

Purchasing Division Finance Department

Room 120 411 West First Street Duluth, Minnesota 55802 218-730-5340purchasing@duluthmn.gov

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Addendum 1 Solicitation 21-99565 Wheeler Sports Complex – Phase II Improvements

This addendum serves to notify all bidders of the following changes to the solicitation documents:

- 1. The pre-bid meeting sign-in sheet has been uploaded to the solicitation both on the City's Purchasing website and in Bid Express.
- 2. Soil boring report is attached.

Please acknowledge receipt of this Addendum by checking the acknowledgment box within the <u>www.bidexpress.com</u> solicitation or by initialing and dating next to Addendum 1 on the paper bid form if it was requested five (5) business days before bid opening.

Posted: July 22, 2021

March 5, 2021 EPC# 21G1494

City of Duluth – Property & Facilities Management 1532 West Michigan Street Duluth, MN 55806

Attn: Mr. Robert Hurd

Re: Soil Boring Log Report Wheeler Athletic Complex Tennis Court Improvements

Dear Mr. Hurd,

This letter report is in regard to the eight corings/borings performed by EPC on February 22 & 23, 2021. All work was performed at the direction of yourself. All borings were staked and numbered in the field by EPC. Core samples of bituminous pavement and the underlying concrete were obtained using a 4-inch core barrel. Borings were performed with EPC's CME 55 rubber track mounted drill rig. Standard penetration tests were performed with a hammer calibrated to N79. Blow counts may have been affected due to possible frozen soils. Samples taken with a Modified California sampler have been converted to SPT values. Sample moistures may be affected due to the water used in the coring process.

Generally speaking, the tennis court surface consisted of 4 to 6 inches of bituminous pavement over 5 to 6 inches of concrete. The bituminous pavement appears to have 3 to 4 lifts with top lift being approximately 1.5 inches. Steel mesh was encountered in the concrete. The soil below the tennis court typically consisted of 1 to 2 feet of silty sand to sand with silt and gravel with sandy clay/sandy silt below it in a medium to stiff consistency.. Native fat clay in a medium to stiff consistency was encountered around 3 to 6 feet below the surface of the tennis court.

Please refer to the table below and the boring logs in the appendix for details.

	Thickness of	Thick	ness of	Depth to
Boring	Bituminous	Concrete	Bottom of Fill	
Number	Pavement	bottom of	(ft)	
	(in)	(i	n)	
SB-21-1	4	6	10	4
SB-21-2	5.5	4*		
SB-21-3	5.5	5.5	11	3
SB-21-4	5.5	6	11.5	3.5
SB-21-5	6	6	12	4
SB-21-6	5.5	5.5	11	6
SB-21-7	4	5.5	9.5	4
SB-21-8	4.5	5.5	10	3

*No recovery. Depth was measured inside of borehole.

One composite gradation was tested on the material immediately below the concrete and classified as Sand with Silt and Gravel with 9.3% passing the #200 sieve. The gradation is included in the appendix.

This report completes EPC's work on this project to date. We must caution you that this report, prepared for soils classification and refusal depth information only, is not a complete geotechnical engineering report. EPC cannot be responsible for possible misinterpretation of the contents of the boring logs, or the strengths of the soils described in them. Soil samples from this project will be saved for two months from the date of this report unless EPC is directed in writing to do otherwise.

We would like to thank you for allowing EPC to be of service to you on this project. If you have any questions or comments, please call us at (218) 727-1239 (w) or (218) 341-4536 (c).

Sincerely,

Logan Tuura, Engineer-In-Training

Reviewed by:

Gary E. Hage, P.E. Principal Engineer

Enclosures: Boring Logs, Location Map, Gradation, and Core Sample Photos





EP Geo 539 Dult	C En techni Garfie uth, M	ngine cal • E ld Ave	ering & Testing Invironmental • Materials Engineering nue a 55802	BORING NUMBER SB-21-1 PAGE 1 OF 1									
CLIEN	T Cit	y of Dul	uth	PROJEC		Whee	eler Field Tei	nnis C	ourt				
PROJ		JMBER		PROJECT LOCATION Duluth, MN									
DATE	STAR	TED _2	/23/21 COMPLETED 2/23/21	GROUND ELEVATION HOLE SIZE _4"									
			CTOR <u>EPC Engineering & Testing</u>										
LOGG	SED BY	BEM		AT	END OF	DRILL	.ING						
NOTE	s			AF	TER DRII	LLING							
ELEVATION (ft)	o DEPTH o (ft)	MATERIAL DESCRIPTION		SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Pocket Penetrometer	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲ 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) 20 40 60 80				
	0.0		4" Bituminous Pavement										
			6" Concrete										
			(SM) (FILL) SILTY SAND, trace gravel, brown, wet		MG		44-37-14-8			13.1			
	2.5		(CL-ML) (FILL) LEAN CLAY to LEAN SILT, some sa organics, brown, wet	nd, trace	1	50	(51)			36.7			
			(CL-ML) (FILL) SANDY LEAN CLAY to SANDY LEA trace organics, brown to black	N SILT,	мс	100	14-8-12-12			33,4			
			(CH) FAT CLAY, brown to reddish brown, moist		2	100	(20)			30.4 •			
			Bottom of hole at 5.0 feet.		_								

EP Geo 539 Dul	C E otechn Garfie uth, M	ngine ical • F ld Ave innesot	ering & Testing Environmental • Materials Engineering nue a 55802				BOF	RIN	G N	UMBEF	PAGE	- 21-2 1 OF 1	
CLIEI	NT _Cit	y of Dul	uth	PROJECT NAME Wheeler Field Tennis Court									
PROJ	ECT N	UMBER		PROJEC	T LOCAT	ION _	Duluth, MN						
DATE	STAR	TED _2	/23/21 COMPLETED _2/23/21	GROUNE	ELEVA				HOLE	SIZE _ 4"			
DRIL	ING C	ONTRA	CTOR _ EPC Engineering & Testing	GROUND WATER LEVELS:									
DRIL	ING M	ETHOD	CME 55 Rubber Track	AT TIME OF DRILLING									
LOGO	SED BY	BEM		_ AT	END OF	DRILL	.ING						
NOTE	:s			_ AF	TER DRI			1					
ELEVATION (ft)	NOLLAY (t) (t) 0.0 MATERIAL DESCRIPTION				SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Pocket Penetrometer	DRY UNIT WT. (pcf)	▲ SPT 20 4 PL 20 4 □ FINES 20 4	N VALU 0 60 MC 0 60 CONTEN	JE ▲ <u>80</u> LL 1 80 NT (%) □ 80	
	0.0		5.5" Bituminous Pavement										
	L .	2.5.4	5" Concrete										
			5 Concrete										
			(SM) (FILL) SILTY SAND w/ GRAVEL, brown, satur	rated									
	L .				мс	100	35-83			9.3			
					Π					9.3			
			NO RECOVERY					-					
	2.5				M								
		-			MC 2	0	35-13-9-8 (22)						
	- ·		NO RECOVERY - Clay measured in hole					-					
100		_			MC 3	0	8-12						
ם פו	5.0		Bottom of hole at 5.0 feet.										
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CLIE	NT Cit	y of Dul	uth	PROJECT NAME Wheeler Field Tennis Court								
PROJ	ECT N	JMBER	21G1494	PROJECT LOCATION								
DATE	STAR	TED _2	/23/21 COMPLETED 2/23/21	GROUND ELEVATION HOLE SIZE _4"								
DRILI	ING C	ONTRA	CTOR _ EPC Engineering & Testing	GROUND	WATER	LEVE	LS:					
DRILI	ING M	ethod	CME 55 Rubber Track	AT	TIME OF		LING					
LOGO	GED B	BEM		AT END OF DRILLING								
NOTE	S			AF	TER DRI	LLING						
ELEVATION (ft)	NOLE (J) HLAD 0.0 NATERIAL DESCRIPTION				SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Pocket Penetrometer	DRY UNIT WT. (pcf)	▲ SPT 20 4 PL 20 4 □ FINES 0 20 4	N VALUI	E▲ 80 LL
	0.0		5.5" Bituminous Pavement							20 4		
	L .		5.5" Concrete									
	- ·		(SP-SM) (FILL) SAND w/ SILT and GRAVEL, brown,	moist						9.4		
			(SM) (FILL) SANDY SILT some clay trace organics		MC 1	100	28-15-7-5 (22)			▲		
	2.5						()			26.4		
			(CH) FAT CLAY w/ SAND, brown to reddish brown, n	noist	SS 2	100	2-4-7-7 (11)	-		24:9		
	5.0		Bottom of hole at 5.0 feet.					1				
סבטרבטו מידרטוס בוס סטרט איזובגבה זיברט ובואאט טסטא נסרס סוא וס בי												

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CLIEN	T Cit	y of Dul	uth	PROJECT NAME Wheeler Field Tennis Court										
PROJ		JMBER	21G1494	PROJECT LOCATION Duluth, MN										
DATE	STAR	TED _2	Z23/21 COMPLETED 2/23/21 2722 522 522 522	_ GROUND ELEVATION HOLE SIZE _4"										
			CTOR EPC Engineering & Testing	GROUND WATER LEVELS: AT TIME OF DRILLING										
LOGG	SED BY	BEM	CHECKED BY LT	ATI		DRILL	ING							
NOTE	s			AFT	ER DRI	LLING								
ELEVATION (ft)	NOLE H OH OH H H OH SO MATERIAL DESCRIPTI 0.0				SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Pocket Penetrometer	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲ 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80				
	0.0		5.5" Bituminous Pavement											
		4 4 4 4 4 4 4 4 4 4 4 4	6" Concrete											
			(SM) (FILL) SILTY SAND w/ GRAVEL, brown, wet		мс	100	59-54		'	9.0 ●				
			(SM) (FILL) SILTY SAND, brown, moist		1			-		18.0				
	2.5				SS 2	100	12-8-7 (15)			21.6				
			(ML) (FILL) SANDY SILT, brown, moist		\backslash									
			(CH) FAT CLAY, trace sand, moist, reddish brown		SS 3	100	7-10-12 (22)	-		250				
	5.0		Bottom of hole at 5.0 feet.											

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CLIEN	NT Cit	y of Dulu	uth	PROJEC	T NAME	Whee	eler Field Te	nnis C	Court			
PROJ		JMBER	21G1494	PROJECT LOCATION Duluth, MN								
DATE	STAR	TED _2/	23/21 COMPLETED 2/23/21	GROUNE	ELEVA				HOLE	SIZE 4"		
DRILL		ONTRA	CTOR _ EPC Engineering & Testing	GROUND WATER LEVELS:								
DRILL	ING M	ethod	CME 55 Rubber Track	AT TIME OF DRILLING								
LOGO	GED BY	BEM		AT END OF DRILLING								
NOTE	s			AF	TER DRI	LLING						
ELEVATION (ft)	NOLUCIE (1) NOLUCIE (1) NOLUC				SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Pocket Penetrometer	DRY UNIT WT. (pcf)	▲ SPT 20 4 PL 20 4 □ FINES (20 4	N VALUE \land 0 60 80 MC LL 0 60 80 CONTENT (% 0 60 80	0 0 5) □
	0.0		6" Bituminous Pavement							20 4		0
	Ļ -											
			6" Cocnrete									
			(SM) (FILL) SILTY SAND w/ GRAVEL brown moist					-				
					мс	100	48-62-12- 11			8.4 •	•	
			wet	ioist to	ss	100	3-5-5-7	-		25.7		
1700			(CH) FAT CLAY, some to with sand, reddish brown,	moist	2	100	(10)			31.5 •		
	0.0		Bottom of hole at 5.0 feet.					1				

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CLIEN	IT _City	y of Dul	uth	PROJECT NAME Wheeler Field Tennis Court									
PROJ	ECT NI	JMBER	21G1494	_ PROJECT LOCATION _ Duluth, MN									
DATE	STAR	TED _2	/23/21 COMPLETED _2/23/21	GROUND ELEVATION HOLE SIZE _4"									
			CIOR EPC Engineering & Testing	_ GROUND WATER LEVELS:									
							LING						
NOTE	s		0.120.22.2.1	AT END OF DRILLING AFTER DRILLING									
ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION		SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Pocket Penetrometer	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲ 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80			
	0.0		5.5" Bituminous Pavement										
		A 4.1	5.5" Concrete										
			(SP-SM) SAND w/ SILT and GRAVEL, brown, moist							8.7			
			(CH) (FILL) CLAY w/ SILT and SAND, trace gravel, tr organics, brown, moist	ace	MC 1	100	50-46-21- 12 (67)	-		24:2			
			(SM) (FILL) SILTY SAND, brown, moist		SS 2	100	4-5-6-6 (11)			23.8			
			(SC-SM) (FILL) SILTY CLAYEY SAND, some organio wet (CH) FAT CLAY w/ SAND, brown, moist	cs, brown,	SS 3	100	3-3-4-4 (7)	-		20.5			
					\mathbb{N}					27.6			
			Bottom of hole at 7.0 feet.										

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CLIEN	IT Cit	y of Du	luth	PROJEC	NAME	Whee	eler Field Te	nnis C	ourt				
PROJ	ECT N	JMBEF	R_21G1494	PROJEC			Duluth, MN						
DATE	STAR	TED _2	2/23/21 COMPLETED 2/23/21	GROUND	ELEVA				HOLE	SIZE _4	"		
DRILL	ING C	ONTRA	CTOR _EPC Engineering & Testing	GROUND	WATER	RLEVE	LS:						
DRILL	ING M		CME 55 Rubber Track	AT			LING						
LOGG	ied By	<u>BEM</u>		AT			.ING						
NOTE	s			AF	I ER DRI			1		1			
ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION		SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Pocket Penetrometer	DRY UNIT WT. (pcf)	▲ 20 Pl 1 20 □ FIN	SPT N VA 40 - MC 40 ES CONT	LUE ▲ <u> 30 8</u> <u> LL</u> <u> 30 8</u> ENT (%	0 0 6) □
	0.0		4" Bituminous Pavement							20	40		0
	L .	P. 6. 4	5.5" Concrete										
			(SM) (FILL) SILTY SAND w/ GRAVEL, brown, wet					-					
					MC 1	100	22-58-54- 29 (112)			11.4			>>
			(CL) (FILL) SANDY CLAY w/ GRAVEL, brown, wet							3	4.6 ●		
			(CL) (FILL) CLAY w/ SAND, brown, moist		55		4-3-3-3			28.2			
			(CH) FAT CLAY, some sand, brown, moist		2	100	(6)			29.3	3		
			Bottom of hole at 5.0 feet.										

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CLIEN	IT Cit	y of Dul	uth	PROJECT NAME Wheeler Field Tennis Court									
PROJ	ECT N	JMBER		PROJECT LOCATION _Duluth, MN									
DATE	STAR	TED _2	COMPLETED 2/23/21	_ GROUND ELEVATION HOLE SIZE _4"									
			CIOR EPC Engineering & Testing	GROUND									
LOGG	ED BY	BEM		AT	END OF	DRILL	.ING						
NOTE	s			AF	TER DRII	LING							
ELEVATION (ft)	NOTES					RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	Pocket Penetrometer	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲ 20 40 60 80 PL MC LL 20 40 60 80 □ FINES CONTENT (%) □ 20 40 60 80			
	0.0		4.5" Bituminous Pavement										
		A. 6. 4 4. 4	5.5" Concrete										
			(SM) (FILL) SILTY SAND w/ GRAVEL, brown, wet							10.1			
			(CL) (FILL) SANDY CLAY w/ GRAVEL, brown, wet		MC 1	100	26-18-15-7 (33)			22.9			
	2.5		(SM) (FILL) SILTY SAND, trace gravel, brown, moist							18.2			
			(CH) FAT CLAY w/ SAND, brown, moist		SS 2	100	4-4-4-6 (8)			27.4			
			Bottom of hole at 5.0 feet.										

EPC Engineering & Testing

Geotechnical • Environmental • Materials Engineering 539 Garfield Avenue

Duluth, Minnesota 55802

21G COFD WHEELER FIELD TENNIS COURT.GPJ GINT STD US LAB.GDT 3/5/21

GRAIN SIZE WITH SPEC BANDS

GRAIN SIZE DISTRIBUTION

PROJECT NAME _ Wheeler Field Tennis Court

