PROJECT DESCRIPTION

THE PROJECT CONSISTS IN PART OF PLACING TWO STRUCTURES FOR THE PROPOSED SR 823 OVER SWAUGER VALLEY 13/32 MINFORD ROAD (CR-31). THE TWO STRUCTURES AS PLANNED, ARE TWO-SPAN STRUCTURES USING MSE WALLS TO HOLD BACK THE ROADWAY EMBANKMENTS AND CONTAIN THE ABUTMENTS.

HISTORIC RECORDS

HISTORIC BORING RECORDS FOR THE AREA WERE REQUESTED FROM THE ODOT OFFICE OF GEOTECHNICAL ENGINEERING AND THE DISTRICT, HOWEVER, NO SUCH RECORDS EXISTED.

GEOLOGY

THE STRUCTURE SITE IS LOCATED IN THE SHAWNEE-MISSISSIPPIAN PLATEAU OF THE UNGLACIATED PORTION OF THE APPALACHIAN PLATEAU PHYSIOGRAPHIC REGION. THE SHAWNEE-MISSISSIPPIAN PLATEAU IS CHARACTERIZED BY DEVONIAN AGED TO PENNSYLVANIAN AGED ROCKS AND CONTAINS RESIDUAL, COLLUVIAL, GLACIAL, ALLUVIAL, AND LACUSTRINE SOILS. BEDROCK WITHIN THE STRUCTURE AREA IS PRIMARILY SANDSTONE OF THE LOGAN FORMATION OF MISSISSIPPIAN AGE. BEDROCK OF THE PENNSYLVANIAN BREATHITT FORMATION CAN BE FOUND AT THE TOP OF THE SLOPES TO THE SOUTH OF THE STRUCTURE, ROUGHLY ABOVE ELEVATION 860. NO MINING IS REPORTED IN THE IMMEDIATE VICINITY.

RECONNAISSANCE

SEVERAL SITE RECONNAISSANCE VISITS WERE MADE BETWEEN AUGUST 2004 AND SEPTEMBER 2006. THE SURROUNDING AREA IS DESCRIBED AS RURAL RESIDENTIAL. THE AREA OF THE PROPOSED STRUCTURE IS BORDERED ON THE NORTH AND SOUTH BY STEEP WOODED TERRAIN. THE AREA WITHIN THE LIMITS OF CONSTRUCTION IS WOODED AND COVERED WITH GRASS, BRUSH, AND SMALL TREES.

SUBSURFACE EXPLORATION

THE SUBSURFACE EXPLORATION CONSISTED OF DRILLING FIVE FINAL AND FOUR PRELIMINARYSTRUCTURAL BORINGS. BORINGS B-5 THROUGH B-9 WERE DRILLED BETWEEN JUNE 15 AND 16, 2006. BORINGS TR-20 THROUGH TR-23 WERE DRILLED BETWEEN AUGUST 3, 2004 AND FEBRUARY 24, 2005. THE BORINGS WERE DRILLED WITH AN ATV MOUNTED ROTARY DRILL RIG, USING 3 1/4 -INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE HOLES THROUGH SOIL. DISTURBED SOIL SAMPLES WERE OBTAINED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT 1.5 TO 5.0-FOOT INTERVALS FOR THE FULL DEPTH OF THE SOIL PORTION OF THE BORINGS. UNDISTURBED SOIL SAMPLES WERE OBTAINED AT THE DEPTHS SHOWN ON THE LOGS AND IN THE PROFILE, IN ACCORDANCE WITH AASHTO T207. WHERE BEDROCK WAS ENCOUNTERED, THE BORINGS WERE ADVANCED AND THE ROCK WAS SAMPLED USING A TYPE NQ SERIES CORE BARREL, WATER METHOD.

EXPLORATION FINDINGS

THE TEST BORINGS DISCLOSED PRDOMINANTLY COHESIVE DEPOSITS THAT CONSIST MAINLY OF MEDIUM STIFF TO HARD SILT AND CLAY (A-6A), STIFF TO HARD SANDY SILT (A-4A), VERY STIFF SILT (A 4B), WHILE THE GRANULAR SOIL DEPOSITS CONSISTED MAINLY OF LOOSE GRAVEL (A-1-A) AND VERY DENSE SANDY SILT (A-4A). THE NATIVE SOIL DEPOSITS EXTENDED TO AN APPROXIMATE DEPTH RANGING BETWEEN 1.5 AND 7.5 FEET BELOW THE GROUND SURFACE WHERE BEDROCK WAS ENCOUNTERED.

IN THE AREA OF THE PROPOSED STRUCTURE, BEDROCK WAS ENCOUNTERED IN ALL BORINGS. THE BEDROCK CONSISTED OF MEDIUM HARD TO HARD, SLIGHTLY TO HIGHLY WEATHERED, SLIGHTLY TO MODERATELY FRACTURED SANDSTONE. THE AMOUNT OF ROCK RECOVERED IN EACH CORE RUN VARIED BETWEEN 81 AND 100 PERCENT. THE ROCK QUALITY DESIGNATION (ROD) OF THE BEDROCK RANGED BETWEEN 17 AND 100 PERCENT WITH AN AVERAGE OF 81 PERCENT INDICATING GOOD ROCK.

SEEPAGE WAS NOT ENCOUNTERED IN ANY BORING DURING DRILLING. THERE WERE NO MEASURABLE WATER LEVELS IN THE BORINGS PRIOR TO ROCK CORING. WATER WAS USED DURING ROCK CORING AND MASKED ANY SEEPAGE ZONES THAT MIGHT EXIST IN THE ROCK. MEASURABLE WATER LEVELS WERE PRESENT IN ALL TEST BORINGS EXCEPT BORINGS B-6 AND B-8 UPON THE COMPLETION OF CORING BETWEEN APPROXIMATE DEPTHS OF 0.5 AND 12.5 FEET. BORING TR-21 WAS DRILLED IN A STREAMBED AND HENCE WAS COMPLETELY SUBMERGED IN WATER.

IT SHOULD BE NOTED THAT THE FOUNDATION LEVELING PAD OF THE MSE WALL AT THE FORWARD ABUTMENT IS IN CLOSE PROXIMITY TO A CREEK, WHICH IS RUNNING ESSENTIALLY PARALLEL TO SWAUGER VALLEY 13/32 MINFORD ROAD. THE APPROXIMATE ELEVATION OF BEDROCK UNDER THE MSE WALL AT THE FORWARD ABUTMENT RANGES FROM 642.5 TO 654.5 FEET, WHICH IS NEAR THE BOTTOM OF THE CREEK AT ELEVATION 631. THE BEDROCK IS SCOUR RESISTANT SANDSTONE AND D50 VALUES ARE NOT APPLICABLE.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2006.

AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1600 WEST BROAD STREET OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
Sandy Silt (A-4a)	A-4a	3	7
Silt (A-4b)	A-4b	1	-
Silt and Clay (A-6a)	A-6a	-	5
	TOTAL	4	11
Sandstone	VISUAL		
Weathered Sandstone	VISUAL		
Topsoil	VISUAL		

BORING LOCATION - PLAN VIEW

DRIVE SAMPLE AND/OR CORE BORING LOCATION PLOTTED TO VERTICAL SCALE ONLY

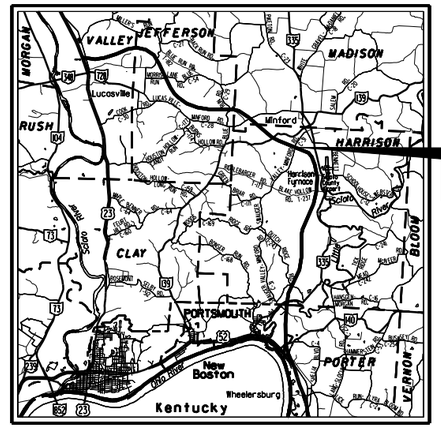
W — INDICATES FREE WATER ELEVATION

INDICATES STATIC WATER ELEVATION

INDICATES STATIC WATER ELEVATION (DRILLING WATER USED)

W/X/Y/Z — FIGURES BESIDE THE BORING IN PROFILE INDICATE THE NUMBER OF BLOWS FOR STANDARD PENETRATION TEST
- W = NUMBER OF BLOWS FOR FIRST 6 INCHES
- X = NUMBER OF BLOWS FOR SECOND 6 INCHES
- Y = NUMBER OF BLOWS FOR THIRD 6 INCHES
- Z = NUMBER OF BLOWS FOR FOURTH 6 INCHES, IF APPLICABLE

50 (n) — INDICATES NUMBER OF BLOWS (50) TO DRIVE A SPLIT-BARREL SAMPLER A DEPTH OF (n) INCHES OTHER THAN THE NORMAL 6 INCH INCREMENT.



LOCATION MAP

LATITUDE: N 38°50'25" LONGITUDE: W 82°50'50"

SCALE IN MILES 0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

PARTICLE SIZE DEFINITIONS

12"	3"	2.0 mm		0.42 mm		0.074 mm	0.005 mm
Boulders	Cobbles	Gravel	Coarse Sand		Fine Sand		Silt	Clay
		No. 10 SIEVE		No. 40 SIEVE		No. 200 SIEVE		

RECON. - AMJ 06/04 to 06/06
DRILLING - DW 08/3/04 & 2/24/05 & 06/15 TO 06/16/06
DRAWN - RLS & AMJ 3/09 TO 4/09
REVIEWED - AEN 4/27/09

DLZ
6121 HUNTLEY ROAD • COLUMBUS, OHIO 43229

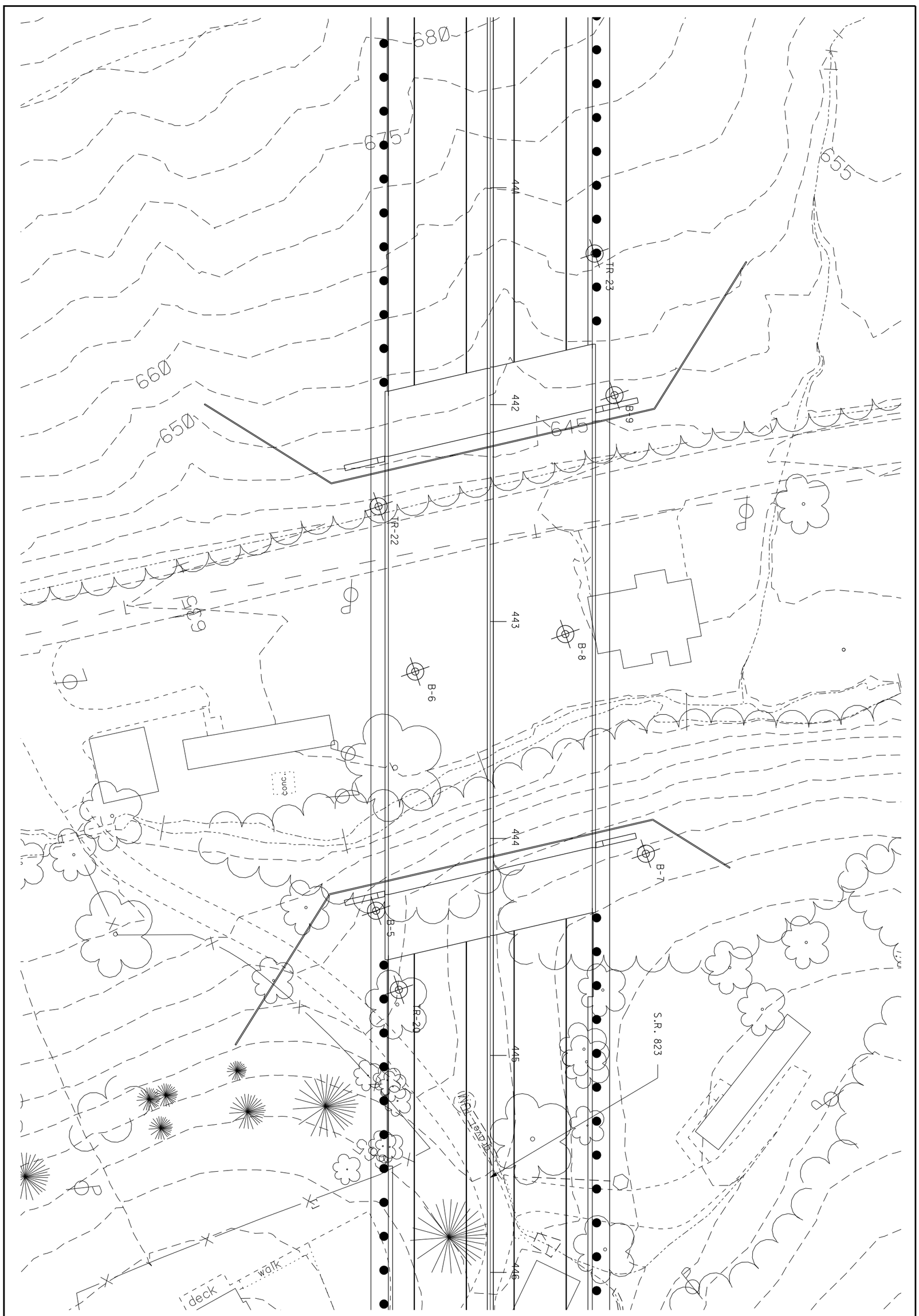
PID NO. 19415

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SCI-823-0837
SR823 OVER SWAUGER VALLEY ROAD

SCI-823-6.81

1/7

$DATE$
$TIME$
$FILE$



2/7	SCI-823-6.81	STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. SCI-823-0837 SR823 OVER SWAUGER VALLEY ROAD	DRAWN CHECKED	0 20 10 40 HORIZONTAL SCALE IN FEET

S.R. 823

TR-23
48.1' Lt.
Topsoil-4"
6/13/15
11/26/20
11/16/40
TR

B-9
66.2' Lt.
Topsoil-1"
7/7/8
50(0)
TR

TR-22
51.5' Rt.
Topsoil-8"
3/6/7
26/50(4)
TR

B-6
34.6' Rt.
7/5/4
6/9/3
50(1)
13
12
TR

B-7
65.4' Lt.
Topsoil-2"
8/18/23
TR

TR-20
42.1' Rt.
Topsoil-2"
3/3/4
1/3/50(3)
TR

B-8
34.6' Lt.
3/2/2
7/6/5
9/15/50(4)
13
12
TR

B-5
63.3' Rt.
Topsoil-1"
18/50(0)
TR

720 700 680 660 640 620 600 580 560 540

441 442 443 444 445 446

443 444

DRAWN | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SCI-823-0837
SR823 OVER SWAUGER VALLEY ROAD

SCI-823-6.81

3 / 7

DLZ OHIO INC. * 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229 * (614)888-0040

Client: TranSystems, Inc. | Project: SCI-823-0.00 | Job No. 0121-3070.03

LOG OF: Boring B-5 | Location: Sta. 444+30.2, 63.3 ft. RT of SR 823 CL | Date Drilled: 06/15/06

Depth (ft)	Elev. (ft)	Blows per 6"	Recovery (in)	Sample No. Drive	Sample No. Press / Core	Hand Penetrometer (tsf)	WATER OBSERVATIONS / DESCRIPTION	% Aggregate	% C. Sand	% M. Sand	% F. Sand	% Silt	% Clay	STANDARD PENETRATION (N) / Natural Moisture Content, % / Blows per foot
0	644.0						WATER OBSERVATIONS: Water seepage at: none. Water level at completion: none (prior to coring); 0.5' (inside hollowstem augers, includes drilling water)							
0	643.5						Topsoil - 1"							
1.5	642.5	18 50/0	6	1			Medium dense gray SANDY SILT (A-4a), damp. (Decomposed Sandstone)							50+
5		Core 120"	Rec 114"	ROD 83%	R-1		Medium hard to hard gray SANDSTONE, fine to very fine grained, moderately to highly weathered, argillaceous, micaceous, massive bedding, moderately fractured, contains few argillaceous laminations. @ 1.5'-7.2', 7.9'-8.3', 10.9', rust staining. @ 3.1'-3.3', high angle fracture. @ 3.5', qu = 8,382 psi.							
10														
11.5	632.5						Bottom of Boring - 11.5'							
15														
20														
25														
30														

DLZ OHIO INC. * 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229 * (614)888-0040

Client: TranSystems, Inc. | Project: SCI-823-0.00 | Job No. 0121-3070.03

LOG OF: Boring B-6 | Location: Sta. 443+23.0, 34.6 ft. RT of SR 823 CL | Date Drilled: 06/15/06 to 06/16/06

Depth (ft)	Elev. (ft)	Blows per 6"	Recovery (in)	Sample No. Drive	Sample No. Press / Core	Hand Penetrometer (tsf)	WATER OBSERVATIONS / DESCRIPTION	% Aggregate	% C. Sand	% M. Sand	% F. Sand	% Silt	% Clay	STANDARD PENETRATION (N) / Natural Moisture Content, % / Blows per foot
0	635.9						WATER OBSERVATIONS: Water seepage at: none. Water level at completion: not reported							
		7 5 4	17	1		4.5+	DESCRIPTION: Hard brown SANDY SILT (A-4a), little clay, trace to little gravel; damp.	16	23	--	15	28	18	
		6 9 3		2		4.5+		10	25	--	14	40	11	Non-Plastic
6.0	629.9	50/1	1	3			Medium hard to hard gray SANDSTONE; very fine to fine grained, moderately weathered, argillaceous, micaceous, massively bedded, slightly fractured, contains moderate argillaceous laminations. @ 6.5'-7.4', rust staining. @ 6.8', 6.9', 7.1', 7.9', rust stained low angle fractures.							50+
10		Core 108"	Rec 105"	ROD 81%	R-1									
15														
20		Core 120"	Rec 120"	ROD 89%	R-2		@ 18.0', qu = 12,418 psi.							
25														
26.5	609.4	Core 12"	Rec 10"	ROD 83%	R-3		Bottom of Boring - 26.5'							
30														

DRAWN | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SCI-823-0837
SR823 OVER SWAUGER VALLEY ROAD

SCI-823-6.81

DLZ OHIO INC. * 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229 * (614)888-0040

Client: TranSystems, Inc. | Project: SCI-823-0.00 | Job No. 0121-3070.03

LOG OF: Boring B-7 | Location: Sta. 444+00.8, 65.4 ft. LT of SR 823 CL | Date Drilled: 06/15/06

Depth (ft)	Elev. (ft)	Blows per 6"	Recovery (in)	Sample No. Drive	Sample No. Press / Core	Hand Penetrometer (tsf)	DESCRIPTION	% Aggregate	% C. Sand	% M. Sand	% F. Sand	% Silt	% Clay	STANDARD PENETRATION (N) Natural Moisture Content, % PL — LL; Blows per foot
0	658.0						WATER OBSERVATIONS: Water seepage encountered at elevation: Water level at completion:							
0.2	657.8						Topsoil - 2"							
		8 18 23	13	1			Medium dense gray SANDY SILT (A-4a), damp. (Decomposed Sandstone)							
2.5	655.5						Medium hard to hard gray SANDSTONE; very fine to fine grained, moderately to highly weathered, argillaceous, micaceous, fossiliferous (trace fossils), massive bedding, highly fractured. @ 2.5'-9.3', rust staining. @ 2.5'-5.0', broken zone. @ 3.5', lost water circulation. @ 6.5', qu = 7,966 psi.							
		Core 120"	Rec 97"	ROD 76%	R-1		@ 8.7'-8.9', high angle fracture.							
12.5	645.5						Bottom of Boring - 12.5'							

DLZ OHIO INC. * 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229 * (614)888-0040

Client: TranSystems, Inc. | Project: SCI-823-0.00 | Job No. 0121-3070.03

LOG OF: Boring B-8 | Location: Sta. 443+05.8, 34.6 ft. LT of SR 823 CL | Date Drilled: 06/16/06

Depth (ft)	Elev. (ft)	Blows per 6"	Recovery (in)	Sample No. Drive	Sample No. Press / Core	Hand Penetrometer (tsf)	DESCRIPTION	% Aggregate	% C. Sand	% M. Sand	% F. Sand	% Silt	% Clay	STANDARD PENETRATION (N) Natural Moisture Content, % PL — LL; Blows per foot
0	638.4						WATER OBSERVATIONS: Water seepage encountered at elevation: Water level at completion reported							
		3 2 2	11	1		4.0	Very stiff to hard brown SILT (A-4b), little clay, trace fine to coarse sand, trace gravel; damp.	4	12	--	15	52	17	
3.0	635.4													
		7 6 5	17	2		4.5+	Hard brown SANDY SILT (A-4a), little clay, little gravel; damp.	12	23	--	17	35	13	
		15 50/4		3		4.5+								50+
7.5	630.9						Medium hard to hard gray SANDSTONE; very fine to fine grained, moderately to highly weathered, argillaceous, micaceous, massive bedding, highly fractured, contains few laminations. @7.5'-8.7', rust staining.							
		Core 108"	Rec 87"	ROD 68%	R-1									
							@ 17.0', qu = 10,997 psi.							
		Core 120"	Rec 120"	ROD 90%	R-2									
27.5	610.9	Core 12"	Rec 12"	ROD 100%	R-3		Bottom of Boring - 27.5'							

DRAWN | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SCI-823-0837
SR823 OVER SWAUGER VALLEY ROAD

SCI-823-6.81

5 / 7

DLZ OHIO INC. * 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229 * (614)888-0040

Client: TranSystems, Inc. | Project: SCI-823-0.00 | Job No. 0121-3070.03

LOG OF: Boring B-9 | Location: Sta. 441+98.6, 66.2 ft. LT of SR 823 CL | Date Drilled: 06/15/06

Depth (ft)	Elev. (ft)	Blows per 6"	Recovery (in)	Sample No. Drive	Sample No. Press / Core	Hand Penetrometer (tsf)	WATER OBSERVATIONS: Water seepage at: none. Water level at completion: none (prior to coring) 1.0' (inside hollowstem augers, includes drilling water) DESCRIPTION	% Aggregate	% C. Sand	% M. Sand	% F. Sand	% Silt	% Clay	STANDARD PENETRATION (N) Natural Moisture Content, % PL — LL Blows per foot -○ 10 20 30 40
0.0	647.5						Topsoil - 1"							
	647.2	7 8 4		1			Medium dense gray SANDY SILT (A-4a), damp. (Decomposed Sandstone)							
							@ 4.0', auger refusal.							
4.0	643.5	50/0	0	2			Medium hard to hard gray SANDSTONE; very fine to fine grained, moderately to highly weathered, argillaceous, micaceous, massive bedding, highly fractured.							50+
							@ 4.0'-11.4', rust staining.							
							@ 7.2', qu = 8,153 psi.							
5														
		Core 120"	Rec 117"	ROD 66%	R-1		@ 8.7'-8.8', 8.9'-9.0', Decomposed argillaceous zones.							
10														
14.0	633.5						Bottom of Boring - 14.0'							
15														
20														
25														
30														

DLZ OHIO INC. * 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229 * (614)888-0040

Client: TranSystems, Inc. | Project: SCI-823-0.00 | Job No. 0121-3070.03

LOG OF: Boring TR-20 | Location: Sta. 444+69.7, 42.1 ft. RT of SR 823 CL | Date Drilled: 8/4/04

Depth (ft)	Elev. (ft)	Blows per 6"	Recovery (in)	Sample No. Drive	Sample No. Press / Core	Hand Penetrometer (tsf)	WATER OBSERVATIONS: Water seepage at: none. Water level at completion: 6.3' (Includes drilling water) DESCRIPTION	% Aggregate	% C. Sand	% M. Sand	% F. Sand	% Silt	% Clay	STANDARD PENETRATION (N) Natural Moisture Content, % PL — LL Blows per foot -○ 10 20 30 40
0.0	650.0						Topsoil - 2"							
0.2	649.8	3 3 4	18	1		0.5	Medium stiff brown SILT AND CLAY (A-6a), little fine to coarse sand, little gravel; contains sandstone fragments; moist.							
5.0	645.0	3 50/3	15	2			Hard gray SANDSTONE; very fine to fine grained, slightly weathered, micaceous, massively bedded, slightly fractured.							50+
							@ 5.0'-5.3', broken.							
5														
		Core 96"	Rec 91"	ROD 88%	R-1		@ 9.3'-9.5', broken zone, possible core loss.							
10														
							@ 13.9' to 14.5', high angle fracture with reddish brown discoloration.							
15														
		Core 84"	Rec 84"	ROD 86%	R-2									
20.0	630.0						Bottom of Boring - 20.0'							
25														
30														

DRAWN | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SCI-823-0837
SR823 OVER SWAUGER VALLEY ROAD

SCI-823-6.81

DLZ OHIO INC. * 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229 * (614)888-0040

Client: TranSystems, Inc. | Project: SCI-823-0.00 | Job No. 0121-3070.03

LOG OF: Boring TR-22 | Location: Sta. 442+46.9, 51.5 ft. RT of SR 823 CL | Date Drilled: 2/24/2005

Depth (ft)	Elev. (ft)	Blows per 6"	Recovery (in)	Sample No. Drive	Sample No. Press / Core	Hand Penetrometer (tsf)	WATER OBSERVATIONS: Water seepage at: none. Water level at completion: 4.5' (inside hollowstem augers, includes drilling water) — DESCRIPTION
0	636.2						
0.7	635.5	3 6 7	18	1		1.25	Topsoil - 8". Stiff brown SANDY SILT (A-4a), trace gravel; organic; moist.
2.8	633.4						
3.5	632.7	26		2A			Very dense brown SANDY SILT (A-4a), trace gravel; organic; moist.
4.0	632.2	50/4	10	2B			Severely weathered brown SANDSTONE.
5							Soft brown SANDSTONE; fine grained, moderately weathered, slightly micaceous, moderately fractured. @ 5.2'-5.7', 7.1'-7.3', 8.7'-8.9' very soft, highly weathered. @ 6.1', gray, medium hard.
		Core 120"	Rec 120"	ROD 84%	R-1		
10							@ 10.9'-11.0', iron stained horizontal fractures. @ 12.0'-12.8', siltstone.
14.0	622.2						Hard gray SANDSTONE; fine grained, slightly weathered, slightly micaceous, slightly fractured. @ 14.7'-15.3', very soft gray and brown SILTSTONE, highly weathered.
15							
		Core 120"	Rec 120"	ROD 96%	R-2		
20							@ 19.3'-19.4', irregular vertical fracture. @ 19.6', 1/2" clay filled fracture.
24.0	612.2						@ 23.2'-23.5', siltstone. Bottom of Boring - 24.0'
25							
30							

GRADATION: % Aggregate | % C. Sand | % M. Sand | % F. Sand | % Silt | % Clay

STANDARD PENETRATION (N) Natural Moisture Content, % — PL ⊢●⊣ LL — Blows per foot -○ — 10 20 30 40

N = 50/4

DLZ OHIO INC. * 6121 HUNTLEY ROAD, COLUMBUS, OHIO 43229 * (614)888-0040

Client: TranSystems, Inc. | Project: SCI-823-0.00 | Job No 0121-3070.03

LOG OF: Boring TR-23 | Location: Sta. 441+30.3, 48.1 ft. LT of SR 823 CL | Date Drilled: 2/9/04

Depth (ft)	Elev. (ft)	Blows per 6"	Recovery (in)	Sample No. Drive	Sample No. Press / Core	Hand Penetrometer (tsf)	WATER OBSERVATIONS: Water seepage at: none. Water level at completion: 2.0' (includes drilling water) — DESCRIPTION
0	661.0						
0.5	660.5						Topsoil - 4".
		6 13 15	17	1		4.5+	Hard brown SILT AND CLAY (A-6a), some fine to coarse sand, trace gravel; contains sandstone fragments; damp.
5		11 26 20	17	2		4.5	
		11 16 40	16	3		4.5+	
7.5	653.5						Soft brown SANDSTONE; fine grained, decomposed.
		Core 30"	Rec 26"	ROD 17%	R-1		
10	651.0						Hard gray SANDSTONE; very fine to fine grained, slightly to moderately weathered, argillaceous, micaceous, slightly fractured. @ 12.3', 13.5', weathered fractures. @ 12.9' to 13.6', brown.
15							
		Core 120"	Rec 120"	ROD 84%	R-2		
20	641.0						Bottom of Boring - 20.0'
25							
30							

GRADATION: % Aggregate | % C. Sand | % M. Sand | % F. Sand | % Silt | % Clay

STANDARD PENETRATION (N) Natural Moisture Content, % — PL ⊢●⊣ LL — Blows per foot -○ — 10 20 30 40

N = 56

DRAWN | CHECKED

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SCI-823-0837
SR823 OVER SWAUGER VALLEY ROAD

SCI-823-6.81

7 / 7