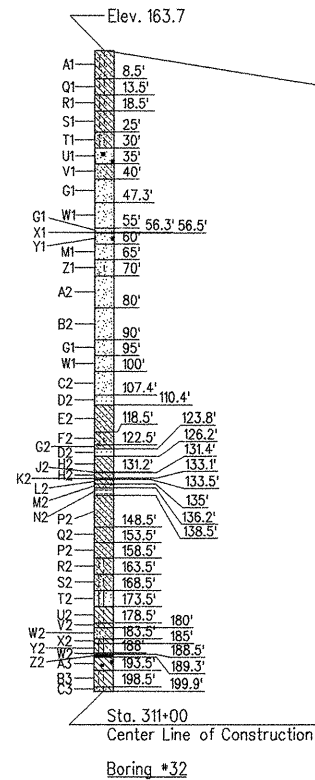
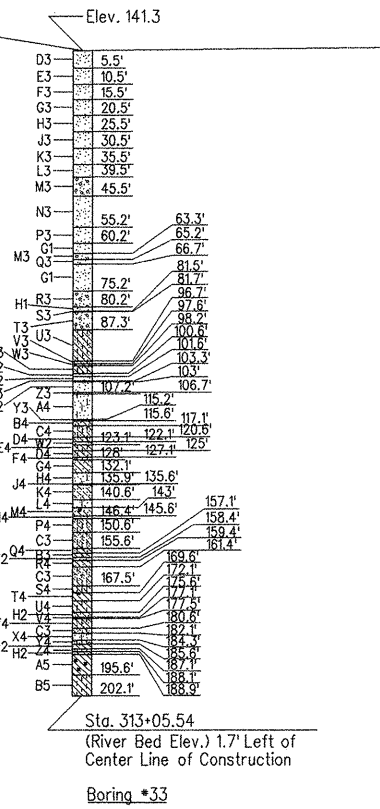


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		110394	49	196
				06830		SOIL BORINGS		41961



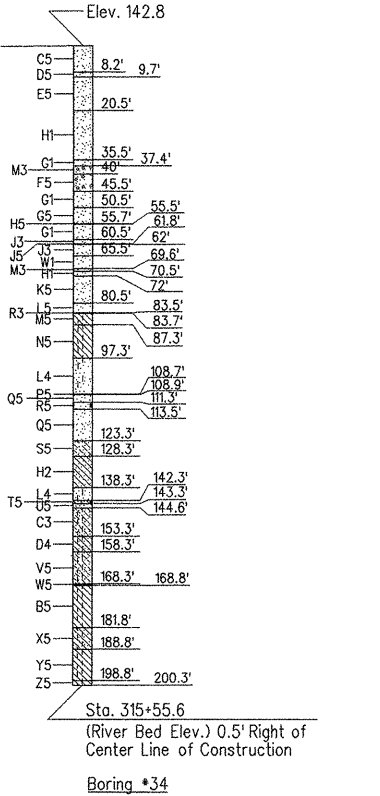
Sta. 311+00 - Center Line of Construction

4.0-5.0, N=9
9.0-10.0, N=2
14.0-15.0, N=0
19.0-20.0, N=0
25.5-26.5, N=3
30.5-31.5, N=24
35.5-36.5, N=14
40.5-41.5, N=20
45.5-46.5, N=24
50.5-51.5, N=18
55.5-56.5, N=12
60.5-61.5, N=45
65.5-66.5, N=22
70.5-71.5, N=22
75.5-76.5, N=36
80.5-81.5, N=36
85.5-86.5, N=61
90.5-91.5, N=26
95.5-96.5, N=28
100.5-101.5, N=55
105.5-106.5, N=53
110.5-111.5, N=14
119.0-120.0, N=26
134.0-135.0, N=58
139.0-140.0, N=43
149.0-150.0, N=32
154.0-155.0, N=45
159.0-160.0, N=37
164.0-164.9, N=86(0.9')
169.0-169.4, N=60(0.4')
174.0-175.0, N=61
179.0-180.0, N=35
184.0-185.0, N=75
189.0-189.3, N=60(0.3')
199.0-199.9, N=97(0.9')



Sta. 313+05.54 - (River Bed Elev.) 1.7' Left of Center Line of Construction

0.5-1.5, N=2
6.0-7.0, N=2
11.0-12.0, N=12
16.0-17.0, N=13
21.0-22.0, N=12
26.0-27.0, N=10
31.0-32.0, N=17
36.0-37.0, N=13
41.0-42.0, N=22
46.0-47.0, N=15
51.0-52.0, N=30
55.7-56.7, N=9
60.7-61.7, N=21
65.7-66.7, N=19
70.7-71.7, N=28
75.7-76.7, N=46
80.7-81.7, N=72
85.7-86.1, N=60(0.4')
90.7-91.7, N=20
97.2-97.6, N=60(0.4')
98.2-98.4, N=60(0.2')
103.5-104.5, N=77
107.2-108.2, N=83
111.1-112.1, N=49
115.0-115.2, N=60(0.2')
116.1-117.1, N=30
121.1-122.1, N=64
126.1-127.1, N=71
131.1-132.1, N=26
136.1-137.1, N=85
141.1-142.1, N=40
146.1-146.4, N=60(0.3')
151.1-151.5, N=60(0.4')
156.1-157.1, N=40
161.1-161.4, N=60(0.3')
166.1-167.0, N=90(0.9')
171.1-172.1, N=54
176.1-177.1, N=50
181.1-182.1, N=73
186.1-187.1, N=41
191.1-192.1, N=55
196.1-197.1, N=50
201.1-202.1, N=47



Sta. 315+55.6 - (River Bed Elev.) 0.5' Right of Center Line of Construction

3.7-4.7, N=9
8.7-9.7, N=7
16.0-17.0, N=11
21.0-22.0, N=34
26.0-27.0, N=32
31.0-32.0, N=31
36.0-37.0, N=18
41.0-42.0, N=9
46.0-47.0, N=11
51.0-52.0, N=19
56.0-57.0, N=28
61.0-62.0, N=7
66.0-67.0, N=13
71.0-72.0, N=42
76.0-77.0, N=74
81.0-82.0, N=37
86.0-87.0, N=22
102.8-103.8, N=98
112.8-113.5, N=115(0.7')
123.8-124.8, N=80
133.8-134.8, N=31
143.8-144.6, N=82(0.8')
153.8-154.8, N=80
173.8-174.8, N=74
184.3-185.3, N=49
194.3-195.3, N=43
199.3-200.3, N=86

SOIL BORINGS & "N" VALUES

NOTE: ORGANIC MATTER AND LIGNITE WERE ENCOUNTERED IN THE BORINGS AND MAY BE ENCOUNTERED IN GREATER AMOUNTS AT OTHER LOCATIONS IN THE PROJECT AREA.

BORING LEGEND

- A1-Moist, Stiff, Brown and Gray Sandy, Silty Clay
- B1-Wet, Soft, Brown and Gray Sandy, Silty Clay
- C1-Wet, Very Soft, Brown Sandy, Silty Clay
- D1-Wet, Very Loose, Brown Sand **
- E1-Wet, Loose, Brown and Gray Sand
- F1-Wet, Very Loose, Gray Sand with some Clay Seams
- G1-Wet, Medium Dense, Gray Sand
- H1-Wet, Dense, Gray Sand
- J1-Moist, Stiff, Gray Silty Clay
- K1-Wet, Medium Dense, Gray Sand with some Gravel and Clay Seams
- L1-Wet, Dense, Gray Sand with some Gravel and Lignite
- M1-Wet, Dense, Gray Sand with Traces of Lignite
- N1-Wet, Dense, Gray Sand with some Gravel
- P1-Wet, Very Dense to Dense, Gray Sand
- Q1-Wet, Soft, Brown Sandy, Silty Clay
- R1-Wet, Very Soft, Brown Sandy, Silty Clay with some Organic Matter
- S1-Wet, Very Soft, Gray Sandy, Silty Clay
- T1-Wet, Very Loose, Gray Silty Sand with Clay Seams
- U1-Wet, Medium Dense, Gray Sand with Organic Matter
- V1-Wet, Medium Dense, Gray Sand with Clay Seams
- W1-Wet, Medium Dense, Gray Sand with some Gravel
- X1-Soft, Black Lignite
- Y1-Wet, Medium Dense, Gray Sand with Lignite
- Z1-Wet, Medium Dense, Gray Silty Sand
- A2-Wet, Medium Dense to Dense, Gray Sand with Traces of Lignite
- B2-Wet, Dense to Very Dense, Gray Sand
- C2-Wet, Very Dense, Gray Sand
- D2-Hard, Gray Cemented Sand
- E2-Wet, Stiff, Gray Sandy Clay
- F2-Moist, Very Stiff, Gray Clay with Silt and Sand Lenses and Traces of Lignite
- G2-Moist, Hard, Gray Clay with Sand Seams and Gravel
- H2-Moist, Hard, Gray Sandy Clay
- J2-Moist, Dense, Brown Siltstone Fragments
- K2-Moist, Dense, Gray Sand
- L2-Moist, Hard, Gray Clay with Sand Seams and some Siltstone Fragments
- M2-Moist, Dense, Gray Sand with Clay Seams
- N2-Alternating Layers of Hard, Brown and Gray Conglomerate with Siltstone and Traces of Lignite and Moist, Dense, Gray Sand
- P2-Moist, Hard, Gray Clay with Sand Seams
- Q2-Moist, Hard, Gray Clay with Sand Seams and Traces of Lignite
- R2-Moist, Dense, Gray Silty Sand with Clay Seams
- S2-Moist, Very Dense, Gray and Brown Silty Sand with Clay Seams and some Lignite
- T2-Moist, Very Dense, Gray Sandy Silt
- U2-Moist, Very Hard, Gray Clay with Silt Seams
- V2-Moist, Hard to Very Hard, Gray Sandy, Silty Clay
- W2-Moist, Dense, Gray Clayey Sand
- X2-Moist, Very Hard, Gray Silty Clay
- Y2-Moist, Dense, Gray Clayey Silt
- Z2-Hard, Dark Brown Lignite with some Clay Seams
- A3-Moist, Hard, Gray and Dark Brown Clay with Lignite
- B3-Moist, Hard, Gray Silty Clay
- C3-Moist, Very Dense, Gray Silty Sand with Clay Seams
- D3-Wet, Very Loose, Gray Sand
- E3-Wet, Very Loose, Brown and Gray Sand
- F3-Wet, Medium Dense, Brown and Gray Sand
- G3-Wet, Medium Dense, Brown and Gray Sand with Traces of Gravel
- H3-Wet, Medium Dense, Gray Sand with Traces of Lignite
- J3-Wet, Loose, Gray Sand
- K3-Wet, Medium Dense, Gray Sand with Traces of Gravel and Organic Matter
- L3-Wet, Medium Dense, Gray Sand with some Clay Seams and Traces of Lignite
- M3-Wet, Medium Dense, Gray Sand and Gravel
- N3-Wet, Medium Dense, Gray Sand with Traces of Gravel
- P3-Wet, Loose, Gray Sand with Traces of Gravel
- Q3-Wet, Medium Dense, Gray Sand with Traces of Organic Matter (Wood)

BORING LEGEND (continued)

- R3-Wet, Dense, Gray Sand and Gravel
- S3-Wet, Very Dense, Gray Novaculite Gravel
- T3-Wet, Very Dense, Gray Sand and Gravel
- U3-Moist, Very Stiff, Gray Sandy, Silty Clay with Traces of Calcareous Nodules
- V3-Moist, Very Hard, Gray Clay with Silt and Sand Lenses, Shells and some Cemented Silt Seams
- W3-Moist, Hard, Gray Clay with Sand and Cemented Silt Seams
- X3-Moist, Very Hard, Gray Sandy, Silty Clay with some Siltstone and Cemented Sand Seams
- Y3-Hard, Gray Siltstone
- Z3-Wet, Very Dense, Gray Sand with Clay and some Thin Siltstone Seams
- A4-Moist, Hard, Gray Silty Sand with some Clay and Thin Siltstone Seams
- B4-Moist, Very Stiff, Gray Sandy Clay with Traces of Lignite
- C4-Moist, Dense, Gray Silty Sand with Clay and some Thin Siltstone Seams
- D4-Moist, Very Hard, Gray Sandy, Silty Clay
- E4-Moist, Hard, Gray Clay with Silt Seams
- F4-Moist, Very Hard, Gray Sandy Silt with Clay Seams
- G4-Moist, Very Stiff, Gray Sandy Clay
- H4-Moist, Medium Dense, Gray Silty Sand with some Clay Seams and Traces of Lignite
- J4-Moist, Very Stiff, Black Organic Matter (Wood)
- K4-Moist, Very Dense, Gray Sand with Clay Seams and Traces of Lignite
- L4-Moist, Very Dense, Gray Silty Sand with some Clay Seams
- M4-Moist, Dense, Gray Clayey Sand with Lignite
- N4-Moist, Very Dense, Gray Silty Sand with Traces of Lignite
- P4-Moist, Very Dense, Gray Silty Sand with Clay Seams with Traces of Lignite
- Q4-Moist, Hard, Gray Sandy, Silty Clay
- R4-Moist, Very Hard, Gray Sandy Clay with Traces of Lignite
- S4-Moist, Dense, Gray Clayey Silt with some Lignite
- T4-Moist, Hard, Dark Brown and Black Lignitic Clay
- U4-Moist, Hard, Gray Silty Clay with Traces of Lignite
- V4-Moist, Dense, Gray Silty Sand with some Clay Seams
- W4-Moist, Hard, Gray Clay with Silt and Sand Lenses and Traces of Lignite
- X4-Moist, Dense, Gray Silty Sand
- Y4-Moist, Dense, Gray Sandy Silt with Clay Seams
- Z4-Moist, Dense, Gray Clayey Silt with some Slickensides
- A5-Moist, Hard, Gray and Brown Lignitic Clay
- B5-Moist, Hard, Gray Silty Clay with some Lignite
- C5-Wet, Loose, Gray to Brown Sand
- D5-Wet, Loose, Gray Sand with Organic Matter
- E5-Wet, Loose to Medium Dense, Gray Sand
- F5-Wet, Loose, Gray Sand and Gravel with some Clay Seams
- G5-Wet, Medium Dense, Gray Sand with some Clay Seams
- H5-Soft, Brown Cemented Silt
- J5-Wet, Loose, Gray Sand and Gravel
- K5-Wet, Dense to Very Dense, Gray Sand with some Gravel
- L5-Wet, Dense, Gray Sand with some Gravel and Traces of Lignite
- M5-Moist, Very Stiff, Gray Silty Clay
- N5-Moist, Very Stiff, Gray Silty Clay with Shells
- P5-Hard, Brown Siltstone
- Q5-Moist, Very Dense, Gray Sand with some Clay Seams
- R5-Wet, Very Dense, Gray Sand with Lignite and some Thin Cemented Silt Seams
- S5-Moist, Very Dense, Gray Clayey Sand
- T5-Hard, Dark Brown Lignite with Gray Sandy Clay Seams
- U5-Moist, Very Dense, Gray Silty Sand with some Lignite
- V5-Moist, Very Dense, Gray Silty Sand with Clay Seams and Traces of Organic Matter
- W5-Hard, Dark Brown Lignite
- X5-Moist, Hard, Gray Clay with Silt and Sand Lenses
- Y5-Moist, Hard, Gray Silty Clay with some Lignite Seams
- Z5-Moist, Very Hard, Gray Silty Clay with some Lignite Seams

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
H. JAMES ENGSTROM & ASSOC., INC.
No. 164

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
W. B. CONWAY
No. 4281

2/19/08

ALTERNATE NO. 1 & 2
WHITE RIVER BRIDGE

DETAILS OF SOIL BORINGS
(SHEET 1 OF 2)

WHITE RIVER STR. & APPRS.
(CLARENDON) (PH. II) (F)
MONROE COUNTY

ROUTE 79 SEC. 13
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

Engstrom / Modjeski and Masters

DRAWN BY: JDB/TAD DATE: Nov. 07 FILENAME: b1103941_i6.dgn
CHECKED BY: LKD DATE: Nov. 01 SCALE: 1" = 30'-0"
DESIGNED BY: LKD DATE: Nov. 01

BRIDGE NO. 06830 DRAWING NO. 41961