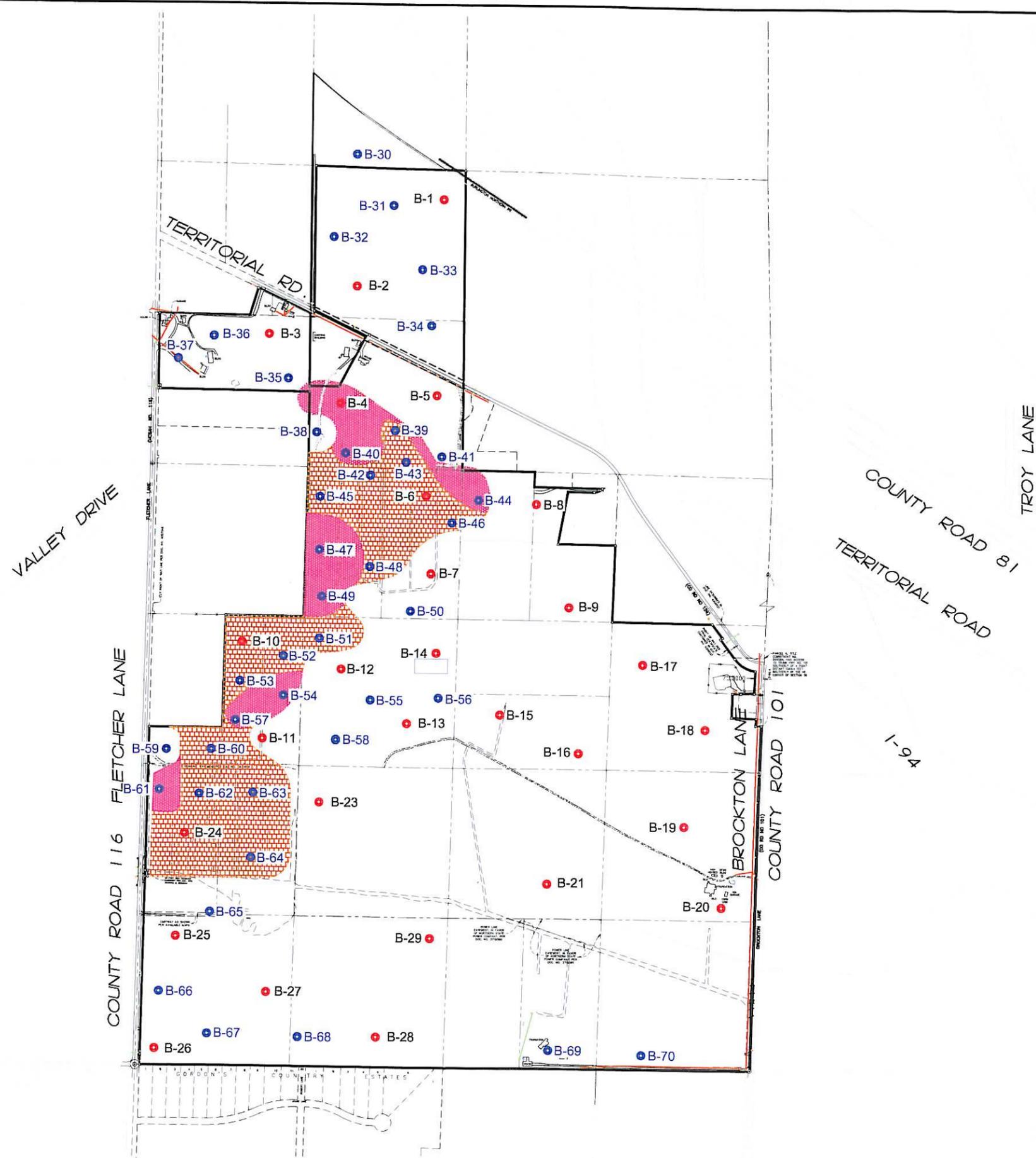


APPENDIX

1. Boring Location Diagram
2. Boring Logs
3. STS General Notes
4. STS Soil Classification System
5. STS Field and Laboratory Procedures
 - Subsurface Exploration Field Procedures
 - Field Sampling Procedures
 - Laboratory Procedures
6. STS Standard Boring Log Procedures
7. STS Subgrade Protection Guideline
8. STS Subgrade Stabilization Guideline
9. STS Earthwork Guideline

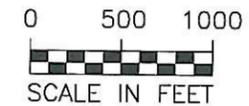


X:\PROJECTS\200703926\G200703926-SB-03.DWG, FIG.1, 10/19/2007 10:00:52 AM, STS_PLOTSTAMP



LEGEND

- DENOTES SOIL BORINGS / MAY 2006
- DENOTES SOIL BORINGS / AUGUST 2007
- ▨ DENOTES ESTIMATED LIMITS OF PEAT SOILS
- ▨ DENOTES AREAS WITH PEAT THICKNESS < 6 FT.



NOTE: BORING LOCATION DIAGRAM BASED ON SITE PLAN PROVIDED BY SCHOELL & MADSON, INC.

REVISED OCTOBER 19, 2007



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SOIL BORING LOCATION DIAGRAM
 STONES THROW
 FLETCHER LANE & TERRITORIAL ROAD
 HASSAN TOWNSHIP, MINNESOTA
 FOR: HASSAN MAINSTREET, LLC.

Drawn: TAK 10/19/2007
 Checked: MM 10/19/2007
 Approved: JHO 10/19/2007

PROJECT NUMBER 200703926

FIGURE NUMBER 1

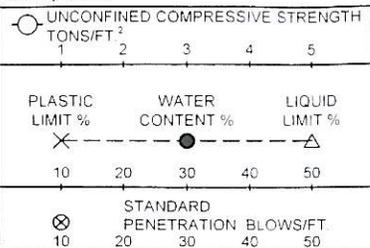


STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER **B-1 & P-1**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION
Fletcher Lane & Territorial Rd., Hassan Twp., MN



DEPTH(FT)	ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS/FT³
-----------	---------------	-----------	-------------	-----------------	----------	-------------------------	---------------------

SURFACE ELEVATION +964.0 NGVD

0.8 Organic silty clay - black - wet - soft - (OL)

1 SS Sandy clay, trace gravel - gray-brown to gray, rust leaching to 13 ft. depth - firm to stiff - (CL)

2.5 HS

2 SS

5.0 HS

3 SS

7.5 HS

4 SS

10.0 HS

5 SS

12.5 HS

15.0 HS

6 SS

17.5 HS

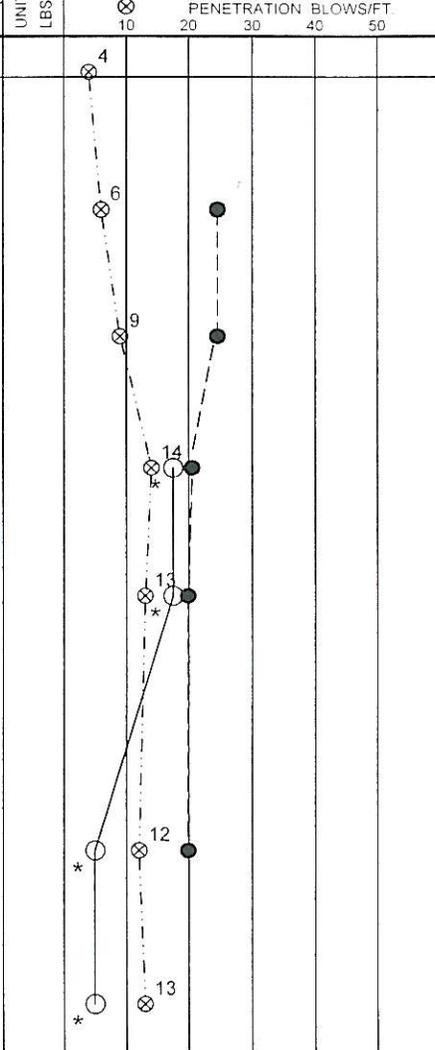
7 SS

20.0

20.0

End of boring at 20.0 ft.

Installed PVC piezometer with screened interval between 15 and 20 ft. depths.



* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	9.5 ft. WS
WL	1.6 ft. 14 days later
WL	

BORING STARTED	5/5/06
BORING COMPLETED	5/5/06
RIG/FOREMAN	CME-45/GD

STS OFFICE	Minneapolis Area - 06	
ENTERED BY	DN	SHEET NO. 1 OF 1
APP'D BY	MM	STS JOB NO. 200603005

BORING LOG 200603005.GPJ STS.GDT 5/22/06



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC

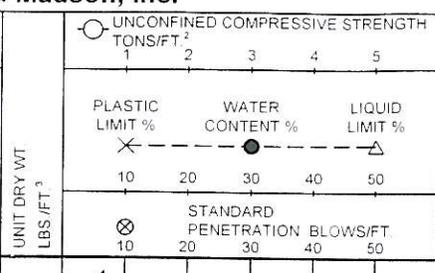
PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER
B-2 & P-2

ARCHITECT-ENGINEER
Schoell & Madson, Inc.

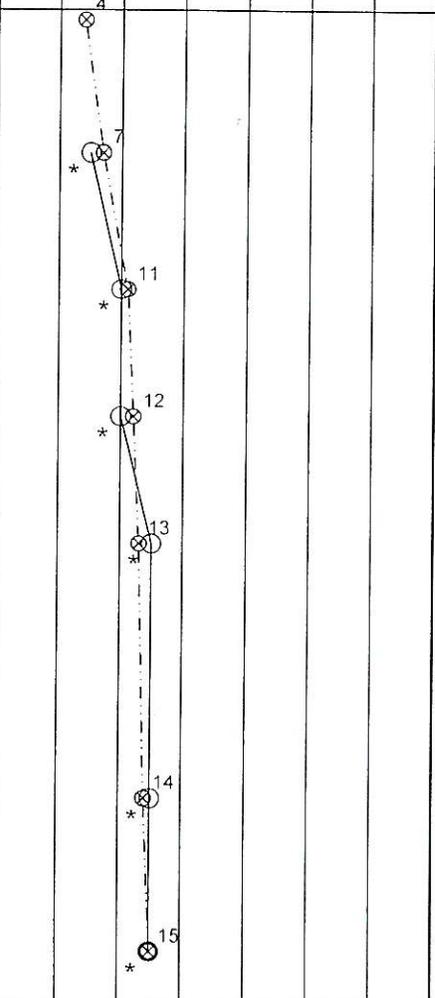
SITE LOCATION
Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH (FT)	ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
------------	----------------	------------	-------------	-----------------	----------	-------------------------



SURFACE ELEVATION +981.0 NGVD

0.5						Organic clayey silt, trace roots - black - soft - (OL)
1		1	SS			Sandy clay, trace gravel - gray-brown to gray, rust leaching to 15 ft. depth - firm to stiff - (CL)
2.5			HS			
2		2	SS			
5.0			HS			
3		3	SS			
7.5			HS			
4		4	SS			
10.0			HS			
5		5	SS			
12.5			HS			
15.0						
6		6	SS			
17.5			HS			
7		7	SS			
20.0						



End of boring at 20.0 ft.
 Installed PVC piezometer with screened interval between 15 and 20 ft. depths.

* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 10.2 ft. WS	BORING STARTED 5/5/06	STS OFFICE Minneapolis Area - 06
WL Piezometer destroyed by farmer.	BORING COMPLETED 5/5/06	ENTERED BY DN
WL	RIG/FOREMAN CME-45/GD	APP'D BY MM
		SHEET NO. 1 OF 1
		STS JOB NO. 200603005

BORING LOG 200603005.GPJ STS GDT 5/22/06

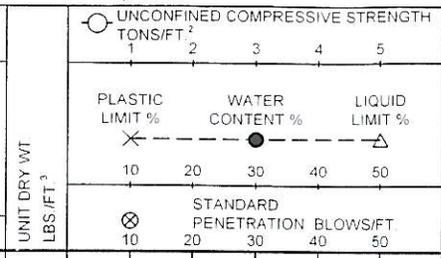


OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

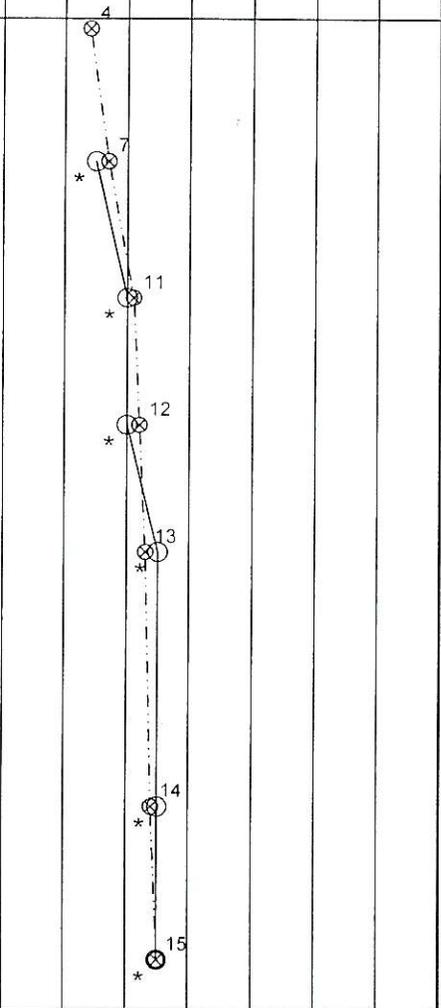
LOG OF BORING NUMBER
B-2 & P-2
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION
Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
						SURFACE ELEVATION +981.0 NGVD



		0.5				Organic clayey silt, trace roots - black - soft - (OL)
		1	SS			Sandy clay, trace gravel - gray-brown to gray, rust leaching to 15 ft. depth - firm to stiff - (CL)
	2.5		HS			
		2	SS			
	5.0		HS			
		3	SS			
	7.5		HS			
		4	SS			
	10.0		HS			
		5	SS			
	12.5		HS			
	15.0					
		6	SS			
	17.5		HS			
		7	SS			
	20.0					



End of boring at 20.0 ft.
 Installed PVC piezometer with screened interval between 15 and 20 ft. depths.

* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 10.2 ft. WS	BORING STARTED 5/5/06	STS OFFICE Minneapolis Area - 06
WL Piezometer destroyed by farmer.	BORING COMPLETED 5/5/06	ENTERED BY DN
WL	RIG/FOREMAN CME-45/GD	APP'D BY MM
		SHEET NO. 1 OF 1 STS JOB NO. 200603005

BORING_LOG_200603005.GPJ STS GDT 5/22/06



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER
B-3 & P-3
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION
Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS/FT ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT ²					
						1	2	3	4	5	
						PLASTIC LIMIT %			WATER CONTENT %		LIQUID LIMIT %
						⊗	⊗	⊗	⊗	⊗	
						STANDARD PENETRATION BLOWS/FT					
						⊗	⊗	⊗	⊗	⊗	
SURFACE ELEVATION +988.7 NGVD											
0.5				Organic sandy clay, trace roots - dark brown - (OL) Sandy clay, trace gravel - brown to gray, rust leaching to 14 ft. depth - firm to very stiff - (CL)		6					
2.5	1	SS									
		HS									
	2	SS									
5.0		HS									
	3	SS									
7.5		HS									
	4	SS									
10.0		HS									
	5	SS									
12.5		HS									
15.0		HS									
	6	SS									
17.5		HS									
	7	SS									
20.0											
End of boring at 20.0 ft. Installed PVC piezometer with screened interval between 15 and 20 ft. depths.						* Calibrated Penetrometer					

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 17.2 ft. WS	BORING STARTED 5/5/06	STS OFFICE Minneapolis Area - 06
WL Dry ACR	BORING COMPLETED 5/5/06	ENTERED BY DN
WL Piezometer destroyed by farmer.	RIG/FOREMAN CME-45/GD	APP'D BY MM
		SHEET NO. 1 OF 1
		STS JOB NO. 200603005

BORING LOG 200603005 GPJ STS GDT 5/22/06



STS Consultants Ltd.

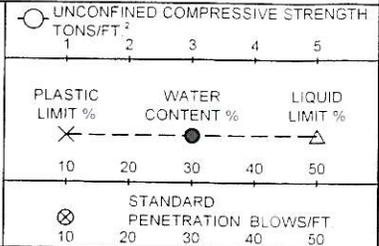
OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER **B-4**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH (FT) ELEVATION (FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT. ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ²				
						1	2	3	4	5
						PLASTIC LIMIT %		WATER CONTENT %		LIQUID LIMIT %
						X		●		△
						STANDARD PENETRATION BLOWS/FT				
						⊗				
				SURFACE ELEVATION +915.0 NGVD						
			1.0	Organic clayey silt, trace roots - black - stiff - (OH)						
				Well decomposed peat - black - wet - firm - (Pt)						
2.5		HS								
			3.5	Sandy clay, trace gravel - brown to gray, rust leaching - firm to stiff - (CL)						
5.0		HS								
7.5		HS								
10.0		HS								
12.5		HS								
15.0		HS								
17.5		HS								
20.0		HS								
			16.0	Fine to coarse sand - gray - saturated - medium dense - (SP-SW)						
			19.3							
			20.0	Sandy clay, trace gravel - gray - stiff - (CL)						
				End of boring at 20.0 ft. Boring backfilled with cuttings.						



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	16 ft. WS	BORING STARTED	5/9/06	STS OFFICE	Minneapolis Area - 06	
WL		BORING COMPLETED	5/9/06	ENTERED BY	DN	SHEET NO. 1 OF 1
WL		RIG/FOREMAN	CME-45/GD	APP'D BY	MM	STS JOB NO. 200603005

BORING LOG 200603005.GPJ STS_GDT 5/12/06



OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER **B-5**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION
Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH(FT)	ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY
		1	SS		
2.5			HS		
		2	SS		
5.0			HS		
		3	SS		
7.5			HS		
		4	SS		
10.0			HS		
		5	SS		
12.5			HS		
15.0					
		6	SS		
17.5			HS		
		7	SS		
20.0					

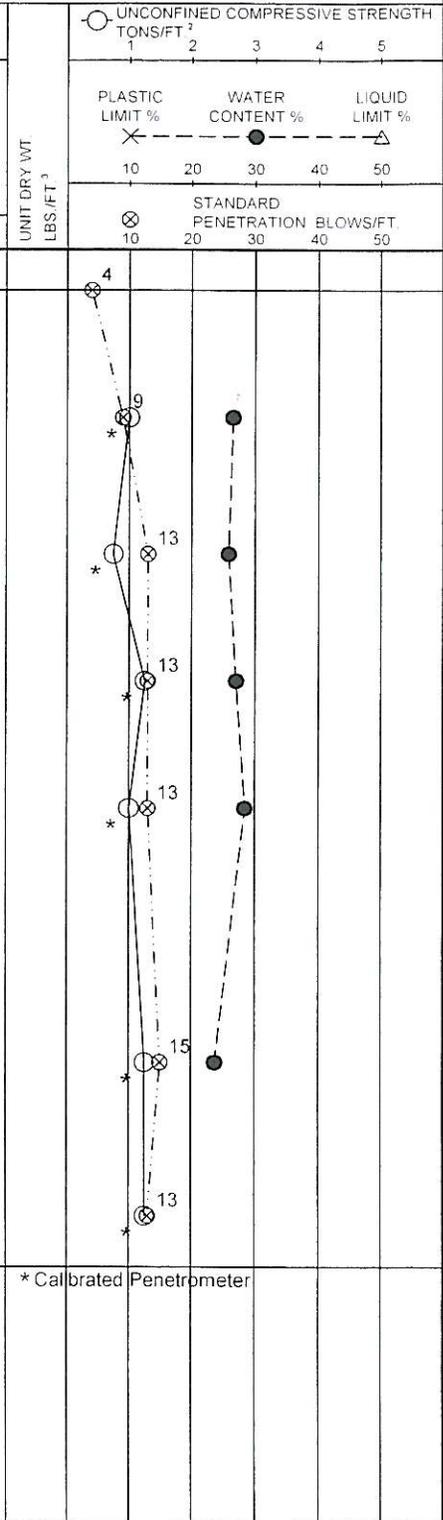
DESCRIPTION OF MATERIAL

SURFACE ELEVATION +939.7 NGVD

0.8 Organic sandy clay, trace roots - black - soft - (OL)

Sandy clay, trace gravel - gray-brown to gray, rust leaching to 11 ft. depth - stiff - (CL)

End of boring at 20.0 ft.
 Boring backfilled with cuttings.



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	Dry ACR	BORING STARTED	5/5/06	STS OFFICE	Minneapolis Area - 06
WL		BORING COMPLETED	5/5/06	ENTERED BY	DN
WL		RIG/FOREMAN	CME-45/GD	APP'D BY	MM
				SHEET NO	1 OF 1
				STS JOB NO.	200603005

BORING LOG 200603005.GPJ STS_GDT 5/12/06



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER
B-6 & P-6
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION
Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH (FT) ELEVATION (FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS / FT ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT ²			PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %				
						1	2	3	10	20	30	40	50
SURFACE ELEVATION +908.9 NGVD													
	1	SS		0.5 Organic silty clay, trace roots - black - firm - (OL) Fibrous to well decomposed peat - brown-black to black - wet to saturated - very soft - (Pt)									
5.0	2	SS											
	3	SS											
10.0	4	SS											
	5	SS											
15.0	6	SS											
	7	SS											
20.0	8	SS											
	9	SS		31.2 Peaty organic silt - brownish-gray - soft - (OH)									
35.0	10	SS											
40.0	11	SS		39.0 Clayey silt, trace organics - dark gray - soft - (CL-CH)									
42				42.0 End of boring at 42.0 ft. Installed PVC piezometer with screened interval between 13 and 18 ft. depths.									

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 4.4 ft. 11 days later	BORING STARTED 5/8/06	STS OFFICE Minneapolis Area - 06
WL	BORING COMPLETED 5/8/06	ENTERED BY DN
WL	RIG/FOREMAN CME-45/GD	APP'D BY MM
		SHEET NO. 1 OF 1
		STS JOB NO. 200603005

BORING LOG 200603005.CPJ STS GDT 8/28/07



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER **B-7**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH (FT)	ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT ²			PLASTIC LIMIT %			WATER CONTENT %			LIQUID LIMIT %		
								1	2	3	1	2	3	4	5	1	2	3	
						SURFACE ELEVATION +908.7 NGVD													
		1	SS			Organic silt, trace roots - brownish-gray - wet - soft - (OH)													
	2.5		HS		1.8	Silty fine to coarse sand, and silty fine to medium sand - gray-brown - saturated - loose - (SM)													
		2	SS																
	5.0		HS																
		3	SS																
	7.5		HS		7.0	Clayey fine sand, trace gravel - gray - saturated - loose - (SC)													
		4	SS																
	10.0		HS																
		5	SS		11.0	Sandy clay, trace gravel - gray - firm to very stiff - (CL)													
	12.5		HS																
	15.0		HS																
		6	SS																
	17.5		HS																
	20.0		HS																
		7	SS																
	21		SS		21.0														
						End of boring at 21.0 ft. Boring backfilled with cuttings.													

* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	2 ft. WS	BORING STARTED	5/8/06	STS OFFICE	Minneapolis Area - 06	
WL		BORING COMPLETED	5/8/06	ENTERED BY	DN	SHEET NO. 1 OF 1
WL		RIG/FOREMAN	CME-45/GD	APP'D BY	MM	STS JOB NO. 200603005

BORING LOG: 200603005.GPJ STS GDT 5/12/06



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER **B-8**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS/FT ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT ²			PLASTIC LIMIT %			WATER CONTENT %			LIQUID LIMIT %			STANDARD PENETRATION BLOWS/FT		
							1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
					SURFACE ELEVATION +944.0 NGVD																
0.5					Silty clay - dark brown - firm - (CL)																
1	1	SS			Sandy clay, trace gravel, thin sand lenses - brown - stiff - (CL, lenses SP)																
2.5		HS																			
2	2	SS																			
5.0		HS																			
3	3	SS																			
6.9																					
7.5		HS			Sandy silt - gray-brown - wet - medium dense - (ML)																
4	4	SS																			
10.0		HS																			
10.0																					
5	5	SS			Sandy clay, trace gravel - gray-brown to gray - stiff to very stiff - (CL)																
12.5		HS																			
15.0																					
6	6	SS																			
17.5		HS																			
20.0																					
7	7	SS																			
20.0																					
					End of boring at 20.0 ft. Boring backfilled with cuttings.																

* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	10 ft. WS	BORING STARTED	5/4/06	STS OFFICE	Minneapolis Area - 06	
WL		BORING COMPLETED	5/4/06	ENTERED BY	DN	SHEET NO. 1 OF 1
WL		RIG/FOREMAN	CME-45/GD	APP'D BY	MM	STS JOB NO. 200603005

BORING LOG 200603005.GPJ STS GDT 5/12/06



OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER
B-9 & P-9
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT. ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ²			PLASTIC LIMIT %			WATER CONTENT %			LIQUID LIMIT %		
						1	2	3	1	2	3	4	5	1	2	3	4
				SURFACE ELEVATION +933.2 NGVD													
0.8				Organic sandy clay, trace roots - brown-black - soft - (OL)													
2.5	1	SS		Sandy clay, trace gravel - gray-brown, rust leaching to 14 ft. depth - firm to very stiff - (CL)													
		HS															
5.0	2	SS															
		HS															
7.5	3	SS															
		HS															
10.0	4	SS															
		HS															
12.5	5	SS															
		HS															
15.0	6	SS															
		HS															
17.5	7	SS															
		HS															
20.0				20.0													
End of boring at 20.0 ft. Installed PVC piezometer with screened interval between 15 and 20 ft. depths.																	

* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 18.9 ft. WS	BORING STARTED 5/3/06	STS OFFICE Minneapolis Area - 06
WL 10.1 ft. 16 days later	BORING COMPLETED 5/3/06	ENTERED BY DN
	RIG/FOREMAN CME-45/GD	APP'D BY MM
		SHEET NO. 1 OF 1
		STS JOB NO. 200603005

BORING LOG 200603005 GPJ - STS GDT 5/22/06



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER
B-10 & P-10
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH(FT) ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS/FT ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT ²									
							1	2	3	4	5					
							PLASTIC LIMIT %			WATER CONTENT %		LIQUID LIMIT %				
							⊗	⊗	⊗	●	⊗	⊗				
							10	20	30	40	50					
							STANDARD PENETRATION BLOWS/FT.									
							⊗	⊗	⊗	⊗	⊗					
							10	20	30	40	50					
					SURFACE ELEVATION +907.5 NGVD											
	1	SS			Fibrous to well decomposed peat - brown-black to black - wet - soft to firm - (Pt)		4									
2.5		HS														
	2	SS					5									
5.0		HS														
	3	SS					5									
7.5		HS														
	4	SS					4									
10.0		HS		10.0	Organic clayey silt - black - saturated - very soft - (OH)											
	5	SS					2									
12.5		HS														
15.0				15.4	Silty clay/clayey silt - gray - soft - (CH-MH)											
	6	SS					3									
17.5		HS		18.0	Silty clay - gray - stiff - (CL-CH)											
	7	SS		20.0			9									
20.0					End of boring at 20.0 ft. Installed PVC piezometer with screened interval between 15 and 20 ft. depths.											

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL Dry ACR	BORING STARTED 5/8/06	STS OFFICE Minneapolis Area - 06
WL 5.8 ft. 11 days later	BORING COMPLETED 5/8/06	ENTERED BY DN
WL	RIG/FOREMAN CME-45/GD	APP'D BY MM
		SHEET NO. 1 OF 1
		STS JOB NO. 200603005

BORING LOG 200603005.GPJ STS GDT 5/22/06



OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER **B-11**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH(FT) ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS/FT ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT ²				
						1	2	3	4	5
SURFACE ELEVATION +907.6 NGVD						PLASTIC LIMIT %				
						WATER CONTENT %				
						LIQUID LIMIT %				
						STANDARD PENETRATION BLOWS/FT.				
				Organic sandy clay, trace roots - black - wet - soft - (OL)						
1.2	1	SS		Clayey fine sand - gray - wet - loose - (SC)		4				
2.5		HS								
	2	SS				7				
5.0		HS								
	3	SS				9				
7.5		HS								
7.7				Sandy silt - gray-brown - wet - medium dense - (ML)						
	4	SS				15				
10.0		HS								
	5	SS				15				
12.5		HS								
14.5				Silty clay, trace fine gravel - gray - stiff - (CL)						
15.0										
	6	SS				15				
17.5		HS								
	7	SS				13				
20.0										
				End of boring at 20.0 ft. Boring backfilled with cuttings.						

*Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	BORING STARTED 5/8/06	STS OFFICE Minneapolis Area - 06
WL	BORING COMPLETED 5/8/06	ENTERED BY DN
WL	RIG/FOREMAN CME-45/GD	APPD BY MM
		SHEET NO 1 OF 1 STS JOB NO. 200603005

BORING LOG 200603005.GPJ STS GDT 5/12/06



STS Consultants Ltd.

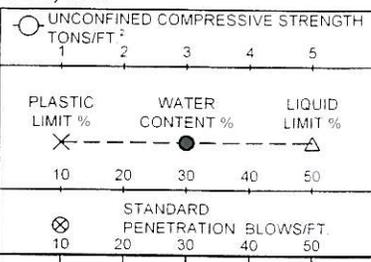
OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER
B-13 & P-13
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH(FT) ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS/FT ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT ²				
						1	2	3	4	5
						PLASTIC LIMIT %		WATER CONTENT %		LIQUID LIMIT %
						⊗	⊗	●	⊗	△
						10	20	30	40	50
						STANDARD PENETRATION BLOWS/FT				
						⊗	⊗	⊗	⊗	⊗
						10	20	30	40	50
				SURFACE ELEVATION +918.3 NGVD						
				Clayey fine sand, trace roots - dark brown - wet - loose - (SC)						
	1	SS	1.2							
2.5		HS		Sandy clay, trace gravel - gray-brown to gray, rust leaching to 14 ft. depth - stiff to very stiff - (CL)						
	2	SS								
5.0		HS								
	3	SS								
7.5		HS								
	4	SS								
10.0		HS								
	5	SS								
12.5		HS								
15.0		HS								
	6	SS								
17.5		HS								
20.0		SS	20.0							
				End of boring at 20.0 ft. Installed PVC piezometer with screened interval between 15 and 20 ft. depths.						



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	Dry ACR	BORING STARTED	5/4/06	STS OFFICE	Minneapolis Area - 06
WL	5.4 ft. 15 days later	BORING COMPLETED	5/4/06	ENTERED BY	DN
WL		RIG/FOREMAN	CME-45/GD	APP'D BY	MM
				SHEET NO	1 OF 1
				STS JOB NO.	200603005

BORING LOG 200603005.GPJ STS GDT 5/22/06



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER **B-14**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH (FT)	ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT ²									
								1	2	3	4	5					
								PLASTIC LIMIT %		WATER CONTENT %		LIQUID LIMIT %					
								⊗	⊗	●	⊗	△					
								10	20	30	40	50					
								STANDARD PENETRATION BLOWS/FT									
								⊗	⊗	⊗	⊗	⊗					
								10	20	30	40	50					
						SURFACE ELEVATION +908.2 NGVD											
						0.8 Organic clayey silt - brown-black - firm - (OL)											
		1	SS			Sandy clay, trace gravel - gray-brown to brown, rust leaching - stiff - (CL)											
	2.5		HS														
		2	SS			Sandy clay, trace gravel - gray-brown to brown, rust leaching - stiff - (CL)											
	5.0		HS														
		3	SS			Sandy clay, trace gravel - gray-brown to brown, rust leaching - stiff - (CL)											
	7.5		HS														
		4	SS			Sandy clay, trace gravel - gray-brown to brown, rust leaching - stiff - (CL)											
	10.0		HS														
		5	SS			Sandy clay, trace gravel - gray-brown to brown, rust leaching - stiff - (CL)											
	12.5		HS														
						Sandy clay, trace gravel - gray-brown to brown, rust leaching - stiff - (CL)											
	15.0		HS														
		6	SS			15.8 Fine sand - brown - saturated - medium dense - (SP)											
						Sandy clay, trace gravel - brown - very stiff - (CL)											
	17.5		HS														
		7	SS			Sandy clay, trace gravel - brown - very stiff - (CL)											
	20.0		HS														
						End of boring at 20.0 ft. Boring backfilled with cuttings.											

* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	16.8 ft. WS	BORING STARTED	5/4/06	STS OFFICE	Minneapolis Area - 06
WL		BORING COMPLETED	5/4/06	ENTERED BY	DN
WL		RIG/FOREMAN	CME-45/GD	APP'D BY	MM
				SHEET NO.	1 OF 1
				STS JOB NO.	200603005

BORING LOG: 200603005.GPJ STS GDT 5/12/06



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER **B-15**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT. ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ²				
						1	2	3	4	5
						PLASTIC LIMIT %		WATER CONTENT %		LIQUID LIMIT %
						X		●		△
						10 20 30 40 50		10 20 30 40 50		10 20 30 40 50
						STANDARD PENETRATION BLOWS/FT.				
						⊗				
						10 20 30 40 50				
				SURFACE ELEVATION +908.2 NGVD						
	1	SS	1.0	Organic clayey silt - black - wet - firm - (OL)						
2.5		HS		Clayey fine to coarse sand, trace gravel - gray-brown - wet to saturated - loose - (SC)						
	2	SS								
5.0		HS	5.2	Clayey silt - gray - saturated - soft - (ML-CL)						
	3	SS								
7.5		HS								
	4	SS								
10.0		HS	10.0	Clayey fine to coarse sand - gray - saturated - loose - (SC)						
	5	SS	11.5							
12.5		HS		Clayey silt - gray - saturated - soft to stiff - (ML-CL)						
	6	SS								
15.0		HS								
	7	SS								
17.5		HS								
	7	SS								
20.0		HS	20.0							
				End of boring at 20.0 ft. Boring backfilled with cuttings.						

* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	2 ft. WS	BORING STARTED	5/4/06	STS OFFICE	Minneapolis Area - 06
WL		BORING COMPLETED	5/4/06	ENTERED BY	DN
WL		RIG/FOREMAN	CME-45/GD	APP'D BY	MM
				SHEET NO.	1 OF 1
				STS JOB NO.	200603005

BORING_LOG 200603005 GP.J STS GDT 5/12/06



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER
B-16 & P-16
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH (FT) ELEVATION (FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS./FT ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT ²			PLASTIC LIMIT %			WATER CONTENT %			LIQUID LIMIT %			
						1	2	3	1	2	3	4	5	1	2	3	4	5
SURFACE ELEVATION +917.3 NGVD																		
0.5				Sandy clay, trace roots and organics - dark brown - firm - (CL-OL)														
2.5	1	SS		Sandy clay, trace gravel - gray-brown, rust leaching - firm to stiff - (CL)														
		HS																
	2	SS																
		HS																
	3	SS																
		HS																
	4	SS																
		HS																
	5	SS																
		HS																
15.0			15.0															
	6	SS		Silty fine to coarse sand - gray-brown - saturated - medium dense - (SM)														
		HS		Sandy clay, trace gravel - gray - very stiff - (CL)														
20.0			20.0															
	7	SS																
		HS																
End of boring at 20.0 ft. Installed PVC piezometer with screened interval between 15 and 20 ft. depths.						* Calibrated Penetrometer												

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 8.4 ft. WS	BORING STARTED 5/3/06	STS OFFICE Minneapolis Area - 06
WL 6.6 ft. 16 days later	BORING COMPLETED 5/3/06	ENTERED BY DN
WL	RIG/FOREMAN CME-45/GD	APP'D BY MM
		SHEET NO 1 OF 1
		STS JOB NO 200603005

BORING_LOG_200603005 GPJ STS GDT 5/22/06



OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER **B-17**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH(FT) ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS/FT ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT ²					
						1	2	3	4	5	
						PLASTIC LIMIT %		WATER CONTENT %		LIQUID LIMIT %	
						⊗	⊗	●	⊗	△	
						STANDARD PENETRATION BLOWS/FT.					
						⊗	⊗	⊗	⊗	⊗	
				SURFACE ELEVATION +934.5 NGVD							
				0.8 Sandy clay, trace roots and organics - dark brown - (CL-OL)							
2.5	1	SS		Sandy clay, trace gravel - brown to gray-brown, rust leaching to 15 ft. depth - stiff - (CL)							
		HS									
5.0	2	SS									
		HS									
7.5	3	SS									
		HS									
10.0	4	SS									
		HS									
12.5	5	SS									
		HS									
15.0											
17.5	6	SS									
		HS									
20.0	7	SS									
				End of boring at 20.0 ft. Boring backfilled with cuttings.							

* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

BORING_LOG_200603005.GPJ STS GDT 5/12/06

WL	Dry ACR	BORING STARTED 5/3/06	STS OFFICE Minneapolis Area - 06
WL		BORING COMPLETED 5/3/06	ENTERED BY DN
WL		RIG/FOREMAN CME-45/GD	SHEET NO. 1 OF 1 STS JOB NO. 200603005
			APP'D BY MM



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER **B-18 & P-18**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH(FT) ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT. ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ²			PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %									
						1	2	3	10	20	30	40	50					
SURFACE ELEVATION +941.3 NGVD						STANDARD PENETRATION BLOWS/FT												
				0.5 Sandy clay, trace roots and organics - gray-brown - soft - (CL-OL)														
2.5		HS		Sandy clay, trace gravel - brown to gray-brown, rust leaching to 17 ft. depth - stiff to very stiff - (CL)														
	1	SS																
	2	SS																
5.0		HS																
	3	SS																
7.5		HS																
	4	SS																
10.0		HS																
	5	SS																
12.5		HS																
15.0		HS																
	6	SS																
17.5		HS																
	7	SS																
20.0		HS																
End of boring at 20.0 ft. Installed PVC piezometer with screened interval between 15 and 20 ft. depths.						* Calibrated Penetrometer												

BORING LOG 200603005 GPJ STS GDT 5/12/06

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL Dry ACR	BORING STARTED 5/3/06	STS OFFICE Minneapolis Area - 06
WL	BORING COMPLETED 5/3/06	ENTERED BY DN
WL	RIG/FOREMAN CME-45/GD	APP'D BY MM
		SHEET NO. 1 OF 1
		STS JOB NO. 200603005



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER **B-19**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH (FT) ELEVATION (FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS/FT ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT ²			PLASTIC LIMIT % WATER CONTENT % LIQUID LIMIT %			STANDARD PENETRATION BLOWS/FT					
						1	2	3	1	2	3	4	5	10	20	30	40
				SURFACE ELEVATION +925.5 NGVD													
0.6				Sandy clay, trace roots and organics - dark brown - (CL-OL)													
1	1	SS		Sandy clay, trace gravel - brown to gray-brown, rust leaching - firm to very stiff - (CL)													
2.5		HS															
2	2	SS															
5.0		HS															
3	3	SS															
7.5		HS															
4	4	SS															
10.0		HS															
5	5	SS															
12.5		HS															
15.0		HS															
6	6	SS															
17.5		HS															
7	7	SS															
20.0				20.0													
End of boring at 20.0 ft. Boring backfilled with cuttings.																	

* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	Dry ACR	BORING STARTED	5/3/06	STS OFFICE	Minneapolis Area - 06
WL		BORING COMPLETED	5/3/06	ENTERED BY	DN
WL		RIG/FOREMAN	CME-45/GD	APP'D BY	MM
				SHEET NO.	1 OF 1
				STS JOB NO.	200603005

BORING LOG 200603005 GPJ STS GDT 5/12/06



OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER **B-21 & P-21**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH(FT) ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS / FT ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ²				
						1	2	3	4	5
						PLASTIC LIMIT %		WATER CONTENT %		LIQUID LIMIT %
						⊗	⊗	●	⊗	△
						10	20	30	40	50
						STANDARD PENETRATION BLOWS/FT.				
						⊗	⊗	⊗	⊗	⊗
						10	20	30	40	50
SURFACE ELEVATION +913.0 NGVD										
				Organic clayey silt, trace roots - dark brown - soft - (OL)						
1	SS		1.2							
2.5	HS			Sandy clay, trace gravel - gray-brown to gray, rust leaching to 15 ft. depth - firm to stiff - (CL)						
2	SS									
5.0	HS									
3	SS									
7.5	HS									
4	SS									
10.0	HS									
5	SS									
12.5	HS									
15.0	HS									
6	SS									
17.5	HS									
7	SS									
20.0			20.0							
End of boring at 20.0 ft. Installed PVC piezometer with screened interval between 15 and 20 ft. depths.						* Calibrated Penetrometer				

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 16 ft. WS	BORING STARTED 5/3/06	STS OFFICE Minneapolis Area - 06
WL 2.7 ft. 16 days later	BORING COMPLETED 5/3/06	ENTERED BY DN
WL	RIG/FOREMAN CME-45/GD	APP'D BY MM
		SHEET NO. 1 OF 1
		STS JOB NO. 200603005

BORING_LOG_200603005.GPJ - STS.GDT 5/22/06

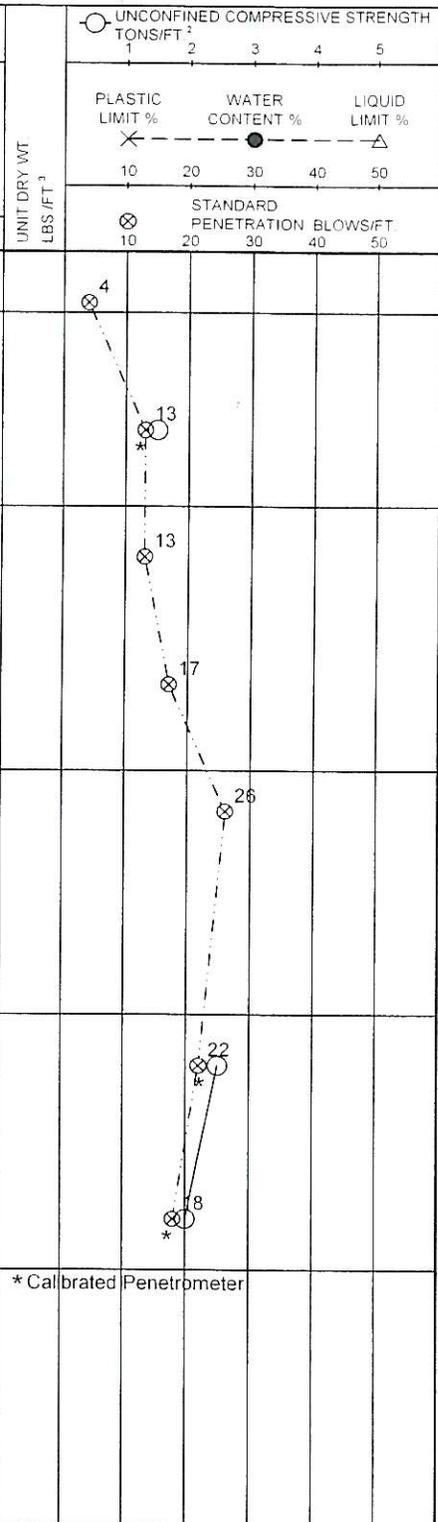


OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER
B-23 & P-23
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION
Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH(FT) ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL
				SURFACE ELEVATION +916.3 NGVD
	1	SS	1.2	Organic clayey silt, trace roots - brown-black - soft - (OL)
2.5		HS		Sandy clay, trace gravel - brown - stiff - (CL)
	2	SS		
5.0		HS	5.0	
	3	SS		Clayey fine sand, thin lens sandy clay - brown - wet to saturated - medium dense - (SC, lens CL)
7.5		HS		
	4	SS		
10.0		HS	10.2	
	5	SS		Silty fine to coarse sand, trace gravel - brown - saturated - medium dense - (SM)
12.5		HS		
15.0		HS	15.0	
	6	SS		Sandy clay, trace gravel - gray - very stiff - (CL)
17.5		HS		
	7	SS		
20.0		HS	20.0	
				End of boring at 20.0 ft. Installed PVC piezometer with screened interval between 15 and 20 ft. depths.



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 7.5 ft. WS	BORING STARTED 5/4/06	STS OFFICE Minneapolis Area - 06
WL 5.7 ft. 15 days later	BORING COMPLETED 5/4/06	ENTERED BY DN SHEET NO. 1 OF 1
WL	RIG/FOREMAN CME-45/GD	APP'D BY MM STS JOB NO. 200603005

BORING_LOG_200603005.GPJ STS GDT 5/22/06



STS Consultants Ltd.

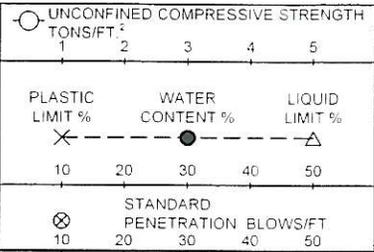
OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER
B-28 & P-28
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS./FT ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT ²		
						1	2	3
						PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %
						X	●	△
						10	20	30
						STANDARD PENETRATION BLOWS/FT		
						10	20	30
				SURFACE ELEVATION +916.8 NGVD				
0.8				Sandy clay, trace organics - dark brown - soft - (CL-OL)				
2.5	1	SS		Sandy clay, trace gravel, random thin lenses clayey sand - gray-brown to gray, rust leaching to 12 ft. depth - stiff to very stiff - (CL, lenses SC)				
		HS						
5.0	2	SS						
		HS						
7.5	3	SS						
		HS						
10.0	4	SS						
		HS						
12.5	5	SS						
		HS						
15.0								
17.5	6	SS						
		HS						
20.0	7	SS						
				End of boring at 20.0 ft. Installed PVC piezometer with screened interval between 12 and 17 ft. depths.				



* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL Dry ACR	BORING STARTED 5/9/06	STS OFFICE Minneapolis Area - 06
WL	BORING COMPLETED 5/9/06	ENTERED BY DN
WL	RIG/FOREMAN CME-45/GD	APP'D BY MM
		SHEET NO. 1 OF 1
		STS JOB NO. 200603005

BORING LOG 200603005.GPJ STS.GDT 5/22/06



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Residential Development

LOG OF BORING NUMBER **B-29**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher Lane & Territorial Rd., Hassan Twp., MN

DEPTH(FT) ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS./FT. ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ²				
							1	2	3	4	5
							PLASTIC LIMIT %		WATER CONTENT %		LIQUID LIMIT %
							⊗	⊗	●	⊗	△
							10	20	30	40	50
							STANDARD PENETRATION BLOWS/FT.				
							⊗	⊗	⊗	⊗	⊗
							10	20	30	40	50
					SURFACE ELEVATION +917.9 NGVD						
					Organic clayey silt, trace roots - black - wet - soft - (OH)						
	1	SS		1.2							
2.5		HS			Sandy clay, trace gravel, random thin seams clayey sand below 17 ft. depth - brown to gray, rust leaching to 13 ft. depth - soft to stiff - (CL, seams SC)						
	2	SS									
5.0		HS									
	3	SS									
7.5		HS									
	4	SS									
10.0		HS									
	5	SS									
12.5		HS									
15.0		HS									
	6	SS									
17.5		HS									
	7	SS									
20.0				20.0							
End of boring at 20.0 ft. Boring backfilled with cuttings.											

* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL Dry AB	BORING STARTED 5/9/06	STS OFFICE Minneapolis Area - 06
WL	BORING COMPLETED 5/9/06	ENTERED BY DN
WL	RIG/FOREMAN CME-45/GD	APP'D BY MM
		SHEET NO. 1 OF 1
		STS JOB NO. 200603005

BORING LOG 200603005.GPJ STS GDT 5/12/06



STS Consultants Ltd.

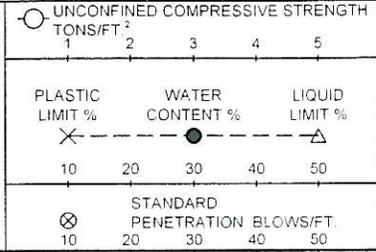
OWNER
Hassan Mainstreet, LLC

LOG OF BORING NUMBER **30**

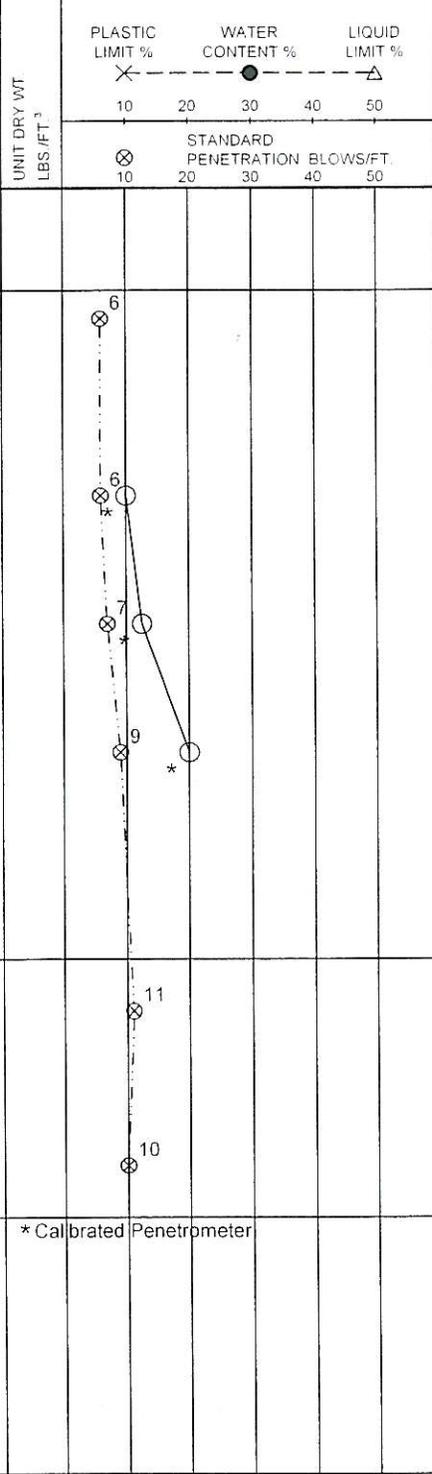
PROJECT NAME
Stones Throw Housing Development

ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION
Fletcher La. & Territorial Rd., Hassan Twp., MN



DEPTH(FT) ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT LBS./FT ³
				SURFACE ELEVATION +978.2 NGVD	
				Sapric peat - black - moist - (Pt)	
2.5	1	AS			
				Silty clay/clayey silt - dark brown to gray-brown, rust leaching - firm to stiff - (CL-ML)	
5.0	2	SS			
7.5	3	SS			
10.0	4	SS			
12.5	5	SS			
15.0		HS			
17.5	6	SS		Fine to medium sand - gray-brown - saturated - medium dense - (SP)	
20.0	7	SS			
				End of boring at 20.0 ft. Boring backfilled with cuttings.	



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 15 ft. WS	BORING STARTED 8/13/07	STS OFFICE Minneapolis Area - 06
WL 8.2 ft. BCR	BORING COMPLETED 8/13/07	ENTERED BY DN SHEET NO. 1 OF 1
WL	RIG/FOREMAN CME-750/DZ	APP'D BY MM STS JOB NO. 200703926

BORING LOG 200703926.GPJ STS.GDT 8/15/07

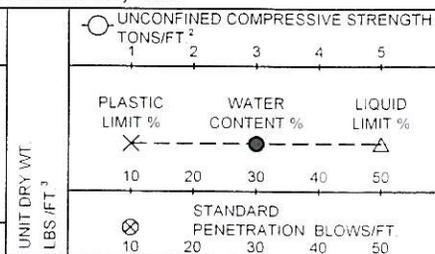


OWNER
Hassan Mainstreet, LLC
 PROJECT NAME
Stones Throw Housing Development

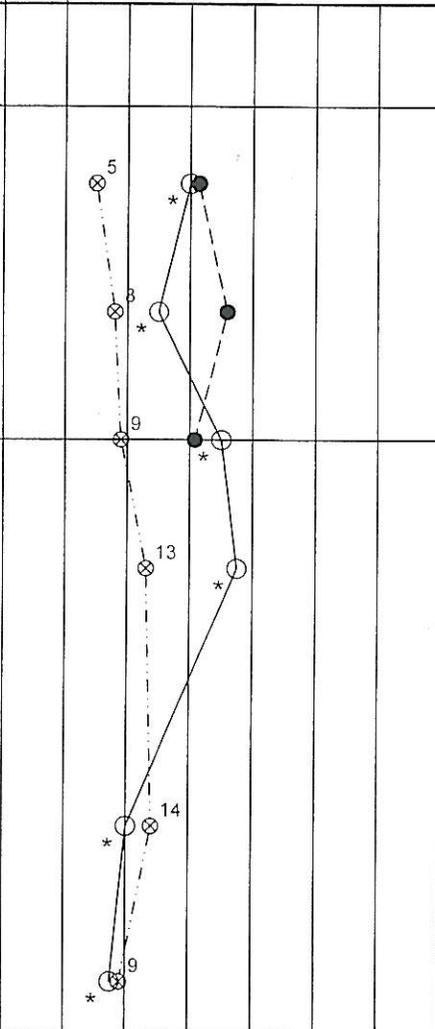
LOG OF BORING NUMBER **31**
 ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION
Fletcher La. & Territorial Rd., Hassan Twp., MN

DEPTH(FT) ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL
				SURFACE ELEVATION +971.8 NGVD



				Organic silty clay - brown-black - (OL)
2.0	1	AS		
2.5		HS		Silty clay/clayey silt - gray-brown, rust leaching - firm - (CL-ML)
	2	SS		
5.0		HS		
	3	SS		
7.5		HS		
	4	SS		Sandy clay, trace gravel - gray-brown to gray - stiff - (CL)
8.5		HS		
10.0		HS		
	5	SS		
12.5		HS		
15.0		HS		
	6	SS		
17.5		HS		
	7	SS		
20.0		HS		



End of boring at 20.0 ft.
 Boring backfilled with cuttings.

* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	Dry ACR	BORING STARTED 8/13/07	STS OFFICE Minneapolis Area - 06
WL		BORING COMPLETED 8/13/07	ENTERED BY DN
WL		RIG/FOREMAN CME-750/DZ	SHEET NO. 1 OF 1 STS JOB NO. 200703926

BORING_LOG 200703926 GPJ STS GDT 8/15/07



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC

LOG OF BORING NUMBER **32**

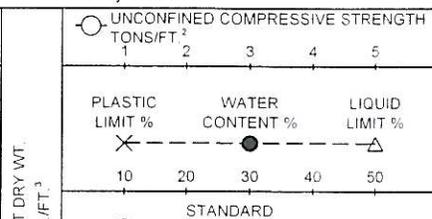
PROJECT NAME
Stones Throw Housing Development

ARCHITECT-ENGINEER
Schoell & Madson, Inc.

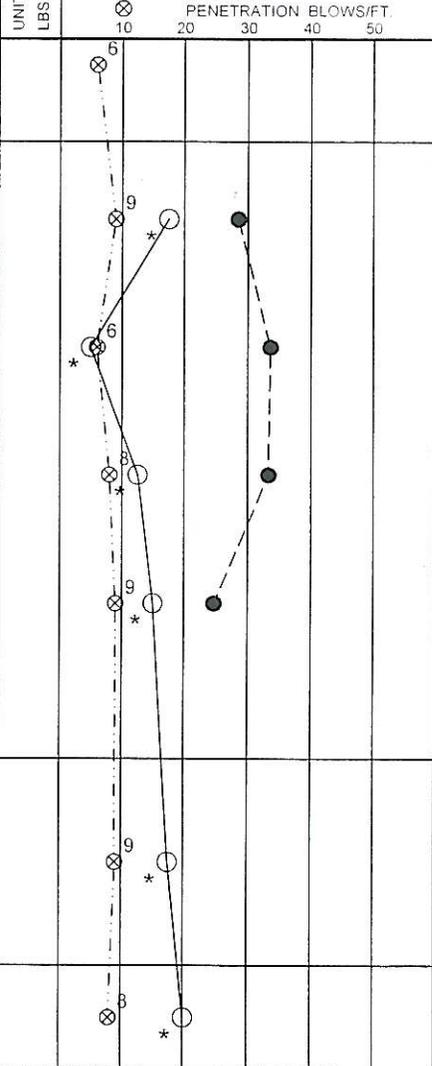
SITE LOCATION

Fletcher La. & Territorial Rd., Hassan Twp., MN

DEPTH(FT) ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL
					SURFACE ELEVATION +978.3 NGVD



					Organic silty clay - brown-black - firm - (OL)
2.5					Silty clay/clayey silt - gray-brown to gray, rust leaching to 10-1/2 ft. depth - (CL-ML)
	1	SS			
					Silty clay/clayey silt - gray-brown to gray, rust leaching to 10-1/2 ft. depth - (CL-ML)
	2	SS			
5.0					Silty clay/clayey silt - gray-brown to gray, rust leaching to 10-1/2 ft. depth - (CL-ML)
	3	SS			
					Silty clay/clayey silt - gray-brown to gray, rust leaching to 10-1/2 ft. depth - (CL-ML)
	4	SS			
10.0					Silty clay/clayey silt - gray-brown to gray, rust leaching to 10-1/2 ft. depth - (CL-ML)
	5	SS			
12.5					Silty clay/clayey silt - gray-brown to gray, rust leaching to 10-1/2 ft. depth - (CL-ML)
					Silty clay/clayey silt - gray-brown to gray, rust leaching to 10-1/2 ft. depth - (CL-ML)
	6	SS			
15.0					Silty clay/clayey silt - gray-brown to gray, rust leaching to 10-1/2 ft. depth - (CL-ML)
					Silty clay/clayey silt - gray-brown to gray, rust leaching to 10-1/2 ft. depth - (CL-ML)
	7	SS			
20.0					Fine to medium sand - gray - wet - loose - (SP)



End of boring at 20.0 ft.
 Boring backfilled with cuttings.

* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 15 ft. WS	BORING STARTED 8/13/07	STS OFFICE Minneapolis Area - 06
WL 10.3 ft. BCR	BORING COMPLETED 8/13/07	ENTERED BY DN SHEET NO. 1 OF 1
WL	RIG/FOREMAN CME-750/DZ	APP'D BY MM STS JOB NO. 200703926

BORING_LOG 200703926 GPJ STS GDT 8/15/07



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC

LOG OF BORING NUMBER **33**

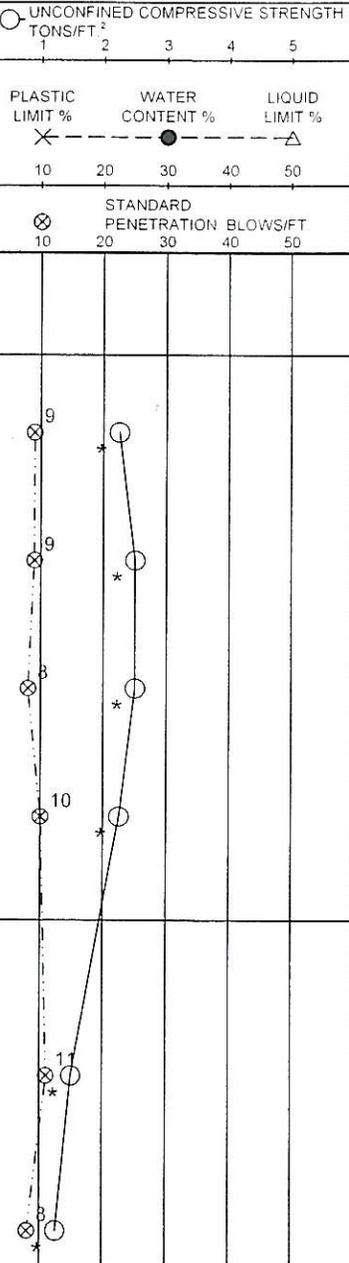
PROJECT NAME
Stones Throw Housing Development

ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher La. & Territorial Rd., Hassan Twp., MN

DEPTH(FT) ELEVATION(FT)	SAMPLE NO	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT. ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ²				
						1	2	3		
						PLASTIC LIMIT %	WATER CONTENT %	LIQUID LIMIT %		
						⊗	●	△		
						10	20	30	40	50
						STANDARD PENETRATION BLOWS/FT				
						⊗	⊗	⊗	⊗	⊗
						10	20	30	40	50
				SURFACE ELEVATION +968.1 NGVD						
	1	AS		Organic silty clay, trace roots - brown-black - (OL)						
2.5		HS		2.0 Silty clay/clayey silt - gray-brown, rust leaching - stiff - (CL-ML)						
	2	SS								
5.0		HS								
	3	SS								
7.5		HS								
	4	SS								
10.0		HS								
	5	SS								
12.5		HS		13.0						
		HS		Sandy clay, trace gravel - gray-brown to gray - stiff - (CL)						
15.0		HS								
	6	SS								
17.5		HS								
	7	SS								
20.0		HS		20.0						
				End of boring at 20.0 ft. Boring backfilled with cuttings.						
										* Calibrated Penetrometer



The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL	Dry ACR	BORING STARTED 8/13/07	STS OFFICE Minneapolis Area - 06
WL		BORING COMPLETED 8/13/07	ENTERED BY DN
WL		RIG/FOREMAN CME-750/DZ	APP'D BY MM
			SHEET NO. 1 OF 1
			STS JOB NO. 200703926

BORING_LOG_200703926.GPJ STS GDT 8/15/07



STS Consultants Ltd.

OWNER
Hassan Mainstreet, LLC

LOG OF BORING NUMBER **34**

PROJECT NAME
Stones Throw Housing Development

ARCHITECT-ENGINEER
Schoell & Madson, Inc.

SITE LOCATION

Fletcher La. & Territorial Rd., Hassan Twp., MN

DEPTH (FT) ELEVATION (FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT. ³	UNCONFINED COMPRESSIVE STRENGTH TONS/FT. ²					PLASTIC LIMIT %			WATER CONTENT %			LIQUID LIMIT %		
							1	2	3	4	5	10	20	30	40	50	10	20	30	40
					SURFACE ELEVATION +950.9 NGVD															
	1	AS			Organic silty clay, trace roots - black to brown-black - (OL)															
2.5		HS			Silty clay/clayey silt - gray-brown, rust leaching - soft to firm - (CL-ML)															
	2	SS																		
5.0		HS																		
	3	SS																		
7.5		HS																		
	4	SS																		
10.0		HS			Sandy clay, trace gravel - gray-brown to gray - stiff - (CL)															
	5	SS																		
12.5		HS																		
	6	SS																		
15.0		HS																		
	7	SS																		
17.5		HS																		
	7	SS																		
20.0					End of boring at 20.0 ft. Boring backfilled with cuttings.															

* Calibrated Penetrometer

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL Dry ACR	BORING STARTED 8/13/07	STS OFFICE Minneapolis Area - 06
WL	BORING COMPLETED 8/13/07	ENTERED BY DN
WL	RIG/FOREMAN CME-750/DZ	SHEET NO. 1 OF 1 STS JOB NO. 200703926

BORING_LOG_200703926.GPJ STS.GDT 8/15/07