



Steven L. Beshear
Governor

TRANSPORTATION CABINET

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

Joseph W. Prather
Secretary

October 29, 2008

CALL NO. 101
CONTRACT ID NO. 081115
ADDENDUM # 2

Subject: Pike County, APD 80-6 (29)
Letting October 31, 2008

- (1) Revised - Plan Sheets - R2E & R50
- (2) Revised - Bid Items - Pages 102-108 of 108

Proposal revisions are available at <http://transportation.ky.gov/contract/>.
Plan sheet revisions are mailed to all plan holders.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Waddle".

Steve Waddle
Director
Division of Construction Procurement

Enclosures
SW:ks



An Equal Opportunity Employer M/F/D

KENTUCKY TRANSPORTATION CABINET
 DEPARTMENT OF HIGHWAYS
 FRANKFORT, KY 40622

CONTRACT ID: 081115
 COUNTY: PIKE
 PROPOSAL: APD 80-6 (29)

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LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
SECTION 0001 ROADWAY					
0010	00003	CRUSHED STONE BASE (REVISED: 10-20-08)	3,773.000 TON		
0020	00020	TRAFFIC BOUND BASE	87.000 TON		
0030	00078	CRUSHED AGGREGATE SIZE NO 2	17.000 TON		
0040	00100	ASPHALT SEAL AGGREGATE	22.000 TON		
0050	00221	CL2 ASPH BASE 0.75D PG64-22 (REVISED: 10-20-08)	4,191.000 TON		
0060	00291	EMULSIFIED ASPHALT RS-2	3.000 TON		
0070	00301	CL2 ASPH SURF 0.38D PG64-22 (REVISED: 10-20-08)	623.000 TON		
0080	00440	ENTRANCE PIPE-15 IN	20.000 LF		
0090	00462	CULVERT PIPE-18 IN	149.000 LF		
0100	00466	CULVERT PIPE-30 IN	256.000 LF		
0110	00468	CULVERT PIPE-36 IN	90.000 LF		
0120	00469	CULVERT PIPE-42 IN	178.000 LF		
0130	00470	CULVERT PIPE-48 IN	54.000 LF		
0140	00472	CULVERT PIPE-60 IN	412.000 LF		
0150	00505	CULVERT PIPE-78 IN EQUIV	98.000 LF		
0160	00522	STORM SEWER PIPE-18 IN	947.000 LF		
0170	00524	STORM SEWER PIPE-24 IN	159.000 LF		
0180	00526	STORM SEWER PIPE-30 IN	563.000 LF		
0190	00528	STORM SEWER PIPE-36 IN	203.000 LF		
0200	00530	STORM SEWER PIPE-48 IN	427.000 LF		

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LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	PRICE	AMOUNT
0210	00532	STORM SEWER PIPE-60 IN	600.000	LF		
0220	01000	PERFORATED PIPE-4 IN	1,555.000	LF		
0230	01002	PERFORATED PIPE-8 IN	2,000.000	LF		
0240	01010	NON-PERFORATED PIPE-4 IN	275.000	LF		
0250	01012	NON-PERFORATED PIPE-8 IN	2,000.000	LF		
0260	01020	PERF PIPE HEADWALL TY 1-4 IN	2.000	EACH		
0270	01024	PERF PIPE HEADWALL TY 2-4 IN	2.000	EACH		
0280	01026	PERF PIPE HEADWALL TY 2-8 IN	3.000	EACH		
0290	01028	PERF PIPE HEADWALL TY 3-4 IN	7.000	EACH		
0300	01032	PERF PIPE HEADWALL TY 4-4 IN	3.000	EACH		
0310	01314	PLUG PIPE	1.000	EACH		
0320	01452	S & F BOX INLET-OUTLET-30 IN	1.000	EACH		
0330	01490	DROP BOX INLET TYPE 1	9.000	EACH		
0340	01493	DROP BOX INLET TYPE 2	4.000	EACH		
0350	01505	DROP BOX INLET TYPE 5B	9.000	EACH		
0360	01691	FLUME INLET TYPE 2	2.000	EACH		
0370	01891	ISLAND HEADER CURB TYPE 2	50.000	LF		
0380	01984	DELINEATOR FOR BARRIER-WHITE	6.000	EACH		
0390	02014	BARRICADE-TYPE III	6.000	EACH		
0400	02159	TEMP DITCH	4,200.000	LF		
0410	02200	ROADWAY EXCAVATION	6,127,995.000	CUYD		

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LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT PRICE	AMOUNT
0420	02242	WATER	0.500	MGAL	
0430	02262	FENCE-WOVEN WIRE TYPE 1	12,741.000	LF	
0440	02351	GUARDRAIL-STEEL W BEAM-S FACE	1,237.500	LF	
0450	02360	GUARDRAIL TERMINAL SECTION NO 1	5.000	EACH	
0460	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	2.000	EACH	
0470	02381	REMOVE GUARDRAIL	890.000	LF	
0480	02391	GUARDRAIL END TREATMENT TYPE 4A	9.000	EACH	
0490	02397	TEMP GUARDRAIL	800.000	LF	
0500	02429	RIGHT-OF-WAY MONUMENT TYPE 1	44.000	EACH	
0510	02432	WITNESS POST	44.000	EACH	
0520	02475	PLUG WATER WELL	10.000	EACH	
0530	02482	CHANNEL LINING CLASS IA	909.000	TON	
0540	02483	CHANNEL LINING CLASS II	6,396.000	TON	
0550	02488	CHANNEL LINING CLASS IV	6,985.000	CUYD	
0560	02542	CEMENT	33.000	TON	
0570	02545	CLEARING AND GRUBBING 157 ACRES	(1.00)	LS	
0580	02555	CONCRETE-CLASS B (ADDED: 10-29-08)	288.000	CUYD	
0590	02562	SIGNS	375.000	SQFT	
0600	02600	FABRIC GEOTEXTILE TY IV FOR PIPE	10,000.000	SQYD	2.00 20,000.00
0610	02610	RETAINING WALL-GABION	130.000	CUYD	
0620	02650	MAINTAIN & CONTROL TRAFFIC	(1.00)	LS	

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LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT PRICE	AMOUNT
0630	02692	SETTLEMENT PLATFORM	2.000	EACH	
0640	02701	TEMP SILT FENCE	4,200.000	LF	
0650	02703	SILT TRAP TYPE A	156.000	EACH	
0660	02704	SILT TRAP TYPE B	156.000	EACH	
0670	02705	SILT TRAP TYPE C	156.000	EACH	
0680	02706	CLEAN SILT TRAP TYPE A	468.000	EACH	
0690	02707	CLEAN SILT TRAP TYPE B	468.000	EACH	
0700	02708	CLEAN SILT TRAP TYPE C	468.000	EACH	
0710	02709	CLEAN TEMP SILT FENCE	4,200.000	LF	
0720	02726	STAKING	(1.00)	LS	
0730	02731	REMOVE STRUCTURE 6X4 RCBC	(1.00)	LS	
0740	02731	REMOVE STRUCTURE UPPER RETAINING WALL AT KY 195	(1.00)	LS	
0750	02894	CRASH CUSHION TYPE VI-T	4.000	EACH	
0760	02898	RELOCATE CRASH CUSHION	4.000	EACH	
0770	03171	CONCRETE BARRIER WALL TYPE 9T	200.000	LF	
0780	03340	STEEL PIPE-2 1/2 IN	168.000	LF	
0790	03343	STEEL PIPE-4 IN	168.000	LF	
0800	05950	EROSION CONTROL BLANKET	50,067.000	SQYD	
0810	05952	TEMP MULCH	758,912.000	SQYD	
0820	05953	TEMP SEEDING AND PROTECTION	151,782.000	SQYD	
0830	05966	TOPDRESSING FERTILIZER	48.000	TON	

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LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	PRICE	AMOUNT
0840	05985	SEEDING AND PROTECTION	758,912.000	SQYD		
0850	05989	SPECIAL SEEDING CROWN VETCH	10,000.000	SQYD		
0860	05990	SODDING	80.000	SQYD		
0870	06511	PAVE STRIPING-TEMP PAINT-6 IN	14,572.000	LF		
0880	08100	CONCRETE-CLASS A	62.080	CUYD		
0890	08150	STEEL REINFORCEMENT	4,395.000	LB		
0900	10020NS	FUEL ADJUSTMENT	884,035.000	DOLL	1.00	884,035.00
0910	10030NS	ASPHALT ADJUSTMENT	11,465.000	DOLL	1.00	11,465.00
0920	20209EP69	GRANULAR PILE CORE	25,000.000	CUYD		
0930	20667ED	PNEUMATIC BACKSTOWING	2,667.000	TON		
0940	21477ND	EARTHWORK MITIGATION MAX. ALLOWABLE BID	(1.00)	LS		
0950	22626EN	CAP MINE SHAFT	10.000	SQYD		
0960	22627NN	HEADWALL-42 IN-MOD	1.000	EACH		
0970	22628NN	DROP BOX INLET-MOD	4.000	EACH		
0980	23131ER701	PIPELINE VIDEO INSPECTION	2,068.000	LF		
SECTION 0002		BRIDGE 25240 EAST BOUND				
0990	02231	STRUCTURE GRANULAR BACKFILL	595.000	CUYD		
1000	02596	FABRIC-GEOTEXTILE TYPE I	163.000	SQYD		
1010	02599	FABRIC-GEOTEXTILE TYPE IV	318.000	SQYD		
1020	02998	MASONRY COATING	16,574.900	SQYD		
1030	03299	ARMORED EDGE FOR CONCRETE	516.000	LF		

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1040	08001	STRUCTURE EXCAVATION-COMMON	12,372.000	CUYD		
1050	08002	STRUCTURE EXCAV-SOLID ROCK	7,895.900	CUYD		
1060	08003	FOUNDATION PREPARATION 25273	(1.00)	LS		
1070	08018	RETAINING WALL ESTIMATED AREA	1,211.000	SQFT		
1080	08019	CYCLOPEAN STONE RIP RAP	1,782.000	TON		
1090	08020	CRUSHED AGGREGATE SLOPE PROT	4,035.000	TON		
1100	08033	TEST PILES	868.000	LF		
1110	08050	PILES-STEEL HP14X73	4,696.000	LF		
1120	08095	PILE POINTS-14 IN	150.000	EACH		
1130	08100	CONCRETE-CLASS A	9,686.900	CUYD		
1140	08104	CONCRETE-CLASS AA	4,939.000	CUYD		
1150	08150	STEEL REINFORCEMENT	2,108,747.000	LB		
1160	08151	STEEL REINFORCEMENT-EPOXY COATED	1,439,803.000	LB		
1170	08160	STRUCTURAL STEEL 1380 LBS	(1.00)	LS		
1180	08160	STRUCTURAL STEEL 1500 LBS	(1.00)	LS		
1190	08160	STRUCTURAL STEEL 3198 LBS	(1.00)	LS		
1200	08160	STRUCTURAL STEEL 360 LBS.	(1.00)	LS		
1210	08160	STRUCTURAL STEEL 360 POUNDS	(1.00)	LS		
1220	08472	EXPANSION DAM-4 IN NEOPRENE	180.000	LF		
1230	08500	APPROACH SLAB	469.000	SQYD		
1240	08634	PRECAST PC I BEAM TYPE 4	5,348.000	LF		

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LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
1250	08637	PRECAST PC I BEAM TYPE 7 72 INCH DEEP	10,975.000 LF		
1260	08713	BRIDGE CHAIN LINK FENCE-9 FT	600.000 LF		
1270	21532ED	RAIL SYSTEM TYPE III	6,262.000 LF		
SECTION 0003 TRAINEES					
1280	02742	TRAINEE PAYMENT REIMBURSEMENT 1 ARTICULATING TRUCK DRIVER TRAINEE	1,000.000 HOUR		
1290	02742	TRAINEE PAYMENT REIMBURSEMENT 1 CARPENTER TRAINEE	1,400.000 HOUR		
1300	02742	TRAINEE PAYMENT REIMBURSEMENT 1 CLASS A OR B OPERATOR	1,600.000 HOUR		
SECTION 0004 MOBILIZATION AND DEMOBILIZATION					
1310	02568	MOBILIZATION	LUMP		
1320	02569	DEMOBILIZATION	LUMP		
TOTAL BID					

GENERAL SUMMARY

ITEM CODE	ITEM	UNIT	MAINLINE US 460 & RAMPS
1314	PLUG PIPE	EACH	1
1691	FLUME INLET TYPE 2	EACH	2
1891	ISLAND HEADER CURB TYPE 2	LIN FT	50
1984	DELINEATOR FOR BARRIER - WHITE	EACH	6
2014	BARRICADE - TYPE III	EACH	6
2159	TEMPORARY DITCH	LIN FT	4,200
2200	ROADWAY EXCAVATION	CU YD	(A) 6,127,995
2242	WATER ④	M GAL	0.5
2262	FENCE - WOVEN WIRE TYPE I	LIN FT	12,741
2351	GUARDRAIL - STEEL "W" BEAM (SINGLE FACE)	LIN FT	1,237,50
2360	GUARDRAIL TERMINAL SECTION NO. 1	EACH	5
2363	GUARDRAIL CONNECTOR TO BRIDGE END TYPE A	EACH	2
2391	GUARDRAIL END TREATMENT TYPE 4A	EACH	9
2381	REMOVE GUARDRAIL	LIN FT	890
2397	TEMPORARY GUARDRAIL	LIN FT	800
2429	R/W MONUMENT TYPE I	EACH	44
2432	WITNESS POST	EACH	44
2475	PLUG WATER WELL	EACH	10
2482	CHANNEL LINING CLASS IA	TON	909
2483	CHANNEL LINING CLASS II	TON	6,396
2488	CHANNEL LINING CLASS IV	CU YD	6,985
2542	CEMENT ⑤	TON	33
2545	CLEARING AND GRUBBING ①	LUMP SUM	1
2562	SIGNS	SO FT	375
2568	MOBILIZATION	LUMP SUM	1
2569	DEMOLITION	LUMP SUM	1
2600	FABRIC - GEOTEXTILE TY IV FOR PIPE	SO YD	10,000
2610	RETAINING WALL - GABION	CU YD	130
2650	MAINTAIN & CONTROL TRAFFIC	LUMP SUM	1
2692	SETTLEMENT PLATFORM	EACH	2
2701	TEMPORARY SILT FENCE	LIN FT	4,200
2703	SILT TRAP TYPE A	EACH	156
2704	SILT TRAP TYPE B	EACH	156
2706	CLEAN SILT TRAP TYPE A	EACH	468
2707	CLEAN SILT TRAP TYPE B	EACH	468
2709	CLEAN TEMPORARY SILT FENCE	LIN FT	4,200
2726	STAKING	LUMP SUM	1
2731	REMOVE EXISTING STRUCTURE ②	LUMP SUM	1
2894	GRASH CUSHION TY VI-T	EACH	4
2898	RELOCATE CRASH CUSHION	EACH	4
3171	CONCRETE BARRIER WALL TYPE 9T ⑨	LIN FT	200
3340	STEEL PIPE - 2 1/2 INCH	LIN FT	168
3343	STEEL PIPE - 4 INCH	LIN FT	168
5950	EROSION CONTROL BLANKET	SO YD	50,067
5952	TEMPORARY MULCH	SO YD	758,912
5953	TEMPORARY SEEDING AND PROTECTION ③	SO YD	151,782
5966	TOPDRESSING FERTILIZER	TON	48
5985	SEEDING AND PROTECTION	SO YD	758,912
5989	SPECIAL SEEDING GROWN VETCH	SO YD	10,000
5990	SODDING	SO YD	80
6511	PAVEMENT STRIPING - TEMP PAINT - 6 INCH	LIN FT	14,572
22626EN	CAP MINE SHAFT ⑥	SO YD	10
2066TED	PNEUMATIC BACKSTOWING ⑦	TON	2,667
2313ERTOI	PIPELINE VIDEO INSPECTION	LIN FT	2,068
20209EP69	GRANULAR PILE CORE	CY	25,000
2705	SILT TRAP TYPE C	EACH	156
2708	CLEAN SILT TRAP TYPE C	EACH	468
21477ND	EARTHWORK MITIGATION	LUMP SUM	1
10020NS	FUEL ADJUSTMENT	DOL	884,035
10030NS	ASPHALT ADJUSTMENT	DOL	11,465
2555	CONCRETE - CLASS B	CU YD	288

COMMON EXCAVATION INCLUDES:
1,733,430 CY EXCAVATION
8,008 CY FROM PIPE SHEETS
2,600 CY DITCH LEFT
2,359 CY DITCH RIGHT

EMBANKMENT INCLUDES:
1,366,896 CY EMBANKMENT
65,650 CY ROCK ROADBED

(A) ROADWAY EXCAVATION INCLUDES:
1,746,397 CY COMMON EXCAVATION
4,156,081 CY ROCK EXCAVATION
187,735 CY EMBANKMENT BENCH
37,782 CY TRANSVERSE BENCH

- ① APPROXIMATELY 157 ACRES
- ② 6x4 RCBC AND UPPER RETAINING WALL @ KY 195, AND RUINS OF EXISTING STRUCTURE LEFT STA. 537+50
- ③ ESTIMATED AT 20% OF TOTAL SEED AND PROTECT
- ④ DUST CAUSED BY MAINTAINING TRAFFIC ONLY ESTIMATED AT 2.125 MGAL PER MILE (FOR CONTROLLING
- ⑤ SEE GEOTECH NOTE NO. 14
- ⑥ SEE GEOTECH NOTE NO. 12
- ⑦ SEE GEOTECH NOTE NO. 13
- ⑧ INCLUDES QUANTITIES FOR MAINTAINING TRAFFIC ALONG KY 195 DURING CONSTRUCTION
- ⑨ TEMPORARY BARRIER WALL TO REMAIN ON SITE UNTIL COMPLETION OF FINAL SURFACING OF ENTIRE INTERCHANGE (BY OTHERS)
- ⑩ CLASS B CONCRETE WILL BE USED FOR RIP RAP GROUT IN CONJUNCTION WITH CLASS IA AND CLASS IV CHANNEL LINING AT THE DISCRETION OF THE PROJECT ENGINEER TO FILL VOIDS AND STABILIZE CLASS IA AND CLASS IV CHANNEL LINING.

THIS PROJECT IS A PARTIALLY CONTROLLED ACCESS HIGHWAY. ACCESS SHALL BE ALLOWED ONLY WHERE SPECIFICALLY SHOWN ON PLANS. MINIMUM SPACING IS 1200 FEET

SECTION 5 GENERAL SUMMARY

GEOTECHNICAL NOTES

COUNTY OF	ITEM NO.	SHEET NO.
PIKE	12-263.50	R50

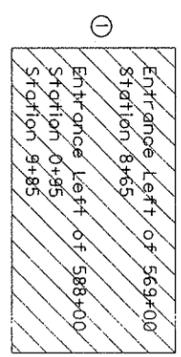
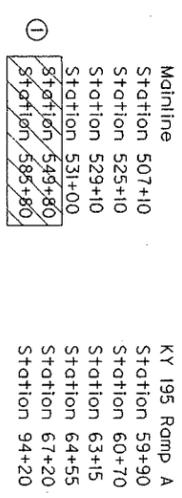
11. In accordance with Section 206 of the current Standard Specifications, the moisture content of embankment material shall not vary from the optimum moisture content as determined by M 64-511 by more than +2 percent or less than -2 percent. This moisture content requirement shall have equal weight with the density requirement when determining the acceptability of embankment construction. Refer to the Family of Curves for moisture/density correlation.

12. All soils, whether from roadway or borrow, may require manipulation to obtain proper moisture content prior to compaction. Direct payment shall not be permitted for rehandling, hauling, stockpiling, and/or manipulating soils.

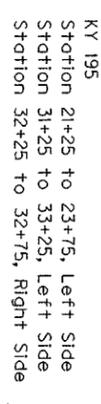
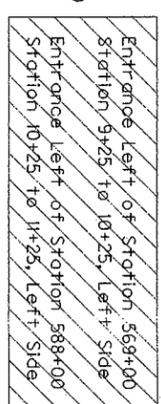
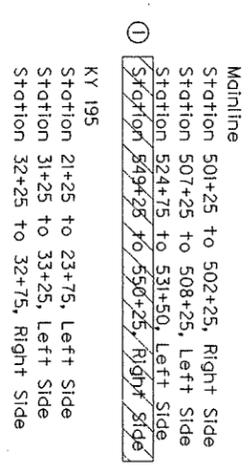
13. The contractor is responsible for conducting any operations necessary (such as construction of temporary drainage ditches, etc.) to excavate the cut areas to the required typical section. These operations shall be incidental to the roadway price.

14. The contractor shall construct foundation embankment benches and transverse benches as indicated on the plans and/or as directed by the Engineer, prior to placement of embankments in areas requiring such benches.

15. Transverse benching and/or perforated pipe underdrains shall be installed at the following approximate locations and any others designated by the Engineer. Contrary to Standard Drawing RDP-006, transverse benches and perforated pipe underdrains shall be placed on both the upgrade and downgrade cut to fill transitions.



16. Foundation embankment benches shall be placed in accordance with Standard Drawing RGX-010 at the locations listed below and/or as directed by the Engineer.



17. Excavation of surface ditches and channel changes adjacent to embankment areas shall be performed prior to the placement of the adjacent embankments. The material excavated for the channel changes and surface ditches is suitable for embankment construction if dried to proper moisture content in accordance with Section 206 of the current Standard Specifications.

18. The contractor shall conduct grading operations in such a manner that durable sandstone (SDI>95) from roadway excavation be stockpiled separately or otherwise manipulated so that ample quantities are available for those areas requiring solid material. No direct payment will be allowed for such necessary manipulating as stockpiling, hauling and/or handling the material.

19. All embankments shall be constructed entirely with durable sandstone and/or durable shale (SDI>95) from roadway excavation, as directed by the engineer. Non-durable shale (SDI<95), coal and underclays shall be wasted and not utilized in the construction of the roadway. The placement of this material is incidental to the unit bid for roadway excavation.

20. Pile cores shall be constructed in accordance with Kentucky Standard Drawing RGX-100 and RGX-105, meeting the material requirements of the current edition of Special Provision 69, non-errodible material only.

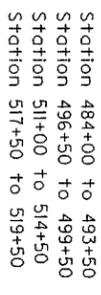
21. Any coal encountered at/or within four (4) feet of planned grade shall be removed to a depth of 4 feet below planned grade. The Contractor shall not perform additional undercutting to recover coal without prior approval of the Engineer. Any such undercutting at or near grade for recovery of coal shall be backfilled with durable rock (sandstone) from roadway excavation in two (2) feet lifts, and positive drainage shall be maintained through the cut using eight (8) inch perforated pipe underdrains, as applicable.

22. Any vertical mine or air shaft under the proposed embankment, whether shown on the plans or not, shall be filled with broken stone (durable sandstone) from roadway excavation and capped with an eight (8) inch thick reinforced concrete slab. The slab shall be in accordance with Section 708 of the current Standard Specifications for Road and Bridge Construction.

23. Any mine tunnels or horizontal auger openings in mined-out areas below grade which show signs of subsidence, whether shown on the plans or not, shall be thoroughly investigated at the direction of the Engineer by rock coring, probing or other means. The openings shall be collapsed or undercut and backfilled with broken stone (durable sandstone) from roadway excavation. The material shall be backfilled in accordance with Section 206. At the direction of the Engineer, pneumatic backstowing of crushed stone (maximum size 1/2 inch with no more than 5% passing the No. 100 sieve) may be utilized to backfill openings which are inaccessible or difficult to backfill by other means. If feasible, positive drainage of the tunnels or openings shall be provided through the use of pipe underdrains or other suitable drainage features. Pipes and other material used for drainage shall be paid for at the unit bid price for those items. Pneumatic backstowing or other special equipment shall be paid for at the unit price per ton of backstowed material. The following areas have been identified as possible mined-out zones.



24. Any mine tunnels or horizontal openings which are exposed in cut slopes, whether shown on the plans or not, shall be backfilled a minimum distance of 20 feet from the face of the cut. To insure that the void is completely backfilled, pneumatic backstowing with broken stone (maximum size 1/2 inch with no more than 5% passing the No. 100 sieve) shall be required in an effort to completely fill any voids. The last 5 feet, horizontally, of backstowed material shall contain five (5) percent cement, by weight, and shall be backstowed as a slurry mix. This will help provide stability of the backstowed material at the face of the cut. If feasible, positive drainage of the tunnels or openings shall be provided through the use of pipe drains, surface ditches or other suitable drainage facilities. Pipes and other material used for drainage shall be paid for at the unit bid price for those items. Pneumatic backstowing or other special equipment shall be paid for at the unit bid price per ton of backstowed material. The following areas have been identified as possible mined-out zones.



25. The embankment materials for the 3 span Bridge over Ramp A of KY 195 @ Station 502+94 shall consist of durable sandstone exhibiting a maximum dimension of one-foot in any direction with a lift thickness not exceeding two-foot. This material requirement shall include the entire embankment, and extend to a point back-station of abutment land ahead-station of abutment 2 equal to the fill height of the abutment (including the entire embankment between the abutments).

26. The embankment of the 3 span Bridge over Ramp A of KY 195 @ Station 502+94 shall be placed as one of the first efforts of the roadway construction due to the anticipated settlement concerns. These embankments shall be built to full height within the limits specified in above note #15. A minimum of five months waiting period will be required following completion of the embankment before the installation of the piles may begin. However, based upon the results of the settlement data the KYTC Geotechnical Branch will determine when enough settlement has occurred to permit the installation of the piles. The waiting period may be increased or decreased as required. Settlement platforms shall be installed in accordance with Section 216 of the current Standard Specifications for Road and Bridge Construction and Standard Drawing RGX-015. The project engineer is requested to contact the Geotechnical Branch approximately one week prior to the installation of the settlement platforms. The platforms shall be installed in accordance with section 216 of the current Standard Specifications for Road and Bridge Construction. The Division of Materials will provide the necessary forms for recording measurements, at the request of the Engineer. Instrumentation destroyed by the contractor shall be replaced at the Contractor's Expense. A settlement platform will be installed at the following approximate locations. The exact locations shall be determined by the Engineer and a representative of the Division of Materials, Geotechnical Branch.



① These items are located on a separate construction section.

KENTUCKY
DEPARTMENT OF HIGHWAYS
COUNTY OF
PIKE

PROJECT FS52 098 0460
NUMBERS APD 80-6 (29)

GEOTECHNICAL NOTES

COUNTY OF	ITEM NO.	SHEET NO.
PIKE	12-263.50	R50

11. In accordance with Section 206 of the current Standard Specifications, the moisture content of embankment material shall not vary from the optimum moisture content as determined by KM 64-511 by more than +2 percent or less than -2 percent. This moisture content requirement shall have equal weight with the density requirement when determining the acceptability of embankment construction. Refer to the Family of Curves for moisture/density correlation.

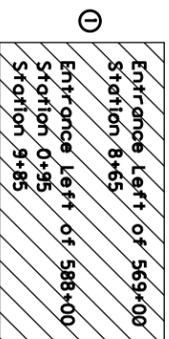
12. All soils, whether from roadway or borrow, may require manipulation to obtain proper moisture content prior to compaction. Direct payment shall not be permitted for rehandling, hauling, stockpiling, and/or manipulating soils.

13. The contractor is responsible for conducting any operations necessary (such as construction of temporary drainage ditches, etc.) to excavate the cut areas to the required typical section. These operations shall be incidental to the roadway price.

14. The contractor shall construct foundation embankment benches and transverse benches as indicated on the plans and/or as directed by the Engineer, prior to placement of embankment's in areas requiring such benches.

15. Transverse benching and/or perforated pipe under-drains shall be installed at the following approximate locations and any others designated by the Engineer. Contrary to Standard Drawing RGP-006, transverse benches and perforated pipe under-drains shall be placed on both the upgrade and downgrade cut to fill transitions.

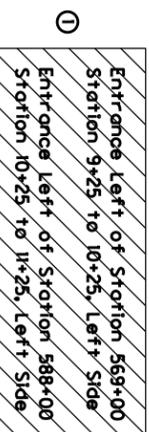
Mainline
 Station 507+10
 Station 525+10
 Station 529+10
 Station 531+00
 Station 549+80
 Station 585+80



①

16. Foundation embankment benches shall be placed in accordance with Standard Drawing RGX-010 at the locations listed below and/or as directed by the Engineer.

Mainline
 Station 501+25 to 502+25, Right Side
 Station 507+25 to 508+25, Left Side
 Station 524+75 to 531+50, Left Side
 Station 549+25 to 550+25, Right Side



①

17. Excavation of surface ditches and channel changes adjacent to embankment areas shall be performed prior to the placement of the adjacent embankments. The material excavated for the channel changes and surface ditches is suitable for embankment construction if dried to proper moisture content in accordance with Section 206 of the current Standard Specifications.

18. The contractor shall conduct grading operations in such a manner that durable sandstone (SD1)951 from roadway excavation be stockpiled separately or otherwise manipulated so that ample quantities are available for those areas requiring solid material. No direct payment will be allowed for such necessary manipulating as stockpiling, hauling and/or handling the material.

19. All embankments shall be constructed entirely with durable sandstone and/or durable shale (SD1)951 from roadway excavation, as directed by the engineer. Non-durable shale (SD1)951, coal and underclays shall be wasted and not utilized in the construction of the roadway. The placement of this material is incidental to the unit bid for roadway excavation.

20. Pile cores shall be constructed in accordance with Kentucky Standard Drawing RGX-100 and RGX-105, meeting the material requirements of the current edition of Special Provision 69, non-erodible material only.

21. Any coal encountered at/or within four (4) feet of planned grade shall be removed to a depth of 4 feet below planned grade. The Contractor shall not perform additional undercutting to recover coal without prior approval of the Engineer. Any such undercutting at or near grade for recovery of coal shall be backfilled with durable rock (sandstone) from roadway excavation in two (2) feet lifts, and positive drainage shall be maintained through the cut using eight (8) inch perforated pipe under-drains, as applicable.

22. Any vertical mine or air shaft under the proposed embankment, whether shown on the plans or not, shall be filled with broken stone (durable sandstone) from roadway excavation and capped with an eight (8) inch thick reinforced concrete slab. The slab shall be in accordance with Section 708 of the current Standard Specifications for Road and Bridge Construction.

23. Any mine tunnels or horizontal auger openings in mined-out areas below grade which show signs of subsidence, whether shown on the plans or not, shall be thoroughly investigated at the direction of the Engineer by rock coring, probing or other means. The openings shall be collapsed or undercut and backfilled with broken stone (durable sandstone) from roadway excavation. The material shall be backfilled in accordance with Section 206. At the direction of the Engineer, pneumatic backstowing of crushed stone (maximum size 1/2 inch with no more than 5% passing the No. 100 sieve) may be utilized to backfill openings which are inaccessible or difficult to backfill by other means. If feasible, positive drainage of the tunnels or openings shall be provided through the use of pipe under-drains or other suitable drainage features. Pipes and other material used for drainage shall be paid for at the unit bid price for those items. Pneumatic backstowing or other special equipment shall be paid for at the unit price per ton of backstowed material. The following areas have been identified as possible mined-out zones.

Mainline
 Station 515+00 to 527+00

KY 195
 Station 74+00 to 79+00

24. Any mine tunnels or horizontal openings which are exposed in cut slopes, whether shown on the plans or not, shall be backfilled a minimum distance of 20 feet from the face of the cut. To insure that the void is completely backfilled, pneumatic backstowing with broken stone (maximum size 1/2 inch with no more than 5% passing the No. 100 sieve) shall be required in an effort to completely fill any voids. The last 5 feet, horizontally, of backstowed material shall contain five (5) percent cement, by weight, and shall be backstowed as a slurry mix. This will help provide stability of the backstowed material at the face of the cut. If feasible, positive drainage of the tunnels or openings shall be provided through the use of pipe drains, surface ditches or other suitable drainage facilities. Pipes and other material used for drainage shall be paid for at the unit bid price for those items. Pneumatic backstowing or other special equipment shall be paid for at the unit bid price per ton of backstowed material. The following areas have been identified as possible mined-out zones.

Station 484+00 to 493+50
 Station 496+50 to 499+50
 Station 511+00 to 514+50
 Station 517+50 to 519+50

25. The embankment materials for the 3 span Bridge over Ramp A of KY 195 @ Station 502+94 shall consist of durable sandstone exhibiting a maximum dimension of one-foot in any direction with a lift thickness not exceeding two-foot. This material requirement shall include the entire embankment, and extend to a point back-station of abutment 1 and ahead-station of abutment 2 equal to the fill height of the abutment (including the entire embankment between the abutments).

26. The embankment at the 3 span Bridge over Ramp A of KY 195 @ Station 502+94 shall be placed as one of the first efforts of the roadway construction due to the anticipated settlement concerns. These embankments shall be built to full height within the limits specified in above note #15. A minimum of five months waiting period will be required following completion of the embankment before the installation of the piles may begin. However, based upon the results of the settlement data the KYTC Geotechnical Branch will determine when enough settlement has occurred to permit the installation of the piles. The waiting period may be increased or decreased as required. Settlement platforms shall be installed in accordance with Section 216 of the current Standard Specifications for Road and Bridge Construction and Standard Drawing RGX-015. The project engineer is requested to contact the Geotechnical Branch approximately one week prior to the installation of the settlement platforms. The platforms shall be installed in accordance with section 216 of the current Standard Specifications for Road and Bridge Construction. The platforms shall be left in place for future readings after the project has been completed. The Division of Materials will provide the necessary forms for recording measurements, at the request of the Engineer. Instrumentation destroyed by the contractor shall be replaced at the Contractor's Expense. A settlement platform will be installed at the following approximate locations. The exact locations shall be determined by the Engineer and a representative of the Division of Materials, Geotechnical Branch.

Station 501+70
 Station 504+20

① These items are located on a separate construction section.

KENTUCKY
DEPARTMENT OF HIGHWAYS
 COUNTY OF
PIKE

PROJECT NUMBERS

FD52 098 0460

APD 80-6 (29)

STATION 501+70

STATION 504+20