

Critical Information related to the bid request:

**City of Rochester, New York - Bid# C04070:
PORT OF ROCHESTER MARINA DEVELOPMENT PROJECT -
CONTRACT 2 UTILITY ROADWAY,
PEDESTRIAN SITE & MARINA IMP.
Title: PORT OF ROCHESTER MARINA DEVELOPMENT
PROJECT - CONTRACT 2**

Please understand this information was independently developed by William J. Brown. Mr. Brown relied upon the expertise of a Dr. Richard Young, State University of New York at Genesco to develop this analysis and understanding of the Marina Site Geology at the Genesee River. He also used the City of Rochester's Marina Draft Environmental Impact Statement and Appendices web references.

The administration of the City of Rochester has continually stated that they have done their homework in regards to the quality of the land for the anticipated project work including the opening of the marina and building of ten story buildings on the site.

I agree that there has been plenty of research in regards to the quality of the site created by outside contractors. The city must have paid both Lebella Contractors and Foundation Design well for their work and it appears to be thorough to a point.

Both Lebella and Foundation Design were answering the question, "Is this site appropriate for a FOUR story building?" They never offered an opinion to build a ten story building. It also appears they were not aware of the fact that the lake about 12,000 years ago was 400 feet lower than it is today. This means that the glacial activity during that time would have created a very deep canyon at the current mouth of the river. Much of the boring information referenced by the Hadley and Aldrich tests supports that concept.

That information alone should cause any engineer much concern about building anything on this site beyond a parking lot. There are three key documents available on the City of Rochester Marina Site pre-development website.

They are:

1. Appendix G_IV. A. Predevelopment Subsurface Conditions
2. Appendix I_IV. B. Remedial Investigation Report
3. Appendix W_IV. O. Geotechnical Site Characterization

These documents can be found at: <http://www.cityofrochester.gov/article.aspx?id=8589950280>

But with that said, there is a breakpoint where the full site could eventually collapse. See the remaining information.

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ROCHESTER MARINA DEVELOPMENT PROJECT -
CONTRACT 2 UTILITY ROADWAY,
PEDESTRIAN SITE & MARINA IMP.
Title: PORT OF ROCHESTER MARINA DEVELOPMENT
PROJECT - CONTRACT 2**

UTILITY ROADWAY, PEDESTRIAN SITE & MARINA IMP.
Specification Summary:

ONE (1) PRIME CONTRACTOR

estimate 8 Million

Bid Number: C04070 Issued: 12/15/2014

Pre-Bid Conference: TUESDAY, JANUARY 6, 2015 AT 1:00 PM ON SITE

Bid Open Date:

01/20/2015 Time: 2:00 PM

Bid responses are to be returned to the Office of the Purchasing Agent in a sealed envelope by the date and time indicate above, at which time and place all bids will be opened, read and recorded.

See below for Mailing Instructions *

Contract Type: Public Works

Supplementary Documents: The City of Rochester has adopted uniform Construction Contract Documents to be utilized for Public Works Projects within the City.

MWBE: This project contains a Minority/Woman Business Enterprise Utilization Goal

APR: None

Other Requirements:

The Federal Aid in Sport Fish Restoration Program is funding this construction thanks to your purchase of fishing equipment and motorboat fuels.

This document was prepared for the New York State Department of State with funds provided under Title II of the Environmental Protection Fund Act.

This project contains a Project Labor Agreement (PLA) which contains Minority and Female Participation Requirements.

Bid Deposit: 5 %

Performance Security Requirement: 100% Performance Bond & Labor & Material Payment Bond

Insurance Requirement: General Liability & Auto - \$1,000,000.00, Workers' Comp & Disability - Statutory Limits

Prevailing Wage Rate: yes

Spec. Deposit Charge: \$ 50

Mailing Fee: \$ 25

Addendum Issued: no

Other Information :

Planholders as of 12/31/2014

Sealand Contractors Corp Rush New York
Ramsey Constructors, Inc. Lakeville, NY
CRANE HOGAN SPENCERPORT NY
MARK CERRONE INC NIAGARA FALLS NY
STRUCTURMARINE MONTREAL CANADA
S.R.S. Inc. ROCH NY
LECHASE CONSTRUCTION SERVICES ROCH NY
TECHNOMARINE REPENTIGNY CANADA
CATCO ALDEN NY
HERBERT F DARLING WILLIAMSVILLE NY
M.L. CACCAMISE ELECTRIC CORP. ROCHESTER, NY
FLOTATION DOCKING SYSTEMS INC CEDARVILE MI
ECONOMY PAVING, CORTLAND, NY
WYCO MECHANICAL, BROCKPORT, NY
MADISON CONSTRUCTION, BUFFALO, NY
LUEDTKE ENGINEERING, FRANKFORT, MI



HA-107
Depth of Core
54 Ft
No Bedrock

B05-4
Depth of Boring
39 Ft
Auger Refusal

HA-103
Depth of Boring
14 Ft
Auger Refusal

HA-103A
Depth of Core
71 Ft
Bottom of Test

HA-122
Dept of Boring
42 Ft
Auger Refusal

HA-123
Depth of Boring
116 Ft
Bedrock (?)

**Based on my reading of the research provided by Lebella and Foundation Design
a reasonable description of the site would be:**

1. Due to the Iron Ore Plant, a large portion of the fill is a combination of Slag and other regulated waste materials.
2. Due to the location of the site to the river, the water table of the site is equal to that of the river.
(Currently the site water in the marina section appears to be equal to the river height).
3. Based on the boring test referenced on the map above, it is unclear as to at what depth bedrock exists.
The deepest bore (HA-123) is at least 116 feet with a second (HA-103a) at about 100 feet.
This would be at approximately 134 feet ABOVE sea level and 141 feet below the surface of Lake Avenue.
4. The river street surface is at approximately 250 feet above sea level.
5. From the research, the regulated waste materials can be found up to 10 feet below the surface which is at 250 feet above sea level.
Again based on the research it would be assumed that the material from 240 feet above sea level and down would be soft soils based on the boring tests.

Based on these conditions and the knowledge that the full site is inside the canyon walls of the river:

When the marina is opened to the river by removing the wall (10 to 20 feet deep) of waste materials (Slag, concrete and other waste materials from the old iron mill)

1. Almost immediately after removing that material from the Iron Ore mill to open the marina to the river **would not** the remaining soft soils begin to be washed away by the current from river flow.
2. Over a short time period this erosion **could accelerate** thus reducing support for the remaining site area. This would cause the remaining site to move towards the river (**collapse**). Since the bedrock is at 116 feet, there would be no support for the current overburden, correct?
3. It would also be likely that the support for the current terminal building be eroded as well? The lost of foundation support for that building could make it totally unusable.
4. The remainder of the site would not be fit for four ten story buildings since it would be sliding towards the river.

**Email Conversation
about the Site Information listed above:
(All on January 2nd, 2014)**

The issues raised by soft, unconsolidated alluvial (river) and lacustrine (lake) soils create problems that take many forms. These types of soils are inherently unstable, as well recognized by most competent engineering firms. Whether river erosion, excavation, foundation load strength, or traffic (vibration) stresses are the issues, such soils require careful analysis to be part of any large project. Simple lateral failure (even without river erosion) could be a predictable outcome in the case of significant marina excavations. This potential, coupled with the potential stresses induced by future activities (whether new construction or heavy traffic impacts) could result in unpredictable failures by various modes that are well document in the literature.

Dick

On 1/2/2015 1:38 PM, William J Brown wrote:

Dr. Young,

Next without getting into a lot of detail, you are concern about removing that wall between the river and the site for the marina, correct?
There is a good chance of erosion due to that opening to the river based on the boring information available?

With your responses so far and answers to these two questions, I can definitely work till you get back.

Bill Brown

The same applies (as previous reply) to these low density, low blow count soils, except the till, which is more compact. But the till generally begins below the critical zone of interest for typical foundations.

Dick

From: Richard Young
Sent: Friday, January 02, 2015 1:31 PM
To: Bill Brown - Home Account
Subject: Re: Marina Boring Tests

Bill:

The saturated, unconsolidated natural soils in these borings have relatively low "blow counts" (indicating soft and unconsolidated), which indicates soils that have potentially low bearing capacity and may be subject to liquifaction or similar types of failure if stressed beyond their capacities.

Dick

--

Richard A. Young, PhD
Department of Geological Sciences (Emeritus)
SUNY Geneseo
1 College Circle
Geneseo, NY 14454
585-245-5296 office
585-243-0087 home
young@geneseo.edu

Bill: Again, these soft, unconsolidated soils (under the fills) seem to me to be at the extreme end of the poor characteristics that one would hope to avoid in foundations for heavy structure, or in areas where long-term stability is important (river banks, artificial channels, etc.).

I am currently involved in a soils analysis and court case in another state where vibration methods (soil compaction of shallow foundation fills) used over unconsolidated glacial deposits for a secondary school addition resulted in the settlement and deformation of the basements and yards of adjacent houses. (Just one example of the problems that can be encountered when building on soft glacial and alluvial materials).

Dick

The remaining pages show:

1. A map of the site with a full list of boring test points and test pits.
2. Specific boring tests reports associated with the area where the marina opening to the river will be constructed

Summary:

Again, please remember most of the information for my research was developed based on the pre-development documents created for the City of Rochester Marina Site contractors.

It should also be noted that request for qualifications for the site development beyond the marina construction were originally sent to 100 developers/contractors. Only three responded and one of those three dropped out of the process very early and a second, Edgewater Resources is owned by the consultant who developed the original plan. To the best of my knowledge based on the Edgewater Resources site, although the owners have been involved with waterfront projects around the world, their company has never attempted a project like this inside a canyon of a river before.

I want to make clear that the marina is a separate project from the site development of a resort hotel and condos. But in either case, if the entrance between the river and the marina erodes, both projects will be in jeopardy.

Please understand that I will not benefit personally in any way whatsoever. This project is already very costly for the taxpayers of this city, this county and state. I have now spoken with several qualified consultants including Dr. Young about this site. It is they who warn about the loose soft soils hazard.

For your reference I have a Master of Science degree in system design (specifically information systems). Over the years I have developed the ability to analyze systems of all sorts and provide problem solving expertise.

I will leave it to you, if you want to engage your company in such an endeavor.

I offer my contact information if you have questions,

Respectfully submitted,

William J. Brown, 308 Southampton Drive, Rochester, NY 585-621-5825

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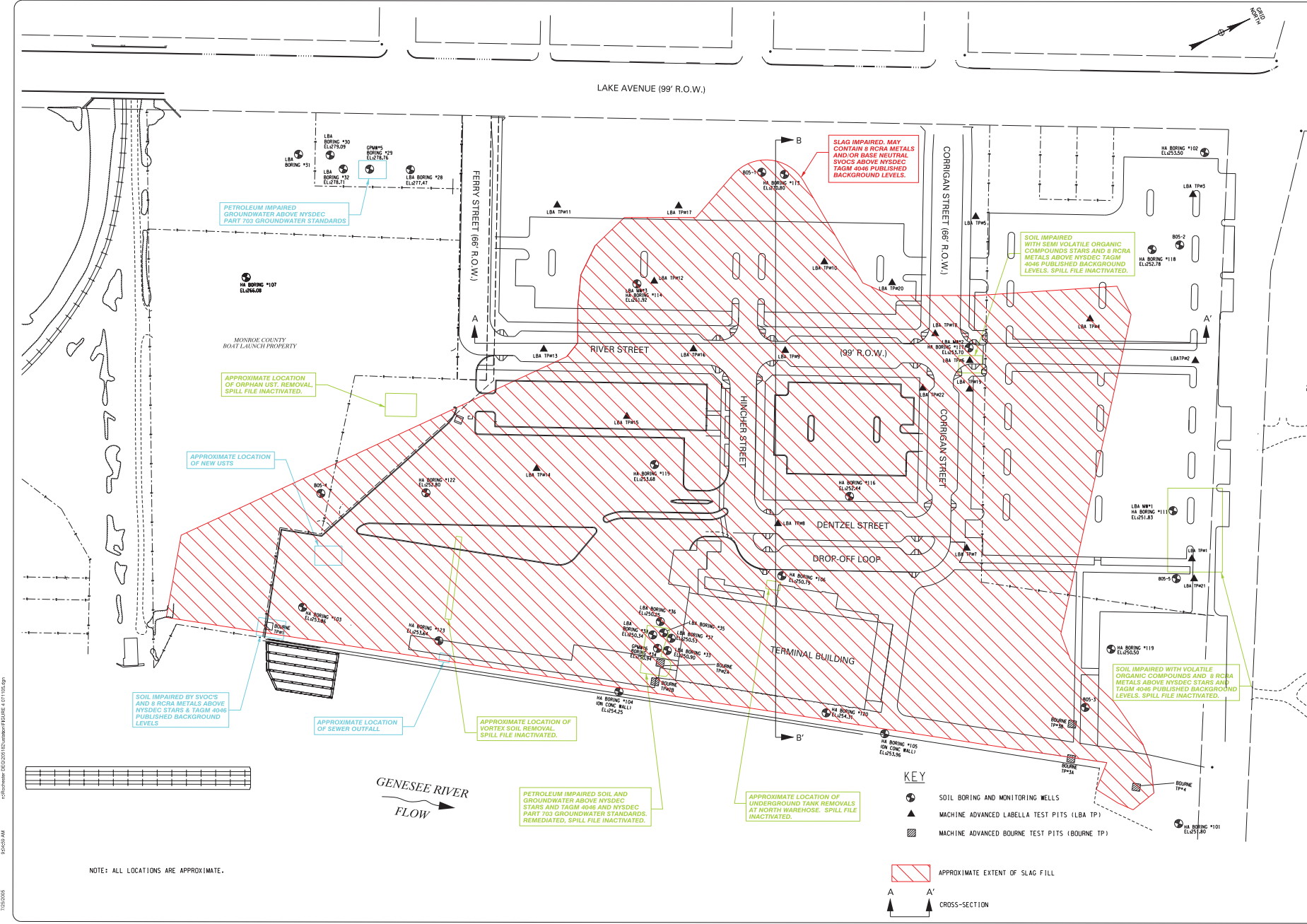
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NOTE: ALL LOCATIONS ARE APPROXIMATE.

NO.	REVISION	DATE
1		
2		
3		
4		
5		
6		

LABELLA
Associates, P.C.

300 STATE STREET
ROCHESTER, NY 14614
P: (585) 454-6110
F: (585) 454-3095
www.labella.com

PROJECT CLIENT
PORT OF ROCHESTER
ENVIRONMENTAL
MANAGEMENT PLAN

CITY OF ROCHESTER
ROCHESTER, NEW YORK

DRAWING TITLE
**SITE CHARACTERIZATION OF
SUBSURFACE ENVIRONMENTAL ISSUES
AT THE PORT OF ROCHESTER SITE**

SCALE: 1" = 40'

DESIGNED FOR: FINAL

DATE: JULY 2006

REVISIONS: NONE

DATE: JULY 2006

PROJECT NUMBER
205182

DRAWING NUMBER
FIG 4

SHEET OF 1

150459 AM 7/20/06

Target Drilling Company
 1850 Lakeville Road
 Avon, New York 14414

Test Boring No.: B05-3
 Job No.: 5505
 Page: 1 OF 3
 Report Date: 5/20/2005

Project: PORT OF ROCHESTER
 Client: LABELLA ASSOCIATES, PC
 Elevation: 253.2
 Water Level - Casing In: _____
 Below Surface - Casing Out: _____

Geologist: _____
 Driller: S. KAHN
 Start: 5/19/2005
 Completed: 5/20/2005

Seasonal and climatic changes may alter observed water levels.

0	C	Blows on Sampler				N	Sample		Soil and Rock Information
		0"/6"	6"/12"	12"/18"	18"/24"		No.	depth	
		10	21					TOPSOIL AND ORGANIC MATTER 0'5"	
				12	13	33	1	0'0"-2'0" FILL MATERIAL C/O MOIST SILT, SAND AND GRAVEL AND SLAG	
		7	8					2'0"-4'0" FILL MATERIAL C/O SILT, SAND AND GRAVEL, TOPSOIL, SLAG AND FOUNDRY SAND 5'0"	
5		7	10					4'0"-6'0" STIFF GREY BROWN MOIST MOTTLED SILT, LITTLE CLAY 6'0"	
		8	8			18	3	6'0"-8'0" FIRM GREY SATURATED M-VF SAND, TRACE SILT	
				12	10	20	4		
10									
		3	5					10'0"-11'6" FIRM GREY SATURATED (LITTLE M-F GRAVEL)	
				8		13	5	(MUDDED BORING FROM 15' TO TERMINATION)	
15									
		5	5					15'0"-16'6" LOOSE GREY SATURATED	
				4		9	6		
20									
		4	4					20'0"-21'6" LOOSE GREY SATURATED (MARL NOTED) 21'2"	
				4		8	7	MEDIUM GREY SATURATED SILT, SOME VF SAND 23'0"	
25									
		1	2					25'0"-26'6" MEDIUM GREY SATURATED ORGANIC SILT	
				3		5	8		
30									
		2	1					30'0"-31'6" SOFT GREY SATURATED	
				2		3	9		
35									

N=No. of Blows to 2" Spoon 12" with 140 30" Ea. Blow
 N=No. of Blows to Drive Spoon _____ with _____ lb. wt _____ Ea. Blow

Target Drilling Company
 1850 Lakeville Road
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 Driller: S. KAHN
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 Completed: 5/20/2005

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35	C	Blows on Sampler				N	Sample		Soil and Rock Information
		0"/6"	6"/12"	12"/18"	18"/24"		No.	depth	
		W/R	W/H						
				2		2	10	35'0"-36'6"	SOFT GREY SATURATED (LESS ORGANICS)
40		W/H	2						
				2		4	11	40'0"-41'6"	SOFT GREY SATURATED (MORE ORGANICS)
45		W/H	W/H						
				W/H		W/H	12	45'0"-46'6"	VERY SOFT GREY SATURATED
50		W3/H	2						
				2		4	13	50'0"-51'6"	SOFT DARK GREY SATURATED (LESS ORGANICS MARL NOTED)
55		W/H	3						
				4		7	14	55'0"-56'6"	MEDIUM DARK GREY SATURATED
60		W/H	2						
				3		5	15	60'0"-61'6"	MEDIUM DARK GREY SATURATED
65		1	3						
				4		7	16	65'0"-66'6"	MEDIUM DARK GREY SATURATED
70									

N=No. of Blows to 2" Spoon 12" with 140 30" Ea. Blow
 N=No. of Blows to Drive Spoon _____ with _____ lb. wt _____ Ea. Blow

Target Drilling Company
 1850 Lakeville Road
 Avon, New York 14414

Test Boring No.: B05-3
 Job No.: 5505
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 Client: LABELLA ASSOCIATES, PC
 Elevation: 253.2
 Water Level - Casing In: _____
 Below Surface - Casing Out: _____

Geologist: _____
 Driller: S. KAHN
 Start: 5/19/2005
 Completed: 5/20/2005

Seasonal and climatic changes may alter observed water levels.

70	C	Blows on Sampler				N	Sample		Soil and Rock Information
		0"/6"	6"/12"	12"/18"	18"/24"		No.	depth	
		1	4			8	17	70'0"-71'6"	MEDIUM DARK GREY SATURATED (SANDIER)
75				4					
		2	2			4	18	75'0"-76'6"	SOFT DARK GREY SATURATED
80				2					
		1	2			3	19	80'0"-81'6"	SOFT DARK GREY SATURATED
85				1					(AUGERED TO 100' REMAINED SOFT)
90									
95									
100									100'0"
105									BORING TERMINATED @ 100'0"

N=No. of Blows to 2" Spoon 12" with 140 30" Ea. Blow
 N=No. of Blows to Drive Spoon _____ with _____ lb. wt _____ Ea. Blow

Target Drilling Company
 1850 Lakeville Road
 Avon, New York 14414

Test Boring No.: B05-4
 Job No.: 5505
 Page: 1 OF 2
 Report Date: 5/6/2005

Project: PORT OF ROCHESTER
 Client: LABELLA ASSOCIATES, PC
 Elevation: 254.7
 Water Level - Casing In: _____
 Below Surface - Casing Out: _____

Geologist: _____
 Driller: S. KAHN
 Start: 5/6/2005
 Completed: 5/6/2005

Seasonal and climatic changes may alter observed water levels.

0	C	Blows on Sampler				N	Sample		Soil and Rock Information
		0"/6"	6"/12"	12"/18"	18"/24"		No.	depth	
		7	7					TOPSOIL AND ORGANIC MATTER 0'5"	
				7	7	14	1	0'0"-2'0" FILL MATERIAL C/O MOIST SILT, SAND AND GRAVEL LITTLE ASPHALT AND SLAG	
		13	13					2'0"-4'0" FILL MATERIAL C/O MOIST SILT, SAND AND GRAVEL AND SLAG	
5		7	7	10	9	23	2	4'0"-6'0" FILL MATERIAL C/O MOIST FOUNDRY SAND	
		4	10	4	4	11	3	6'0"-8'0" FILL MATERIAL C/O FOUNDRY SAND 7'8"	
				20	20	30	4	8'0"-10'0" FILL MATERIAL C/O SATURATED SLAG	
10		15	10	15	22	25	5	10'0"-12'0" FILL MATERIAL C/O SATURATED SLAG	
		21	12					12'0"-14'0" FILL MATERIAL C/O SATURATED SLAG	
		7	10	21	18	33	6	14'0"-16'0" MEDIUM GREY SATURATED SILT, TRACE ORGANIC NODULES 15'8"	
15		3	3	9	4	19	7	16'0"-18'0" MEDIUM BLACK MOIST PEAT LIKE MATERIAL (MUDDED BORING FROM 18' TO TERMINATION)	
				4	6	7	8	20'0"-22'0" MEDIUM BLACK GREY WET TO SATURATED SHELBY TUBE 24'0"	
		6	5	5	5	10	9	24'0"-26'0" MEDIUM DARK GREY WET ORGANIC SILT, TRACE CLAY 28'0"	
20									
		2	3						
				3	4	6	10		
25		2	4						
				3	4	7	11		
30									
		2	2						
				2		4	12	30'0"-31'6" MEDIUM GREY SATURATED SILT, LITTLE CLAY, TRACE VF SAND SEAMS (NO ORGANICS)	
35									

N=No. of Blows to 2" Spoon 12" with 140 30" Ea. Blow
 N=No. of Blows to Drive Spoon _____ with _____ lb. wt _____ Ea. Blow

Target Drilling Company
 1850 Lakeville Road
 Avon, New York 14414

Test Boring No.: B05-4
 Job No.: 5505
 Page: 2 OF 2
 Report Date: 5/6/2005

Project: PORT OF ROCHESTER
 Client: LABELLA ASSOCIATES, PC
 Elevation: 254.7
 Water Level - Casing In: _____
 Below Surface - Casing Out: _____

Geologist: _____
 Driller: S. KAHN
 Start: 5/6/2005
 Completed: 5/6/2005

Seasonal and climatic changes may alter observed water levels.

C	Blows on Sampler				N	Sample		Soil and Rock Information
	0"/6"	6"/12"	12"/18"	18"/24"		No.	depth	
35	7	8						
			9		17	13	35'0"-36'6"	FIRM RED WET SILT, SOME C-F GRAVEL, WEATHERED ROCK AND VF SAND
40								AUGER REFUSAL @ 39'2"
								BORING TERMINATED @ 39'2"
45								
50								
55								
60								
65								
70								

N=No. of Blows to 2" Spoon 12" with 140 30" Ea. Blow
 N=No. of Blows to Drive Spoon _____ with _____ lb. wt _____ Ea. Blow

TEST BORING REPORT

BORING NO.
HA-103

Page 1 of 3

PROJECT	PORT OF ROCHESTER	H&A FILE NO.	70819-000
LOCATION	ROCHESTER, NEW YORK	PROJECT MGR.	M. VALENTINE
CLIENT	LABELLA ASSOCIATES	FIELD REP.	D. NOSTRANT
CONTRACTOR	GEOLOGIC ENTERPRISES	DATE STARTED	31-May-00
DRILLER	L. TODD	DATE FINISHED	31-May-00

Elevation	253.86	ft	Datum	City	Boring Location	See Bring Location Plan		
Item	Casing	Sampler	Core Barrel	Rig Make & Model	CME-55 Truck Mount			Drill Mud
Type	HSA	SS	NX	<input checked="" type="checkbox"/> Truck	<input type="checkbox"/> Tripod	<input checked="" type="checkbox"/> Cat-Head	Hammer Type	<input type="checkbox"/> Bentonite
Inside Diameter (in)	3-1/4	1-3/8	1-7/8	<input type="checkbox"/> ATV	<input type="checkbox"/> Geoprobe	<input type="checkbox"/> Winch	<input checked="" type="checkbox"/> Safety	<input type="checkbox"/> Polymer
Hammer Weight (lb)	--	140		<input type="checkbox"/> Track	<input type="checkbox"/> Air Track	<input type="checkbox"/> Roller Bit	<input type="checkbox"/> Doughnut	<input checked="" type="checkbox"/> None
Hammer Fall (in)	--	30		<input type="checkbox"/> Skid	<input type="checkbox"/>	<input type="checkbox"/> Cutting Head	Casing	<input type="checkbox"/> Driven <input type="checkbox"/> Spun

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
0		8	S1	0.0		Medium dense gravelly coarse to fine sand, little silt, dry.
		11				FILL
		15	15"/24"	2.0	2.0	Medium dense dark brown coarse to fine SAND, some gravel, little silt, dry.
		18	S2	2.0		FILL
		11				FILL
		7	10"/24"	4.0		Same.
		9	S3	4.0		Moist to wet beginning at 5.5 ft.
5		8				FILL
		4				FILL
		6		6.0		Same, wet.
		3	S4	6.0		FILL
		5				Noted refusal and suspected cobble at 7.5 ft.
		8	4"/18"	7.5		FILL
		507.0	S5	8.0		Same, except black.
		7				FILL
		9				FILL
		4	6"/24"	10.0		Medium dense black coarse to fine sandy GRAVEL, little silt, wet.
10		7	S6	10.0		FILL
		9				FILL
		10				FILL
		15		12.0		Same, except very dense, gray-black.
		62	S7	12.0		FILL
		26				Driller noted sulphur-like odor in sample.
		29				See Note on Page 2 of 4.
		9	12"/24"	14.0		Auger Refusal at 14.0 ft.
						Boring moved 18.0 ft. west of original location.

Water Level Data						Sample ID		Summary	
Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)	O	T	U	S
						Open End Rod	Thin Wall Tube	Undisturbed Sample	Split Spoon Sample
						Geoprobe			
						Overburden (Linear ft)	14	Rock Cored (Linear ft)	--
						Number of Samples	75		

BORING NO. HA-103

TEST BORING REPORT

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		1	S12	34.0		Loose gray fine sand SILT, some clay, organics, moist.
35		3				
		3				
		4	12"/24"	36.0		ALLUVIUM
		2	S13	39.0		Loose gray silty fine to coarse SAND, trace organics, moist.
40		2				
		4				
		4	23"/24"	40.0		
		2	S14	44.0		Loose gray brown fine to medium sandy SILT, little clay, organics, moist.
45		4				
		4				
		5	22"/24"	46.0		
		2	S15	49.0		Same.
50		2				
		3				
		3	22"/24"	51.0		
		2	S16	54.0		Same.
55		2				
		3				
		3	23"/24"	56.0		
		2	S17	59.0		Same.
60		2				
		3				
			22"/24"	61.0		
		4	S18	64.0		Medium dense gray brown fine to medium sandy SILT, little clay, organics, moist.
65		4				
		7				
		7	22"/24"	66.0		
		7	S19	69.0		Bottom of Exploration at 71.0 ft.
70		10				
		10				
		10	17"/24"	71.0		

TEST BORING REPORT

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		13	S10	33.0		Very dense gray brown fine silty sand, little gravel, wet.
		39				
		41				GLACIAL TILL
35		40	19"/24"	35.0		
		16	S11	38.0		Same.
		26				
		39				
40		43	17"/24"	40.0		
		25	S12	43.0		Very dense gray brown fine sandy SILT, trace clay, little gravel, wet.
		65				
		100/4	16"/17"	44.4		
45						
		24	S13	48.0		Same, except pocket of red brown fine to coarse SAND, some rock fragments, wet.
		100/5	11"/12"	49.0	49.0	Began Rock Coring at 49.0 ft.
50						
						Competent red sandstone with interbedded gray sandstone.
					54.0	Bottom of Exploration at 54.0 ft.
55						
60						
65						
70						

TEST BORING REPORT

BORING NO.
HA-122

Page 1 of 2

PROJECT	PORT OF ROCHESTER	H&A FILE NO.	70819-000
LOCATION	ROCHESTER, NEW YORK	PROJECT MGR.	M. VALENTINE
CLIENT	LABELLA ASSOCIATES	FIELD REP.	D. NOSTRANT
CONTRACTOR	GEOLOGIC ENTERPRISES	DATE STARTED	31-May-00
DRILLER	L. TODD	DATE FINISHED	31-May-00

Elevation	252.8	ft	Datum	City	Boring Location	See Boring Location Plan			
Item	Casing	Sampler	Core Barrel	Rig Make & Model			Drill Mud		
Type	HSA	SS	NX	CME-55 Truck Mount			Hammer Type		
Inside Diameter (in)	3-1/4	1-3/8	1-7/8	<input checked="" type="checkbox"/> Truck	<input type="checkbox"/> Tripod	<input checked="" type="checkbox"/> Cat-Head	<input type="checkbox"/> Bentonite		
Hammer Weight (lb)	-	140		<input type="checkbox"/> ATV	<input type="checkbox"/> Geoprobe	<input type="checkbox"/> Winch	<input type="checkbox"/> Polymer		
Hammer Fall (in)	-	30		<input type="checkbox"/> Track	<input type="checkbox"/> Air Track	<input type="checkbox"/> Roller Bit	<input type="checkbox"/> None		
				<input type="checkbox"/> Skid		<input checked="" type="checkbox"/> Cutting Head	<input type="checkbox"/> Driven	<input type="checkbox"/> Spun	

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
0		7	S1	0.0	0.3	TOPSOIL Medium dense dark brown, coarse to fine sand, little cinders, little gravel.
		8				FILL
		10				
		8	14"/24"	2.0		
		6	S2	2.0		Same.
		6				
		5	10"/24"	4.0		
		3	S3	4.0		No Recovery.
5		3				
		2	0"/24"	6.0		
		2	S4	6.0		Loose dark brown coarse to fine sand, some gravel, trace silt, wet.
		3				
		2	2"/24"	8.0		
		2	S5	8.0		Same.
		3				
		21	18"/24"	10.0		
10		1	S6	10.0		Same.
		2				
		6	14"/24"	12.0		
		10	S7	12.0		
		26				
		24				
		10	20"/24"	14.0	13.2	Dense blue-gray gravel, little coarse to fine sand, wet.
		3	S8	14.0		
15		2			14.3	Very loose brown ORGANICS, trace sand, trace silt, wet.
		1			15.5	
		3	16"/24"	16.0		Very loose gray-brown fine clayey SILT, some sand, little organics, moist.
						ALLUVIUM
20		1	S9	20.0		Same, except little fine sand.
		2				
		1	24"/24"	22.0		
		2				
25		2	S10	25.0		Same.
		2				
		2	20"/24"	27.0		
		3				
30						

Water Level Data						Sample ID		Summary	
Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)	O	Open End Rod	Overburden (Linear ft)	37
						T	Thin Wall Tube	Rock Cored (Linear ft)	5
						U	Undisturbed Sample	Number of Samples	12S
						S	Split Spoon Sample		
						G	Geoprobe		
								BORING NO.	HA-122

CORE BORING REPORT

BORING NO.
HA-122

Page 1 of 1

PROJECT	PORT OF ROCHESTER	H&A FILE NO.	70819-000
LOCATION	ROCHESTER, NEW YORK	PROJECT MGR.	M. VALENTINE
CLIENT	LABELLA ASSOCIATES	FIELD REP.	R. DEDRICK
CONTRACTOR	GEOLOGIC ENTERPRISE	DATE STARTED	30-May-00
DRILLER	L. TODD	DATE FINISHED	30-May-00

Elevation		ft		Datum		Boring Location					
Item	Casing	Sampler	Core Barrel	Rig Make & Model						Drill Mud	
Type	HAS	SS	NX	<input checked="" type="checkbox"/> Truck	<input type="checkbox"/> Tripod	<input checked="" type="checkbox"/> Cat-Head	Hammer Type		<input type="checkbox"/> Bentonite		
Inside Diameter (in)	3-1/4	1-3/8	2	<input type="checkbox"/> ATV	<input type="checkbox"/> Geoprobe	<input type="checkbox"/> Winch	<input checked="" type="checkbox"/> Safety	<input type="checkbox"/> Polymer			
Hammer Weight (lb)	--	140		<input type="checkbox"/> Track	<input type="checkbox"/> Air Track	<input type="checkbox"/> Roller Bit	<input type="checkbox"/> Doughnut	<input checked="" type="checkbox"/> None			
Hammer Fall (in)	--	30		<input type="checkbox"/> Skid	<input type="checkbox"/>	<input type="checkbox"/> Cutting Head	Casing		<input type="checkbox"/> Driven	<input type="checkbox"/> Spun	

Depth (ft)	Drilling Rate (min/ft)	Core No. Depth (ft)	Recovery RQD		Weathering	Stratum Change (ft)	Visual Classification and Remarks
			(in)	(%)			
		37.0				37.0	Begin Coring at 37.0 ft.
			48	80			Moderately soft, moderately weathered red-brown-green mottled fine grained, very thin to thin bedded SANDSTONE with close to very close weathered shaley partings.
40		RI	35	58	MOD		QUEENSTON FORMATION
		42.0				42.0	Bottom of Boring at 42.0 ft.
45							
50							
55							
60							
65							

Water Level Data						Sample ID		Summary	
Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)	O	T	U	S
						Open End Rod	Thin Wall Tube	Undisturbed Sample	Split Spoon Sample
						G	Geoprobe		
								Overburden (Linear ft)	37
								Rock Cored (linear ft)	5
								Samples	12S
								BORING NO.	HA-122

TEST BORING REPORT

BORING NO.
HA-123

Page 1 of 4

PROJECT	PORT OF ROCHESTER	H&A FILE NO.	70819-000
LOCATION	ROCHESTER, NEW YORK	PROJECT MGR.	M. VALENTINE
CLIENT	LABELLA ASSOCIATES	FIELD REP.	R. DEDRICK
CONTRACTOR	GEOLOGIC ENTERPRISES	DATE STARTED	5-Jun-00
DRILLER	L. TODD	DATE FINISHED	6-Jun-00

Elevation	253.64	ft	Datum	City	Boring Location	See Boring Location Plan		
Item	Casing	Sampler	Core Barrel	Rig Make & Model	CME 55 - Truck Mount			Drill Mud
Type	HSA	SS	NX	<input checked="" type="checkbox"/> Truck	<input type="checkbox"/> Tripod	<input checked="" type="checkbox"/> Cat-Head	Hammer Type	<input type="checkbox"/> Bentonite
Inside Diameter (in)	3-1/4	1-3/8	2	<input type="checkbox"/> ATV	<input type="checkbox"/> Geoprobe	<input type="checkbox"/> Winch	<input checked="" type="checkbox"/> Safety	<input type="checkbox"/> Polymer
Hammer Weight (lb)	-	140		<input type="checkbox"/> Track	<input type="checkbox"/> Air Track	<input type="checkbox"/> Roller Bit	<input type="checkbox"/> Doughnut	<input checked="" type="checkbox"/> None
Hammer Fall (in)	-	30		<input type="checkbox"/> Skid	<input type="checkbox"/>	<input type="checkbox"/> Cutting Head	Casing	<input type="checkbox"/> Driven <input type="checkbox"/> Spun

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
0	4		S1	0.0		(0.3 ft TOPSOIL)
	8					Medium dense brown gray sandy SILT, little coarse gravel, dry.
	8					FILL
	8	8	8"/24"	2.0		
	8		S2	2.0		Medium dense brown red silty fine to coarse SAND, trace fine gravel, dry.
	7					
	8					
	8		13"/24"	4.0		
	5		S3	4.0		Same, except moist.
5	4					
	3					
	3		16"/24"	6.0		
	2		S4	6.0		Loose brown red silty fine to coarse SAND, trace fine gravel, wet.
	2					
	2					
	2		20"/24"	8.0		
	1		S5	8.0		Medium dense black brown silty fine to coarse SAND, wood, wet.
	4					
	8					
	9		16"/24"	10.0		
10	5		S6	10.0		No Recovery.
	5					
	2					
	2		0"/24"	12.0		
	5		S7	12.0		No Recovery.
	5					
	5					
	3		0"/24"	14.0		
	5		S8	14.0		Loose gray brown silty fine to coarse SAND, some organics, moist.
	4					
15	1					
	3		19"/24"	16.0		ALLUVIUM
	2					
	2		S9	19.0		Loose gray brown clayey SILT, little sand, moist.
20	2					
	2					
	2		10"/24"	21.0		
	1					
	2		S10	24.0		Same, except little clay.
25	2					
	2					
	2		14"/24"	26.0		
	2					
	2		S11	29.0		Same.
30	2					
	4		15"/24"	31.0		

Water Level Data						Sample ID		Summary					
Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)	O	T	U	S	G	Overburden (Linear ft)	Rock Cored (Linear ft)	Number of Samples
											114	2	248
											BORING NO.	HA-123	

TEST BORING REPORT

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
				31.0		
35		2	S11	34.0		Very loose gray brown fine to medium sand SILT, trace clay, organics, moist.
	2					
	2					
		4	20"/24"	36.0		
						ALLUVIUM
40		1	S12	39.0		Same.
	2					
		2				
		3	14"/24"	41.0		
45		1	S13	44.0		Very loose gray silty fine to medium SAND, moist.
	2					
		2				
		3	19"/24"	46.0		
50		1	S14	49.0		Loose gray fine sand SILT, trace clay, organics, moist.
	2					
		3				
		4	20"/24"	51.0		
55		1	S15	54.0		Same.
	1					
		3				
		3	20"/24"	56.0		
60		1	S16	59.0		Same.
	2					
		5				
		4	20"/24"	61.0		
65		3	S17	64.0		Loose gray fine sand SILT, trace clay organics, moist.
	1					
		4				
		3	24"/24"	66.0		
70		WOH	S18	69.0		Same, except medium dense.
	5					
		7				
		8	22"/24"	71.0		

TEST BORING REPORT

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
						ALLUVIUM
		100/2	S27 2 2/3"	114.0 114.2	114.0	Very dense sandy ROCK FRAGMENTS. WEATHERED BEDROCK Began rock coring 114.0 ft.
115						Bottom of Exploration at 116.0 ft.
120						
125						
130						
135						
140						
145						
150						
					FILE NO.	70819-000
					BORING NO.	HA-123