



TRANSPORTATION CABINET

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

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

May 16, 2011

CALL NO. 324
CONTRACT ID NO. 111317
ADDENDUM # 1

Subject: Graves County, FD04 SSP 042 NEW ROUTE
Letting May 20, 2011

- (1) Revised - Plan Sheets - S1 & S6
- (2) Revised - Bid Items - Pages 117-129 of 129

Proposal revisions are available at <http://transportation.ky.gov/contract/>.
Plan revisions are available at <http://www.lynnimaging.com/kytransportation/>.

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

Sincerely,

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

Ryan Griffith
Director
Division of Construction Procurement

RG:ks
Enclosures



An Equal Opportunity Employer M/F/D

FILE NAME: H:\Archives\Graves\26234\26234.dgn

USERNAME: Gary.Newton

DATE: 12-MAY-2011

SHEET LOCATION: PL

Definitions of Terms

PILE CUT-OFF ELEVATION: Elevation of the top of pile in the finished structure.
PILE LENGTH IN PLACE: Actual pile length below the Pile Cut-Off Elevation in the finished structure.

POINT OF PILE ELEVATION AS DRIVEN: Actual point of pile elevation in the finished structure.

MINIMUM POINT OF PILE ELEVATION: Point of pile elevation corresponding to the minimum embedment required to satisfy design considerations.

DESIGN AXIAL LOAD: Service load carried by each pile as estimated from structural design calculations.

EOD REQUIRED FIELD BEARING: Pile bearing value at the End of Driving (EOD) required to satisfy design requirements. This value is taken as 1.25 times the Design Axial Load plus the total estimated side friction capacity at the time of driving in any scour susceptible, unsuitable, and embankment layers. A group efficiency factor may be included for piles in cohesive soils.

BOR REQUIRED FIELD BEARING: Pile bearing value at the Beginning of Restrike (BOR) required to satisfy design requirements. This value is taken as 2.0 times the Design Axial Load plus the total estimated side friction capacity after setup in any scour susceptible, unsuitable, and embankment layers. A group efficiency factor may be included for piles in cohesive soils.

CALCULATED FIELD BEARING: Pile bearing value in place calculated using the appropriate pile driving formula in Section 604.03.07(B) of the Standard Specifications.

Driving Criteria

Satisfy two criteria when driving friction piles:

1. Drive piles to the Minimum Point of Pile Elevation
2. Drive piles until the Calculated Field Bearing equals or exceeds the EOD Required Field Bearing if determined at the End of Driving, or the BOR Required Field Bearing if determined at the Beginning of Restrike.

The EOD Required Field Bearing and the BOR Required Field Bearing are different values. The reason is that the formula used to calculate field bearing tends to overpredict pile capacity and the overprediction is greater during restrike. Adjustments are applied by the designer to account for the differences.

If either the EOD or BOR Required Field Bearing value is achieved at an elevation higher than the Minimum Point of Pile Elevation, continue driving until the Minimum Point of Pile Tip Elevation is reached. If the EOD Required Field Bearing is not achieved by the time the pile has been driven to the Plan Test Pile Length or Production Pile Order Length, cease driving, restrike the pile with a warm hammer a minimum of twenty-four hours after the end of initial driving, and verify that the BOR Required Field Bearing has been achieved. If it is necessary to determine the BOR Required Field Bearing, leave piling at least 12 inches (plus strip-down length if necessary) above the cutoff elevation at the end of initial driving to provide a sufficient amount of exposed pile length to accommodate additional pile penetration during restrike.

The Project Engineer shall determine the Calculated Field Bearing at the Beginning of Restrike using a minimum of 10 blows. If the BOR Required Field Bearing is not achieved after restrike or if the pile cannot be advanced to the Minimum Point of Pile Elevation, consult the Central Office Division of Construction.

Field Data

For each pile, the Project Engineer shall record the following on this sheet: Pile Length in Place, Point of Pile Elevation as Driven, Calculated Field Bearing, and an indication of whether the Calculated Field Bearing was determined at End of Driving (EOD) or Beginning of Restrike (BOR). Submit this record to:

Kentucky Transportation Cabinet
 Director, Division of Structural Design
 Room #322
 200 Mero Street
 Frankfort, KY 40622

This pile record does not replace other pile records the Project Engineer is required to keep and submit.

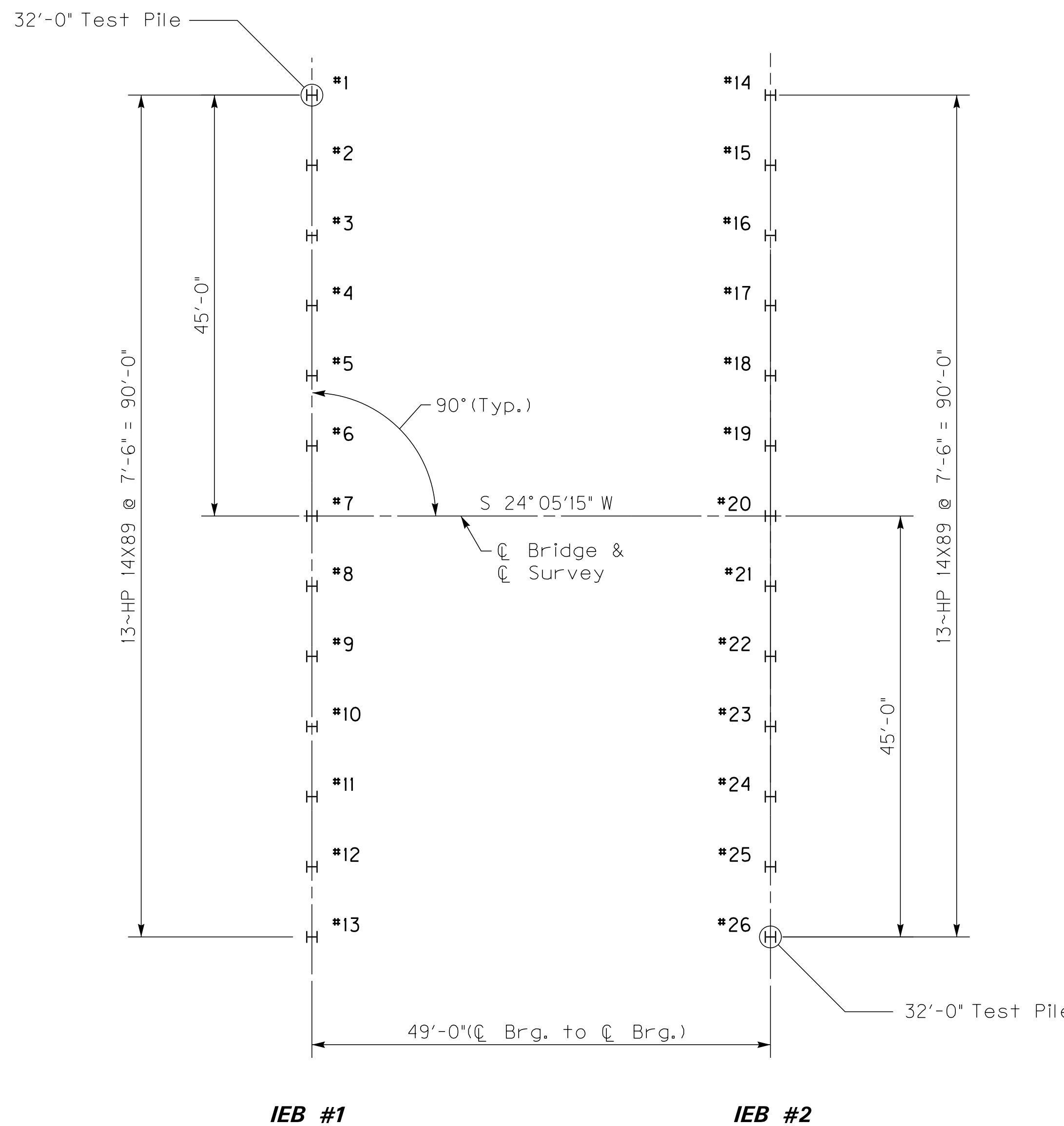
Use HPI4x89 in accordance with BPS-011 C.E.

Use reinforced pile points capable of advancing pile through overburden materials and seating the piles in the vary dense sands.

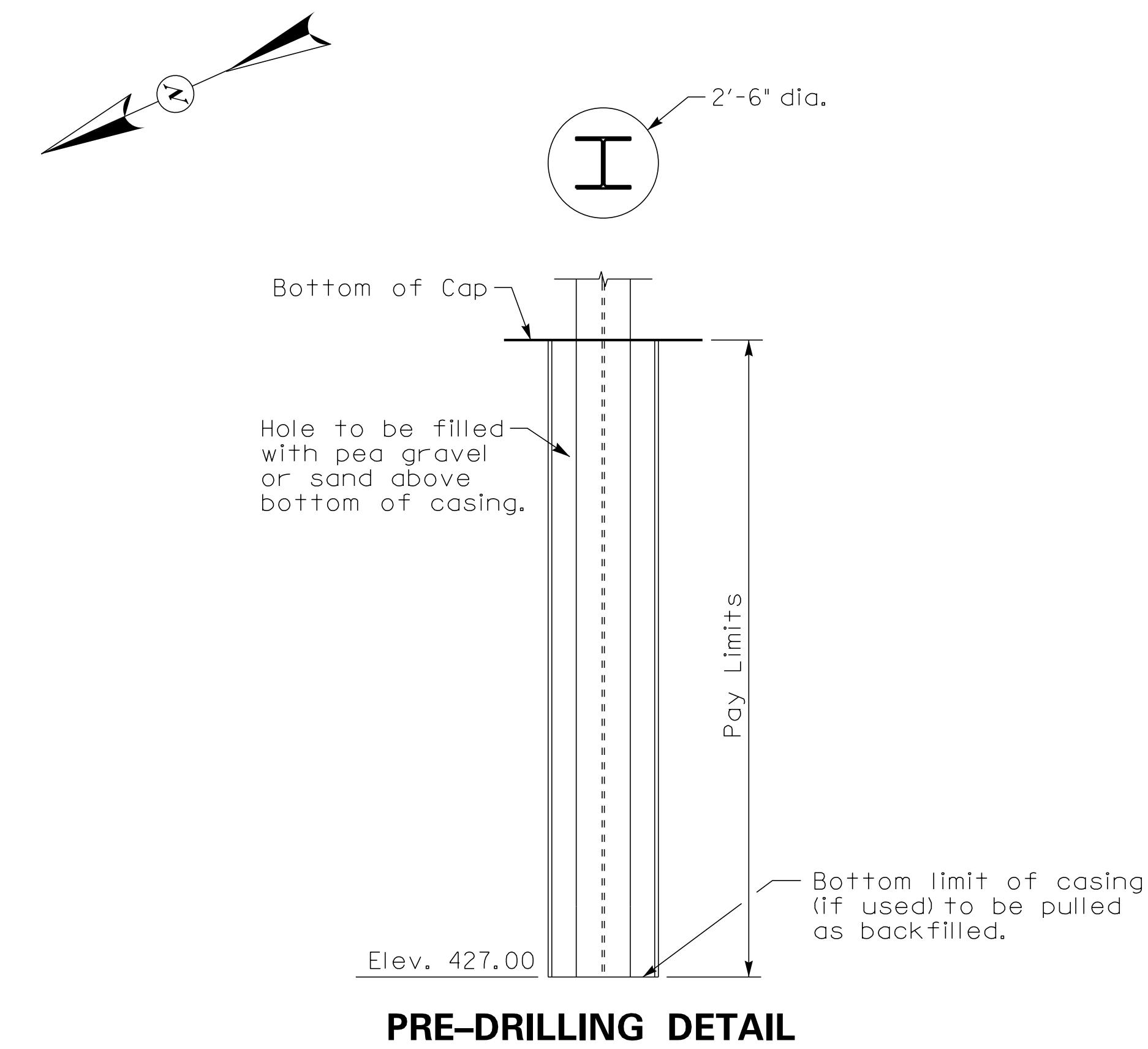
A hammer with a minimum energy of between 22 & 42 kip-ft is recommended to adequately drive the piles without encountering excessive blow counts and over-stressing the piles. The Contractor shall submit his pile driving system to The Department for approval prior to the installation of the first pile. Approval of the pile driving system by the Engineer will be subject to satisfactory field performance of the pile driving procedures.

PILE RECORD FOR FRICTION PILES									
Pile No.	Pile Cut-off Elevation Feet	Pile Length In Place Feet	Point of Pile Elevation As Driven Feet	Minimum Point of Pile Elevation Feet	Design Axial Load Tons	EOD Required Field Bearing Tons	BOR Required Field Bearing Tons	Calculated Field Bearing Tons	EOD or BOR
INTEGRAL END BENT #1									
1	453.994			427.000	47	59	94		
2	456.157			427.000	47	59	94		
3	456.157			427.000	47	59	94		
4	456.157			427.000	47	59	94		
5	456.157			427.000	47	59	94		
6	456.157			427.000	47	59	94		
7	456.157			427.000	47	59	94		
8	456.157			427.000	47	59	94		
9	456.157			427.000	47	59	94		
10	456.157			427.000	47	59	94		
11	456.157			427.000	47	59	94		
12	456.157			427.000	47	59	94		
13	453.994			427.000	47	59	94		

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INTEGRAL END BENT #2									
14	453.940			427.000	47	59	94		
15	455.853			427.000	47	59	94		
16	455.853			427.000	47	59	94		
17	455.853			427.000	47	59	94		
18	455.853			427.000	47	59	94		
19	455.853			427.000	47	59	94		
20	455.853			427.000	47	59	94		
21	455.853			427.000	47	59	94		
22	455.853			427.000	47	59	94		
23	455.853			427.000	47	59	94		
24	455.853			427.000	47	59	94		
25	455.853			427.000	47	59	94		
26	453.940			427.000	47	59	94		



FOUNDATION LAYOUT



PRE-DRILLING DETAIL

REVISION		DATE
DATE:	April 2008	CHECKED BY
DESIGNED BY:	W. W. Hagerman	K. Ee
DETAILED BY:	D. Wilson	W. W. Hagerman
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS <small>COUNTY</small> GRAVES		
ROUTE	CROSSING	
KY 97	Kess Creek Overflow Channel	
FOUNDATION LAYOUT <small>PREPARED BY</small> Division of Structural Design W. H. McKinney Section		
ITEM NUMBER	SHEET NO.	DRAWING NO.
1-181.40	S6	26234

FILE NAME: H:\Archives\Graves\26234\26234.dgn
 USERNAME: Gary.Newton
 DATE: 12-MAY-2011
 SHEET LOCATION: PL

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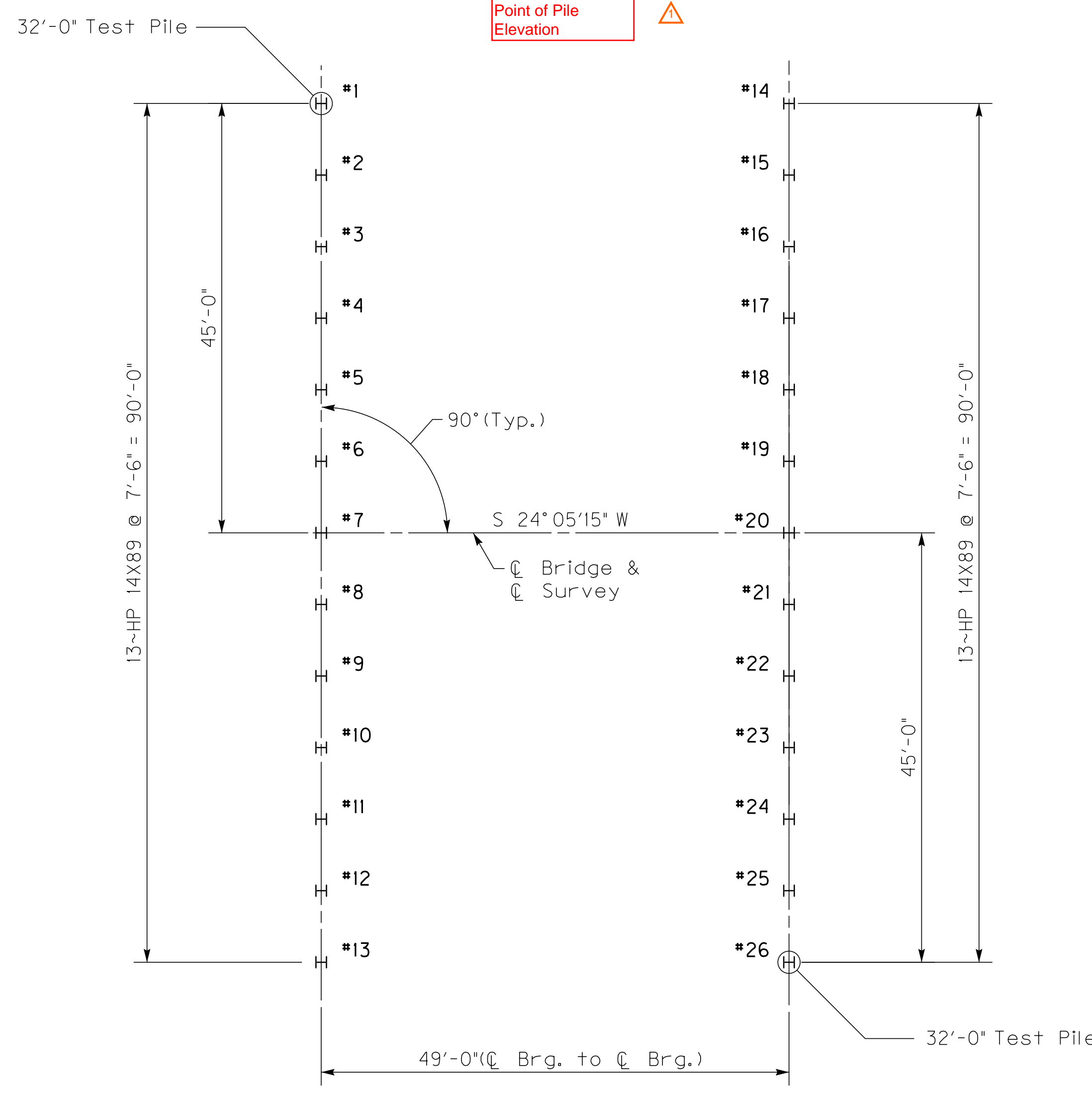
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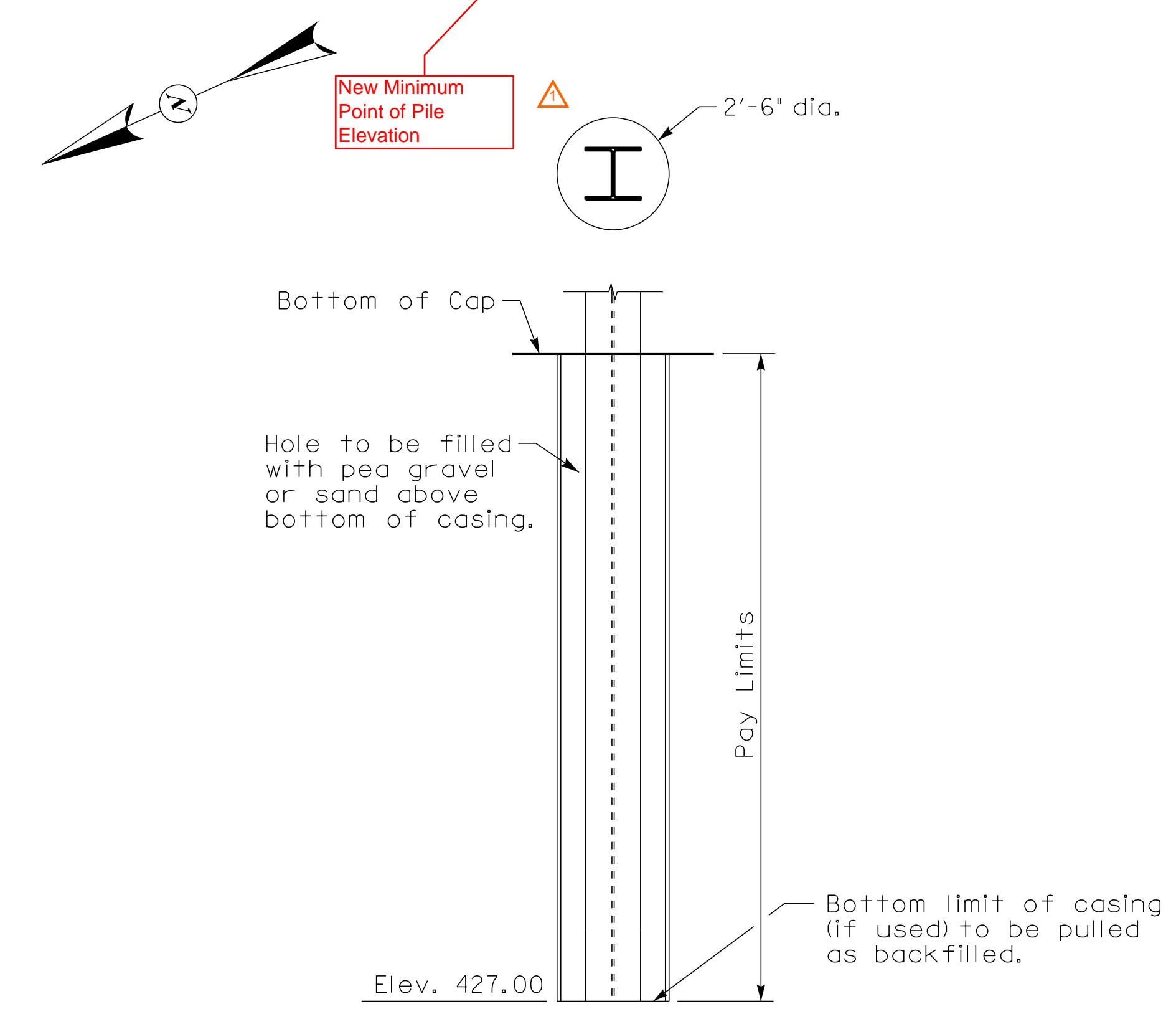
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INTEGRAL END-BENT #2									
14	453.940			427.000	47	59	94		
15	455.853			427.000	47	59	94		
16	455.853			427.000	47	59	94		
17	455.853			427.000	47	59	94		
18	455.853			427.000	47	59	94		
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25	455.853			427.000	47	59	94		
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FOUNDATION LAYOUT



PRE-DRILLING DETAIL REVISED 5-12-11

REVISION		DATE
DATE:	April 2008	CHECKED BY
DESIGNED BY:	W. W. Hagerman	K. Ee
DETAILED BY:	D. Wilson	W. W. Hagerman
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS		
COUNTY GRAVES		
ROUTE	CROSSING	
KY 97	Kess Creek Overflow Channel	
FOUNDATION LAYOUT		
PREPARED BY	SHEET NO.	
Division of Structural Design	S6	
W. H. McKinney Section	DRAWING NO.	
	26234	

ITEM NUMBER
1-181.40

CONTRACT ID: 111317
COUNTY: GRAVES
PROPOSAL: FD04 SSP 042 NEW ROUTE

PAGE: 1
LETTING: 05/20/11
CALL NO: 324

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
SECTION 0001		PAVING				
ALT GROUP AA1		ALTERNATE 1 - ASPHALT				
0010	00003	CRUSHED STONE BASE	38,929.000	TON		
0020	00008	CEMENT STABILIZED ROADBED	33,260.000	SQYD		
0030	00078	CRUSHED AGGREGATE SIZE NO 2	26,910.000	TON		
0040	00100	ASPHALT SEAL AGGREGATE	233.000	TON		
0050	00103	ASPHALT SEAL COAT	31.000	TON		
0060	00190	LEVELING & WEDGING PG64-22	668.000	TON		
0070	00212	CL2 ASPH BASE 1.00D PG64-22	29,753.000	TON		
0080	00221	CL2 ASPH BASE 0.75D PG64-22	6,027.000	TON		
0090	00301	CL2 ASPH SURF 0.38D PG64-22	1,596.000	TON		
0100	00309	CL2 ASPH SURF 0.50D PG64-22	989.000	TON		
0110	00358	ASPHALT CURING SEAL	35.000	TON		
0120	01811	STANDARD CURB AND GUTTER MOD	4,327.000	LF		
0130	02075	JPC PAVEMENT-6 IN	573.000	SQYD		
0140	02084	JPC PAVEMENT-8 IN	609.000	SQYD		
0150	02101	CEM CONC ENT PAVEMENT-8 IN	571.000	SQYD		
0160	02230	EMBANKMENT IN PLACE	207,158.000	CUYD		
0170	02542	CEMENT	671.000	TON		
0180	02599	FABRIC-GEOTEXTILE TYPE IV	77,704.000	SQYD		
0190	02702	SAND FOR BLOTTER	84.000	TON		
0200	10203ND	PAVEMENT ADJUSTMENT	(1.00)	LS	333,377.00	333,377.00

CONTRACT ID: 111317
COUNTY: GRAVES
PROPOSAL: FD04 SSP 042 NEW ROUTE

PAGE: 2
LETTING: 05/20/11
CALL NO: 324

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0210	23362ES403	CL2 ASPH SURF 0.5B PG64-22	5,692.000	TON		
SECTION 0002 PAVING ALT GROUP AA2 ALTERNATE 2 - CONCRETE						
0220	00003	CRUSHED STONE BASE	38,750.000	TON		
0230	00008	CEMENT STABILIZED ROADBED	33,260.000	SQYD		
0240	00078	CRUSHED AGGREGATE SIZE NO 2	30,100.000	TON		
0250	00100	ASPHALT SEAL AGGREGATE	233.000	TON		
0260	00103	ASPHALT SEAL COAT	31.000	TON		
0270	00190	LEVELING & WEDGING PG64-22	668.000	TON		
0280	00212	CL2 ASPH BASE 1.00D PG64-22	11,306.000	TON		
0290	00221	CL2 ASPH BASE 0.75D PG64-22	6,027.000	TON		
0300	00301	CL2 ASPH SURF 0.38D PG64-22	1,596.000	TON		
0310	00309	CL2 ASPH SURF 0.50D PG64-22	410.000	TON		
0320	00358	ASPHALT CURING SEAL	35.000	TON		
0330	01811	STANDARD CURB AND GUTTER MOD	3,721.000	LF		
0340	01830	STANDARD INTEGRAL CURB	606.000	LF		
0350	02073	JPC PAVEMENT-9 IN	38,205.000	SQYD		
0360	02075	JPC PAVEMENT-6 IN	573.000	SQYD		
0370	02078	JPC PAVEMENT-6 IN SHLD	6,362.000	SQYD		
0380	02084	JPC PAVEMENT-8 IN	609.000	SQYD		
0390	02101	CEM CONC ENT PAVEMENT-8 IN	571.000	SQYD		
0400	02230	EMBANKMENT IN PLACE	209,122.000	CUYD		

CONTRACT ID: 111317
COUNTY: GRAVES
PROPOSAL: FD04 SSP 042 NEW ROUTE

PAGE: 3
LETTING: 05/20/11
CALL NO: 324

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0410	02542	CEMENT	671.000	TON		
0420	02599	FABRIC-GEOTEXTILE TYPE IV	86,950.000	SQYD		
0430	02702	SAND FOR BLOTTER	84.000	TON		
0440	10203ND	PAVEMENT ADJUSTMENT	(1.00)	LS	156,324.00	156,324.00
0450	23362ES403	CL2 ASPH SURF 0.5B PG64-22	2,775.000	TON		
SECTION 0003		PAVING				
ALT GROUP AA3		ALTERNATE 3 - CONCRETE W/ ASPHALT SHOULDERS				
0460	00003	CRUSHED STONE BASE	39,230.000	TON		
0470	00008	CEMENT STABILIZED ROADBED	33,260.000	SQYD		
0480	00078	CRUSHED AGGREGATE SIZE NO 2	30,100.000	TON		
0490	00100	ASPHALT SEAL AGGREGATE	233.000	TON		
0500	00103	ASPHALT SEAL COAT	31.000	TON		
0510	00190	LEVELING & WEDGING PG64-22	668.000	TON		
0520	00212	CL2 ASPH BASE 1.00D PG64-22	12,617.000	TON		
0530	00221	CL2 ASPH BASE 0.75D PG64-22	6,027.000	TON		
0540	00301	CL2 ASPH SURF 0.38D PG64-22	1,596.000	TON		
0550	00309	CL2 ASPH SURF 0.50D PG64-22	939.000	TON		
0560	00358	ASPHALT CURING SEAL	35.000	TON		
0570	01811	STANDARD CURB AND GUTTER MOD	3,721.000	LF		
0580	01830	STANDARD INTEGRAL CURB	606.000	LF		
0590	02073	JPC PAVEMENT-9 IN	38,205.000	SQYD		
0600	02075	JPC PAVEMENT-6 IN	573.000	SQYD		

CONTRACT ID: 111317
COUNTY: GRAVES
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PAGE: 4
LETTING: 05/20/11
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LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0610	02084	JPC PAVEMENT-8 IN	609.000	SQYD		
0620	02101	CEM CONC ENT PAVEMENT-8 IN	571.000	SQYD		
0630	02230	EMBANKMENT IN PLACE	209,122.000	CUYD		
0640	02542	CEMENT	671.000	TON		
0650	02599	FABRIC-GEOTEXTILE TYPE IV	86,950.000	SQYD		
0660	02702	SAND FOR BLOTTER	84.000	TON		
0670	10203ND	PAVEMENT ADJUSTMENT	(1.00)	LS	156,324.00	156,324.00
0680	23362ES403	CL2 ASPH SURF 0.5B PG64-22	2,775.000	TON		
SECTION 0004 ROADWAY						
0690	00078	CRUSHED AGGREGATE SIZE NO 2	27.000	TON		
0700	01000	PERFORATED PIPE-4 IN	14,982.000	LF		
0710	01001	PERFORATED PIPE-6 IN	822.000	LF		
0720	01010	NON-PERFORATED PIPE-4 IN	180.000	LF		
0730	01011	NON-PERFORATED PIPE-6 IN	148.000	LF		
0740	01020	PERF PIPE HEADWALL TY 1-4 IN	1.000	EACH		
0750	01021	PERF PIPE HEADWALL TY 1-6 IN	5.000	EACH		
0760	01024	PERF PIPE HEADWALL TY 2-4 IN	2.000	EACH		
0770	01025	PERF PIPE HEADWALL TY 2-6 IN	1.000	EACH		
0780	01028	PERF PIPE HEADWALL TY 3-4 IN	11.000	EACH		
0790	01029	PERF PIPE HEADWALL TY 3-6 IN	1.000	EACH		
0800	01032	PERF PIPE HEADWALL TY 4-4 IN	4.000	EACH		

CONTRACT ID: 111317
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PAGE: 5
LETTING: 05/20/11
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LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
0810	01033	PERF PIPE HEADWALL TY 4-6 IN	2.000	EACH		
0820	01310	REMOVE PIPE	691.000	LF		
0830	01718	REMOVE INLET	7.000	EACH		
0840	01741	CORED HOLE DRAINAGE BOX CON-6 IN	2.000	EACH		
0850	01845	ISLAND INTEGRAL CURB	275.000	LF		
0860	01982	DELINEATOR FOR GUARDRAIL-WHITE	57.000	EACH		
0870	01984	DELINEATOR FOR BARRIER-WHITE	24.000	EACH		
0880	02014	BARRICADE-TYPE III	46.000	EACH		
0890	02091	REMOVE PAVEMENT	11,596.000	SQYD		
0900	02159	TEMP DITCH	12,970.000	LF		
0910	02160	CLEAN TEMP DITCH	12,970.000	LF		
0920	02219	PIPE UNDERCUT	140.000	CUYD		
0930	02223	GRANULAR EMBANKMENT	32,142.000	CUYD		
0940	02242	WATER	226.000	MGAL		
0950	02262	FENCE-WOVEN WIRE TYPE 1	732.000	LF		
0960	02265	REMOVE FENCE	745.000	LF		
0970	02273	FENCE-4 FT CHAIN LINK	6,619.000	LF		
0980	02351	GUARDRAIL-STEEL W BEAM-S FACE	2,512.500	LF		
0990	02360	GUARDRAIL TERMINAL SECTION NO 1	4.000	EACH		
1000	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	21.000	EACH		
1010	02367	GUARDRAIL END TREATMENT TYPE 1	6.000	EACH		

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PAGE: 6
LETTING: 05/20/11
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1020	02369	GUARDRAIL END TREATMENT TYPE 2A	8.000	EACH		
1030	02372	REMOVE GUARDRAIL CON TO BR END	5.000	EACH		
1040	02381	REMOVE GUARDRAIL	787.500	LF		
1050	02383	REMOVE & RESET GUARDRAIL	375.000	LF		
1060	02391	GUARDRAIL END TREATMENT TYPE 4A	3.000	EACH		
1070	02396	REMOVE GUARDRAIL END TREATMENT	10.000	EACH		
1080	02397	TEMP GUARDRAIL	225.000	LF		
1090	02404	SEPTIC TANK TREATMENT	12.000	EACH		
1100	02429	RIGHT-OF-WAY MONUMENT TYPE 1	47.000	EACH		
1110	02430	RIGHT-OF-WAY MONUMENT TYPE 1A	2.000	EACH		
1120	02432	WITNESS POST	49.000	EACH		
1130	02475	PLUG WATER WELL	2.000	EACH		
1140	02483	CHANNEL LINING CLASS II	5,329.000	TON		
1150	02545	CLEARING AND GRUBBING (87 ACRES)	(1.00)	LS		
1160	02562	SIGNS	2,419.000	SQFT		
1170	02585	EDGE KEY	645.000	LF		
1180	02596	FABRIC-GEOTEXTILE TYPE I	7,402.000	SQYD		
1190	02598	FABRIC-GEOTEXTILE TYPE III	66,079.000	SQYD		
1200	02600	FABRIC GEOTEXTILE TY IV FOR PIPE	2,479.000	SQYD	2.00	4,958.00
1210	02625	REMOVE HEADWALL	4.000	EACH		
1220	02650	MAINTAIN & CONTROL TRAFFIC	(1.00)	LS		

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1230	02651	DIVERSIONS (BY-PASS DETOURS)	(1.00)	LS		
1240	02653	LANE CLOSURE	5.000	EACH		
1250	02655	CROSSOVER	(1.00)	LS		
1260	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.000	EACH		
1270	02690	SAFELADING	99.000	CUYD		
1280	02701	TEMP SILT FENCE	15,620.000	LF		
1290	02703	SILT TRAP TYPE A (1)	85.000	EACH		
1300	02703	SILT TRAP TYPE A (2)	85.000	EACH		
1310	02705	SILT TRAP TYPE C	85.000	EACH		
1320	02706	CLEAN SILT TRAP TYPE A (1)	255.000	EACH		
1330	02706	CLEAN SILT TRAP TYPE A (2)	255.000	EACH		
1340	02708	CLEAN SILT TRAP TYPE C	255.000	EACH		
1350	02709	CLEAN TEMP SILT FENCE	15,620.000	LF		
1360	02720	SIDEWALK-4 IN CONCRETE	1,470.000	SQYD		
1370	02726	STAKING	(1.00)	LS		
1380	02731	REMOVE STRUCTURE (ACCESS ROAD)	(1.00)	LS		
1390	02731	REMOVE STRUCTURE (KY 303)	(1.00)	LS		
1400	02731	REMOVE STRUCTURE (KY 80)	(1.00)	LS		
1410	02775	ARROW PANEL	1.000	EACH		
1420	03171	CONCRETE BARRIER WALL TYPE 9T	120.000	LF		
1430	03225	TUBULAR MARKERS	102.000	EACH		

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1440	03289	SIDEWALK RAMP TYPE 3	3.000	EACH		
1450	04935	TEMP SIGNAL	(1.00)	LS		
1460	05950	EROSION CONTROL BLANKET	7,301.000	SQYD		
1470	05952	TEMP MULCH	421,445.000	SQYD		
1480	05953	TEMP SEEDING AND PROTECTION	30,000.000	SQYD		
1490	05966	TOPDRESSING FERTILIZER	23.000	TON		
1500	05985	SEEDING AND PROTECTION	311,686.000	SQYD		
1510	05990	SODDING	8,360.000	SQYD		
1520	05998	SPREADING STOCKPILED TOPSOIL	1,933.000	CUYD		
1530	06510	PAVE STRIPING-TEMP PAINT-4 IN	44,356.000	LF		
1540	06514	PAVE STRIPING-PERM PAINT-4 IN	61,718.000	LF		
1550	06530	PAVE STRIPING REMOVAL-4 IN	15,270.000	LF		
1560	06550	PAVE STRIPING-TEMP REM TAPE-W	18,284.000	LF		
1570	06551	PAVE STRIPING-TEMP REM TAPE-Y	31,055.000	LF		
1580	06568	PAVE MARKING-THERMO STOP BAR-24IN	535.000	LF		
1590	06570	PAVE MARKING-PAINT CROSS-HATCH	15,356.000	SQFT		
1600	06572	PAVE MARKING-DOTTED LANE EXTEN	340.000	LF		
1610	06573	PAVE MARKING-THERMO STR ARROW	2.000	EACH		
1620	06574	PAVE MARKING-THERMO CURV ARROW	47.000	EACH		
1630	06575	PAVE MARKING-THERMO COMB ARROW	1.000	EACH		
1640	06588	PAVEMENT MARKER TY IVA-BY TEMP	375.000	EACH		

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1650	06589	PAVEMENT MARKER TYPE V-MW	70.000	EACH		
1660	06591	PAVEMENT MARKER TYPE V-BY	351.000	EACH		
1670	06592	PAVEMENT MARKER TYPE V-B W/R	94.000	EACH		
1680	06600	REMOVE PAVEMENT MARKER TYPE V	78.000	EACH		
1690	07551	CROSS VANE	2.000	EACH		
1700	08100	CONCRETE-CLASS A	14.000	CUYD		
1710	08150	STEEL REINFORCEMENT	692.000	LB		
1720	20208NC	PAVE MARK-PAINT ARROWS	45.000	EACH		
1730	20300ES719	REM & RESET G/R END TREAT TY 4A	3.000	EACH		
1740	20368ES724	RIPARIAN ZONE SEEDING	(1.00)	LS		
1750	21160ED	ROCK TOE PROTECTION	1,630.000	LF		
1760	21547NS719	REMOVE AND RESET BRIDGE END CONNECTOR	3.000	EACH		
1770	23010EN	PAVE MARK TEMP PAINT STOP BAR-24 IN	453.000	LF		
1780	23131ER701	PIPELINE VIDEO INSPECTION	2,432.000	LF		
1790	23158ES505	DETECTABLE WARNINGS	110.000	SQFT		
SECTION 0005 DRAINAGE						
1800	00440	ENTRANCE PIPE-15 IN	919.000	LF		
1810	00441	ENTRANCE PIPE-18 IN	458.000	LF		
1820	00443	ENTRANCE PIPE-24 IN	144.000	LF		
1830	00445	ENTRANCE PIPE-30 IN	62.000	LF		
1840	00450	ENTRANCE PIPE-15 IN EQUIV	199.000	LF		

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1850	00451	ENTRANCE PIPE-18 IN EQUIV	229.000	LF		
1860	00454	ENTRANCE PIPE-30 IN EQUIV	33.000	LF		
1870	00462	CULVERT PIPE-18 IN	492.000	LF		
1880	00466	CULVERT PIPE-30 IN	194.000	LF		
1890	00468	CULVERT PIPE-36 IN	314.000	LF		
1900	00521	STORM SEWER PIPE-15 IN	42.000	LF		
1910	00522	STORM SEWER PIPE-18 IN	1,517.000	LF		
1920	00524	STORM SEWER PIPE-24 IN	29.000	LF		
1930	01370	METAL END SECTION TY 1-15 IN	38.000	EACH		
1940	01371	METAL END SECTION TY 1-18 IN	24.000	EACH		
1950	01373	METAL END SECTION TY 1-24 IN	4.000	EACH		
1960	01374	METAL END SECTION TY 1-30 IN	2.000	EACH		
1970	01391	METAL END SECTION TY 3-18 IN	7.000	EACH		
1980	01394	METAL END SECTION TY 3-30 IN	1.000	EACH		
1990	01395	METAL END SECTION TY 3-36 IN	2.000	EACH		
2000	01414	METAL END SECTION TY 4-30 IN	1.000	EACH		
2010	01456	CURB BOX INLET TYPE A	13.000	EACH		
2020	01505	DROP BOX INLET TYPE 5B	1.000	EACH		
2030	01559	DROP BOX INLET TYPE 13G	4.000	EACH		
2040	01690	FLUME INLET TYPE 1	1.000	EACH		
2050	01691	FLUME INLET TYPE 2	1.000	EACH		

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2060	20166ES810	TEMPORARY PIPE	377.000	LF		
2070	23152NN	METAL END SECTION TY 1-30 IN EQUIV	2.000	EACH		
SECTION 0006 BRIDGE						
2080	02231	STRUCTURE GRANULAR BACKFILL	1,975.000	CUYD		
2090	02998	MASONRY COATING	2,999.000	SQYD		
2100	03299	ARMORED EDGE FOR CONCRETE	643.400	LF		
2110	08001	STRUCTURE EXCAVATION-COMMON	816.000	CUYD		
2120	08003	FOUNDATION PREPARATION	(1.00)	LS		
2130	08019	CYCLOPEAN STONE RIP RAP	2,548.000	TON		
2140	08033	TEST PILES	500.000	LF		
2150	08039	PRE-DRILLING FOR PILES (REVISED: 5-16-11)	572.000	LF		
2160	08046	PILES-STEEL HP12X53	1,014.000	LF		
2170	08051	PILES-STEEL HP14X89	6,467.000	LF		
2180	08095	PILE POINTS-14 IN	172.000	EACH		
2190	08100	CONCRETE-CLASS A	1,287.800	CUYD		
2200	08104	CONCRETE-CLASS AA	1,550.500	CUYD		
2210	08150	STEEL REINFORCEMENT	47,541.000	LB		
2220	08151	STEEL REINFORCEMENT-EPOXY COATED	434,483.000	LB		
2230	08500	APPROACH SLAB	744.000	SQYD		
2240	08632	PRECAST PC I BEAM TYPE 2	353.500	LF		
2250	08634	PRECAST PC I BEAM TYPE 4	4,323.000	LF		

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2260	21532ED	RAIL SYSTEM TYPE III	823.800	LF		
SECTION 0007 SIGNALIZATION						
2270	04793	CONDUIT-1 1/4 IN	2,291.000	LF		
2280	04795	CONDUIT-2 IN	1,368.000	LF		
2290	04811	JUNCTION BOX TYPE B	30.000	EACH		
2300	04820	TRENCHING AND BACKFILLING	3,629.000	LF		
2310	04830	LOOP WIRE	9,276.000	LF		
2320	04844	CABLE-NO. 14/5C	2,317.000	LF		
2330	04845	CABLE-NO. 14/7C	1,178.000	LF		
2340	04850	CABLE-NO. 14/1 PAIR	16,962.000	LF		
2350	04885	MESSENGER-10800 LB	1,675.000	LF		
2360	04895	LOOP SAW SLOT AND FILL	8,689.000	LF		
2370	04931	INSTALL CONTROLLER TYPE 170	3.000	EACH		
2380	04932	INSTALL STEEL STRAIN POLE	12.000	EACH		
2390	04950	REMOVE SIGNAL EQUIPMENT	1.000	EACH		
2400	20094ES835	TEMP RELOCATION OF SIGNAL HEAD	28.000	EACH		
2410	20188NS835	INSTALL LED SIGNAL-3 SECTION	19.000	EACH		
2420	20189NS835	INSTALL LED SIGNAL-5 SECTION	4.000	EACH		
2430	20266ES835	INSTALL LED SIGNAL- 4 SECTION	2.000	EACH		
2440	21543EN	BORE AND JACK CONDUIT	101.000	LF		
2450	23157EN	TRAFFIC SIGNAL POLE BASE	56.780	CUYD		

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2460	23982EC	INSTALL ANTENNA	3.000	EACH		
SECTION 0008 MOBILIZATION / DEMOBILIZATION						
2470	02568	MOBILIZATION (NO MORE THAN 5%)		LUMP		
2480	02569	DEMOBILIZATION (AT LEAST 1.5%)		LUMP		
		TOTAL BID				