

Kaniewski, Adam B

From: Mike Schultz <mschultz@cgcinc.net>
Sent: Tuesday, August 30, 2022 4:59 PM
To: Kaniewski, Adam B
Cc: 'Eric Fair'
Subject: RE: Penn Park Soil Borings C22051-12
Attachments: 22051-12.pdf; Appendix.pdf

Caution: This email was sent from an external source. Avoid unknown links and attachments.

At your request, CGC has completed the requested two soil borings where the basketball and tennis courts at Penn Park are being considered for reconstruction. The attached Soil Boring Location Map presents the location of the two borings, with B-1 situated within the northern edge of the existing court pavement and B-2 situated outside and east of the existing courts. The soil borings were done by Soil Essentials (under subcontract to CGC) on August 23, 2022. Note the boring locations were selected by City of Madison personnel and they were staked in the field by CGC staff. The soil profile for B-1 taken within the limits of the existing court revealed 2.5-in. of asphalt pavement underlain by 8.5-in. of base course, which was followed by almost 2 ft of loose fill involving a mix of silty sand and clay. The native soils below the fill were loose to medium dense sands with trace to little silt. The soil profile is similar for B-2 but in this case for the boring drilled outside of the court limits the area was mantled by 4-in. of topsoil over about 2 ft of medium dense sand fill, followed again by loose to medium dense native sands. Those sands were observed to extend to the boring termination depths of 10 ft. No groundwater was observed within the drilling depths during or shortly after drilling. Note that water levels can vary depending on seasons, precipitation and other factors. Additional information regarding the soil and groundwater conditions is presented on the attached soil boring logs.

In our opinion the fill soils in general appear satisfactory for pavement reconstruction. We envision that the first step during construction would be to strip the existing topsoil and pavement. A proof-roll using a loaded quad-axle dump truck should follow. If excessive rutting and /or deflection is noted those areas should be removed and replaced with granular fill compacted to a minimum of 95% of the modified Proctor dry density (ASTM D-1557). As an alternative 3-in. dense graded base (DGB) can be worked into the subgrade until deflection ceases and stabilization occurs. If grades are to be raised, we recommend that granular fill be used that is densified to at least 95%. Assuming a firm subgrade is established, we recommend a design subgrade modulus of 100 pci be utilized. A typical pavement design would incorporate 3.5-in. of asphalt underlain by 8 to 10-in. of base course. Additional details can be provided upon request.

We trust this brief report addresses your present needs. Please contact CGC if we can be of further service or questions arise upon review of this transmittal. Information regarding limitations pertaining to opinions presented in this submittal is attached. Thank you.

Michael N. Schultz, P.E.
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Legend

● Denotes Boring Location

Notes

1. Soil borings performed by Soil Essentials in August 2022
2. Boring locations are approximate



Scale: Reduced

Date: 8/2022	CGC, Inc.
Job No. C22051-12	

Soil Boring Location Map
Penn Park Court Replacement
Madison, WI



LOG OF TEST BORING

Project Penn Park Court Replacement
 Location Madison, WI

Boring No. **B-1**
 Surface Elevation (ft) 892±
 Job No. C22051-12
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES					
No.	TYPE	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL	LOI
					0	X	2.5 in. Asphalt Pavement/8.5 in. Base Course				
1		14	M	9	9	X	FILL: Loose Dark Brown Silty Sand with Clay				
					10		Loose to Medium Dense, Light Brown Fine SAND, Trace to Little Silt (SP/SP-SM)				
2		16	M	12	12						
					15						
3		14	M	12	12						
					20						
4		15	M	10	10						
					25						
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					705						



LOG OF TEST BORING

Project Penn Park Court Replacement
 Location Madison, WI

Boring No. **B-2**
 Surface Elevation (ft) 890±
 Job No. C22051-12
 Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N		Depth (ft)	qu (qa) (tsf)	W	LL	PL
					0	FILL: 4 in. Dark Brown Sandy Topsoil Over 26 in. Dark Brown Sand with Silt and Gravel				
1		2	M	14	14					
					5	Loose to Medium Dense, Light Brown Fine SAND, Trace to Little Silt (SP/SP-SM)				
2		15	M	9	9					
					10	Trace Gravel and Scattered Thin Silt Seams Noted Near 9'				
3		16	M	10	10					
					15	End of Boring at 10 ft Backfilled with Bentonite Chips and Sod Plug				
4		15	M	10	10					

WATER LEVEL OBSERVATIONS

GENERAL NOTES

While Drilling NW Upon Completion of Drilling NW
 Time After Drilling _____
 Depth to Water _____
 Depth to Cave in _____ **8.3'**

Start 8/23/22 End 8/23/22
 Driller SE Chief CRJ Rig 7822DT
 Logger AR Editor ESF
 Drill Method 2.25" HSA; Autohammer

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.