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	DAT	E: _		5/15/	/18				Е	LEVATION:
F	PRC	JEC	CT:		S	Subs	urface	Investigation for the Proposed West R		Vall Improvements
			_		_			Exchange Street, Rochester,	NY	
				FOF	_					
E	OK		S 22 ASS	CAT	-	<u>:                                    </u>	, ,	Bergmann Associates	<b>5</b>	
0 –	SN	0/ 6	6/ 12	12/ 18	18/ 24	N	LITH	DESCRIPTION AND CLASSIFICATION	REC	COMMENTS
U	1	5						Moist, mixed brown (SANDY-SILT) topsoil 0.3	0.7'	Topsoil to 0.3 foot over soil fill
			18			25		with little very fine size sand, compact, with fine size roots		with wood to 6.0 feet over gravel fill with cobbles and
	$\vdash$			7				Soil fill with fibrous wood material (poor		occasional boulders to 12.0 feet
					7	-		recovery)	0.0'	over sand and gravel fill to
	2	7	9			-			0.0	refusal
			9	11		20				
					5	-	$\otimes \otimes$			
	3	6			-	-	$\times$		0.1'	
			5				$\bowtie$			
5 —				7		12				
					8			6.0		
	4	3						Wet, gray (GRAVEL) fill with 40 to 60%	0.3'	
			2					gravel with cobbles and occasional		
				4		] "		boulders, very fine to very coarse size sand, loose		
					4			cana, 10000	1511 915	
	5	6							0.1'	
			4			7	$\qquad \qquad $			
				3						
0 —					8				0.5'	Note: At 14 0' bent appear
	6	4						*	0.5	Note: At 14.0' bent spoon, pounded casing and bent
			8			19		-		casing with casing refusal at
				11	7	1				16.0' bgs. Move approximately
	7	2				1		Wet, brown, very gravelly (SILTY-SAND)	0.7'	10.0' away from the river (approximately 2.0' lower in
	-		2				$\times\!\!\times\!\!\times$	fill with 40 to 50% gravel and concrete,	MALLE.	elevation) and re-drill SB 1-A
				4		6	$\times \times \times$	very fine to medium size sand, little silt,		
		-20-			4			loose, becoming very dense below 14.5' bgs		
	8	9						bgs	1.0'	
22			15							
5 —				36		51				
		54			19		$\times \times \times$	16.0		
								Auger Refusal at 16.0' bgs		No Water at Completion
0 —	닊	GC	ED	BV.	D,	عاد ا	M Gr	amza, P.G.		PAGE 1 of 1
		~	$ \cup$	<b>U</b>   .		$\alpha \circ \cup 1$	VI. UIC	411124, 1.O.		

Hole Number: SB-1



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								Hole Number: SB-1A		
	TAC			5/15						LEVATION:
F	PRC	)JE(	CT:			Subs	urface	e Investigation for the Proposed West F		Vall Improvements
								Exchange Street, Rochester,	NY	
				FOI	- Actor					
ľ	3OF			CAT		: _		Bergmann Associates	S	
0 -	SN	0/ 6	6/ 12	12/ 18	18/ 24	N	LITH	DESCRIPTION AND CLASSIFICATION	REC	COMMENTS
						-		Advanced NW casing without sampling to 14.0' bgs		Below 14.0' - Sandy slack water sediment with some silt to 18.0 feet over water sorted and deposited sand and gravel with little to some silt to 19.4 feet over dolostone boulder to 22.4 feet over silty glacial drift to 25.0 feet over sandy glacial drift to 27.9 feet over dolostone bedrock to end of coring
5 -										
						-				
10 -										
15 —	9	4	2	2	1	4		Wet, gray (SILTY-SAND) with very fine size sand, some silt, loose to very loose, thinly bedded with fibrous wood material	0.5'	
	10	2	1	1	2	2			1.0'	
	11	16	50/5" RUN			>50		Wet, gray, very gravelly (SILTY-SAND) with 40 to 50% gravel, very fine size sand, little to some silt, very dense, stratified  See next sheet	0.4'	
20 –	LC	GG	ED	BY:	Da	ale I	M. Gr	amza, P.G.		PAGE 1 of 3



LOGGED BY: Dale M. Gramza, P.G.

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Hole Number: SB-1A DATE: ELEVATION: 5/15/18 Subsurface Investigation for the Proposed West River Wall Improvements PROJECT: Exchange Street, Rochester, NY PREPARED FOR: BORING LOCATION: Bergmann Associates 18/ LITH **DESCRIPTION AND CLASSIFICATION** REC COMMENTS Dolostone boulder RUN #1 ▼ Water Level at 21.5' bgs prior to Coring Extremely moist, brown, gravelly (SILT) with 15 to 25% gravel, little very fine size 2.0' 12 20 sand, very dense, with brittle consistence, massive soil structure to weakly thinly >100 50/5" bedded 2.0' Wet, brown (SILTY-SAND) with 5 to 10% 13 68 gravel, very fine size sand, little to some 50 silt, very dense, massive soil structure to >100 50/5" weakly thinly bedded 0.8' 14 32 50/2" >50 Dolostone bedrock, gray, very hard, very thin to medium bedded, 1" to 8" thick, RUN Core Data #2 occasional small vugs noticed from 27.9' to Length % RQD Interval (ft) 30.1 (ft) 19.4 to 22.4 3.0 1.3 43 0 30 27.9 to 32.4 76 4.5 96 32.4 to 37.0 4.6 4.6 100 78 37.0 to 41.0 3.8 4.0 RUN #3 RUN



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Hole Number: SB-1A DATE: 5/15/18 **ELEVATION:** Subsurface Investigation for the Proposed West River Wall Improvements PROJECT: Exchange Street, Rochester, NY PREPARED FOR: **BORING LOCATION:** Bergmann Associates N LITH DESCRIPTION AND CLASSIFICATION REC COMMENTS Dolostone bedrock, gray, very hard, very thin to medium bedded, 1" to 8" thick RUN #4 Dolostone bedrock, gray, very hard, very thin to medium bedded, 1" to 8" thick RUN #5 45 Core Data RQC Interval (ft) (ft) RUN 410 to 45.8 4.8 100 92 45.8 to 50.6 5.0 100 50.6 to 54.5 100 92 50 RUN #7 Coring Completed at 54.5' bgs 55 LOGGED BY: Dale M. Gramza, P.G. PAGE 3



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Hole Number: SB-4 DATE: 5/18/18 ELEVATION: Subsurface Investigation for the Proposed West River Wall Improvements PROJECT: Exchange Street, Rochester, NY PREPARED FOR: **BORING LOCATION:** Bergmann Associates LITH DESCRIPTION AND CLASSIFICATION REC COMMENTS Moist, dark gray (SILT) topsoil / fill with 1.0' Topsoil / fill to 0.4 foot over trace very fine size sand, loose, with fine sand and gravel fill with cobbles 5 size roots and occasional boulders to 6.0 5 Moist, dark gray to brown, very gravelly feet over silty soil fill with some (SILTY-SAND) fill with 40 to 50% gravel gravel to 10.0 feet over silty 0.8' 8 and slag with cobbles and occasional slack water sediment with trace boulders, very fine to coarse size sand, sand to 16.0 feet over water little silt, loose to compact sorted and deposited sand and gravel with little silt to 21.0 feet over silty glacial till to 26.3 feet 0.3 over dolostone bedrock to end of coring 7 4 0.8' 4 Extremely moist to wet, brown and dark gray, gravelly (SILT) fill with 20 to 40% 1 gravel with occasional cobbles and 10 boulders, trace very fine size sand, compact 0.8' 5 8 ▼ Water Level at 8.6' bgs on 11 5/21/18 in AM ▼ Water Level at 9.7' bgs at 10 1.0' WH Extremely moist, gray to brown (SILT) with end of day on 5/18/18 with HSA trace very fine size sand, compact to loose, at 16.0' 17 thinly bedded 16 WH - Sampler Penetration with weight of Rods and Hammer 1.0' 3 2

Wet, gray, very gravelly (SILTY-SAND)

stratified

with 40 to 50% gravel, very fine to medium

size sand, little silt, very dense to compact,

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25

1

18

10 5 2

27

15

2

33

10

10

PAGE 1

1.2'

1.3'

1.5'



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- History			XXXX			10110/201000		Hole Number: SB-4									
	AT		_	5/18									ION:				
P	RC	)JE	CT:			Subs	urface	Investigation for the Proposed We	est Riv	er W	/all	Imp	rove	men	ts		
			_					Exchange Street, Roches	ster, N	Y							
P	RE	PA	RED	FOI	₹: _												
В	OR	RINC	3 LO	CAT	ION	l:		Bergmann Assoc	iates								
	SN	0/ 6	6/ 12	12/ 18	18/ 24	N	LITH	DESCRIPTION AND CLASSIFICATION		REC			CON	/MENT	s		
	11	2	12	10	24		6.6.	Wet, gray, very gravelly (SILTY-SAND)		0.8'							
	12000		15					with 40 to 50% gravel, very fine to mediu	ım								
				42		57		size sand, little silt, very dense to comparations	ct, 21.0								
					50/4"		37	Moist, brown (SILT) with 5 to 15% gravel									
	12	22						trace very fine size sand, very dense with	n   1	0.8'							
			50/4"				•	brittle consistence, massive soil structure	9								
						>50											
	13	43				1				>1"							
-			50/4"				7.3										
5 —						>50											
							4.3		ľ								
		1					777	Deleaters hadrack and the land	26.3								
			RUN				/////	Dolostone bedrock, gray, very hard, very thin to medium bedded, 1" to 8" thick, sm									
				#1				vugs noticed between 26.0' to 28.8',									
								fracture zone between 28.8' and 29.2'									
							1,1,1						C-	re Data			
							7777			ł	Run			Length	D	%	RQD
o —							////				#	Inter	val (ft)	(ft)	(ft)		* %
							7777			ı	1	26.3	to 31.7	5.4	5.3	98	77
					10)					- 1	2	317	to 36.4	4.7	4.6	97	97
		1								ł	3		o 411	4.7	4.7	100	94
		X								1							
			RUN														
		and the same of		#2													
		- CO															
		CZ CZ															
		200															
5 —		SCHOOL STATE															
		-					745										
		_															
	-	X					/////										
	$\dashv$	CHARGES	RUN														
	$\dashv$	TOR HOLISIA		#3			/										
		on Section															
		Section Co.															
		TO SECOND			-												
		The Period															
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							CAILLY	Hole Number:	SB-4			,				
										E	LEVA	TION:				
	PRC	)JE	CT:		S	ubs	urface	Investigation for the F	roposed West	River V	Vall Ir	nprove	men	ts		
								Exchange Str	<u>eet, Rochester</u>	r, NY						
			RED													
	BOL			,	ION	:		Bergr	nann Associat	es						_
	SN	6	6/ 12	12/ 18	18/ 24	N	LITH	DESCRIPTION AND CLA		REC		COM	MENT	'S		
50		0/ 6 	RUN #3	#4	18/24	N		Description and class Dolostone bedrock, gray, thin to medium bedded, 1'  Coring Completed at 50.9'	very hard, very ' to 8" thick		4 41		re Data Length (R) 4.8 5.0	Rec	% Rec 100 100	RQD % 1000 800
60 -	LC	GG	ED	BY:	Da	ale N	M. Gra	amza, P.G.			P/	AGE 3		of		3



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Hole Number: SB-9

DATE: 5/22/18 ELEVATION: \_\_\_\_\_

PROJECT: Subsurface Investigation for the Proposed West River Wall Improvements

Exchange Street, Rochester, NY

## PREPARED FOR:

PREPARED FOR:	
BORING LOCATION:	Bergmann Associates

D	UK	CINC	LO	CAI	ION:			Bergmann Associates		
0	SN	0/ 6	6/ 12	12/ 18	18/ 24	N	LITH	DESCRIPTION AND CLASSIFICATION	REC	COMMENTS
0 —	1	3						ղ Moist, dark gray (SILTY-SAND) topsoil / fil <u>l օ</u> .յ	0.8'	Topsoil / fill to 0.3 foot over
			4				$\langle \langle \langle \langle \rangle \rangle$	with very fine size sand, little silt, loose,		sandy fill with some gravel and
				3		7		with fine size roots		cinders to 5.0 feet over silty soil
					2			Moist, dark gray, gravelly (SAND) fill with		fill with trace gravel to 8.0 feet
	2	2						20 to 40% gravel and cinders, loose to compact	0.2'	over silty slack water sediment with trace to little sand to 14.8
	- 1		3					Compact		feet over dolostone bedrock to
			-	2		5				end of Coring
					3		$\times$		0.8'	
	3	6	7000						0.6	
5 —			7			14		5.0		
			14	7			$\times\!\times\!\times$	Extremely moist, faintly mottled, brown		
					5			(SILT) fill with 5 to 15% gravel, compact to loose		l
	4	2						loose	0.7'	
			2				$\times\!\!\times\!\!\times$			
				2		4				
					1			8.0		
	5	WH					VVV	Wet, gray to olive gray (SILT) with trace to	1.5'	WH - Sampler Penetration with
			1	,				little very fine size sand, very loose, thinly		weight of Rods and Hammer
			/	12		1		bedded		
					1					▼ Water Level at 9.5' bgs prior
10 —	6	WH			•				2.0'	to Coring
	0	VVII	WH				100/1			
			VVII			<3	6.0.46			
	_			2						
					1				1.7'	
	7	1					3. 3.0		1.7	
			1		2	2				
				1		_	- 1 S			
					1					
	8	50/3"							0.2'	
15 -		^				\F0	7.77	Delectors bedrook grow your bond thin to		
15		1	RUN			>50		Dolostone bedrock, gray, very hard, thin to medium bedded, 1" to 8" thick		
				#1				medium bedded, i to o tillok		Core Data
							<del>/ / / / /</del>			Run   Interval (ft)   Length   Rec   %   RQD
	1									
ł	1	+								1 14.8 to 19.7 4.9 4.9 100 69
	$\dashv$	-			7					
	+	+			7)					
ŀ	$\dashv$	-								
	$\dashv$	+								
	$\dashv$	1								
20 4	ᆜ	<b>A</b>	-	DV			KA A	D.O.		
	LÜ	GGG	Ŀυ	RA:	Da	ile l	vi. Gra	amza, P.G.		PAGE 1 of <u>2</u>



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		RED						2						_
	0/	6/	12/	18/			Bergmann Associate	S						
SN	6	12	18	24	N	LITH	Description and classification  Dolostone bedrock, gray, very hard, thin to	REC		(	COMMEN	TS ——		
	-	RUN					medium bedded, 1" to 8" thick							
		NON	#2											
	1													
	- Committee													
	1													
	X													
	T	RUN				7,77								
	-		#3											
	-					////			6		2 2			
	1					7,7,7			-	<u> </u>	Core Data			В
	1								Run #	Interval (f	t) Lengti	h Rec (ft)	% Rec	
	-								2	19.7 to 2	4.2 4.5	4.2	93	-
	-								3	24.2 to 2	2000000	4.8	100	t
	100								4	29.0 to 3		4.6	98	╁
	Carrie Cont.				g					1		_		┺
	X								5	33.7 to 3	8.7 5.0	5.0	100	
	TUSB CONT.	RUN			8									
	- Co	KON	#4		9	1,77								
	- Carrier		#4		8									
-	TO MADE				8									
	ADM SHARE													
	-				£									
	- 1													
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	1													
	X													
	Spartition of the same of the	RUN												
	articles articles		#5											
	allectores.													
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	MEDINESIA													
	Charles				-									
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								Hole Number:A-5		-
	DAT			5/22						LEVATION:
F	PRC	)JE(	CT:		5	Subs	urface	Investigation for the Proposed West I	River V	Vall Improvements
			Towns a second		185			Exchange Street, Rochester,	NY	
				FOI	_					
Е	3OF	RING	3 LC	CAT	ION	l:		Bergmann Associate	S	
0	SN	0/ 6	6/ 12	12/ 18	18/ 24	N	LITH	DESCRIPTION AND CLASSIFICATION	REC	COMMENTS
	2	5	5	3	6	10		Moist, dark gray (SILT) topsoil / fill with trace very fine size sand, loose, with fine size roots  Moist, brown, gravelly (SILTY-SAND) fill with 15 to 25% gravel, very fine size sand, 2.0 loose  Moist, brown (CLAYEY-SILT) fill with little clay, firm  Moist, dark gray, gravelly (SAND) fill with 20 to 40% gravel and cinders, very fine to	1.3'	Topsoil / fill to 0.4 foot over sandy fill with little gravel to 2. feet over silty soil fill with little clay to 3.0 feet over sandy fill with some gravel and cinders 6.0 feet over silty soil fill with trace bricks to 7.5 feet over cinder and ash fill to 9.5 feet over sandy slack water sediment with some silt to 12.
5 —	4	2	4	4	3	8		Extremely moist, brown (SILT) fill with 5 to 15% red brick fragments, trace very fine size sand	1.5'	feet over silty slack water sediment with trace sand to 16.0 feet over water sorted an deposited sand with little silt to 18.0 feet over gravelly glacial drift to 20.7 feet over doloston bedrock to end of coring
	5	2	1	0	3	1		Cinder and ash fill	1.3'	
10 —	6	WH	WH	WH	1			Wet, olive gray (SILTY-SAND) with very fine size sand, some silt, very loose, thinly bedded	1.5'	<ul> <li>Water Level at 9.5' bgs prior to Coring</li> <li>WH - Sampler Penetration wit weight of Rods and Hammer</li> </ul>
	7	WH	WH	WH	1			Wet, faintly mottled, olive brown to gray (SILT) with trace very fine size sand, very loose, thinly bedded	2.0'	
15 —	8	WH	WH	2	1				2.0'	
	9	WH	1	6		7		Wet, gray (SILTY-SAND) with very fine size sand, little silt, very loose, thinly bedded	1.8'	
	10	12	52	50/4"	47	>102		Wet, brown, very gravelly (SILTY-SAND) with 40 to 50% gravel, very fine to coarse size sand, little silt, very dense, massive soil structure to weakly stratified	1.0'	
20 —	LO	GG	ED	BY:	Da	ale I	M. Gr	amza, P.G.		PAGE 1 of 3



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		63/m12 57: 540						Hole Number: A-5	United Property Section 2019						
											VATION:				
F	PRC	)JE(	CT:		S	Subs	urface	Investigation for the Proposed West	River V	Vall	Improve	men	ts		
								Exchange Street, Rochester,							
F	PRE	PAF	RED	FOI	₹:										
E	3OR	RING	LO	CAT	ION	:		Bergmann Associate	S						
	SN	0/	6/	12/	18/	N	LITH	DESCRIPTION AND CLASSIFICATION	REC		CON	MENT	S		
	11	6 36	12	18	24		919110	See previous sheet	0.7'	$\vdash$		IIVIC I VI			
		<b>A</b>	50/1"					20.7	Victorial Co.						
		7 4	RUN			>50		Dolostone bedrock, gray, very hard, very thin to medium bedded, 1" to 8" thick with							
		$\top$		#1			////	occasional small crystal filled vugs from							
								20.7' to 31.0', encountered small vertical							
								fracture between 26.3' to 26.5'							
		$\perp$					////								
25 -															
		X													
		+	RUN	#0							Co	re Data			
	$\vdash$	+		#2						Run	Interval (ft)	Length		%	RQD
	H	-					/			#	WY 100 W 100	(ft)	(ft)		100-500
		-								1	20.7 to 25.4	4.7	4.6	98	70
		1								2	25.4 to 30.4	5.0	4.8	96	76
		-								3	30.4 to 35.2	4.8	4.7	98	93
						1				4	35.2 to 40.2	5.0	5.0	100	90
30 -							////								
30		V	310 311-												
		1	RUN												
		_		#3											
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		_					////								
		- Annual Control													
		-													
35 —		X													
		T	RUN				7777								
		Contract of the Contract of th		#4											
		CHICAGORIA													
		WALKE STATE													
		and department													
		The state of the s													
40 —	닞		FD	DV		1- 1		D.C.			D				
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DATE:	nts
PROJECT: Subsurface Investigation for the Proposed West River Wall Improveme Exchange Street, Rochester, NY  PREPARED FOR:  BORING LOCATION: Bergmann Associates  SN 0/6 1/2 1/18 2/4 N LITH DESCRIPTION AND CLASSIFICATION REC COMMENT DOISONNE DOISONNE HAID CLASSIFICATION REC COMMENT THE PROPOSED REC COMMENT DOISONNE HAID CLASSIFICATION REC COMMENT THE PROPOSED REC COMMENT DOISONNE HAID CLASSIFICATION REC COMMENT THE PROPOSED REC COMMENT DOISONNE HAID CLASSIFICATION REC COMMENT THE PROPOSED REC	nts
Exchange Street, Rochester, NY  PREPARED FOR:  BORING LOCATION:  SN 0/ 6/ 12 18/ 24 N LITH DESCRIPTION AND CLASSIFICATION REC COMMENT  PRUN #4 Dolostone bedrock, gray, very hard, very thin to medium bedded, 1" to 8" thick	
BORING LOCATION:  SN 0/ 6/ 12/ 18 24 N LITH DESCRIPTION AND CLASSIFICATION REC COMMENT  RUN #4 Dolostone bedrock, gray, very hard, very thin to medium bedded, 1" to 8" thick	ITS
SN 6/ 6/ 12/ 18 24 N LITH DESCRIPTION AND CLASSIFICATION REC COMMENT DOIOStone bedrock, gray, very hard, very thin to medium bedded, 1" to 8" thick	ITS
RUN #4 Dolostone bedrock, gray, very hard, very thin to medium bedded, 1" to 8" thick	ITS
RUN #4 RUN #5  Dolostone bedrock, gray, very hard, very thin to medium bedded, 1" to 8" thick	
RUN #5 thin to medium bedded, 1" to 8" thick	
Core Dat	
Run   Interval (ft)   Leng	h Rec % RQD (ft) Rec %
5 40.2 to 44.0 3.8	3.5 92 89
5 RUN 5 44.0 to 45.7 1.7	1.7 100 94
45.7	
Coring Completed at 45.7' bgs	
LOGGED BY: Dale M. Gramza, P.G. PAGE 3	of 3



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HOLE NUMBER:

SB-7

DATE: **ELEVATION:** 5/22/18 PROJECT: Subsurface Investigation for the Proposed West River Wall Improvements Exchange Street, Rochester, NY PREPARED FOR: BORING LOCATION: Bergmann Associates 6/ 12/ 18/ MONITORING LITH DESCRIPTION AND CLASSIFICATION REC REMARKS COMMENTS WELL 1.7' 8" Flush Moist, dark brown (SILT) Topsoil to 0.4 foot over topsoil with trace very fine mount sand and gravel fill to 4.0 8 size sand, loose, with fine Road box feet over sand and gravel 12 size roots fill with trace silt to 8.0 Encased 19 Moist, light grayish brown, feet over silty soil fill with in 1.3' 2 13 very gravelly (SILTY-SAND) trace gravel to 10.5 feet Concrete fill with 40 to 50% gravel, over silty slack water 17 Bentonite sediment with trace to very fine to medium size Seal sand, compact little sand to refusal 8 0.8' 3 9 Moist, gray to dark gray, very gravelly (SILTY-SAND) 17 2" PVC 24 fill with 40 to 50% gravel 7 Riser and cinders, very fine to 3 Pipe very coarse size sand, trace 0.3 2 silt, compact to loose #0 Size 3 Sand 1 1.3' Wet, dark gray to gray 2" 10-Slot (SILT) fill with 5 to 15% 1 PVC 3 gravel with occasional SCreen cobbles, trace very fine size 50/3 10 2.0' 6 38

Wet, olive gray (SILT) with 8 11 trace to little very fine size sand, compact, thinly 3 bedded 0.5 7 1 2 1 1 0.1' Water Level at 13.9' 8 WH bgs at Completion WH 15 <3 50/2 Auger Refusal at 15.4' bgs WH - Sampler Penetration with weight of Rods and Hammer

LOGGED BY: Dale M. Gramza, P.G.

PAGE 1 of 1



5/25/18

3553 Crittenden Road Alden, NY 14004 (716) 937-6527

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ELEVATION: \_\_\_\_\_

PROJECT:

DATE:

Subsurface Investigation for the Proposed West River Wall Improvements

Exchange Street, Rochester, NY

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	FOD
PREPARED	H(JH)
	I OIV.

BORING LOCATION: Bergmann Associates

1
Sill
Sol3   Sol   Sol   Wely fine size sand, loose   Moist, mixed brown and dark gray, gravelly (SANDY-SILT) fill with 15 to   Sol   So
Moist, gray, very gravelly (SILTY-SAND) fill with 40 to 50% gravel and cornete, sand very fine to coarse size sand, very dense sand, very dense sand, very dense sand, very dense sand, sose to very lose, thirthy bedded with occasional (CLAYEY-SILT) layers  Moist, gray, very gravelly (SILTY-SAND) fill with 40 to 50% gravel and cornete, very fine to coarse size sand, very dense sand, loose to title very fine size sand, loose to title very fine size sand, loose to title very fine size sand, loose to yery loose, thirthy bedded with occasional (CLAYEY-SILT) layers  Moist, gray, very gravelly (SILTY-SAND) fill with 40 to 50% gravel and concrete, very fine to coarse size sand, very dense sand, loose to yery fine size sand, loose to yery loose, thirthy bedded with occasional (CLAYEY-SILT) layers  Moist, gray, very gravelly (SILTY-SAND) fill with 40 to 50% gravel and concrete, very fine to coarse size sand, very dense sand, loose to yery fine size sand, loose to yery fine size sand, loose to yery loose, thirthy bedded with occasional (CLAYEY-SILT) layers  Moist, gray, very gravelly (SILTY-SAND) fill with 40 to 50% gravel and concrete, yet of the sand to 20.0 to yer sand agravel fill with concrete cement // Bentonite Grout refused a sand yet of y
2   4
2   4
25% gravel and asphalt, loose to compact  25% gravel and asphalt, loose to compact  200
10
3   6   3   3   6   4   4   6   6   7   7   5   5   8   8   9   10   6   3   3   5   7   1   2   2   3   3   7   1   2   2   4   8   WH
10
10
Moist, gray, very gravelly   Seal
Moist, gray, very gravelly   Solar   Solar
A   16
10
Sol3
Moist, gray, very gravelly (SILTY-SAND) fill with 40 to 50% gravel and concrete, very fine to coarse size sand, very dense 9.5  Wet, brown to olive gray (SILT) with trace to little very fine size sand, loose to very loose, thinly bedded with occasional (CLAYEY-SILT) layers  15  WH - Sampler Penetration with weight Rods and Hammel
(SILTY-SAND) fill with 40 to 50% gravel and concrete, very fine to coarse size sand, very dense sand, very dense (SILT) with trace to little very fine size sand, loose to very loose, thinly bedded with occasional (CLAYEY-SILT) layers  15 WH  16 3
5 8
very fine to coarse size sand, very dense  yet sand, very dense  sand  Wet, brown to olive gray (SILT) with trace to little very fine size sand, loose to very loose, thinly bedded with occasional (CLAYEY-SILT) layers  1.3'  1.3'  2" 10-Slot PVC SCreen  O.7'  2.0'  WH - Sampler Penetration with weigh Rods and Hammer
10
Wet, brown to olive gray (SILT) with trace to little very fine size sand, loose to very loose, thinly bedded with occasional (CLAYEY- SILT) layers  WH - Sampler Penetration with weigh Rods and Hammer  1.8'  Wet, brown to olive gray (SILT) with trace to little very fine size sand, loose to very loose, thinly bedded with occasional (CLAYEY- SILT) layers  WH - Sampler Penetration with weigh Rods and Hammer
(SILT) with trace to little very fine size sand, loose to very loose, thinly bedded with occasional (CLAYEY-SILT) layers  (SILT) with trace to little very fine size sand, loose to very loose, thinly bedded with occasional (CLAYEY-SILT) layers  (SILT) with trace to little very fine size sand, loose to very loose, thinly bedded with occasional (CLAYEY-SILT) layers  (O.7' WH - Sampler Penetration with weigh Rods and Hammer Penetration with Weight Rods and Hammer Penetration with We
very loose, thinly bedded with occasional (CLAYEY-SILT) layers  2
with occasional (CLAYEY-SILT) layers  0.7'    1
1
WH - Sampler Penetration with weigh Rods and Hammel
2.0' WH - Sampler Penetration with weight Rods and Hammer  1.8'  1.8'
WH - Sampler Penetration with weight Rods and Hammer 1.8'
8 WH
8 WH
Penetration with weight Rods and Hammer
15
1.8'
9 1 1.8'
20.0
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www.natureswayenvironmental.com A-6 / SB-18 HOLE NUMBER: DATE: ELEVATION: 5/25/18 PROJECT: Subsurface Investigation for the Proposed West River Wall Improvements Exchange Street, Rochester, NY

PREPARED FOR: **BORING LOCATION:** Bergmann Associates

					HON	•	Bergma				
SN		6/ 12	12/ 18	18/ 24	N	LITH	DESCRIPTION AND CLASSIFICATION	REC	MONITORING WELL	REMARKS	COMMENTS
11	50/				>50		Wet, brown, gravelly (SILTY-SAND) with 15 to 25% gravel, very fine size sand, little silt, very dense, massive soil structure Auger Refusal at 20.5' bgs	0.2'	20.5	2" 10-Slot PVC SCreen #0 Size Sand	No Water at Completion
5 —											
0											
							Crowns D.C		DAGE	2 1	

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HOLE NUMBER:

DATE: 5/29/18 **ELEVATION:** PROJECT: Subsurface Investigation for the Proposed West River Wall Improvements

	Exchange Street, Rochester, NY											
F	PREPARED FOR:											
	BORING LOCATION: Bergmann Associates											
	SN	0/ 6	6/ 12	12/ 18	18/ 24	N	LITH	DESCRIPTION AND CLASSIFICATION	REC	MONITORING WELL	REMARKS	COMMENTS
0 —	1	4					XXX	Moist, brown (SILT) topsoil 0.2	1.2'	0.2	8" Flush	Topsoil to 0.2 foot over
			4			13		with trace to little very fine size sand, loose, with fine			mount	sandy fill with little gravel
				9		15		size roots		1.5	Road box Encased	and concrete to 3.5 feet over apparent silty soil fill
	and the second				12			Moist, brown, gravelly	. 0 41		in	with trace gravel to 7.0
	2	7						(SILTY-SAND) fill with 15 to 25% gravel and concrete,	>0.1'		Concrete	feet over silty slack water sediment with trace sand
		Ve 2	6	201		10		very fine size sand,			Bentonite	to 15.5 feet over water
	_			4	1			compact to loose 3.5			— Seal	sorted and deposited
	3	1			1			Wet, gray (SILT) fill with 5	0.7'		2" PVC	sand with little gravel to 16.8 feet over dolostone
	_	Ė	1					to 15% gravel, trace to little very fine size sand, very		4.5	Riser	bedrock to end of coring
5 —				1		2		loose			Pipe	
					1						#0 Size	
	4	1							0.8'	6.3	<b>\</b>	
			1			3		7.0			211 40 Clas	
				2		3		Wet, faintly mottled, brown,			2" 10-Slot — PVC	
					1			becoming gray below 14.0' (SILT) with trace very fine	4.01		SCreen	
	5	WR	_					size sand, very loose, thinly	1.0'			WR - Sampler Penetration with weight of
	_		1			2		bedded				Rods
		-		1	0							
10 —	6	wн			-				1.5'			WH - Sampler
	_	••••	2									Penetration with weight of
			100	1		3						Rods and Hammer
				58	2							
	7	1							1.7'			
			1			2						
4				1		2						
	79.5				1				4 51			
	8	WH	NEO NEO						1.5'			▼ Water Level at 14.0' bgs on 5/30/18 AM
15 —			1			1	200 Y 100		3		1	290 011 0/00/10 / ((1)
				0	10			Wet, dark gray, gravelly				
	9	50/			10			(SILTY-SAND) with 15 to	0.3'	16.3		
	_	3"						25% gravel, very fine to fine, 8				
			RUN			>50	<i></i>	size sand, some silt, compact, stratified				Note: Move 5.0' and
		+		#1				Dolostone bedrock, light				redrill without sampling to 16.3' and install well
								gray, very hard, very thin to				
								thinly bedded, 1" to 4" thick, with numerous solution				
								vugs				
20 —							<del>*************************************</del>					
	LC	)G	GE	בט	BY	: <u>Da</u>	ale M.	Gramza, P.G.		PAGE	<u>1</u> of	3



HOLE NUMBER:

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DATE: 5/29/18 **ELEVATION:** PROJECT: Subsurface Investigation for the Proposed West River Wall Improvements Exchange Street, Rochester, NY PREPARED FOR: **BORING LOCATION:** Bergmann Associates 0/ 6/ 12/ 18/ 6 12 18 24 MONITORING SN LITH DESCRIPTION AND CLASSIFICATION REMARKS REC COMMENTS WELL Dolostone bedrock, light gray, very hard, very thin to RUN #1 thinly bedded, 1" to 4" thick, with numerous solution vugs RUN #2 Dolostone bedrock, moist, Core Data gray, very hard, thin to medium bedded, 1" to 8" % RQD Length Rec 25 Interval (ft) thick, noticed gypsum (ft) Rec % nodule at 28.8' and thin 16.8 to 21.9 5.1 100 67 calcite/gypsum layer at 35.2 21.9 to 5.4 5.3 98 69 27.3 to 87 4.7 4.6 98 32.0 to 3.9 3.7 95 88 RUN 35.9 to 5.3 5.1 96 80 30 1" void at 30.0' - Lost all water returns RUN 35 RUN #5 LOGGED BY: Dale M. Gramza, P.G. PAGE 2 of



ENV	RONN	ENT	AL CO	NSUL	TANTS	& CONTR	ACTORS. IN	HOLE NUMBER:		'	www.natur	eswayenvironmental.com
Г	ΤΔι	- [		E/	20/1	0	***************************************	HOLE NUMBER:		A-7	ELEV	/ATION:
	DATE:5/29/18 ELEVATION: PROJECT: Subsurface Investigation for the Proposed West River Wall Improvements											
PROJECT: Subsurface Investigation for the Proposed West River Wall Improvements  Exchange Street, Rochester, NY												provements
PREPARED FOR:												
	BORING LOCATION: Bergmann Associates											
	SN	6	12	12/ 18	24	N	LITH	DESCRIPTION AND CLASSIFICATION	REC	WELL	REMARKS	COMMENTS
	_	1	RUN					Dolostone bedrock, moist, gray, very hard, thin to				
			#5					medium bedded, 1" to 8"				
	$\vdash$	-						thick				
								Coring Completed at 41.2' bgs				
								9				
<b>1</b> 5 —												
			16									
			30									
50 —												
			e;									
_												
5 —												
	$\vdash$											
		- 1	1	- 1				l l				

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