work sites, only a single TMA will be required at a location directed by the Engineer. Locate the TMAs at the individual work sites and move them as the work zone moves within the project limits. All details of the TMA installations will be approved by the Engineer. Truck Mounted Attenuators will not be measured for payment, but are incidental to Maintain and Control Traffic. The Department **WILL NOT** take possession of the TMAs upon completion of the work.

PAVEMENT MARKINGS

If lane closures are in place during nighttime hours, 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 a closed lane is reopened to traffic. No direct payment will be made for removing and replacing or covering and uncovering the lenses, but will be incidental to "Maintain and Control Traffic".

Place temporary and permanent striping in accordance with Section 112, except that:

1. Temporary and permanent striping will be 6" in width (ramp gore striping will be 12”)
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 will be used; however removable tape will be measured and paid as Pavement Striping-Temporary Paint 6”
3. Edge lines will be required for temporary striping
4. Existing, temporary, or permanent striping will be in place before a lane is opened to traffic.
5. Place permanent striping on bridge decks and pavement within the project limits.
6. Permanent striping will be Durable Waterborne Paint except for bridge decks receiving epoxy-urethane overlay. Permanent striping of these bridges will be thermoplastic.

Voids created from removing the raised pavement markers are to be filled prior to allowing traffic on them. The partial depth patching material is to be used to fill the voids. The patching

material and all work involved in patching the voids created by removing the existing pavement markers are incidental to the pavement marker removal bid item. See 'Special Note For Removing Existing Type V Raised Pavement Markers On Portland Cement Pavement'.

PAVEMENT EDGE DROP-OFFS

Pavement edge drop-offs will be protected by a lane or shoulder closure. Lane closures will be protected with plastic drums, vertical panels, or barricades as shown on the Standard Drawings.

It may be necessary to saw or excavate small areas in an adjacent lane to allow room for forms to pour a new slab to the proper grade. Any hole will be filled temporarily with DGA when adjacent to traffic or there exists a possibility that a vehicle may drop a wheel into the hole.

TRAFFIC COORDINATOR

Designate an employee to be traffic coordinator. The designated Traffic Coordinator must be certified by the American Traffic Safety Services Association (ATSSA) or equivalent qualified agency. The Traffic Coordinator will inspect 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 will report all incidents throughout the work zone to the Engineer on the project. The Contractor will 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 Signs 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.

COORDINATION OF WORK

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

CONTRACTOR'S AND CONTRACTOR'S EMPLOYEE'S VEHICLES

Do not use or allow employees to use median crossovers at any time except when inside lanes

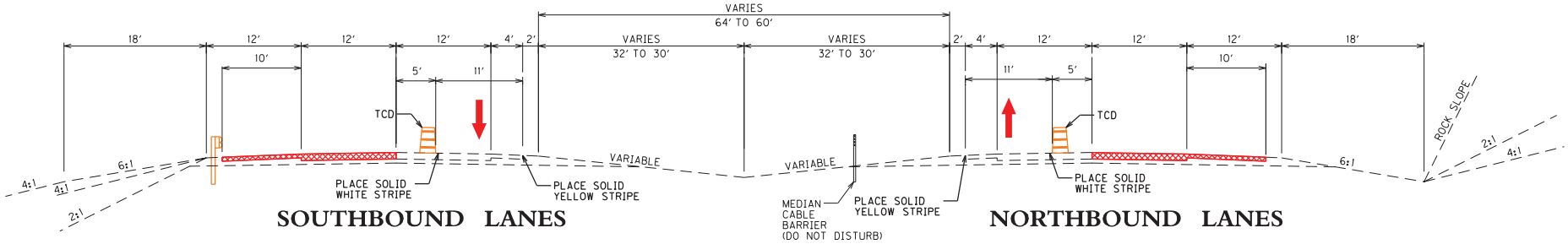
are closed for construction. In all other phases of construction, change vehicular direction of travel only at interchanges.

LAW ENFORCEMENT OFFICERS (LEO'S)

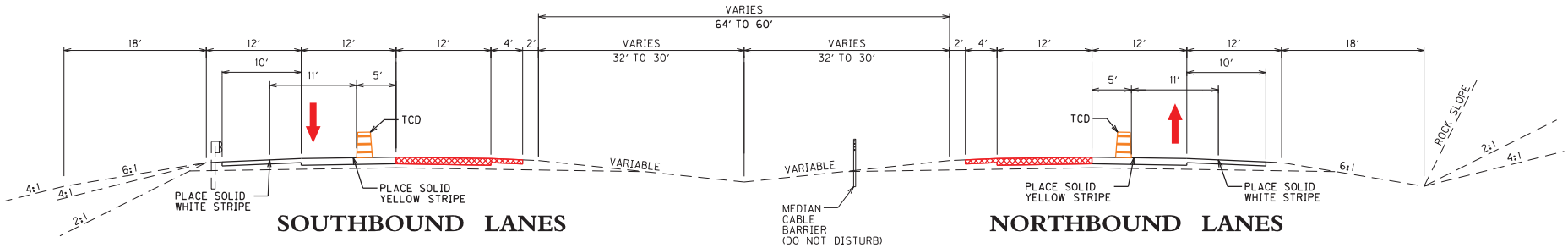
Police support shall be a unit consisting of an off-duty police officer from any police force agency having lawful jurisdiction and a police car equipped with externally mounted flashing blue lights. Officers may be asked to issue citations for traffic violations, but will be considered incidental to the contract unit bid price for "Law Enforcement Officer". No additional compensation will be provided. The officers will be placed at the discretion of the Engineer. Police support will be measured and paid on a per hour basis for each officer and police vehicle.

COUNTY OF	ITEM NO.
JEFFERSON	5-2068.00

I–265
MAINTENANCE OF TRAFFIC
TYPICAL SECTIONS



PHASE I



PHASE II

EXISTING PAVEMENT
6" DGA
10" NON-REINFORCED PCC PAVEMENT

FOR SHOULDERS
6" NON-REINFORCED PCC PAVEMENT

I-265
MAINTENANCE OF TRAFFIC
TYPICAL SECTIONS

DETOUR SIGNS KEY

PORTABLE CHANGEABLE MESSAGE SIGNS

1A

RAMP TO
KY 22
CLOSED
FOLLOW
DETOUR

2

M4–9

4

M4–9

6

M4–8A

3

E5–2A

5

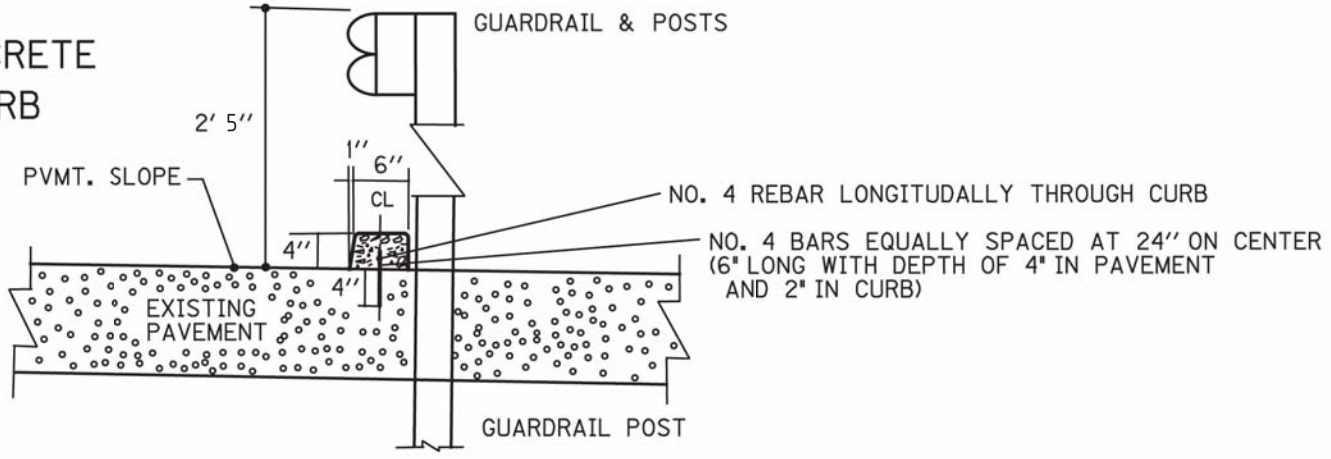
M4–9

ALL SIGNS SHALL BE PLACED IN LOCATIONS NOTED OR AS DIRECTED AND/OR APPROVED BY THE ENGINEER


DETOUR SIGNING PLAN FOR I-265 RAMP 3
I-265 NB RAMP TO KY 22
EXHIBIT NO. 1
Ramp 3 Closed
Brownsboro Rd
71
265
22
1747
841
1A
2
3
5
6
0
500
1,000
2,000
Feet
ALL SIGNS SHALL BE PLACED IN LOCATIONS NOTED
OR AS DIRECTED AND/OR APPROVED BY THE ENGINEER

CROSS SECTION VIEW

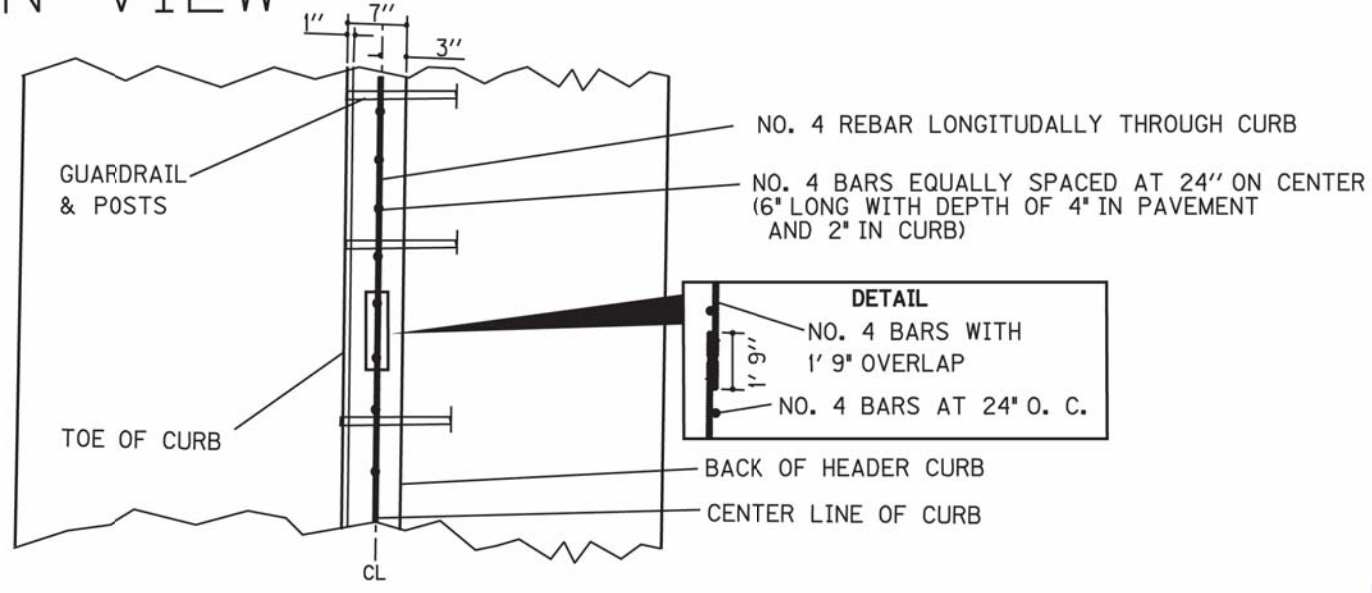
SPECIAL CONCRETE
HEADER CURB



NOT TO SCALE

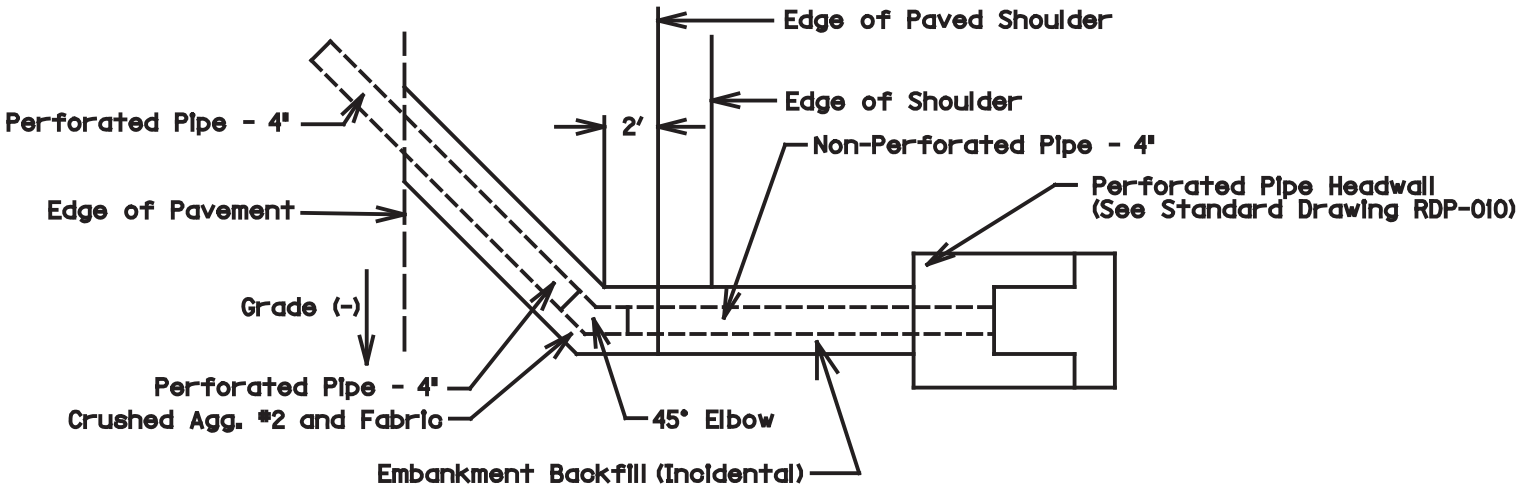
PLAN VIEW

SPECIAL CONCRETE
HEADER CURB

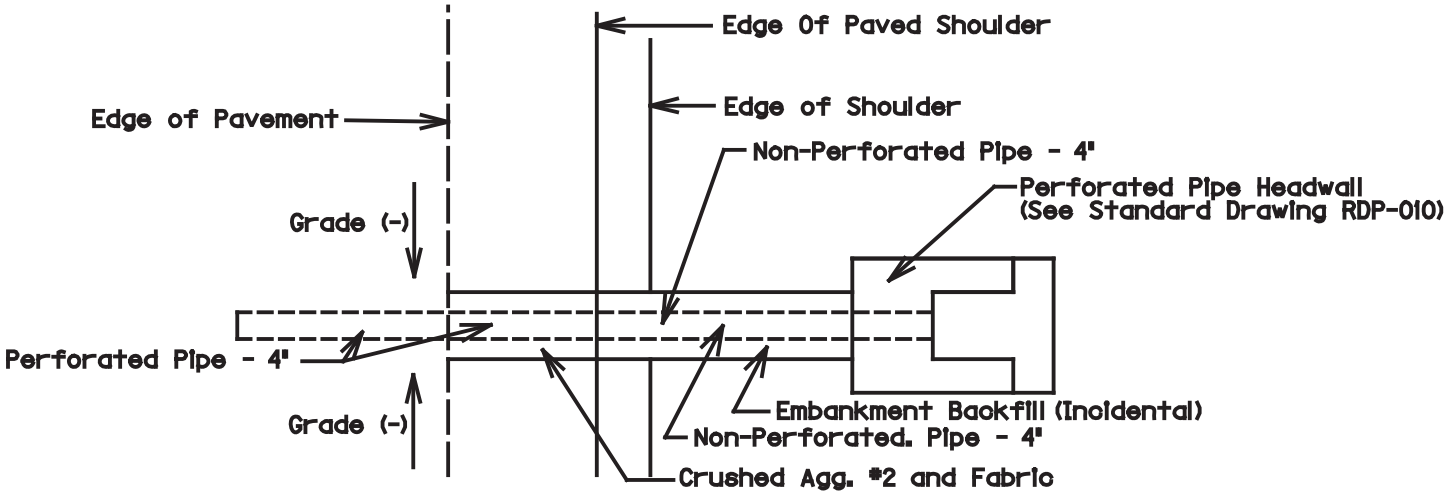


NOT TO SCALE

USE ON GRADES



USE IN SAGS



Not To Scale

PERFORATED PIPE OUTLET AND HEADWALL

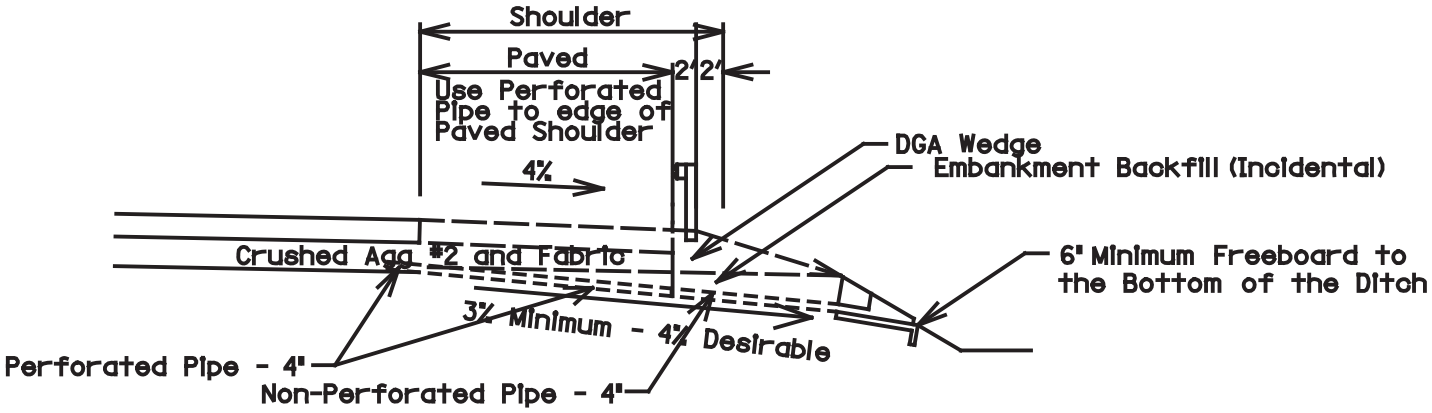
•NOTE : EMBANKMENT BACKFILL IS INCIDENTAL TO NON-PERFORATED PIPE

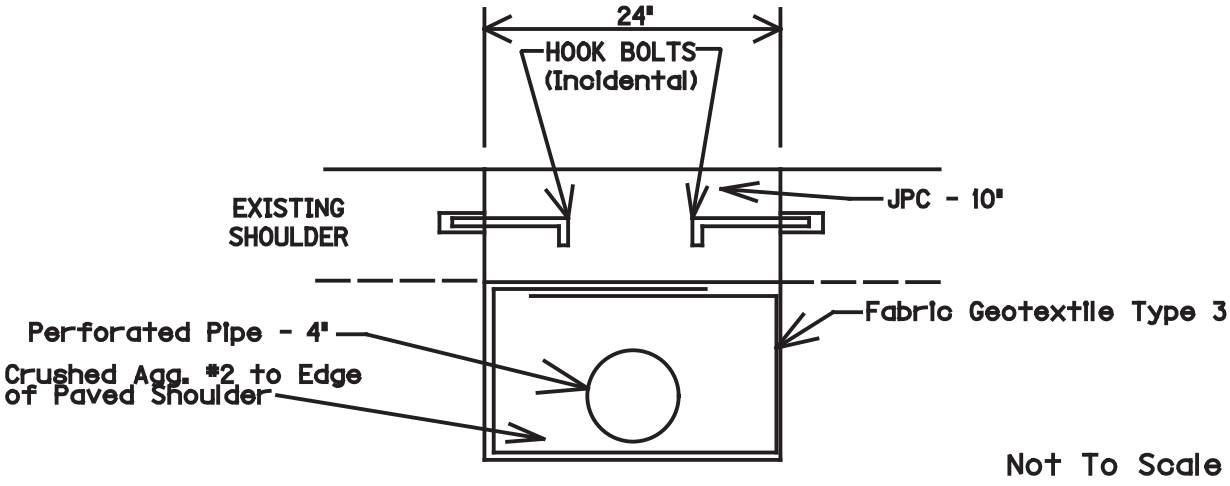
I-265

ITEM NOS 5-2068.00

JEFFERSON COUNTY

FD52 056 0265 030-036





PERFORATED PIPE DRAIN OUTLET

I-265

ITEM NOS 5-2068.00

JEFFERSON COUNTY

FD52 056 0265 030-036

REFERENCES

1. Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2012.

2. FHWA Manual on Uniform Traffic Control Devices (MUTCD), latest edition.

3. Active Sepia List

Drawing No.	Drawing Name
001	Delineators at Narrow Shoulder Bridges
002	Delineators for Guardrail
003	Treatment of Open Sinkholes
004	Delineators for Concrete Barriers
007	Guardrail End Treatment Type 2A
008	Guardrail Components

4. Kentucky Department of Highways Standard Drawings, current editions, as applicable:

RBB-002	Guardrail and Bridge End Drainage For Twin Structures
RBB-003	Layout of Guardrail At Twin Structures-Depressed Median
RBC-001	Guardrail Connector to Bridge End Type A and A1
RBC-002	Guardrail Connector to Bridge End Type A and A1 Components
RBC-003	Guardrail Connector to Bridge End Type A and A1 Components
RBE-200	Crash Cushion Type IX
RBE-205	Crash Cushion Type IX-A
RBI-001	Typical Guardrail Installations
RBI-002	Typical Guardrail Installations
RBI-003	Installation of Guardrail End Treatment Type 2A
RBI-004	Installation of Guardrail End Treatment Type 1
RBI-006	Guardrail Installation at Sign Supports
RBR-001	Steel Beam Guardrail ("W" Beam)
RBR-005	Guardrail Components
RBR-010	Guardrail Terminal Sections
RBR-015	Guardrail Posts
RBR-016	Guardrail Posts
RBR-020	Guardrail End Treatment Type 1
RBR-025	Guardrail End Treatment Type 2A
RBR-030	Guardrail End Treatment Type 3
RBR-031	Guardrail End Treatment Type 3 Pipe Drainage Detail
RBR-035	Guardrail End treatment Type 4A
RDB-105	Sloped and Flared Box Inlet-Outlet
RDB-106	Grates for Sloped and Flared Box Inlet-Outlet
RDB-280	Curb Box Inlet Type B (Detail Drawing)
RDB-281	Curb Box Inlet Type B (Steel Drawing)

RDB-282	Curb Box Inlet Type B (Top Phase Tables)
RDB-283	Curb Box Inlet Type B (Detail and Bar Chart for 8” lid)
RDD-040	Channel Lining Class II and III
RDH-110	Pipe Culvert Headwalls 0 Degrees Skew
RDH-210	Dimensions & Quantities 30” – 108” Headwalls Circular Pipe 0 Degrees Skew
RDH-310	Bill of Reinforcement 30” – 90” Diameter Circular Pipe Headwalls 0 Degrees Skew
RDI-020	Pipe Bedding for Culverts, Entrance and Storm Sewer Pipe
RDI-021	Pipe Bedding for Culverts, Entrance and Storm Sewer Reinforced Concrete Pipe
RDI-025	Pipe Bedding, Trench Condition
RDI-026	Pipe Bedding Trench Condition Reinforced Conc. Pipe
RDP-001	Perforated Pipe Types and Cover Heights
RDP-005	Perforated Pipe for Subgrade Drainage on Two-Lane (class 2) and Multi-Lane Roads
RDP-010	Perforated Pipe Headwalls
RDX-050	Subgrade Drainage Concrete Pavement
RDX-060	Intermediate and End Anchors for Circular Pipe
RDX-160	Security Devices for Frames, Grates and Lids
RDX-210	Temporary Silt Fence
RDX-220	Silt Trap Type A
RDX-225	Silt Trap Type B
RDX-230	Silt Trap Type C
RFC-001	Chain Link Fence 4’ to 6’ High
RFW-001	Fencing Details
RFW-005	Woven Wire Fence Type 1
RGS-002	Superelevation for Multilane Pavement
RGX-001	Miscellaneous Standards Part I
RGX-060	Breakaway Sign Support System For Type C Beam
RGX-061	Footing Details For Type C Beam
RGX-065	Type D Breakaway Sign Support
RGX-200	One Point Proctor Family of Curves
RPM-100	Curb and Gutter, Curbs, and Valley Gutter
RPM-145	Rumble Strips Type 3
RPN-001*	Jointed Plain Concrete Pavement for Shoulders and Medians
RPN-010	Pavement Transitions & Joint Details for Jointed Plain Concrete Pavement at Bridge Ends
RPN-015*	Non-Reinforced Concrete Pavement
RPN-020	Concrete Pavement Joints Types and Spacing
RPS-010	Cement Concrete Pavement Joint Details
RPS-020*	Expansion and Contraction Joint Load Transfer Assemblies
RPS-030*	Concrete Pavement Joints Types and Spacing
RPS-031	Concrete Pavement Joints Types and Spacing
RPS-033	Concrete Pavement Joints Types and Spacing

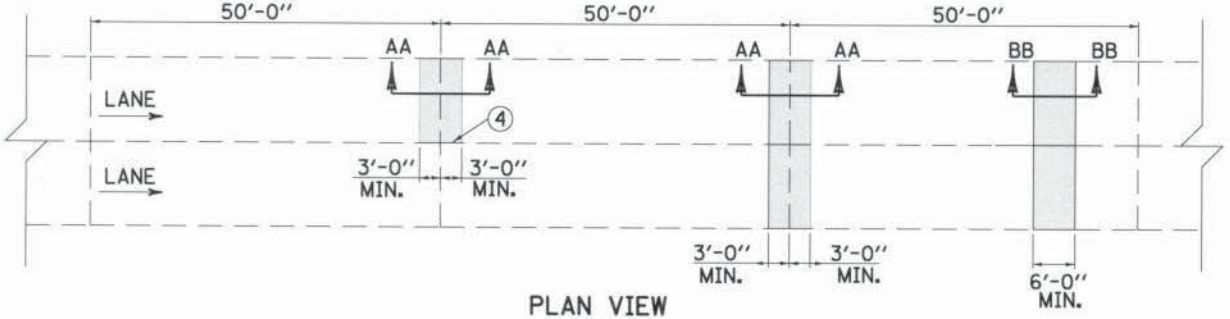
RPS-035	Concrete Pavement Joints Types and Spacing
RPS-036	Concrete Pavement Joints Types and Spacing
RPS-037	Concrete Pavement Joints Types and Spacing
RPS-038	Concrete Pavement Joints Types and Spacing
RPS-039	Concrete Pavement Joints Types and Spacing
RPX-001	Station Markings Concrete Pavement
RPX-010	Preformed Compression Joint Seal for Concrete Pavement
RPX-015	Hot-Poured Elastic Joint Seals for Concrete Pavement
RPX-020	Silicone Rubber Seals for Concrete Pavement
TPM-105	Pavement Marker Arrangements Multi-Lane Roadways
TPM-125	Pavement Marker Arrangement Exit Gore and Off-Ramp
TPM-130	Pavement Marker Arrangement On-Ramp with Tapered Acceleration Lane
TPM-135	Pavement Marker Arrangement On-Ramp with Parallel Acceleration Lane
TTC-115	Lane Closure Multi-Lane Highway Case I
TTC-120	Lane Closure Multi-Lane Highway Case II
TTC-125	Double Lane Closure
TTC-135	Shoulder Closure
TTC-155	Temporary Pavement Marker Arrangements for Construction Zones
TTC-160	Temporary Pavement Marker Arrangements for Lane Closures
TTD-110	Post Splicing Detail
TTD-120	Work Zone Speed Limit and Double Fine Signs
TTD-125	Pavement Condition Warning Signs
TTS-110	Mobile Operation for Paint Striping Case III
TTS-115	Mobile Operation for Paint Striping Case IV
TTS-120	Mobile Operation for Durable Striping Case I
TTS-125	Mobile Operation for Durable Striping Case II

* - Older “Standard Drawings” showing skewed joints have been included for reference.

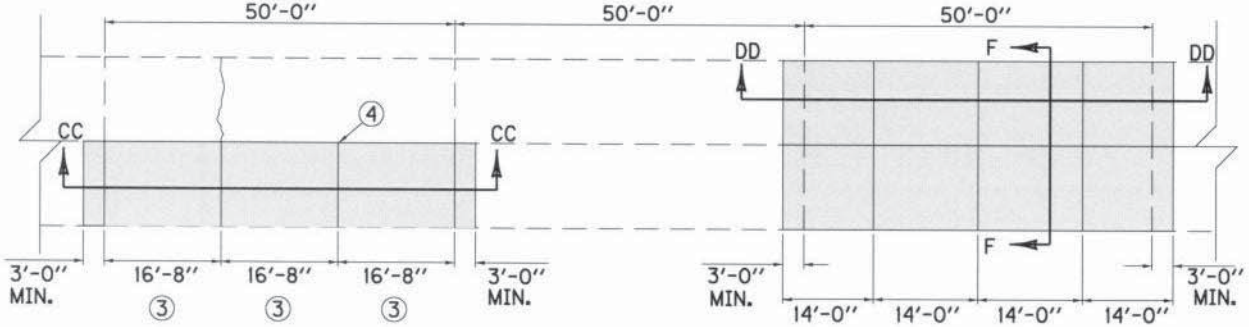
5. Kentucky Transportation Cabinet, Department of Highways, Standard Specifications for Road and Bridge Construction, Edition of 2012 - Supplemental Specifications, as applicable:

Special Note 1I	Portable Changeable Message Signs (6/15/2012)
Special Note 10E	QC/QA Specifications for Class P Concrete (6/15/2012)
Special Note 10T	Complete Acceptance of JPC Pavement Thickness (6/15/2012)
Special Note 11J	Full Depth Concrete Pavement Repair (6/15/2012)
Special Note 11K	Partial Depth Repair Special Note (6/15/2012)
Special Note	Material, Installation, and Bid Item Notes for Permanent Traffic Data Acquisition Stations (Rev. 3/2012) *attached*
Special Note	Typical Section Dimensions *attached*
Special Note	Removing Existing Pavement Markers on Portland Cement Pavement *attached*
Special Note	Before You Dig *attached*
Special Note	Guardrail Delivery Verification Sheet *attached*
Special Note	Shoulder Preparation and Restoration *attached* (See MOT Notes)

Special Note	Sealing Existing Transverse and Longitudinal Joints and Random Cracks *attached*
Special Note	Ride Quality Adjustment for Diamond Grinding *attached*
Special Note	Erosion Prevention and Sediment Control *attached*
Special Note	CPM Scheduling *attached*
Special Note	Fixed Completion Date and Liquidated Damages *attached*



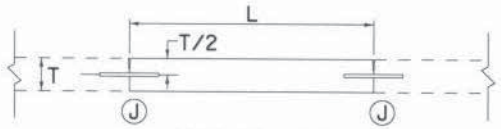
PLAN VIEW



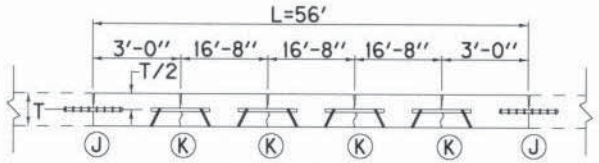
JPC PAVEMENT TO BE REMOVED

PLAN VIEW

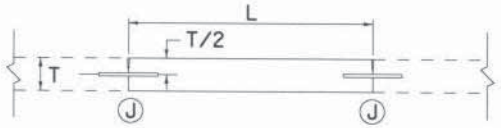
1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM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



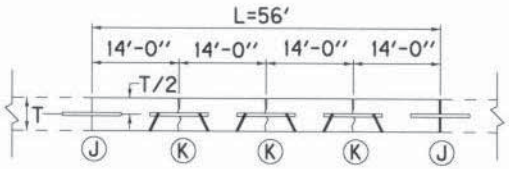
SECTION AA



SECTION CC



SECTION BB

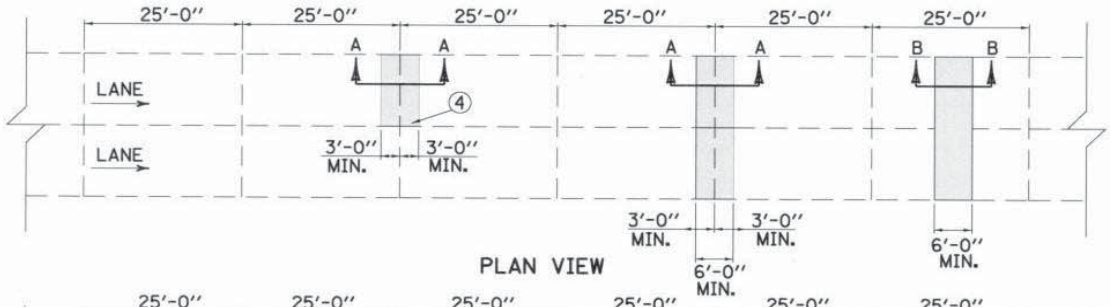


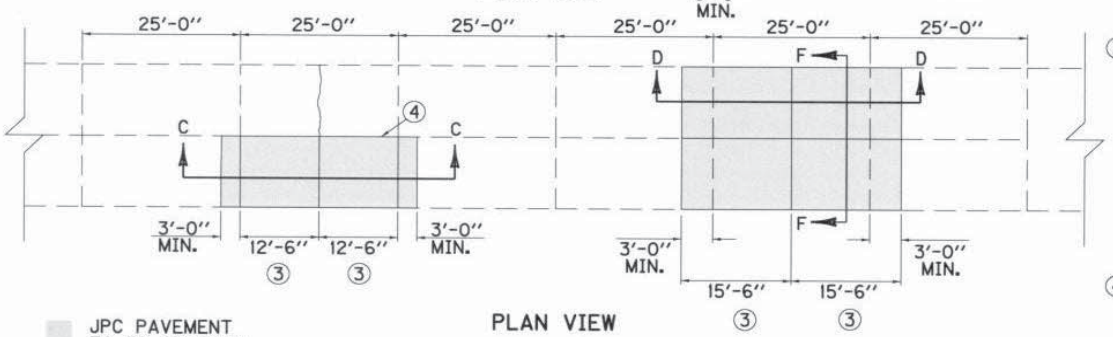
SECTION DD

KENTUCKY
DEPARTMENT OF HIGHWAYS

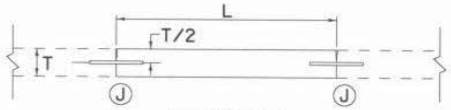
50' JOINT SPACING

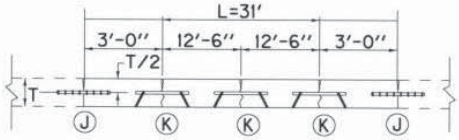
SUBMITTED _____ DATE _____
TEBW DIVISION OF DESIGN

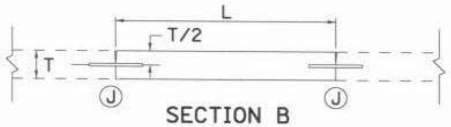


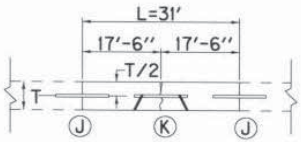


JPC PAVEMENT TO BE REMOVED







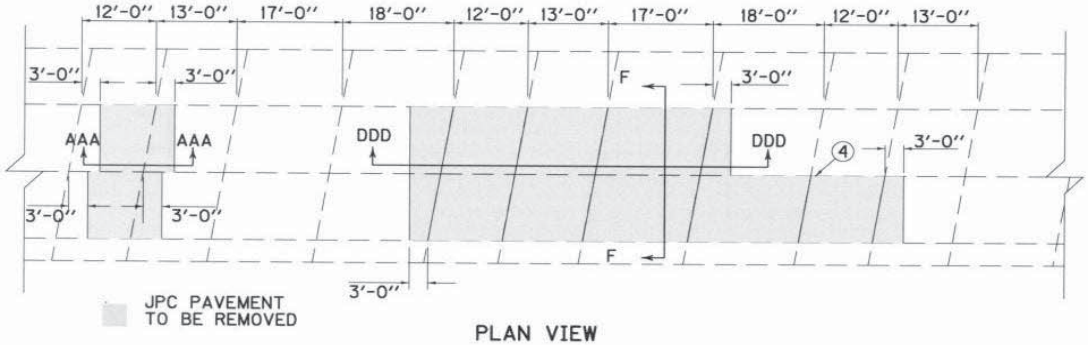


1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM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

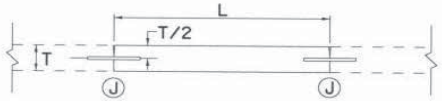
KENTUCKY
DEPARTMENT OF HIGHWAYS

25' JOINT SPACING

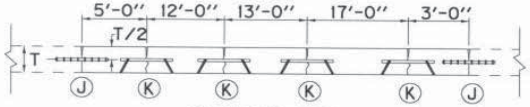
APPROVED _____ TEBM DIVISION OF DESIGN _____ DATE



PLAN VIEW



SECTION AAA



SECTION DDD

1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (OR TIE BARS FOR SECTION DDD), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION DDD) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION DDD) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND MATCH EXISTING JOINTS. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH EXISTING JOINTS IN ADJACENT SLABS.

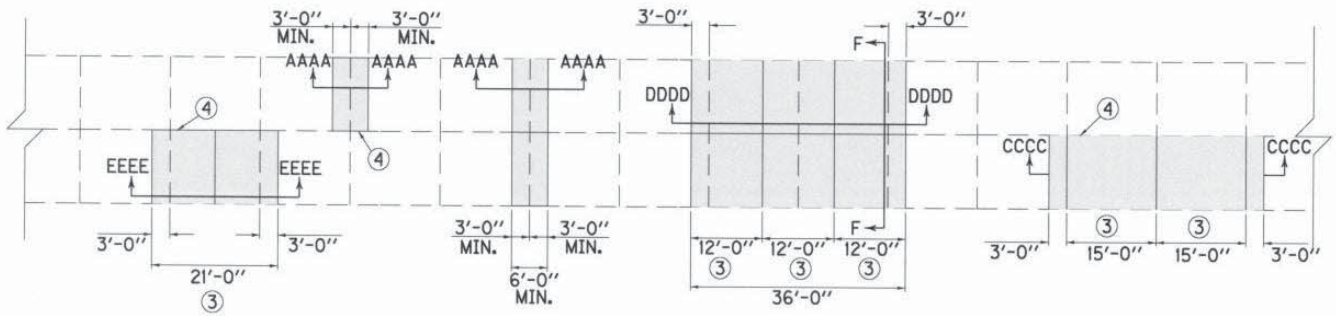
④ IF ONLY ONE LANE IS REMOVED, AND L>25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L≤25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.

5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONSTRUCTION JOINTS AT LOCATIONS "J". SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.

KENTUCKY
DEPARTMENT OF HIGHWAYS

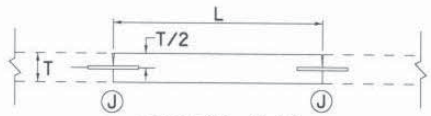
RANDOM SKEWED

APPROVED _____ TEAM DIVISION OF DESIGN _____ DATE

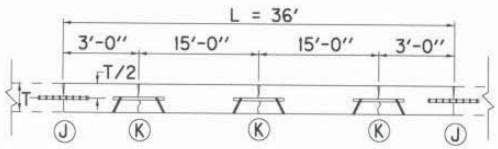


PLAN VIEW

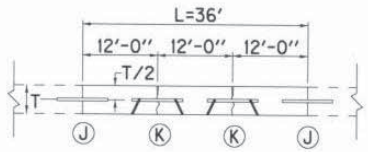
JPC PAVEMENT TO BE REMOVED



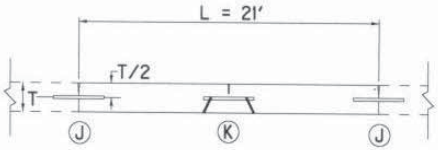
SECTION AAAA



SECTION CCCC



SECTION DDDD



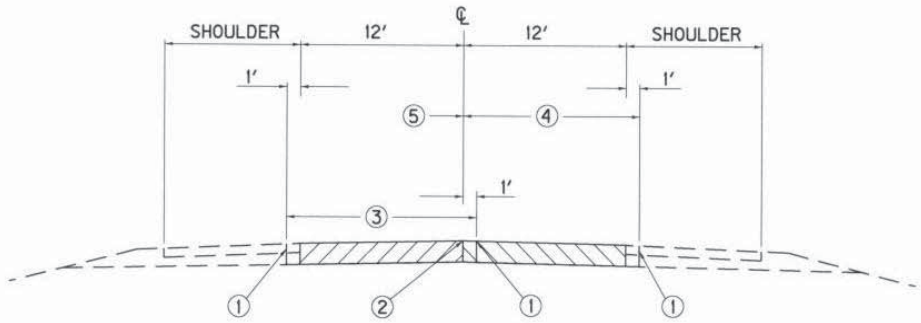
SECTION EEEE

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

KENTUCKY DEPARTMENT OF HIGHWAYS

15' JOINT SPACING

APPROVED _____ TEBM DIVISION OF DESIGN _____ DATE



SECTION F

① SAW-CUT LINE. THIS ONE FOOT IS TO ALLOW FOR A FORM AND THE REMOVAL AND REPLACEMENT SHALL BE INCIDENTAL TO THE WORK, EXCEPT NEW ASPHALT MIXTURE SHALL BE PAID DIRECT ON A TONNAGE BASIS, AND NEW JPC PAVEMENT WILL BE PAID BY THE SQUARE YARD. COMPACT THE DGA BASE BY MECHANICAL TAMPERS TO THE ENGINEER'S SATISFACTION.

② EXISTING LONGITUDINAL JOINT.

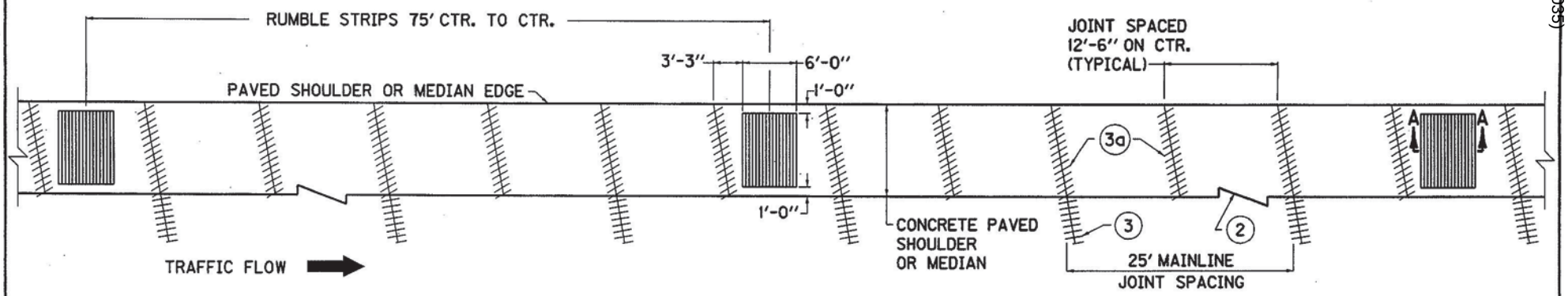
③ FIRST SLAB REMOVAL LIMITS AND REPLACE 12-FOOT LANE.

④ SECOND SLAB REMOVAL LIMITS AND REPLACE 12-FOOT LANE.

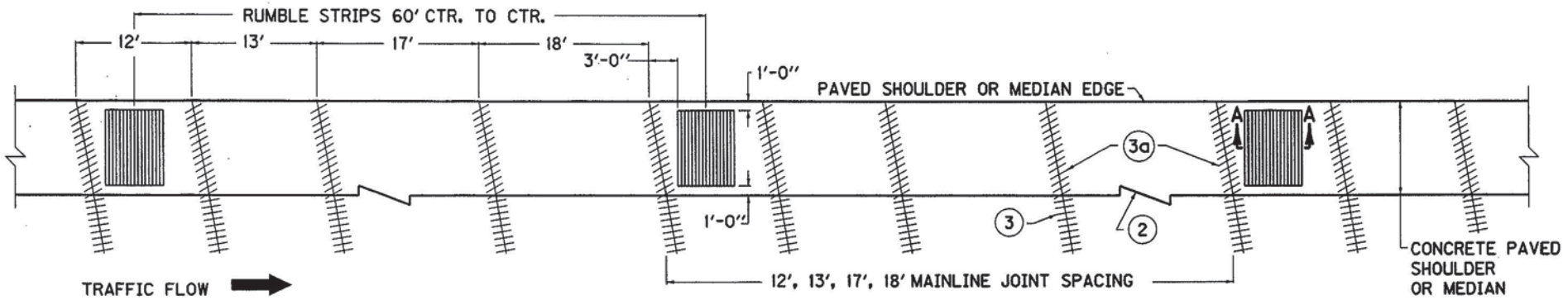
⑤ THIS ONE FOOT IS TO ALLOW FOR A FORM ON THE FIRST POUR, AND A TEMPORARY PAVEMENT IS REQUIRED. THE DEPARTMENT WILL NOT REQUIRE REMOVAL OF THIS ONE FOOT IF THE GRADE OF THE EXISTING PAVEMENT IS ADEQUATE TO ENSURE THE NEW CONCRETE CAN BE PLACED AND FINISHED TO THE SATISFACTION OF THE ENGINEER.

6. THE ABOVE DRAWING DEPICTS THE ORDER OF SLAB REMOVAL WHEN BOTH ARE TO BE REMOVED AT THE SAME LOCATION. WHEN ONLY ONE SLAB OR LANE IS TO BE REMOVED, REMOVE AND REPLACE ACCORDING TO SECTION C, CC, CCC OR CCCC. TRAFFIC CONTROL WILL SPECIFY WHICH LANE TO REMOVE FIRST.

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



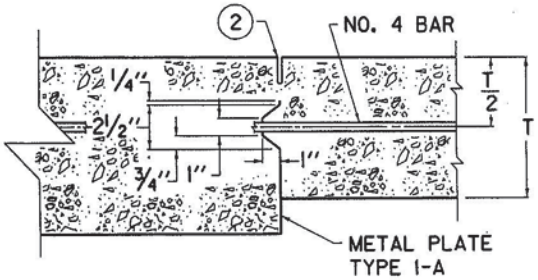
NON-REINFORCED CONCRETE PAVED SHOULDER OR MEDIAN WITH STANDARD REINFORCED CONCRETE MAINLINE



NON-REINFORCED CONCRETE PAVED SHOULDER OR MEDIAN WITH NON-REINFORCED CONCRETE MAINLINE

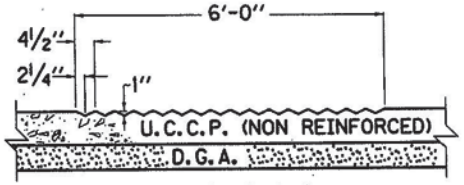
NOTES

1. THE COST OF CONSTRUCTING RUMBLE STRIPS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR NON-REINFORCED CONCRETE PAVEMENT.
2. (2) (3) (3a) SEE CUR. STD. DWG. RPS-010 FOR JOINT SYMBOLS AND DETAILS.
3. AFTER FINAL FINISHING OF THE PAVEMENT, CORRUGATIONS FOR RUMBLE STRIPS SHALL BE FORMED AT THE INTERVALS SHOWN INTO THE PLASTIC CONCRETE.
4. THE CORRUGATIONS SHALL BE ROUNDED RATHER THAN PEAKED, WITH THE TOP FLUSH WITH THE SHOULDER OR MEDIAN SLOPE.
5. THE TROUGH SHALL BE TAILED OUT, SO AS TO PROVIDE POSITIVE DRAINAGE.



JOINT DETAIL

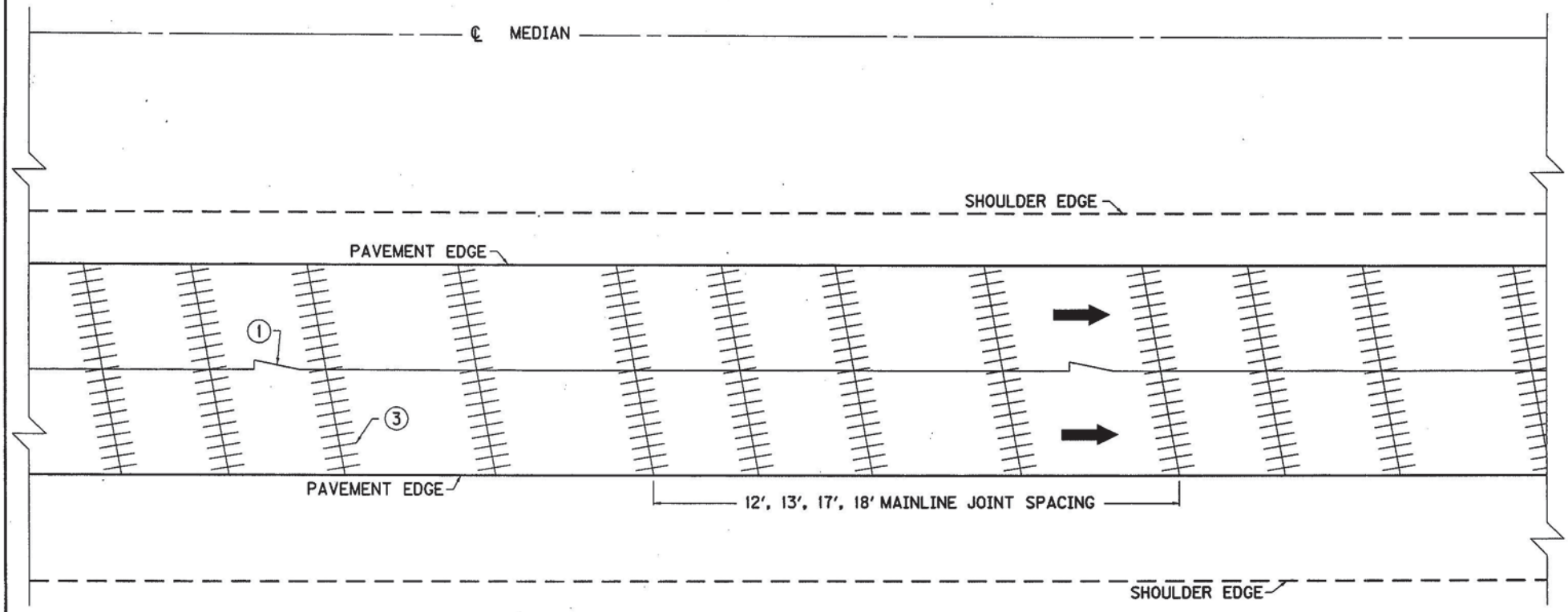
METAL PLATE FOR USE WITH CONCRETE SHOULDER PAVING CONSTRUCTED IN CONJUNCTION WITH MAINLINE PAVEMENT.
IF OTHER ALTERNATES ARE USED, THE TIE-STEEL AND KEYWAY SHALL BE LOCATED IN ACCORDANCE WITH THIS DRAWING.



SECTION A-A

KENTUCKY
DEPARTMENT OF HIGHWAYS
NON-REINFORCED
CONCRETE PAVEMENT
FOR
SHOULDERS & MEDIANS
STANDARD DRAWING NO. RPN-001-04

SUBMITTED _____ DIRECTOR DIVISION OF DESIGN _____ DATE
APPROVED _____ STATE HIGHWAY ENGINEER _____ DATE



PLAN VIEW

NOTES

JOINTS

TRANSVERSE CONTRACTION JOINTS SHALL BE SPACED AS FOLLOWS: 12', 13', 17', 18' AND SHALL BE SAWED TO A MINIMUM DEPTH OF ONE FOURTH OF THE PAVEMENT THICKNESS OR T/4. ALL TRANSVERSE CONTRACTION AND TRANSVERSE EXPANSION JOINTS SHALL REQUIRE LOAD TRANSFER ASSEMBLIES AS DETAILED ON THE PLANS OR STANDARD DRAWINGS.

JOINT SPACING AND TYPE, AT BRIDGE ENDS, SHALL BE REQUIRED AS SHOWN ON THE PLANS OR CURRENT STANDARD DRAWING RPS-010.

TRANSVERSE CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 501.03.16, EXCEPT THEY SHALL BE NO CLOSER THAN 5'-0" TO ANY TRANSVERSE CONTRACTION JOINT OR EXPANSION JOINT.

(1) (3) SEE CURRENT STANDARD DRAWING RPS-010 FOR JOINT SYMBOLS AND DETAILS.

THIS DRAWING DEPICTS JOINTS SKEWED TO THE CENTERLINE OF THE ROADWAY, HOWEVER JOINTS AT RIGHT ANGLES TO THE CENTERLINE SHALL BE SPACED IN THE SAME MANNER.

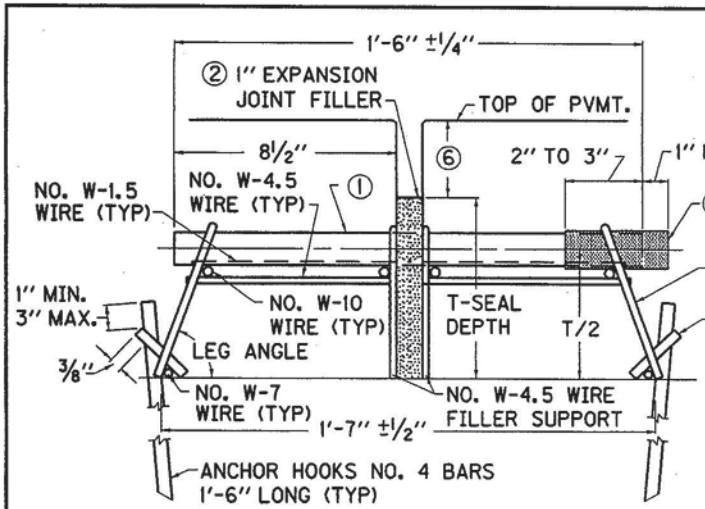
KENTUCKY
DEPARTMENT OF HIGHWAYS

NON-REINFORCED
CONCRETE PAVEMENT

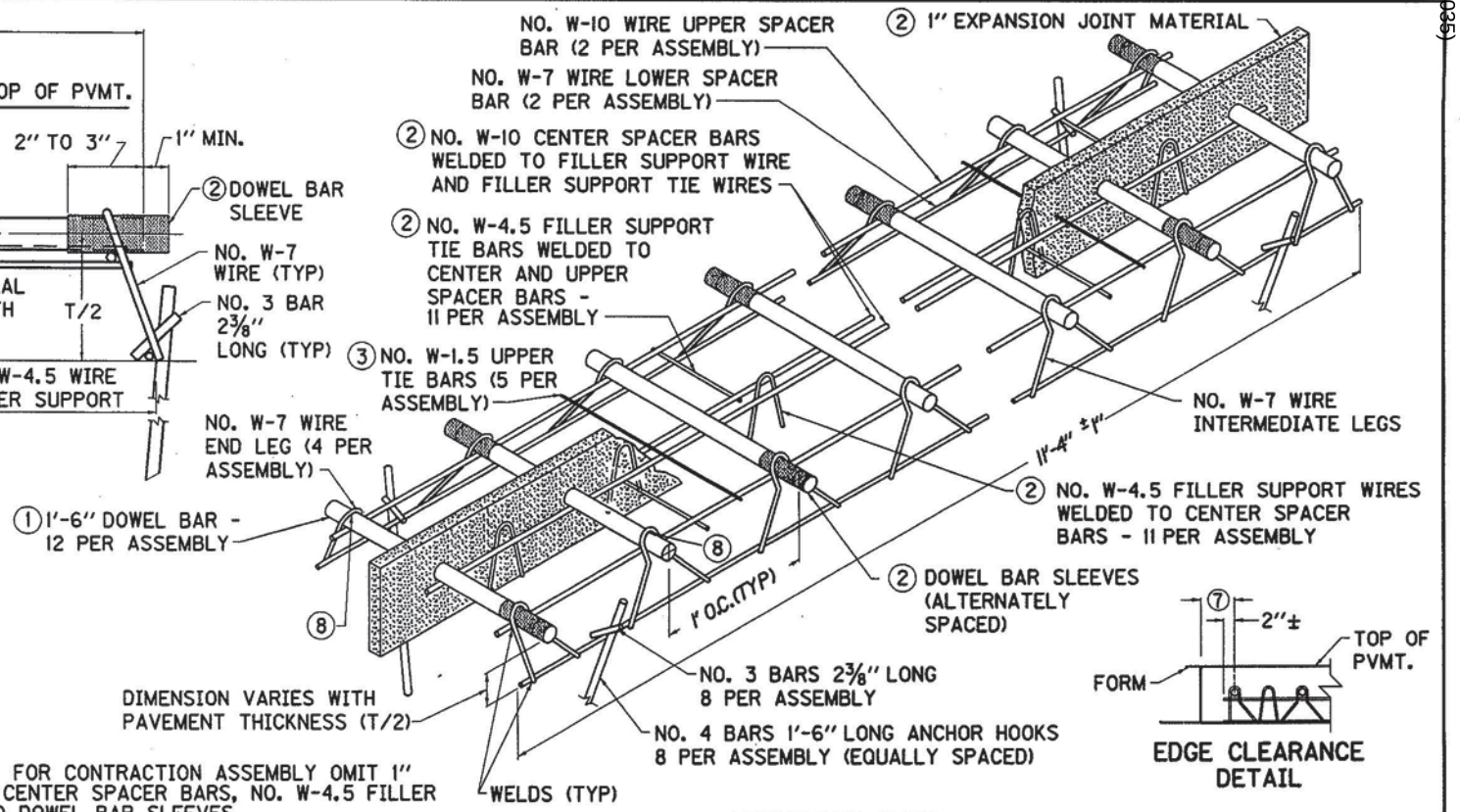
STANDARD DRAWING NO. RPN-015-03

SUBMITTED _____ DIRECTOR DIVISION OF DESIGN _____ DATE

APPROVED _____ STATE HIGHWAY ENGINEER _____ DATE



END ELEVATION



ISOMETRIC VIEW

EDGE CLEARANCE DETAIL

NOTES

① DOWEL BAR SIZES

PAVEMENT THICKNESS						
8"	9"	10"	11"	12"	13"	14"
BAR DIAMETER						
1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1 5/8"	1 3/4"
LEG ANGLES +/- 3 DEGREES						
63	63	63	70	70	70	70

② EXPANSION ASSEMBLY IS ILLUSTRATED: FOR CONTRACTION ASSEMBLY OMIT 1" EXPANSION JOINT MATERIAL, NO. W-10 CENTER SPACER BARS, NO. W-4.5 FILLER SUPPORT WIRES, FILLER TIE BARS, AND DOWEL BAR SLEEVES.

③ NO. W-1.5 UPPER TIE BARS WELDED TO UPPER SPACER BARS CUT AFTER FIRST CONCRETE PLACEMENT.

④ FOR END LEGS, BEND WIRE AS SHOWN BY PHANTOM LINES IN INTERMEDIATE LEG DETAIL.

⑤ REFERENCE POINTS SHALL BE REQUIRED ON EACH SIDE OF THE LOAD TRANSFER ASSEMBLY REGARDLESS OF WHETHER SKEWED OR AT RIGHT ANGLES, IN ORDER TO LOCATE THE INTENDED SAWED JOINT AFTER PAVING. ALL SAWING SHALL BE ACCURATELY CONTROLLED TO THE CENTERLINE OF THE LOAD TRANSFER ASSEMBLIES. LONGITUDINAL ORIENTATION OF DOWEL BARS SHALL BE SUCH THAT ALL DOWEL BARS ARE PARALLEL WITH THE CENTERLINE OF EACH PAVING LANE.

⑥ SEE APPLICABLE CURRENT STD. DWG. RPX-010 OR RPX-020 FOR SEAL DEPTH.

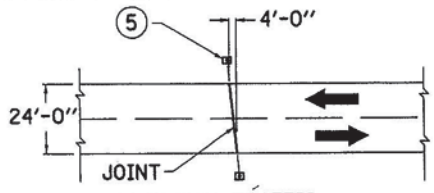
⑦ 4 1/2" MIN. AND 10 1/2" MAX. FOR VARIABLE SLAB WIDTH. 6" FOR UNIFORM OR STD. SLAB WIDTH. BOTH SKEWED AND RIGHT ANGLE ASSEMBLIES ARE DEPICTED. UNLESS SPECIFIED ELSEWHERE IN THE PLANS THE SKEWED ASSEMBLY SHALL BE REQUIRED. FOR LOCATION AND SPACING SEE APPLICABLE PAVEMENT STANDARD DRAWINGS.

⑧ WELD EITHER NO. W-10 UPPER SPACER BAR OR LEG SUPPORT TO ALTERNATE ENDS OF DOWEL BARS AS TYPICALLY SHOWN.

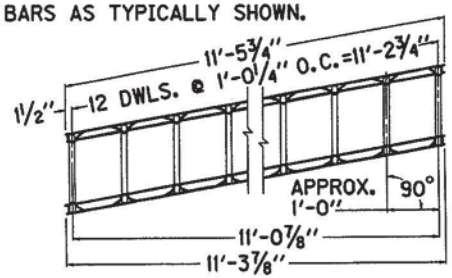
9. DOWEL ENDS SHALL NOT VARY MORE THAN 1/4" FROM A STRAIGHT LINE.

10. DOWELS SHALL BE PARALLEL WITH BASE, WITH A TOLERANCE OF 1/4".

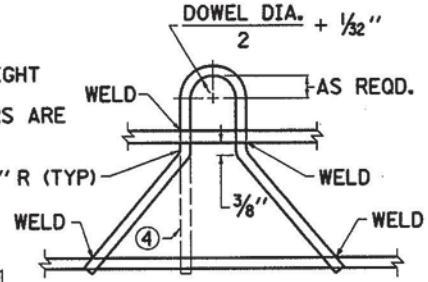
11. EPOXY SHALL BE CLEANED OFF TO BARE METAL BEFORE WELDING DOWEL TO WIRE.



TWO WAY TRAFFIC
(SKEWED IN DIRECTION OF TRAFFIC)
SKEWED PVMT. JT. PLACEMENT



PLAN VIEW (SKEWED DETAIL)



INTERMEDIATE LEG DETAIL

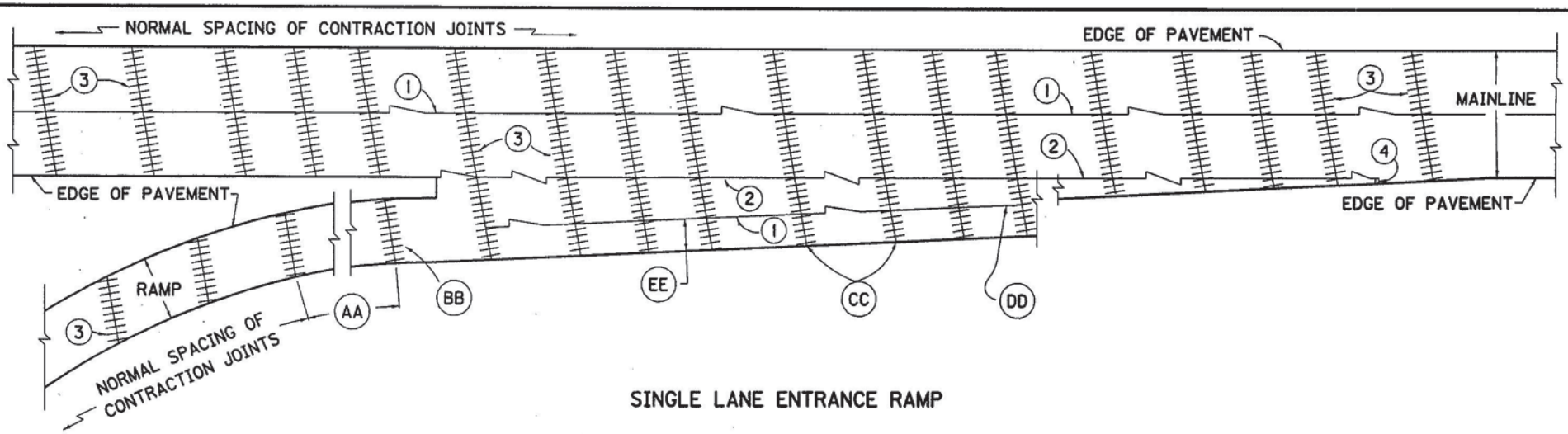
KENTUCKY DEPARTMENT OF HIGHWAYS

EXPANSION AND CONTRACTION JOINT LOAD TRANSFER ASSEMBLIES

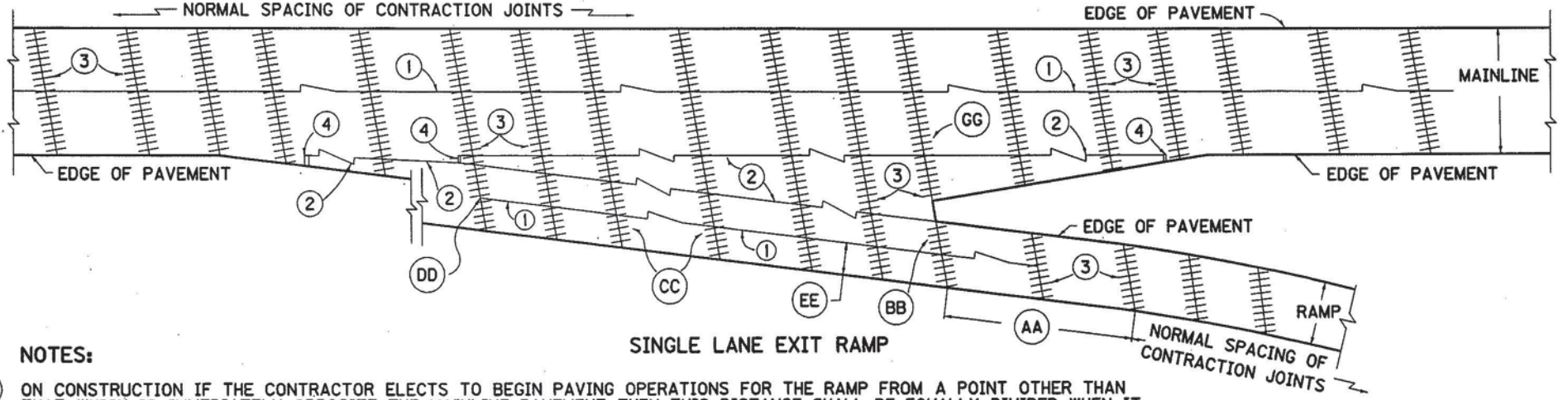
STANDARD DRAWING NO. RPS-020-11

SUBMITTED _____ DIRECTOR DIVISION OF DESIGN _____ DATE

APPROVED _____ STATE HIGHWAY ENGINEER _____ DATE



SINGLE LANE ENTRANCE RAMP



SINGLE LANE EXIT RAMP

NOTES:

(AA) ON CONSTRUCTION IF THE CONTRACTOR ELECTS TO BEGIN PAVING OPERATIONS FOR THE RAMP FROM A POINT OTHER THAN THAT WHICH IS IMMEDIATELY OPPOSITE THE MAINLINE PAVEMENT THEN THIS DISTANCE SHALL BE EQUALLY DIVIDED WHEN IT BECOMES GREATER THAN 20 FEET AND LESS THAN 40 FEET.

(BB) THIS CONTRACTION JOINT IN THE RAMP SHALL ALWAYS BE OPPOSITE THE CONTRACTION JOINT IN THE MAINLINE PAVEMENT.

(CC) ALL CONTRACTION JOINTS IN THE RAMP IMMEDIATELY OPPOSITE THE MAINLINE PAVEMENT SHALL BE A CONTINUATION OF THE JOINTS IN THE MAINLINE PAVEMENT.

(DD) LONGITUDINAL SAWED JOINT SHALL END AT THE NEAREST CONTRACTION JOINT, WHERE THE OVERALL WIDTH OF THE RAMP IS A MAXIMUM OF 16 FEET.

(EE) THIS DISTANCE SHALL BE EQUAL TO ½ THE NORMAL RAMP SECTION.

FF. LONGITUDINAL SAWED JOINTS AT CENTERLINE SHALL BE REQUIRED FOR ALL RAMPS AND LOOP WIDTHS GREATER THAN 16 FEET.

(GG) THIS CONTRACTION JOINT SHALL ALWAYS BE PLACED OPPOSITE THE NOSE OF THE RAMP. THE TWO CONTRACTION JOINTS IMMEDIATELY PRECEEDING THIS JOINT, DEPENDING ON THE DIRECTION OF PAVING OPERATIONS, SHALL BE EQUALLY DIVIDED, PROVIDED THE SPACING DOES NOT EXCEED THE NORMAL SPACING. SHOULD SPACING BE GREATER THAN NORMAL, AN EXTRA JOINT SHALL BE ADDED AND THE DISTANCE EQUALLY DIVIDED. THE JOINT IMMEDIATELY FOLLOWING THE JOINT THAT IS PLACED OPPOSITE THE RAMP NOSE SHALL BE NORMALLY SPACED.

HH. SEE CURRENT STANDARD DRAWING RPS-010 FOR JOINT SYMBOLS AND DETAILS.

II. NORMAL SPACING OF CONTRACTION JOINTS INDICATED ON THIS DRAWING ARE TO BE IN ACCORDANCE WITH SPACING INDICATED ON CURRENT STANDARD DRAWING RPN-015.

KENTUCKY
DEPARTMENT OF HIGHWAYS

CONCRETE PAVEMENT JOINTS TYPES AND SPACING

STANDARD DRAWING NO. RPS-030-04

SUBMITTED _____ DIRECTOR DIVISION OF DESIGN _____ DATE

APPROVED _____ STATE HIGHWAY ENGINEER _____ DATE

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS
I-265

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

Special Note for JPC Ride Quality

Jefferson County
SYP 5-2068.00

The Department will apply JPC Ride Quality requirements on this project in accordance with Section 503.03.09.

SPECIAL NOTE FOR REMOVING EXISTING PAVEMENT MARKERS ON PORTLAND CEMENT PAVEMENT I-265

Before diamond grinding, sawcut around and remove existing Type V snow plowable raised pavement markers (iron castings). Patch the hole with Partial Depth Repair Material listed in the Special Note for Partial Depth Concrete Pavement Repair. This material can be diamond ground unless otherwise noted by the manufacturer.

Removal of Type V markers will be paid at the contract unit price each, which shall be full compensation for removing the markers and disposing of the castings and any debris. The bid quantity is estimated by dividing the length of each run of markers by their average spacing (80’), plus one. Actual quantities removed will be verified by the Engineer. Partial Depth Repair Material to repair the resulting recess will be incidental to the pay item “Remove Pavement Marker Type V”.

SPECIAL NOTE FOR BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

Guardrail Delivery Verification Sheet

I-265 JEFFERSON COUNTY

ITEM NO. 5-2068.00

GUARDRAIL, END TREATMENT, TERMINAL SECTION, OR POST TYPE	UNIT	FIELD VERIFIED AMOUNT	DELIVERED AMOUNT
GUARDRAIL-STEEL W BEAM	LF		
TEMPORARY GUARDRAIL	LF		
GUARDRAIL TERMINAL SECTION	EACH		
CRASH CUSHION TYPE IX-A	EACH		
GUARDRAIL END TREATMENT TYPE 1	EACH		
GUARDRAIL END TREATMENT TYPE 2A	EACH		
GUARDRAIL END TREATMENT TYPE 3	EACH		
GUARDRAIL END TREATMENT TYPE 4A	EACH		
GUARDRAIL END TREATMENT TYPE 7	EACH		
GUARDRAIL CONNECTOR TO BRIDGE END	EACH		
GUARDRAIL CONNECTOR TO CONC MED BARR	EACH		
GUARDRAIL CONNECT-SHLD BRIDGE PIER	EACH		
STEEL GUARDRAIL POST	EACH		
STEEL BLOCKOUTS	EACH		

Removed guardrail, end treatments, terminal sections, steel blockouts and posts shall be delivered to the Guardrail and Sign Center on Wilkinson Blvd in Frankfort, KY and shall be neatly stacked in accordance with section 719.03.07 of the standard specifications. Contractor, Engineer, and Central Sign/Guardrail Center representative must all sign off on this sheet before payment may be made.

	PRINTED NAME	SIGNATURE	DATE
Resident Engineer (or representative)			
Contractor (or Representative)			
Central Sign/Guardrail Center Representative			

Special Note For Fixed Completion Date and Liquidated Damages
I-265
Jefferson County
Item No. 5-2068.00

This project has two Fixed Completion Dates.

Contrary to Section 108.09, Liquidated Damages of $25,000 per calendar day will be assessed for each day work remains uncompleted beyond the Specified Completion Date for the proposed construction including all pavement repairs and diamond grinding north of the bridge over Brownsboro Road, KY 22, specified in the proposal. The Fixed Completion Date for this work is June 3, 2013. Liquidated Damages will be assessed for each day that a lane closure in in place north of Brownsboro Road after this date, **NO EXCEPTIONS**.

Contrary to Section 108.09, Liquidated Damages of $5,000 per calendar day will be assessed for each day work remains uncompleted beyond the Specified Project Completion Date. This project has a Fixed Project Completion Date of August 1, 2013.

In addition to the Liquidated Damages specified in Section 108.09, Liquidated Damages in the following amounts will be charged when a lane or ramp closure remains in place during the prohibited period outlined in the Traffic Control Plan, excluding delays caused by inclement weather:

Mainline:	$2,500 for the first hour $25,000 any additional hour
Ramps:	$2,500 for the first hour $10,000 any additional hour

If work is delayed by inclement weather, the minimum work required to allow removal of the lane closure, as directed by the Engineer, shall be resumed immediately as soon as weather permits or the Department will begin to assess Liquidated Damages as specified herein.

Contrary to Section 108.09 of the Standard Specifications, **the disincentive fee will be charged during those periods when seasonal limitations of the Contract prohibit the Contractor from working on a controlling item or operation. This includes the months from December through March.**

All liquidated damages will be applied cumulatively.

All other applicable portions of Section 108 apply.

SPECIAL NOTE FOR SEALING EXISTING TRANSVERSE AND LONGITUDINAL JOINTS AND RANDOM CRACKS

1. Sealing Existing Transverse and Longitudinal Joints

The contractor shall clean and seal the existing transverse and longitudinal joints where indicated in the plans or proposal or as marked by the Engineer. Old sealant and incompressible material shall be completely removed from the joint to the minimum width and depth of the new reservoir with a diamond saw blade. The removed sealant shall become the property of the Contractor and be removed from the jobsite.

Removal of the old sealant for the entire depth of the joint is not required if the depth of the new reservoir is less than the depth of the existing joint.

Reseal with Hot-Poured Elastic

The existing joint width should not be increased more than 1/8 inch or to the dimensions shown in Standard Drawing RPX-015-03. The hot-poured elastic sealant should be placed in the existing joint to a depth of T/3 or 4", whichever is less.

For all joint reseals, the cracks shall be blown clean with dry, oil-free compressed air immediately prior to sealing. The joints shall be completely dry before the sealing installation may begin. Immediately following air blowing, the sealant material shall be installed in conformance to the manufacturer's recommendations and in accordance with the Standard Drawings and Specifications.

The top surface of the sealant shall be at least ¼-inch below the surface of the pavement and the shape should be in accordance with the standard drawings. All joints should have beveled edges reestablished according to the standard drawing(s) prior to seal replacement.

2. Sealing Existing Concrete Random Cracks

The Contractor shall route, clean and seal existing concrete random cracks where indicated in the plans or proposal or where directed by the Engineer. Cracks smaller than 5/16-inch in width shall be routed to 5/16-inch wide by 1-inch deep prior to placing the sealant. Cracks over 5/16-inch in width shall be cleaned and sealed.

All incompressible material shall be completely removed from the existing random crack to a depth of ¾-inch. Immediately prior to sealing, the cracks shall be blown clean with dry, oil-free compressed air.

The top surface of the sealant shall be at least ¼-inch below the surface of the pavement.

Special Note For:
Erosion Prevention and Sediment Control
Item 5-2068.00: I-265 Pavement Rehabilitation
Jefferson County

The Contractor shall be responsible for filing the Kentucky Pollution Discharge Elimination System (KPDES) KYR10 permit Notice of Intent (NOI) with the Kentucky Division of Water (DOW) and any KPDES local Municipal Separate Storm Sewer System (MS4) program that has jurisdiction. The NOI shall name the contractor as the Facility Operator and include the KYTC Contract ID Number (CID) for reference.

The Contractor shall perform all temporary erosion/sediment control functions including: providing a Best Management Practice (BMP) Plan, conducting required inspections, modifying the BMP plan documents as construction progresses and documenting the installation and maintenance of BMPs in conformance with the KPDES KYR10 permit effective on August 1, 2009 or a permit re-issued to replace that KYR10 permit. This work shall be conducted in conformance with the requirements of Section 213 of KYTC 2012 Department of Highways, Standard Specifications for Road and Bridge Construction.

Contrary to Section 213.03.03, paragraph 2, the Engineer shall conduct inspections as needed to verify compliance with Section 213 of KYTC 2012 Department of Highways, Standard Specifications for Road and Bridge Construction. The Engineer's inspections shall be performed a minimum of once per month and within seven days after a storm of ½ inch or greater. Copies of the Engineer's inspections shall not be provided to the contractor unless improvements to the BMP's are required. The contractor shall initiate corrective action within 24 hours of any reported deficiency and complete the work within 5 days. The Engineer shall use Form TC 63-61 A for this report. Inspections performed by the Engineer do not relieve the Contractor of any responsibility for compliance with the KPDES permit.

Contrary to Section 213.05, bid items for temporary BMPs will not be listed and will be replaced with one lump sum item for the services. Payment will be pro-rated based on the Project Schedule as submitted by the Contractor and as agreed to by the Engineer.

The contractor shall be responsible for applying "good engineering practices" as required by the KPDES permit. The contractor may use any temporary BMPs with the approval of the KYTC Engineer.

The contractor shall provide the Engineer copies of all documents required by the KPDES permit at the time they are prepared.

The contractor shall be responsible for the examination of the soils to be encountered and make his own independent determination of the temporary BMPs that will be required to accomplish effective erosion prevention and sediment control.

The Contractor shall be responsible for filing the KPDES permit Notice of Termination (NOT) with the Kentucky DOW and any local MS4 program that has jurisdiction. The NOT shall be filed after the Engineer agrees that the project is stabilized or the project has been formally accepted.

Payment: Payment will be at the contract unit price for K.P.D.E.S Permit & Temporary Erosion Control: Lump Sum.

Special Note for CPM Scheduling

A. General.

Contrary to Kentucky Standard Specifications 108.07.04, additional contract time will only be added when the Engineer deems the critical path of the project has been effected. Create the progress schedule required for this project using the critical path method (CPM). The Contractor shall designate a Schedule Representative who shall be responsible for coordinating with the Engineer during the preparation and maintenance of the schedule. The contractor shall submit an interim schedule followed by a baseline schedule, or only a baseline schedule, depending on when the contractor starts work as described below.

B. Interim Schedule.

If the Contractor starts work within ***30*** days of the Notice to Begin Work, they shall submit an interim schedule. The interim schedule will be in CPM schedule format. The interim schedule shall include detailed activities for the work to be accomplished during the first ***45*** days of the Contract, and summary activities for the balance of the work. The interim schedule, if required, shall be submitted at the Preconstruction Conference. No work shall begin without the submission of an interim schedule.

C. Baseline Schedule.

The Contractor shall submit a baseline schedule as outlined in the submission requirements section (C.2) within ***30*** days of the Notice to Begin Work. No pay estimates will be processed after 15 days without the submission of the baseline schedule. The baseline schedule will be in CPM schedule format and as described below. The Engineer will review the baseline schedule and will “accept”, “accept as noted” or “reject" the schedule within ***10*** days of receipt. If the Engineer does not provide written notification regarding the disposition of the baseline schedule within ***10*** days, the submission will be considered “accepted.”

For baseline schedules that are “accepted as noted”, the Contractor shall make the necessary revisions and resubmit the revised schedule within ***10*** days. The Engineer will only “reject” baseline schedules that are not in compliance with contract requirements.

For baseline schedules that are “rejected”, the Engineer shall indicate in writing portions of the schedule that are not in compliance with the contract requirements. The Project Engineer shall conduct a mandatory meeting with the Contractor and the Contractor’s Schedule Representative within ***10*** days of the Engineer’s written notice. The purpose of this meeting is to resolve disputes with the baseline schedule so that it may be resubmitted. The Contractor shall provide clarification and all additional information necessary for the Engineer within ***10*** days of this meeting. The Contractor shall submit the revised Baseline Schedule to the Engineer for review and acceptance within ***10*** days of this meeting.

No pay estimates will be generated until the baseline schedule is “accepted” or “accepted

as noted." In the event the baseline schedule is not "accepted" within 90 days of the Notice to Begin Work, all work shall cease on the project until the baseline schedule is "accepted". The incurred delays from the "cease work order" will be the contractor's responsibility and will not be considered for time extension. Any claims associated with time impacts for work performed or delay experienced prior to the baseline schedule being "accepted" or "accepted as noted" will be evaluated at the sole discretion of the Engineer. "Acceptance" by the Engineer will not relieve the Contractor of their responsibilities for compliance with specifications and contract requirements or for the accuracy or feasibility of the schedule.

"Acceptance" of the baseline schedule does not revise the Contract Documents. The baseline schedule must be "accepted" or "accepted as noted" by the Engineer prior to the Engineer evaluating any contractor claims associated with time impacts.

The Engineer's review of the baseline schedule will be for compliance with the specifications and contract requirements. "Acceptance" by the Engineer will not relieve the Contractor of any of their responsibilities for the accuracy or feasibility of the schedule.

1. Schedule Requirements.

Generate and submit an electronic copy of the baseline schedule using Primavera Contractor 5.0 Deluxe by Primavera Systems Inc., Bala Cynwyd, PA, or equivalent electronically transferable software. The Contractor's costs associated with these provisions should be incorporated into the bid item for the progress schedule.

Provide a calendar day schedule that shows the various activities of work in sufficient detail to demonstrate a reasonable and workable plan to complete the Project by the Original Contract Completion Date. Show the order and interdependence of activities and the sequence for accomplishing the work. Describe all activities in sufficient detail so that the Engineer can readily identify the work and measure the progress of each activity. The baseline schedule must reflect the scope of work, required phasing, maintenance of traffic requirements, interim completion dates, the Completion Date, and other project milestones established in the Contract Documents. Include activities for submittals, working drawings, shop drawing preparation, submittal review time for the Department shop drawings, material procurement and fabrication, and the delivery of materials, plant, and equipment, and other similar activities.

The Contractor shall be responsible for assuring all work, including all subcontractor's work, is included in the schedule. The Contractor shall be responsible for assuring that all work sequences are logical and that the schedule indicates a coordinated plan.

Failure by the Contractor to include any element of work required for performance of the Contract shall not excuse the Contractor from completing all work within the required time. Omissions and errors will be corrected as described in Section F or H in this note and will not affect contract time.

a) Administrative Identifier Information.

1. Project Number
2. County
3. Route Number
4. Item Number
5. CID Number
6. Award Date
7. Date of Notice to Begin Work
8. Completion Date
9. Contractor's Name
10. Contractor's Dated Signature
11. KYTC's Dated Accepted Signature

b) Project Activities.

i. Activity Identification (ID): Assign each activity a unique identification number. Activity ID length shall not exceed 10 characters. Assign baseline Activity ID's in sequences of 10 (e.g.; A1000, A1010, A1020). This will allow modifications and additional items to be placed into the Identification scheme easily. Once accepted, the Activity ID shall be used for the duration of the project.

ii. Activity Description: Each activity shall have a narrative description consisting of a verb or work function (e.g.; form, pour, excavate, pier #2) and an object (e.g.; slab, footing, underdrain).

iii. Activity Original Duration: Assign planned duration in calendar days for each activity. Do not exceed a duration of 20 calendar days for any construction activity unless approved by the Engineer. Do not represent the maintenance of traffic, erosion control, and other similar items as single activities extending to the Completion Date. Break these Contract Items into component activities in order to meet the duration requirements of this paragraph.

iv. Activity Relationships:

- All activities, except the first activity, shall have a predecessor(s). All activities, except the final activity, shall have a successor(s).
- Use only finish-to-start relationships with no leads or lags to link activities, or use start-to-start relationships with lags no greater than the predecessor duration to link activities.
- Use of finish-to-finish relationship is permitted when both activities are already linked with a start-to-start relationship.

c) Project Milestones.

i. Start Project: The Contractor shall include as the first milestone in the schedule, a milestone named "Start Project". The date used for this milestone is the date the contract is executed and signed by the Department.

ii. End Project Milestone: The Contractor shall include as the last activity in the project schedule, a milestone named "End Project". The date used for this milestone is considered the project completion date.

iii. Start Phase Milestone: The Contractor shall include as the first activity for a project phase, an activity named "Start Phase X", where "X" identifies the phase

of work. The Contractor may include additional milestones but, as a minimum, must include all contractual milestones.

iv. End Phase Milestone: The Contractor shall include as the last activity in a project phase, an activity named "End Phase X" where "X" identifies the phase of work. The Contractor may include additional milestones, but at a minimum contractual milestones.

d) Schedule Options.

The schedule may only be calculated using retained logic. Show open ends as non-critical. Schedule durations are to be contiguous. The project calendar will be based on the Contractor's plan for completing the project. However, the scheduling increment (hours or days) will be stipulated during the Preconstruction Conference. All days must remain active unless the Contractor is instructed not to work by contract documents. Total float shall be calculated as finish float.

2. Submission Requirements.

Submit all schedules within the time frames specified. Submit the schedule and information in electronic file format via email, and compact disc (CD) compatible with the Engineer's computer. Submit the following information along with the electronic baseline schedule:

a) A baseline schedule in a bar chart format including the Administrative Identifier Information discussed in Section C.1.a on the first page of the schedule. For each activity on the chart, indicate the Activity ID, Activity Description, Original Duration, Remaining Duration, Total Float, Early Start Date, Early Finish Date, and Percent Complete. Use arrows to show the relationships among activities.

b) A baseline schedule in a bar chart format, on paper. Identify the critical path of the project on the bar chart in red. The critical path is defined as; the longest path of activities in the project that determines the project completion date. The activities that make-up the critical path of activities are the "Critical Activities."

3. Submittal Cover Memo.

All submittals shall be accompanied with a brief cover memo containing:

- Identification of the submission as the Baseline Schedule
- Administrative Identifier Information (see section C.1.a)
- Any critical notes as determined by the Contractor

An example Cover Memo is provided in this note.

D. Float.

Use of float suppression techniques, such as; preferential sequencing (arranging critical path through activities more susceptible to Department caused delay), lag logic restraints, unrealistic activity durations, zero total or free float constraints, extending activity times, or imposing constraint dates other than as required by the contract, shall be cause for rejection of the project schedule or its updates. Schedules with negative float will also not be accepted.

1. Definitions of Float.

Total Float is the length of time along a given network path that the actual start and finish of activity(s) can be delayed without delaying the project
completion date. Project Float is the length of time between the End Project Milestone and the Contract Completion Date.

2. Ownership of Float.

Float available in the schedule, at any time shall not be considered for the exclusive use of either the Department or the Contractor. During the course of contract execution, any float generated due to the efficiencies of either party is not for the sole use of the party generating the float; rather it is a shared commodity to be reasonably used by either party. Efficiencies gained as a result of favorable weather within a Biweekly period, where the number of days of normally anticipated weather is less than expected, will also contribute to the Project Float. A schedule showing work completing in less time than the contract time, and accepted by the Department, will be considered to have Project Float. Project Float will be a resource available to both the Department and the Contractor. No time extensions will be granted nor delay damages paid unless a delay occurs which impacts the project's critical path, consumes all available float and extends the work beyond the Contract Completion Date.

3. Negative Float.

Negative float is not allowed. Schedules with negative float will not be accepted. Negative float will not be a basis for requesting time extensions. Any extension of time will be addressed in accordance with the Section F. Scheduled completion date(s) that extend beyond the contract (or phase) completion date(s) may be used in computations for assessment of liquidated damages. The use of this computation is not to be construed as an order by the Department to accelerate the project.

E. Biweekly Update Schedule.

A Biweekly update schedule is a schedule in which only progress is updated from the prior data date to the current data date. Work added and/or excusable delays encountered since the prior data date must be represented as a schedule revision as described in Section E.

1. Update Requirements.

Biweekly on a date set at the Preconstruction Conference and until Formal Acceptance, submit an updated schedule and all required information with a data date of the last day of the preceding biweekly submittal. The date for submission and data date may be adjusted to accommodate regularly scheduled progress meetings. Submit the Biweekly updated bar chart on paper and a copy of the updated schedule in electronic format in Section C.2. The Engineer shall “accept” or “reject” the schedule update within ***10*** days of receipt of the updated CPM schedule. The Engineer may withhold estimates if the updated schedule is not submitted as required by this section. For each updated schedule, identify the actual start and finish dates for all completed activities and the actual start date and remaining duration for all activities in progress. Provide a written narrative that identifies any changes or shifts in the critical path and submit reasons for the changes or shifts in the critical path.

Submit the following with each updated schedule:

a) CPM Schedule in Bar Chart Format

b) Electronic files (formatted as described above)

2. Submittal Cover Memo.

All update submittals shall be accompanied with a brief cover memo containing all the information require in the Baseline Submittal Cover Memo per section C.3 with the addition of:

- Baseline Report
  - Narrative of baseline expectations
  - Project completion status per baseline expectations
- Logic Report
  - Logic Modification Report per section F
  - Narrative of all logic changes and reasoning
  - Two separate CPM submissions; one reflecting the schedule without changes in logic, the other reflecting the proposed logic and the effects.
  - Description of fragnet required per section F
- Progress Report
  - Narrative of all schedule changes since last update
  - Details of each change including impact of change on the schedule, float consumption or addition, and reason causing change when float is consumed

F. Revisions.

The Work may require and/or the Contractor may make revisions to the CPM schedule. Addition of new activities (fragnets required) or new calendars or changes to existing activities, calendars or logic constitute a revision. All revisions must be reported in a Logic Modification Report. The Logic Modification Report is a separate CPM update which includes all the changes recommended by the contractor within the current Biweekly update schedule. It shall include a Narrative explanation of the necessary changes accompanying the Biweekly update schedule. Any revision which modifies the critical path or impacts an interim date or project completion date is considered a Logic Modification. A fragnet is defined as the sequence of new activities that are proposed to be added to the existing schedule. The fragnet shall identify the predecessors to the new activities and demonstrate the impacts to successor activities. If submitted as a fragnet, the Contractor shall compute two Finish Dates. The first Finish Date shall be computed without consideration of any impact by the fragnet. The second Finish Date shall be computed with consideration of any impact by the fragnet. The Contractor shall also submit a written narrative stating the reason for the proposed revisions. The Engineer shall “accept” or “reject” proposed revisions within ten days of receipt of appropriate schedules and narrative. All approved revisions will be incorporated into the Biweekly Update Schedule which will become the Revised Biweekly Update Schedule.

G. Time Extensions.

The Work may require and/or the Contractor may request an extension of the Completion Date. Perform the following analysis to compute the duration of the time extension. Submit two paper copies and two electronic copies of each analysis performed.

1. Determine project progress prior to circumstance(s) necessitating the time extension. Unless the Engineer requests an interim schedule updated to the date of the circumstance alleging to have caused delay, the previous accepted Biweekly update shall be used to display the prior progress of the project. This schedule is referred to as the Un-impacted Schedule
2. Prepare a fragmentary network (fragnet) depicting the circumstance that is believed to have delayed the project.
3. Insert the fragnet into the Un-impacted Schedule, run the schedule calculations and determine the finish date. This schedule is referred to as the Impacted Schedule.
4. Compare the Impacted Schedule finish date with the Un-impacted Schedule finish date in order to determine the duration of any warranted time extension.

Submit the impacted schedule with the request for time extension. Include a narrative report describing the effects of new activities and relationships to interim and contract completion dates. All time extensions approved by the Engineer will be incorporated into the Biweekly update with the fragnet used to determine impacts incorporated into the schedule.

H. Recovery Schedule.

If the Biweekly Update Schedule or Revised Biweekly Update Schedule projects a finish date for the Project more than 14 calendar days later than the Contract Completion Date, submit a recovery schedule showing a plan to finish by the current Completion Date. The acceptance of any schedule projecting a completion date for the Project beyond the Current Contract Completion Date does not constitute approval of a time extension or an order to accelerate. All changes to completion dates and orders to accelerate must be made via Change Order. The Department will withhold Estimates until the Engineer “accepts” the recovery schedule. The Engineer will use the schedule to evaluate time extensions and associated costs requested by the Contractor. In the event the current Completion Date is in dispute, the recovery schedule will need to be submitted once the dispute has been resolved.

I. Basis of Payment.

The Department will make partial payments according to Section 109.05 of the standard specifications and as modified by the following schedule:

1. The Department will release 50 percent of the lump sum amount bid for Project CPM Schedule to the Contractor with the first regular estimate payable after the Engineer has “accepted” the CPM Baseline schedule submission and the Department has received the scheduling software.
2. The Department will release an additional 25 percent of the lump sum amount bid for Project CPM Schedule to the Contractor with the first regular estimate payable after 50 percent of the original contract amount is complete.

3. The Department will release the remaining 25 percent of the lump sum amount bid for Project CPM Schedule to the Contractor with the first regular estimate payable after project completion.

The Department will pay for the accepted quantities at the contract price as follows:

Code	**Pay Item**	**Pay Unit**
------	Project CPM Schedule	Lump Sum

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

SPECIAL NOTE FOR WATERBLASTING STRIPING REMOVAL

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

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

2.0 MATERIALS AND EQUIPMENT.

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

2.2 Water. Conform to Section 803.

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

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

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

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

Code	Pay Item	Pay Unit
22664EN	Water Blasting Existing Stripe	Linear Foot

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

JEFFERSON COUNTY, I-265

ITEM NO. 5-2068

BRIDGE REHABILITATION
(4 LOCATIONS)

MILE POINT 30.637 TO 35.201

INDEX

SPECIAL NOTE FOR REPLACING SEAL IN EXISTING EXPANSION JOINT

I. DESCRIPTION

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, and this Note. Section references are to the Standard Specifications.

This work consists of the following:

(1) Furnish all labor, materials, tools, and equipment
(2) Remove existing joint seal
(3) Install new joint seal
(4) Maintain and control traffic
(5) Any other work specified as part of this contract

II. MATERIALS

A. Neoprene Joint Seals (Compression Seal or Strip Seal). See Section 807.
B. Silicone Rubber Sealant. See Section 807.

III. CONSTRUCTION

A. Remove Existing Materials. Remove the existing joint seal. Remove debris and/or expansion joint filler as directed by the Engineer. Dispose of all removed material entirely away from the job site. This work is incidental to the contract unit price for "Expansion Joint Seal Replacement".

B. Blast Clean Armored Edges. Blast clean all areas of existing armored edges until free of all laitance and deleterious substances immediately prior to the placement of the new joint seal.

C. Preformed Neoprene Compression Joint Seal. Oversize the neoprene joint seal as much as practically possible for installation. Place the preformed joint seal in one continuous, unbroken length from out-to-out of bridge, turning the seal upward through the barriers. The portion of the joint seal extending through the barriers will be considered incidental. Place neoprene compression seals as recommended by the manufacturer and in accordance with Section 609.03.04 (D).

D. Preformed Expansion Joint Strip Seal. Place strip seal as recommended by the manufacturer and in accordance with Section 609.03.04 (E).

E. Silicone Rubber Sealant. Place the silicone sealant as recommended by the manufacturer and in accordance with Section 609.03.04 (C).

F. Shop Plans. Shop Plans will not be required. The contractor is responsible for obtaining field measurements and supplying properly sized materials to complete the work.

IV. MEASUREMENT

A. Expansion Joint Seal Replacement. The Department will measure the quantity in linear feet from gutterline to gutterline along the centerline of the joint.

V. PAYMENT

A. Expansion Joint Seal Replacement. Payment at the contract unit price per linear foot is full compensation for removing specified existing materials, furnishing and installing the neoprene compression joint seal, strip seal, or silicone rubber sealant, and all incidental items necessary to complete the work within the specified pay limits as specified by this note.

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

3/8" EPOXY-URETHANE WATERPROOFING OVERLAY FOR BRIDGE DECKS

1. DESCRIPTION

1.1 This specification describes the Pre-treatment and Overlay consisting of multiple layers of hybrid polymer systems and a special blend of extremely hard aggregate designed to provide a minimum of a 3/8" thick application for the purpose of complete waterproofing as well as providing a non-skid surface to withstand continuous heavy traffic and extreme changes in weather conditions.

1.2 Unless otherwise noted, Section references herein are to the Department's *Standard Specifications for Road and Bridge Construction*. All applicable portions of the Department's *Standard Specifications* apply unless specifically modified herein.

2. MATERIALS

Pre-treatment:

2.1 Hairline cracks

This two part hybrid polymer shall be free of any fillers, volatile solvents and shall be formulated to provide simple volumetric ratio of two components such as one to one or two to one by volume.

This hybrid polymer system shall be formulated to provide a unique combination of extremely low viscosity and low surface tension coupled with a built in affinity for concrete and steel.

Overlay:

2.2 The two-part epoxy-urethane co-polymer system shall be free of any fillers volatile solvents and shall be formulated to provide simple volumetric mixing ratio of two components such as one to one or two to one by volume.

The epoxy-urethane co-polymer system shall be formulated to provide flexibility in the system without any sacrifice of the hardness, chemical resistance or strength of the epoxy-urethane co-polymer system. Use of external/conventional flexibilizers is not acceptable. Flexibility shall be introduced by interaction of elastomers to chemically link in the process of curing so that the flexibility of the molecule is least affected during the low temperature conditions that are confronted in actual use.

2.3 Material Requirements

2.3.1 Physical Requirements of Cured *Pretreatment for Cracks* System. When Components A and B are mixed in the appropriate ratio, the cured resin shall conform to the requirements of Table 1. (Test methods are discussed in detail in Item 3 of this specification.)

TABLE 1	
PHYSICAL PROPERTIES OF THE CURED SYSTEM	
Property	**Value**
Compressive Strength, min. psi	5000
Tensile Strength, min. psi	2500
Tensile Elongation, percent	$25^{\pm}5$
Water Absorption, percent by wt. max.	0.5%
Shore D hardness, 25°C (77°F)	$70^{\pm}5$
Gel Time, minutes	48-52 (100gms)
Adhesion to Concrete	100% failure in concrete
Percent Solids	100

2.3.2 Physical requirements of Epoxy-Urethane Copolymer Overlay System. When Components A and B are mixed in the appropriate ratio, the cured resin shall conform to the requirements of Table 2. (Test methods are discussed in detail in Item 3 of this specification.)

TABLE 2	
PHYSICAL PROPERTIES OF THE CURED SYSTEM	
Property	**Value**
Compressive Strength, min. psi	6000
Tensile Strength, min. psi	2000
Tensile Elongation, percent	$30^{\pm}10$
Water Absorption, percent by wt. max.	0.5%
Shore D hardness, 25°C (77°F)	$70^{\pm}5$
Gel Time, minutes	25-31 (100gms)
Abrasion Resistance, mg., max.	85
Adhesion to Concrete	100% failure in concrete
Flexural Yield Strength, min. psi	5000
Percent Solids	100

2.3.2.1 Visco-Elastic Properties of Epoxy-Urethane Copolymer system. The modulus of the cured epoxy-urethane system determined by variable temperature Dynamic Mechanical Analysis (DMA) using DMA instruments and according to ASTM D4065-95, shall conform to the following minimum values as given in Table 3.

TABLE 3		
VISCO-ELASTIC PROPERTIES OF THE CURED SYSTEM		
Temperature	**Storage Modulus Dynes/Sq.Cm.**	**Loss Modulus Dynes/Sq.Cm.**
-10°C	1×10^9	7×10^7
20°C	6×10^8	7×10^7
50°C	4×10^7	2×10^7
60°C	1×10^7	5×10^6
70°C	6×10^6	1×10^6

The tests shall be conducted at a frequency of 1 Hz with a 0.3% strain in accordance with the guidelines described in the testing equipment manual.

2.3.2.2 Load Bearing Capabilities. The cured epoxy-urethane system must exhibit the following load bearing capacity. At approximately 20% strain, the polymer shall retain at least 85% of its original load bearing strength (tensile stress) as per ASTM D-638.

2.4 Material Provider. The bridge deck restoration system shall be provided by one of the following manufacturers or an approved equivalent.

POLY-CARB, INC.,
Pretreatment: MARK-135
Overlay: MARK-163 FLEXOGRID
33095 Bainbridge Road
Solon, Ohio 44139
(440) 248-1223

Unitex
Pretreatment: Pro-Poxy 50
Overlay: Pro-Poxy Type III DOT
3101 Gardner Ave.
Kansas City, MO 64120
(816) 231-7700

2.5 Aggregate

2.5.1 Aggregate used for all layers shall be non-friable, non-polishing, clean and free from surface moisture. It shall be durable and sound and have a proven record of performance in applications of this type. The aggregate shall be 100 percent fractured, thoroughly washed and kiln dried to a maximum moisture content of 0.2 percent by weight, measured in accordance with ASTM C566. The fracture requirements shall be at least one mechanically fractured face and will apply to materials retained on

U.S. No. 10 sieve. The recommended sources of aggregate are **Washington Stone** or **Oklahoma Flint.**

2.5.2 Aggregate for all layers shall have a minimum Mohs scale hardness of 6.5.

2.5.3 The grading of the aggregate shall conform to the requirements of Table 4.

TABLE 4	
AGGREGATE GRADATION	
Sieve Size	**Percent Passing**
No. 6	60 - 100
No. 10	0 - 40
No. 20	0 - 10

2.6 Thermoplastic. Conform to Section 837.

3. METHOD OF TESTING

3.1 Tests shall be conducted in accordance with the following methods:

3.1.1 Compressive Strength: ASTM C109, *Compressive Strength of Hydraulic Cement Mortars.* The two components of the resin are to be thoroughly mixed in their appropriate ratios. Two volumes of graded silica sand in accordance with ASTM C778 shall be added to one volume of mixed resin. The samples shall then be prepared according to the requirements of ASTM C109 and allowed to cure for 7 days at 23 ± 2°C.

3.1.2 Tensile Strength and Elongation: ASTM D638, *Tensile Properties of Plastics,* Specimen Type I or Type II. Samples shall be cured at 23 ± 2°C (73.4 ± 3.6°F) and 50 ± 5% relative humidity. Speed of testing shall be at 0.5 in./min.

3.1.3 Water Absorption: ASTM D570, *Water Absorption of Plastics.* Sample specimens shall be prepared according to section 4.1 and allowed to cure at 23 ± 2°C (73.4 ± 3.6°F) and 50 ± 5% relative humidity. Tests are then to be carried out as per section 6.1.

3.1.4 Shore D Hardness: ASTM D2240, *Rubber Property – Durometer Hardness.* Specimen shall be prepared as per ASTM D570 section 4.1 and allowed to cure at 23 ± 2°C (73.4 ± 3.6°F).

3.1.5 Gel Time: The following procedure shall be used to determine gel time. Measure 4 oz. of Part A and 2 oz. of Part B each at 25°C (77°F), into an unwaxed paper cup and record the time and mix immediately. 100 gms of this mixture shall be poured into a 6 oz. unwaxed paper cup and placed on a wooden bench top. Starting twenty minutes from the time recorded

above, the mixture shall be probed every two minutes with a small stick until a small ball forms in the center of the container. The total time, including mixing, required for the ball to form shall be regarded as the gel time. The test shall be performed in a room or enclosed area maintained at 25 ± 2°C (77 ± 3.6°F) and 50 ± 5% relative humidity.

3.1.6 **Abrasion Resistance:** ASTM C501, *Test Method for Relative Resistance to Wear of Unglazed Ceramic Tile by the Taber Abrader*. Tests shall be done using a CS-17 wheel and a 1,000 gram load for 1,000 cycles.

3.1.7 **Adhesion to Concrete:** ACI-503-R; Pull Out Test.

3.1.8 **Flexural Yield Strength:** ASTM D-790.

3.1.9 **DMA:** ASTM D-4065-95

4. CONSTRUCTION PRACTICE

4.1 Surface Preparation

4.1.1 Perform full depth patching in accordance with the requirements of Section 606.03.05. All patching materials shall be in accordance with the requirements of Section 601 and be free of Magnesium Phosphate.

4.1.2 Patching shall be scheduled so that the bridge can be open to traffic during all non-working hours.

4.1.3 Polymer patching system such as **POLY-CARB, Inc.'s MARK-120** is recommended for *shallow* and *partial* depth repair. Completion of Partial Depth Patching including removal of concrete, cleaning, and placing the material will not be measured for payment and shall be considered incidental to "Epoxy-Urethane Waterproofing Overlay". The pay item includes additional quantity for partial depth patching.

4.1.4 The entire concrete deck shall be cleaned by shotblasting to remove any oil, dirt, rubber or any other potentially detrimental material such as curing compound and laitances which, in the manufacturer and engineer's opinion, would prevent proper bonding to and curing of the material.

4.1.5 In areas that the shotblasting equipment cannot reach (i.e., along curbs and median walls) or cannot remove (linemarking, asphalt, etc.), sandblasting and walk behind grinders are permitted to an extent satisfactory to the manufacturer and engineer. This should be performed prior to the shotblasting whenever applicable and practical.

4.1.6 Steel surfaces such as expansion joints, sidewalks, steel grids and steel plate to be treated with the restoration system, shall be shot or sand blasted clean to **SSPC-SP-6** standards.

4.1.7 The overlay application equipment is allowed to drive on the deck surface during application provided precautions have been taken to insure that the deck surface will not become contaminated. For any reason traffic is to be allowed on the deck after surface preparation, or between layers, a visual inspection by the manufacturer and state engineer will be required to determine if additional surface preparation is needed before applying material.

4.1.8 All surfaces to be treated shall be dry at the time of application. Immediately before the application of any liquids, all prepared surfaces shall be cleaned with compressed air (or vacuumed) to remove dust and debris.

4.1.9 The application of the system shall not be made when it has rained 24 hours before application or rain is forecast (greater than 50%) within eight hours after application or as determined by the manufacturer (fog and high humidity will not impede the application of or affect the performance of the overlay). If waiting for 24 hours is impractical, then the moisture content in concrete substrate shall not exceed 4.5% when measured by an electronic moisture meter. Any exception shall be determined by the moisture content present in the deck which shall not exceed 75% of air entrainment in the mix design.

4.1.10 The minimum recommended temperature in which the system shall be applied is 50°F and rising. All applications at temperatures below 50°F shall require prior written approval from the manufacturer.

4.2 Application of Overlay System

4.2.1 **The manufacturer of the epoxy-urethane overlay material shall have a representative on the jobsite at all times** who, upon consultation with the engineer, may suspend any item of work that is suspect and does not meet the requirements of this specification. Resumption of work will occur only after the manufacturer's representative and the engineer are satisfied that appropriate remedial action has been taken by the contractor.

4.2.2 The overlay shall be applied on all deck areas using metering, mixing and distribution machinery **owned and operated by the manufacturer of the epoxy-urethane overlay system.** The application machine shall feature positive displacement volumetric metering pumps controlled by a hydraulic power unit. Components A and B shall be stored in temperature controlled reservoirs capable of maintaining 100°F + 10°F to insure optimum mixing. Ratio check verification at the pump outlets

as well as cycle counting capabilities to monitor output will be standard features. In line mixing shall be motionless so as to not overly shear the material or entrap air in the mix. The machine shall also make maximum use of the working time of the material to insure proper "wetting" of the system by mixing it immediately prior to dispensing onto the deck.

4.2.3 The number of layers (a minimum of three) and the application rates of the liquid in the various layers shall be as recommended by the manufacturer in order to achieve an average overlay thickness of 3/8**".**

4.2.4 Hand mixing of material is not permitted.

4.2.5 Application of Pre-treatment

Crack Filling (First Layer)

Application of the Liquid: After mechanically measuring and mixing of the components, the liquid shall be evenly distributed on the clean, dry deck surface at the rate/process recommended by the manufacturer. The overlay application equipment may drive on this layer (prior to being cured) when applying the overlay system. If the overlay application is going to be applied after 6-8 hrs of the pretreatments application, a medium size coarse silica sand shall be broadcasted evenly into the pre-treatment system (prior to it curing) as directed by the manufacturer.

4.2.6 Overlay (Second and Third Layers)

Application of Liquid: Prior to the application, if there exists any excess or loose aggregate from the previous coat, such excess aggregate shall be completely removed by vacuum or with compressed air. After mixing of the components via the mechanical application equipment, the liquid shall be evenly distributed on the clean, dry deck surface at the rate recommended by the manufacturer.

4.2.7 After the application of the liquid in the second and third coats, the maximum time allowed before broadcasting of the aggregate is as follows:

Above 90°F	. . . . .	10 minutes
80°F to 90°F	. . . . .	15 minutes
70°F to 80°F	. . . . .	20 minutes
60°F to 70°F	. . . . .	25 minutes
50°F to 60°F	. . . . .	35 minutes

4.2.8 <u>No vehicle shall be allowed on the overlay during the curing period.</u>

4.2.9 Broadcasting on decks shall be by truck-mounted equipment capable of dispensing the aggregate onto the deck in a uniform manner as directed or otherwise approved by the manufacturer of the epoxy-urethane overlay.

4.2.10 The aggregate shall be broadcast as described below such that to cover the surface so that no wet spots appear and before the co-polymer begins to gel (see section 3.1.5). The aggregate must be dropped vertically in such a manner that the level of the liquid is not disturbed.

4.2.10.1 In the second and third layers of **FLEXOGRID** (or approved equivalent) liquid aggregate conforming to table 4 shall be broadcast to saturation.

4.2.11 Removal of Excess Aggregate: After the overlay has hardened, removal of all loose and excess aggregate with a power vacuum or other method shall be made prior to the application of subsequent coats.

4.2.12 Joints in the Overlay: (i.e., between two adjacent lanes) shall be staggered and overlapped between successive coats so that no ridges will appear.

4.2.13 Traffic may be allowed on the final layer (or in between layers) after the resin has cured (as determined by the manufacturer) and after removal of all excess, loose aggregate.

5. STORAGE AND HANDLING

5.1 Liquid Material: All material shall be transported and stored in their original containers inside a dry, temperature controlled facility and maintained at a minimum temperature of 60°F and not to exceed 120°F.

5.2 Job Site Storage: The materials shall be stored on the jobsite in a dry, weather protected facility away from moisture and within the temperature range of 60°F to 90°F. When the materials are transported or stored on the job in the application machine tanks, the material must also be maintained at a temperature of 60°F to 90°F. Outdoor storage is permitted with manufacturer's approval.

5.3 Handling of Liquid Materials on the Job: Protective gloves, clothing, and goggles shall be provided to workers and inspectors directly exposed to the material if required. Product safety data sheets shall be provided to all workers and inspectors as obtained from the manufacturer.

5.4 Packing Requirement: All materials must be packaged in strong, substantial containers. The containers shall be identified as Part A and Part B and shall be plainly marked with the name and address of the manufacturer, name of the product, mixing proportions and instructions, lot and batch numbers, date of manufacture, and quantity contained therein.

5.5 Aggregate: All aggregate shall be stored in a dry, moisture-free atmosphere. The aggregate shall be fully protected from any contaminants on the jobsite and shall be stored so as not to be exposed to rain or other moisture sources.

6. SAMPLING AND ACCEPTANCE

6.1 Product Acceptance: The manufacturer of the system shall provide evidence of field performance, lab performance with infrared spectra in order to obtain state approval of the overlay system for use on the project:

6.1.1 Independent Lab Performance

A nationally recognized independent lab must verify that the material:

1. Has the capability of preventing the ingress of essentially all the chloride ions into the concrete at 1" depth when tested according to NCHRP-244 method.
2. Has the capability to de-activate the existing chloride ions present in the concrete specimen so that the corrosion of steel rebars embedded in the concrete stop corroding.
3. When tested as per Tables 1,2 and 3, fully comply with the test results specified for cured system.

6.1.2 Infrared Spectrograph: In addition to the initial certification process each manufacturer shall furnish the state an infrared spectra of each component of system for its permanent record and for individual installation verification.

6.1.3 Field Performance: The selected material must have verifiable satisfactory performance of at least five (5) years in the state of Kentucky and a minimum of twelve (12) years in three neighboring states with comparable weather conditions.

6.2 Certification for Compliance: At the pre-construction conference, the contractor shall notify the state project engineer of the source of material.

6.2.1 Independent Test Lab Report: Test results certified and verified by a nationally recognized independent testing laboratory verifying properties of the cured system as per Table 1, 2 & 3 shall be submitted to the engineer for approval prior to the bid opening. This certification shall be provided on each lot number to be used on the project.

6.2.2 Infrared Spectra: Infrared spectra of each component from each lot number (to be used on the project) shall be submitted with the independent lab certification.

6.2.3 Test Sample for DOT Laboratory: The manufacturer shall furnish at least a one-quart sample of each component from each lot to the DOT laboratory to verify material supplied by the manufacturer. Material shall be taken at job site.

6.3 Performance Acceptance

6.3.1 Thickness Verification: The state shall be notified of the number of gallons used on the project with two notarized statements - one from the contractor and one from the manufacturer. In addition, the contractor shall verify to the State that the overlay is an average of at least 3/8" thick at three random locations agreed upon by the state engineer and material manufacturer representative. If 3/8" average is not achieved, a retest shall be performed in adjoining areas. Thin areas shall be re-coated as described above by the contractor and re-verified at no additional cost to the State. This verification may consist of cores, holes, etc., but in all cases, any destructively tested areas shall be repaired by the contractor before final acceptance by the engineer.

6.3.2 Performance Guarantee: The epoxy-urethane co-polymer manufacturer and the contractor, by acceptance of the work described in this specification, jointly agree to guarantee the wearing surface against all defects incurred during normal traffic use for a period of five (5) years. The guarantee period shall commence on the date of acceptance of the work, usually the date the final layer of the overlay has been applied and cured. The guarantee covers all labor and materials required to satisfactorily repair or replace the wearing surface. Manufacturer will be responsible for integrity of warranty and will be removed from QPL if warranty repair not upheld within timely manner.

7. MEASUREMENT

7.1 Epoxy-Urethane Waterproofing Overlay. The Department will measure the square feet of overlay application.

7.2 Shotblasting. The Department will measure "Blast Cleaning" in Square Yard. The Department will only measure this quantity once for any area to be shotblast. Additional blast cleaning to meet the requirements of this note shall be performed at the Contractor's expense.

7.3 Full Depth Patching. The Department will measure "Concrete Class M Full Depth Patching" in Cubic Yard.

7.4 Thermoplastic Pavement Markings. See Section 714.

8. PAYMENT

8.1 Epoxy-Urethane Waterproofing Overlay. The Department will pay for the measured quantities at the Contract unit bid price for "Epoxy-Urethane Waterproofing".

8.2 Shotblasting. The payment at the contract unit price for the pay item "Blast Cleaning" shall include all labor, equipment and material needed to complete the task as described in paragraphs 4.1.4 and 4.1.5.

8.3 Full Depth Patching. The payment at the contract unit price shall include all labor, equipment and material needed to complete this task. The Department will not measure material removal, forming, blast cleaning, or retying steel reinforcement in the patches and will consider this work incidental to the pay item "Concrete Class M Full Depth Patching".

8.4 Thermoplastic Pavement Markings. See Section 714.

SPECIAL NOTE FOR CONRETE PATCHING REPAIR

I. DESCRIPTION

Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, and this Note. Section references are to the Standard Specifications.

This work consists of the following:

(1) Furnish all labor, materials, tools, and equipment
(2) Provide safe access to the bridge substructure, in accordance with Section 107.01.01, for the Engineer to sound possible repair areas and for workers to complete the construction
(3) Remove the deteriorated concrete
(4) Blast clean and prepare the surfaces for patching
(5) Prime the areas immediately prior to patching
(6) Apply the Vertical and Overhead Patch or Class M Concrete
(7) Finish the patched surface
(8) Maintain and control traffic
(9) Any other work specified as part of this contract

II. MATERIALS

A. Vertical and Overhead Patching Material. Conform to Manufacturer's Technical Guidance.

B. Class "M" Concrete. Use either "M1" or "M2". See Section 601.

III. CONSTRUCTION

A. Remove Deteriorated Concrete. Prior to beginning the concrete repairs, provide safe access to the substructure, in accordance with Section 107.01.01, for the Engineer to sound possible repair areas. The Engineer will sound the concrete with a hammer and mark the areas of concrete to be removed and patched. All areas of deteriorated concrete found should be repaired as part of this work. Final payment for "Concrete Patching Repair" will be the field measured quantity of patching completed in accordance with this Note and as designated by the Engineer.

Remove specified areas of deteriorated concrete as directed by the Engineer. The removal of unsound material shall be accomplished with hand tools or pneumatic hammers that do not exceed twenty (20) pounds. Precautions shall be exercised to protect the underlying sound material. Saw, route, or otherwise manipulate the sides of the patch so that the interface between the old concrete and patch area are perpendicular. Remove all deteriorated loose concrete to a minimum depth of 2" for repairs using vertical and overhead patching material and 4" for repairs using Class M Concrete. Also ensure concrete removal in the patch area extends at least three-quarters (3/4) inch

beyond any steel reinforcement more than 50 percent exposed. Dispose of all removed material entirely away from the job site or as directed by the Engineer.

Extreme care shall be taken when removing the existing spalled or delaminated concrete so as not to damage the existing reinforcing steel. Completely clean all existing steel reinforcement encountered free of rust and leave in place. Wire brushing may be required to thoroughly clean exposed steel reinforcement. Repair or replace any damaged steel reinforcement as directed by the Engineer at no additional cost to the Department. Ensure that all exposed steel reinforcement is tied in accordance with Section 602.03.04. The Contractor must consult the Engineer before removing any concrete that is directly below the beam bearings.

B. Prepare Concrete Surfaces for Patching. Prepare concrete surfaces to be patched in accordance with Section 510.03.01. Final blast cleaning shall be completed within twelve (12) hours prior to placement of the epoxy mortar patch. Concrete must be sound, dry, and clean prior to placement of epoxy resin prime coat.

C. Apply Vertical and Overhead Patching Material or Class M Concrete. The Engineer shall have the option of designating a spalled or delaminated area to be repaired using Class M high early strength concrete or a Vertical and Overhead Patching Material. Any material used must be approved by the Engineer. Refer to the Transportation Cabinet, Division of Materials' List of Approved Materials for currently approved materials for vertical and overhead patching. Place either the class M Concrete or Vertical and Overhead Patching Material as approved by the Engineer. Place the epoxy resin primer in accordance with the standard specifications and manufacturer's recommendations. Place the Vertical and Overhead Patching Material in accordance with the manufacturer's specifications to restore the deteriorated areas to their original dimensions as directed by the Engineer. Place Class M Concrete according to the Standard Specifications.

IV. MEASUREMENT

A. Concrete Repair. The Department will measure the quantity in square feet.

V. PAYMENT

A. Concrete Repair. Payment at the contract unit price per square foot is full compensation for removal of deteriorated concrete, preparation of the concrete surface, application of the Vertical and Overhead Patching Material or Class M Concrete, application of the epoxy resin seal coat, and all incidental items necessary to complete the work in accordance with this Note.

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

SPECIAL NOTE FOR BRIDGE RESTORATION AND WATERPROOFING WITH CONCRETE OVERLAYS

I. DESCRIPTION. Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's 2012 Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

This work consists of the following: (1) Furnish all labor, materials, tools, and equipment; (2) Remove the existing overlay or machine prep the existing slab; (3) Complete full-depth and partial depth repairs as directed by the Engineer; (4) Repair/replace damaged and corroded reinforcing bars; (5) Place new concrete overlay and epoxy-sand slurry in accordance with Section 606; (6) Complete asphalt approach pavement if required; (7) Maintain and control traffic; and (8) Any other work specified as part of this contract.

All construction will be in accordance with Section 606 unless otherwise specified.

II. MATERIALS.

A. Latex Concrete. See Section 606.03.17.

B. Class "M" Concrete. Use either "M1" or "M2". See Section 601.

C. Bituminous Asphalt. Use CL2 ASPH SURF 0.38D PG64-22.

D. Epoxy-Sand Slurry. See Section 606.03.10.

III. CONSTRUCTION.

A. Remove Existing Overlay. In addition to Section 606.03.03, totally remove any existing concrete overlay by milling. See Special Note for Use of Hydrodemolition Method. When removal of an existing overlay is a pay item, no payment will be allowed for "Machine Prep of Existing Slab".

B. Machine prep of existing slab. If there is no existing overlay, remove concrete from existing slab to a depth of at least ¼" below the existing surface, and remove all patches completely, in accordance with the requirements of Section 606.03.03. See Special Note for Use of Hydrodemolition Method.

C. Full Depth Slab Repair. See Section 606.

D. Partial Depth Slab Repair and Latex Overlay. Remove areas determined to be unsound by the Engineer via hydrodemolition or via hand held jackhammers weighing less than 45lbs in accordance with Section 606.02.10 D. Repair/Replace all damaged or severely corroded reinforcing bars prior to partial depth repair operation. The Department will not measure material removal and will consider this work incidental to the bid item "PARTIAL DEPTH PATCHING". Mix and place Latex Modified Concrete Overlay in accordance with Sections 606.03.08 and 606.03.17.

E. Asphalt Approach Pavement. If required, mill each existing asphalt approach for a distance of 50' from the bridge end. Remove the bituminous material uniformly by making an edge key, so as to provide a smooth transition to the finished bridge when a new bituminous overlay of compacted depth of approximately 1½" is added to the approaches. The grinding depth may vary depending of the condition of the existing

approach and final elevation of bridge end. Dispose of all removed material away from the site.

F. Surface Texturing. Texture the concrete surface of the overlay in accordance with Section 609.03.10.

IV. MEASUREMENT. See Section 606 and the following:

A. Latex Modified Concrete for Overlay. The Department will measure the quantity in cubic yards using the theoretical volume as follows for each bridge:

073B00118L&R	**(185'x39.25'x1.25")**	**=**	**28.1 cuyd**
073B00120L&R	**(482'x76'x1.25")**	**=**	**141.4 cuyd**
073B00009N	**(294'x44'x1.50")**	**=**	**61.9 cuyd**

B. Latex Modified Concrete for Partial Depth Patching and variable thickness of Overlay. The Department will measure the quantity in cubic yards by deducting the theoretical volume of bridge deck overlay (LMC) from the total volume (as indicated by the batch quantity tickets) of Concrete required to obtain the finished grade shown on the Plans or established by the Engineer.

C. Steel Reinforcement. The Department will measure any reinforcing steel necessary for the partial or full depth patch in pounds, which shall include all labor, equipment, and material needed to complete this work.

D. Asphalt Approach Pavement. The Department will measure the quantity in square yards, which shall include all labor, equipment, and material needed to complete this work.

V. PAYMENT. See Section 606 and the following:

A. Latex Modified Concrete for Overlay. The Department will make payment for the Latex Modified Concrete under bid item #08534 "CONCRETE OVERLAY – LATEX" for the quantity in cubic yards complete in place.

B. Latex Modified Concrete for Partial Depth Patching and variable thickness of Overlay. The Department will make payment for the Partial Depth Patching under bid item #24094EC "PARTIAL DEPTH PATCHING". Payment will be for the quantity per cubic yard complete in place.

C. Steel Reinforcement. The Department will make payment for steel reinforcement, if necessary, under bid item #08150 "STEEL REINFORCEMENT". Payment will be at the unit price per pound.

D. Asphalt Approach Pavement. The Department will make payment for the completed and accepted quantity of this work under the bid item #03304 "BRIDGE OVERLAY APPROACH PAVEMENT".

SPECIAL NOTE FOR USE OF HYDRODEMOLITION METHOD

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

I. DESCRIPTION

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

II. EQUIPMENT

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

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

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

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

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

equipment is utilized, the equipment must be capable of delivering a minimum of 5,000 psi.

F. Power Driven Hand Tools. Power driven hand tools and jackhammers will be permitted, but shall not be heavier than the nominal 40 lb class. Chipping hammers shall not be heavier than the nominal 15 lb class. Only hand chipping tools shall be used when removing concrete within 1 in. of reinforcing steel. Mechanically driven tools shall be operated at a maximum angle of 45 degrees from the bridge floor surface.

III. CONSTRUCTION

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

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

C. Preparation of Existing Deck: No operations without reasonably available engineering controls that limit fugitive dust will be acceptable.

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

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

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

D. Removal of Existing Asphaltic Concrete Overlays: If an existing asphaltic concrete overlay is present upon the original bridge deck surface to

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

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

E. Removal of Existing Modified Concrete Overlays: Use conventional methods to remove any and all existing concrete overlay prior to commencement of the Hydrodemolition operation. Clean the bridge deck. Use “Total Surface Hydrodemolition” method to provide a rough & highly bondable surface and to remove partial depth deteriorated concrete with a minimum depth of ¼” below the original deck elevation. If Hydrodemolition does not leave a bondable surface resident can require mechanical scarification to his satisfaction at no additional cost to the Cabinet.

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

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

F. Bridge Decks with No Existing Concrete Overlay: If Hydrodemolition is to be performed on an original bridge deck surface without a bituminous or concrete bridge deck overlay, the Contractor may use mechanical scarification equipment conforming to these specifications to remove an initial portion of the hydro-demolition depth. The scarification depth shall be ¼”. Total surface Hydrodemolition is used to provide a highly bondable surface and to remove partial depth deteriorated concrete.

Cost of the scarification shall be included as a portion of the pay item for Hydrodemolition.

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

G. Concrete Removal by Hydro-Demolition

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

With the use of Hydrodemolition surface preparation, the requirement to provide a minimum ¾" clearance around all reinforcing bars that are more than 50% diameter exposed is waived, providing that the existing concrete is sound. The amount of steel exposed shall be kept to a minimum.

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

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

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

The Engineer shall verify the following settings:

1. Water pressure gauge (13,000 psi minimum)
2. Machine staging control (step)
3. Nozzle size
4. Nozzle speed (travel)
5. Depth of removal

6. Minimum water usage (43 gallons per minute)

During the Hydrodemolition operations, any or all of the above settings may be modified in order to achieve removal of all unsound concrete and to provide a highly bondable surface. The settings may be changed by the Contractor to achieve total removal of unsound concrete, but the Engineer must be notified of all changes. The Engineer may change any or all of the settings in order to achieve the desired results with Hydrodemolition. The removals and depth shall be verified, as necessary, and at least every 30 feet along the cutting path. The readings shall be documented and, if necessary, the equipment re-calibrated to insure the Hydrodemolition process achieves the desired results and removal of unsound concrete.

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

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

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

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

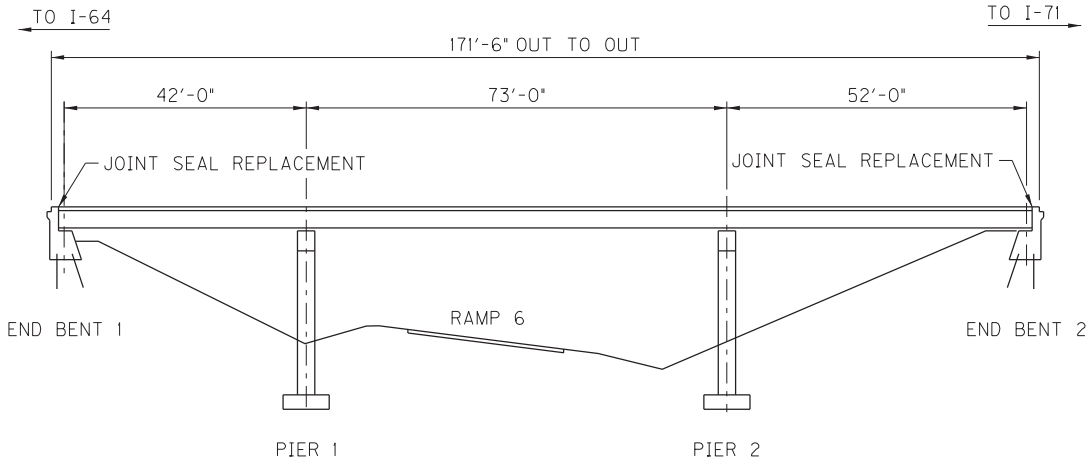
I. Resounding: After the Hydrodemolition operation has completed the removal, and the deck is cleaned and allowed to dry, the deck shall be resounded to assure that the all unsound concrete deck material has been removed. The final sounding of the deck shall be done by the Engineer and shall only be performed when the deck is completely dry and frost-free. Final sounding shall consist of as many successive resounding as required to ensure that all deteriorated and fractured concrete has been removed. Additional removal shall be performed with 40 lb maximum weight jackhammers operated at an angle of no more than 45 degrees from horizontal. Aerosol spray paint for outlining and sounding chains shall be provided by the Contractor.

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

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

I-265 OVER RAMP 6
(056B0000288L & R)
(MP32.424)

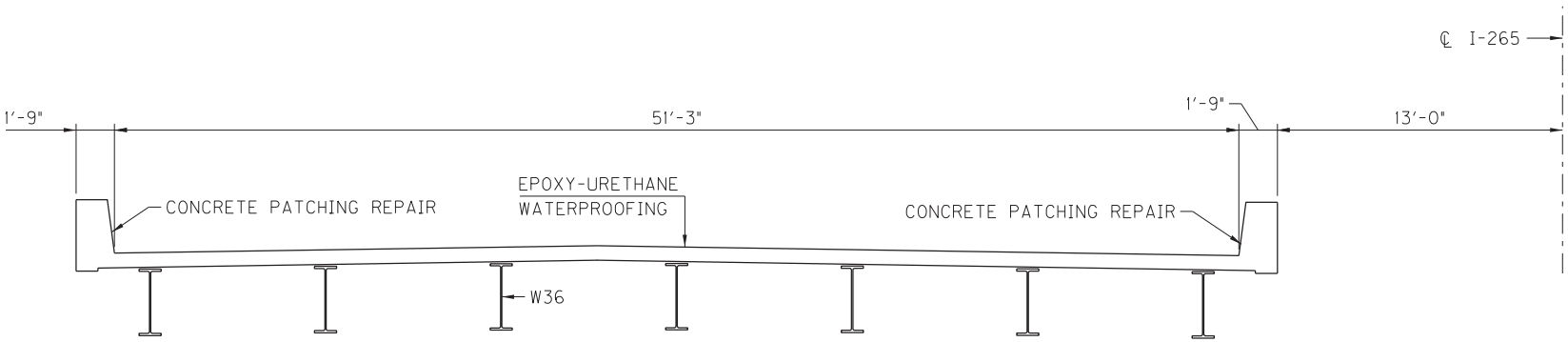
SUMMARY OF QUANTITIES			
ITEM CODE	**DESCRIPTION**	**QUANTITY**	**UNIT**
6542	PAVEMENT STRIPING - THERMOPLASTIC - 6 IN WHITE	430	LF
6543	PAVEMENT STRIPING - THERMOPLASTIC - 6 IN YELLOW	343	LF
8549	BLAST CLEANING	1953	SQYD
23331EC	EPOXY-URETHANE WATERPROOFING	17579	SQFT
23386EC	JOINT SEAL REPLACEMENT	205	LF
23428EC	CONCRETE PATCHING REPAIR	12	CUFT



ELEVATION
NTS

NOTES:
ALL DIMENSIONS ON THESE DETAIL SHEETS THAT REFER TO THE EXISTING STRUCTURE ARE FROM THE EXISTING PLANS AND ARE APPROXIMATE.

ALL REPAIRS TYPICAL FOR BOTH NB & SB, UNLESS NOTED OTHERWISE.



TYPICAL SECTION
NTS

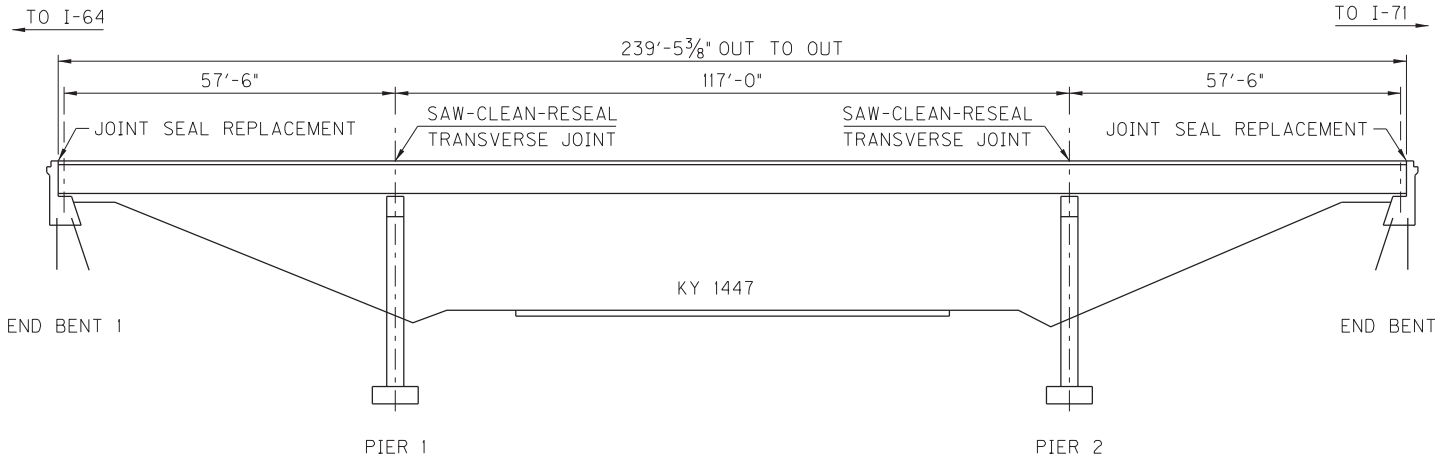
Stantec

ELEVATION AND TYPICAL SECTION

COUNTY:	JEFFERSON
ROUTE:	I-265
CROSSING:	RAMP 6

I-265 OVER WEST PORT ROAD (1447)
(056B00287L &R)
(MP 32.527)

SUMMARY OF QUANTITIES			
ITEM CODE	**DESCRIPTION**	**QUANTITY**	**UNIT**
2115	SAW-CLEAN-RESEAL TVERSE JOINT	303	LF
6542	PAVEMENT STRIPING - THERMOPLASTIC - 6 IN WHITE	1080	LF
6543	PAVEMENT STRIPING - THERMOPLASTIC - 6 IN YELLOW	480	LF
8549	BLAST CLEANING	3397	SQYD
23331EC	EPOXY-URETHANE WATERPROOFING	30573	SQFT
23386EC	JOINT SEAL REPLACEMENT	303	LF

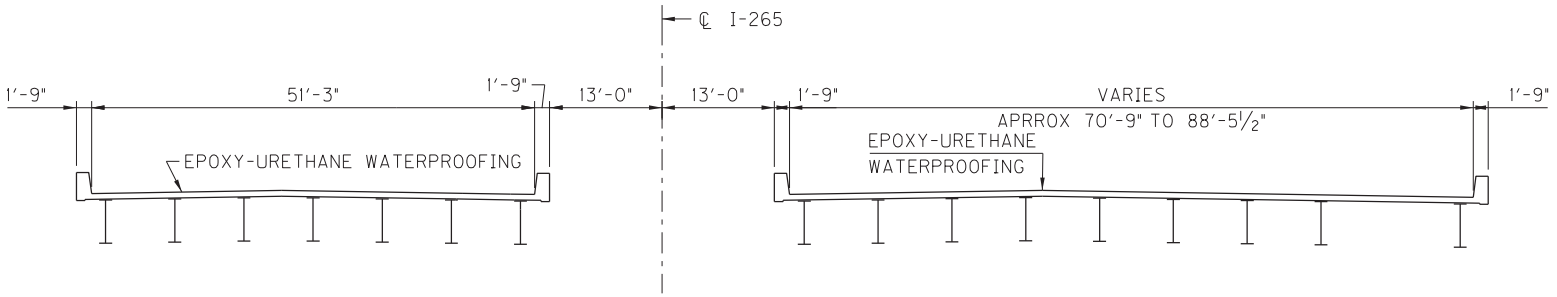


ELEVATION

32°50' SKEW RIGHT
NTS

NOTES:
ALL DIMENSIONS ON THESE DETAIL SHEETS THAT REFER TO THE EXISTING STRUCTURE ARE FROM THE EXISTING PLANS AND ARE APPROXIMATE.

ALL REPAIRS TYPICAL FOR BOTH NB & SB, UNLESS NOTED OTHERWISE.



TYPICAL SECTION

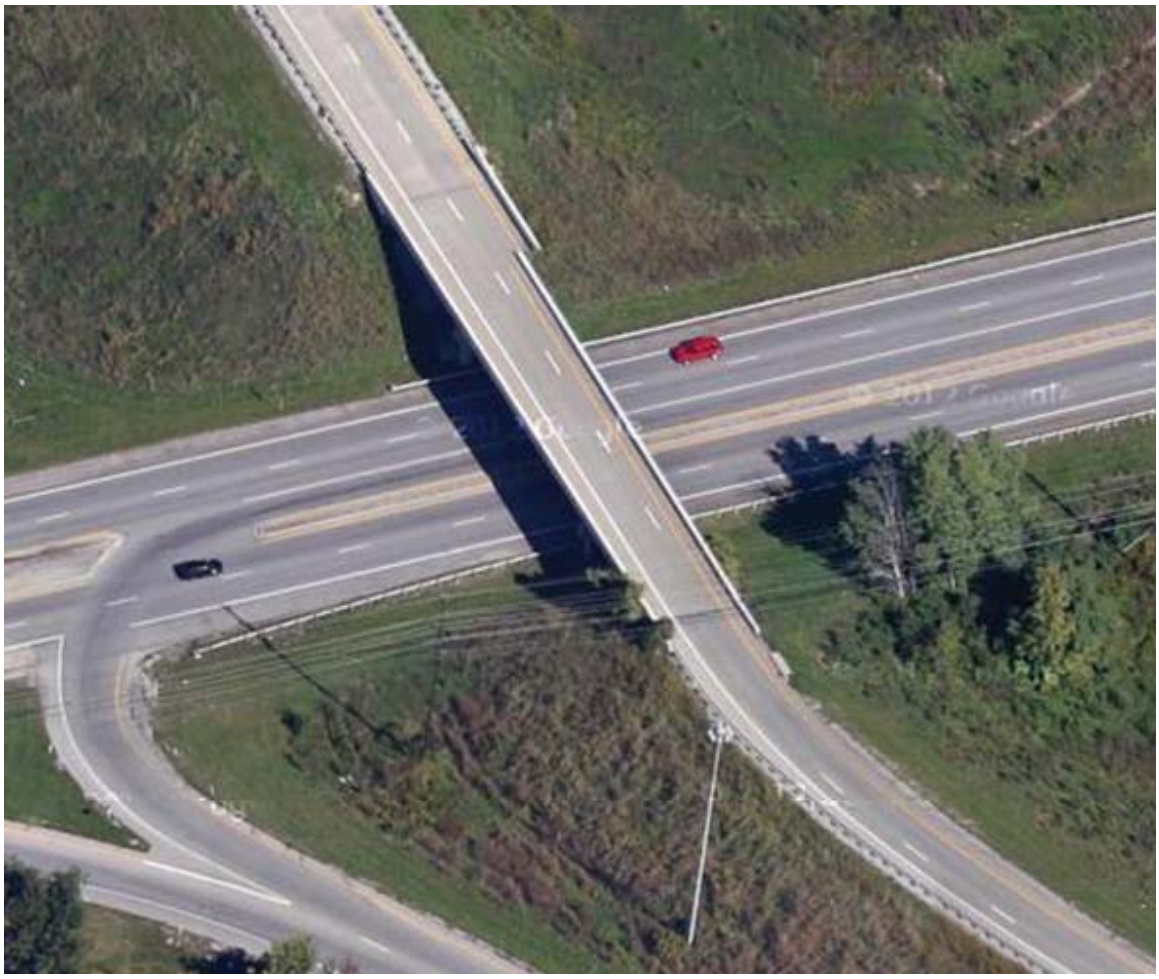
NTS

Stantec

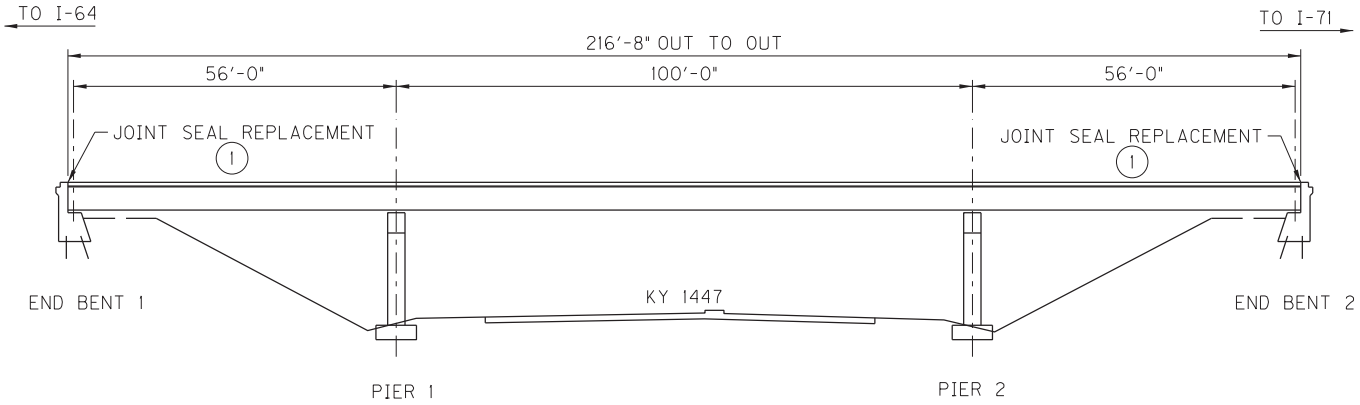
ELEVATION AND TYPICAL SECTION

COUNTY:	JEFFERSON
ROUTE:	I-265
CROSSING:	WEST PORT ROAD (KY 1447)

RAMP 6 OVER WEST PORT ROAD (KY 1447)
(056B00088L &R)
(MP 32.527)



SUMMARY OF QUANTITIES			
ITEM CODE	**DESCRIPTION**	**QUANTITY**	**UNIT**
6542	PAVEMENT STRIPING - THERMOPLASTIC - 6 IN WHITE	271	LF
6543	PAVEMENT STRIPING - THERMOPLASTIC - 6 IN YELLOW	217	LF
8549	BLAST CLEANING	843	SQYD
23331EC	EPOXY-URETHANE WATERPROOFING	7587	SQFT
23386EC	JOINT SEAL REPLACEMENT	71	LF

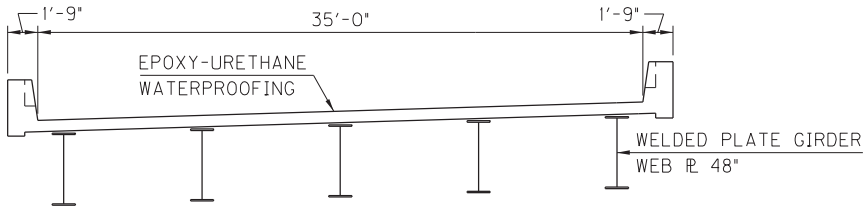


ELEVATION
5°48'06" SKEW RIGHT
NTS

NOTATIONS:

(1) BETWEEN BRIDGE DECK AND BACKWALL REPLACE EXISTING SILICONE RUBBER SEALANT WITH PREFORMED NEOPRENE COMPRESSION JOINT

NOTE:
ALL DIMENSIONS ON THESE DETAIL SHEETS THAT REFER TO THE EXISTING STRUCTURE ARE FROM THE EXISTING PLANS AND ARE APPROXIMATE.



TYPICAL SECTION
NTS

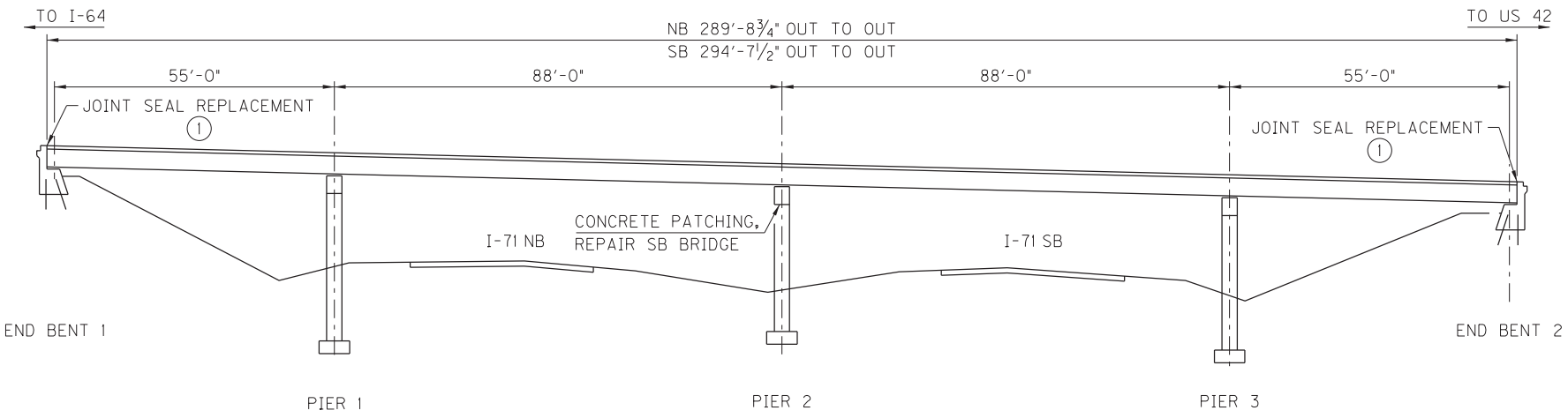
Stantec

ELEVATION AND TYPICAL SECTION

COUNTY:	JEFFERSON
ROUTE:	RAMP 6
CROSSING:	WEST PORT ROAD (KY 1447)

I-265 OVER I-71
(056B00091L &R)
(MP 34.708)

SUMMARY OF QUANTITIES			
ITEM CODE	**DESCRIPTION**	**QUANTITY**	**UNIT**
8504	EPOXY SAND SLURRY	225	SQYD
8510	REMOVE EPOXY, BITUMINOUS OR FOREIGN OVERLAY	2879	SQYD
8526	CONCRETE CLASS M FULL DEPTH PATCH	4	CUYD
8534	CONCRETE OVERLAY – LATEX	120	CUYD
8549	BLAST CLEANING	2879	SQYD
23386EC	JOINT SEAL REPLACEMENT	200	LF
23428EC	CONCRETE PATCHING REPAIR	6	CUFT
24094EC	PARTIAL DEPTH PATCHING	18	CUYD



ELEVATION
26°04'43" SKEW RIGHT
NTS

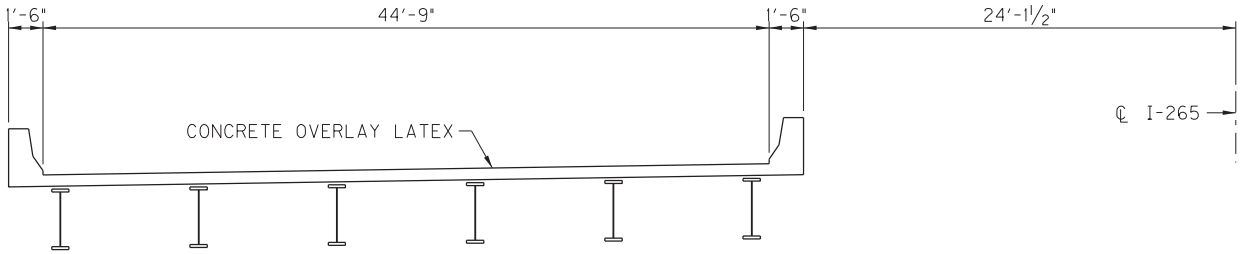
NOTATIONS:

(1) BETWEEN BRIDGE DECK AND BACKWALL REPLACE EXISTING SILICONE RUBBER SEALANT WITH PREFORMED NEOPRENE COMPRESSION JOINT SEAL

BETWEEN APPROACH SLAB AND BACKWALL REPLACE SILICONE RUBBER SEALANT

NOTES:
ALL DIMENSIONS ON THESE DETAIL SHEETS THAT REFER TO THE EXISTING STRUCTURE ARE FROM THE EXISTING PLANS AND ARE APPROXIMATE.

ALL REPAIRS TYPICAL FOR BOTH NB & SB, UNLESS NOTED OTHERWISE.



TYPICAL SECTION
NTS

Stantec

ELEVATION AND TYPICAL SECTION

COUNTY:	JEFFERSON
ROUTE:	I-265
CROSSING:	I-71

JEFFERSON CO. I-265 m.p. ~ 30.6
STATION A76
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 CABINETS. DIVISION OF PLANNING PERSONNEL WILL CONNECT THE LOOPS AND PIEZOS INSIDE THE CABINETS.

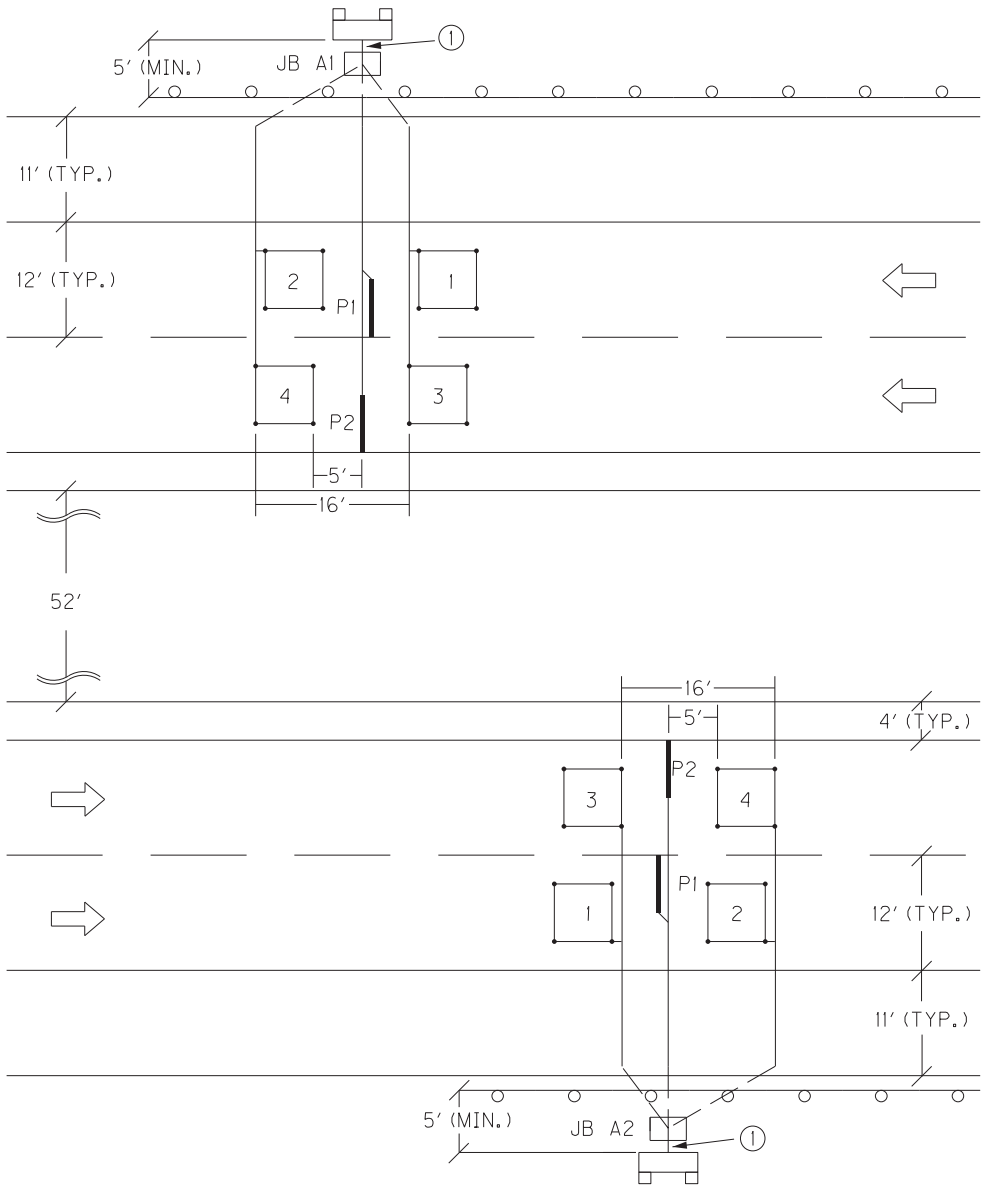
INSTALL ONE (1) 1¼" CONDUIT FROM EACH SAW SLOT TO NEAREST JUNCTION BOX.

INSTALL TWO (2) TYPE A JUNCTION BOXES (JB A1, JB A2).

INSTALL TWO (2) 20"X20"X8" CABINETS MOUNTED TO TWO (2) WOOD POSTS EACH.

CODED NOTE:

① INSTALL ONE (1) 2" CONDUIT.



SCALE 1"=

JEFFERSON CO. I-265 m.p. 33.69
STATION A13 (NB)
FIGURE 2a

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.

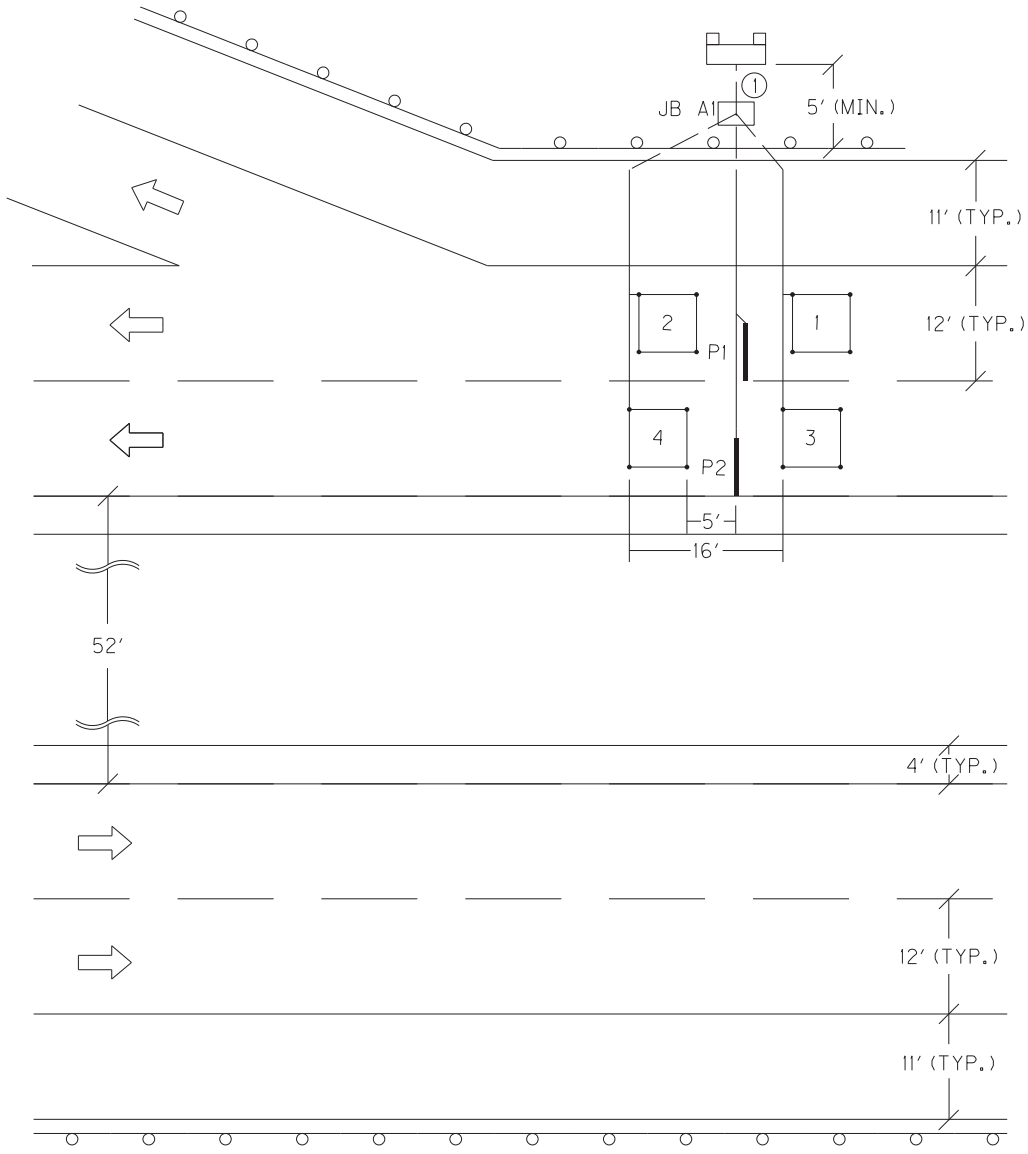
INSTALL ONE (1) 1¼" CONDUIT FROM EACH SAW SLOT TO NEAREST JUNCTION BOX.

INSTALL ONE (1) TYPE A JUNCTION BOXES (JB A1).

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

CODED NOTE:

① INSTALL ONE (1) 2" CONDUIT.



SCALE 1"=

JEFFERSON CO. I-265 m.p. 33.11
STATION A13 (SB)
FIGURE 2b

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.

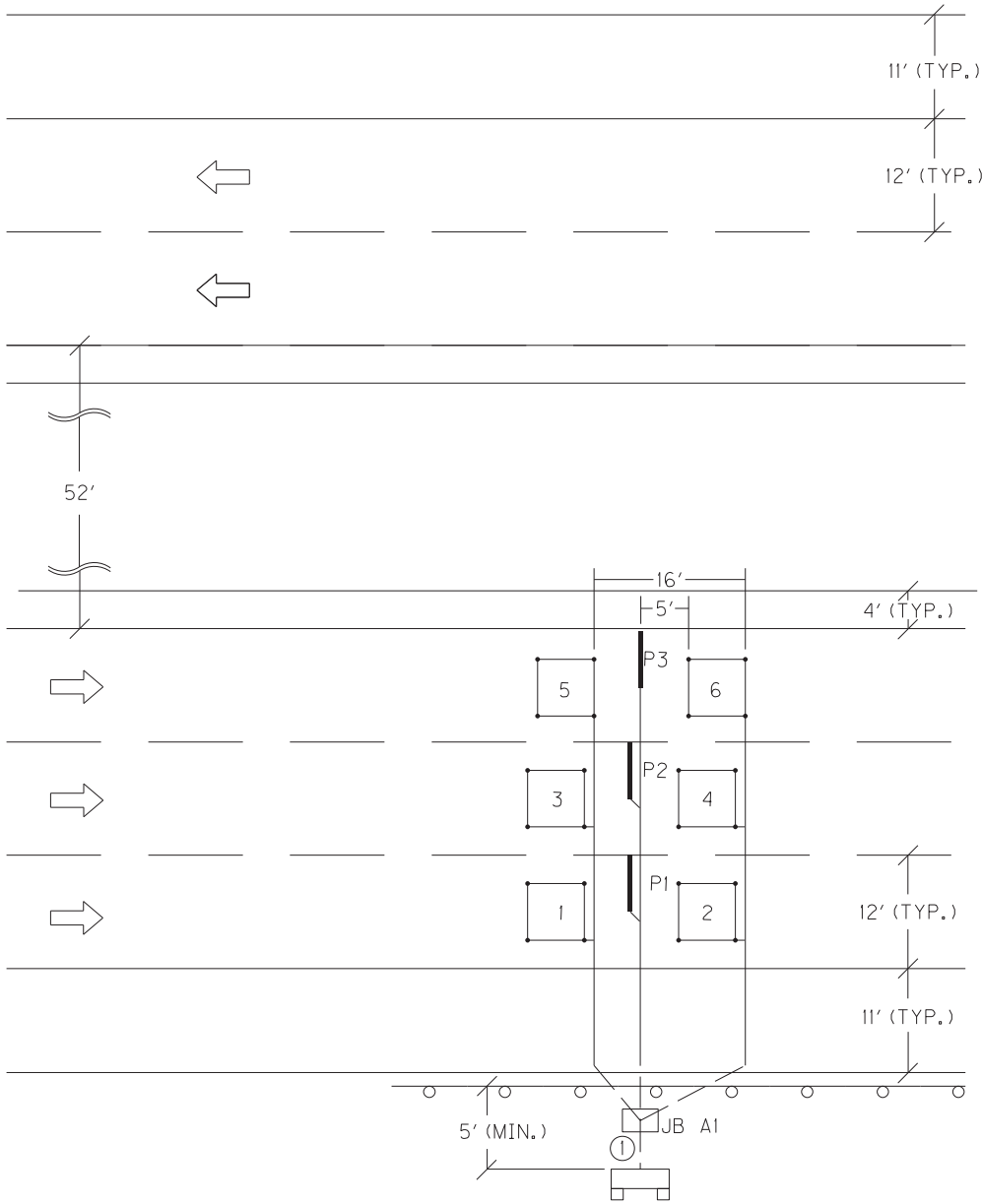
INSTALL ONE (1) 1¼" CONDUIT FROM EACH SAW SLOT TO NEAREST JUNCTION BOX.

INSTALL ONE (1) TYPE A JUNCTION BOXES (JB A1).

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

CODED NOTE:

① INSTALL ONE (1) 2" CONDUIT.



SCALE 1"=8'

JEFFERSON CO. I-265 m.p. 34.38
STATION A11
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 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.

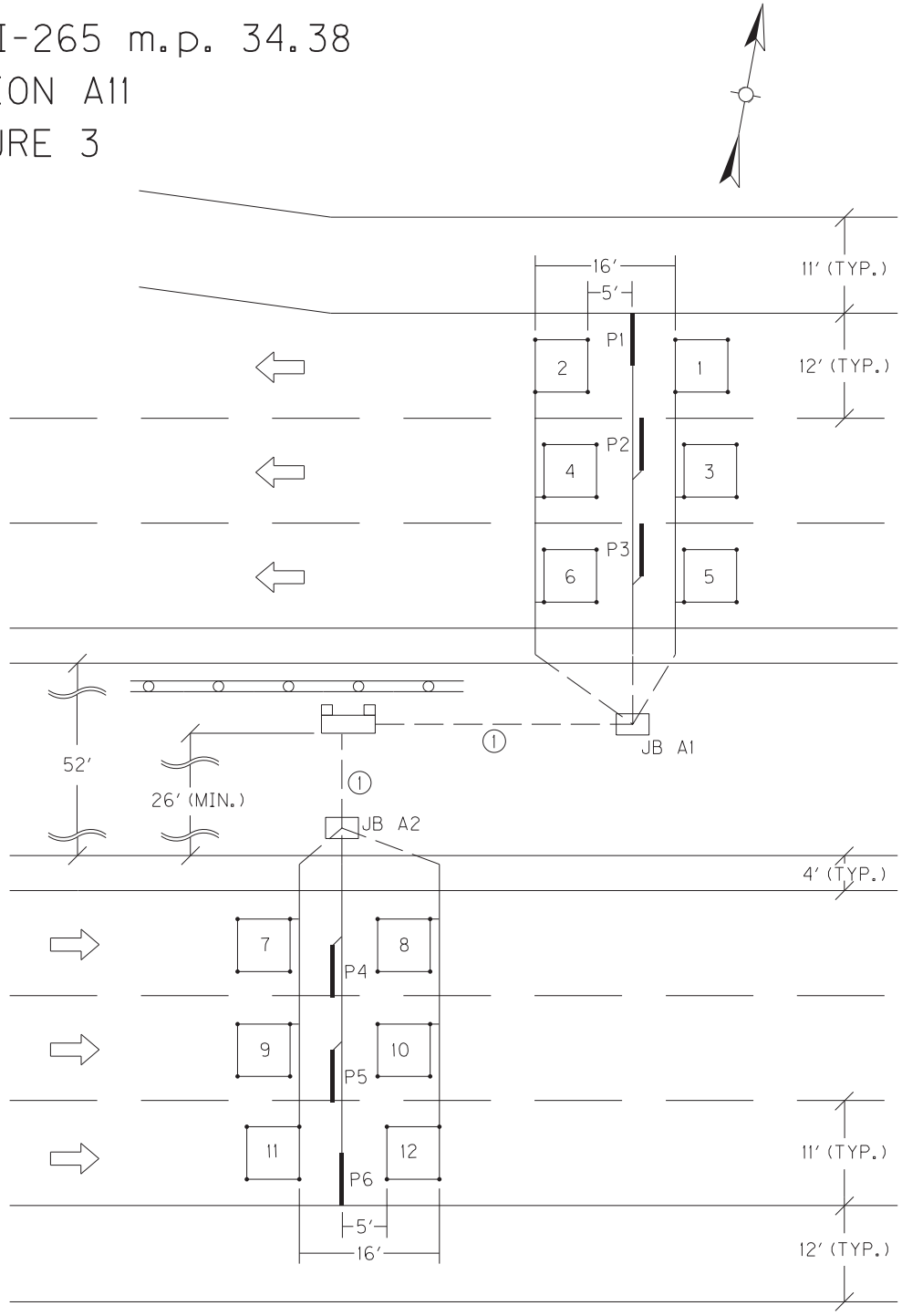
INSTALL ONE (1) 1¼" CONDUIT FROM EACH SAW SLOT TO NEAREST JUNCTION BOX.

INSTALL TWO (2) TYPE A JUNCTION BOXES (JB A1 AND A2).

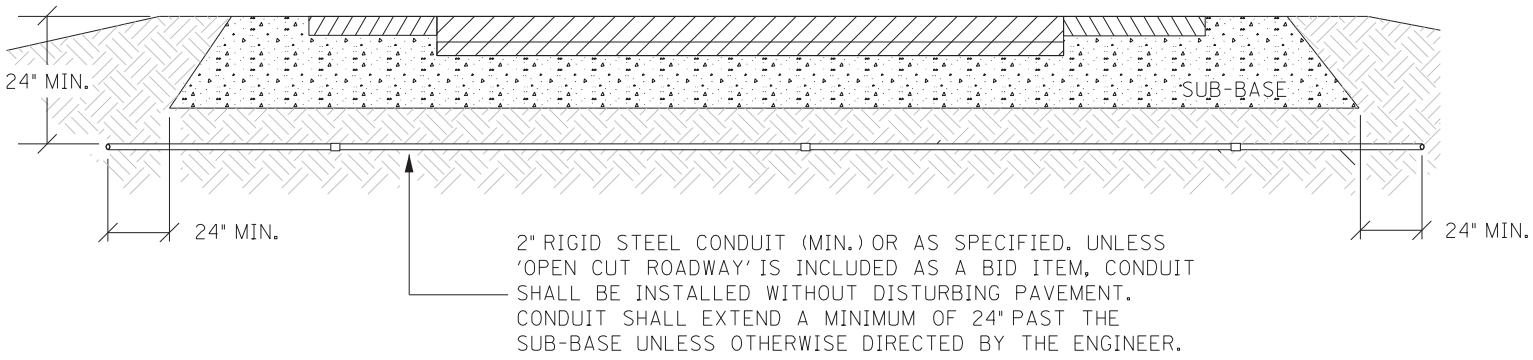
INSTALL ONE (1) 20"X20"X8" CABINET MOUNTED TO TWO (2) WOOD POSTS.

CODED NOTE:

(1) INSTALL ONE (1) 2" CONDUIT.



SCALE 1"=20'

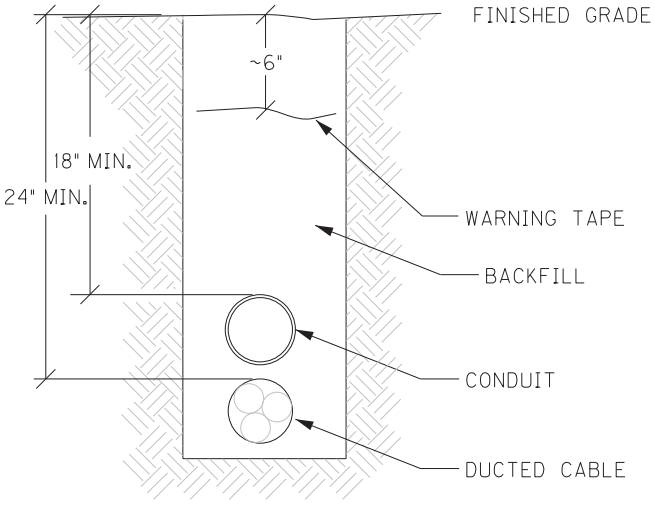


CONDUIT UNDER PAVEMENT

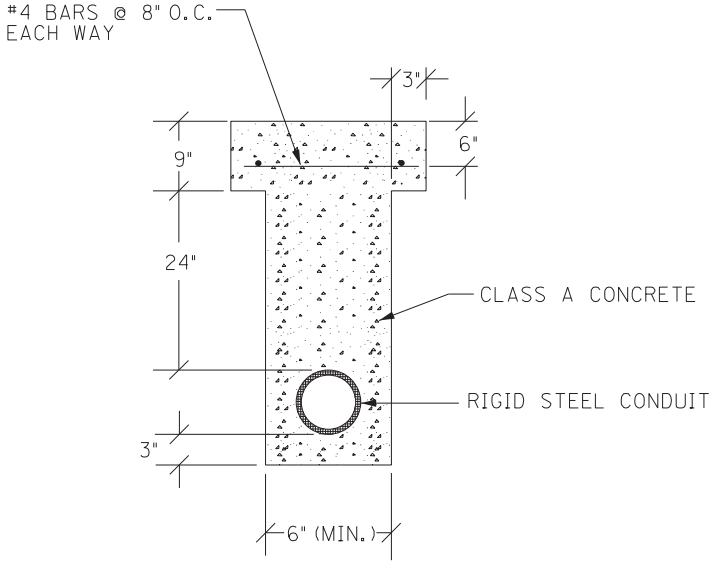
TOTAL TRENCH WIDTH SHALL BE 3" (NOM.) WIDER THAN THE SUM OF THE OUTSIDE DIAMETER(S) OF THE CONDUIT(S) INSTALLED. CONDUIT(S) SHALL BE CENTERED IN TRENCH.

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.



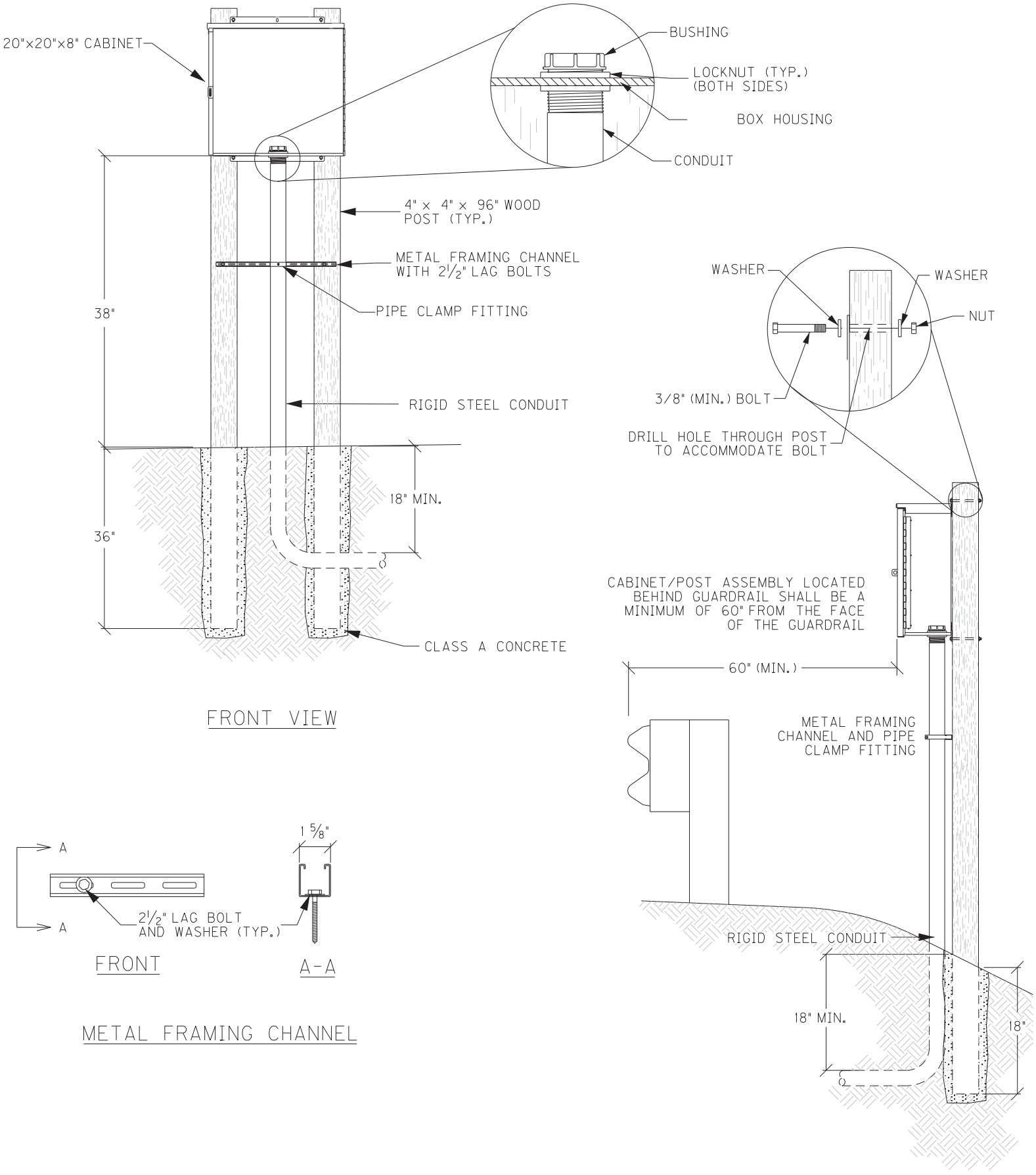
CONDUIT TRENCH



OPEN CUT PAVEMENT DETAIL

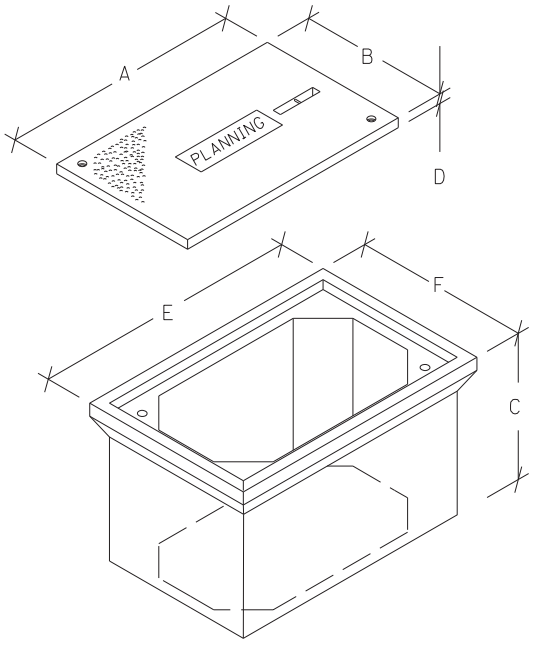
CONDUIT INSTALLATION

NOT TO SCALE



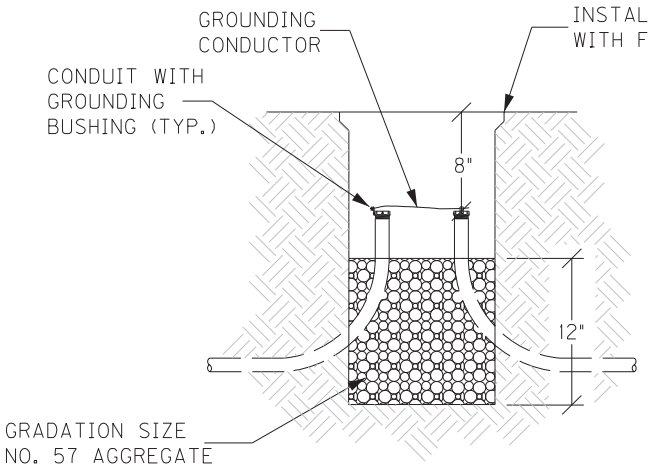
GALVANIZED STEEL CABINET
DOUBLE POST ASSEMBLY

NOT TO SCALE



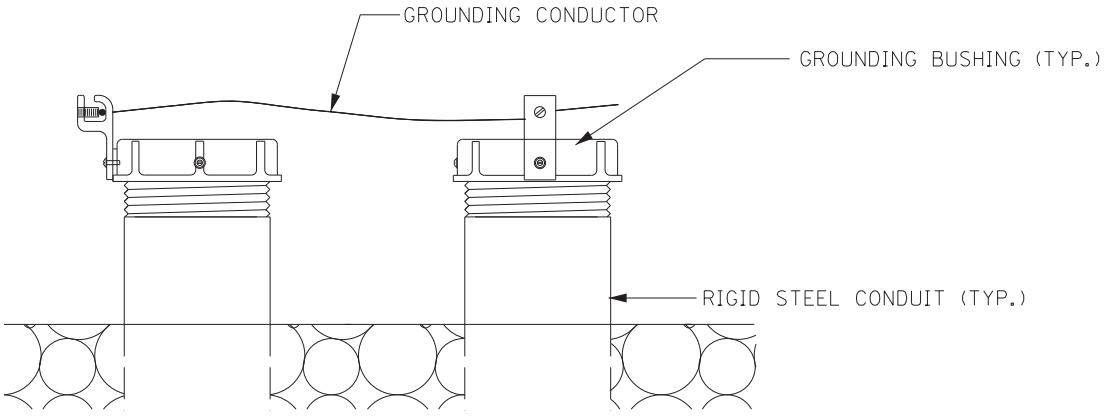
JUNCTION BOX DIMENSIONS (NOMINAL)						
	A	B	C	D*	E	F
TYPE A	23"	14"	18"	2"	25"	16"
TYPE B	18"	11"	12"	1¾"	20"	13"
TYPE C	36"	24"	30"	3"	38"	26"

* MINIMUM
STACKABLE BOXES ARE PERMITTED



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

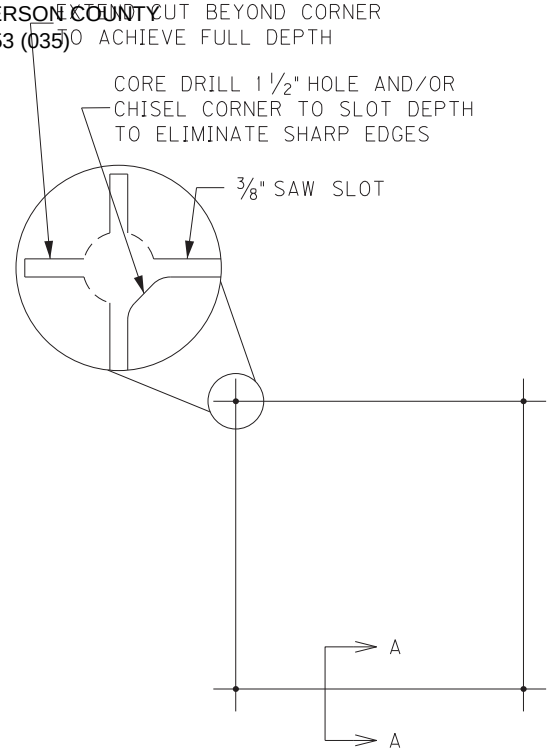
ELEVATION



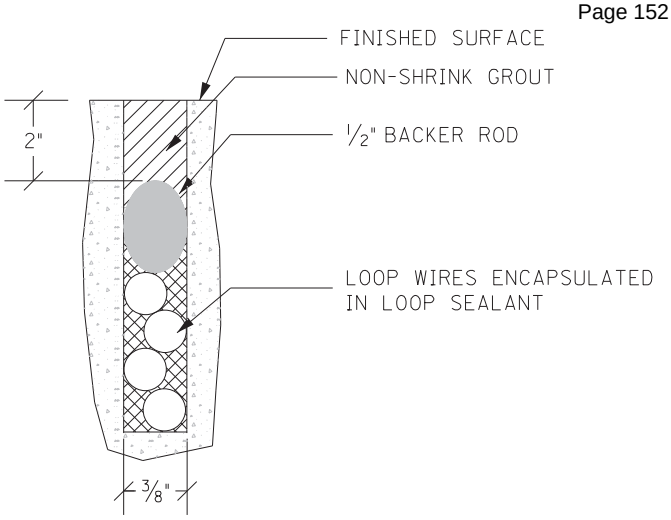
GROUNDING DETAIL

JUNCTION BOX - TYPE A, TYPE B, TYPE C

NOT TO SCALE



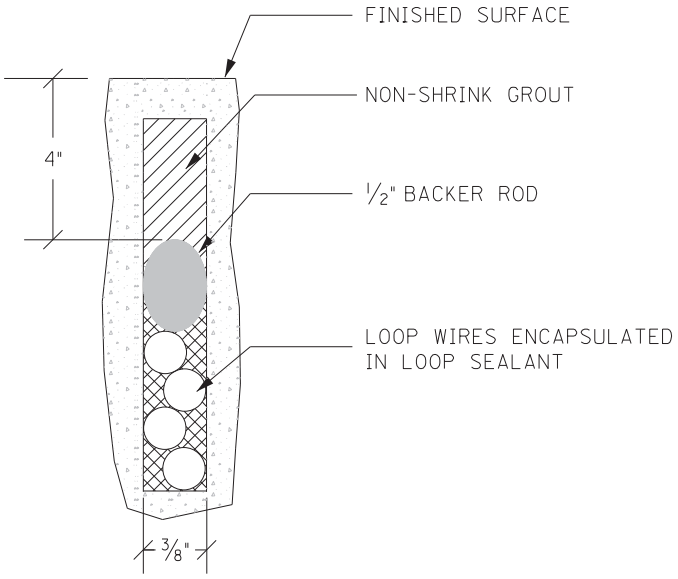
SAW CUT PLAN



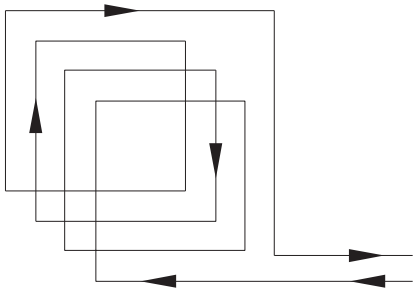
SECTION A-A (CONCRETE)

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

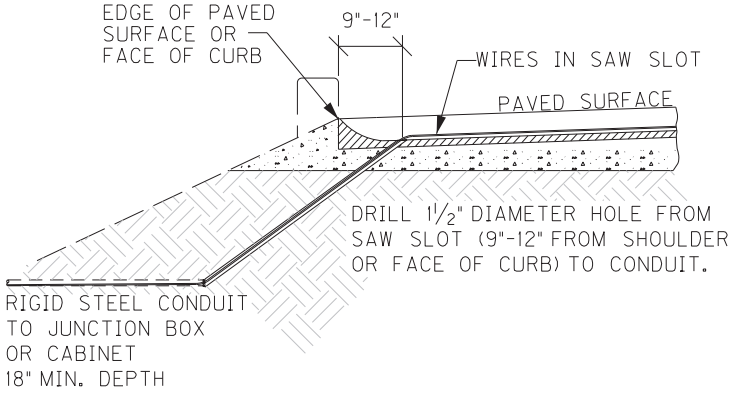
ADJACENT SAW SLOTS SHALL BE A MINIMUM OF 12" APART.



SECTION A-A (ASPHALT)



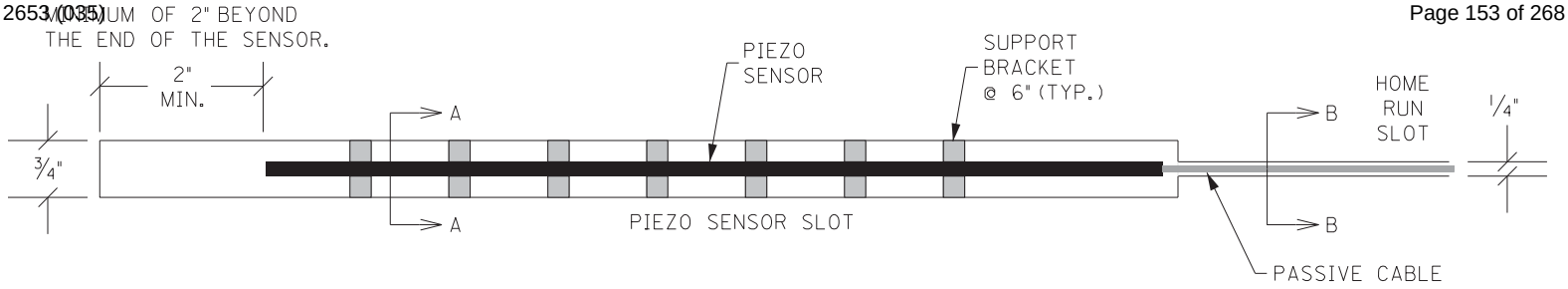
WIRING PLAN



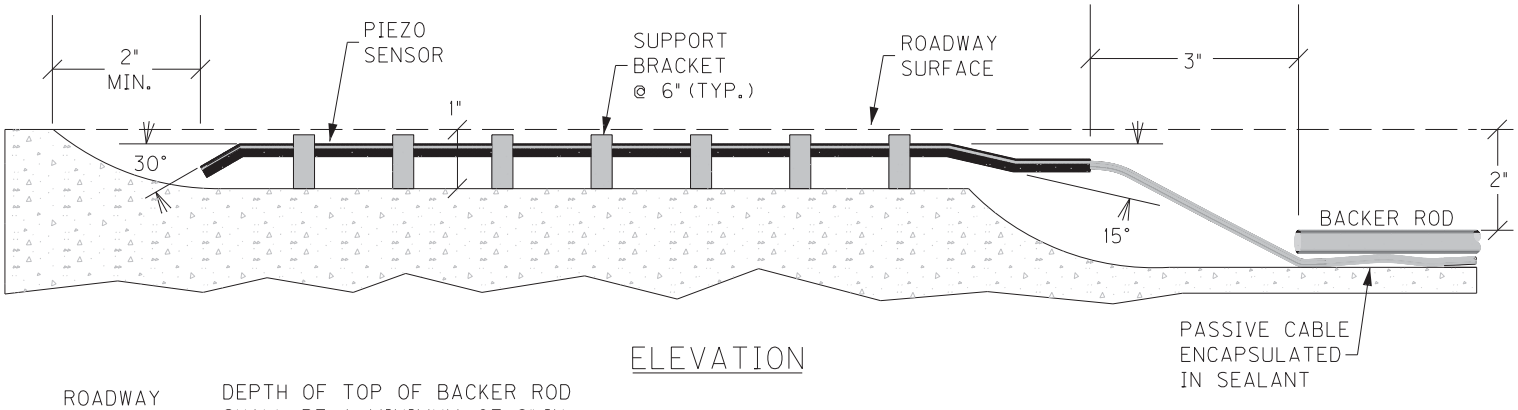
SAW SLOT EDGE OF PAVEMENT TRANSITION

INDUCTIVE LOOP DETECTOR

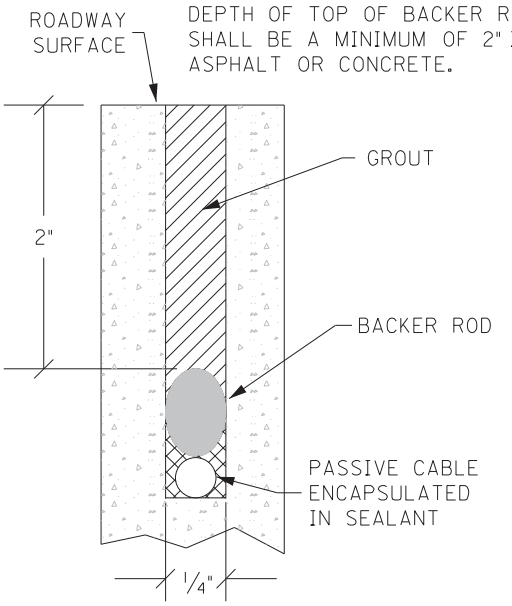
NOT TO SCALE



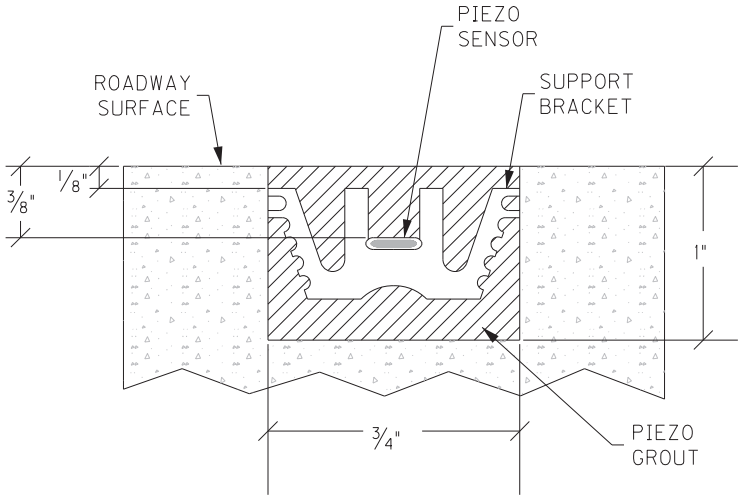
PLAN



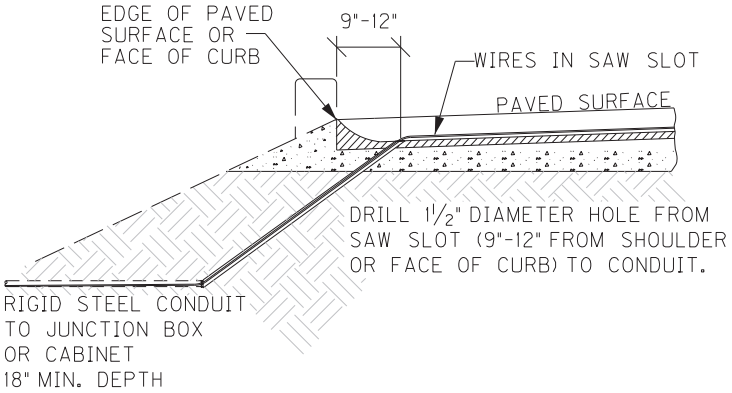
ELEVATION



SECTION B-B



SECTION A-A



SAW SLOT EDGE OF PAVEMENT TRANSITION

PIEZOELECTRIC SENSOR INSTALLATION

NOT TO SCALE

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	195
4795	CONDUIT 2 INCH	LIN FT	130
4810	JUNCTION BOX	EACH	
4811	JUNCTION BOX TYPE B	EACH	
4820	TRENCHING AND BACKFILLING	LIN FT	295
4821	OPEN CUT ROADWAY	LIN FT	
4829	PIEZOELECTRIC SENSOR	EACH	15
4830	LOOP WIRE	LIN FT	7550
4850	CABLE NO. 14/1 PAIR	LIN FT	
4871	POLE – 35’ WOODEN	EACH	
4895	LOOP SAW SLOT AND FILL	LIN FT	1347
4899	ELECTRICAL SERVICE	EACH	
4901	TELEPHONE SERVICE	EACH	
20213EC	INSTALL PAD MOUNT ENCLOSURE	EACH	
20359EC	GALV STEEL CABINET	EACH	5
20360ES818	WOOD POST	EACH	10
20391ES835	JUNCTION BOX TYPE A	EACH	6
20392ES835	JUNCTION BOX TYPE C	EACH	
20468EC	JUNCTION BOX 10x8x4	EACH	
21543EN	BORE AND JACK CONDUIT – 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.

INTERSTATE 265 PAVEMENT REHABILITATION PROJECT
KY 146 TO INTERSTATE 71
M.P. 30.3 TO M.P. 35.2
ITEM # 5-2068.00
PUBLIC INFORMATION PLAN

The primary goal of the Public Information Plan (PIP) is to inform the motoring public and area stakeholders of project information including Maintenance of Traffic (MOT) which includes lane and ramp closures. The KYTC District 5 Public Information Officer (PIO) will coordinate and disseminate to stakeholders and the media appropriate information regarding the construction plans.

LOCAL STAKEHOLDERS

- Elected Officials
  - State Senator Julie Denton – (502) 489-9058; julie.denton@lrc.ky.gov
  - State Senator Ernie Harris – (502) 241-8307; ernie.harris@lrc.ky.gov
  - State Representative Bob DeWeese – (502) 426-5565; bob.deweese@lrc.ky.gov
  - State Representative Ron Crimm – (502) 245-8905; ron.crimm@lrc.ky.gov
  - Mayor Greg Fischer – (502) 574-2003; greg.fishcher@louisvilleky.gov
  - Metro Councilman Kelly Downard (502) 574-1116; kelly.downard@louisvilleky.gov
  - Metro Councilman Glen Stuckel – (502) 574-1117; glen.stuckel@louisvilleky.gov
  - Metro Councilman Jerry Miller – (502) 574-1119; jerry.miller@louisvilleky.gov

- Local Agencies
  - Rick Caple, Director of Transportation for Jefferson County Public Schools – (502) 485-3470; richard.caple@jefferson.kyschools.us
  - Barry Barker, Transit Authority of the River City (TARC) – (502) 561-5100; jbarrybarker@ridetarc.org
  - Lt. Dave Seelye, Louisville Metro Police Department Traffic Division – (502) 574-2445; dave.seelye@louisvilleky.gov
  - Mark Giuffre, UPS – (502) 329-3060; mgiuffre@ups.com
  - Chief Jeff Riddle, Middletown Fire Protection District – (502) 245-7555; jriddle@mfpd.org
  - Amy Pope, Ford Truck Plant – (502) 429-2444; apope@ford.com
  - Lonnie Corkum, Ford Truck Plant – (502) 429-2245; lcorkum@ford.com
  - Chief Bob Hamilton, PeWee Valley Fire Protection District – (502) 241-0025; bob.hamilton@peweevalleyfire.org
  - Bob Tolson, Middletown Fire Protection District, Station 3 – (502) 243-8555; btolson@mfpd.org
  - Deputy Chief Shawn Canto, Harrods Creek Fire Dept. – (502) 228-1351; scanto@hcfd.org

- Madison Steele, Worthington Fire District – (502) 241-9366; msteele@worthingtonfire.com
- Dan O'Sullivan, Kroger Distribution Center – (734) 358-0956; dosullivan@transervice.com
- Ellen Wade, President of Northeast Louisville Business Association (NELBA) – (502) 905-4408; bigole@aol.com
- Marcus Buell, Wal-Mart at I-265 and Westport Road – (859) 539-9834; smbuell@insightbb.com
- Kathy Preston, Westport Distribution Center – (502) 499-9199; kpreston@teamweston.com
- John Falvey, Eastpoint Business Center – (502) 371-1122; jfalvey@falveycommercial.com
- Covenant Classical Academy – (502) 243-0404; lharris@covenant-classical.org
- Summitt Shopping Center, Rebecca Norton; bnorton@bayerproperties.com

- Utility Companies
  - Local utility companies are kept apprised of this project at the monthly utility coordination meetings hosted by District 5

- Neighborhoods and their Mayors

TRUCKING FIRMS AND OUT OF STATE STAKEHOLDERS

Information will be distributed electronically to trucking firms via Rick Taylor at the Department of Vehicle Regulation (502-564-4540; rick.taylor@ky.gov). Information will also be posted on the 511 website (www.511.ky.gov) and on the 511 telephone information system.

PRESENTATIONS

A project description including anticipated schedule will be provided to the media, stakeholders and other emergency service agencies via e-mail prior to construction. Information will be provided to these groups via traffic advisories, press releases, the District 5 website and the weekly District 5 Road Show of Construction and Maintenance Activities.

MEDIA RELATIONS

The District PIO will prepare an initial news release regarding the contract award for the project. The PIO will conduct interviews with the media throughout the project duration to keep the public informed of construction progress. Traffic advisories will be submitted to the media when a change in the MOT occurs. The contractor must provide to the PIO via the Resident Engineer notification of any change in the MOT at least five (5) days prior to the change.

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

Right-of-Way Certification Form

Revised 2/22/11

☑ Federal Funded ☐ State Funded

☑ Original ☐ Re-Certification

This form must be completed and submitted to FHWA with the PS&E package for federal-aid funded Interstate, Appalachia, and Major projects. This form shall also be submitted to FHWA for all federal-aid projects that fall under Conditions No. 2 or 3 outlined elsewhere in this form. When Condition No. 2 or 3 apply, KYTC shall resubmit this ROW Certification prior to construction contract Award. For all other federal-aid projects, this form shall be completed and retained in the KYTC project file.

Date: 10-10-12

Project Name: Repair and Grind Pavement
Letting Date: November, 2012
Project #: FD52 056 0265 030-036
County: Jefferson
Item #: 5-2068.00
Federal #: IM 2653 (035): FD52 056 0265 030-036

Description of Project: Repair and Grind Pavement on Westbound and Eastbound I-265 from MP 30.637 to MP 35.201

Projects that require NO new or additional right-of-way acquisitions and/or relocations

☐ The proposed transportation improvement will be built within the existing rights-of -way and there are no properties to be acquired, individuals, families, and businesses ("relocatees") to be relocated, or improvements to be removed as a part of this project.

Projects that require new or additional right-of-way acquisitions and/or relocations

☐ Per 23 CFR 635.309, the KYTC hereby certify that all relocatees have been relocated to decent, safe, and sanitary housing or that KYTC has made available to relocatees adequate replacement housing in accordance with the provisions of the current FHWA directive(s) covering the administration of the Highway Relocation Assistance Program and that at least one of the following three conditions has been met. (Check those that apply.)

☐ **Condition 1.** All necessary rights-of-way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Fair market value has been paid or deposited with the court.

☐ **Condition 2.** Although all necessary rights-of-way have not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Trial or appeal of some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Fair market value has been paid or deposited with the court for most parcels. Fair market value for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract. (See note 1 below.)

Note 1: The KYTC shall re-submit a right-of-way certification form for this project prior to AWARD of **all** Federal-Aid construction contracts. Award must not to be made until after KYTC has obtained full legal possession and fair market value for all parcels has been paid or deposited with the court and FHWA has concurred in the re-submitted right-of-way certification.

Right-of-Way Certification Form

Revised 2/22/11

☐ **Condition 3.** The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. However, all remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. The KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary rights-of-way will not be fully acquired, and/or some occupants will not be relocated, and/or the fair market value will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction. A full explanation and reason for this request, including identification of each such parcel and dates on which acquisitions, payments, and relocations will be completed, is attached to this certification form for FHWA concurrence. (See note 2.)

Note 2: The KYTC may request authorization on this basis only in unique and unusual circumstances. Proceeding to bid letting shall be the exception and never become the rule. In all cases, the KYTC shall make extraordinary efforts to expedite completion of the acquisition, payment for all affected parcels, and the relocation of all relocatees prior to AWARD of all Federal-Aid construction contracts or force account construction.

Approved: Ron Geveden _____ _____ Right-of-Way Supervisor
Printed Name Signature

Approved: _____ _____ KYTC, Director of ROW &Utilities
Printed Name Signature

Approved: _____ _____ FHWA, ROW Officer (when applicable)
Printed Name Signature

Right-of-Way Certification Form

Revised 2/22/11

Date: 10-10-12

Project Name: Grind & Repair pavement
Project #: FD52 056 0265 030-036
Item #: 5-2068.00
Letting Date: November, 2012

County: Jefferson
Federal #: IM 2653 (035)

This project has 0 total number of parcels to be acquired, and 0 total number of individuals or families to be relocated, as well as 0 total number of businesses to be relocated.

0 Parcels where acquired by a signed fee simple deed and fair market value has been paid

_____ Parcels have been acquired by IOJ through condemnation and fair market value has been deposited with the court

_____ Parcels have not been acquired at this time (*explain below for each parcel*)

_____ Parcels have been acquired or have a "right of entry" but fair market value has not been paid or has not been deposited with the court *(explain below for each parcel)*

_____ Relocatees have not been relocated from parcels ____, ____, ____, ____, ____, ____, and ____ *(explain below for each parcel)*

Parcel #	Name/Station	Explanation for delayed acquisition, delayed relocation, or delayed payment of fair market value	Proposed date of payment or of relocation

There are 0 billboards and/or 0 cemeteries involved on this project.

There are 0 water or monitoring wells on parcels ____, ____, ____, ____, and ____. All have been acquired and are the responsibility of the project contractor to close/cap.

Form Effective Date: April 1, 2006
Last Revised: February 22, 2011

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

JEFFERSON, STP 2653 (035)
FD52 056 0265 030-036
REPAIR AND DIAMOND GRIND CONCRETE PAVEMENT ON I-265
FROM MILEPOINT 30.637 TO MILEPOINT 35.201
SYP ITEM NO.: 5-2068.00

GENERAL PROJECT NOTE ON UTILITY PROTECTION
Utility coordination efforts determined that no significant utility relocation work is required to complete the project. Any work pertaining to these utility facilities is defined in the bid package and is to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal

NOTE: DO NOT DISTURB THE FOLLOWING UTILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS
Insight, **LG&E**, **AT&T-KY**, **Louisville Water Company (LWCo)**, and **MSD** may have overhead and/or underground utility crossings in the general vicinity of construction. However, there is no impact or adjustments required of their services. All of these facilities are not to be disturbed and will remain in place.
The Contractor is fully responsible for protection of all utilities listed above

THE FOLLOWING COMPANIES ARE RELOCATING/ADJUSTING THEIR UTILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION
N/A

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE COMPANY OR THE COMPANY'S SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT
N/A

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT
N/A

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

JEFFERSON, STP 2653 (035)
FD52 056 0265 030-036
REPAIR AND DIAMOND GRIND CONCRETE PAVEMENT ON I-265
FROM MILEPOINT 30.637 TO MILEPOINT 35.201
SYP ITEM NO.: 5-2068.00

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs.

The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

JEFFERSON, STP 2653 (035)
FD52 056 0265 030-036
REPAIR AND DIAMOND GRIND CONCRETE PAVEMENT ON I-265
FROM MILEPOINT 30.637 TO MILEPOINT 35.201
SYP ITEM NO.: 5-2068.00

AREA UTILITIES CONTACT LIST

Utility Owners and Contact Person

For
Jefferson County

1. LG&E KU (Electric)
820 West Broadway
Louisville, KY 40202
LG&E Emergency Number (502) 589-1444
LG&E and KU Emergency Number 1-800-331-7370

Greg Geiser
work: (502) 627-3708
Greg.Geiser@LGE-KU.com

2. LG&E (Gas)
820 West Broadway
Louisville, KY 40202
Gas Emergency Number (502) 589-5511
LG&E and KU Emergency Number 1-800-331-7370

Greg Geiser
work: (502) 627-3708
Greg.Geiser@LGE-KU.com

3. Louisville Water Company
550 South Third Street
Louisville, KY 40202

Daniel Tegene, PE
(502) 569-3649
DTegene@LWCky.com

4. AT&T KY
3719 Bardstown Road - 2nd Floor
Louisville, KY 40218

Morgan Herndon
Morgan.Herndon@att.com
(502) 458-7312

5. Metropolitan Sewer District
700 West Liberty Street
Louisville, KY 40203-1911

Steve Emly
Emly@MSDLouky.org
(502)540-6509
Brad Selch
SelchB@MSDLouky.org
(502) 540-6614
Send to both contacts

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

JEFFERSON, STP 2653 (035)
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REPAIR AND DIAMOND GRIND CONCRETE PAVEMENT ON I-265
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6. Insight Communications Company
4701 Commerce Crossings Dr.
Louisville, KY40229
Dwight.Barbour@TWCable.com

Deno Barbour
Cell: (502) 664-7395
Office(502) 357-4376

Nathen Howerton
Cell: (502) 639-6838
Office: (502) 357-4318
Nathen.Howerton@TWCable.com
Forrest Antique
Cell: (502) 817-6519
Office: (502) 357-4724
Forrest.Antique@TWCable.com

7. Texas Gas Transmission Corporation
10327 Gaslight Way
Louisville, KY 40299

John Weaver
(502) 438-2407
John.Weaver@BWPMLP.com

8. Marathon Pipeline, LLC
539 S Main St, Rm 7642
Findlay, OH 45840

David Wisner
DSWisner@MarathonPetroleum.com
(419) 421-2211

9. Indiana Gas Company Inc
d.b.a. Vectren Energy Delivery of Indiana, Inc
or
Ohio River Pipeline Corporation
2520 Lincoln Drive
Clarksville, Indiana 47129

Mary Barber
MBarber@Vectren.com
(812) 948-4952

Line Maintained By
Texas Gas Transmission, LLC
3800 Frederica Street
Owensboro, Kentucky 42302
Cell: (270) 485-1152

Tim Turner
(270) 688-6461
Tim.Turner@bwpmlp.com

10. Indiana Utilities Corporation
123 West Chestnut Street
Corydon, Indiana 47112
(812) 738-3235

Kevin Kinney
Ron Timberlake
Jackie Rogers
JackieR@IndianaUtilitiesCorp.com

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

JEFFERSON, STP 2653 (035)
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REPAIR AND DIAMOND GRIND CONCRETE PAVEMENT ON I-265
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11.	Sprint - Fiber Optics 11370 Enterprise Park Dr. Sharonville, OH 45241	Joe Thomas Joe.Thomas@Ericsson.com Office (513) 612-4204 Cell (937) 209-9754
12.	Mid-Valley Pipeline Company 4910 Limaburg Road Burlington, KY 41005 FAX (866) 699-1185	Todd Calfee (Richard) (859) 371-4469x14 (859) 630-8271 RTCALFEE@SunocoLogistics.com
13.	Level 3 Communications (Transmission) 848 S. 8th St. Louisville, KY 40203	Kevin Webster Kevin.Webster@Level3.com Office (502) 777-8622 Cell (502) 777-8622 Fax (502) 561-6950
	Level 3 Communications (Transmission) 848 S. 8th St. Louisville, KY 40203	Tim Morphew Tim.Morphew@Level3.com Office (502) 561-6935 Cell (502) 221-1785 Fax (502) 561-6950
	Level 3 Communications (Distribution) 962 South Third Street Louisville, KY 40203	Mark Sewell Mark.Sewell@Level3.com Office (502) 515-9142 Cell (502) 295-0939 **Send to all 3 contacts**
14.	Jefferson County Public Schools (JCPS) C B Young Building 7 3001 Crittenden Dr. Louisville. KY 40209	Jeff Hardy Jeff.Hardy@Jefferson.kyschools.us 502-485-7975

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

JEFFERSON, STP 2653 (035)
FD52 056 0265 030-036
REPAIR AND DIAMOND GRIND CONCRETE PAVEMENT ON I-265
FROM MILEPOINT 30.637 TO MILEPOINT 35.201
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15. Kentucky Data Link (KDL now Windstream)
Project Manager
3701 Communications Way
Evansville, IN 47715
(Address envelopes ATTN Melissa Gugino)

Michael Russell
Michael.Russell@windstream.com
John Mcdowell
John.Mcdowell@windstream.com
859-369-3623
Melissa.gugino@windstream.com

Timothy Gibson (Fiber location/relocation)
Timothy.Gibson@Windstream.com
(812) 454-6756
Lezlie Allison
Lezlie.Allison@Windstream.com
Work: (859) 357-6205
Cell: (859) 421-3769
Send to both contacts

16 AT&T Legacy
4500 Johnston Pkwy.
Cleveland, OH 44128

Mike Diederich
MD4145@att.com
(216)-587-6267
(216)-212-8556

Don Garr
DRGarr@Hughes.net
Cell: (502) 741-8374
Send to both contacts

17. TWTelecom
Medinger Tower
462 S. 4th St., Suite 2400
Louisville, KY 40202

Jeremy Cornell
Jeremy.Cornell@TWTelecom.com
(502) 992-1168

333 West Vine Street, Suite 330
Lexington, KY 40507

Gerald Long
Gerald.Long@TWTelecom.com
(859) 550-2201

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

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18. City of Taylorsville Sewer & Water
70 Taylorsville Rd., P O Box 279
Taylorsville, KY 40071

Harold Compton
HCompton@TaylorsvilleWater.org
(502) 477-3235
Fax: (502) 477-1310

19. Qwest Communications Company, LLC
700 W Mineral Ave, UTD2734
Littleton, Colorado 80120

George McElvain
George.McElvain@Qwest.com
(303) 992-9931
Cell:720-260-2514
Fax:303-707-3252

20. Shelby Energy Cooperative
P.O. Box 311, 620 Old Finchville Road
Shelbyville, KY 40065
(502) 633-4420

Jason Ginn
Jason@ShelbyEnergy.com
cell: (502) 643-2778

21. Atmos Energy
130 Stonecrest Road Suite105
Shelbyville, KY 40065
Bernie.Anderson@AtmosEnergy.com
(502) 633-2831 ext. 104

Bernie Anderson
cell: (502) 321-8073

OR

Earl Taylor
Earl.Taylor@AtmosEnergy.com
Cell: 859-583-0306
Office: 859-236-2300
Send to both contacts

22. Crown Castle Network Operations
10170 Linn Station Road
Suite 525
Louisville, KY 40223
(builds cell towers and leases space on them)

Brian Watkins
Brian.Watkins@CrownCastle.com
(502) 318-1323
Brandy Bowling (Brian's supervisor)
Brandy.Bowling@CrownCastle.com
(502) 318-1322
Cindy Shaffer
Cynthia.Shaffer@CrownCastle.com
(502) 318-1313
Chris Gladstone
Chris.Gladstone@CrownCastle.com
(502)689-2162

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

JEFFERSON, STP 2653 (035)
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23. Zayo
701 W. Henry Street
Suite 201
Indianapolis, IN 46225

Bill Hales
Bill.Hales@zayo.com
(502) 500-3661

24. MCI/Verizon(Owns WUTEL)
MCI/Verizon
730 West Henry Street
Indianapolis, IN 46225

Chris Fowler
Chris.Fowler@Verizon.com
Office: (317) 685-8050
Cell: (317) 435-6225

Dave Wiley (Field)
(502) 439-8783
Dave.Wiley@One.Verizon.com

25. TRIMARC
Public Safety & Transportation Systems
901 West Main Street
Louisville, Kentucky 40202

Todd Hood
Todd.Hodd@ngc.com
Office: (502)587-6624 ext. 2
Cell: (502)307-7456

AIRPORT CONTACTS

Steve Stoker (502) 375-7360 – FFA Location Manager
Jack Stauble (502) 664-9637 cell – FFA Location Technician

Chuck Hensley (502) 380-8356 EXT 356 – Construction Manager
Louisville Regional Airport Authority

Andy Hepfinger (502) 329-3706 – UPS Construction
Brian Knesco (502) 741-2922 – UPS Construction

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

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Railroad Companies

1. **C.S.X. Transportation, Inc.**
Contacts:
David Hall, KY Liaison, (502) 815-1865
Milton Holder – crossings – cell (502) 817-2011
John Williams – crossings – cell (502) 376-8745, Office (502) 364-1133
Joe Malandruco (Florida) – signals (904) 245-1160

2. Norfolk - Southern Railway Company
Norfolk - Southern Railway Company (Roy Johnson to provide contact data)
Mr. J. N. Carter, Jr. Chief Engineer
Bridges and Structures
Norfolk Southern Corporation
1200 Peachtree Street
Atlanta, Georgia 30309

3. Paducah and Louisville Railway, Inc.
Gerald Gupton, Office: (270) 444-4386

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

1I

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

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SPECIAL NOTE FOR
QC/QA SPECIFICATIONS FOR CLASS P CONCRETE

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

1.0 DESCRIPTION. This Special Note specifies the process control and acceptance testing for Class P Concrete (JPC pavement, shoulders, base). JPCP 24/48/72 will not be included under this note. Perform work and furnish materials according to the Department's Standard Specifications with the following exceptions and additions. Perform both process control and acceptance testing. Minimum test frequencies are provided. The Department will only perform verification testing.

2.0 MATERIALS. Conform to Subsection 501.02 or 601.02.

3.0 PROCESS.

3.1 Quality Control Plan (QCP). Submit the QCP checklist to the Engineer for review and approval at least 15 calendar days prior to commencing concrete operations. The QCP is the responsibility of the Contractor and should be a joint effort between the Contractor and any subcontractors. Submit a revised QCP for review and approval if any changes are necessary.

3.2 Contractor Requirements.

1) Select a concrete production facility that conforms to the production requirements found in Subsection 601. If the facility fails to meet these requirements during production and is no longer qualified to supply concrete the Contractor is solely responsible for obtaining the services of another concrete production facility to continue placement of concrete on the project.
2) Provide concrete technicians that are certified as ACI Level I Concrete Field Testing Technicians.
3) Provide an AASHTO accredited or Kentucky Transportation Cabinet qualified laboratory facility.
4) Job Site Acceptance Requirements:

    a) Trip Tickets. Collect trip tickets for each load of concrete. Check each truck mixer for a current performance test sticker and the metal plate stating manufacturers recommended capacities and revolution speeds. Verify and/or record the following for each load of concrete delivered to the project:

    - Age of mix
    - Mixing revolutions recorded on the trip ticket
    - Discharge time
    - Addition of water
    - Additional mixing revolutions if water is added
    - Job site test data

    The Technician shall reject concrete failing to meet the requirements for any item.

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b) Technician Responsibilities. ACI Level I Concrete Technicians shall be on site to inspect all quantities of concrete delivered to the project. Inspection responsibilities include field tests for slump, air content, temperature, and casting of cylinders of the plastic concrete. All testing shall be performed according to the applicable Kentucky Methods. The Technician shall reject concrete failing to meet the requirements of any of these tests.

5) Testing:

a) Start Up Test Frequencies. Perform start-up slump, air content, and temperature tests each day of placement for Class P concrete. The minimum frequency is the first unit and any one of the next 4 Units

The First Unit is the first load delivered producing acceptable start up test results. For example; if the first load of the day produces failing test results, it is rejected. Repeat Start Up Tests for the second load delivered. If the second load produces passing test results it is accepted and considered the First Unit.

b) Acceptance Testing. Provide test equipment conforming to requirements of the appropriate test method. The Engineer may inspect and reject any equipment found defective.

- Sample and test the plastic concrete for air content, slump, and temperature at the point of placement. Once the First Unit has been established, the Department will include all randomly selected samples for payment in the pay factor calculations even if the unit is out of specification. If any randomly selected production unit is outside the specification limits for slump, temperature, or air content, return to the start-up testing frequency.
- Mold a minimum of one set of cylinders at the point of placement for each sublot (see part 3.2-5-c) for compressive strength testing. A “set” of cylinders is outlined in KM 64-305. Randomly sample and test when the Engineer directs. (See the following note)
- Obtain samples anytime visual inspection of the delivered concrete indicates questionable specification compliance.
- Perform compressive strength testing on certified or Department approved machines.
- Notify the Engineer at least 24 hours prior to the time of compressive strength testing so that the test may be witnessed. The Department will witness and document a minimum of 75 percent of the tests.
- Core any concrete meeting the criteria for investigation of in-place concrete based on low cylinder strengths (see part 3.2-6). When coring is required, furnish equipment and personnel necessary to obtain and test cores. Core diameter will be as required by the Department.

Note: Number cylinders for strength testing according to the following format unless otherwise approved by the Engineer:

Lot # - Sublot # - Class of Concrete

If a set of cylinders are made for early breaks, follow the class of concrete with an “X”. The verification cylinders made by the department will use a “V” after the class of concrete.

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c) Lot Size**.** Lots and sublots will be based on delivered quantities in lieu of design quantity. Lots are defined as 4,000 square yards. Lots are divided into 4 sub-lots of 1,000 square yards.

Use the following table in determining concrete quantities and their corresponding lots and sublots.

Square Yards	Total Sublots – Equally Divided
< 2,000	Accept based upon plastic concrete test results plus one set of cylinders if more than 15 cubic yards per calendar day*
2,000 ≤ 4,000	4
4,000 ≤ 5,000	5
5,000 ≤ 6,000	6
6,000 < 8,000	One standard lot, plus a second smaller lot with 4 sublots.

* PWL and incentive/disincentives are not applied but accepted at 100% pay based on achieving acceptable results.

NOTE: All early strength modified mixes will be combined, if quantities are available, to make a lot(s).

d) Documentation. Record all job site test results when obtained. Provide a summary of test results and trip tickets at least weekly to the Engineer. In the summary, include a record of all concrete rejected. As 28-day breaks are obtained, submit air and strength results along with corresponding random numbers and sublot/lot identification at the completion of each and every lot. Report all failing compressive strength tests to the Engineer as soon as possible, but no later than the end of the testing day.

e) In addition to acceptance testing, perform all sampling, testing (slump, air, temperature and strength) for the purpose of either load applications, or opening to traffic. These results are to be kept separate from random QC results and are not to be used for pay calculations.

f) Additional acceptance sampling testing by the Contractor is permitted but must be included in the QCP by reducing size of sublots within the lots (see part 3.2-5-c) to be included in pay calculations.

6) Investigation of In-Place Concrete. The Department will require a core evaluation of the in-place concrete when any of the following occur:

- An individual test result falls more than 500 psi below minimum required compressive strength
- Strength PWL for a lot is less than 75
- Air content PWL below 60 will require special evaluation by the Engineer based on core testing (hardened air content) to determine acceptance/rejection, and any corrective work needed.
- Any lot missing more than 25% of the required tests for strength or air will require coring and testing. The results will be evaluated according to part 3.4-2.

The investigation will take place at the direction of the Engineer. Obtain cores within 7 calendar days of written notification.

3.3 Concrete Producer Requirements. Requirements include mix design, testing, documentation, plant approval, and truck approval in accordance with Section 601. Mix Designs. Submit mix designs to the Engineer using either Option A or Option B below.

1) Option A. Kentucky Mix Design. Submit mix designs according to Subsection 601.03.02 G at least 15 calendar days prior to commencing concrete operations. Design and proportion the concrete mixtures according to Subsection 601.03.03. Resubmit the mix designs when changes are made.
2) Option B. ACI-318 Mix Design. ACI 318, Chapters 4 and 5, is permitted for mix design only. Comply with ingredient material specifications and mineral admixture limitations according to the Department's Standard Specifications. Option B is not permitted for HPC or JPCP 25/48/72 mixes. Conform to the following if requirements are not modified elsewhere by plan note.

Max. Free Water By w/c Ratio (lbs/lbs)	Min. 28-Day Comp. Strength For acceptance (psi)	Air Content (%)
0.45	4,500	6± 2% *

* The air content shall be 7 ± 2% when coarse aggregate sizes #8, #78, or #9-M are used.

3.4 Department Responsibilities.

1) Concrete Mixture Verification Testing. The Engineer will conduct verification testing to verify acceptance procedures. Only ACI Level I qualified personnel will perform the verification testing. The Engineer will determine according to KM 64-113 when the Contractor is to perform random sampling and testing. The Engineer will notify the Contractor immediately prior to required random sampling and testing.

   The Engineer will test at a minimum frequency of one per every 8 acceptance tests made by the contractor. The Engineer reserves the right to increase the frequency of testing when deemed necessary. The Engineer will perform verification testing on independent samples from the same batch and location as the Contractor's tested sublot and promptly compare results. Additionally, the Engineer may select any portion of any sublot at any time to verify specifications limits. All verification cylinders will be the same size as the contractors acceptance cylinders.

   When the verification test results differ from the Contractor's test results by more than tolerances shown below, the discrepancy must be resolved and documented along with the verification results. The dispute resolution outlined in Section 113 will be utilized to verify the acceptability of the concrete.

   The Department will witness and document a minimum of 75 percent of the tests.

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Acceptance/Verification Tolerance*	
Test	**Tolerance**
Air Content	±0.75%
Compressive Strength	±15%
Temperature	±3 °F
Slump	±25% of maximum limit

*These tolerances only apply to verification samples

2) Core Evaluation for Class P Concrete. When investigation is required according to part 3.2-6 of this note, the Engineer will direct the Contractor in obtaining cores and take possession of the cores for testing. All expenses in obtaining and testing cores will be the responsibility of the contractor. The Engineer will evaluate cores as follows:

   a) If core strengths are equal to or greater than 90 percent of minimum required compressive strength, the core strengths will be substituted for the low/missing cylinder(s) to determine PWL. Lots affected will not be eligible for incentive adjustments but may achieve 100 percent maximum pay.
   b) If core strengths are below 90 percent of minimum required compressive strength, a design analysis will be required to determine if strength is adequate.

      1) If strength is determined to be adequate, the core strengths will be substituted for the low/missing cylinder(s) to determine PWL.
      2) If strength is determined not to be adequate, the lot or sublot containing the failing concrete shall be removed and replaced at the Contractor's expense. The Contractor may be given the option of obtaining additional cores to more accurately identify the extent of removal required.

   c) If the hardened air content is found to be acceptable, the air results will be substituted for the failing/missing air result to determine PWL. Lots affected will not be eligible for incentive adjustments but may receive 100 percent maximum pay.
   d) If the hardened air content is found to be unacceptable, the concrete is subject to removal.

4.0 MEASUREMENT.

4.1 Class P (JPC Pavement, Base, and Shoulders). The Department will measure JPC Pavement, Base, and Shoulder according to Subsections 501.04.01, 501.04.02, and 501.04.03 respectively.

The Department will not measure the strength and air content of the pavement concrete as a separate pay unit, but will analyze the strength and air content data as provided by Contractor to calculate pay factors for each separate lot of JPC Pavement, Base, and Shoulders.

4.2 Measurement of Dispute Items. Disputed items may require a third party resolution by a mutually agreeable laboratory. If the independent laboratory testing and investigation indicates that the Department's tests are correct, pay the cost of the

investigation. If the independent laboratory testing and investigation indicates that the Department's tests are not correct, the Department will pay the cost of the investigation.

When the dispute is resolved at any level, and the Department's verification tests are correct, the Department will base the Contractor's pay on the Department's verification test results rather than on the Contractor's acceptance test results. When the Department's verification tests are not correct, the Department will base the Contractor's pay on the Contractor's test results as the appropriate section or subsection specifies.

4.3 Measurement of Quality Control (QC). The Department will measure the quantity by the lump sum. The Department will not measure the QCP, any actions and personnel required to carry out the QCP, any testing, any testing equipment, or any other work necessary to perform the specified QC/QA procedures and will consider them incidental to this item of work.

5.0 PAYMENT. The Department will calculate pay factors for Class P Concrete only, and will apply them on a lot basis. The Department will apply Concrete QC/QA incentive/disincentive adjustment as a one-time Concrete Adjustment prior to final payment. When net bonuses exceed net penalties for concrete for the total project, the Department will pay the net difference. When net penalties, derived from Percent Within Limits (PWL) and incentive/disincentive calculations, exceed net bonuses for concrete for the total project, the Department will deduct the net difference. For concrete not requiring PWL and incentive/disincentive calculations, the Department will apply penalties according to the appropriate subsection or application. Additional pay adjustments may be applicable for concrete pavement thickness and ride quality in accordance with the Special Notes or Standard Specifications.

Code	Pay Item	Pay Unit
02069-02071, 02073, 02075, 02084, 02086, 02088	JPC Pavement Non-Reinforced, thickness	See Subsection 501.05
02072, 02077, 02078, 02081-02083, 02087, 02089	JPC Pavement Non-Reinforced Shoulder, thickness	See Subsection 501.05
02061, 02064, 02065	PCC Base, thickness	See Subsection 501.05
20181ES	QC for Class P Concrete	Lump Sum
----	Concrete Adjustment[(1)]	Each

(1) The Department will determine pay factors and adjust the price based on the strength and air content of the concrete.

January 1, 2008

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**Procedures for Percent Within Limits (PWL)
and Pay Factor Calculations**

The Contractor's QC testing data must be validated by the Department's verification tests. A percent within limit (PWL) analysis is used to determine how various specified limits are met by the Contractor. The procedure calls for determining the mean and standard deviation of acceptance data. Determine the following quality indices based upon the mean, standard deviation and upper/lower specification limits. The upper/lower limits for air content PWL calculations will be ± 2.0% of the target air content for Class-P Concrete. If there is no upper specification limit (e.g. compressive strength), the upper quality index will be considered 100% within limits.

Q_u = (Upper Specification Limit - Average) / Standard Deviation

Q_L = (Average - Lower Specification Limit) / Standard Deviation

Where:

Standard Deviation = $[\text{Sum}(\text{Individual Measurement} - \text{Average})^2 / (n-1)]^{1/2}$, and

n = Number of Measurements.

There will be 2 sets of Qu's and Ql's calculated for the air content. The first set will be calculated based on the range of ± 2.0% if the target air percentage, with the upper limit shown as:

Qu = {(Target Air % + 2.0) – Average Air %} / Standard Deviation of the air content

The second set will be calculated on a target of ± 1.0 % of the target air percentage, with the upper limit shown as:

Qu = {(Target Air % + 1.0) – Average Air %} / Standard Deviation of the air content

These values will be used to derive separate PWL's and then these PWL's will be used to obtain the combined air pay factor.

Use the values for the Q_u, and Q_L and enter in the PWL tables and determine PWL_u, and PWL_L, respectively. If the values for Q_u or Q_L are determined to be negative, follow the directions given on the PWL tables. Round-off the calculated numbers to 2 decimal places.

Determine the total PWL for each specified requirement using the following relationship.

$PWL = (PWL_u + PWL_L) - 100$

The PWL for each specified requirement per lot is then used to determine the lot's acceptance/rejection status and its appropriate pay factor.

The Combined Air Content Pay Factor will be calculated as:

$((25+(PWL_{@\pm2}*0.25))+(0.0125*PWL_{@\pm1}))/100$, and the Strength Pay Factor will be calculated as ((26.25+(0.25*PWL))/100

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Lot Pay Factor will be calculated as: (Air Pay Factor+Strength Pay Factor)

The lowest Pay Factor will be limited to 0.85 for Class-P Concrete.

Missing Data:

The first sublot missing test results per project will be permitted with no reduction in pay. The lot will be calculated based on the remaining test results if the sample size is three or more. The second sublot missing test results will require a 10% deduct for that lot. All additional sublots missing data will receive a 25% deduct applied to the lot for each sublot missing data.

Any lot missing more than 25% of the required tests for strength or air will require coring and testing. The results will be evaluated according to (3.4-2).

NOTE: All calculations are rounded to 2 decimal places except the Lot Pay Factor and the Project Pay Factor which are carried to 6 decimal places.

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Table A-1. Percent Within Limits (PWL) for Selected Sample Sizes (N). (Courtesy of FHWA-SA-96-026, 1996)

PERCENT WITHIN LIMITS ESTIMATION TABLE
VARIABILITY-UNKNOWN PROCEDURE
STANDARD DEVIATION METHOD
SAMPLE SIZE 3

Second Decimal Places For Q

Q	***0.00***	***0.01***	***0.02***	***0.03***	***0.04***	***0.05***	***0.06***	***0.07***	***0.08***	***0.09***
0.00	50.00	50.28	50.55	50.83	51.10	51.38	51.65	51.93	52.21	52.48
0.10	52.76	53.04	53.31	53.59	53.87	54.15	54.42	54.70	54.98	55.26
0.20	55.54	55.82	56.10	56.38	56.66	56.95	57.23	57.51	57.80	58.08
0.30	58.37	58.65	58.94	59.23	59.51	59.80	60.09	60.38	60.67	60.97
0.40	61.26	61.55	61.85	62.15	62.44	62.74	63.04	63.34	63.65	63.95
0.50	64.25	64.56	64.87	65.18	65.49	65.80	66.12	66.43	66.75	67.07
0.60	67.39	67.72	68.04	68.37	68.70	69.03	69.37	69.70	70.04	70.39
0.70	70.73	71.08	71.43	71.78	72.14	72.50	72.87	73.24	73.61	73.98
0.80	74.36	74.75	75.14	75.53	75.93	76.33	76.74	77.16	77.58	78.01
0.90	78.45	78.89	79.34	79.81	80.27	80.75	81.25	81.75	82.26	82.79
1.00	83.33	83.89	84.47	85.07	85.69	86.34	87.02	87.73	88.49	89.29
1.10	90.16	91.11	92.18	93.40	94.92	97.13	100.00	100.00	100.00	100.00

Numbers in the body of this table are estimates of percent within limits (PWL) corresponding to specific values of Q, the QUALITY INDEX. For Q values less than zero, subtract the table value from 100.

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Table A-2. Percent Within Limits (PWL) for Selected Sample Sizes (N)
(Courtesy of FHWA-SA-96-026, 1996)

PERCENT WITHIN LIMITS ESTIMATION TABLE
VARIABILITY-UNKNOWN PROCEDURE
STANDARD DEVIATION METHOD
SAMPLE SIZE 4

	Second Decimal Places For Q									
Q	***0.00***	***0.01***	***0.02***	***0.03***	***0.04***	***0.05***	***0.06***	***0.07***	***0.08***	***0.09***
0.00	50.00	50.33	50.67	51.00	51.33	51.67	52.00	52.33	52.67	53.00
0.10	53.33	53.67	54.00	54.33	54.67	55.00	55.33	55.67	56.00	56.33
0.20	56.67	57.00	57.33	57.67	58.00	58.33	58.67	59.00	59.33	59.67
0.30	60.00	60.33	60.67	61.00	61.33	61.67	62.00	62.33	62.67	63.00
0.40	63.33	63.67	64.00	64.33	64.67	65.00	65.33	65.67	66.00	66.33
0.50	66.67	67.00	67.33	67.67	68.00	68.33	68.67	69.00	69.33	69.67
0.60	70.00	70.33	70.67	71.00	71.33	71.67	72.00	72.33	72.67	73.00
0.70	73.33	73.67	74.00	74.33	74.67	75.00	75.33	75.67	76.00	76.33
0.80	76.67	77.00	77.33	77.67	78.00	78.33	78.67	79.00	79.33	79.67
0.90	80.00	80.33	80.67	81.00	81.33	81.67	82.00	82.33	82.67	83.00
1.00	83.33	83.67	84.00	84.33	84.67	85.00	85.33	85.67	86.00	86.33
1.10	86.67	87.00	87.33	87.67	88.00	88.33	88.67	89.00	89.33	89.67
1.20	90.00	90.33	90.67	91.00	91.33	91.67	92.00	92.33	92.67	93.00
1.30	93.33	93.67	94.00	94.33	94.67	95.00	95.33	95.67	96.00	96.33
1.40	96.67	97.00	97.33	97.67	98.00	98.33	98.67	99.00	99.33	99.67
1.50	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Numbers in the body of this table are estimates of percent within limits (PWL) corresponding to specific values of Q, the QUALITY INDEX. For Q values less than zero, subtract the table value from 100.

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Table A-3. Percent Within Limits (PWL) for Selected Sample Sizes (N). (Courtesy of FHWA-SA-96-026, 1996)

PERCENT WITHIN LIMITS ESTIMATION TABLE
VARIABILITY-UNKNOWN PROCEDURE
STANDARD DEVIATION METHOD
SAMPLE SIZE 5

	Second Decimal Places For Q									
Q	***0.00***	***0.01***	***0.02***	***0.03***	***0.04***	***0.05***	***0.06***	***0.07***	***0.08***	***0.09***
0.00	50.00	50.36	50.71	51.07	51.42	51.78	52.13	52.49	52.85	53.20
0.10	53.56	53.91	54.27	54.62	54.98	55.33	55.69	56.04	56.39	56.75
0.20	57.10	57.46	57.81	58.16	58.52	58.87	59.22	59.57	59.92	60.28
0.30	60.63	60.98	61.33	61.68	62.03	62.38	62.72	63.07	63.42	63.77
0.40	64.12	64.46	64.81	65.15	65.50	65.84	66.19	66.53	66.87	67.22
0.50	67.56	67.90	68.24	68.58	68.92	69.26	69.60	69.94	70.27	70.61
0.60	70.95	71.28	71.61	71.95	72.28	72.61	72.94	73.27	73.60	73.93
0.70	74.26	74.59	74.91	75.24	75.56	75.89	76.21	76.53	76.85	77.17
0.80	77.49	77.81	78.13	78.44	78.76	79.07	79.38	79.69	80.00	80.31
0.90	80.62	80.93	81.23	81.54	81.84	82.14	82.45	82.74	83.04	83.34
1.00	83.64	83.93	84.22	84.52	84.81	85.09	85.38	85.67	85.95	86.24
1.10	86.52	86.80	87.07	87.35	87.63	87.90	88.17	88.44	88.71	88.98
1.20	89.24	89.50	89.77	90.03	90.28	90.54	90.79	91.04	91.29	91.54
1.30	91.79	92.03	92.27	92.51	92.75	92.98	93.21	93.44	93.67	93.90
1.40	94.12	94.34	94.56	94.77	94.98	95.19	95.40	95.61	95.81	96.01
1.50	96.20	96.39	96.58	96.77	96.95	97.13	97.31	97.48	97.65	97.81
1.60	97.97	98.13	98.28	98.43	98.58	98.72	98.85	98.98	99.11	99.23
1.70	99.34	99.45	99.55	99.64	99.73	99.81	99.88	99.94	99.98	100.00

Numbers in the body of this table are estimates of percent within limits (PWL) corresponding to specific values of Q, the QUALITY INDEX. For Q values less than zero, subtract the table value from 100.

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Table A-4. Percent Within Limits (PWL) for Selected Sample Sizes (N)
(Courtesy of FHWA-SA-96-026, 1996)

PERCENT WITHIN LIMITS ESTIMATION TABLE
VARIABILITY-UNKNOWN PROCEDURE
STANDARD DEVIATION METHOD
SAMPLE SIZE 6

	Second Decimal Places For Q									
Q	***0.00***	***0.01***	***0.02***	***0.03***	***0.04***	***0.05***	***0.06***	***0.07***	***0.08***	***0.09***
0.00	50.00	50.37	50.73	51.10	51.47	51.84	52.20	52.57	52.94	53.30
0.10	53.67	54.04	54.40	54.77	55.14	55.50	55.87	56.23	56.60	56.96
0.20	57.32	57.69	58.05	58.41	58.78	59.14	59.50	59.86	60.22	60.58
0.30	60.94	61.30	61.66	62.02	62.38	62.73	63.09	63.45	63.80	64.16
0.40	64.51	64.86	65.21	65.57	65.92	66.27	66.62	66.96	67.31	67.66
0.50	68.00	68.35	68.69	69.04	69.38	69.72	70.06	70.40	70.74	71.07
0.60	71.41	71.75	72.08	72.41	72.74	73.08	73.40	73.73	74.06	74.39
0.70	74.71	75.04	75.36	75.68	76.00	76.32	76.63	76.95	77.26	77.58
0.80	77.89	78.20	78.51	78.82	79.12	79.43	79.73	80.03	80.33	80.63
0.90	80.93	81.22	81.51	81.81	82.10	82.39	82.67	82.96	83.24	83.52
1.00	83.90	84.08	84.36	84.63	84.91	85.18	85.45	85.71	85.98	86.24
1.10	86.50	86.76	87.02	87.28	87.53	87.78	88.03	88.28	88.53	88.77
1.20	89.01	89.25	89.49	89.72	89.96	90.19	90.42	90.64	90.87	91.09
1.30	91.31	91.52	91.74	91.95	92.16	92.37	92.58	92.78	92.98	93.18
1.40	93.37	93.57	93.76	93.95	94.13	94.32	94.50	94.67	94.85	95.02
1.50	95.19	95.36	95.53	95.69	95.85	96.00	96.16	96.31	96.46	96.60
1.60	96.75	96.89	97.03	97.16	97.29	97.42	97.55	97.67	97.79	97.91
1.70	98.02	98.13	98.24	98.34	98.45	98.55	98.64	98.73	98.82	98.91
1.80	98.99	99.07	99.15	99.22	99.29	99.36	99.43	99.49	99.54	99.60
1.90	99.65	99.70	99.74	99.78	99.82	99.85	99.88	99.91	99.93	99.95
2.00	99.97	99.98	99.99	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Numbers in the body of this table are estimates of percent within limits (PWL) corresponding to specific values of Q, the QUALITY INDEX. For Q values less than zero, subtract the table value from 100.

10E

Table A-5. Percent Within Limits (PWL) for Selected Sample Sizes (N)
(Courtesy of FHWA-SA-96-026, 1996)

PERCENT WITHIN LIMITS ESTIMATION TABLE
VARIABILITY-UNKNOWN PROCEDURE
STANDARD DEVIATION METHOD
SAMPLE SIZE 7

	Second Decimal Places For Q									
Q	***0.00***	***0.01***	***0.02***	***0.03***	***0.04***	***0.05***	***0.06***	***0.07***	***0.08***	***0.09***
0.00	50.00	50.37	50.75	51.12	51.50	51.87	52.24	52.62	52.99	53.37
0.10	53.74	54.11	54.49	54.86	55.23	55.60	55.97	56.35	56.72	57.09
0.20	57.46	57.83	58.20	58.56	58.93	59.30	59.67	60.03	60.40	60.77
0.30	61.13	61.50	61.86	62.22	62.58	62.94	63.31	63.67	64.02	64.38
0.40	64.74	65.10	65.45	65.81	66.16	66.51	66.87	67.22	67.57	67.92
0.50	68.26	68.61	68.96	69.30	69.64	69.99	70.33	70.67	71.01	71.34
0.60	71.68	72.02	72.35	72.68	73.01	73.34	73.67	74.00	74.32	74.65
0.70	74.97	75.29	75.61	75.93	76.25	76.56	76.88	77.19	77.50	77.81
0.80	78.12	78.42	78.73	79.03	79.33	79.63	79.93	80.22	80.52	80.81
0.90	81.10	81.39	81.67	81.96	82.24	82.52	82.80	83.08	83.35	83.63
1.00	83.90	84.17	84.44	84.70	84.97	85.23	85.49	85.74	86.00	86.25
1.10	86.51	86.75	87.00	87.25	87.49	87.73	87.97	88.21	88.44	88.67
1.20	88.90	89.13	89.35	89.58	89.80	90.02	90.23	90.45	90.66	90.87
1.30	91.07	91.28	91.48	91.68	91.88	92.08	92.27	92.46	92.65	92.83
1.40	93.02	93.20	93.38	93.55	93.73	93.90	94.07	94.23	94.40	94.56
1.50	94.72	94.87	95.03	95.18	95.33	95.48	95.62	95.76	95.90	96.04
1.60	96.17	96.31	96.43	96.56	96.69	96.81	96.93	97.05	97.16	97.27
1.70	97.38	97.49	97.59	97.70	97.80	97.89	97.99	98.08	98.17	98.26
1.80	98.35	98.43	98.51	98.59	98.66	98.74	98.81	98.88	98.94	99.01
1.90	99.07	99.13	99.19	99.24	99.30	99.35	99.40	99.44	99.49	99.53
2.00	99.57	99.61	99.64	99.68	99.71	99.74	99.77	99.79	99.82	99.84
2.10	99.86	99.88	99.90	99.92	99.93	99.94	99.95	99.96	99.97	99.98
2.20	99.99	99.99	99.99	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Numbers in the body of this table are estimates of percent within limits (PWL) corresponding to specific values of Q, the QUALITY INDEX. For Q values less than zero, subtract the table value from 100.

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Table A-6. Percent Within Limits (PWL) for Selected Sample Sizes (N)
(Courtesy of FHWA-SA-96-026, 1996)

PERCENT WITHIN LIMITS ESTIMATION TABLE
VARIABILITY-UNKNOWN PROCEDURE
STANDARD DEVIATION METHOD
SAMPLE SIZE 8

	Second Decimal Places For Q									
Q	***0.00***	***0.01***	***0.02***	***0.03***	***0.04***	***0.05***	***0.06***	***0.07***	***0.08***	***0.09***
0.00	50.00	50.38	50.76	51.14	51.51	51.89	52.27	52.65	53.03	53.41
0.10	53.78	54.16	54.54	54.92	55.29	55.67	56.04	56.42	56.79	57.17
0.20	57.54	57.92	58.29	58.66	59.03	59.41	59.78	60.15	60.52	60.89
0.30	61.25	61.62	61.99	62.35	62.72	63.08	63.45	63.81	64.17	64.53
0.40	64.89	65.25	65.61	65.96	66.32	66.67	67.03	67.38	67.73	68.08
0.50	68.43	68.78	69.13	69.47	69.82	70.16	70.50	70.84	71.18	71.52
0.60	71.85	72.19	72.52	72.85	73.18	73.51	73.84	74.17	74.49	74.81
0.70	75.14	75.46	75.77	76.09	76.41	76.72	77.03	77.34	77.65	77.96
0.80	78.26	78.56	78.86	79.16	79.46	79.76	80.05	80.34	80.63	80.92
0.90	81.21	81.49	81.77	82.05	82.33	82.61	82.88	83.15	83.43	83.69
1.00	83.96	84.22	84.49	84.75	85.00	85.26	85.51	85.76	86.01	86.26
1.10	86.51	86.75	86.99	87.23	87.46	87.70	87.93	88.16	88.39	88.61
1.20	88.83	89.06	89.27	89.49	89.70	89.91	90.12	90.33	90.53	90.74
1.30	90.94	91.13	91.33	91.52	91.71	91.90	92.09	92.27	92.45	92.63
1.40	92.81	92.98	93.15	93.32	93.49	93.65	93.81	93.97	94.13	94.29
1.50	94.44	94.59	94.74	94.88	95.03	95.17	95.31	95.44	95.58	95.71
1.60	95.84	95.97	96.09	96.21	96.33	96.45	96.57	96.68	96.79	96.90
1.70	97.01	97.11	97.21	97.31	97.41	97.51	97.60	97.69	97.78	97.87
1.80	97.96	98.04	98.12	98.20	98.28	98.35	98.42	98.49	98.56	98.63
1.90	98.69	98.76	98.82	98.88	98.93	98.99	99.04	99.09	99.14	99.19
2.00	99.24	99.28	99.33	99.37	99.41	99.45	99.48	99.52	99.55	99.58
2.10	99.61	99.64	99.67	99.70	99.72	99.74	99.77	99.79	99.81	99.83
2.20	99.84	99.86	99.87	99.89	99.90	99.91	99.92	99.93	99.94	99.95
2.30	99.96	99.96	99.97	99.98	99.98	99.98	99.99	99.99	99.99	100.00

Numbers in the body of this table are estimates of percent within limits (PWL) corresponding to specific values of Q, the QUALITY INDEX. For Q values less than zero, subtract the table value from 100.

10T

SPECIAL NOTE FOR ACCEPTANCE OF JPC PAVEMENT THICKNESS

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

1.0 DESCRIPTION. This Special Note covers the requirements for thickness of JPC pavement. Contrary to Subsection 501.03.21 and 501.05.01, the Department will accept JPC pavement thickness from cores based on a percent within limits (PWL) per lot. The PWL will not apply for projects involving less than 2,500 square yards of pavement per bid item. For quantities less than 2,500 square yards of pavement per bid item, acceptance will be in accordance with 3.1.2 of this note.

2.0 MATERIALS. Reserved

3.0 CONSTRUCTION.

3.1 Pavement Thickness. The Engineer will determine random sampling locations according to KM 64-113. Obtain 8 cores per lot at the randomly selected locations under the observance of the Engineer. Cut cores with a nominal diameter of not less than 4 inches. Take all cores after any corrective grinding. Provide the cores to the Engineer immediately. The Department will measure cores according to KM 64-308, taking 5 measurements for all cores. Furnish all tools, labor, and materials for cutting samples and filling the cored hole. Fill core holes with a non-shrink grout approved by the Engineer within one day after sampling.

When a core thickness is deficient by one inch or more, the Department will not accept the pavement. Remove and replace the deficient pavement. Take another random core from the sublot as the Engineer directs to determine the PWL.

3.1.1 Lot Size. The Department will divide each pavement bid item into lots of 6,000 linear feet of paved width. The lot will be divided into 8 sublots of equal length (750 feet). Take a core from each sublot for determination of pavement thickness.

For bid items with over 2,500 square yards and less than 6,000 linear feet of paved width, project area will be divided into 4 equal sublots for determination of PWL.

For a remainder lot of less than 3,000 feet, the Department will add the quantity of pavement to the previous lot and the 8 sublots will be equally divided over the increased length. For a remainder lot of 3,000 feet or greater, the Department will divide the remainder lot into 8 equal sublots for acceptance.

3.1.2 Small Quantities and Miscellaneous Areas. For quantities less than 2,500 square yards per bid item and for miscellaneous areas, the acceptance may be based on either of the following:

1) Engineer's inspection of the base grade elevation in relation to the forms, or
2) Engineer's monitoring of the yield rate and visual inspection of the placement,

Miscellaneous areas are entrances and tapers less than 10 feet wide. Furnish cores for areas where there are indications of deficient thickness as the Engineer directs. Replace areas found deficient by one inch or more at no cost. The Engineer will evaluate areas found deficient by 0.50 to 0.99 inches according to Subsection 105.04 for acceptance.

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3.1.3 Statistical Evaluation. The Department will use the Variability-Unknown/Standard Deviation Method to determine the estimate percentage of the lot that is within the specification limits (PWL). The Engineer will calculate the lower quality index (QL)

$$QL = \frac{\text{Average} - LSL}{s}$$

Where: Average = the arithmetic mean of the test values. The average will be determined to the nearest tenth of an inch.
LSL = the specified thickness minus 0.20 inch.
s = Standard Deviation = [Sum (Individual Measurement - Average)^2 / (n-1)]$^{1/2}$, determined to 2 decimal places.
N = Number of measurements.

QL will be determined to 2 decimal places.

For calculation of PWL, core thickness greater than 0.75 inches more than the specified thickness will be rounded down to the specified thickness plus 0.75 inch.

Percent Within Limits (PWL) will be determined by the attached tables with QL, for n = the number of tests for the Lot. PWL will be determined to 2 decimal places.

For all calculations round down when the last significant digit is followed by a number less than 5 and round up when the last significant digit is followed by a number equal to or greater than 5.

4.0 MEASUREMENT. The Department will not measure for payment any work or materials required to supply the cores or grout the holes and will consider it incidental to JPC Pavement.

5.0 PAYMENT. The Department will base acceptance of each lot of material on the percentage of material within specification limits (PWL). The following equation will determine the pay factor for thickness: PF % = 52.5 + 0.5 PWL. The Department will round the Pay Factor to 2 decimal places as noted above.

January 1, 2008

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PERCENT WITHIN LIMITS ESTIMATION TABLE
Variability - Unknown Procedure
Standard Deviation Method
Sample Size 4

Q	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	50.00	50.33	50.67	51.00	51.33	51.67	52.00	52.33	52.67	53.00
0.1	53.33	53.67	54.00	54.33	54.67	55.00	55.33	55.67	56.00	56.33
0.2	56.67	57.00	57.33	57.67	58.00	58.33	58.67	59.00	59.33	59.67
0.3	60.00	60.33	60.67	61.00	61.33	61.67	62.00	62.33	62.67	63.00
0.4	63.33	63.67	64.00	64.33	64.67	65.00	65.33	65.67	66.00	66.33
0.5	66.67	67.00	67.33	67.67	68.00	68.33	68.67	69.00	69.33	69.67
0.6	70.00	70.33	70.67	71.00	71.33	71.67	72.00	72.33	72.67	73.00
0.7	73.33	73.67	74.00	74.33	74.67	75.00	75.33	75.67	76.00	76.33
0.8	76.67	77.00	77.33	77.67	78.00	78.33	78.67	79.00	79.33	79.67
0.9	80.00	80.33	80.67	81.00	81.33	81.67	82.00	82.33	82.67	83.00
1.0	83.33	83.67	84.00	84.33	84.67	85.00	85.33	85.67	86.00	86.33
1.1	86.67	87.00	87.33	87.67	88.00	88.33	88.67	89.00	89.33	89.67
1.2	90.00	90.33	91.67	91.00	91.33	91.67	92.00	92.33	92.67	93.00
1.3	93.33	93.67	94.00	94.33	94.67	95.00	95.33	95.67	96.00	96.33
1.4	96.67	97.00	97.33	97.67	98.00	98.33	98.67	99.00	99.33	99.67
1.5	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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PERCENT WITHIN LIMITS ESTIMATION TABLE
Variability - Unknown Procedure
Standard Deviation Method
Sample Size 8

Q	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	50.00	50.38	50.76	51.14	51.51	51.89	52.27	52.65	53.03	53.41
0.1	53.78	54.16	54.54	54.92	55.29	55.67	56.04	56.42	56.79	57.17
0.2	57.54	57.92	58.29	58.66	59.03	59.41	59.78	60.15	60.52	60.89
0.3	61.25	61.62	61.99	62.35	62.72	63.08	63.45	63.81	64.17	64.53
0.4	64.89	65.25	65.61	65.96	66.32	66.67	67.03	67.38	67.73	68.08
0.5	68.43	68.78	69.13	69.47	69.82	70.16	70.50	70.84	71.18	71.52
0.6	71.85	72.19	72.52	72.85	73.18	73.51	73.84	74.17	74.49	74.81
0.7	75.14	75.46	75.77	76.09	76.41	76.72	77.03	77.34	77.65	77.96
0.8	78.26	78.56	78.86	79.16	79.46	79.76	80.05	80.34	80.63	80.92
0.9	81.21	81.49	81.77	82.05	82.33	82.61	82.88	83.15	83.43	83.69
1.0	83.96	84.22	84.49	84.75	85.00	85.26	85.51	85.76	86.01	86.26
1.1	86.51	86.75	86.99	87.23	87.46	87.70	87.93	88.16	88.39	88.61
1.2	88.83	89.06	89.27	89.49	89.70	89.91	90.12	90.33	90.53	90.74
1.3	90.94	91.13	91.33	91.52	91.71	91.9	92.09	82.27	92.45	92.63
1.4	92.81	92.98	93.15	93.32	93.49	93.65	93.81	93.97	94.13	94.29
1.5	94.44	94.59	94.74	94.88	95.03	95.17	95.31	95.44	95.58	95.71
1.6	95.84	95.97	96.09	96.21	96.33	96.45	96.57	96.68	96.79	96.90
1.7	97.01	97.11	97.21	97.31	97.41	97.51	97.60	97.69	97.78	97.87
1.8	97.96	98.04	98.12	98.20	98.28	98.35	98.42	98.49	98.56	98.63
1.9	98.69	98.76	98.82	98.88	98.93	98.99	99.04	99.09	99.14	99.19
2.0	99.24	99.28	99.33	99.37	99.41	99.45	99.48	99.52	99.55	99.58
2.1	99.61	99.64	99.67	99.7	99.72	99.74	99.77	99.79	99.81	99.83
2.2	99.84	99.86	99.87	99.89	99.90	99.91	99.92	99.93	99.94	99.95
2.3	99.96	99.96	99.97	99.98	99.98	99.98	99.99	99.99	99.99	100.00

11J

SPECIAL NOTE FOR FULL DEPTH CONCRETE PAVEMENT REPAIR

This Special Note applies to full depth repairs of concrete pavement. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Remove and replace concrete pavement. Comply with the applicable Standard Drawings and the Standard Specifications except as specifically superseded herein.

2.0 MATERIALS AND EQUIPMENT.

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

2.2 Dowel Bars and Sleeves. Conform to 811.

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

2.4 Joint Sealants. Conform to Subsection 807.03.01 or 807.03.05.

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

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

2.7 Geotextile Fabric. Conform to Section 843.

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

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

3.0 CONSTRUCTION.

3.1 Removal of Existing Pavement. Remove existing pavement to the extent the Contract specifies or as the Engineer directs. The minimum length of patches measured along centerline is 3 feet on each side of an existing joint.

When working with pavements with non-skewed transverse joints, if it is necessary to remove existing pavement closer than 6 feet to a transverse joint, remove the pavement 3 feet beyond that joint .

When working with pavements with skewed transverse joints, if it is necessary to remove existing pavement closer than 3 feet to a transverse joint, remove the pavement 3 feet beyond that joint.

Details of configurations of pavement and joints for various situations are depicted in the drawings herein.

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

In the removal operation, make a full depth saw cut longitudinally along the centerline joint and shoulder joint and transversely along the area marked for removal. To prevent damage to the subbase, do not allow the saw to penetrate more than ½" into the subbase. The Engineer may direct or approve additional cuts within the removal area for ease of removal of the damaged slab and to prevent damage to adjacent pavement to remain in place. Do not overcut beyond the limits of the removal area. Prevent saw slurry from entering existing joints and cracks. To avoid pumping and erosion beneath the slab, do not allow traffic on sawed pavement for more than 48 hours before beginning removal procedures, unless directed by the Engineer.

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

3.2 Pavement Replacement. Do not damage the pavement base during these operations.

3.2.1 Preparation of Base. Compact the new and existing aggregate base to the Engineer's satisfaction. The Engineer will accept compaction by either visual inspection or by nuclear gauge. When the Engineer deems it necessary to stabilize the existing base or replace unsuitable materials, excluding bridge ends, use 12 inches of geotextile fabric wrapped No. 2 aggregate topped with 4 inches of DGA or CSB. Use either Type III or Type IV geotextile fabric. Flowable fill and cement stabilization may be used as an alternative to stabilize the existing base or to replace unsuitable materials when a plan for such is presented to and approved by the Engineer. The Engineer may also direct using only DGA or CSB to correct base deficiencies. At bridge ends, treat existing base and subgrade as the Contract specifies. During compaction, wet the base as the Engineer directs. Compact areas not accessible to compaction equipment by hand tamping.

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

3.2.3 Pavement Replacement. Using load transfer assemblies for dowel joints drill into the existing slab according to the details shown herein and on the Standard Drawings.

Use plain epoxy coated dowels of the size specified on the standard drawings based on the pavement thickness for contraction and expansion joints.

Drill holes for dowel bars and tie bars into the face of the existing slab, at a diameter as specified in the following. Drill the dowel bar holes and tie bar

holes to a depth equal to 1/2 the length of the bars. Anchor tie bars into the existing pavement using an epoxy resin. Anchor dowel bars into the existing pavement using either an epoxy resin or an adhesive grout. For tie bars and dowel bars where an epoxy resin is to be used drill the holes 1/8 inch larger than the bar diameter. For dowel bars where an adhesive grout product is to be used, drill holes 1/4 inch larger than the bar diameter. Use a clear or opaque grout retention disk in both grout and epoxy applications. Operate the equipment to prevent damage to the pavement being drilled. Obtain the Engineer's approval of the drilling procedure. Install load transfer assemblies according to the Standard Drawings and Standard Specifications.

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

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

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

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

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

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

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

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

4.0 MEASUREMENT.

4.1 Remove JPC Pavement. The Department will measure the quantity in square yards of surface area. The Department will not measure removal of

underlying base material for payment and will consider it incidental to Remove JPC Pavement.

4.2 DGA or CSB. The Department will measure the quantity used to stabilize the existing base or to replace unsuitable material in tons. The Department will not measure removal of existing base material or underlying material for payment and will consider incidental to DGA or CSB. The quantity of DGA used for the drop-off protection shall be incidental to this work and will not be measured for payment.

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

JPC Pavement will be paid according to section 5.0 below and according to the following payment schedule based on the compressive strength. The cylinders for payment will be tested two hours prior the scheduled opening of traffic.

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

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

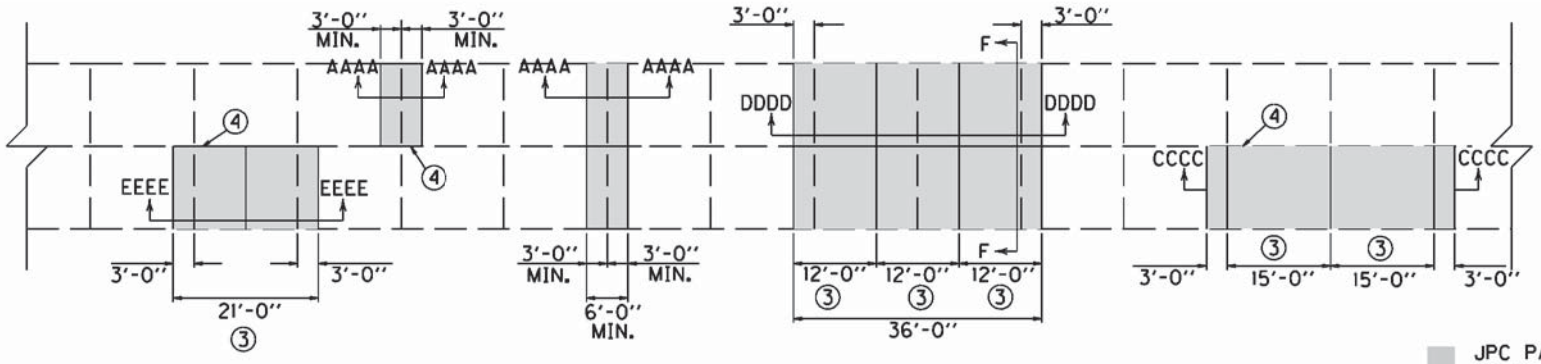
4.4 Underdrains. The Department will measure the quantity according to Subsection 704.04. The Department will not measure lateral drains for payment and will consider them incidental to the Underdrains.

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

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

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

June 15, 2012



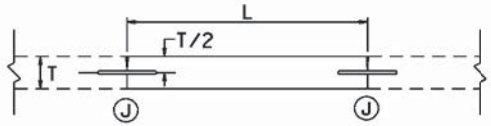
PLAN VIEW

1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (EXCEPT USE TIE BARS FOR SECTION CCCC), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION CCCC) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION CCCC) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.

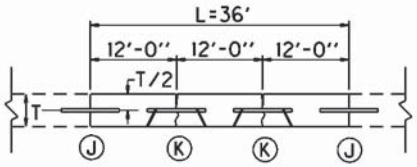
③ IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND CONSTRUCT CONTRACTION JOINTS SUCH THAT THE DISTANCE BETWEEN JOINTS IN THE REPLACED SECTION IS NO LESS THAN 10 FEET OR MORE THAN 20 FEET. TRANSVERSE JOINTS SHALL BE SPACED APPROXIMATELY 15' EQUIDISTANT, BUT NOT LESS THAN 10 FEET OR NO MORE THAN 20 FEET. ADJUST JOINTS TO PROVIDE THE MINIMUM NUMBER OF JOINTS WITHOUT EXCEEDING THE 10-20 FOOT RANGE. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH AN EXISTING JOINT OR CRACK IN THE ADJACENT SLAB IF ONLY ONE LANE IS BEING REPLACED.

④ IF ONLY ONE LANE IS REMOVED, AND L>25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L≤25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.

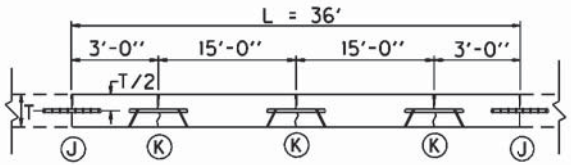
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONTRACTION JOINTS (OR A CONSTRUCTION JOINT FOR LOCATION CCCC) AT LOCATIONS "J". SAW AND SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.



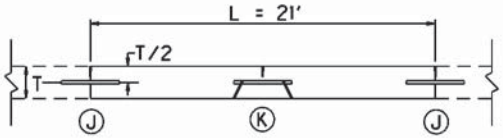
SECTION AAAA
JOINT REPLACEMENT



SECTION DDDD
FULL WIDTH REPLACEMENT
(INCLUDING JPC SHOULDERS)

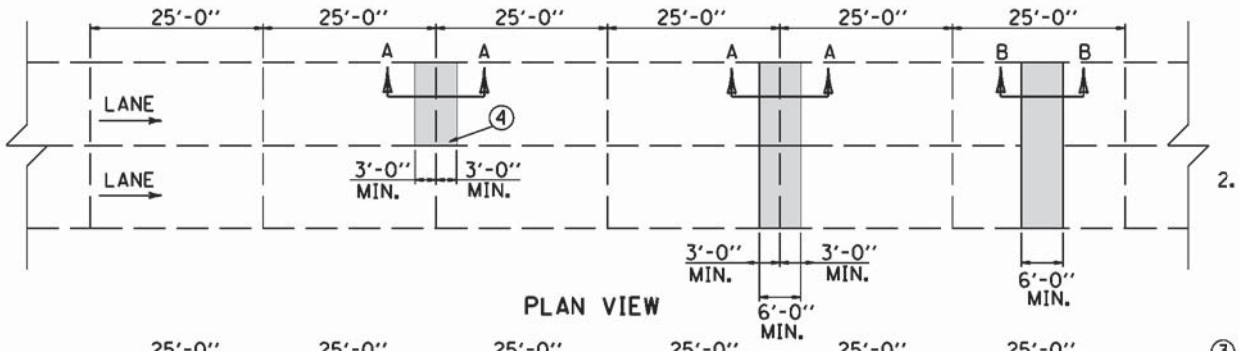


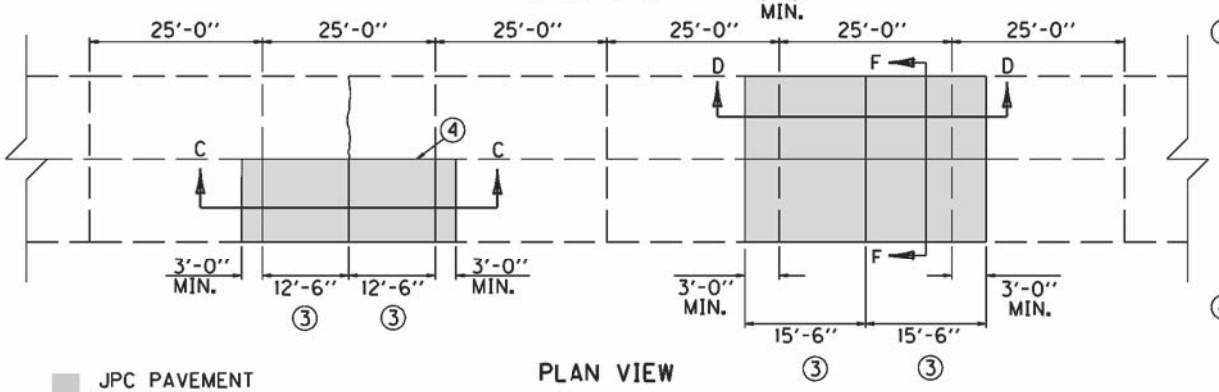
SECTION CCCC
LANE REPLACEMENT WHERE ADJACENT
LANES OR JPC SHOULDERS WILL REMAIN



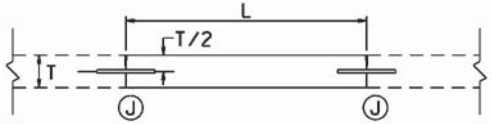
SECTION EEEE
LANE REPLACEMENT L≤25'

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

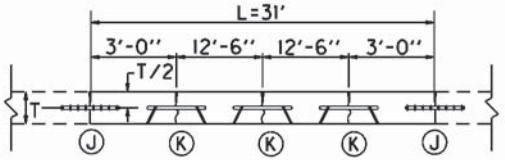




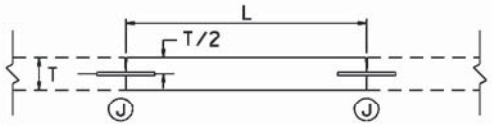
JPC PAVEMENT TO BE REMOVED



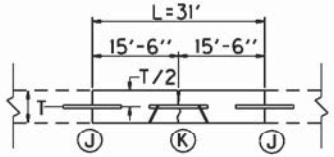
SECTION A
JOINT REPLACEMENT



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



SECTION B
MID-SLAB REPLACEMENT



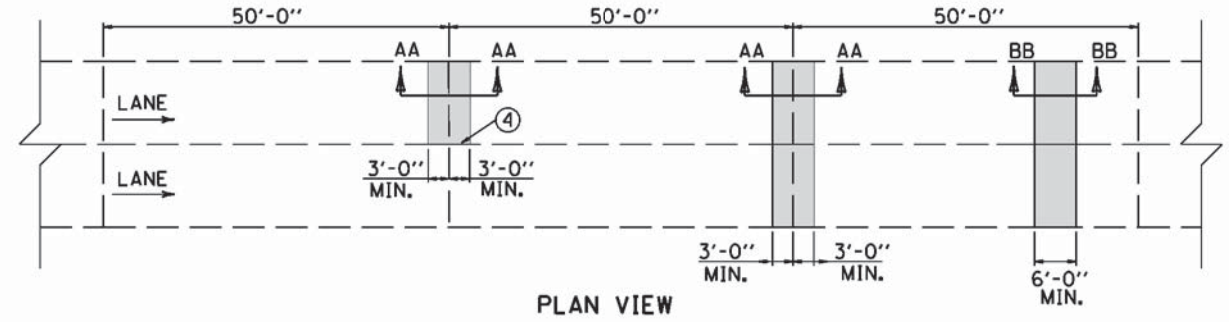
SECTION D
FULL WIDTH REPLACEMENT
(INCLUDING JPC SHOULDERS)

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

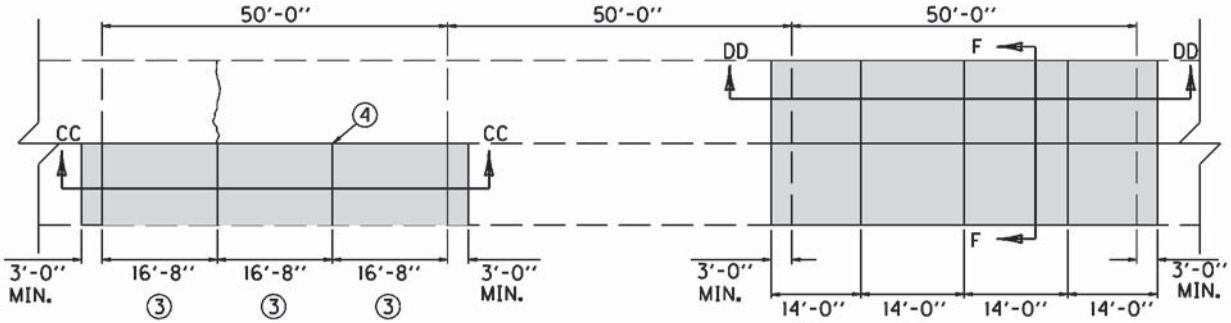
KENTUCKY DEPARTMENT OF HIGHWAYS

25' JOINT SPACING

APPROVED _____ TEBM DIVISION OF DESIGN _____ DATE

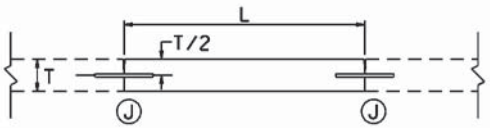


PLAN VIEW

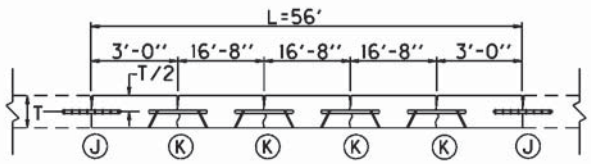


JPC PAVEMENT TO BE REMOVED

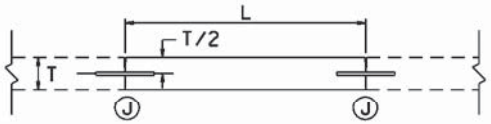
PLAN VIEW



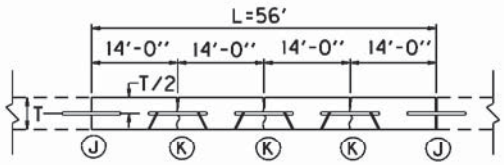
SECTION AA
JOINT REPLACEMENT



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



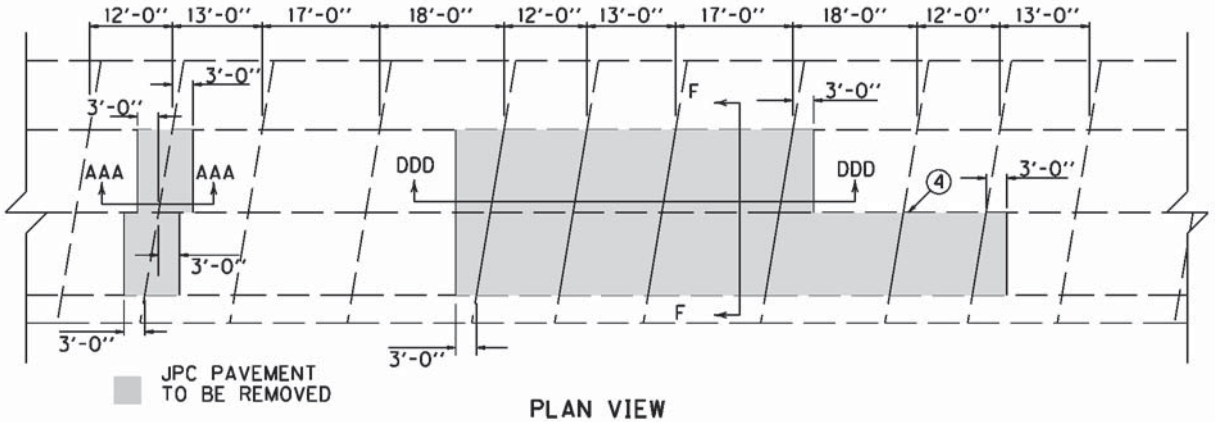
SECTION BB
MID-SLAB REPLACEMENT



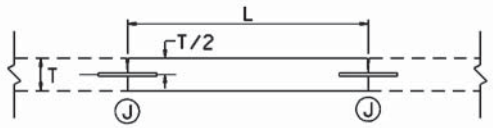
SECTION DD
FULL WIDTH REPLACEMENT
(INCLUDING JPC SHOULDERS)

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

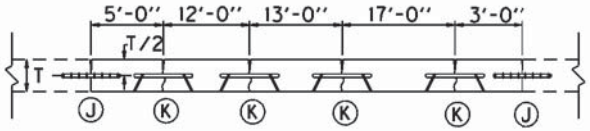
KENTUCKY DEPARTMENT OF HIGHWAYS
50' JOINT SPACING
SUBMITTED _____ TEBM DIVISION OF DESIGN _____ DATE



PLAN VIEW



SECTION AAA
JOINT REPLACEMENT



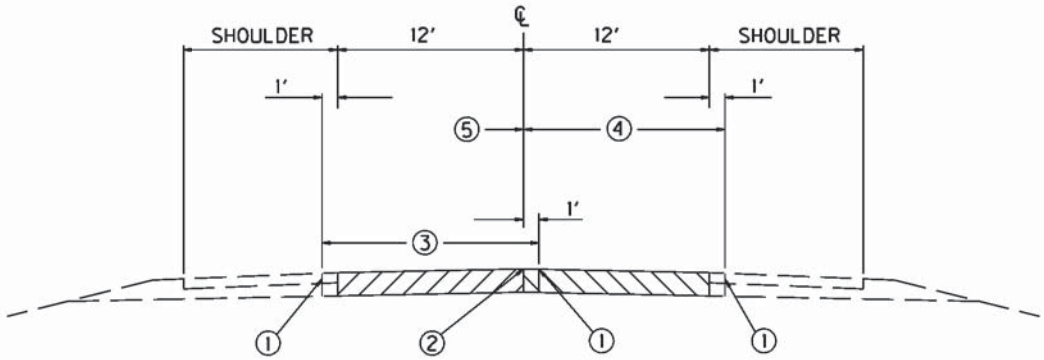
SECTION DDD
LANE REPLACEMENT
(ALWAYS MATCH EXISTING JOINTS)

1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (EXCEPT USE TIE BARS FOR SECTION DDD), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION DDD) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION DDD) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND MATCH EXISTING JOINTS. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH EXISTING JOINTS IN ADJACENT SLABS.

④ IF ONLY ONE LANE IS REMOVED, AND L>25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L≤25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.

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

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



SECTION F

① SAW-CUT LINE. THIS ONE FOOT IS TO ALLOW FOR A FORM AND THE REMOVAL AND REPLACEMENT SHALL BE INCIDENTAL TO THE WORK, EXCEPT NEW ASPHALT MIXTURE SHALL BE PAID DIRECT ON A TONNAGE BASIS, AND NEW JPC PAVEMENT WILL BE PAID BY THE SQUARE YARD. COMPACT THE DGA BASE BY MECHANICAL TAMPERS TO THE ENGINEER'S SATISFACTION.

② EXISTING LONGITUDINAL JOINT.

③ FIRST SLAB REMOVAL LIMITS AND REPLACE 12-FOOT LANE.

④ SECOND SLAB REMOVAL LIMITS AND REPLACE 12-FOOT LANE.

⑤ THIS ONE FOOT IS TO ALLOW FOR A FORM ON THE FIRST POUR, AND A TEMPORARY PAVEMENT IS REQUIRED. THE DEPARTMENT WILL NOT REQUIRE REMOVAL OF THIS ONE FOOT IF THE GRADE OF THE EXISTING PAVEMENT IS ADEQUATE TO ENSURE THE NEW CONCRETE CAN BE PLACED AND FINISHED TO THE SATISFACTION OF THE ENGINEER. ANY TEMPORARY PAVEMENT IS INCIDENTAL TO JPC PAVEMENT.

6. THE ABOVE DRAWING DEPICTS THE ORDER OF SLAB REMOVAL WHEN BOTH ARE TO BE REMOVED AT THE SAME LOCATION. WHEN ONLY ONE SLAB OR LANE IS TO BE REMOVED, REMOVE AND REPLACE ACCORDING TO SECTION C, CC, OR CCCC. TRAFFIC CONTROL WILL SPECIFY WHICH LANE TO REMOVE FIRST.

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

11K

SPECIAL NOTE FOR PARTIAL DEPTH CONCRETE PAVEMENT REPAIR

This Special Note applies to partial depth repairs of concrete pavement. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Remove and replace small, shallow areas of deteriorated concrete that extend no deeper than one-third of the slab thickness. Comply with the applicable Standard Drawings and the Standard Specifications except as specifically superseded herein.

2.0 MATERIALS AND EQUIPMENT.

2.1 JPC Pavement 24/48/72. Conform to Section 502.

2.2 Latex Materials. Conform to Section 606.

2.3 Rapid Set Concrete Patching Materials. See the List of Approved Materials for Rapid and Very Rapid hardening materials from the Division of Materials.

2.4 Hot-Poured Elastic and Silicone Rubber Sealant. Conform to Subsection 807.03.01 or 807.03.05.

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

3.0 CONSTRUCTION.

3.1 Repair Dimension Selection. The locations for partial-depth repair will be identified in the plans or proposal or as specified by the Engineer during construction. Identify the repair boundaries by sounding the concrete with a solid steel rod, a heavy chain, or a ball peen hammer. Repair boundaries should extend a minimum of 3 inches outside unsound areas.

3.2 Concrete Removal. Saw the hole to be patched with a vertical face, to a 2-inch minimum depth and to the configuration the Contract specifies or the Engineer directs. After sawing, keep exposure to traffic to a minimum until patching.

If the area to be patched is deeper than 1/3 the slab depth, construct full depth patches according to the “Special Note for Full-Depth Concrete Pavement Repair”. Partial depth patches that become full depth repairs will be paid forty (40) percent of the unit price for Partial Depth Patching.

Keep overcutting beyond the limits of the removed area to a minimum. Prevent saw slurry from entering existing joints and cracks. Clean all saw slurry and other contaminants from overcutting. Repair the overcut area with a low viscosity epoxy compound.

3.3 Repair Area Preparation. Following the removal of the concrete, the surface of the repair area must be prepared to provide a clean, irregular surface for the development of a good bond between the repair material and the

existing slab. Clean the repair area by sandblasting followed by compressed airblasting to remove dirt, oil, thin layers of unsound concrete, and laitance. The compressed air used in the final cleaning must be free of oil. This should be checked by placing a cloth over the air compressor nozzle and visually inspecting for oil.

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

3.5 Patching Material and Placement.

3.5.1 Portland Cement Patch. Use a mixture conforming to Section 502 except use No. 8 or 9M coarse aggregate. Submit a mix design for the Engineer's approval. Vigorously scrub a grout bond coat into the repair area. Use a grout consisting of a slurry made of water mixed with equal parts of Portland cement and mortar sand.

Place the patch before the grout shows any sign of drying. Cure according to Subsection 502.03. Two applications of curing compound will be required. Remove and replace all areas of the patches that display cracks or are not bonded to the underlying pavement.

3.5.2 Latex Concrete Patch. Prepare the patch area and apply a latex grout bond coat. Furnish, mix, place, and cure the latex concrete according to Section 606. Ensure the curing materials required by Subsection 606.03.17 A) 4) remain in place for the specified time. Remove and replace all areas of the patches that display cracks or are not bonded to the underlying pavement.

3.5.3 Rapid Set Concrete Patching Materials. Furnish a repair material specified as "Rapid" or "Very Rapid" hardening listed on the Division of Materials *List of Approved Materials* when the repair area is required to be opened to traffic in a short time frame. A substitute product may be allowed only after submittal and approval by the Division of Materials. Repair materials should be installed according to the manufacturer's recommendations. All materials used will be tested prior to the project beginning to insure that a minimum opening compressive strength of 3,000 psi can be obtained based on the time requirements listed in the maintenance of traffic notes for the project.

Remove and replace all areas of the patches that display cracks or are not bonded to the underlying pavement.

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

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4.0 MEASUREMENT.

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

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

Code	Pay Item	Pay Unit
02110	Partial Depth Patching	Cubic Foot

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

June 15, 2012

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. 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 such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

EMPLOYMENT REQUIREMENTS
RELATING TO
NONDISCRIMINATION OF EMPLOYEES
(APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)

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.

REVISED: 12-3-92

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.

General Decision Number: KY120125 08/31/2012 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
15	08/31/2012

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

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* ELEC0575-002 05/28/2012

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 30.90	13.44

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-III-III- HWY dated September 5, 2012.

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

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (Executive Order 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.

2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

GOALS FOR MINORITY PARTICIPATION IN EACH TRADE	GOALS FOR FEMALE PARTICIPATION IN EACH TRADE
11.2%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. The notification shall be mailed to:

Evelyn Teague, Regional Director
Office of Federal Contract Compliance Programs
61 Forsyth Street, SW, Suite 7B75
Atlanta, Georgia 30303-8609

4. As used in this Notice, and in the contract resulting from this solicitation, the **"covered area"** is Jefferson County.

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

121362

PROPOSAL BID ITEMS

Report Date 10/26/12

Section: 1 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICI	FP	AMOUNT
0010	00001		DGA BASE	716.00	TON		$	
0020	00069		CRUSHED AGGREGATE SIZE NO 3	500.00	TON		$	
0030	00100		ASPHALT SEAL AGGREGATE	2,121.00	TON		$	
0040	00103		ASPHALT SEAL COAT	255.00	TON		$	
0050	00335		CL4 ASPH SURF 0.50A PG76-22	6,902.00	TON		$	
0060	00461		CULVERT PIPE-15 IN	30.00	LF		$	
0070	00462		CULVERT PIPE-18 IN	8.00	LF		$	
0080	00464		CULVERT PIPE-24 IN	12.00	LF		$	
0090	00469		CULVERT PIPE-42 IN	24.00	LF		$	
0100	01000		PERFORATED PIPE-4 IN	250.00	LF		$	
0110	01010		NON-PERFORATED PIPE-4 IN	50.00	LF		$	
0120	01020		PERF PIPE HEADWALL TY 1-4 IN	1.00	EACH		$	
0130	01310		REMOVE PIPE	74.00	LF		$	
0140	01451		S & F BOX INLET-OUTLET-24 IN	1.00	EACH		$	
0150	01484		CURB BOX INLET TYPE B-T	2.00	EACH		$	
0160	01490		DROP BOX INLET TYPE 1	1.00	EACH		$	
0170	01845		ISLAND INTEGRAL CURB	275.00	LF		$	
0180	01877		SPECIAL HEADER CURB(CONCRETE)	1,000.00	LF		$	
0190	01890		ISLAND HEADER CURB TYPE 1	300.00	LF		$	
0200	01904		REMOVE CURB	300.00	LF		$	
0210	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	193.00	EACH		$	
0220	01983		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	131.00	EACH		$	
0230	01984		DELINEATOR FOR BARRIER - WHITE	16.00	EACH		$	
0240	01985		DELINEATOR FOR BARRIER - YELLOW	16.00	EACH		$	
0250	02020		JPC PAVEMENT-6 IN/24	28.00	SQYD		$	
0260	02024		JPC PAVEMENT-10 IN/24	8,639.00	SQYD		$	
0270	02058		REMOVE PCC PAVEMENT	8,667.00	SQYD		$	
0280	02060		PCC PAVEMENT DIAMOND GRINDING	222,715.00	SQYD		$	
0290	02110		PARTIAL DEPTH PATCHING	14.56	CUFT		$	
0300	02115		SAW-CLEAN-RESEAL TVERSE JOINT	146,899.00	LF		$	
0310	02116		SAW-CLEAN-RESEAL LONGIT JOINT	175,004.00	LF		$	
0320	02200		ROADWAY EXCAVATION	877.00	CUYD		$	
0330	02220		FLOWABLE FILL	30.00	CUYD		$	
0340	02223		GRANULAR EMBANKMENT	945.00	CUYD		$	
0350	02237		DITCHING	25,000.00	LF		$	
0360	02261		FENCE-WOVEN WIRE	32.00	LF		$	
0370	02265		REMOVE FENCE	132.00	LF		$	
0380	02274		FENCE-6 FT CHAIN LINK	100.00	LF		$	
0390	02352		GUARDRAIL-STEEL W BEAM-D FACE	825.00	LF		$	
0400	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	15.00	EACH		$	
0410	02365		CRASH CUSHION TYPE IX-A	6.00	EACH		$	
0420	02367		GUARDRAIL END TREATMENT TYPE 1	24.00	EACH		$	
0430	02369		GUARDRAIL END TREATMENT TYPE 2A	29.00	EACH		$	
0440	02381		REMOVE GUARDRAIL	27,775.50	LF		$	

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PROPOSAL BID ITEMS

Report Date 10/26/12

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICI	FP	AMOUNT
0450	02387		GUARDRAIL CONNECTOR TO BRIDGE END TY A-1	12.00	EACH		$	
0460	02391		GUARDRAIL END TREATMENT TYPE 4A	6.00	EACH		$	
0470	02483		CHANNEL LINING CLASS II	426.00	TON		$	
0480	02484		CHANNEL LINING CLASS III	4,720.00	TON		$	
0490	02562		SIGNS	1,500.00	SQFT		$	
0500	02565		OBJECT MARKER TYPE 2	18.00	EACH		$	
0510	02570		PROJECT CPM SCHEDULE SEE DESIGN FOR SPECIAL NOTE	1.00	LS		$	
0520	02599		FABRIC-GEOTEXTILE TYPE IV	795.00	SQYD		$	
0530	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
0540	02671		PORTABLE CHANGEABLE MESSAGE SIGN	12.00	EACH		$	
0550	02677		ASPHALT PAVE MILLING & TEXTURING	6,902.00	TON		$	
0560	02714		SHOULDERING	2,000.00	LF		$	
0570	02775		ARROW PANEL	4.00	EACH		$	
0580	02929		CRASH CUSHION TYPE IX	10.00	EACH		$	
0590	05950		EROSION CONTROL BLANKET	10,000.00	SQYD		$	
0600	06407		SBM ALUM SHEET SIGNS .125 IN	600.00	SQFT		$	
0610	06410		STEEL POST TYPE 1	400.00	LF		$	
0620	06412		STEEL POST MILE MARKERS	10.00	EACH		$	
0630	06417		FLEXIBLE DELINEATOR POST-W	723.00	EACH		$	
0640	06418		FLEXIBLE DELINEATOR POST-Y	472.00	EACH		$	
0650	06511		PAVE STRIPING-TEMP PAINT-6 IN	404,000.00	LF		$	
0660	06568		PAVE MARKING-THERMO STOP BAR-24IN	148.00	LF		$	
0670	06573		PAVE MARKING-THERMO STR ARROW	3.00	EACH		$	
0680	06574		PAVE MARKING-THERMO CURV ARROW	20.00	EACH		$	
0690	06592		PAVEMENT MARKER TYPE V-B W/R	1,752.00	EACH		$	
0700	06593		PAVEMENT MARKER TYPE V-B Y/R	726.00	EACH		$	
0710	06600		REMOVE PAVEMENT MARKER TYPE V	2,478.00	EACH		$	
0720	08100		CONCRETE-CLASS A	7.00	CUYD		$	
0730	08150		STEEL REINFORCEMENT	500.00	LB		$	
0740	20366NN		REPLACE GRATE	12.00	EACH		$	
0750	20411ED		LAW ENFORCEMENT OFFICER	2,000.00	HOUR		$	
0760	21173EC		SAW-CLEAN-RESEAL RANDOM CRACKS	58.00	LF		$	
0770	21533EN		EMBANKMENT	500.00	CUYD		$	
0780	21802EN		G/R STEEL W BEAM-S FACE (7 FT POST)	25,450.50	LF		$	
0790	22664EN		WATER BLASTING EXISTING STRIPE	202,000.00	LF		$	
0800	23143ED		KPDES PERMIT AND TEMP EROSION CONTROL	1.00	LS		$	
0810	24189ER		DURABLE WATERBORNE MARKING-6 IN W	97,900.00	LF		$	
0820	24190ER		DURABLE WATERBORNE MARKING-6 IN Y	81,850.00	LF		$	
0830	24191ER		DURABLE WATERBORNE MARKING-12 IN W	9,980.00	LF		$	

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PROPOSAL BID ITEMS

Report Date 10/26/12

Section: 2 - BRIDGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICI	FP	AMOUNT
0840	02115		SAW-CLEAN-RESEAL TVERSE JOINT	303.00	LF		$	
0850	06542		PAVE STRIPING-THERMO-6 IN W	1,781.00	LF		$	
0860	06543		PAVE STRIPING-THERMO-6 IN Y	1,040.00	LF		$	
0870	08504		EPOXY SAND SLURRY	225.00	SQYD		$	
0880	08510		REM EPOXY BIT FOREIGN OVERLAY	2,879.00	SQYD		$	
0890	08526		CONC CLASS M FULL DEPTH PATCH	4.00	CUYD		$	
0900	08534		CONCRETE OVERLAY-LATEX	120.00	CUYD		$	
0910	08549		BLAST CLEANING	9,072.00	SQYD		$	
0920	23331EC		EPOXY-URETHANE WATERPROOFING	55,739.00	SQFT		$	
0930	23386EC		JOINT SEAL REPLACEMENT	779.00	LF		$	
0940	23428EC		CONCRETE PATCHING REPAIR	18.00	CUFT		$	
0950	24094EC		PARTIAL DEPTH PATCHING	18.00	CUYD		$	

Section: 3 - TRAFFIC LOOPS

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICI	FP	AMOUNT
0960	04793		CONDUIT-1 1/4 IN	195.00	LF		$	
0970	04795		CONDUIT-2 IN	130.00	LF		$	
0980	04820		TRENCHING AND BACKFILLING	295.00	LF		$	
0990	04829		PIEZOELECTRIC SENSOR	15.00	EACH		$	
1000	04830		LOOP WIRE	7,550.00	LF		$	
1010	04895		LOOP SAW SLOT AND FILL	1,347.00	LF		$	
1020	20359NN		GALVANIZED STEEL CABINET	5.00	EACH		$	
1030	20360ES81		WOOD POST	10.00	EACH		$	
1040	20391NS83		ELECTRICAL JUNCTION BOX TYPE A	6.00	EACH		$	

Section: 4 - MOBILIZATION / DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICI	FP	AMOUNT
1050	02568		MOBILIZATION	1.00	LS		$	
1060	02569		DEMOBILIZATION	1.00	LS		$	