

QU(TSF) P-Penet. L-Labor.	STANDARD PENETRATION TEST		Elev. 415.3
	DEPTH	BLOWS/6"	
	3.5	3-3-3	Brown to Dark Gray, Loose to Medium Dense, Fine SAND, Dry to Wet, (SP), Trace Silt, Organics Elev. 403.3 Dark Gray, Very Loose, Fine, Silty SAND, Wet, (SM) Elev. 400.5 Dark Gray, Soft to Firm, Fat CLAY, (CH) Elev. 392.3 Gray, Fine, Silty SAND, Wet, (SM) Elev. 386.8 Dark Gray, Stiff, Fat CLAY, Wet, (CH) Elev. 381.8 Brown-Gray, Medium Dense, Fine SAND, Wet, (SP) Elev. 373.3 Gray, Dense, Fine, Silty SAND, Wet, (SM) Elev. 368.3 Dark Gray to Gray, Medium Dense, Fine to Coarse SAND, Wet, (SP), Trace Organics, Gravel Elev. 356.8 Gray, Medium Dense, Fine to Coarse SAND, Wet, (SW), Trace to Some Gravel Elev. 346.8 Dark Gray, Medium Dense, Fine, Silty SAND, Wet, (SM) Elev. 343.3 Gray, Dense to Very Dense, Fine to Medium SAND, Wet, (SP) Elev. 331.8 Elev. 316.0 Gray, Dense, Fine to Coarse SAND, Wet, (SW), Trace Fine Gravel Elev. 311.0 Gray, Dense, Fine to Coarse SAND, Wet, (SW), Trace Fine Gravel - rough drilling at 106.0 ft. Elev. 306.0 Gray, Very Dense, Fine to Medium SAND, Wet, (SP), Trace Fine Gravel Elev. 301.0 Gray, Very Dense, Fine to Coarse SAND, Wet, (SW), Trace Gravel Elev. 295.8 Elev. 295.3 DOLomite, gray, hard, finely crystalline, thin bedded, fresh to slightly weathered - slightly weathered below 122.0 ft. - fracture at 120.6 and 128.0 ft. - fractures from 122.2 to 126.2 ft. - chert lense at 125.9 and 128.0 ft. Elev. 287.2 LIMESTONE, gray, hard, finely crystalline, thin bedded, fresh - dolomite from 142.0 to 144.6 and 145.5 to 147.0 ft. - clay seam at 157.2 ft. - shale seams at 159.1, 159.3, and 159.5 ft. - cemented horizontal fractures at 132.7, 133.2, 134.8, 135.3, and from 137.2 to 141.0 ft. - multiple cemented horizontal fractures from 147.0 to 157.0 ft. - fracture at 130.3, 157.6, 158.7, 159.6, 160.0, 160.4, 161.2, and 161.7 ft. - 45 degree fracture at 155.4 ft. - cemented vertical fracture from 137.0 to 137.3 ft. - chert lense at 134.1 and 136.2 ft. - chert lenses from 137.3 to 139.8 ft. Elev. 250.3 DOLomite, gray, hard, finely crystalline, medium bedded, slightly weathered - clay seam at 166.6 ft. - limestone from 166.5 to 167.5 ft. - multiple fractures from 168.6 to 169.0 ft. - cemented fracture at 171.2 ft. Elev. 243.3
	8.5	3-5-6	
0.25P	13.5	WOH-WOH-2	
1.0P	18.5	1-2-3	
	23		
1.25P	28.5	1-2-6	
	33.5	13-15-13	
	38.5	18-11-9	
	43.5	20-22-17	
	48.5	9-5-12	
	53.5	9-13-12	
	58.5	11-8-11	
	63.5	16-13-17	
	68.5	9-11-10	
	73.5	17-24-18	
	78.5	12-22-35	
	83.5	18-31-45	
	88.5	15-19-23	
	93.5	17-18-21	
	98.5	17-33-29	
	103.5	20-27-30	
	108.5	22-38-34	

ROCK CORE		
DEPTH	REC%	ROD%
122	100	75
236.4L	127	100
727.4L	132	100
	137	100
436.8L	142	95
600.5L	147	100
	152	100
	157	100
	162	100
	167	100
	172	100

Boring No. IL-3
Pier 16
Sta. 109+37.64, 41.96' Rt.

QU(TSF) P-Penet. L-Labor.	STANDARD PENETRATION TEST		Elev. 414.5
	DEPTH	BLOWS/6"	
	3.5	4-4-4	Brown, Loose, Fine SAND, Moist to Wet, (SP), Trace Roots Elev. 401.0 Gray, Soft, Fat CLAY, Moist, (CH) - sand lenses below 24.7 ft. Elev. 385.5 Gray, Medium Dense, Silty SAND, Wet, (SM) - possible clay seam from 31.5 to 32.5 ft. Elev. 381.0 Elev. 331.0 Gray, Dense, Fine to Coarse SAND, Wet, (SW), Trace Gravel, rough drilling at 91.0 ft. Elev. 316.0 Gray, Very Dense, Fine to Medium SAND, Wet, (SP), Trace Fine Gravel Elev. 311.0 Gray, Dense, Fine to Coarse SAND, Wet, (SW), Trace Fine Gravel - rough drilling at 106.0 ft. Elev. 306.0 Gray, Very Dense, Fine to Medium SAND, Wet, (SP), Trace Fine Gravel Elev. 301.0 Gray, Very Dense, Fine to Coarse SAND, Wet, (SW), Trace Gravel Elev. 295.8 Elev. 295.3 DOLomite, dark gray, hard, finely crystalline, medium to thin bedded, slightly weathered - thin bedded below 125.0 ft. - slightly pitted from 127.1 to 131.2 ft. - 1.0' gray, soft, clay seam at 125.9 ft. - 45 degree fracture at 121.0 and 128.8 ft. - highly fractured from 123.2 to 123.4 ft. Elev. 283.3 LIMESTONE, gray, hard, finely crystalline, thin to medium bedded, slightly weathered - medium bedded below 135.0 ft. - cherty from 134.6 to 134.8, 135.0 to 136.4, and 138.3 to 142.1 ft. Elev. 271.7 DOLomite, gray, hard, finely crystalline, medium bedded, slightly weathered - core loss from 144.8 to 150.0 ft. - highly fractured from 144.3 to 144.8 ft. - 45 degree fracture from 146.2 to 146.5 ft. - cherty from 148.7 to 150.0 ft. Elev. 264.5 LIMESTONE, gray, hard, finely crystalline, medium to thick bedded, slightly weathered - medium to thick bedded below 160.0 ft. - dark gray dolomite from 167.5 to 169.0 ft. - multiple cemented horizontal fractures from 151.0 to 152.0 and 152.9 to 154.3 ft. - cemented horizontal fracture at 157.5, 160.5, 163.9, and 164.2 ft. - 45 degree fracture at 158.0 ft. - 0.12" chert seam at 150.5 ft. - 0.25" chert seam at 163.6 ft. Elev. 244.5
	8.5	3-4-5	
0.5P	13.5	WOH-WOH-2	
0.5P	18		
0.5P	23.5	2-2-3	
	28.5	1-3-13	
	33.5	7-13-13	
	38.5	8-8-5	
	43.5	7-11-14	
	48.5	11-11-7	
	53.5	11-15-20	
	58.5	12-13-23	
	63.5	16-29-21	
	68.5	14-17-20	
	73.5	16-15-14	
	78.5	15-17-18	
	83.5	39-25-20	
	88.5	15-21-29	
	93.5	9-11-21	
	98.5	20-24-48	
	103.5	13-17-19	
	108.5	18-26-35	
	113.5	24-36-48	
	118.5	50/0"	

ROCK CORE		
DEPTH	REC%	ROD%
120	100	100
244.7L	125	100
603.4L	130	100
	135	100
544.8L	140	100
222.0L	145	93
	150	100
493.3L	155	100
	160	100
241.2L	165	100
	170	97

Boring No. IL-4
Pier 16
Sta. 109+57.80, 43.47' Lt.

QU(TSF) P-Penet. L-Labor.	STANDARD PENETRATION TEST		Elev. 416.2
	DEPTH	BLOWS/6"	
	3.5	2-2-4	Brown, Loose, Fine to Coarse SAND, Moist, (SW) Elev. 409.7 Brown, Loose, Fine to Medium SAND, Wet, (SP) Elev. 404.7 Gray, Very Soft to Soft, Fat CLAY, Moist, (CH), Trace Sand Lenses Elev. 394.7 Elev. 364.7 Gray, Medium Dense to Loose, Fine to Coarse SAND, Wet, (SW), Trace Fine Gravel Elev. 354.7 Elev. 319.7 Gray, Very Dense, Fine to Coarse SAND, Wet, (SW), Trace Fine Gravel Elev. 314.7 Gray, Very Dense, Fine SAND, Wet, (SP) Elev. 309.7 Gray, Dense to Very Dense, Fine to Coarse SAND, Wet, (SW), Trace Fine Gravel, Cobbles - rough drilling from 113.5 to 118.0 ft. Elev. 295.2 LIMESTONE, gray to dark gray, moderately hard, medium crystalline, thin to thick bedded, slightly weathered - dark gray, thick bedded below 125.0 ft. - 0.25" dark gray, soft, shale seam at 123.3, 124.8, 129.3 and 129.8 ft. - fractured pieces from 121.0 to 121.4 and 123.8 to 124.4 ft. - vertical fracture from 122.5 to 122.7 ft. Elev. 286.2 DOLomite, gray to dark gray, hard, finely crystalline, thin to medium bedded, slightly weathered, slightly pitted - thin to medium bedded below 135.0 ft. - vuggy from 134.3 to 135.0 ft. - cemented vertical fracture from 137.4 to 138.3 ft. Elev. 277.9 LIMESTONE, gray, hard, finely crystalline, thin to thick bedded, slightly weathered - thick bedded below 140.0 ft. - gray, thin bedded below 160.0 ft. - dark gray from 167.3 to 167.7 and 168.9 to 169.3 ft. - dark gray, pitted dolomite from 151.8 to 155.2 ft. - dark gray dolomite from 155.9 to 157.8 ft. - calcite deposit from 152.8 to 153.0 ft. - cemented 45 degree fracture from 140.4 to 140.8 ft. - 1.0" chert seam at 141.7 ft. - chert seam from 146.3 to 146.4 ft. - chert layer from 147.1 to 147.8 ft. - cherty from 148.7 to 150.0 ft. - trace chert at 157.7 ft. Elev. 246.2
	8.5	3-4-5	
0.0P	13.5	WOR-WOH-WOH	
0.5P	18		
	23		
	28.5	8-8-13	
	33.5	8-12-9	
	38.5	9-13-8	
	43.5	5-5-7	
	48.5	10-8-5	
	53.5	7-9-9	
	58.5	5-4-4	
	63.5	9-16-17	
	68.5	16-25-50	
	73.5	11-12-17	
	78.5	8-13-12	
	83.5	8-11-12	
	88.5	10-11-15	
	93.5	11-15-21	
	98.5	21-26-25	
	103.5	30-50-50	
	108.5	15-17-19	
	113.5	35-33-50	

ROCK CORE		
DEPTH	REC%	ROD%
123	100	0
125	92	46
532.8L	130	100
209.5L	135	100
	140	100
1092.8L	145	100
	150	100
329.9L	155	100
	160	100
768.7L	165	100
	170	100

Boring No. ILC-5
Pier 17
Sta. 112+44.08, 45.01' Lt.

Note: For Typical Boring and General Notes, see Sheet No. 9.

BORING DATA (4 OF 7)

CONTRACT NO. 76D61

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR
USER NAME = jja11fff	
PLOT SCALE = #SCALE#	
PLOT DATE = 4/14/2010	
DESIGNED -	HNTB
CHECKED -	CMT
DRAWN -	CMT / HNTB
REVISED -	
REVISED -	
REVISED -	
REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS APPROACH STRUCTURE
FOR NEW I-70 MISSISSIPPI RIVER BRIDGE

MISSOURI HIGHWAYS
AND TRANSPORTATION COMMISSION

HNTB
715 KIRK DRIVE
KANSAS CITY, MO 64105
TELEPHONE (816) 472-1201
CERTIFICATE OF AUTHORITY
NO. 001270

CMT
CRAWFORD, MURPHY & TILLY, INC.
2750 WEST WASHINGTON STREET
SPRINGFIELD, IL 62702
TELEPHONE (217) 787-8050
ENGINEERING CORPORATION - 000631

Detailed JUL 2009
Checked JUL 2009

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 12 of 152