

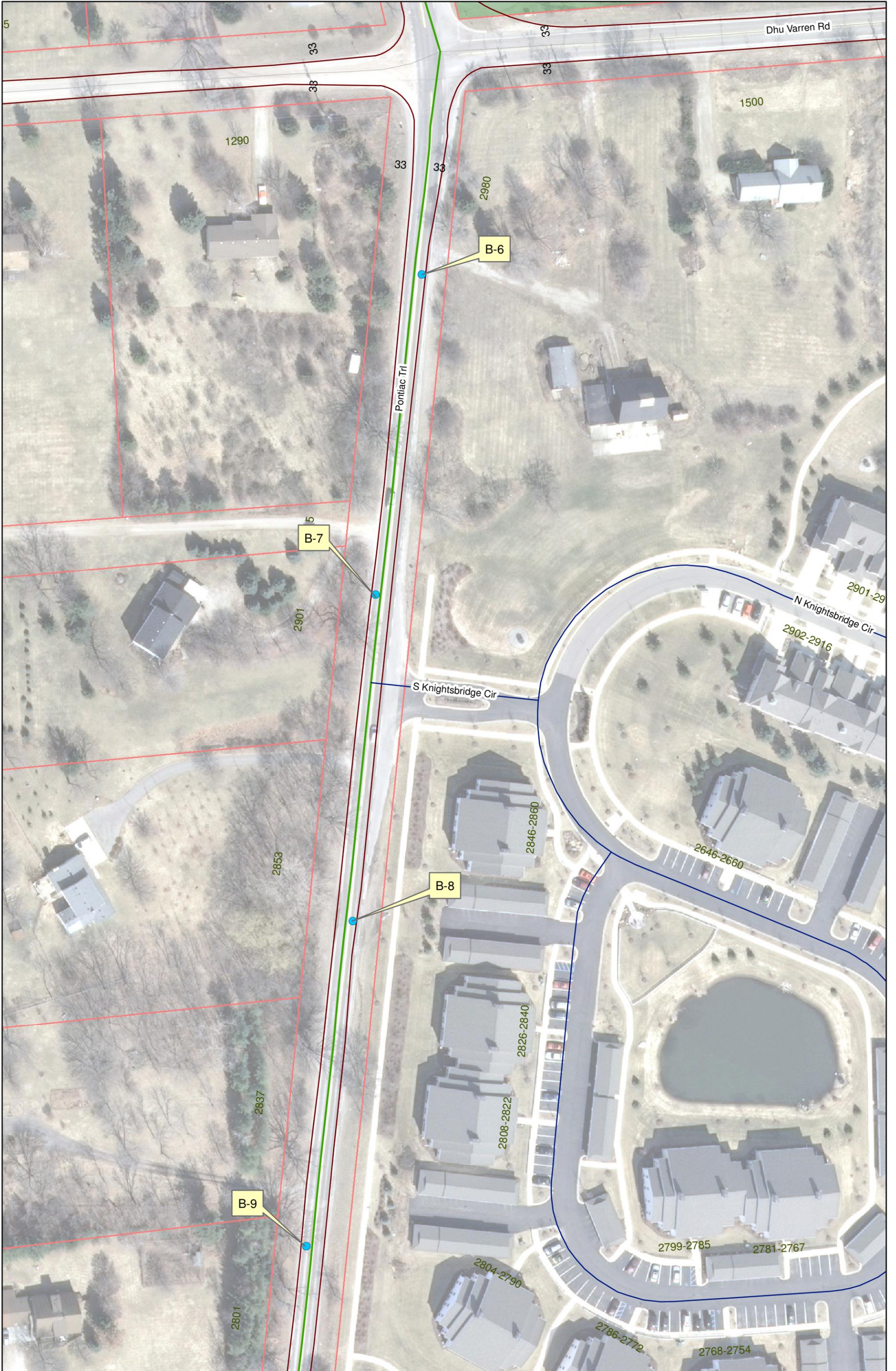
# Pontiac Trail

1" = 80'



# Pontiac Trail

1" = 80'



# Pontiac Trail

1" = 80'





**CLIENT** City of Ann Arbor  
**PROJECT NUMBER** 3122040060-2  
**DATE STARTED** 11/28/12 **COMPLETED** 11/28/12  
**DRILLING CONTRACTOR** Stearns Drilling  
**DRILLING METHOD** 4-1/4 inch Hollow Stem Auger  
**LOGGED BY** G. Geerlings **CHECKED BY** T. Marsik  
**NOTES** Boring backfilled with auger cuttings and patched.

**PROJECT NAME** Miscellaneous Geotechnical Services  
**PROJECT LOCATION** Ann Arbor, Michigan  
**GROUND ELEVATION** N/A  
**GROUND WATER LEVELS:**  
**DURING DRILLING** None  
**AFTER DRILLING** None  
**COLLAPSE DEPTH** 15' 6"

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf) UNC. STRENGTH (psf)	NATURAL MOISTURE CONTENT (%)	▲ SPT N VALUE ▲		
								20	40	60
0		5 inches ASPHALT PAVEMENT								
		13 inches of dark brown moist silty fine to medium SAND with gravel - (FILL)	SS 1	89	10-15-15 (30)					
		Brown moist fine to medium SAND with some silt and trace of gravel - (FILL)								
5		Dark brown moist sandy CLAY with silt and trace of gravel - (FILL)	SS 2	17	6-8-9 (17)					
		Rubbelized ASPHALT with occasional clay seams and pieces of slag - (FILL)	SS 3	100	24-22-13 (35)					
		Brown moist medium dense clayey fine SAND with trace of gravel and occasional clay seams - (SC)	SS 4	11	8-13-14 (27)					
10		Brown moist dense fine to medium SAND with some silt, trace of gravel and occasional cobbles - (SP-SM)								
15			SS 5	44	9-25-22 (47)					
20		Brown moist dense to very dense fine SAND with silt, some gravel and occasional cobbles - (SM)	SS 6	56	12-17-22 (39)					
25			SS 7	100	38-47-22 (69)					

Bottom of borehole at 25.0 feet.

Boring performed 2' east of west edge of road, 61' north of address 3185 driveway



CTI and Associates Inc

# BORING NUMBER: Pontiac Trail B-2

PAGE 1 OF 1

**CLIENT** City of Ann Arbor  
**PROJECT NUMBER** 3122040060-2  
**DATE STARTED** 10/11/12 **COMPLETED** 10/11/12  
**DRILLING CONTRACTOR** Stearns Drilling  
**DRILLING METHOD** 2-1/4 inch HSA  
**LOGGED BY** G. Geerlings **CHECKED BY** T. Marsik  
**NOTES** Boring backfilled with auger cuttings.

**PROJECT NAME** Miscellaneous Geotechnical Services  
**PROJECT LOCATION** Ann Arbor, Michigan  
**GROUND ELEVATION** N/A  
**GROUND WATER LEVELS:**  
**DURING DRILLING** None  
**AFTER DRILLING** None  
**COLLAPSE DEPTH** 15'6"

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf) UNC. STRENGTH (psf)	NATURAL MOISTURE CONTENT (%)	▲ SPT N VALUE ▲		
								20	40	60
0		12 inches of dark brown moist sandy TOPSOIL with traces of gravel								
0-4.5		Brown moist medium dense clayey fine to medium SAND with silt and some gravel - (SC)	SS 1	100	7-7-7 (14)					
4.5-7		Brown moist hard sandy CLAY with silt, trace of gravel and frequent silt partings - (CL)	SS 2	100	7-9-8 (17)	4.5+				
7-9		Brown moist medium dense silty fine to coarse SAND with some gravel and occasional cobbles - (SM)	SS 3	78	8-6-7 (13)	4.5+				
9-15		Brown moist medium dense silty fine to coarse SAND with some gravel and occasional cobbles - (SM)	SS 4	78	9-6-7 (13)					
15-20		Brown moist medium dense silty, clayey fine SAND with trace of gravel - (SC-SM)	SS 5	78	4-5-6 (11)					
20-22		Brown moist medium dense silty, clayey fine SAND with trace of gravel - (SC-SM)	SS 6	100	10-11-12 (23)					
22-25		Brown moist medium dense silty fine SAND with traces of gravel and clay - (SM)	SS 7	100	12-10-11 (21)					

Bottom of borehole at 25.0 feet.

Boring performed 20' west of west edge of road, 40' north of center of Dhu Varren Road



CTI and Associates Inc

**BORING NUMBER: Pontiac Trail B-3**

PAGE 1 OF 1

**CLIENT** City of Ann Arbor  
**PROJECT NUMBER** 3122040060-2  
**DATE STARTED** 10/11/12 **COMPLETED** 10/11/12  
**DRILLING CONTRACTOR** Stearns Drilling  
**DRILLING METHOD** 2-1/4 inch HSA  
**LOGGED BY** G. Geerlings **CHECKED BY** T. Marsik  
**NOTES** Boring backfilled with auger cuttings and patched.

**PROJECT NAME** Miscellaneous Geotechnical Services  
**PROJECT LOCATION** Ann Arbor, Michigan  
**GROUND ELEVATION** N/A  
**GROUND WATER LEVELS:**  
**DURING DRILLING** 13'  
**AFTER DRILLING** None  
**COLLAPSE DEPTH** 16'6"

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf) UNC. STRENGTH (psf)	NATURAL MOISTURE CONTENT (%)	▲ SPT N VALUE ▲			
								PL	MC	LL	
								20	40	60	80
								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
0		6 inches of ASPHALT PAVEMENT									
		18 inches of brown moist fine to medium SAND with some gravel and clay - (FILL)	SS 1	100	16-11-7 (18)						
		Brown moist medium dense gravelly fine to coarse SAND with some clay and occasional clay lenses - (SP-SC)	SS 2	83	4-3-3 (6)						
5		Brown moist hard CLAY with silt, traces of gravel and sand and occasional silt partings - (CL)	SS 3	94	2-3-5 (8)	4.5+	13				
		Brown moist dense fine SAND with some silt, trace of gravel and occasional cobbles - (SP-SM)	SS 4	100	5-12-21 (33)	4.5+	21				
10		Brown wet dense sandy SILT - (ML)	SS 5	100	12-14-18 (32)						
15		Light brown moist dense to medium dense fine SAND with some silt - (SP-SM)	SS 6	100	11-14-21 (35)						
20			SS 7	100	8-12-13 (25)						
25											

Bottom of borehole at 25.0 feet.

Boring performed 10' west of east curb, 20' south of Knightsbridge Circle



CTI and Associates Inc

# BORING NUMBER: Pontiac Trail B-4

PAGE 1 OF 1

**CLIENT** City of Ann Arbor  
**PROJECT NUMBER** 3122040060-2  
**DATE STARTED** 10/12/12 **COMPLETED** 10/12/12  
**DRILLING CONTRACTOR** Stearns Drilling  
**DRILLING METHOD** 2-1/4 inch HSA  
**LOGGED BY** G. Geerlings **CHECKED BY** T. Marsik  
**NOTES** Boring backfilled with auger cuttings.

**PROJECT NAME** Miscellaneous Geotechnical Services  
**PROJECT LOCATION** Ann Arbor, Michigan  
**GROUND ELEVATION** N/A  
**GROUND WATER LEVELS:**  
**DURING DRILLING** None  
**AFTER DRILLING** None  
**COLLAPSE DEPTH** None

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf) UNC. STRENGTH (psf)	NATURAL MOISTURE CONTENT (%)	▲ SPT N VALUE ▲			
								PL	MC	LL	
								20	40	60	80
								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
0		2 inches of dark brown TOPSOIL									
0 - 4.5		Brown moist medium dense silty, sandy GRAVEL - (GM)	SS 1	94	8-9-12 (21)						
4.5 - 15		Brown moist hard CLAY with silt, traces of gravel and sand and frequent silt partings - (CL)	SS 2	100	11-15-17 (32)	4.5+					
			SS 3	100	11-18-22 (40)	4.5+					
			SS 4	100	13-21-33 (54)	4.5+					
15 - 20		Light brown moist dense to medium dense fine SAND with some silt - (SP-SM)	SS 5	100	12-22-22 (44)	4.5+					
			SS 6	100	10-9-18 (27)						
			SS 7	100	12-17-17 (34)						

Bottom of borehole at 25.0 feet.

Boring performed 15' west of west edge of road, 260' north of driveway to address 2735 Pontiac Trail



CTI and Associates Inc

# BORING NUMBER: Pontiac Trail B-5

PAGE 1 OF 1

**CLIENT** City of Ann Arbor  
**PROJECT NUMBER** 3122040060-2  
**DATE STARTED** 11/29/12 **COMPLETED** 11/29/12  
**DRILLING CONTRACTOR** Stearns Drilling  
**DRILLING METHOD** 4-1/4 inch Hollow Stem Auger  
**LOGGED BY** G. Geerlings **CHECKED BY** T. Marsik  
**NOTES** Boring backfilled with auger cuttings.

**PROJECT NAME** Miscellaneous Geotechnical Services  
**PROJECT LOCATION** Ann Arbor, Michigan  
**GROUND ELEVATION** N/A  
**GROUND WATER LEVELS:**  
**DURING DRILLING** 13' 6"  
**AFTER DRILLING** 13'  
**COLLAPSE DEPTH** 14'

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf) UNC. STRENGTH (psf)	NATURAL MOISTURE CONTENT (%)	▲ SPT N VALUE ▲			
								20	40	60	80
0								PL	MC	LL	
								20	40	60	80
								□ FINES CONTENT (%) □			
								20	40	60	80
0		6 inches of brown moist silty fine to medium SAND with gravel - (FILL)									
		Brown moist fine to medium SAND with some gravel and silt - (FILL)	SS 1	89	6-7-3 (10)	0.75	17				
		Brown moist CLAY with silt, traces of gravel and sand and occasional silt seams - (FILL)									
5		Brown moist silty fine SAND with trace of gravel and occasional clay lenses - (FILL)	SS 2	83	3-5-5 (10)						
		Brown moist loose fine to medium SAND with some silt, trace of gravel and occasional organic clay seams - (SP-SM/Poss. FILL) Loss-on-Ignition (organic content) = 3.5%	SS 3	83	2-5-4 (9)		28				
10		Brown moist stiff CLAY with silt, traces of gravel and sand and occasional silt seams - (CL)	SS 4	100	2-3-4 (7)	1.25	21				
15		Brown wet very loose to medium dense fine to medium SAND with some silt and occasional clay lenses - (SP-SM)	SS 5	78	1-0-0 (0)						
20			SS 6	100	7-9-7 (16)						
25		Gray wet loose clayey fine to medium SAND with trace of gravel and occasional clay seams - (SC)	SS 7	83	2-2-2 (4)						

Bottom of borehole at 25.0 feet.

Boring performed 4' east of east edge of road, 2 feet north of address 2672 driveway



CTI and Associates Inc

# BORING NUMBER: Pontiac Trail B-6

PAGE 1 OF 1

**CLIENT** City of Ann Arbor  
**PROJECT NUMBER** 3122040060-2  
**DATE STARTED** 11/29/12 **COMPLETED** 11/29/12  
**DRILLING CONTRACTOR** Stearns Drilling  
**DRILLING METHOD** 4-1/4 inch Hollow Stem Auger  
**LOGGED BY** G. Geerlings **CHECKED BY** T. Marsik  
**NOTES** Boring backfilled with auger cuttings.

**PROJECT NAME** Miscellaneous Geotechnical Services  
**PROJECT LOCATION** Ann Arbor, Michigan  
**GROUND ELEVATION** N/A  
**GROUND WATER LEVELS:**  
**DURING DRILLING** None  
**AFTER DRILLING** None  
**COLLAPSE DEPTH** 17'

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf) UNC. STRENGTH (psf)	NATURAL MOISTURE CONTENT (%)	▲ SPT N VALUE ▲		
								20	40	60
0		6 inches of brown moist silty fine to medium SAND with gravel - (FILL)								
		Brown moist loose fine to coarse SAND with some gravel and silt - (SP-SM)	SS 1	78	6-5-4 (9)					
		Brown moist loose fine to coarse SAND with some gravel and clay - (SP-SC)	SS 2	56	3-4-4 (8)					
5		Brown moist loose fine SAND with some silt and trace of gravel - (SP-SM)	SS 3	89	3-4-5 (9)					
			SS 4	78	3-3-4 (7)					
10										
		Brown moist medium dense fine to medium SAND with silt and some gravel - (SM)	SS 5	89	4-8-9 (17)					
15										
		Brown moist medium dense fine to medium SAND with some gravel, trace of silt and occasional cobbles - (SP)	SS 6	67	6-7-10 (17)					
20										
			SS 7	56	9-11-9 (20)					
25										

Bottom of borehole at 25.0 feet.

Boring performed 1' east of east edge of road, 65' south of address 2600 driveway



CTI and Associates Inc

# BORING NUMBER: Pontiac Trail B-7

PAGE 1 OF 1

**CLIENT** City of Ann Arbor  
**PROJECT NUMBER** 3122040060-2  
**DATE STARTED** 11/29/12 **COMPLETED** 11/29/12  
**DRILLING CONTRACTOR** Stearns Drilling  
**DRILLING METHOD** 4-1/4 inch Hollow Stem Auger  
**LOGGED BY** G. Geerlings **CHECKED BY** T. Marsik  
**NOTES** Boring backfilled with auger cuttings and patched.

**PROJECT NAME** Miscellaneous Geotechnical Services  
**PROJECT LOCATION** Ann Arbor, Michigan  
**GROUND ELEVATION** N/A  
**GROUND WATER LEVELS:**  
**DURING DRILLING** None  
**AFTER DRILLING** None  
**COLLAPSE DEPTH** 21' 6"

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf) UNC. STRENGTH (psf)	NATURAL MOISTURE CONTENT (%)	▲ SPT N VALUE ▲		
								20	40	60
0		6 inches of ASPHALT PAVEMENT								
		6 inches of dark brown moist silty fine to medium SAND with gravel - (FILL)	SS 1	89	6-9-7 (16)					
		12 inches of gray moist fine to coarse SAND and GRAVEL - (FILL)								
		Brown moist medium dense silty fine sand with traces of gravel and clay and occasional clay seams - (SM)	SS 2	94	4-5-7 (12)					
5		Brown moist loose silty fine SAND - (SM)	SS 3	100	3-5-5 (10)					
			SS 4	89	4-5-5 (10)					
10		Brown moist to very moist loose sandy SILT - (ML)								
			SS 5	94	4-4-4 (8)					
15		Light brown moist loose fine to medium SAND with some gravel, trace of silt and occasional silt lenses - (SP)								
			SS 6	44	3-5-6 (11)					
20		Brown moist medium dense to loose fine to medium SAND with some gravel and silt - (SP-SM)								
			SS 7	67	5-4-5 (9)					
25										

Bottom of borehole at 25.0 feet.

Boring performed 11' west of east edge of road, 61' south of address 2520 driveway

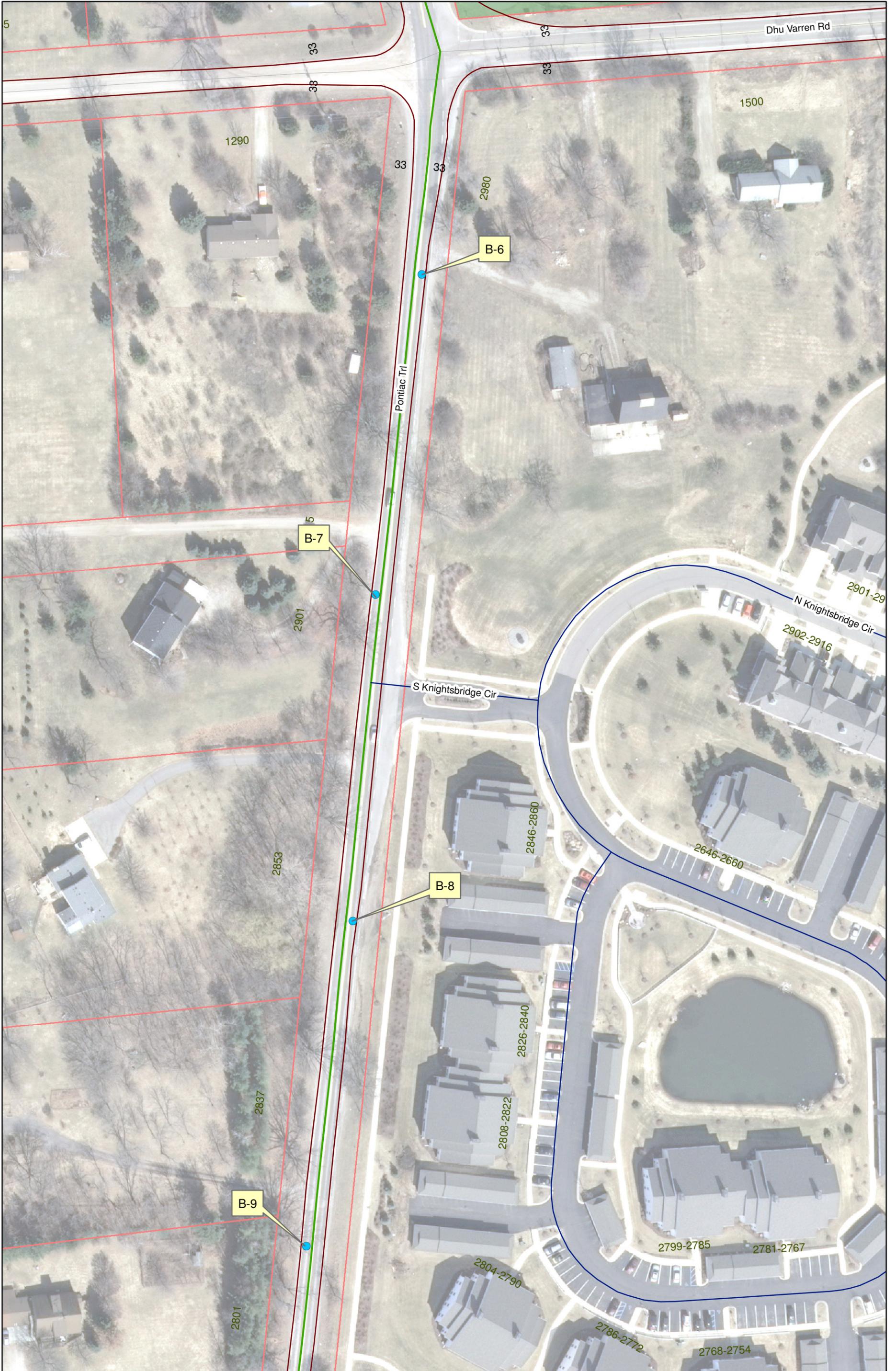
# Pontiac Trail

1" = 80'



# Pontiac Trail

1" = 80'



# Pontiac Trail

1" = 80'





# Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249

(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

<b>Boring No.:</b> PT1 Pontiac Trail	<b>Job No.:</b> 51989	<b>Project:</b> Miscellaneous Geotechnical Services, Bundle One
<b>Client:</b> City of Ann Arbor		
<b>Type of Rig:</b> Truck		<b>Location:</b> Ann Arbor, Michigan
<b>Drilling Method:</b> Solid Stem Augers		<b>Drilled By:</b> I. Mickle
<b>Ground Surface Elevation:</b>		<b>Started:</b> 12/21/2011
		<b>Completed:</b> 12/21/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.25	ASPHALT (3")	4.7	94	
2.5	LS	15 16 12	3	Medium Compact Moist Brown Gravelly Well Graded Sand With Some Clay-FILL			
5.0	LS	6 9/4"	5	Medium Compact Moist Brown Clayey SAND With Trace Of Gravel & Clay Layers	5.8	112	
7.5				Bottom of Borehole at 5'			
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance  
 SS - 2" I.D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample

w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, pcf  
 DP - Direct Push

**Water Encountered:** None

**At Completion:** None

**Boring No.** PT1 Pontiac Trail



# Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249

(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

<b>Boring No.:</b> PT2 Pontiac Trail	<b>Job No.:</b> 51989	<b>Project:</b> Miscellaneous Geotechnical Services, Bundle One
<b>Client:</b> City of Ann Arbor		
<b>Type of Rig:</b> Truck		<b>Location:</b> Ann Arbor, Michigan
<b>Drilling Method:</b> Solid Stem Augers		<b>Drilled By:</b> I. Mickle
<b>Ground Surface Elevation:</b>		<b>Started:</b> 12/21/2011
		<b>Completed:</b> 12/21/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.38	ASPHALT (4 1/2")			
2.5	LS	10 13 10		Medium Compact Moist Brown Gravelly Well Graded Sand With Some Clayey Seams-FILL	5.5	93	
5.0	LS	4 9/5"	5	Bottom of Borehole at 5'	5.7	97	
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance  
 SS - 2" J.D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample

w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, psf  
 DP - Direct Push

**Water Encountered:** None

**At Completion:** None

**Boring No.** PT2 Pontiac Trail



# Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249

(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

<b>Boring No.:</b> PT3 Pontiac Trail	<b>Job No.:</b> 51989	<b>Project:</b> Miscellaneous Geotechnical Services, Bundle One
<b>Client:</b> City of Ann Arbor		
<b>Type of Rig:</b> Truck		<b>Location:</b> Ann Arbor, Michigan
<b>Drilling Method:</b> Solid Stem Augers		<b>Drilled By:</b> I. Mickle
<b>Ground Surface Elevation:</b>		<b>Started:</b> 12/21/2011
		<b>Completed:</b> 12/21/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.27	ASPHALT (3 1/4")	7.1	99	
2.5	LS	15 11 11	3	Medium Compact Moist Brown Gravelly Well Graded Sand With Some Clay-FILL			
5.0	LS	4 5 6	4 5	Medium Compact Moist Brown Fine SAND	15.5	103	
				Firm Moist Brown CLAY With Some Silt & Trace Of Gravel			
7.5				Bottom of Borehole at 5'			
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance  
 SS - 2" J.D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample

w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, psf  
 DP - Direct Push

**Water Encountered:** None

**At Completion:** None

**Boring No.** PT3 Pontiac Trail



# Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249  
 (248) 588-6200 or (313) T-E-S-T-I-N-G  
 Fax (248) 588-6232

<b>Boring No.:</b> PT4 Pontiac Trail	<b>Job No.:</b> 51989	<b>Project:</b> Miscellaneous Geotechnical Services. Bundle One
<b>Client:</b> City of Ann Arbor		
<b>Type of Rig:</b> Truck		<b>Location:</b> Ann Arbor, Michigan
<b>Drilling Method:</b> Solid Stem Augers		<b>Drilled By:</b> I. Mickle
<b>Ground Surface Elevation:</b>		<b>Started:</b> 12/21/2011
		<b>Completed:</b> 12/21/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.54				
2.5	LS	6 7 5	1.5	ASPHALT (6 1/2")	16.3	125	3300
			3	Medium Compact Moist Brown Clayey Medium To Fine SAND With Trace Of Gravel			
5.0	LS	6 7 7	5	Firm Moist Brown CLAY With Some Silt & Trace Of Gravel	5.6	104	
				Medium Compact MOist Brown Medium SAND			
7.5				Bottom of Borehole at 5'			
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

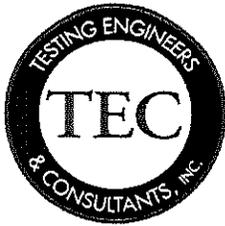
"N" - Standard Penetration Resistance  
 SS - 2" J.D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample

w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, psf  
 DP - Direct Push

**Water Encountered:** None

**At Completion:** None

**Boring No.** PT4 Pontiac Trail



# Testing Engineers & Consultants, Inc.

1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249  
 (248) 588-6200 or (313) T-E-S-T-I-N-G  
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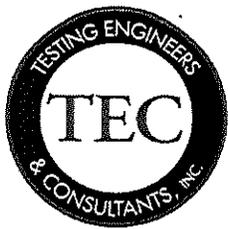
<b>Boring No.:</b> PT5 Pontiac Trail	<b>Job No.:</b> 51989	<b>Project:</b> Miscellaneous Geotechnical Services, Bundle One
<b>Client:</b> City of Ann Arbor		
<b>Type of Rig:</b> Truck		<b>Location:</b> Ann Arbor, Michigan
<b>Drilling Method:</b> Solid Stem Augers		<b>Drilled By:</b> I. Mickle
<b>Ground Surface Elevation:</b>		<b>Started:</b> 12/21/2011
		<b>Completed:</b> 12/21/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.29	ASPHALT (3 1/2")			
2.5	LS	3 4 5	3	Loose Moist Brown Well Graded Sand With Some Gravel & Clay-FILL	14.3	124	1400
5.0	LS	6 8 9	5	Medium Compact Moist Brown Fine To Medium SAND With Trace Of Gravel	5.2	101	
7.5				Bottom of Borehole at 5'			
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance  
 SS - 2" )D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample

w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, psf  
 DP - Direct Push

**Water Encountered:** None  
**At Completion:** None  
**Boring No.** PT5 Pontiac Trail



# Testing Engineers & Consultants, Inc.

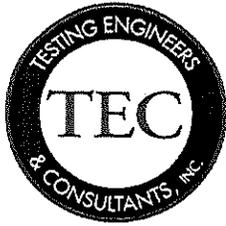
1343 Rochester Road - PO Box 249 - Troy, Michigan - 48099-0249  
 (248) 588-6200 or (313) T-E-S-T-I-N-G  
 Fax (248) 588-6232

<b>Boring No.:</b> PT6 Pontiac Trail	<b>Job No.:</b> 51989	<b>Project:</b> Miscellaneous Geotechnical Services, Bundle One
<b>Client:</b> City of Ann Arbor		
<b>Type of Rig:</b> Truck		<b>Location:</b> Ann Arbor, Michigan
<b>Drilling Method:</b> Solid Stem Augers		<b>Drilled By:</b> I. Mickle
<b>Ground Surface Elevation:</b>		<b>Started:</b> 12/7/2011
		<b>Completed:</b> 12/7/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
0.0			.60	ASPHALT (7 1/4")			
2.5	LS	9 9 6		Medium Compact Moist Brown Well Graded Sand With Some Gravel & Clay-FILL	6.5	106	
5.0	LS	5 7 9	5	Medium Compact Moist Brown Medium SAND With Trace Of Gravel	4.6	112	
5.0				Bottom of Borehole at 5'			
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

\*N\* - Standard Penetration Resistance  
 SS - 2" J.D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample  
 w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, psf  
 DP - Direct Push

**Water Encountered:** None  
**At Completion:** None  
**Boring No.** PT6 Pontiac Trail



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(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

<b>Boring No.:</b> PT7 Pontiac Trail	<b>Job No.:</b> 51989	<b>Project:</b> Miscellaneous Geotechnical Services, Bundle One
<b>Client:</b> City of Ann Arbor		
<b>Type of Rig:</b> Truck		<b>Location:</b> Ann Arbor, Michigan
<b>Drilling Method:</b> Solid Stem Augers		<b>Drilled By:</b> I. Mickle
<b>Ground Surface Elevation:</b>		<b>Started:</b> 12/7/2011
		<b>Completed:</b> 12/7/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.58	ASPHALT (7")			
2.5	LS	9 9 9		Medium Compact Moist Brown Well Graded Sand With Some Gravel & Clay-FILL	7.6	122	
5.0	LS	5 6 6	4 5	Medium Compact Moist Brown Fine SAND With Trace Of Gravel	3.9	125	
7.5				Bottom of Borehole at 5'			
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

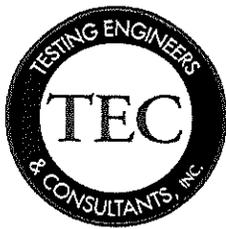
"N" - Standard Penetration Resistance  
 SS - 2" I.D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample

w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, psf  
 DP - Direct Push

**Water Encountered:** None

**At Completion:** None

**Boring No.** PT7 Pontiac Trail



# Testing Engineers & Consultants, Inc.

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(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

<b>Boring No.:</b> PT8 Pontiac Trail	<b>Job No.:</b> 51989	<b>Project:</b> Miscellaneous Geotechnical Services, Bundle One
<b>Client:</b> City of Ann Arbor		
<b>Type of Rig:</b> Truck		<b>Location:</b> Ann Arbor, Michigan
<b>Drilling Method:</b> Solid Stem Augers		<b>Drilled By:</b> I. Mickle
<b>Ground Surface Elevation:</b>		<b>Started:</b> 12/7/2011
		<b>Completed:</b> 12/7/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.54	ASPHALT (6 1/2")			
2.5	LS	9 10 6		Medium Compact Moist Brown Clayey SAND With Some Gravel & Pebbles	7.4	124	
5.0	LS	6 7 12	5	Bottom of Borehole at 5'	10.5	130	
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance  
 SS - 2" D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample

w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, psf  
 DP - Direct Push

**Water Encountered:** None

**At Completion:** None

**Boring No.** PT8 Pontiac Trail



# Testing Engineers & Consultants, Inc.

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 (248) 588-6200 or (313) T-E-S-T-I-N-G  
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<b>Boring No.:</b> PT9 Pontiac Trail	<b>Job No.:</b> 51989	<b>Project:</b> Miscellaneous Geotechnical Services, Bundle One
<b>Client:</b> City of Ann Arbor		
<b>Type of Rig:</b> Truck		<b>Location:</b> Ann Arbor, Michigan
<b>Drilling Method:</b> Solid Stem Augers		<b>Drilled By:</b> I. Mickle
<b>Ground Surface Elevation:</b>		<b>Started:</b> 12/7/2011
		<b>Completed:</b> 12/7/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
2.5	LS	4 4 2/2"	.56  3.4	ASPHALT (6 3/4")  Loose Moist Brown Clayey SAND With Some Gravel	12.5	109	
5.0				On Possible Utility At 2.2'. Moved 3.5' North & Redrilled, Possible Utility At 3.4' Bottom of Borehole at 3.4'			
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance  
 SS - 2" .D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample

w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, psf  
 DP - Direct Push

**Water Encountered:**

**At Completion:**

**Boring No.** PT9 Pontiac Trail



# Testing Engineers & Consultants, Inc.

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(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

<b>Boring No.:</b> PT10 Pontiac Trail 51989	<b>Job No.:</b>	<b>Project:</b> Miscellaneous Geotechnical Services, Bundle One
<b>Client:</b> City of Ann Arbor		<b>Location:</b> Ann Arbor, Michigan
<b>Type of Rig:</b> Truck		<b>Drilled By:</b> I. Mickle
<b>Drilling Method:</b> Solid Stem Augers		<b>Started:</b> 12/7/2011
<b>Ground Surface Elevation:</b>		<b>Completed:</b> 12/7/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.56	ASPHALT (6 3/4")			
2.5	LS	7 5 4	2	Medium Compact Moist Brown Clayey Medium To Fine SAND With Trace Of Gravel	4.9	128	
			3	Loose Moist Brown Clayey SAND With Trace Of Gravel			
5.0	LS	7 8 9	5	Stiff Moist Brown CLAY With Some Silt & Trace Of Gravel	11.1	130	5600
7.5				Bottom of Borehole at 5'			
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance  
 SS - 2" .D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample

w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, psf  
 DP - Direct Push

**Water Encountered:** None  
**At Completion:** None  
**Boring No.** PT10 Pontiac Trail



# Testing Engineers & Consultants, Inc.

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(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

<b>Boring No.:</b> PT11 Pontiac Trail 51989	<b>Job No.:</b>	<b>Project:</b> Miscellaneous Geotechnical Services, Bundle One
<b>Client:</b> City of Ann Arbor		<b>Location:</b> Ann Arbor, Michigan
<b>Type of Rig:</b> Truck		<b>Drilled By:</b> I. Mickie
<b>Drilling Method:</b> Solid Stem Augers		<b>Started:</b> 12/7/2011
<b>Ground Surface Elevation:</b>		<b>Completed:</b> 12/7/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.35	ASPHALT (4 1/4")	4.3	120	
2.5	LS	10 7 7	2.5	Medium Compact Moist Dark Brown Clayey Medium To Fine SAND With Trace Of Gravel			
	LS	4/1"	3.6	Medium Compact Moist Brown Clayey SILT & Sand			
5.0				Bottom of Borehole at 5'			
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

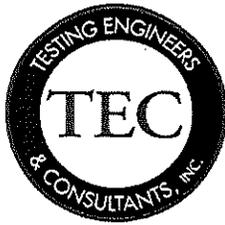
"N" - Standard Penetration Resistance  
 SS - 2" .D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample

w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, psf  
 DP - Direct Push

**Water Encountered:** None

**At Completion:** None

**Boring No.** PT11 Pontiac Trail



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 (248) 588-6200 or (313) T-E-S-T-I-N-G  
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<b>Boring No.:</b> PT12 Pontiac Trail 51989	<b>Job No.:</b>	<b>Project:</b> Miscellaneous Geotechnical Services, Bundle One
<b>Client:</b> City of Ann Arbor		<b>Location:</b> Ann Arbor, Michigan
<b>Type of Rig:</b> Truck		<b>Drilled By:</b> I. Mickle
<b>Drilling Method:</b> Solid Stem Augers		<b>Started:</b> 12/7/2011
<b>Ground Surface Elevation:</b>		<b>Completed:</b> 12/7/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.63				
	LS	6	1.3	ASPHALT (7 1/2")	10.1	123	
2.5		6					
		5	3	Moist Brown Gravelly Well Graded Sand With Some Clay-FILL			
	LS	2			15.8	115	1400
5.0		3	5	Medium Compact Moist Brown Clayey SILT & Sand			
		3					
				Plastic Moist Variegated CLAY With Some Silt & Trace Of Sand			
7.5				Bottom of Borehole at 5'			
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

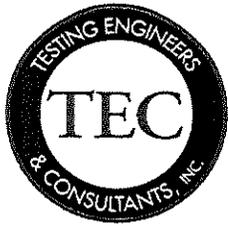
"N" - Standard Penetration Resistance  
 SS - 2" .D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample

w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, psf  
 DP - Direct Push

**Water Encountered:** None

**At Completion:** None

**Boring No.** PT12 Pontiac Trail



# Testing Engineers & Consultants, Inc.

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(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

<b>Boring No.:</b> PT13 Pontiac Trail 51989	<b>Job No.:</b>	<b>Project:</b> Miscellaneous Geotechnical Services, Bundle One
<b>Client:</b> City of Ann Arbor		<b>Location:</b> Ann Arbor, Michigan
<b>Type of Rig:</b> Truck		<b>Drilled By:</b> I. Mickle
<b>Drilling Method:</b> Solid Stem Augers		<b>Started:</b> 12/7/2011
<b>Ground Surface Elevation:</b>		<b>Completed:</b> 12/7/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.48 .83	ASPHALT (5 3/4")			
2.5	LS	10 9 11		Moist Brown Gravelly Well Graded Sand With Some Clay-FILL	10.6	103	
5.0	LS	4 6 6	5	Medium Compact Moist Brown Fine SAND	3.6	105	
5.0				Bottom of Borehole at 5'			
7.5							
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

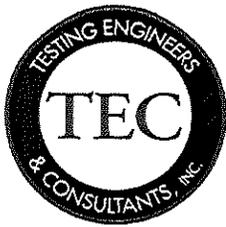
"N" - Standard Penetration Resistance  
 SS - 2" .D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample

w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, psf  
 DP - Direct Push

**Water Encountered:** None

**At Completion:** None

**Boring No.** PT13 Pontiac Trail



# Testing Engineers & Consultants, Inc.

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(248) 588-6200 or (313) T-E-S-T-I-N-G

Fax (248) 588-6232

<b>Boring No.:</b> PT14 Pontiac Trail 51989	<b>Job No.:</b>	<b>Project:</b> Miscellaneous Geotechnical Services, Bundle One
<b>Client:</b> City of Ann Arbor		<b>Location:</b> Ann Arbor, Michigan
<b>Type of Rig:</b> Truck		<b>Drilled By:</b> I. Mickle
<b>Drilling Method:</b> Solid Stem Augers		<b>Started:</b> 12/7/2011
<b>Ground Surface Elevation:</b>		<b>Completed:</b> 12/7/2011

Depth (ft)	Sample Type	N	Strata Change	Soil Classification	w	d	qu
			.38 .83	ASPHALT (4 1/2")			
2.5	LS	12 12 11	3	Moist Brown Gravelly Well Graded Sand With Some Clay-FILL (5 1/2")	3.3	106	
5.0	LS	5 5 4	5	Medium Compact Moist Brown Fine SAND With Trace Of Gravel	6.7	107	
				Loose Moist Brown Fine SAND With Silt Layers			
7.5				Bottom of Borehole at 5'			
10.0							
12.5							
15.0							
17.5							
20.0							
22.5							

"N" - Standard Penetration Resistance  
 SS - 2" .D. Split Spoon Sample  
 LS - Sectional Liner Sample  
 ST - Shelby Tube Sample  
 AS - Auger Sample

w - H<sub>2</sub>O, % of dry weight  
 d - Bulk Density, pcf  
 qu - Unconfined Compression, psf  
 DP - Direct Push

**Water Encountered:** None

**At Completion:** None

**Boring No.** PT14 Pontiac Trail