GEOTECHNICAL SITE CHARACTERIZATION
PORT OF ROCHESTER HARBOR IMPROVEMENT
AND HARBOR FERRY TERMINAL
ROCHESTER, NEW YORK

Draft

by

Haley & Aldrich of New York
Rochester, New York

for

LaBella Associates, P.C.
Rochester, New York

File No. 70819-000
September 2000

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LaBella Associates, P.C.
300 State Street
Rochester, New York 14614

Attention: Sergio Esteban, P.E.

Subject: Port of Rochester Harbor Improvement and Harbor Ferry Terminal
Rochester, New York

Ladies and Gentlemen:

We are pleased to submit herewith our report entitled, *Geotechnical Site Characterization, Port of Rochester Harbor Improvement and Harbor Ferry Terminal, Rochester, New York.* The work was undertaken at your request, as outlined in our proposal dated 4 June 1999 and authorized under our Subconsultant Agreement, dated 16 December 1999.

This report presents a compilation of the results of historic and new subsurface explorations, field testing, laboratory testing, groundwater observations, and site geotechnical engineering interpretations pertinent to the planning and preliminary design of the proposed ferry terminal and related infrastructure.

If additional information regarding the data or conclusions presented in this report is required, please do not hesitate to contact us. It has been a pleasure working with you and the other project team members on this exciting project, and we look forward to our continued association during subsequent phases of the project.
Sincerely yours,

HALEY & ALDRICH OF NEW YORK

Maureen S. Valentine, P.E.
Senior Engineer

Stanley E. Walker, P.E.
Vice President

Enclosures

c: Bourne Consulting Engineers, Attn: Ronald Bourne, P.E.

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EXECUTIVE SUMMARY

This report presents a summary of research, exploration, and characterization of the subsurface conditions at the site of the proposed Port of Rochester Harbor Improvement and Harbor Ferry Terminal, City of Rochester Project ID # 99021, conducted by Haley & Aldrich of New York. It has been prepared in accordance with our Subconsultant Agreement with LaBella Associates, P.C. dated 16 December 1999.

The purpose of this study was to characterize the site's subsurface conditions in sufficient detail to support the planning and preliminary design of the proposed site improvements.

This report contains reproductions of historic (Sanborn) maps (1892 to 1967) depicting the various facilities that have occupied the site and records of several earlier subsurface explorations made on or near the site. It also contains detailed records of the 25 test borings, 27 test pits, and 3 groundwater observation wells installed as part of the current study of the site by Haley & Aldrich, LaBella Associates, and Bourne Consulting Engineers.

The project area has undergone significant geologic and man-made alteration. An approximately 85-foot-deep, steep-sided gorge in the bedrock formed by post-glacial erosion, encroaches beneath the former transit sheds (the North and South Warehouses) along the eastern edge of the site. From the gorge's edge the bedrock surface rises more gently from about Elev. 200 (City Datum) to Elev. 215 to 235 near the western edge and southern end of the site, ranging from about 60 to 20 feet below the present ground surface. The much of the site is underlain by man-placed fill consisting of uncontrolled deposits of soil and iron-manufacturing slag and demolition rubble ranging from as much as 20 feet to as little as 1 foot in thickness. The fill varies quite randomly from loose to dense. In most areas loose alluvial (river-deposited) fine sand and silt underlie the fills which extend to depths of a few to more than 100 feet. Groundwater levels appear to be about 2 to5 feet above river level.

These conditions, while providing generally fair support for at-grade roadways and parking areas, provide variably fair to poor support for buildings and additional earthfills. The loose fills and alluvial deposits could yield detrimental differential settlements under thick regrading fills and moderately to heavily loaded structures.

Careful consideration should be given to the existing data presented in this report and the need for additional exploration, testing, and evaluation of the subsurface conditions in the planning and design of any proposed site and structural improvements.

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I. INTRODUCTION

1.01 Purpose

This geotechnical report has been prepared to assist planning and preliminary engineering efforts for the proposed Port of Rochester Harbor Improvements and Harbor Ferry Terminal, in Rochester, New York.

Haley & Aldrich of New York (H&A) was retained by LaBella Associates, P.C. and the City of Rochester to collect and assimilate existing and new geotechnical and geologic information pertinent to the project to provide a general characterization of subsurface conditions at the project location. This document represents a collection of data, some developed by H&A in the past and some by others, that establish the general regional conditions. Site-specific subsurface explorations and field and laboratory testing were performed as part of the site characterization study.

This report is preliminary in nature, given the state of development for the project. The scope of the investigations has been to collect, assemble and interpret site and subsurface information in order to develop an understanding of the regional subsurface conditions, sufficient to complete initial planning efforts and preliminary engineering design. Additional detailed design phase geotechnical investigations will likely be required to more fully evaluate the significance of the subsurface conditions to the design and long-term performance of the project elements.

1.02 Project Description

The proposed Port of Rochester Harbor Improvements site is located as shown on Figure 1 - Project Locus, and is bounded to the east by the Genesee River, to the north by Beach Avenue, to the west by Lake Avenue and to the south by the Stutson Street Bridge. Currently, the site is occupied by parking facilities and two existing warehouses, a boat ramp, an excursion ferry dock, several privately operated marinas and commercial establishments. A CSX railroad crosses the central portion of the project area with a branch to the south along the western bank of the river. Approximate locations of existing structures are shown on Figure 2 - Exploration Location Plan.

This project consists of the preliminary design of proposed transportation access, building facilities and waterside improvements associated with the Port of Rochester Harbor Improvement. The proposed improvements are intended to expand and enhance public access to the waterfront as well as provide the necessary infrastructure to support public recreation, transportation and economic development opportunities. According the contract documents, the project scope includes, but it not limited to the following:

- Access/Transportation
  - Reconstruction of existing street pavement and sidewalks;
  - Construction of new streets and sidewalks;
  - Improvement of existing and construction of new parking facilities;
  - Riverfront pedestrian promenade;
  - Streetscape and site landscape features;
  - Street and site lighting;
  - Signage and graphics;
  - Public and private utility improvements.

- Building Facilities
  - New building for a ferry terminal and border crossing operation;
  - Kiosks and marina support structures;
  - Rehabilitation of the north warehouse;
  - Signage and graphics;
  - Public and private utility services.
- Waterside Improvements
  - Transient marina and related facilities;
  - Ferry boat and excursion vessel berthing facilities;
  - River wall rehabilitation and/or reconstruction;
  - Navigation improvements;
  - Marina extension along River Street to Petten Street;
  - Public and private utility services and fueling facilities.

At the time of this writing, the proposed improvements are in the conceptual stage. Several alternate configurations are being considered for design.

1.03 Elevation datum

Elevations used herein are referenced to the City of Rochester Datum. Historical elevations are shown in the Appendices as referenced by the original project, but have been adjusted to the City of Rochester Datum within the tables and text.

II. FIELD AND LABORATORY INVESTIGATIONS

2.01 Background Information

Several earlier investigations in the general area of the project have been conducted by H&A and others, as listed below. The locations of the explorations associated with these earlier investigations are shown on Figure 2, Exploration Location Plan. A summary of the conditions encountered by these explorations is presented in Table II - Conditions Encountered in Earlier Subsurface Investigations:

- Stutson Street Water Main - Genesee River Crossing: Rochester Drilling Company between 13 and 21 September 1989 performed explorations, under the observation of H&A of New York. The work was performed for Joseph C. Lu, P.E for the design of a force main crossing the Genesee River.
- Stutson Street Bridge: Explorations were performed between 2 November 1994 and 11 December 1997, under the observation of NYSDOT personnel, for the design of a replacement for the Stutson Street Bridge.
- Army Corps of Engineers Dredge Probes: the Army Corps of Engineers performed Probe explorations between February 1959 and April 1961 for a Rochester Harbor Deepening project.
- Wave Surge Protection Project: the Army Corps of Engineers performed drive sample explorations in December 1960 for a Wave Surge Protection Project in the Rochester Harbor.
- Rehabilitation of East Pier: Explorations were performed by Empire Soils Investigation Inc. between April 1973 and August 1985 under the observation of Army Corps of Engineers personnel for a design analysis of the East Pier Repair in the Rochester Harbor.
- Lake Avenue Improvements: Explorations were performed by Vanderhorst between 16 and 17 March 1999 for Bergmann Associates, P.C. and the City of Rochester for the planning and preliminary engineering of the Lake Avenue Improvement Project.

Copies of the logs of the explorations made during these investigations are presented in Appendix C.

2.02 Recent Investigations

Three sets of objective-specific explorations were made as a part of this site characterization study. A summary of the conditions encountered in each of the explorations is presented in Table I – Conditions Encountered in Recent (2000) Subsurface Investigations.

In mid-January, 2000, four backhoe-dug test pits were made under the direction of Bourne Consulting Engineers, to explore the configuration and condition of the existing quay wall and its tieback anchorage system. These test pits were observed and logged by Haley & Aldrich. The locations of these test pits, designated BCE-TP # 1 through #4, are shown on Figure 2. Field logs of these explorations are presented in Appendix A-1.

In late-February, 2000, twenty-two backhoe-dug test pits were made under the direction of LaBella Associates, to explore the physical and chemical character of the near-surface subgrade materials and the groundwater levels at the site. LaBella Associates observed, logged, and sampled the test pits. A Haley & Aldrich representative observed and viewed samples from

several of these test pits. The locations of these test pits, designated LBA-TP #1 through #22, as surveyed by LaBella Associates, are shown on Figure 2. The logs of these test pits are presented in Appendix A-2.

Between 23 May and 13 June 2000, twenty-four test borings, HA-101 through HA-107, and HA-109 through HA-125, were drilled by Geologic Enterprises, Inc., of Cortland, New York, at locations selected by Haley & Aldrich to aid in characterizing the soil and bedrock conditions at the site. Tests boring locations and ground surface elevations, as shown on Figure 2, were determined by LaBella Associates.

The borings were drilled using hollow-stem augers to depths below ground surface ranging from 10 to 116 ft. Soil samples were recovered continuously within the fill and at 5-ft intervals thereafter by driving a 1⅜-in. I.D. split-spoon sampler with a 140-lb. hammer consistent with ASTM Method D1586. The "N" value was determined at each sample interval by counting the number of blows required to drive the split-spoon sampler a distance of 24 in. below the bottom of the hollow stem auger and into the soil under the impact of the hammer free-falling 30 inches. The "N" value is taken as the number of blows required to advance the sampler from 6 to 18 inches within the 24-inch sample range. A Haley & Aldrich geologist monitored the drilling and logged the recovered soil samples.

Bedrock was cored in five of the borings, HA-102, -107, -111, -121, and -122, using an NX-size (1-7/8 in. I.D.) corebarrel. Bedrock was cored to depths ranging from 2.0 to 10.0 ft.

Test Boring and Core Boring Reports prepared by Haley & Aldrich are presented in Appendix A-3. It should be noted that boring reports and related information depict subsurface conditions and water levels at the specific locations at the time of drilling. Soil conditions at other locations may differ from conditions encountered in the explorations. Groundwater conditions at any of the exploration locations may also change with time.

2.03 Groundwater Observation Wells

Groundwater observation wells were installed in completed boreholes HA-111 (MW-1, HA-114a (MW-3), and HA-117 (MW-2). The wells consisted of 2-inch-diameter, perforated PVC screen placed at or below groundwater level, and a solid PVC riser extending to approximately 2 ft. above ground surface. The annulus between the PVC pipe and the borehole was backfilled with filter sand, and bentonite seals were placed above the PVC screen.

Observation Well Installation Reports prepared by Haley & Aldrich for each of these wells are included Appendix A-4.

2.04 Laboratory Soil Testing

Ray M. Teeter, P.E. of Fairport, New York, performed laboratory tests on six soil samples from the test borings. The soil testing consisted of sieve analyses and hydrometer tests to quantify the grain-size distribution of the soils, and Atterberg limits and moisture content determinations to assess the plasticity of the fine-grained soils. The results of these tests have been incorporated into the soil descriptions shown on the Test Boring Reports, and are presented in Appendix B, Table B-1. Soil testing data from earlier investigations are presented in Table B-2

III. SITE AND SUBSURFACE CONDITIONS

3.01 Site conditions

The project site is located on the western side of the Genesee River, at its discharge to Lake Ontario. The project site has been part of extensive planning over the years, and includes the area bounded by Beach Avenue to the north, Lake Avenue to the west, and the Genesee River to the east. The south end of the project extends beyond the Stutson Street Bridge.

The area north of the CSX railroad is currently occupied by parking facilities for Charlotte Beach, a boat ramp and two existing warehouse structures along the river walk. The foundation from a third warehouse structure remains visible. A group of municipal buildings occupies the southwest corner, near Lake Avenue. This portion of the project slopes downward to the northeast from Lake Avenue toward the Genesee River. The ground surface elevations range from approximately El. 290 near the Lake Avenue crossing of the railroad, to El. 250 in the northeast corner, beyond the existing warehouse structures. Historically, this portion of the project area has housed an iron works which changed hands several times and became a steel company, associated rail lines, a rail loop turnaround, a ball park and yacht club, a steam boat wharf, later boat ramps, three warehouses, and various configurations of roads and parking facilities.

The project area south of the CSX railroad, between River Street and the river, is currently occupied by residential structures, boat docks, boat storage yards, and a small water treatment facility. This portion of the site is relatively level, with elevation ranging from El. 252 to 254 between River Street and the Genesee River. The ground surface slopes up relatively steeply at the railroad embankment, to an elevation of El. 260. West of River Road, the ground surface also slopes up relatively steeply to a crest at approximately El. 283 at the lighthouse. Historically, this portion of the project has housed a planing mill, which later became a veneer works and boat manufacturing facility, various boat-docking facilities and associated structures.

Historic (Sanborn) maps depicting on-site structures and facilities in 1892, 1912, 1924, 1950, And 1967 superimposed on the current site mapping are presented in Appendix D.

3.02 Subsurface soil and rock conditions

A. Geologic History

Rochester lies within the relatively low and flat-lying physiographic province known as the Erie-Ontario Lowland, which begins at Lake Ontario and extends southward to the Appalachian Plateau. The Genesee River runs north- south through the Erie-Ontario Lowland.

Bedrock underlying the northern portion of Rochester is part of the Queenston Formation, which is exposed in outcrops of the Genesee River gorge from Lake Ontario to the Driving Park Avenue Bridge at the Lower Falls. The Queenston Formation is an approximately 1000-foot thick sequence of alternating, nearly level shale and sandstone beds of Ordovician age, formed in deep seawater.

As a result of land movements associated with the building of the Appalachian Mountains to the south and east, the land surface of western New York was raised above the inland seas.

Subsequently, the exposed rocks were tilted southward and a southerly drainage system developed along the shallow dipping beds.

A long period (about 350 million years) of erosion ensued until glaciation occurred during the Pleistocene Epoch. It is estimated that over 2000 feet to rock was stripped from the region during this time.

Major streams, which formed during this erosional period, were the ancient Ontarian River and the Genesee River, which flowed into the Ontarian River at what is now Irondequoit Bay.

Approximately 3.0 to1.5 million years ago, glacial scouring deepened the Ontarian River Valley, which, upon retreat of the glaciers, became present-day Lake Ontario. Glacial scouring also deepened the pre-glacial Genesee River Valley. As the ice retreated during the past 20,000 years, differential post-glacial uplift resulted in flooding of the pre-glacial Genesee River Valley, forming present day Irondequoit Bay. The Genesee River then established its present course by eroding a new deep channel in the exposed bedrock some 4 to 5 miles west of the pre-glacial Genesee Valley.

Fairchild (1918) concluded in his paper, "The Rochester Canyon and the Genesee River Base-Levels", that the present river valley was formed by post-glacial erosion, the depth of which was regulated by the varying water levels in what is now Lake Ontario. His studies indicated the "canyon" bottom at the lakeshore to be about Elev. 100, about 145 feet below the present lake level.

B. On-site Conditions

Site stratigraphy was evaluated on the basis of the findings of the test borings, test pits and readily available public information regarding the local geology and hydrology. The borings encountered three principal soil units at the site; fill, alluvial sediments and glacial till. Generalized descriptions of the soil units and encountered thicknesses are presented below.

FILL – Man-placed fill materials, ranging from silty sand and gravel to varying combinations of iron-manufacturing waste slag, demolition rubble (bricks, concrete, and railroad ties), remnant concrete slabs and foundations, and some organic matter, in thicknesses ranging from 1 to 20 feet, were encountered in essentially all of the on-site explorations. Standard Penetration Test values (blows to advance the sampler 1 foot) varied erratically from 4 to refusal on inpenetratable objects, reflecting the varying and uncontrolled nature of the fill deposits. The estimated bottom-of-fill surface, as inferred by Haley & Aldrich, is depicted on Figure 3 – Bottom-of-Fill Contour Map.

ALLUVIUM – Alluvium (stream-deposited soil) was encountered beneath the topsoil or fill in most all of the on-site borings, extending to depths of a few feet toward the western side of the site to as much as 114 feet below the ground surface in the deep borings (HA- 101 and HA-123) at the river's edge. The alluvial soils consist of silty medium to fine sand with varying amounts of gravel with occasional zones of plastic, slightly organic clayey silt with some fine sand. In some test pits remnants of former surface vegetation were observed directly beneath overlying fill material. The samples ranged from dry to wet, generally increasing in moisture content with depth. Results of grain-size analyses and Atterberg limit and moisture content determinations on samples of the alluvial deposits are presented in Appendix B. Standard Penetration Test values ranged from 0 to more than 50 blows per foot and averaged from 3 to more than 20 in

individual borings, indicating the generally loose to very loose condition of these river-deposited sediments.

GLACIO-LACUSTRINE DEPOSITS – Deposits of late-glacial lakebed sediments consisting of stratified fine sands with occasional clay and coarser sand layers were encountered in thicknesses of up to 10 feet overlying glacial till in several explorations in the higher ground toward Lake Avenue.

GLACIAL TILL - Glacial till was encountered directly below the fill or alluvial or lacustrine sediments and extended to the top of the bedrock in most of the borings. In a few borings, HA-101, -109, -110, and -123, the glacial till was missing and the alluvium extended directly to bedrock. The till materials encountered ranged from soft to hard sandy, silty clay with trace gravel or clayey silt with sand and fine gravel. However, in general the undisturbed till was found to be very compact. The samples ranged from dry to moist. The estimated top-of-till surface, as inferred by Haley & Aldrich, is depicted on Figure 4 – Top-of-Till Contour Map.

A mixture of rock fragments and soil, identified as weathered bedrock, was encountered in a few of the borings. Visual descriptions ranged from "very dense red brown silty fine to coarse SAND, trace clay" to "disintegrated red sandstone". Borings HA-102, -109, -110, -122, and –123 penetrated weathered bedrock, encountering thicknesses of 1.0 to 5.0 ft.

Bedrock cored in the explorations consisted of relatively flat-lying sedimentary rocks of the Queenston Formation. This unit is are described individually below:

SANDSTONE – A relatively massive layer of sandstone of the Queenston formation was encountered beneath the alluvium and glacial till at depths ranging from 27 to 114 ft. below the ground surface. The core samples recovered from the test borings are described as moderately weathered to competent red, fine-grained sandstone with interbedded or mottled gray sandstone. RQD values ranged from 38 to 69 percent, indicating that the quality is pore to fair.

The bedrock surface was encountered at elevations ranging from El. 138 (auger refusal in HA-101) and El. 139 (HA-123) to El. 232 (in HA-110).

However, earlier borings (DN-B-51 and –B-52) made in the river south of the present Stutson Street Bridge's east abutment, did not encounter bedrock or refusal before reaching elevations at or below 118. These depths are consistent with Fairchild's (1918) findings and together with the present exploration findings support the inference that there is a deep curvilinear trough in the bedrock passing beneath and to the east of the project site on its course to the deeper water off shore.

The estimated top-of-bedrock surface, including a speculated configuration of this deep "canyon", as inferred by Haley & Aldrich, is depicted on Figure 5 – Top-of-Bedrock Contour Map.

3.03 Groundwater Conditions

The depth to water was recorded at completion of the explorations in borings HA 102, 107, 111, and 118 at depths ranging from 3.0 to 18 ft. below the existing ground surface. Water levels were also measured in each of the three piezometers at depths ranging from 3.60 to 10.74 ft.

below the existing ground surface. In general, the water table in late-May to early-June 2000 appears to have been between El. 248 and 251, sloping downward from west to east and being 2 to 5 feet above normal river level.

Corps of Engineers' river-level data reviewed and summarized by Bourne Consulting Engineering (5-10-00) indicates a maximum-recorded water level at El. 250.39. The Flood Insurance Rate Map for Rochester shows the project site as "Zone C" - subject to minimal flooding.

Water levels at the site should be expected to vary with precipitation, season, temperature and construction activity in the area. Therefore, groundwater levels during and following construction may differ from those observed in the test borings.

IV. GEOTECHNICAL ENGINEERING CONSIDERATIONS

The site's geologic and use history have produced subsurface conditions which warrant careful consideration in planning its redevelopment. These conditions include markedly varying bedrock surface elevations; deep, loose, and potentially compressible natural soil deposits; remnant foundations of earlier facilities; extensive areas of filled land containing iron-manufacturing slag and other wastes and demolition rubble; and relatively shallow groundwater levels. Detailed subsurface exploration and testing programs will be needed to establish appropriate design criteria and support construction planning for significant site improvements.

4.01 Design Considerations for Site Infrastructure Improvements

The uncontrolled fills and shallow groundwater that underlie most of the site present variable and potentially settlement-yielding support for streets and parking lots and a possibly corrosive environment for underground utilities. The chemical character and potential corrosivity (to concrete and metals) of the groundwater should be assessed in conjunction with the design of such facilities. The addition of more than 1 or 2 feet of fill to the present grade could cause noticeable, long-term settlements in areas of poorer subgrade conditions. To minimize the impact of post-construction differential settlements, site regrading, preceded by removal of existing topsoil and pavement and thorough proof-rolling of the exposed subgrade with a heavy, smooth-drum, vibratory compactor, should be completed prior to the construction of infrastructure improvements. Subgrade and surface drainage should be carefully developed to assure the long-term performance of trafficked areas. The presence of the loose fills and shallow groundwater should be carefully considered in the planning and execution of all utility trenching and installation.

4.02 Design Considerations for Foundations

The existing uncontrolled fills present widely varying support for foundations and could yield significant general or differential settlements under moderately to heavily loaded foundations. The buried slag and other waste and affected groundwater could pose threats to the long-term integrity of concrete or steel foundations. Removal and replacement or partial removal and insitu densifications of the existing fill materials and replacement with controlled fill may be appropriate for moderately loaded structures. Heavily loaded or settlement-intolerant structures would most likely require deep foundations (piles or caissons) seated on or in the glacial till or bedrock.

4.03 Design Considerations for Below-grade Walls

The shallow groundwater and loose fill and alluvial sediments will exert considerable horizontal loadings on temporary and permanent earth-retaining structures. Chemically aggressive groundwater could pose a threat to the long-term integrity of earth-retaining walls, particularly those constructed of steel. Care must be taken to assure sufficient lateral support both at the top and at or below the bottom of the excavation or below-grade floor.

4.04 Design Groundwater Levels

In view of the levels observed in the recently installed observation wells, the presence of the confining sheet-pile quay wall, and the potential (minimal) for site flooding, design groundwater levels should be taken as the finished ground surface throughout the site.

4.05 Seismic Design Considerations

The site is located within Seismic Zone A of the proposed (1999) Seismic Zoning Map for New York State Seismic Building Code. Zone A has a seismic zone factor, Z = 0.09, which numerically corresponds to effective peak acceleration in g on rock /stiff soil S1 conditions. In view of the indicated subsurface stratigraphy, all the soil profile beneath and eastward of the westerly line of the existing warehouses should be considered Type S_4, and that westward of the warehouses should be considered Type S_3. Seismic design loadings for new structures should be considered in accordance with the latest BOCA Building Code.

V. CONCLUDING COMMENTS

This report has been prepared for specific application to the preliminary planning of the Port of Rochester Harbor Improvements and Harbor Ferry Terminal development, in accordance with generally accepted geotechnical engineering practices. It presents a general characterization of the subsurface conditions as Haley & Aldrich has inferred them from the cited data and literature. The actual subsurface conditions between and beyond the points of exploration are expected to vary somewhat from those described and depicted in this report.

The characterizations and geotechnical engineering considerations presented in this report are based, in part, upon the data obtained from the referenced subsurface explorations. The historic construction and uses of the site, together with the geotechnical information presented herein, should be carefully considered in establishing the need for additional exploration, testing, and evaluation to support the design and construction of the anticipated structures and site improvements.

REFERENCES

1. Herman L. Fairchild (1918), The Rochester Canyon and the Genesee River Base-Levels, Proceedings of the Rochester Academy of Science, October, 1918.

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Haley & Aldrich of New York

Project: Port of Rochester
Project #: 70819-000
Client: LaBella Associates, P.C.
Subject: Recent Explorations

TABLE I - CONDITIONS ENCOUNTERED IN RECENT (2000) SUBSURFACE INVESTIGATIONS

Date: Aug-00
Created By: MSV
Checked By SEW

EXPLORATION IDENTIFICATION	NORTHING	EASTING	SURFACE ELEVATION (ft)	COMPLETION DEPTH (ft)	FILL				ALLUVIUM				LACUSTRINE				GLACIAL TILL				BEDROCK / REFUSAL		COMMENTS
					TOP		BOTTOM		TOP		BOTTOM		TOP		BOTTOM		TOP		BOTTOM		TOP		
					DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	
HA-101	1188198	1408785	251.8	115.0	0.00	251.80	8.00	243.80	8.00	243.80	113.00	138.80	-	-	-	-	-	-	-	-	113.00	138.80	?Weathered rock.Auger refusal @115 ft
HA-102	1188629	1407974	253.5	60.5	0.00	253.50	6.00	247.50	6.00	247.50	15.00	238.50	-	-	-	-	-	-	-	-	-	-	
HA-103			253.86	14	0.00	253.86	refusal @ 14ft	below 240	-	-	-	-	-	-	-	-	15.00	238.50	45.00	208.50	50.50	203.00	Queenston Formation
HA-103a	1187248	1407997	253.86	71	0.00	253.86	18.00	235.86	18.00	235.86	not encountered	below 183	-	-	-	-	-	-	-	-	-	-	
HA-104	1187587	1408289	254.25	31	Marine boring: 19.0 ft to mudline			254.25	19.00	235.25	not encountered	below 204	-	-	-	-	-	-	-	-	-	-	
HA-105	1187889	1408499	253.96	32	Marine boring: 15.0 ft to mudline			253.96	15.00	238.96	not encountered	below 207	-	-	-	-	-	-	-	-	-	-	
HA-106	1187857	1408244	250.79	41	0.00	250.79	4.00	246.79	4.00	246.79	-	-	-	-	-	-	-	-	-	-	-	-	
HA-107	1187375	1407557	266.08	54.5	0.50	265.58	13.00	253.08	13.00	253.08	23.00	243.08	-	-	-	-	23.00	243.08	49.00	217.08	49.00	217.08	Queenston Formation
HA-108	DELETED: Exploration not made		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HA-109	1186330	1407602	251.78	27.8	0.00	251.78	2.50	249.28	2.50	249.28	25.00	226.78	-	-	-	-	-	-	-	-	-	-	
HA-110	1185999	1407418	252.78	20	0.00	252.78	6.00	246.78	6.00	246.78	20.00	232.78	-	-	-	-	-	-	-	-	25.00	226.78	Weathered rock. Auger refusal @ 27.9 ft.
HA-111/LBA-MW1	1188376	1408397	251.83	63.5	1.00	250.83	10.00	241.83	10.00	241.83	42.00	209.83	-	-	-	-	-	-	-	-	19.00	233.78	Weathered rock. Auger refusal @ 20.0 ft.
HA-112	1186945	1407594	260.89	41	0.00	260.89	1.00	259.89	1.00	259.89	19.00	241.89	-	-	-	-	42.00	209.83	46.00	205.83	58.50	193.33	Queenston Formation
HA-113	1188099	1407751	270.8	27	0.00	270.80	20.00	250.80	-	-	-	-	-	-	-	-	19.00	241.89	not encountered	below 220	-	-	
HA-114	1187858	1407798	261.90	10.3	0.00	261.90	conc.obstruction	251.6	-	-	-	-	-	-	-	-	20.00	250.80	not encountered	below 244	-	-	
HA-114a/LBA-MW3	1187852	1407798	261.92	25	0.00	261.92	14.00	247.92	14.00	247.92	19.00	242.92	-	-	-	-	-	-	-	-	-	-	
HA-115	1187766	1408031	253.68	26	2.00	251.68	19.00	234.68	19.00	234.68	-	-	-	-	-	-	19.00	242.92	not encountered	below 237	-	-	
HA-116	1187987	1408186	252.44	27	0.40	252.04	8.00	244.44	8.00	244.44	-	-	-	-	-	-	-	-	-	-	-	-	
HA-117/LBA-MW2	1188223	1408074	253.7	26	0.00	253.70	10.00	243.70	10.00	243.70	-	-	-	-	-	-	-	-	-	-	-	-	
HA-118	1188506	1408063	252.78	51	0.00	252.78	2.00	250.78	2.00	250.78	20.00	232.78	-	-	-	-	-	-	-	-	-	-	
HA-119	1188218	1408530	250.52	51	0.00	250.52	2.00	248.52	2.00	248.52	-	-	-	-	-	-	20.00	232.78	-	-	-	-	
HA-120	1187830	1408439	254.31	52	0.00	254.31	6.00	248.31	6.00	248.31	-	-	-	-	-	-	-	-	-	-	-	-	
HA-121	1187786	1407572	276	71	0.00	276.00	4.00	272.00	4.00	272.00	30.00	246.00	-	-	-	-	30.00	246.00	61.00	215.00	61.00	215.00	Red sandstone
HA-122	1187468	1407931	252.8	42	0.00	252.80	14.30	238.50	14.30	238.50	36.00	216.80	-	-	-	-	36.00	216.80	37.00	215.80	37.00	215.80	Queenstone Formation
HA-123	1187396	1408120	253.64	116	0.00	253.64	14.00	239.64	14.00	239.64	114.00	139.64	-	-	-	-	-	-	-	-	114.00	139.64	
HA-124	1186260	1407172	267.92	10	0.00	267.92	not encountered	below 257.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HA-125	1186070	1407222	255.29	10	0.00	255.29	8.00	247.29	-	-	-	-	-	-	-	-	8.00	247.29	not encountered	below 245	-	-	
BCE-TP #1			254.00	9.5	0.00	254.00	not encountered	below 245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	bottomed on top of pile cap and water @9.5ft
BCE-TP #2			252	7	0	252	not encountered	below 245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	tie-rod&anchor @7ft.,water @ 6.75ft.
BCE-TP #3a			254	9.5	0	254	not encountered	below 245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	top of pile cap and water @ 9.5ft
BCE-TP #3b			254	10	0	253.5	not encountered	below 244	-	-	-	-	-	-	-	-	-	-	-	-	-	-	tie-rod&bottom of anchor @10f.,water @ 9.5ft
BCE-TP #4			254	4	0	254	not encountered	below 250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	top of sheetpile deadmen @ 4 ft.
LBA-TP #1			251	6	0	251	not encountered	below246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	water infiltration @ 4.5 ft.
LBA-TP #2			252	6	0	252	not encountered	below 246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	perched? GW @ 3 ft.
LBA-TP #3			253	8	0	253	1	252	1	252	not encountered	below 245	-	-	-	-	-	-	-	-	-	-	running sand, GW @ 6 ft.
LBA-TP #4			253	6.3	0	253	3.2	249.8	3.2	249.8	not encountered	below247	-	-	-	-	-	-	-	-	-	-	standing water @ 5 ft
LBA-TP #5			255	10.5	0	255	1	254	not encountered	-	not encountered	-	1	254	7.5	247.5	7.5	247.5	not encountered	below 245	-	-	some sandstone @ bottom. No water noted.
LBA-TP #6			253	4.5	0	253	not encountered	below 249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	no water noted
LBA-TP #7			252	7	0	252	not encountered	below 245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GWT @ 5.2 ft.
LBA-TP #8			252	6.5	0	252	not encountered	below 246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	perched GW @ 3 ft.
LBA-TP #9			260	12	0	260	not encountered	below 248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	standing water @ 10.3ft.
LBA-TP #10			258	12.5	0	258	5.5	252.5	not encountered	-	not encountered	-	5.5	252.5	12.5	245.5	12.5	245.5	not encountered	below 245.5	-	-	no standing water
LBA-TP #11			269	13	0	269	9.8	259.2	not encountered	-	not encountered	-	9.8	259.2	not encountered	below 256	-	-	-	-	-	-	no water noted
LBA-TP #12			262	5	0	262	not encountered	below 257	-	-	-	-	-	-	-	-	-	-	-	-	-	-	bottomed on concrete slab @ 5 ft.
LBA-TP #13			259	9.5	0	259	not encountered	below 250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	bottomed on concrete slab @ 9.5 ft.
LBA-TP #14			253	7	0	253	not encountered	below 246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	standing water @ 7 ft
LBA-TP #15			254	9.2	0	254	not encountered	below245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	water @ bottom, 9 ft.
LBA-TP #16			259	12	0	259	7.5	251.5	not encountered	-	-	-	7.5	251.5	not encountered	below247	-	-	-	-	-	-	water not noted
LBA-TP #17			265	11	0	265	1	264	not encountered	-	-	-	1	264	not encountered	below 254	-	-	-	-	-	-	water not noted
LBA-TP #18			254	6.8	0	254	not encountered	below 247	-	-	-	-	-	-	-	-	-	-	-	-	-	-	standing water @ bottom, 6.8 ft.
LBA-TP #19			253	5	0	253	not encountered	below 248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	standing water @ bottom, 5 ft.
LBA-TP #20			256	10	0	256	4.5	251.5	not encountered	-	-	-	4.5	251.5	not encountered	below 246	-	-	-	-	-	-	water not noted
LBA-TP #21			251	6.3	0	251	not encountered	below 245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	water not noted
LBA-TP #22			253	6	0	253	not encountered	below 247	-	-	-	-	-	-	-	-	-	-	-	-	-	-	standing water @ bottom, 6 ft.

NOTES:
1. ALL ELEVATIONS HAVE BEEN CONVERTED TO CITY OF ROCHESTER DATUM.

Haley & Aldrich of New York

Project: Port of Rochester
Project #: 70819-000
Client: LaBella Associates, P.C.
Subject: Earlier Explorations

TABLE II - CONDITIONS ENCOUNTERED IN EARLIER SUBSURFACE INVESTIGATIONS

Date: January-00
Created By: BEBa
Checked By SEW

INVESTIGATION TITLE	EXPLORATION IDENTIFICATION	NORTHING	EASTING	SURFACE ELEVATION (ft)	FILL				ALLUVIUM				LACUSTRINE				GLACIAL TILL				BEDROCK / REFUSAL		ROCK DESCRIPTION
					TOP		BOTTOM		TOP		BOTTOM		TOP		BOTTOM		TOP		BOTTOM		TOP		
					DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	
Stutson Street Water Main H&A #7616 December-87	B101	1185436	1407522.1	250.08	0.00	250.08	2.00	248.08	2.00	248.08	>30	-	-	-	-	-	-	-	-	-	-	-	
	B102	1185497	1407241.1	253.08	0.00	253.08	4.00	249.08	4.00	249.08	17.50	235.58	-	-	-	-	17.50	235.58	19.80	233.28	19.80	233.28	5 ft - QUEENSTON SHALE
	B103	1185546	1407318.1	225.48	-	-	-	-	0.00	225.48	3.00	222.48	-	-	-	-	3.00	222.48	4.50	220.98	4.50	220.98	5 ft - QUEENSTON SHALE
	B104	1185523	1407344.1	221.48	-	-	-	-	0.00	221.48	19.80	201.68	-	-	-	-	19.80	201.68	20.20	201.28	20.20	201.28	5 ft - QUEENSTON SHALE
	B105	1185496	1407414.1	222.48	-	-	-	-	0.00	222.48	>30	-	-	-	-	-	-	-	-	-	-	-	
	B106	1185469	1407452.1	231.48	-	-	-	-	0.00	231.48	>50	-	-	-	-	-	-	-	-	-	-	-	
	B107	1185511	1407376.1	221.48	-	-	-	-	0.00	221.48	>22	-	-	-	-	-	-	-	-	-	-	-	
Genesee River Crossing H&A #70037 December-89	B-1	1186769	1407897.1	223.78	-	-	-	-	0.00	223.78	>35	-	-	-	-	-	-	-	-	-	-	-	
	B-2	1186776	1408024.1	227.48	-	-	-	-	0.00	227.48	>35	-	-	-	-	-	-	-	-	-	-	-	
	B-3	1186755	1408121.1	224.78	-	-	-	-	0.00	224.78	>27	-	-	-	-	-	-	-	-	-	-	-	
	B-4	1186736	1408249.1	240.28	-	-	-	-	0.00	240.28	>35	-	-	-	-	-	-	-	-	-	-	-	
	B-5	1186741	1408381.1	250.58	0.00	250.58	4.00	246.58	4.00	246.58	>36	-	-	-	-	-	-	-	-	-	-	-	
	B-6	1186746	1407831.1	251.58	0.00	251.58	7.50	244.08	7.50	244.08	>35	-	-	-	-	-	-	-	-	-	-	-	
	B-7	1186728	1408435.1	250.58	0.00	250.58	10.00	240.58	10.00	240.58	>25	-	-	-	-	-	-	-	-	-	-	-	
Stutson Street Bridge NYSDOT December-97	DN-B-3	1185301.1	1407176.2	216.77	-	-	-	-	0.00	216.77	9.20	207.57	-	-	-	-	-	-	-	-	9.20	207.57	12.3 ft - sandstone
	DN-B-4	1185223.4	1407136.1	216.22	-	-	-	-	0.00	216.22	17.50	198.72	-	-	-	-	-	-	-	-	17.50	198.72	10 ft -shale/siltstone
	DN-B-5	1185156.4	1407094.9	225.60	-	-	-	-	0.00	225.60	26.30	199.30	-	-	-	-	-	-	-	-	26.30	199.30	10 ft -shale/sandstone
	DN-B-51	1185255.8	1407355.8	219.10	-	-	-	-	0.00	219.10	96.90	122.20	-	-	-	-	-	-	-	-	102.70	116.40	9 ft - shale
	DN-B-52	1185220.6	1407341.3	220.91	-	-	-	-	0.00	220.91	100.60	120.31	-	-	-	-	100.60	120.31	103.50	117.41	103.50	117.41	10 ft - shale/siltstone
	DN-B-53	1185182.6	1407326.2	221.30	-	-	-	-	0.00	221.30	100.70	120.60	-	-	-	-	-	-	-	-	102.50	118.80	10 ft - siltstone
	DN-B-54	1185110.9	1407304.3	222.88	-	-	-	-	0.00	222.88	100.60	122.28	-	-	-	-	-	-	-	-	103.60	119.28	10 ft - shale
	DN-B-55	1185060.8	1407290.5	226.88	-	-	-	-	0.00	226.88	100.60	126.28	-	-	-	-	-	-	-	-	102.30	124.58	11 ft - sandstone/siltstone
	DN-B-9	1184953.1	1407594.1	251.67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94.80	156.87	10.2 ft - unidentified bedrock
	FH-B-1	1185336.5	1406926.2	289.79	0.00	289.79	4.00	285.79	-	-	-	-	4.00	285.79	34.00	255.79	34.00	255.79	44.00	245.79	48.40	241.39	10 ft - siltstone/sandstone
	FH-B-10	1185222.6	1407944.9	256.98	0.00	256.98	20.00	236.98	-	-	-	-	20.00	236.98	25.00	231.98	-	-	-	-	27.10	229.88	10.3 ft - siltstone
	FH-B-11	1184980.6	1407902.7	256.89	0.00	256.89	6.00	250.89	-	-	-	-	6.00	250.89	25.00	231.89	-	-	-	-	27.50	229.39	10.2 ft - siltstone
	FH-B-12	1185178.1	1408119.1	254.69	0.00	254.69	10.00	244.69	-	-	-	-	10.00	244.69	25.00	229.69	-	-	-	-	26.10	228.59	10.5 ft - siltstone
	FH-B-13	1185203.5	1408309.9	253.18	0.00	253.18	10.00	243.18	-	-	-	-	10.00	243.18	20.00	233.18	-	-	-	-	22.30	230.88	9.9 ft - siltstone
	FH-B-14	1185139.5	1408467	251.97	0.00	251.97	6.00	245.97	-	-	-	-	6.00	245.97	25.00	226.97	-	-	-	-	25.00	226.97	9.9 ft - siltstone
	FH-B-201	1185288.3	1406962	289.76	0.00	289.76	1.00	288.76	-	-	-	-	1.00	288.76	37.00	252.76	37.00	252.76	47.00	242.76	51.00	238.76	8 ft - unidentified bedrock
	FH-B-202	1185357	1406987.7	288.08	0.00	288.08	1.00	287.08	-	-	-	-	1.00	287.08	44.00	244.08	44.00	244.08	50.00	238.08	50.00	238.08	10 ft - unidentified bedrock
	FH-B-203	1185265.7	1406948.9	291.08	-	-	-	-	-	-	-	-	0.00	291.08	37.00	254.08	37.00	254.08	46.00	245.08	46.00	245.08	10 ft - unidentified bedrock
	FH-B-305	1184929.4	1407765.8	253.05	0.00	253.05	16.50	236.55	-	-	-	-	16.50	236.55	25.00	228.05	-	-	-	-	25.00	228.05	4.5 ft - unidentified bedrock
	FH-B-306	1184857.5	1407765.9	253.97	0.00	253.97	9.50	244.47	-	-	-	-	9.50	244.47	25.00	228.97	-	-	-	-	25.00	228.97	5 ft - unidentified bedrock
	FH-B-307	1184947.3	1407738.5	251.77	0.00	251.77	33.50	218.27	-	-	-	-	33.50	218.27	40.00	211.77	-	-	-	-	40.00	211.77	4 ft - unidentified bedrock
	FH-B-308	1184899	1407651.3	251.77	0.00	251.77	48.50	203.27	-	-	-	-	48.50	203.27	55.00	196.77	-	-	-	-	55.00	196.77	5 ft - unidentified bedrock
	FH-B-309	1184958	1407588	251.60	0.00	251.60	25.00	226.60	-	-	-	-	25.00	226.60	100.50	151.10	-	-	-	-	100.50	151.10	5 ft - unidentified bedrock
	FH-B-310	1184951.4	1407582.5	251.51	0.00	251.51	8.00	243.51	-	-	-	-	8.00	243.51	>15	-	-	-	-	-	-	-	
	FH-B-311	1184966.8	1407697.6	251.44	0.00	251.44	15.00	236.44	-	-	-	-	15.00	236.44	>31	-	-	-	-	-	-	-	
	FH-B-312	1185018.8	1407639	251.37	0.00	251.37	10.00	241.37	-	-	-	-	10.00	241.37	>31	-	-	-	-	-	-	-	
	FH-B-6	1185284.1	1407567.5	250.49	0.00	250.49	8.00	242.49	-	-	-	-	8.00	242.49	107.80	142.69	-	-	-	-	107.80	142.69	10.1 ft - sandstone
	FH-B-7	1185032.6	1407446	251.47	0.00	251.47	6.00	245.47	-	-	-	-	6.00	245.47	107.00	144.47	-	-	-	-	108.10	143.37	10.9 ft - unidentified bedrock
	FH-B-8	1185094.7	1407680.6	250.78	0.00	250.78	50.60	200.18	-	-	-	-	50.60	200.18	99.60	151.18	-	-	-	-	99.60	151.18	10.4 ft - siltstone/shale
Dredge Probes Army Corp June-60	215.73+R	1185671.4	1407401.6	PROBE BORING - COMPLETE AT																	-	215.73	NO REFUSAL
	216.13+R	1185763.5	1407441.1	PROBE BORING - COMPLETE AT																	-	216.13	NO REFUSAL
	216.33+R	1185594.2	1407338.6	PROBE BORING - COMPLETE AT																	-	216.33	NO REFUSAL
	216.53+R	1185863.5	1407462.3	PROBE BORING - COMPLETE AT																	-	216.53	NO REFUSAL
	216.53+R	1186028.9	1407572.2	PROBE BORING - COMPLETE AT																	-	216.53	NO REFUSAL
	216.53+R	1186130	1407596.8	PROBE BORING - COMPLETE AT																	-	216.53	NO REFUSAL
	216.93+R	1185236.8	1407138.4	PROBE BORING - COMPLETE AT																	-	216.93	NO REFUSAL
	217.13+R	1185508	1407288.6	PROBE BORING - COMPLETE AT																	-	217.13	NO REFUSAL
	217.33R	1185943.2	1407519.3	PROBE BORING - COMPLETE AT																	-	217.33	NO REFUSAL
	218.33R	1185678.2	1407389.9	PROBE BORING - REFUSAL AT																	-	218.33	
	218.43R	1185767.1	1407434.1	PROBE BORING - REFUSAL AT																	-	218.43	
	218.83R	1186036.9	1407553.9	PROBE BORING - REFUSAL AT																	-	218.83	
	218.93R	1185602.2	1407319	PROBE BORING - REFUSAL AT																	-	218.93	
	219.03R	1185868.1	1407454.1	PROBE BORING - REFUSAL AT																	-	219.03	
	219.13R	1185947.9	1407510.8	PROBE BORING - REFUSAL AT																	-	219.13	
	219.83R	1185952.4	1407502.5	PROBE BORING - REFUSAL AT																	-	219.83	
	220.53+R	1185870.6	1407449.5	PROBE BORING - COMPLETE AT																	-	220.53	NO REFUSAL
	220.53R	1185681.1	1407383.8	PROBE BORING - REFUSAL AT																	-	220.53	
	221.83R	1185597	1407331.5	PROBE BORING - REFUSAL AT																	-	221.83	
	221.83R	1186032.2	1407563.7	PROBE BORING - REFUSAL AT																	-	221.83	
	222.43R	1185510.6	1407280.5	PROBE BORING - REFUSAL AT																	-	222.43	
	224.23R	1185687.5	1407373.1	PROBE BORING - REFUSAL AT																	-	224.23	
	224.53R	1185776.6	1407416.2	PROBE BORING - REFUSAL AT																	-	224.53	
	226.13R	1185516.1	1407268.7	PROBE BORING - REFUSAL AT																	-	226.13	
	226.83R	1185782.9	1407404.9	PROBE BORING - REFUSAL AT																	-	226.83	
	227.63R	1185691.3	1407365.7	PROBE BORING - REFUSAL AT																	-	227.63	
	228.03R	1186039.4	1407547.4	PROBE BORING - REFUSAL AT																	-	228.03	

Haley & Aldrich of New York

Project: Port of Rochester
Project #: 70819-000
Client: LaBella Associates, P.C.
Subject: Earlier Explorations

TABLE II - CONDITIONS ENCOUNTERED IN EARLIER SUBSURFACE INVESTIGATIONS

Date: January-00
Created By: BEBa
Checked By SEW

INVESTIGATION TITLE	EXPLORATION IDENTIFICATION	NORTHING	EASTING	SURFACE ELEVATION (ft)	FILL				ALLUVIUM				LACUSTRINE				GLACIAL TILL				BEDROCK / REFUSAL		ROCK DESCRIPTION
					TOP		BOTTOM		TOP		BOTTOM		TOP		BOTTOM		TOP		BOTTOM		TOP		
					DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	
	231.63R	1185773.1	1407422.9		PROBE BORING - REFUSAL AT																-	231.63	
Dredge Borings Army Corp June-60	P-4	1185026.3	1407241.6	234.53	-	-	-	-	0.00	234.53	>14	-	-	-	-	-	-	-	-	-	-	-	
	P-6	1187540.1	1409019.4	238.23	-	-	-	-	0.00	238.23	>14	-	-	-	-	-	-	-	-	-	-	-	
	P-8	1190920.2	1411001.4	225.43	-	-	-	-	0.00	225.43	>4	-	-	-	-	-	-	-	-	-	-	-	
Wave Surge Protection Project Army Corp April-95	D73-1	1189385.8	1409593.7	234.53	0.00	234.53	1.70	232.83	1.70	232.83	>25.5	-	-	-	-	-	-	-	-	-	-	-	
	D79-2	1189424.1	1410130.3	236.63	0.00	236.63	7.50	229.13	7.50	229.13	17.50	219.13	17.50	219.13	>24	-	-	-	-	-	-	-	
	D79-3	1188575.3	1409061.3	241.03	0.00	241.03	7.50	233.53	7.50	233.53	>30	-	-	-	-	-	-	-	-	-	-	-	
	D79-4	1188770.4	1409129.6	252.33	0.00	252.33	8.20	244.13	8.20	244.13	>40.5	-	-	-	-	-	-	-	-	-	-	-	
	D79-5	1188389.7	1408888.8	250.93	0.00	250.93	7.10	243.83	7.10	243.83	35.20	215.73	35.20	215.73	>39	-	-	-	-	-	-	-	
	D85-2	1188299.9	1409437.4	239.83	0.00	239.83	4.90	234.93	4.90	234.93	13.70	226.13	13.70	226.13	43.30	196.53	-	-	-	-	43.30	196.53	1.2 ft - weathered rock
	D94-1	1189791	1409857.1	224.33	-	-	-	-	0.00	224.33	>33	-	-	-	-	-	-	-	-	-	-	-	
	D94-2	1188803	1409713.1	232.33	-	-	-	-	0.00	232.33	>19	-	-	-	-	-	-	-	-	-	-	-	
	D94-3	1187280	1408721.1	238.33	-	-	-	-	0.00	238.33	>25	-	-	-	-	-	-	-	-	-	-	-	
Rehabilitation of East Pier Army Corp June-85	D79-1	1189852.8	1409867.3	234.83	0.00	234.83	3.00	231.83	3.00	231.83	12.00	222.83	12.00	222.83	>22.5	-	-	-	-	-	-	-	
	D79-6	1188378.5	1408924.2	238.43	-	-	-	-	0.00	238.43	>27	-	-	-	-	-	-	-	-	-	-	-	
	D85-1	1188380.4	1408901.3	240.03	-	-	-	-	0.00	240.03	7.80	232.23	7.80	232.23	35.70	204.33	-	-	-	-	35.70	204.33	2.1 ft - weathered rock
	D85-3	1188437.7	1408965.3	237.73	0.00	237.73	2.40	235.33	2.40	235.33	7.90	229.83	7.90	229.83	33.20	204.53	-	-	-	-	33.20	204.53	10.6 ft - weathered rock
	P73-2	1189557.4	1409673.7	236.83	PROBE BORING - COMPLETE AT																16.00	220.83	NO REFUSAL
	P73-7	1189508.4	1409641.1	236.33	PROBE BORING - COMPLETE AT																14.00	222.33	NO REFUSAL
	P79-10	1189835.8	1409856.8	235.43	PROBE BORING - COMPLETE AT																18.10	217.33	NO REFUSAL
	P79-11	1189752.3	1409801.7	235.73	PROBE BORING - REFUSAL AT																11.00	224.73	
	P79-12	1189668.9	1409746.6	235.83	PROBE BORING - COMPLETE AT																18.50	217.33	NO REFUSAL
	P79-13	1189585.2	1409691.9	236.03	PROBE BORING - REFUSAL AT																12.50	223.53	
	P79-14	1189518.4	1409647.8	237.03	PROBE BORING - REFUSAL AT																17.00	220.03	
	P79-15	1189418.2	1409581.8	234.53	PROBE BORING - COMPLETE AT																17.20	217.33	NO REFUSAL
	P79-16	1189334.4	1409527.3	236.93	PROBE BORING - COMPLETE AT																19.60	217.33	NO REFUSAL
	P79-17	1189251	1409472	237.13	PROBE BORING - COMPLETE AT																19.80	217.33	NO REFUSAL
	P79-18	1189167.5	1409417	235.23	PROBE BORING - COMPLETE AT																17.90	217.33	NO REFUSAL
	P79-19	1190073.1	1410042	234.53	PROBE BORING - REFUSAL AT																4.40	230.13	
	P79-20	1189990.3	1409985.8	236.93	PROBE BORING - COMPLETE AT																19.60	217.33	NO REFUSAL
	P79-21	1189906.6	1409931.2	236.93	PROBE BORING - REFUSAL AT																5.80	231.13	
	P79-22	1189823	1409876.2	236.23	PROBE BORING - COMPLETE AT																18.90	217.33	NO REFUSAL
	P79-23	1189739.7	1409820.9	237.23	PROBE BORING - COMPLETE AT																19.90	217.33	NO REFUSAL
	P79-24	1189655.9	1409766.4	236.53	PROBE BORING - COMPLETE AT																19.20	217.33	NO REFUSAL
	P79-25	1189572.7	1409710.9	236.23	PROBE BORING - COMPLETE AT																18.90	217.33	NO REFUSAL
	P79-26	1189487.8	1409656.2	236.63	PROBE BORING - COMPLETE AT																19.30	217.33	NO REFUSAL
	P79-27	1189405.1	1409601.7	237.23	PROBE BORING - COMPLETE AT																19.90	217.33	NO REFUSAL
	P79-28	1189321.7	1409546.6	238.73	PROBE BORING - REFUSAL AT																0.80	237.93	
	P79-29	1189237.8	1409492.1	240.43	PROBE BORING - REFUSAL AT																3.30	237.13	
	P79-30	1189154.4	1409437	242.13	PROBE BORING - COMPLETE AT																24.90	217.23	NO REFUSAL
	P79-31	1188857.6	1409214.8	243.03	PROBE BORING - REFUSAL AT																0.00	243.03	
	P79-32	1188773.7	1409160.4	239.73	PROBE BORING - REFUSAL AT																0.70	239.03	
	P79-33	1188690	1409105.7	240.23	PROBE BORING - REFUSAL AT																3.40	236.83	
	P79-34	1188605.6	1409052.1	240.83	PROBE BORING - COMPLETE AT																23.50	217.33	NO REFUSAL
	P79-35	1188521.5	1408998	241.73	PROBE BORING - REFUSAL AT																1.30	240.43	
	P79-36	1188429.2	1408936.3	241.83	PROBE BORING - REFUSAL AT																21.40	220.43	
	P79-37	1188353.8	1408888.9	242.63	PROBE BORING - REFUSAL AT																2.20	240.43	
	P79-48	1189363.3	1409574.3	238.43	PROBE BORING - COMPLETE AT																24.20	214.23	NO REFUSAL
	P79-49	1189446.7	1409629.5	236.03	PROBE BORING - COMPLETE AT																18.70	217.33	NO REFUSAL
	P79-50	1189530.2	1409684.4	235.93	PROBE BORING - COMPLETE AT																18.60	217.33	NO REFUSAL
	P79-51	1189614.2	1409738.8	236.93	PROBE BORING - REFUSAL AT																5.20	231.73	
	P79-52	1189697.3	1409794.3	235.43	PROBE BORING - COMPLETE AT																18.10	217.33	NO REFUSAL
	P79-53	1189781	1409849.1	235.83	PROBE BORING - COMPLETE AT																18.50	217.33	NO REFUSAL
	P79-54	1189864.7	1409903.8	236.43	PROBE BORING - REFUSAL AT																3.50	232.93	
	P79-55	1189898.2	1409925.8	237.23	PROBE BORING - REFUSAL AT																2.00	235.23	
	P79-56	1189948.3	1409958.7	236.43	PROBE BORING - COMPLETE AT																19.10	217.33	NO REFUSAL
	P79-57	1190031.9	1410013.6	235.13	PROBE BORING - COMPLETE AT																17.80	217.33	NO REFUSAL
	P79-58	1190065.2	1410035.8	235.93	PROBE BORING - COMPLETE AT																18.60	217.33	NO REFUSAL
	P79-59	1190078.4	1410015.7	233.73	PROBE BORING - COMPLETE AT																16.40	217.33	NO REFUSAL
	P79-60	1190031.9	1410013.6	232.83	PROBE BORING - COMPLETE AT																15.50	217.33	NO REFUSAL
	P79-61	1189961.4	1409938.7	232.73	PROBE BORING - COMPLETE AT																15.40	217.33	NO REFUSAL
	P79-62	1189877.7	1409884	234.83	PROBE BORING - COMPLETE AT																17.50	217.33	NO REFUSAL
	P79-63	1189794.2	1409829	236.53	PROBE BORING - COMPLETE AT																19.20	217.33	NO REFUSAL
	P79-64	1189744.1	1409796.1	235.63	PROBE BORING - COMPLETE AT																18.30	217.33	NO REFUSAL
	P79-65	1189710.6	1409774.1	235.03	PROBE BORING - COMPLETE AT																17.70	217.33	NO REFUSAL
	P79-66	1189627.2	1409719	234.33	PROBE BORING - COMPLETE AT																17.00	217.33	NO REFUSAL
	P79-67	1189576.9	1409686.3	236.23	PROBE BORING - COMPLETE AT																18.90	217.33	NO REFUSAL
	P79-68	1189543.5	1409664.2	235.43	PROBE BORING - COMPLETE AT																18.10	217.33	NO REFUSAL
	P79-69	1189459.8	1409609.5	234.73	PROBE BORING - COMPLETE AT																17.40	217.33	NO REFUSAL
	P79-7	1190087.1	1410020.6	232.83	PROBE BORING - REFUSAL AT																1.20	231.63	

Haley & Aldrich of New York

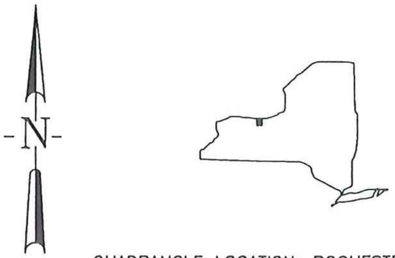
Project: Port of Rochester
Project #: 70819-000
Client: LaBella Associates, P.C.
Subject: Earlier Explorations

TABLE II - CONDITIONS ENCOUNTERED IN EARLIER SUBSURFACE INVESTIGATIONS

Date: January-00
Created By: BEBa
Checked By SEW

INVESTIGATION TITLE	EXPLORATION IDENTIFICATION	NORTHING	EASTING	SURFACE ELEVATION (ft)	FILL				ALLUVIUM				LACUSTRINE				GLACIAL TILL				BEDROCK / REFUSAL		ROCK DESCRIPTION
					TOP		BOTTOM		TOP		BOTTOM		TOP		BOTTOM		TOP		BOTTOM		TOP		
					DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)	DEPTH (ft)	ELEV. (ft)		
	P79-70	1189376.4	1409554.4	237.23	PROBE BORING - COMPLETE AT																25.00	212.23	NO REFUSAL
	P79-71	1189292.7	1409499.6	236.13	PROBE BORING - COMPLETE AT																18.80	217.33	NO REFUSAL
	P79-72	1189209.3	1409444.5	236.83	PROBE BORING - COMPLETE AT																19.50	217.33	NO REFUSAL
	P79-73	1188849.4	1409209.2	241.03	PROBE BORING - REFUSAL AT																0.30	240.73	
	P79-74	1188815.7	1409187.6	239.83	PROBE BORING - COMPLETE AT																22.50	217.33	NO REFUSAL
	P79-75	1188769.4	1409157.9	239.83	PROBE BORING - COMPLETE AT																22.50	217.33	NO REFUSAL
	P79-76	1188731.8	1409133.2	240.83	PROBE BORING - REFUSAL AT																2.10	238.73	
	P79-77	1188685.7	1409103.1	240.13	PROBE BORING - COMPLETE AT																22.80	217.33	NO REFUSAL
	P79-78	1188648	1409078.7	240.33	PROBE BORING - COMPLETE AT																23.00	217.33	NO REFUSAL
	P79-79	1188563.8	1409024.7	241.53	PROBE BORING - COMPLETE AT																24.20	217.33	NO REFUSAL
	P79-8	1190002.9	1409966.6	232.23	PROBE BORING - COMPLETE AT																14.90	217.33	NO REFUSAL
	P79-80	1188525.9	1409000.3	241.13	PROBE BORING - REFUSAL AT																1.40	239.73	
	P79-81	1188413.4	1408925.7	240.63	PROBE BORING - COMPLETE AT																23.30	217.33	NO REFUSAL
	P79-82	1188396.4	1408915.2	241.83	PROBE BORING - COMPLETE AT																24.50	217.33	NO REFUSAL
	P79-83	1188349.8	1408886	242.53	PROBE BORING - REFUSAL AT																3.40	239.13	
	P79-84	1188604.9	1409071.3	240.63	PROBE BORING - COMPLETE AT																30.00	210.63	NO REFUSAL
	P79-85	1188520.8	1409017.3	240.43	PROBE BORING - COMPLETE AT																34.00	206.43	NO REFUSAL
	P79-86	1188466.8	1408981.1	239.23	PROBE BORING - COMPLETE AT																27.50	211.73	NO REFUSAL
	P79-87	1188432.4	1408958.8	239.53	PROBE BORING - COMPLETE AT																26.50	213.03	NO REFUSAL
	P79-88	1188357.8	1408910.2	239.13	PROBE BORING - COMPLETE AT																28.50	210.63	NO REFUSAL
	P79-89	1188333.5	1408894.4	238.33	PROBE BORING - COMPLETE AT																30.00	208.33	NO REFUSAL
	P79-9	1189919.4	1409911.6	234.73	PROBE BORING - COMPLETE AT																17.40	217.33	NO REFUSAL
	P79-90	1188294	1408867.1	240.93	PROBE BORING - COMPLETE AT																30.50	210.43	NO REFUSAL
	SS-70100	1188675.7	1409091.1	249.23	0.00	249.23	7.50	241.73	7.50	241.73	31.00	218.23	31.00	218.23	>45	-	-	-	-	-	-	-	
Lake Avenue	LA-B-1	1185979.4	1406564.7	285	0.00		>8.1	277-		277-													
Improvement Project	LA-B-2	1186329.1	1406742.5	283	0.00		3.50	280	3.50	280	>8.1												
Vanderhorst	LA-B-3	1186687.1	1406924	282	0.00		5.00	277	5.00	277	>8.1												
March-99	LA-B-4	1188193.8	1407686	273	0.00		5.00	268	5.00	268	>8.2												
	LA-B-5	1188776.2	1407962.7	253	0.00		>8.0	245-		245-													
	LA-B-6	1188968.2	1407675.7	254	0.00		>8.1	246-		246-													
	LA-B-7	1187677.2	1407386.3	280	0.00		3.30	277	3.30	277	>8.3												
	LA-B-8	1187249.8	1407158.7	288	0.00		>8.2	280-		280-													
	LA-A-1	1187047.5	1407104.6	282	0.00		>3.2	279-		279-													
	LA-A-2	1187490.9	1407328.6	287	0.00		3.50	284	3.50	284	>4.1												
	LA-A-3	1187842.2	1407504.5	277	0.00		1.10	276	1.10	276	>3.1												
	LA-A-4	1188559	1407869.1	259	0.00		1.20	258	1.20	258	>3.2												
	LA-A-5	1188885.2	1407786	253	0.00		>3.0	250-		250-													
	LA-A-6	1188388.1	1407733.9	267	0.00		>3.0	264-		264-													
	LA-A-7	1188036.7	1407556.8	276	0.00		1.00	275	1.00	275	>3.0												
	LA-A-8	1186885.8	1406974.2	282	0.00		2.10	280	2.10	280	>3.1												
	LA-A-9	1186531.1	1406798.6	282	0.00		1.00	281	1.00	281	>3.0												
	LA-A-10	1186175.1	1406625.5	284	0.00		>3.0	281-		281-													

NOTES: 1. ALL ELEVATIONS HAVE BEEN CONVERTED TO CITY OF ROCHESTER DATUM.
2. PROBE REFUSAL IS NOT A GUARANTEE OF BEDROCK DEPTH.
3. NORTHINGS AND EASTINGS ARE BASED ON '83 GRID



QUADRANGLE LOCATION: ROCHESTER EAST, N.Y.

HALEY & ALDRICH

UNDERGROUND ENGINEERING & ENVIRONMENTAL SOLUTIONS

PORT OF ROCHESTER IMPROVEMENTS
AND HARBOR FERRY TERMINAL
ROCHESTER, NY

GEOTECHNICAL CHARACTERIZATION

PROJECT LOCUS

SCALE: AS SHOWN

MARCH 2000

70819-000

FIGURE 1

See Electronic Copy for Plans

APPENDIX A

Records of Recent (2000) Subsurface Explorations

A-1 Logs of Test Pits by Bourne Consulting Engineers
A-2 Logs of Test Pits by LaBella Associates
A-3 Logs of Test Borings by Haley & Aldrich
A-4 Observation Well Installation Reports by Haley & Aldrich

H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists	TEST PIT REPORT	TEST PIT NO. TP#1 FILE NO. 70819-000

PROJECT: Port of Rochester - Charlotte Beach, New York
LOCATION: Old General Cargo Terminal
CLIENT: Labella Associates (City of Rochester)
CONTRACTOR: Hickory Hill Construction
EQUIPMENT USED: John Deer 410D

LOCATION: Adjacent to Boat launch
ELEVATION: Not Surveyed
EXPLORATION DATE: 11 Jan 2000
H&A REP.: R. Dedrick

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA CHANGE	DESCRIPTION OF MATERIALS	REMARKS
			0.5ft	Asphalt	(1) Cobbles composition unknown. Irridescent blue & sulfer smell. Possible Foundery biproduct.
				Grey medium to coarse sandy GRAVEL, Little silt. Dry	
2			2.0ft	- Crushed Stone -	
	obtained by Labella Associates			Brown red fine to coarse SAND. Some cobbles, Some coarse gravel. Moist	(2) More dense composition of cobbles located adjacent to river-wall
4					(3) Tie-rods located adjacent to triangular concrete forms.
6					
8					
			9.5ft	Top of Pile cap - Concrete Structure	
10				BOE - 9.5ft	
				* exploration ended due to influx of water	
12					

WATER LEVEL		
DATE	TIME*	DEPTH FT
11Jan00	30min	9.5ft

* Hrs after completed

APPROXIMATE PIT DIMENSIONS AT SURFACE

LENGTH 25 feet WIDTH 20 feet

BOULDERS

8" to 18" DIAMETER: No. 50+ - Vol. cu ft

Over 18" DIAMETER: No. 10+ - Vol. cu ft

SUMMARY

DEPTH: 9.5 ft
JAR SAMPLES: -
BAG SAMPLES: -
WATER LEVEL: Not Present
TEST PIT NO. TP #1

H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists	TEST PIT REPORT	TEST PIT NO. TP# 2 FILE NO. 70819-000

PROJECT:
LOCATION:
CLIENT:
CONTRACTOR:
EQUIPMENT USED:

LOCATION: Between Buildings
ELEVATION: Not Surveyed
EXPLORATION DATE: 12 Jan 2000
H&A REP.: R. Dedrick

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA CHANGE	DESCRIPTION OF MATERIALS	REMARKS
			0.3ft	Asphalt	① Located between building above dead man anchor
			1.0ft	Crushed Stone	
2	Obtained by Labella Associates			Brown silty fine to coarse SAND. Little coarse gravel. Trace cobbles Trace clay. Moist. Pockets of grey/green discolored soil. Pocket of crushed brick.	② 30 ft swing tie from corner of both buildings to the rod
4					③ Completed in 2 sections. Similar cross sections, However, 2 pit (closest to river) encountered railroad ties & steel @ ~ 0.5ft
6					
			7.0ft	Located Tie-line & Anchor	
				BOE = 7.0ft	
8					
10					
12					

WATER LEVEL		
DATE	TIME*	DEPTH FT
12 Jan 00	15 min	6.75ft

* Hrs after completed

APPROXIMATE PIT DIMENSIONS AT SURFACE

LENGTH 50 feet WIDTH 10 feet

BOULDERS

8" to 18" DIAMETER: No. 15+ = Vol. cu ft

Over 18" DIAMETER: No. 0 = Vol. cu ft

SUMMARY

DEPTH: 7.0ft
JAR SAMPLES: —
BAG SAMPLES: —
WATER LEVEL: 6.75ft
TEST PIT NO. TP# 2

H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists	TEST PIT REPORT	TEST PIT NO. TP# 3a FILE NO.

PROJECT:
LOCATION:
CLIENT:
CONTRACTOR:
EQUIPMENT USED:

LOCATION: South of Paddle boat House
ELEVATION: Not Surveyed
EXPLORATION DATE: 12 Jan 2000
H&A REP.: R. Dedrick

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA CHANGE	DESCRIPTION OF MATERIALS	REMARKS
			0.3ft	Asphalt	① Encountered railroad tracks approximately 0.5ft below groundsurface 7.0ft inland of riverwall.
			1.0ft	Crushed Stone	
2	Obtained by Labella Associates			Light brown fine to coarse SAND. Some silt. Moist.	② 2nd set of railroad track similar to first set located approximately 20ft in from river wall
4					
6					
8					
			9.5ft	Located top of pile cap. BOE = 9.5	
10				* exploration ended due to influx of water	
12					

WATER LEVEL		
DATE	TIME*	DEPTH FT
12Jan 00	30min	9.5ft

* Hrs after completed

APPROXIMATE PIT DIMENSIONS AT SURFACE

LENGTH 20 feet WIDTH 15 feet

BOULDERS

8" to 18" DIAMETER: No. ∅ = Vol. cu ft

Over 18" DIAMETER: No. ∅ = Vol. cu ft

SUMMARY

DEPTH: 9.5 ft
JAR SAMPLES: –
BAG SAMPLES: –
WATER LEVEL: 9.5ft
TEST PIT NO. TP# 3a

H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists	TEST PIT REPORT	TEST PIT NO TP#3b FILE NO.

PROJECT:
LOCATION:
CLIENT:
CONTRACTOR:
EQUIPMENT USED:

LOCATION: Southwest of Paddleboat House
ELEVATION: Not surveyed
EXPLORATION DATE: 13 Jan 2000
H&A REP.: R. Dedrick

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA CHANGE	DESCRIPTION OF MATERIALS	REMARKS
			0.2ft	Concrete Foundation	① Strata change @ 5.0ft is even with top of Sheetpile on deadmen Anchor
			0.7ft	Crushed Stone / Asphalt Mixture	
2				Brown fine to coarse SAND. Some silt. Trace coarse gravel, Moist.	
4	No Samples Taken				
			5.0ft		
6				Dark brown grey silty fine to coarse SAND. Some coarse gravel. Little cobbles. Concrete debris.	
8					
10			10.0ft	Located Tie-rod/Bottom of anchor BOE = 10.0 ft	
12					

WATER LEVEL		
DATE	TIME*	DEPTH FT
12 Jan 00	30min	9.5 ft

* Hrs after completed

APPROXIMATE PIT DIMENSIONS AT SURFACE

LENGTH 20 feet WIDTH 15 feet

BOULDERS

8" to 18" DIAMETER: No. 20+ = Vol. cu ft

Over 18" DIAMETER: No. Ø = Vol. cu ft

SUMMARY

DEPTH: 10.0 ft
JAR SAMPLES: —
BAG SAMPLES: —
WATER LEVEL: 9.5 ft
TEST PIT NO. TP#3b

H&A OF NEW YORK, ROCHESTER, NEW YORK Consulting Geotechnical Engineers, Geologists and Hydrogeologists	TEST PIT REPORT	TEST PIT NO. TP#4 FILE NO. 70819-000

PROJECT:
LOCATION:
CLIENT:
CONTRACTOR:
EQUIPMENT USED:

LOCATION: North of paddleboat house
ELEVATION: Not Surveyed
EXPLORATION DATE: 13 Jan 99
H&A REP.: R. Dedrick

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	STRATA CHANGE	DESCRIPTION OF MATERIALS	REMARKS
			0.8ft	Organic	① Located north of paddleboat house at intersection of 2-deadmen anchors.
2				Brown silty fine to coarse SAND. Little gravel. Little cobbles. Brick debris.	
			4.0	Top of Sheet Pile	
4				< Left site to return to office >	
6					
8					
10					
12					

WATER LEVEL			APPROXIMATE PIT DIMENSIONS AT SURFACE	SUMMARY
DATE	TIME*	DEPTH FT	LENGTH feet WIDTH feet	DEPTH: Left before Completion
				JAR SAMPLES: –
			BOULDERS	BAG SAMPLES: –
			8" to 18" DIAMETER: No. = Vol. cu ft	WATER LEVEL: –
* Hrs after completed			Over 18" DIAMETER: No. = Vol. cu ft	TEST PIT NO. TP#4

TEST PIT REPORT -

ABELLA ASSOCIATES, P.C. 300 STATE STREET	TEST PIT # 1 PROJECT # 99150 DATE: DEP
PROJECT: PART LOCATION: Parking lot @ P.R. TURN TABLE CLIENT: CONTRACTOR: Hickory Hills EQUIPMENT: BACK-HOE	ELEVATION: LABELLA REP: DEP

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Blacktop RED/Black CINDERS MISC. FILL	NP odor 0
2			MED/COURSE BROWN SAND	
3			← Railroad TIES	0
4				0
5			~ WATER INFILTRATION (PERCHED?/ACTUAL?)	0
6			running SAND/GW @ 6'	
7				
8				
9				
10				
11				
12				
13				

WATER LEVEL		
DATE	TIME*	DEPTH

*Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

BELLA ASSOCIATES, P.C.
300 STATE STREET

TEST PIT # 2
PROJECT # 99150
DATE: 2/28/00

OJECT:
LOCATION:
ENT:
NTRACTOR:
EQUIPMENT: BACK-HOE

ELEVATION:
LABELLA REP: DE

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			BLACKTOP RED SILT/SAND with gravel	NS ODOR 0
2			GRAY MED/COURSE SAND	0
3			MED GRAVEL REFUSED?/ACTUAL GW	
4				0
5			STANDING GW — TERM	
6				
7				
8				
9				
10				
11				
12				
13				

WATER LEVEL		
ATE	TIME*	DEPTH

* Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

ABELLA ASSOCIATES, P.C. 300 STATE STREET	TEST PIT # 3 PROJECT # 9950 DATE: 2/28/00
ROJECT: LOCATION: LIENT: ONTRACTOR: EQUIPMENT: BACK-HOE	ELEVATION: LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Blacktop FILL: f/m Sand w/ Gravel Brown/gray sand	0 No Odor
2				
3				0
4				No Odor
5				0
6			some gravel	
7			Running Sand / GW	0
8				
9				
10				
11				
12				
13				

WATER LEVEL		
DATE	TIME*	DEPTH

* Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

LABELLA ASSOCIATES, P.C.
300 STATE STREET

TEST PIT # 4
PROJECT # 99150
DATE: 2/28/00

PROJECT:
LOCATION:
CLIENT:
CONTRACTOR:
EQUIPMENT: BACK-HOE

ELEVATION:
LABELLA REP: DFD

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Blacktop	No odor
2			White coal? Misc. fill — Some BLUE slag (Sulfur odor)	0
3			RED silt/sand	0
4			Brown red sand // LAYER of Slag (dense) \\	
5				No odor
6			- spraying H_2O -	0
7				6
8				
9				
10				
11				
12				
13				

WATER LEVEL		
DATE	TIME*	DEPTH

* Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

BELLA ASSOCIATES, P.C.
300 STATE STREET

TEST PIT # 5
PROJECT # 99150
DATE: 2/28/00

OJECT:
LOCATION:
IENT:
ONTRACTOR:
EQUIPMENT: BACK-HOE

ELEVATION:
LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Grass Silt/sand some gravel	No odor
2			Brown sand	
3				
4			Silt sand some clay	0
5				
6				
7			clay	0
8				
9			fine sand some gravel	
10			some sandstone	0
11				
12				
13				

WATER LEVEL

DATE	TIME*	DEPTH

Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

LABELLA ASSOCIATES, P.C. 300 STATE STREET	TEST PIT # 6 PROJECT # 99150 DATE: 2/28/00
PROJECT: LOCATION: CLIENT: CONTRACTOR: EQUIPMENT: BACK-HOE	ELEVATION: LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Grass Red silt GRAVEL misc. fill	
2			Blue "Buffalo Rocks" misc FILL	
3			↓	
4			Term @ 4' DUE TO SLAG	
5			misc. white "slag" (sample)	
6				
7				
8				
9				
10				
11				
12				
13				

WATER LEVEL		
DATE	TIME*	DEPTH

* Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

ABELLA ASSOCIATES, P.C. 300 STATE STREET	TEST PIT # 7 PROJECT # 99150 DATE: 2/29/00
ROJECT: LOCATION: LIENT: ONTRACTOR: EQUIPMENT: BACK-HOE	ELEVATION: LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
			Grass misc silt/gravel	
1				sulfur odor 0
2			Blue slag misc Fill - Brick/slag/coke	
3			- Black layer sample	0
4				
5			- H_2O -	0
6				0
7			- misc. Fill	
8				
9				
10				
11				
12				
13				

WATER LEVEL			APPROXIMATE TEST PIT DIMENSIONS AT SURFACE
DATE	TIME*	DEPTH	WIDTH X LENGTH =

* Hrs. after completion

TEST PIT #1

TEST PIT REPORT

ELLA ASSOCIATES, P.C. 300 STATE STREET	TEST PIT # 8 PROJECT # 99150 DATE: 2/28/00
OJECT: LOCATION: ENT: NTRACTOR: EQUIPMENT: BACK-HOE	ELEVATION: LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Gerss Misc. Fill - slag / brick	sulfur odor
2			Black FINE ASH/silt ?	
3			slag. misc. Fill	
4				
5			GW @	
6				
7				
8				
9				
10				
11				
12				
13				

WATER LEVEL		
TE	TIME*	DEPTH

hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

BELLA ASSOCIATES, P.C.
300 STATE STREET

TEST PIT # 9
PROJECT # 99150
DATE: 2/28/00

OJECT:
LOCATION:
IENT:
NTRACTOR:
EQUIPMENT: BACK-HOE

ELEVATION:
LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			GRASS SOIL	0
2			Sample	Sulfur odor 0
3			RED SLAG - Fill / misc + BLUE SLAG	
4				
5			ASH (Sample)	c
6				Sulfur
7				0
8				
9				
10				e
11			STABILIZED WATER (No sheen)	
12				
13				

WATER LEVEL		
ATE	TIME*	DEPTH

Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

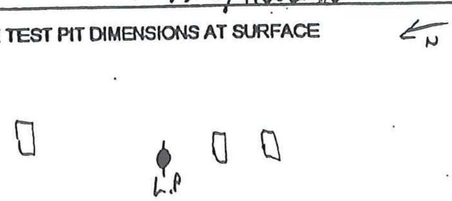
TEST PIT #1

TEST PIT REPORT

LABELLA ASSOCIATES, P.C. 300 STATE STREET	TEST PIT # 10 PROJECT # 99150 DATE: 2/28/00
PROJECT: LOCATION: CLIENT: CONTRACTOR: EQUIPMENT: BACK-HOE	ELEVATION: LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS	
			Attempt 1: Grass, Sand/silt; Conc. Slab ~3' 2: Grass, Sand/silt; slag - red/blue; Large Frag 3'; Conc. ~5' 3: Grass, Gravel; Conc. ~1.5' 4: Grass, silt/Fill		
1			Red silt ? Fill	sulfur	0
2					
3			Black cinders fill		
4					
5			Brown sand		0
6			Gray f. sand - firm	No odor	
7					0
8			Brown sand		
9					
10					0
11					
12			(No standing GW)		0
13			Hard sand/Till layer		

WATER LEVEL			APPROXIMATE TEST PIT DIMENSIONS AT SURFACE	
DATE	TIME*	DEPTH	WIDTH X LENGTH =	



* Hrs. after completion

TEST PIT #1

TEST PIT REPORT

LABELLA ASSOCIATES, P.C. 300 STATE STREET	TEST PIT # 11 PROJECT # 99150 DATE: 2/28/00
PROJECT: LOCATION: CLIENT: CONTRACTOR: EQUIPMENT: BACK-HOE	ELEVATION: LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Grass silt/Sand Brown (some debris/conc. slabs) ↓	No odor ↓ — 0
2				
3				0
4				
5				
6				0
7				
8				0
9				
10			Gray silt (dense) / Clay ↓	
11				0
12				
13				

WATER LEVEL			APPROXIMATE TEST PIT DIMENSIONS AT SURFACE
DATE	TIME*	DEPTH	WIDTH X LENGTH =

* Hrs. after completion

TEST PIT #1

TEST PIT REPORT

BELLA ASSOCIATES, P.C.
300 STATE STREET

TEST PIT # 12
PROJECT # 9915
DATE: 2/28/05

OJECT:
LOCATION:
IENT:
NTRACTOR:
EQUIPMENT: BACK-HOE

ELEVATION:
LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Grass Brick/Rock Frag. Misc. Fill Blue/Black slag Conc. Slab	Grass silt misc. slag Brick Brick/Conc. Rubble
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

WATER LEVEL		
ATE	TIME*	DEPTH

* Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

ABELLA ASSOCIATES, P.C. 300 STATE STREET	TEST PIT # 13 PROJECT # 99150 DATE: 2/29/00
PROJECT: LOCATION: CLIENT: CONTRACTOR: EQUIPMENT: BACK-HOE	ELEVATION: LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
			Gravel/sub-base	
1			silt/sand w/ gravel	NO odor 0
			FIRM/DENSE HARD fine SAND ↓	↓
2				
3			Brick/Conc.	0
4			Brown sand ↓	
5				0
6				
7				
			Black Cinders ↓	
8				
9			Conc. slab.	↓
10				
11				
12				
13				

WATER LEVEL			APPROXIMATE TEST PIT DIMENSIONS AT SURFACE	
DATE	TIME*	DEPTH	WIDTH X LENGTH =	
* Hrs. after completion				TEST PIT #1

TEST PIT REPORT

LABELLA ASSOCIATES, P.C. 300 STATE STREET	TEST PIT # 14 PROJECT # 99150 DATE: 2/29/00
PROJECT: LOCATION: CLIENT: CONTRACTOR: EQUIPMENT: BACK-HOE	ELEVATION: LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS	
			Gravel - sub-base	NO odor	0
1			Misc - Fill (Slag, BLUE gravel, sand, Brick)		
2			↓	sulfur odor ↓	0
3					
4					0
5					
6					0
7			~ STANDING WATER —		
8					
9					
10					
11					
12					
13					

WATER LEVEL			APPROXIMATE TEST PIT DIMENSIONS AT SURFACE
DATE	TIME*	DEPTH	WIDTH X LENGTH =

* Hrs. after completion

TEST PIT #1

TEST PIT REPORT

ABELLA ASSOCIATES, P.C.
300 STATE STREET

TEST PIT # 15
PROJECT # 99150
DATE: 2/29/00

PROJECT:
LOCATION:
CLIENT:
CONTRACTOR:
EQUIPMENT: BACK-HOE

ELEVATION:
LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Gravel/sub-base silt/sand gravel (fill)	
2			conc. slab	
3			misc. slag. (white - sample) (iron - sample)	
4				
5				
6				
7				
8				
9			H_2O	
10				
11				
12				
13				

WATER LEVEL		
DATE	TIME*	DEPTH

* Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

BELLA ASSOCIATES, P.C.
300 STATE STREET

TEST PIT # 16
PROJECT # 99150
DATE: 9/29/00

OJECT:
LOCATION:
IENT:
NTRACTOR:
EQUIPMENT: BACK-HOE

ELEVATION:
LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Gravel silt/sand	Sulfur odor
2			misc. slag	
3				
4				
5				
6				
7			silty clay (NATIVE)	
8				NO odor
9				
10				
11				
12				
13				

FILL

WATER LEVEL		
ATE	TIME*	DEPTH

* Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

BELLA ASSOCIATES, P.C.
300 STATE STREET

TEST PIT # 1
PROJECT # 9915
DATE: 2/29/08

OJECT:
LOCATION:
IENT:
ONTRACTOR:
EQUIPMENT: BACK-HOE

ELEVATION:
LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Grass topsoil/silt med brown sand/silt ↓ Gray Blue clay (silty)	NO ODOR 0 0 0 0
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

WATER LEVEL		
DATE	TIME*	DEPTH

Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

;BELLA ASSOCIATES, P.C. 300 STATE STREET	TEST PIT # 18 PROJECT # 99150 DATE: 2/29/00
ROJECT: LOCATION: LIENT: ONTRACTOR: EQUIPMENT: BACK-HOE	ELEVATION: LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Gravel silt/sand - gravel	0
2				
3			Misc. slag white, blue, green	sulfur odor 0
4				
5				
6				0
7			STAND. WATER	
8				
9				
10				
11				
12				
13				

WATER LEVEL		
ATE	TIME*	DEPTH

* Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

BELLA ASSOCIATES, P.C. 300 STATE STREET	TEST PIT # 19 PROJECT # 9758 DATE: 2/25/00
ROJECT: LOCATION: LIENT: ONTRACTOR: EQUIPMENT: BACK-HOE	ELEVATION: LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Grass silt sand	
2				
3				
4			Dense slag - white/blue	
5			grnd. water - some seep	
6				
7				
8				
9				
10				
11				
12				
13				

WATER LEVEL			APPROXIMATE TEST PIT DIMENSIONS AT SURFACE	
DATE	TIME*	DEPTH	WIDTH X LENGTH =	

* Hrs. after completion

TEST PIT #1

TEST PIT REPORT

BELLA ASSOCIATES, P.C. 300 STATE STREET	TEST PIT # 20 PROJECT # 9915O DATE: 2/28/00
OJECT: LOCATION: IENT: NTRACTOR: EQUIPMENT: BACK-HOE	ELEVATION: LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Grass Silt/sand/topsoil RED COURSE SAND - WASTE FILL	NO ODOR 0
2				
3				0
4				
5			BROWN SILT/FINE SAND NO SLAG (Rocks)	
6				0
7				
8				0
9				
10				
11				
12				
13				

WATER LEVEL		
ATE	TIME*	DEPTH

*Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

BELLA ASSOCIATES, P.C.
300 STATE STREET

TEST PIT # 21
PROJECT # 9915O
DATE: 2/29/00

OJECT:
LOCATION:
IENT:
)NTRACTOR:
EQUIPMENT: BACK-HOE

ELEVATION:
LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS
1			Black top 2"	no odor 0
			Gravel (NOT sub-base)	
2			Gray MED/FINE SAND	creosote odor
			sample → creosote odor	
3				6
4				
			TIES	
5				6
			sample	
6			SLAG	6
7				
8				
9				
10				
11				
12				
13				

WATER LEVEL		
ATE	TIME*	DEPTH

Hrs. after completion

APPROXIMATE TEST PIT DIMENSIONS AT SURFACE

WIDTH X LENGTH =

TEST PIT #1

TEST PIT REPORT

LABELLA ASSOCIATES, P.C. 300 STATE STREET	TEST PIT # 22 PROJECT # 99150 DATE: 3/29/00
PROJECT: LOCATION: CLIENT: CONTRACTOR: EQUIPMENT: BACK-HOE	ELEVATION: LABELLA REP:

SCALE IN FEET	SAMPLE NUMBER	SAMPLE DEPTH RANGE	DESCRIPTION OF MATERIALS	REMARKS	
			Grass		
1			Silt/Sand Fill ↓	no odor	0
2			misc. slag frag - Blue/White ↓	Sulfur odor ↓	0
3					
4					0
5			conc/slag layer - Hoe Ran		
6			~ Standing Water - Sheen		0
7					
8					
9					
10					
11					
12					
13					

WATER LEVEL			APPROXIMATE TEST PIT DIMENSIONS AT SURFACE	
DATE	TIME*	DEPTH	WIDTH X LENGTH =	
* Hrs. after completion				TEST PIT #1

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-101

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**	23-May-00
DRILLER	L. TODD	**DATE FINISHED**	23-May-00

Elevation 251.8 ft **Datum** City

Boring Location See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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						CONCRETE
		26	S1	1.0		Very dense black brown gray silty fine to coarse SAND, some rock fragments,
		26	10"/12"	2.0		dry.
		9	S2	2.0		Medium dense black brown silty fine to coarse SAND, some rock fragments,
		10				moist.
		18				
		15	12"/24"	4.0		
		4	S3	4.0		Medium dense black brown yellow, silty fine to coarse SAND, some rock
		8				fragments, wet.
5		5				
		4	7"/24"	6.0		
		7	S4	6.0		Same.
		17				FILL
		18				
		17	10"/24"	8.0		
		100/.2	S5	8.0		Very dense black brown silty fine to coarse SAND, some rock fragments.
				8.2		Obstruction at 8.0 ft.
10						See Boring HA-101a
						(HA-101a offset 30' West of Original Location)
15						
20						
25						
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Summary

Overburden (Linear ft)	115
Rock Cored (Linear ft)	---
Number of Samples	18S

BORING NO. HA-101

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. **HA-101a**

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	7-Jun-00
DRILLER	L. TODD	DATE FINISHED	7-Jun-00

Elevation 251.8 ft | Datum City | Boring Location See Boring Location Plan

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

Rig Make & Model: ☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing: ☐ Driven ☐ 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						
						Augered to 5.0 ft.
5		5	S6	5.0		Loose gray brown fine to medium SAND, trace silt, organics, moist.
		5				
		3				ALLUVIUM
		5	14"/24"	7.0		
						Augered to 10.0 ft.
10		4	S7	10.0		Same, except wet.
		4				
		3				
		2	16"/24"	12.0		
15		1	S8	15.0		Medium dense gray brown fine to coarse SAND, some coarse gravel, wet.
		9				
		7				
		7	23"/24"	17.0		
20		11	S9	20.0		Same.
		10				
		11				
		14	20"/24"	22.0		
25		12	S10	25.0		Same, except loose.
		3				
		4				
		3	20"/24"	27.0		
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	115
Rock Cored (Linear ft)	---
Number of Samples	18S
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Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		9	S11	30.0		Loose gray brown silty fine to coarse SAND, trace gravel, wet.
		4				
		4				ALLUVIUM
		3	22"/24"	32.0		
35		2	S12	35.0		Same, except very loose.
		1				
		2				
		2	23"/24"	37.0		
40		1	S13	40.0		Very loose gray brown fine sandy SILT, little clay, organics, wet.
		1				
		2				
		3	22"/24"	42.0		
45		1	S14	45.0		Same, except no organics.
		2				
		2				
		3	18"/24"	47.0		
50		1	S15	50.0		Same.
		2				
		2				
		2	20"/24"	52.0		
55		1	S16	55.0		Same.
		2				
		3				
		5	20"/24"	57.0		
60		1	S17	60.0		Loose gray brown SILT, little clay, trace sand, wet.
		3				
		4				
		4	20"/24"	62.0		
65		1	S18	65.0		Same.
		2				
		2				
		4	23"/24"	67.0		
						(Augered to bedrock)
70						

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HALEY & ALDRICH

TEST BORING REPORT

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Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
						(Augered to bedrock - No samples recovered)
75						
80						
85						
90						
95						
100						
105						
110						

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Form #3001

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-101a

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
						(Encounter Change in drilling condtions
						? WEATHERED ROCK
						(Auger refusal)
115						Bottom of Exploration of 115.0 ft
120						
125						
130						
135						
140						
145						
150						

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HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-102

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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**	30-May-00
DRILLER	L. TODD	**DATE FINISHED**	30-May-00

Elevation 253.5 ft **Datum** City

Boring Location See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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		28	S1	0.0		Medium dense brown and black silty fine to coarse SAND, little rock fragments, dry.
		19				
		16				FILL
		14	16"/24"	2.0		
		9	S2	2.0		Medium dense brown silty fine to coarse SAND, trace coarse gravel, dry.
		8				
		6				
		5	14"/24"	4.0		
		5	S3	4.0		Same, rock obstruction in bottom of spoon.
5		5				
		3				
		3	2"/24"	6.0	6.0	
		1	S4	6.0		Loose gray brown fine to coarse SAND, wet.
		2				
		3				ALLUVIUM
		1	15"/24"	8.0		
		4	S5	8.0		Medium dense gray brown fine to coarse SAND, some gravel, wet.
		18				
		15				
		17	17"/24"	10.0		
10		22	S6	10.0		Very dense brown fine to coarse SAND, moist.
		48				
		58				
		45	2"/24"	12.0		
15		54	S7	15.0	15.0	Very dense gray brown silty fine to coarse SAND, some gravel, moist.
		100/.4	8"/11"	15.9		GLACIAL TILL
20		100/.4	S8	20.0		Very dense brown silty fine to coarse SAND, some gravel. Red sandstone in bottom of spoon, moist.
			4"/5"	20.4		
25		19	S9	25.0		Very dense gray brown silty fine to coarse SAND, some gravel, moist.
		91				
		100/.3	12"/18"	26.3		
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)
30-May		2			17.5

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	50.5
Rock Cored (Linear ft)	10
Number of Samples	14S

BORING NO. HA-102

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-102

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		10	S10	30.0		Very dense gray brown silty fine to coarse SAND, little rock fragments, wet.
		100/.3	7"/10"	30.8		GLACIAL TILL
35		19	S11	35.0		Very dense silty fine to coarse SAND, some gravel, trace clay, wet.
		60				
		100/.3	16"/16"	36.3		
40		15	S12	40.0		Same.
		100/.4	10"/11"	40.9		
45		20	S13	45.0	45.0	Very dense red brown silty fine to coarse SAND, trace clay, moist.
		100/.1	6"/8"	45.6		WEATHERED ROCK
50		100/.5	S14	50.0	50.5	Same, with little clay.
				50.5		Began rock coring at 50.5 ft.
						Competent, red sandstone with interbedded gray sandstone.
						QUEENSTONE FORMATION
55						
						Highly fractured 58.8 ft. to 60.5 ft.
60						Bottom of Exploration at 60.5 ft.
65						
70						

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HALEY & ALDRICH

CORE BORING REPORT

BORING NO. **HA-102**

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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
Type	HAS	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

Rig Make & Model: ☑ Truck ☐ Tripod ☑ Cat-Head ☐ ATV ☐ Geoprobe ☐ Winch ☐ Track ☐ Air Track ☐ Roller Bit ☐ Skid ☐ _____ ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing: ☐ Driven ☐ Spun

Depth (ft)	Drilling Rate (min/ft)	Core No. Depth (ft)	Recovery RQD (in)	Recovery RQD (%)	Weathering	Stratum Change (ft)	Visual Classification and Remarks
		50.5					
							Competent red sandstone with interbedded gray sandstone.
			3.4/5.0	68			QUEENSTONE FORMATION
	Avg. 3-4						
5	minutes						
	per foot						
			3.45/5.0	69			Highly fractured 8.0 ft. to 10.0 ft.
		60.5					
10							
15							
20							
25							
30							

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	50.5
Rock Cored (linear ft)	10
Samples	14S

BORING NO. HA-102

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-103

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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

Rig Make & Model CME-55 Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	1-7/8
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head

☐ ATV ☐ Geoprobe ☐ Winch

☐ Track ☐ Air Track ☐ Roller Bit

☐ Skid ☐ _____ ☐ Cutting Head

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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				
		11				FILL
		15	15"/24"	2.0	2.0	
		13	S2	2.0		Medium dense dark brown coarse to fine SAND, some gravel, little silt, dry.
		18				
		11				FILL
		7	10"/24"	4.0		
		9	S3	4.0		Same.
		8				Moist to wet beginning at 5.5 ft.
5		4				FILL
		6		6.0		
		3	S4	6.0		Same, wet.
		5				FILL
		8				Noted refusal and suspected cobble at 7.5 ft.
		50/.0	4"/18"	7.5		
		5	S5	8.0		Same, except black.
		7				FILL
		9				
		4	6"/24"	10.0		
10		7	S6	10.0		Medium dense black coarse to fine sandy GRAVEL, little silt, wet.
		9				FILL
		10				
		15		12.0		
		62	S7	12.0		Same, except very dense, gray-black.
		26				FILL
		29				Driller noted sulphur-like odor in sample.
		9	12"/24"	14.0		See Note on Page 2 of 3.
						Auger Refusal at 14.0 ft.
15						Boring moved 18.0 ft. west of original location.
20						
25						
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Summary

Overburden (Linear ft)	14
Rock Cored (Linear ft)	--
Number of Samples	7S

BORING NO. HA-103

Form #3000

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. **HA-103**

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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
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	1-7/8
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

Rig Make & Model: CME-55 Truck Mount

☑ Truck ☐ Tripod ☑ Cat-Head ☐ Bentonite
☐ ATV ☐ Geoprobe ☐ Winch ☐ Polymer
☐ Track ☐ Air Track ☐ Roller Bit ☑ None
☐ Skid ☐ _____ ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud

Casing: ☐ Driven ☐ 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				
		11				FILL
		15	15"/24"	2.0	2.0	
		13	S2	2.0		Medium dense dark brown coarse to fine SAND, some gravel, little silt, dry.
		18				
		11				FILL
		7	10"/24"	4.0		
		9	S3	4.0		Same.
5		8				Moist to wet beginning at 5.5 ft.
		4				
		6		6.0		
		3	S4	6.0		Same, wet.
		5				
		8				Noted refusal and suspected cobble at 7.5 ft.
		50/.0	4"/18"	7.5		
		5	S5	8.0		Same, except black.
		7				
		9				
		4	6"/24"	10.0		
10		7	S6	10.0		Medium dense black coarse to fine sandy GRAVEL, little silt, wet.
		9				
		10				
		15		12.0		
		62	S7	12.0		Same, except very dense, gray-black.
		26				
		29				Driller noted sulphur-like odor in sample.
		9	12"/24"	14.0		See Note on Page 2 of 3.
						Auger Refusal at 14.0 ft.
15						Boring moved 18.0 ft. west of original location.
20						
25						
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	14
Rock Cored (Linear ft)	--
Number of Samples	7S

BORING NO. **HA-103**

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-103a

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**	31-May-00
DRILLER	L. TODD	**DATE FINISHED**	1-Jun-00

Elevation 253.86 ft | **Datum** City | **Boring Location** See Boring Location Plan | **Rig Make & Model** CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head ☐ Bentonite
☐ ATV ☐ Geoprobe ☐ Winch ☐ Polymer
☐ Track ☐ Air Track ☐ Roller Bit ☑ None
☐ Skid ☐ _____ ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud

Casing: ☐ Driven ☐ 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		A				(Offset 18 west of original location)
		U				
		G	See Samples for 0-14 ft. in Boring HA-103			
		E				
		R				
5		11		5.0		Medium dense brown black fine to coarse SAND, little silt, dry.
		14				FILL
		7				
		4		7.0		
		A				
		U				
		G				
		E				
		R				
10		9		10.0		Dense black brown fine to coarse SAND, little silt, slag fragments, wet.
		19				
		22				
		20		12.0		
		7	S8	14.0		Same, except medium dense.
15		11				
		15				
		12	14"/24"	16.0		
		8		16.0		
		3	No Recovery			
		6				
		7		18.0		
		8	S9	18.0		Medium dense black brown silty fine to coarse SAND, wet.
		10				ALLUVIUM
		8				
		6	6"/24"	20.0		
20						
		5	S10	24.0		Loose gray brown fine sand SILT, wet.
		3				
25		3				
		4	2"/24"	26.0		
		2	S11	29.0		Loose gray fine sand SILT, some clay, organics, moist.
		3				
30		3	12"/18"	30.5		

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	7
Rock Cored (Linear ft)	--
Number of Samples	19S

BORING NO. HA-103a

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-103a

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				ALLUVIUM
		4	12"/24"	36.0		
		2	S13	39.0		Loose gray silty fine to coarse SAND, trace ogranics, 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				
		5	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		

FILE NO. 70819-000 BORING NO. HA-103a

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. **HA-104**

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	13-Jun-00
DRILLER	L. TODD	DATE FINISHED	13-Jun-00

Elevation 254.25 ft | Datum City | Boring Location See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head ☐ Bentonite
☐ ATV ☐ Geoprobe ☐ Winch ☐ Polymer
☐ Track ☐ Air Track ☐ Roller Bit ☑ None
☐ Skid ☐ _____ ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud

Casing: ☐ Driven ☐ 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						Mudline 19.0 ft below top of seawall.
						Sunk augers 4.0 ft below mudline.
		WOR	S1	4.0		Very loose gray brown silty coarse to fine SAND.
5		WOR				
		WOR				
		1	11"/24"	6.0		ALLUVIUM
		WOR	S2	9.0		Same as above.
10		WOR				
		WOR				
		WOR	20"/24"	11.0		
		1	S3	14.0		Loose gray brown sandy fine to medium SILT, organics, wet.
15		3				
		3				
		5	24"/24"	16.0		
		3	S4	19.0		Same as above.
20		5				
		5				
		9	20"/24"	21.0		
		2	S5	24.0		Same as above.
25		2				
		4				
		6	24"/24"	26.0		
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	31
Rock Cored (Linear ft)	--
Number of Samples	6S

BORING NO. HA-104

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-104

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		2	S6	29.0		Loose gray fine to medium sandy SILT, organics, wet.
		2	24"/24"	31.0		ALLUVIUM
		4				Bottom of Exploration at 31.0 ft.
		5				
35						
40						
45						
50						
55						
60						
65						
70						

FILE NO. 70819-000 BORING NO. HA-104

Form #3001

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-105

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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**	13-Jun-00
DRILLER	L. TODD	**DATE FINISHED**	13-Jun-00

Elevation 253.96 ft **Datum** City **Boring Location** See Boring Location Plan

Rig Make & Model CME 55 Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head
☐ ATV ☐ Geoprobe ☐ Winch
☐ Track ☐ Air Track ☐ Roller Bit
☐ Skid ☐ _____ ☐ Cutting Head

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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						15.0 ft to Mudline from Top of Seawall
						-Sunk augers 3.0 ft below mudline-
		WOR	S1	3.0		Very loose gray brown sandy SILT, wet
		WOR				
		WOR				ALLUVIUM
5		WOR	14"/24"	5.0		
		WOR	S2	6.0		Very loose gray brown silty coarse to fine SAND, wet.
		WOR				
		WOR				
		WOR	14"/24"	8.0		
		WOR	S3	8.0		Same as above.
		WOR				
		WOR				
10		WOR	16"/24"	10.0		
15		WOR	S4	15.0		Loose gray brown silty coarse to fine SAND, wet.
		WOR				
		5				
		7	15"/24"	17.0		
20		2	S5	20.0		Loose gray brown sandy SILT, organics.
		2				
		7				
		7	24"/24"	22.0		
25		WOH	S6	25.0		Same as above.
		2				
		5				
		7	20"/24"	27.0		
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	32
Rock Cored (Linear ft)	--
Number of Samples	7S

BORING NO. HA-105

Form #3000

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-105

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	S7	30.0		Loose gray brown sandy SILT, organics.
		3				
		3				ALLUVIUM
		6		32.0		Bottom of Exploration at 32.0 ft.
35						
40						
45						
50						
55						
60						
65						
70						

FILE NO. 70819-000 BORING NO. HA-105

Form #3001

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. **HA-106**

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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	1-Jun-00
DRILLER	L. TODD	DATE FINISHED	1-Jun-00

Elevation 250.79 ft | Datum City | Boring Location See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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		Augered				
		3	S1	0.5		Medium dense brown silty fine to coarse SAND, some rock fragments, dry.
		4				FILL
		7	11"/18"	2.0		
		8	S2	2.0		Medium dense red brown silty fine to coarse SAND, trace rock fragments, moist.
		5				
		5				
		7	12"/24"	4.0		
		4	S3	4.0		Medium dense black brown fine to coarse SAND, litte silt, wet.
		12				ALLUVIUM
5		17				
		15	16"/24"	6.0		
		20	S4	6.0		Same, except very dense.
		37				
		31				
		36	12"/24"	8.0		
		44	S5	8.0		Same.
		28				
		24				
		12	6"/24"	10.0		
10		5	S6	10.0		Loose gray brown fine to coarse SAND, little silt, wet.
		3				
		5				
		6	8"/24"	12.0		
		3	S7	12.0		Same, except trace rock fragments.
		3				
		6				
		5	12"/24"	14.0		
		6	S8	14.0		Medium dense gray brown fine to coarse SAND, little silt, wet.
		12				
15		14				
		14	11"/24"	16.0		
		4	S9	19.0		Loose gray fine sand SILT, little clay, moist.
		3				
20		4				
		2	3"/24"	21.0		
		2	S10	24.0		Same, except very loose.
		2				
25		2				
		4	15"/24"	26.0		
		1	S11	29.0		Loose gray brown fine to medium sand SILT, little clay, organics, moist.
		2				
30		3	17"/24"	31.0		

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Summary

Overburden (Linear ft)	41
Rock Cored (Linear ft)	--
Number of Samples	13S
BORING NO.	HA-106

Form #3000

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-106

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		2	S12	34.0		Loose gray brown fine to medium sand SILT, little clay, organics, moist,
35		3				
		3				ALLUVIUM
		4	20"/24"	36.0		
		1	S13	39.0		Same.
40		2				
		3				
		4	22"/24"	41.0		
						Bottom of Exploration at 41.0 ft.
45						
50						
55						
60						
65						
70						

FILE NO. 70819-000 BORING NO. HA-106

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-107

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.**	R. DEDRICK
CONTRACTOR	GEOLOGIC ENTERPRISES	**DATE STARTED**	26-May-00
DRILLER	L. TODD	**DATE FINISHED**	26-May-00

Elevation 266.08 ft **Datum** City

Boring Location See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head ☐ Bentonite
☐ ATV ☐ Geoprobe ☐ Winch ☑ Polymer
☐ Track ☐ Air Track ☐ Roller Bit ☐ None
☐ Skid ☐ _____ ☐ Cutting Head

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud

Casing ☐ Driven ☐ 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					0.5	ASPHALT
		5	S1	0.5		Medium dense black brown fine to coarse SAND, some gravel, dry.
		11				FILL
		21	7"/18"	2.0		
		13	S2	2.0		Medium dense brown fine to coarse SAND, damp.
		18				
		14				
		11	16"/24"	4.0		
		5	S3	4.0		Dense brown black fine to coarse SAND, little silt, brick, damp.
5		22				
		22				
		30	17"/24"	6.0		
		14	S4	6.0		Same, except medium dense.
		11				
		14				
		12	20"/24"	8.0		
		4	S5	8.0		Medium dense brown orange fine to coarse SAND, moist.
		6				
		6				
		7	18"/24"	10.0		
10						
					13.0	
		1	S6	13.0		Loose brown gray fine sand SILT, trace to little clay, trace organics, moist.
		2				
		3				
		3	21"/24"	15.0		ALLUVIUM
15						
		2	S7	18.0		Same.
		3				
		4				
		5	24"/24"	20.0		
20						
					23.0	
		7	S8	23.0		Very dense gray brown silty SAND, some gravel. Pockets of brown fine to coarse SAND, wet.
		35				
		37				GLACIAL TILL
		21	22"/24"	25.0		
25						
		22	S9	28.0		Same.
		24				
		26				
		26	20"/24"	30.0		
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)
26-May		0.5			18

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	49.0
Rock Cored (Linear ft)	5.0
Number of Samples	13S
BORING NO.	**HA-107**

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-107

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		15	S10	33.0		Very dense gray brown fine silty sand, little gravel, wet.
		39				GLACIAL TILL
		41				
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						

FILE NO. 70819-000 BORING NO. HA-107

Form #3001

HALEY & ALDRICH

CORE BORING REPORT

BORING NO. **HA-107**

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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	26-May-00
DRILLER	L. TODD	DATE FINISHED	26-May-00

Elevation	ft	Datum	
Boring Location			

Item	Casing	Sampler	Core Barrel
Type	HAS	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

Rig Make & Model

- [x] Truck
- [ ] Tripod
- [x] Cat-Head
- [ ] ATV
- [ ] Geoprobe
- [ ] Winch
- [ ] Track
- [ ] Air Track
- [ ] Roller Bit
- [ ] Skid
- [ ] _____
- [ ] Cutting Head

Hammer Type

- [x] Safety
- [ ] Doughnut

Drill Mud

- [ ] Bentonite
- [ ] Polymer
- [x] None

Casing [ ] Driven [ ] Spun

Depth (ft)	Drilling Rate (min/ft)	Core No. Depth (ft)	Recovery RQD (in)	Recovery RQD (%)	Weathering	Stratum Change (ft)	Visual Classification and Remarks
		49.5					0-2 ft. Highly fractured.
	Avg. 4 ft. per minute		1.9/5.0	38			Competent red sandstone with interbedded gray sandstone.
							QUEENSTONE FORMATION
5		54.5					
10							
15							
20							
25							
30							

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

- O Open End Rod
- T Thin Wall Tube
- U Undisturbed Sample
- S Split Spoon Sample
- G Geoprobe

Summary

Overburden (Linear ft)
Rock Cored (linear ft)
Samples

BORING NO. HA-107

Form #3002

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-109

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 ENTERPRISES	**DATE STARTED**	12-Jun-00
DRILLER	L. TODD	**DATE FINISHED**	12-Jun-00

Elevation 251.78 ft **Datum** City

Boring Location See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head

☐ ATV ☐ Geoprobe ☐ Winch

☐ Track ☐ Air Track ☐ Roller Bit

☐ Skid ☐ _____ ☐ Cutting Head

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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 10 7 7	S1 17"/24"	0.0 2.0		Medium dense brown black gray silty coarse to fine SAND, some gravel, ash, dry. FILL
		7 7 8 11	S2 14"/24"	2.0 4.0	2.5	Same. Medium dense brown silty coarse to fine SAND, dry.
		9 10 10 10	S3 17"/24"	4.0 6.0		Medium dense brown black silty coarse to fine SAND, moist. ALLUVIUM
10		2 1 2 2	S4 15"/24"	9.0 11.0		Very loose gray brown fine sandy SILT, little clay, organics, moist.
		1 2 2 2	S5 16"/24"	14.0 16.0		Very loose, gray brown silty medium to fine SAND, organics, moist.
20		1 1 2 1	S6 20"/24"	19.0 21.0		Same.
		2 1 30 46	S7 16"/24"	24.0 26.0	25.0	Same. Very dense red silty fine to coarse SAND, dry. DISINTEGRATED RED SANDSTONE
30		100/.3	S8 4"/4"	27.5 27.8		Same, except some rock fragment. Bottom of Exploration at 27.9 ft. Auger Refusal.

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	27.8
Rock Cored (Linear ft)	--
Number of Samples	8S

BORING NO. HA-109

Form #3000

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-110

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 ENTERPRISES	**DATE STARTED**	12-Jun-00
DRILLER	L. TODD	**DATE FINISHED**	12-Jun-00

Elevation 252.78 ft **Datum** City **Boring Location** See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head ☐ Winch ☐ ATV ☐ Geoprobe ☐ Roller Bit ☐ Air Track ☐ Track ☐ Skid ☐ Cutting Head

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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		22	S1	0.0		Very dense gray brown silty fine to coarse SAND, some gravel, dry.
		30				FILL
		27				
		30	11"/24"	2.0		
		7	S2	2.0		Medium dense brown black silty fine to coarse SAND, trace gravel, trace
		7				organics, moist.
		6				
		6	14"/24"	4.0		
		4	S3	4.0		Loose gray black gravelly SAND, slag, wet.
5		3				
		3				
		3	3"/24"	6.0	6.0	
		1	S4	6.0		Very loose gray silty fine SAND, organics, moist.
		2				ALLUVIUM
		2				
		3	13"/24"	8.0		
		1	S5	8.0		Same, except wet.
		1				
		1				
		2	10"/24"	10.0		
10						
		1	S6	14.0		Very loose gray silty coarse to fine SAND, organics, wet.
		1				
15		2				
		1	12"/24"	16.0		
					19.0	
		100/.2	S7	19.0		Very dense red silty SAND and ROCK FRAGMENTS.
			3"/3"	19.3		WEATHERED BEDROCK
20						Bottom of Boring at 20.0 ft.
						Auger Refusal
25						
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Summary

Overburden (Linear ft)	20
Rock Cored (Linear ft)	--
Number of Samples	7S

BORING NO. HA-110

Form #3000

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-111

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**	23-May-00
DRILLER	L. TODD	**DATE FINISHED**	23-May-00

Elevation 251.83 ft **Datum** City

Boring Location See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head

☐ ATV ☐ Geoprobe ☐ Winch

☐ Track ☐ Air Track ☐ Roller Bit

☐ Skid ☐ _____ ☐ Cutting Head

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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			No sample		0.5	ASPHALT
					1.0	CRUSHED STONE
		3	S1	1.0		Loose gray brown silty fine to coarse SAND, pocket of black fine to coarse
		3	5"/12"	2.0		SAND, dry.
		5	S2	2.0		Medium dense gray brown fine to coarse SAND, little silt, wet.
		6				FILL
		7				
		6	8"/24"	4.0		
		9	S3	4.0		Medium dense gray brown green (mottled) silty fine to coarse SAND, some fine
		4				gravel, wood, moist. Water in borehole at 3.9 ft.
5		19				
		21	12"/24"	6.0		
		19	S4	6.0		Dense gray brown gravelly SAND, wet. Rock Obstruction in shoe.
		19				
		27				
		32	16"/24"	8.0		
		21	S5	8.0		Very dense gray brown fine to coarse SAND, some fine gravel, wet.
		24				
		26				
		25	20"/24"	10.0		
10		10	S6	10.0	10.0	Medium dense gray brown fine to coarse SAND.
		15				
		14				ALLUVIUM
		19	17"/24"	12.0		
15		4	S7	15.0		Loose gray brown fine to coarse SAND, some fine to coarse gravel, moist.
		6				
		3				
		3	14"/24"	17.0		
20		1	S8	20.0		Very loose gray brown fine sand SILT, wood, natural laminations in soils, moist.
		1				
		2				
		2	18"/24"	22.0		
25		1	S9	25.0		Very loose gray brown fine sand SILT, little clay, wood.
		1				
		1				
		1	24"/24"	27.0		
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)
23-May	10	0.75			3.9

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Summary

Overburden (Linear ft)	58.5
Rock Cored (Linear ft)	5
Number of Samples	14S

BORING NO. HA-111

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-111

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	S10	30.0		Very loose gray brown fine sand SILT, little clay, root structures, wood, moist.
		2				
		2				
		3	24"/24"	32.0		
						ALLUVIUM
35		2	S11	35.0		Same, except some clay.
		2				
		2				
		2	24"/24"	37.0		
40		2	S12	40.0		Very loose gray-green fine sand SILT, root structures, red fine to coarse sand in shoe, moist.
		2				
		2				
		6	24"/24"	42.0	42.0	
						GLACIAL TILL
45		70	S13	45.0		Dense red brown SILT, little clay, gray green fractured sandstone.
		33			46.0	
		8				
		12	16"/24"	47.0		
50		100/.2				No Recovery.
55		100/.2	S14	55.0	55.0	Very dense red, brown fractured sandstone, red brown silt, wet.
			2"/3"	55.3		
						WEATHERED BEDROCK
						Auger Refusal at 58.5 ft.; began rock coring.
60						
65						
70						

FILE NO. 70819-000 BORING NO. HA-111

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-111

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
						Competent red sandstone with interbedded gray sandstone.
						QUEENSTON FORMATION
						Bottom of Exploration at 63.5 ft.
65						Monitoring well installed in adjacent borehole. See Installation Report for LBA-MW1
70						
75						
80						
85						
90						
95						
##						

FILE NO. 70819-000 BORING NO. HA-111

HALEY & ALDRICH

CORE BORING REPORT

BORING NO. **HA-111**

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	23-May-00
DRILLER	L. TODD	DATE FINISHED	23-May-00

Elevation ft | Datum | Boring Location

Item	Casing	Sampler	Core Barrel
Type	HAS	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

Rig Make & Model: ☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing: ☐ Driven ☐ Spun

Depth (ft)	Drilling Rate (min/ft)	Core No. Depth (ft)	Recovery RQD (in)	Recovery RQD (%)	Weathering	Stratum Change (ft)	Visual Classification and Remarks
		58.5					
	5						Competent red sandstone with interbedded gray sandstone.
	5						QUEENSTONE FORMATION
	3						
	4						
5	5	63.5					
10							
15							
20							
25							
30							

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Summary

Overburden (Linear ft)
Rock Cored (linear ft)
Samples

BORING NO. HA-111

Form #3002

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-112

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.**	R. DEDRICK
CONTRACTOR	GEOLOGIC ENTERPRISES	**DATE STARTED**	9-Jun-00
DRILLER	L. TODD	**DATE FINISHED**	9-Jun-00

Elevation 260.89 ft **Datum** City **Boring Location** See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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		3 4	S1	0.0	1.0	CRUSHED STONE FILL
		4 3	14"/24"	2.0		Loose brown silty fine to coarse SAND, dry.
		3 3	S2	2.0		Loose brown silty fine to coarse SAND, trace clay, trace organics, moist. ALLUVIUM
		3 3	18"/24"	4.0		
5		3 1	S3	4.0		Same, except very loose.
		2 3	18"/24"	6.0		
		5 5	S4	9.0		Medium dense brown fine sandy SILT, some clay pockets, moist.
10		6 6	17"/24"	11.0		
		2 2	S5	14.0		Loose gray brown fine sandy SILT, some clay pockets, moist.
15		3 5	20"/24"	16.0		
					19.0	
		2 4	S6	19.0		Loose gray brown silty coarse to fine SAND, some gravel, moist. GLACIAL TILL
20		5 6	12"/24"	21.0		
		3 5	S7	24.0		Loose gray brown silty fine to coarse SAND, some gravel, little clay, wet.
25		4 5	24"/24"	26.0		
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	41
Rock Cored (Linear ft)	--
Number of Samples	10S

BORING NO. HA-112

Form #3000

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-112

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		5	S8	30.0		
		16				Medium dense gray brown silty fine to coarse SAND, some gravel, little clay,
		19				wet.
		21	23"/24"	32.0		
35		35	S9	35.0		Same, except very dense
		46				
		46				
		62	24"/24"	37.0		
		44	S10	39.0		Same.
40		46				
		66				
		100/.3	24"/24"	41.0		
						Bottom of Exploration at 41.0 ft.
45						
50						
55						
60						
65						
70						

FILE NO. 70819-000 BORING NO. HA-112

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-113

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**	7-Jun-00
DRILLER	L. TODD	**DATE FINISHED**	8-Jun-00

Elevation 270.8 ft **Datum** City **Boring Location** See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head ☐ Winch
☐ ATV ☐ Geoprobe ☐ Roller Bit
☐ Track ☐ Air Track ☐ Cutting Head
☐ Skid ☐ _____

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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		1	S1	0.0		Loose brown silty fine SAND, organics, dry.
		2				
		3				
		3	16"/24"	2.0		
		3	S2	2.0		Very loose brown red silty fine to coarse SAND, little rock fragments, slag, dry.
		2				FILL
		2				
		2	14"/24"	4.0		
		3	No	4.0		No Recovery
		4	Recovery			
5		5				
		7	2"/24"	6.0		
		7	S3	6.0		Loose brown red silty fine to coarse SAND, little rock fragments, slag, dry.
		5				
		4				
		4	15"/24"	8.0		
		4	S4	8.0		Same.
		100/.4	4"/24"	8.9		
						Obstruction at 8.3 ft.
10						
						Note: Moved 4.0 ft. to south. Blind augered to 10.0 ft. and hit auger refusal again. Moved again 10.0 ft. south of second boring. See Boring HA-113a.
15						
20						
25						
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	27.0 ft.
Rock Cored (Linear ft)	--
Number of Samples	8S
BORING NO.	**HA-113**

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. **HA-113a**

Page 2 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.	R. DEDRICK
CONTRACTOR	GEOLOGIC ENTERPRISES	DATE STARTED	7-Jun-00
DRILLER	L. TODD	DATE FINISHED	8-Jun-00

Elevation 270.8 ft | Datum City | Boring Location See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing: ☐ Driven ☐ 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						(Blind augered to 10.0 ft.) See Boring HA-113
5						
10		1 2 3	S5	10.0		Loose brown red silty fine to coarse SAND, little rock fragments, slag, moist. FILL
		3	3"/24"	12.0		
15		7 11 11	S6	15.0		(Slag obstruction in spoon)
		14	1"/24"	17.0		
					20.0	
20		3 14 36	S7	20.0		Very dense gray brown silty fine to coarse SAND, some gravel, pockets of clayey silt, moist. GLACIAL TILL
		50	22"/24"	22.0		
25		30 76 98	S8	25.0		Same as above.
		100/.3	22"/24"	27.0		Bottom of Exploration at 27.0 ft.
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	27.0 ft.
Rock Cored (Linear ft)	--
Number of Samples	8S

BORING NO. HA-113a

Form #3000

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. **HA-114**

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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	25-May-00
DRILLER	L. TODD	DATE FINISHED	25-May-00

Elevation 261.92 ft | Datum City | Boring Location See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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		1	S1	0.0		Medium dense brown sandy SILT, brick, dry.
		7				
		12				FILL
		6	6"/24"	2.0		
		6	S2	2.0		Medium dense brown black sandy SILT, brick, slag, dry.
		7				
		5				
		5	8"/24"	4.0		
		8	S3	4.0		Same.
		15				
5		7				
		8	10"/24"	6.0		
		35	S4	6.0		Medium dense brown black silty SAND, brick, slag, dry.
		22				
		16				
		50/.3	12"/24"	8.0		
		12	S5	8.0		Same, except some rock fragments.
		17				
		100/.4				
			9"/24"	10.0		
10		100/.3	S6	10.0		Concrete Obstruction
				10.3		(offset 6' south of initial location, see log HA-114a)
15						
20						
25						
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Summary

Overburden (Linear ft)	25.0
Rock Cored (Linear ft)	--
Number of Samples	10S

BORING NO. HA-114

Form #3000

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-114a

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**	25-May-00
DRILLER	L. TODD	**DATE FINISHED**	25-May-00

Elevation 261.92 ft **Datum** City **Boring Location** See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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						
						Blind Augered to 12.0 ft. (See Boring Log HA-114)
5						
10						
		20	S7	12.0		Very dense gray black blue gravelly SAND, slag, wet.
		97				
		90				FILL
		29	15"/24"	14.0	14.0	
		3	S8	14.0		Medium dense gray brown clayey SILT, moist.
15		5				
		8				ALLUVIUM
		12	16"/24"	16.0		
		7	S9	19.0	19.0	Medium dense brown silty fine to coarse SAND, some gravel, wet.
20		17				
		20				
		21	18"/24"	21.0		GLACIAL TILL
		87	S10	24.0		Very dense gray brown fine to coarse SAND, some gravel, wet.
25		100/.4	10"/24"	24.9		Bottom of Exploration at 25.0 ft.
						Monitoring well installed in completed borehole. See Installation Report for LBA-MW3.
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	25
Rock Cored (Linear ft)	--
Number of Samples	10S
BORING NO.	**HA-114a**

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. **HA-115**

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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	25-May-00
DRILLER	L. TODD	DATE FINISHED	25-May-00

Elevation 253.68 ft | Datum City | Boring Location See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing: ☐ Driven ☐ 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						CRUSHED STONE
		14 54	S1	2.0		Very dense black blue gray silty fine to coarse SAND, brick, slag, dry.
		34 42	16"/24"	4.0		FILL
		28 48	S2	4.0		Same, except moist.
5		23 20	14"/24"	6.0		
		12 15	S3	6.0		Medium dense brown-black sandy ROCK FRAGMENTS, wet.
		12 8	7"/24"	8.0		
		7 7	S4	8.0		Same.
		7 14	4"/24"	10.0		
10		10 5	S5	10.0		Same.
		6 6	4"/24"	12.0		
		12 8	S6	12.0		Same.
		12 8	6"/24"	14.0		
15						
		2 2	S7	19.0		Loose brown-gray sandy SILT, organics, wet.
20		3 3	10"/24"	21.0		ALLUVIUM
		3 4	S8	24.0		Same.
25		3 3	10"/24"	26.0		
						Bottom of Exploration at 26.0 ft.
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Summary

Overburden (Linear ft)	26
Rock Cored (Linear ft)	--
Number of Samples	8S

BORING NO. HA-115

Form #3000

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-116

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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**	2-Jun-00
DRILLER	L. TODD	**DATE FINISHED**	2-Jun-00

Elevation 252.4 ft **Datum** City **Boring Location** See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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		0.4 ft. TOPSOIL
		16				Medium dense black blue silty fine to coarse SAND, slag, dry.
		19				FILL
		24	11"/24"	2.0		
		22	S2	2.0		Same, except wet.
		12				
		21				
		11	12"/24"	4.0		
		42	S3	4.0		Same.
		25				
5		10				
		20	8"/24"	6.0		
		14	S4	6.0		Medium dense brown fine to coarse SAND, slag.
		12				
		4				
		2	10"/24"	8.0		
		3	S5	8.0		Medium dense gray brown fine to coarse SAND, some gravel, wet.
		5				
		8				
		10	8"/24"	10.0		
10		18	S6	10.0		Same.
		7				
		4				ALLUVIUM
		6	8"/24"	12.0		
15		1	S7	15.0		Loose gray brown fine sand SILT, organics, moist.
		2				
		3				
		3	3"/24"	17.0		
20		2	S8	20.0		Very loose gray brown fine sand SILT, little clay, organics, moist.
		1				
		3				
		3	16"/24"	22.0		
25		1	S9	25.0		Same.
		1				
		2				
		3	18"/24"	27.0		
						Bottom of Exploration at 27.0 ft.
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	27
Rock Cored (Linear ft)	--
Number of Samples	9S

BORING NO. HA-116

Form #3000

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-117

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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**	24-May-00
DRILLER	L. TODD	**DATE FINISHED**	24-May-00

Elevation 253.7 ft **Datum** City

Boring Location See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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		2 4 7	S1	0.0		Medium dense brown sandy SILT, organics, dry.
		8	8"/24"	2.0		
		10 9 20	S2	2.0		Medium dense brown blue silty SAND, foundry, debris, dry. FILL
		30	9"/24"	4.0		
		13 34 53	S3	4.0		Very dense blue-black gray sandy SILT, brick, slag, moist.
5		50/.4	14"/24"	6.0		
		62 100/.4	S4	6.0		Same, except wet.
			7"/10"	8.0		
		6 13 15	S5	8.0		Medium dense black-blue silty ROCK FRAGMENTS, wet.
		15	9"/24"	10.0	10.0	
10		13 20 7	S6	10.0		Medium dense sandy SILT, little clay, organics, moist.
		4	12"/24"	12.0		
		2 5 19	S7	12.0		Medium dense black-gray silty fine to coarse SAND, some fine gravel, moist. ALLUVIUM
		19	12"/24"	14.0		
15						
		2 5 6	S8	19.0		Medium dense gray-brown sandy SILT, little gravel, wood, organics, moist.
20		7	14"/24"	21.0		
		3 3 4	S9	24.0		Same.
25		4	17"/24"	26.0		Bottom of Exploration at 26.0 ft.
						Monitoring well installed in completed borehole. See Installation Report for LBA-MW2.
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	26
Rock Cored (Linear ft)	--
Number of Samples	9S

BORING NO. HA-117

Form #3000

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. **HA-118**

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.	R. DEDRICK
CONTRACTOR	GEOLOGIC ENTERPRISES	DATE STARTED	8-Jun-00
DRILLER	L. TODD	DATE FINISHED	8-Jun-00

Elevation 242.78 ft | Datum City | Boring Location See Boring Location Plan

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

Rig Make & Model: CME 55 - Truck Mount

☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing: ☐ Driven ☐ 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						ASPHALT
		9	S1	0.5		Medium dense black brown red silty fine to coarse SAND, brick, some rock
		18				fragments, dry.
		9	13"/18"	2.0	2.0	FILL
		7	S2	2.0		Medium dense brown silty fine to coarse SAND, moist.
		12				ALLUVIUM
		9				
		8	12"/24"	4.0		
		4	S3	4.0		Loose gray brown silty fine to medium SAND, organics, moist.
5		4				
		3				
		3	12"/24"	6.0		
10		6	S4	10.0		Medium dense gray fine to coarse SAND, little silt, little gravel, wet.
		14				
		12				
		4	16"/24"	12.0		
15		3	S5	15.0		Very loose brown organic SILT, moist.
		1				
		1				
		4	16"/24"	17.0		
					20.0	
20		4	S6	20.0		Medium dense gray brown silty fine to coarse SAND, some gravel, moist.
		16				
		19				GLACIAL TILL
		22	20"/24"	22.0		
25		28	S7	25.0		Very dense brown silty fine to coarse SAND, some gravel, moist.
		100/.4	10"/10"	25.9		
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)
5/8/2000		0.5			9.1

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	51
Rock Cored (Linear ft)	--
Number of Samples	12S

BORING NO. **HA-118**

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-118

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
			S8	30.0		Very dense brown silty fine to coarse SAND, some gravel, moist.
		100/.4	3"/5"	30.4		
35		18	S9	35.0		Same, except gray brown.
		77				
		100/.5	12"/18"	36.5		
40		36	S10	40.0		Same.
		66				
		98				
		87	12"/24"	42.0		
45		100/.5	S11	45.0		Same, except trace rock fragments.
			3"/6"	45.5		
50		100/.4	S12	50.0		Very dense red silty sandstone rock fragments.
			4"/5"	50.5		
						Bottom of Exploration at 51.0 ft.
55						
60						
65						
70						

FILE NO. 70819-000 BORING NO. HA-118

Form #3001

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-119

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**	2-Jun-00
DRILLER	L. TODD	**DATE FINISHED**	2-Jun-00

Elevation 250.52 ft **Datum** City

Boring Location See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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						ASPHALT
		44	S1	1.0		Very dense brown gravelly fine to coarse SAND, dry.
		66	3"/12"	2.0		FILL
		10	S2	2.0		Medium dense brown silty fine to medium SAND, little silt, wet.
		10				
		6				ALLUVIUM
		7	14"/24"	4.0		
		1	S3	4.0		Medium dense brown gray, fine to coarse SAND, little silt, wet.
		7				
5		7				
		7	16"/24"	6.0		
		8	S4	6.0		Medium dense gray brown fine to coarse SAND, some silt, little rock fragments,
		12				wet.
		20				
		25	10"/24"	8.0		
		5	S5	8.0		Medium dense gray brown gravelly fine to coarse SAND, trace silt, wet.
		14				
		25				
		50	20"/24"	10.0		
10						
		14	S6	14.0		Loose gray brown sandy SILT, wet.
		3				
15		3				
		3	18"/24"	16.0		
		3	S7	19.0		Loose gray brown silty fine to coarse SAND, trace gravel, wet.
		3				
20		3				
		3	20"/24"	21.0		
		6	S8	24.0		Loose gray brown fine to medium sandy SILT, trace clay, organics, moist.
		2				
25		3				
		2	15"/24"	26.0		
		1	S9	29.0		Same.
		1				
30		3	14"/24"	31.0		

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	51
Rock Cored (Linear ft)	--
Number of Samples	13S

BORING NO. HA-119

HALEY & ALDRICH

TEST BORING REPORT

BORING NO.
HA-119

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		
		1 2 3	S10	34.0		Loose gray brown fine sand SILT, trace clay, organics, moist.
35		3	17"/24"	36.0		
		1 2 3	S11	39.0		Same.
40		3	22"/24"	41.0		
		1 2 3	S12	44.0		Loose, gray fine sand SILT, trace clay, organics.
45		3	24"/24"	46.0		
		1 2 2	S13	49.0		Same.
50		4	18"/24"	51.0		
						Bottom of Exploration at 51.0 ft.
55						
60						
65						
70						

FILE NO. 70819-000 BORING NO. HA-119

Form #3001

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. **HA-120**

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.	R. DEDRICK
CONTRACTOR	GEOLOGIC ENTERPRISES	DATE STARTED	8-Jun-00
DRILLER	L. TODD	DATE FINISHED	9-Jun-00

Elevation 254.31 ft | Datum City | Boring Location See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing: ☐ Driven ☐ 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						
		6	S1	0.5		ASPHALT Medium dense gray to black fine to coarse SAND, some rock fragments, dry.
		10				FILL
		20	10"/18"	2.0		
		5	S2	2.0		Medium dense black to red brown silty fine to coarse SAND, some rock fragments,
		5				dry.
		7				
		9	12"/24"	4.0		
		6	S3	4.0		Same, except loose.
		3				
5		3				
		2	12"/24"	6.0	6.0	
		1	S4	6.0		Very loose brown silty fine to medium SAND, trace rock fragments, moist.
		1				ALLUVIUM
		1				
		1	7"/24"	8.0		
		1	S5	8.0		Same, except wet.
		1				
		1				
		2	3"/24"	10.0		
10		1	S6	10.0		Very loose gray brown silty fine to coarse SAND, little gravel, wet.
		1				
		3				
		4	18"/24"	12.0		
		5	S7	12.0		Same, except some gravel.
		5				
		5				
		12	16"/24"	14.0		
		6	S8	14.0		Medium dense gray brown silty fine to coarse SAND, little gravel, wet.
		6				
15		5				
		8	14"/24"	16.0		
20		1	S9	20.0		Same, except very loose.
		2				
		2				
		3	14"/24"	22.0		
25		3	S10	25.0		Very loose gray brown fine to medium sandy SILT, trace clay, organics, moist.
		1				
		2				
		1	14"/24"	27.0		
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	52
Rock Cored (Linear ft)	--
Number of Samples	15S

BORING NO. **HA-120**

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-120

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	S11	30.0		
		1				Very loose gray brown fine to medium sandy SILT, trace clay, organics, moist.
		2				
		2	18"/24"	32.0		
						ALLUVIUM
35		1	S12	35.0		Same.
		1				
		2				
		2	24"/24"	37.0		
40		1	S13	40.0		Same.
		3				
		3				
		3	24"/24"	42.0		
45		1	S14	45.0		Same.
		2				
		4				
		3	22"/24"	47.0		
50		H	S15	50.0		Same.
		2				
		2				
		2	24"/24"	52.0		
						Bottom of Exploration at 52.0 ft.
55						
60						
65						
70						

FILE NO. 70819-000 BORING NO. HA-120

Form #3001

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-121

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**	30-May-00
DRILLER	L. TODD	**DATE FINISHED**	30-May-00

Elevation 276 +/- ft **Datum** City **Boring Location** See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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		5	S1	0.0		Medium dense gray brown fine sand SILT, little clay, dry.
		8				
		8				FILL
		14	16"/24"	2.0		
		18	S2	2.0		Dense gray red fine sand SILT, little clay, dry.
		20				
		22				
		24	16"/24"	4.0	4.0	
		14	S3	4.0		Dense brown silty fine to medium SAND, little clay, moist.
5		20				
		24				ALLUVIUM
		20	18"/24"	6.0		
		14	S4	6.0		Dense brown silty fine SAND, some clay, moist.
		21				
		24				
		20	23"/24"	8.0		
		19	S5	8.0		Dense brown silty fine to medium SAND, little clay, moist.
		24				
		26				
		28	20"/24"	10.0		
10		14	S6	10.0		Medium dense brown silty fine to coarse SAND, pockets of clay, moist.
		8				
		12				
		17	19"/24"	12.0		
15		7	S7	15.0		Medium dense brown silty fine to coarse SAND, little clay, moist.
		9				
		9				
		10	16"/24"	17.0		
20		4	S8	20.0		Same.
		5				
		5				
		6	18"/24"	22.0		
25		3	S9	25.0		Loose gray brown sandy SILT, some clay, moist.
		3				
		4				
		4	20"/24"	27.0		
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	61
Rock Cored (Linear ft)	10
Number of Samples	16S
BORING NO.	**HA-121**

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-121

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		2	S10	30.0		
		6				Medium dense brown gray silty fine to coarse SAND, little gravel, wet.
		8				
		10	20"/24"	32.0		GLACIAL TILL
35		2	S11	35.0		Same.
		16				
		18				
		20	14"/24"	37.0		
40		5	S12	40.0		Very dense brown gray silty fine to coarse SAND, some gravel, wet.
		64				
		37				
		67	17"/24"	42.0		
45		14	S13	45.0		Same, except little gravel.
		44				
		100/.4	17"/18"	46.5		
50		6	S14	50.0		Same.
		100/.2	6"/8"	50.7		
55		30	S15	55.0		Same.
		100/.3	3"/9"	55.8		
60		100/.4	S16	60.0	60.4	Same.
			2"/5"	60.4		Began Rock Coring at 61.0 ft.
						Moderately fractured red SANDSTONE with interbedded gray sandstone, clay pockets.
65						BEDROCK
						Bottom of Exploration at 71.0 ft.
70						

FILE NO. 70819-000 BORING NO. HA-121

Form #3001

HALEY & ALDRICH

CORE BORING REPORT

BORING NO. **HA-121**

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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	31-May-00
DRILLER	L. TODD	DATE FINISHED	31-May-00

Elevation ft | Datum | Boring Location

Item	Casing	Sampler	Core Barrel
Type	HAS	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

Rig Make & Model: ☑ Truck ☐ Tripod ☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing: ☐ Driven ☐ Spun

Depth (ft)	Drilling Rate (min/ft)	Core No. Depth (ft)	Recovery RQD (in)	Recovery RQD (%)	Weathering	Stratum Change (ft)	Visual Classification and Remarks
		61.0					
	6 to 7 minutes per foot		4.8/2.1				Moderately fracture red SANDSTONE with interbedded gray sandstone, clay pockets.
							QUEENSTONE FORMATION
5		66.0					
	5 to 5 minutes per foot		4.5/3.9				
		71.0					
10							Bottom of Exploration at 71.0 ft.
15							
20							
25							
30							

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Summary

Overburden (Linear ft)	61
Rock Cored (linear ft)	10
Samples	16S

BORING NO. HA-121

Form #3002

HALEY & ALDRICH

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

Rig Make & Model CME-55 Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	1-7/8
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head ☐ Winch ☐ Roller Bit ☑ Cutting Head

☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing: ☐ Driven ☐ 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
		8				Medium dense dark brown, coarse to fine sand, little cinders, little gravel.
		10				FILL
		8	14"/24"	2.0		
		6	S2	2.0		Same.
		6				
		5				
		5	10"/24"	4.0		
		3	S3	4.0		No Recovery.
5		3				
		2				
		2	0"/24"	6.0		
		2	S4	6.0		Loose dark brown coarse to fine sand, some gravel, trace silt, wet.
		3				
		2				
		2	2"/24"	8.0		
		2	S5	8.0		Same.
		2				
		3				
		21	18"/24"	10.0		
10		1	S6	10.0		Same.
		2				
		6				
		10	14"/24"	12.0		
		26	S7	12.0		
		24				
		10			13.2	Dense blue-gray gravel, little coarse to fine sand, wet.
		9	20"/24"	14.0		
		3	S8	14.0	14.3	Very loose brown ORGANICS, trace sand, trace silt, wet.
		2				
15		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				
		2	24"/24"	22.0		
25		2	S10	25.0		Same.
		2				
		2				
		3	20"/24"	27.0		
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	37
Rock Cored (Linear ft)	5
Number of Samples	12S
BORING NO.	HA-122

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-122

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		2	S11	30.0		Loose gray-brown clayey SILT, little fine sand, little organics, moist.
		3				
		3				
		3	24"/24"	32.0		ALLUVIUM
35		1	S12	35.0		
		6			36.0	
		8				Medium dense brown-red coarse to fine sandy SILT, some gravel, little clay, damp
		30	15"/24"	37.0	37.0	to moist. GLACIAL TILL
						Observed auger refusal at 37.0 ft. Begin coring at 37.0 ft. See Core Boring Report.
40						
						Bottom of Exploration at 42.0 ft.
45						
50						
55						
60						
65						
70						

FILE NO. 70819-000 BORING NO. HA-122

Form #3001

HALEY & ALDRICH

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

Rig Make & Model

Item	Casing	Sampler	Core Barrel
Type	HAS	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head ☐ Bentonite
☐ ATV ☐ Geoprobe ☐ Winch ☐ Polymer
☐ Track ☐ Air Track ☐ Roller Bit ☑ None
☐ Skid ☐ _____ ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud

Casing: ☐ Driven ☐ Spun

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

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	37
Rock Cored (linear ft)	5
Samples	T2S

BORING NO. HA-122

Form #3002

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. **HA-123**

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
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

Rig Make & Model: CME 55 - Truck Mount

☑ Truck ☐ Tripod ☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing: ☐ Driven ☐ 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) Medium dense brown gray sandy SILT, little coarse gravel, dry. FILL
		8				
		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	S9	19.0		Loose gray brown clayey SILT, little sand, moist.
		2				
20		2				
		2	10"/24"	21.0		
		1	S10	24.0		Same, except little clay.
		2				
25		2				
		2	14"/24"	26.0		
		2	S11	29.0		Same.
		2				
30		4	15"/24"	31.0		

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	114
Rock Cored (Linear ft)	2
Number of Samples	24S

BORING NO. **HA-123**

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-123

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		
		2	S11	34.0		Very loose gray brown fine to medium sand SILT, trace clay, organics, moist.
35		2				
		2				
		4	20"/24"	36.0		
						ALLUVIUM
		1	S12	39.0		Same.
40		2				
		2				
		3	14"/24"	41.0		
		1	S13	44.0		Very loose gray silty fine to medium SAND, moist.
45		2				
		2				
		3	19"/24"	46.0		
		1	S14	49.0		Loose gray fine sand SILT, trace clay, organics, moist.
50		2				
		3				
		4	20"/24"	51.0		
		1	S15	54.0		Same.
55		1				
		3				
		3	20"/24"	56.0		
		1	S16	59.0		Same.
60		2				
		5				
		4	20"/24"	61.0		
		3	S17	64.0		Loose gray fine sand SILT, trace clay organics, moist.
65		1				
		4				
		5	24"/24"	66.0		
		WOH	S18	69.0		Same, except medium dense.
70		5				
		7				
		8	22"/24"	71.0		

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-123

Depth (ft)	Casing Blows per ft	Sampler Blows per 6 in	Sample Number & Recovery	Sample Depth (ft)	Stratum Change (ft)	Visual Classification and Remarks
		4	S19	74.0		Medium dense gray fine sandy SILT, trace clay, organics moist.
		5				
75		8				ALLUVIUM
		9	22"/24"	76.0		
		2	S20	79.0		Same.
		5				
80		7				
		9	23"/24"	81.0		
		5	S21	84.0		Same.
		5				
85		8				
		9	20"/24"	86.0		
		5	S22	89.0		Medium dense gray brown silty medium to fine SAND, trace clay, moist.
		5				
90		8				
			21"/24"	91.0		
		WOR	S23	94.0		Very loose gray brown silty medium to fine SAND, trace clay, moist.
		WOR				
95		WOR				
		5	22"/24"	96.0		
		5	S24	99.0		Same, except medium dense.
		7				
100		8				
		9	22"/24"	101.0		
		WOR	S25	104.0		Same, except very loose.
		WOR				
105		WOR				
		WOR	24"/24"	106.0		
		3	S26	109.0		Medium dense gray brown silty fine to medium SAND, trace clay, pockets of rock fragments, moist.
		5				
110		5				
		12	23"/24"	111.0		

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-123

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
					114.0	
		100/.2	S27 2"/3"	114.0 114.2		Very dense sandy ROCK FRAGMENTS. WEATHERED BEDROCK
115						Began rock coring 114.0 ft.
						Bottom of Exploration at 116.0 ft.
120						
125						
130						
135						
140						
145						
150						

FILE NO. 70819-000 BORING NO. HA-123

HALEY & ALDRICH

CORE BORING REPORT

BORING NO. **HA-123**

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	5-Jun-00
DRILLER	L. TODD	DATE FINISHED	6-Jun-00

Elevation 253.6 ft | Datum City | Boring Location See Boring Location Plan

Item	Casing	Sampler	Core Barrel
Type	HAS	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

Rig Make & Model: CNE 55 - Truck Mount

☑ Truck ☐ Tripod ☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

Hammer Type: ☑ Safety ☐ Doughnut

Casing: ☐ Driven ☐ Spun

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Depth (ft)	Drilling Rate (min/ft)	Core No. Depth (ft)	Recovery RQD (in)	Recovery RQD (%)	Weathering	Stratum Change (ft)	Visual Classification and Remarks
						114.0	Begin coring at 114.0 ft.
		114.0					Moderately soft, moderately weathered red-brown-gray mottled fine-grained SANDSTONE.
115		R1	21	88	MOD		
			15	63			QUEENSTON FORMATION
		116.0				116.0	
							Bottom of Boring at 116.0 ft.
120							
125							
130							
135							
140							

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Summary

Overburden (Linear ft)	114
Rock Cored (linear ft)	2
Samples	27S

BORING NO. HA-123

Form #3002

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-124

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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**	12-Jun-00
DRILLER	L. TODD	**DATE FINISHED**	12-Jun-00

Elevation 267.92 ft **Datum** City

Boring Location See Boring Location Plan

Rig Make & Model CME 55 Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head ☐ Winch ☐ Roller Bit ☐ Cutting Head

☐ ATV ☐ Geoprobe ☐ Track ☐ Air Track ☐ Skid ☐ _____

Hammer Type ☑ Safety ☐ Doughnut

Drill Mud ☐ Bentonite ☐ Polymer ☑ None

Casing ☐ Driven ☐ 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						ASPHALT
						CRUSHED STONE
		6	S1	1.0		Medium dense brown black silty fine to medium SAND, little gravel, ash, brick,
		4	12"/12"	2.0		dry.
		3	S2	2.0		Loose brown silty fine to coarse SAND, moist.
		7				
		2				FILL
		4	18"/24"	4.0		
		7	S3	4.0		(Black rock obstruction in spoon.)
5		7				
		4				
		4	1"/24"	6.0		
		2	S4	6.0		Loose brown silty SAND, organics, wet.
		3				
		3				
		2	17"/24"	8.0		
		2	S5	8.0		Same.
		5				
		4				
10		3	24"/24"	10.0		
						Bottom of Exploration at 10.0 ft.
15						
20						
25						
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	10
Rock Cored (Linear ft)	--
Number of Samples	5S

BORING NO. HA-124

Form #3000

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. HA-125

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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**	12-Jun-00
DRILLER	L. TODD	**DATE FINISHED**	12-Jun-00

Elevation 255.29 ft **Datum** City **Boring Location** See Boring Location Plan

Rig Make & Model CME 55 - Truck Mount

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	NX
Inside Diameter (in)	3-1/4	1-3/8	2
Hammer Weight (lb)	--	140	
Hammer Fall (in)	--	30	

☑ Truck ☐ Tripod ☑ Cat-Head

☐ ATV ☐ Geoprobe ☐ Winch

☐ Track ☐ Air Track ☐ Roller Bit

☐ Skid ☐ _____ ☐ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut

Drill Mud: ☐ Bentonite ☐ Polymer ☑ None

Casing: ☐ Driven ☐ 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						ASPHALT
						CRUSHED STONE
		12	S1	1.0		Medium dense brown black gravelly SAND, slag, dry
		7	4"/12"	2.0		
		3	S2	2.0		Loose brown gray silty fine to medium SAND, damp
		4				FILL
		2				
		7	15"/24"	4.0		
		3	S3	4.0		Same.
		2				
5		4				
		2	14"/24"	6.0		
		3	S4	6.0		Loose gray silty fine SAND, some clay, little gravel, damp
		3				
		3				
		7	18"/24"	8.0	8	
		8	S5	8.0		Very dense brown gray silty fine SAND, some gravel, damp
		28				
		29				GLACIAL TILL
		28	15"/24"	10.0		
10						Bottom of Exploration at 10.0 ft.
15						
20						
25						
30						

Water Level Data

Date	Time	Elapsed Time (hrs)	Bottom of Casing (ft)	Bottom of Boring (ft)	Water (ft)

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Summary

Overburden (Linear ft)	10
Rock Cored (Linear ft)	--
Number of Samples	5S

BORING NO. HA-125

OBSERVATION WELL INSTALLATION REPORT

HALEY & ALDRICH

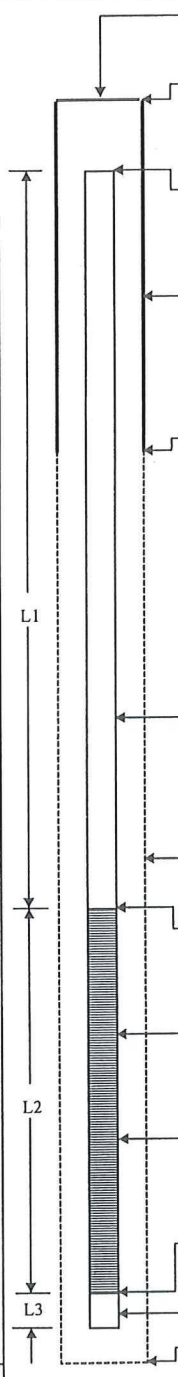
Well No. LBA-MW1

Boring No. HA-111*

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 INSTALLED	5/24/2000
DRILLER	L. TODD	WATER LEVEL	

Ground El.	251.83 ft	Location	N: 1188376.32	☐ Guard Pipe
El. Datum	City		E: 1408 396.58	☑ Roadway Box

SOIL/ROCK CONDITIONS	BOREHOLE BACKFILL
Gray brown silty coarse to fine SAND. Some gravel, wood, wet. FILL	Sand/Grout



Type of protective cover/lock	Roadway Box
Height/Depth of top of guard pipe/roadway box above/below ground surface	-- ft
Height/Depth of top of riser pipe above/below ground surface	0.3 ft
Type of protective casing:	None
Length	-- ft
Inside Diameter	-- in
Depth of bottom of guard pipe/roadway box	-- ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	1.0
Bentonite Seal	1.0	2.5

Type of riser pipe:	
Inside diameter of riser pipe	2.0 in
Type of backfill around riser	Quartz Sand
Diameter of borehole	4-1/4 in
Depth to top of well screen	3.0 ft
Type of screen	SCHEDULE 40 PVC
Screen gauge or size of openings	0.010 in
Diameter of screen	2.0 in
Type of backfill around screen	Quartz Sand
Depth of bottom of well screen	13.0 ft
Bottom of Silt trap	-- ft
Depth of bottom of borehole	14.0 ft

(Bottom of Exploration)

(Numbers refer to depth from ground surface in feet)

(Not to Scale)

3 ft	+	10 ft	+	0 ft	=	13 ft
Riser Pay Length (L1)		Length of screen (L2)		Length of silt trap (L3)		Pay length

COMMENTS: Well installed 4 ft. west of Boring HA-111. Hole was blind augered to 14.0 ft. per Greg Senegal of Labella Associates

HALEY & ALDRICH

OBSERVATION WELL INSTALLATION REPORT

Well No. LBA-MW2

Boring No. HA-117

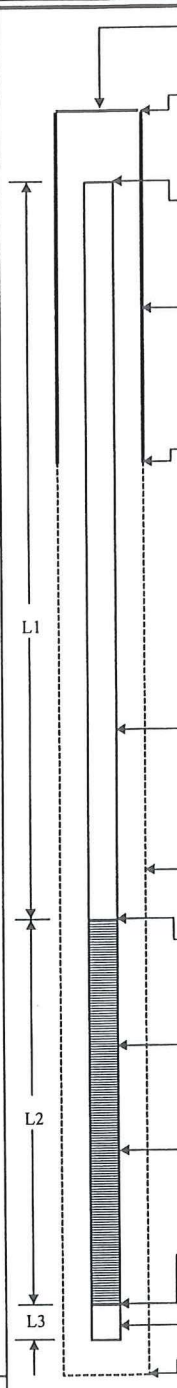
PROJECT	PORT OF ROCHESTER	H&A FILE NO.	70819-000
LOCATION	ROCHESTER, NEW YORK	PROJECT MGR.	M. VALENTINE
CLIENT	LABELLA ASSOCIATES	FIELD REP.	R. DEDRICK
CONTRACTOR	GEOLOGIC ENTERPRISE	DATE INSTALLED	5/24/2000
DRILLER	L. TODD	WATER LEVEL	

Ground El.	253.7 ft	Location	N: 1188222.94
El. Datum	City		E: 1408074.34

☐ Guard Pipe ☑ Roadway Box

SOIL/ROCK CONDITIONS	BOREHOLE BACKFILL
	Quartz Sand (17 ft. bgs.)
	Bentonite (17 ft. to 26 ft.)
Black brown silty SAND, slag, brick, gravel. FILL	
10.0	
Gray silty SAND, little gravel. ALLUVIUM	
(Bottom of Exlporation)	

(Numbers refer to depth from ground surface in feet)



(Not to Scale)

- Type of protective cover/lock: Roadway Box
- Height/Depth of top of guard pipe/roadway box above/below ground surface: -- ft
- Height/Depth of top of riser pipe above/below ground surface: 0.3 ft
- Type of protective casing: None
  - Length: -- ft
  - Inside Diameter: -- in
- Depth of bottom of guard pipe/roadway box: -- ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	0.0
Bentonite Seal	0.0	4.0

- Type of riser pipe: PVC
  - Inside diameter of riser pipe: 2.0 in
  - Type of backfill around riser: Quartz Sand
- Diameter of borehole: 4-1/4 in
- Depth to top of well screen: 5.0 ft
- Type of screen: SCHEDULE 40 PVC
  - Screen gauge or size of openings: 0.010 in
  - Diameter of screen: 2.0 in
  - Type of backfill around screen: Quartz Sand
- Depth of bottom of well screen: 15.0 ft
- Bottom of Silt trap: 15.0 ft
- Depth of bottom of borehole: 26.0 ft

5 ft	+	10 ft	+	0 ft	=	15 ft
Riser Pay Length (L1)		Length of screen (L2)		Length of silt trap (L3)		Pay length

COMMENTS: Bottom of borehole seal from 26.0 ft. to 17.0 ft. b.g.s. using Bentonite Chips.

OBSERVATION WELL INSTALLATION REPORT

HALEY & ALDRICH

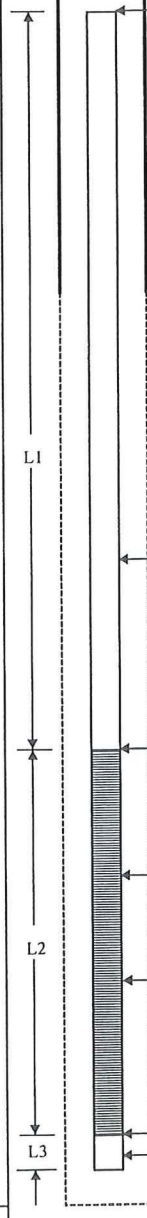
Well No.	Boring No.
LBA-MW3	HA-114a

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 INSTALLED	5/25/2000
DRILLER	L. TODD	WATER LEVEL	

Ground El.	261.92 ft	Location	N: 1187851.82	☐ Guard Pipe
El. Datum	City		E: 1407798.33	☑ Roadway Box

SOIL/ROCK CONDITIONS	BOREHOLE BACKFILL
Gray brown silty SAND, slag, brick FILL 14.0	Bentonite/ Quartz Sand
Gray brown clayey SILT ALLUVIUM 19.0	
Brown silty SAND, some gravel. GLACIAL TILL	
(Bottom of Exploration)	

(Numbers refer to depth from ground surface in feet)



(Not to Scale)

Type of protective cover/lock	Roadway Box
Height/Depth of top of guard pipe/roadway box above/below ground surface	-- ft
Height/Depth of top of riser pipe above/below ground surface	0.3 ft
Type of protective casing:	None
Length	-- ft
Inside Diameter	-- in
Depth of bottom of guard pipe/roadway box	-- ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Concrete	0.0	1.0
Bentonite Seal	1.0	12.0

Type of riser pipe:	PVC
Inside diameter of riser pipe	2.0 in
Type of backfill around riser	Bentonite Chips
Diameter of borehole	4-1/4 in
Depth to top of well screen	15.0 ft
Type of screen	SCHEDULE 40 PVC
Screen gauge or size of openings	0.010 in
Diameter of screen	2.0 in
Type of backfill around screen	Quartz Sand
Depth of bottom of well screen	25.0 ft
Bottom of Silt trap	-- ft
Depth of bottom of borehole	25.0 ft

14.7 ft	+	10 ft	+	0 ft	=	24.7 ft
Riser Pay Length (L1)		Length of screen (L2)		Length of silt trap (L3)		Pay length

COMMENTS:

APPENDIX B

Results of Laboratory Soil Testing

Haley & Aldrich of New York

Project: Port of Rochester
Project #: 70819-000
Client: LaBella Associates, P.C.
Subject: Data Table of Recent Explorations

TABLE B-1 - TEST DATA - RECENT SUBSURFACE INVESTIGATIONS

Date: 23-Jun-00
Created By: MSV
Checked By: SEW

PROJECT IDENTIFICATION	EXPLORATION IDENTIFICATION	SURFACE ELEVATION	LOCATION		LABORATORY TESTS									
					DEPTH	NATURAL WATER CONTENT	ATTERBERG LIMITS (%)			TOTAL UNIT WEIGHT	SHEAR STRENGTH (TSF)			OTHERS
		(FT)	NORTHING (FT)	EASTING (FT)	(FT)	(%)	WL	WP	IP	(PCF)	TV	SV Remolded	PP/2	
	HA-101	251.8			10 to12									4% <#200
	HA-101				60 to62									98% < #200
	HA-122	252.8			25 to27	87.3	105	74	31					
	HA-122				30 to32									80% <#200
	HA-123	253.6			19 to21	43.1	45	38	7					
	HA-123				24 to 26									86% <#200

Haley & Aldrich of New York

Project: Port of Rochester
Project #: 70819-000
Client: LaBella Associates, P.C.
Subject: Data Table of Existing Explorations

TABLE B-2 - TEST DATA - EARLIER SUBSURFACE INVESTIGATIONS

Date: 31-Jan-00
Created By: BEBa
Checked By: SEW

PROJECT IDENTIFICATION	EXPLORATION IDENTIFICATION	SURFACE ELEVATION	LOCATION		LABORATORY TESTS									
					DEPTH	NATURAL WATER CONTENT	ATTERBERG LIMITS (%)			TOTAL UNIT WEIGHT	IDEX STRENGTH (TSF)			OTHERS
		(FT)	NORTHING (FT)	EASTING (FT)	(FT)	(%)	WL	WP	IP	(PCF)	TV	SV / R	PP/2	
Stutson Street Water Main H&A #7616 December-87	B101	249	1185395	759165	16.7	49.2				103				
					16.8	41.4					0.1		0.16	
					16.9	34.1					0.14	0.21	0.2	
												0.04		
						34.2	34.4	27.3	7.1					LOI = 3.5%
					17.2	34.7								UU = 0.26 TSF
					17.4	35.8					0.2		0.23	
	B105	221.4	1185455	759057	11.2	44.1				92.6				
					11.3	51.6					0.09	0.08	0.02	
												0.01		
					11.5	45.1					0.06	0.09	0.01	
												0.01		
						41.7	39.4	29.6	9.8					LOI = 5.6%
					11.8	42.5								UU = 0.13 TSF
	B107	220.4	1185470	759019	6	39.5				97.3				
					6.2	35.7						0.07	0.08	0.01
					6.3	43.5								
					6.6	37.7								UU = 0.07 TSF
					6.8	30				97.8	0.1	0.21	0.06	
												0.04		
					7.2	38.8								
					7.3	40.7					0.07	0.07	0.02	
												0.1		
					7.5	41.9					0.08	0.09	0.03	
												0.02		
						40	37.6	28.8	8.8					LOI = 4.1%
					7	32.9				96.9	0.07		0.04	
					10	44.8				99.4				
					10.2	41					0.09	0.06	0.03	LOI = 4.8%
												0.01		
					10.4	38.4					0.08	0.09	0.03	
												0.01		
					10.7	39.7					0.06	0.08	0.01	
												0		
					11	39.7					0.07	0.08	0.01	
												0.01		
						38.4	33.9	29	4.9					
					11.2	29.4					0.08	0.08	0.02	
												0.01		
					11.5	28.1					0.09	0.1	0.01	
												0.02		
					11.7	34.6					0.07		0.01	

Haley & Aldrich of New York

Project: Port of Rochester
Project #: 70819-000
Client: LaBella Associates, P.C.
Subject: Data Table of Existing Explorations

TABLE B-2 - TEST DATA - EARLIER SUBSURFACE INVESTIGATIONS

Date: 31-Jan-00
Created By: BEBa
Checked By: SEW

PROJECT IDENTIFICATION	EXPLORATION IDENTIFICATION	SURFACE ELEVATION	LOCATION		LABORATORY TESTS									
					DEPTH	NATURAL WATER CONTENT	ATTERBERG LIMITS (%)			TOTAL UNIT WEIGHT	IDEX STRENGTH (TSF)			OTHERS
		(FT)	NORTHING (FT)	EASTING (FT)	(FT)	(%)	WL	WP	IP	(PCF)	TV	SV / R	PP/2	
Genesee River Crossing H&A #70037 December-89	B-1	222.7	1186728	759540	4.5	39.7				105.3				
					4.7	37.3					0.17	0.1	0.13	
												0.03		
					5	21.1					0.08	0.14	0.06	
												0.04		
						39								LOI = 2.4%
					5.2	34.1					0.13	0.26	0.28	
												0.05		
						34.1	30	24.7	5.3					
					5.7	35.5					0.17	0.3	0.53	
												0.06		
						34.4								GRAIN SIZE
					6	41.6					0.18	0.22	0.16	G = 2.66
												0.07		
					6.2	38.6					0.18		0.5	
	B-2	226.4	1186735	759667	11.1	35.7				103.7	0.15	0.16	0.13	
												0.03		
						39.3								LOI = 3.0 %
						38.3								GRAIN SIZE
						37.4	34.8	24.2	10.7					
					11.3	39.6								G =2.67
	B-3	223.7	1186714	759764	10	43.9				105.2				
					10.2	39.9					0.2	0.29	0.38	
												0.06		
					10.5	50.2					0.2	0.2	0.17	G =2.67
												0.06		
					10.7	40					0.17	0.19	0.28	
												0.04		
					10.9	32.1					0.11	0.24	0.26	
												0.06		
						49.5								LOI = 4.3%
					11.2	43.5					0.18	0.21	0.18	
												0.06		
						34.8	45.3	26.9	18.4					
					11.5	35.2					0.12	0.22	0.28	
												0.05		
						34.5								GRAIN SIZE
					11.7	29.8					0.08	0.34	0.18	
	B-4	239.2	1186695	759892								0.06		

Haley & Aldrich of New York

Project: Port of Rochester
Project #: 70819-000
Client: LaBella Associates, P.C.
Subject: Data Table of Existing Explorations

TABLE B-2 - TEST DATA - EARLIER SUBSURFACE INVESTIGATIONS

Date: 31-Jan-00
Created By: BEBa
Checked By: SEW

PROJECT IDENTIFICATION	EXPLORATION IDENTIFICATION	SURFACE ELEVATION	LOCATION		LABORATORY TESTS									
					DEPTH	NATURAL WATER CONTENT	ATTERBERG LIMITS (%)			TOTAL UNIT WEIGHT	IDEX STRENGTH (TSF)			OTHERS
		(FT)	NORTHING (FT)	EASTING (FT)	(FT)	(%)	WL	WP	IP	(PCF)	TV	SV / R	PP/2	
Stutson Street Bridge NYSDOT December-97	DA-B-101	275.00	1186450	756550.001										
	DN-B-102	273.13	1186450	756550.001										
	DN-B-103	272.44	1186450	756550.001										
	DN-B-3	216.77	1185260.09	758819.15										
	DN-B-4	216.22	1185182.4	758779.05										
	DN-B-5	225.60	1185115.4	758737.87										
	DN-B-51	219.10	1185214.8	758998.7										
	DN-B-52	220.91	1185179.6	758984.2										
	DN-B-53	221.30	1185141.6	758969.1										
	DN-B-54	222.88	1185069.9	758947.22			D.O.T. LAB DATA NOT AVAILABLE							
	DN-B-55	226.88	1185019.8	758933.4										
	DN-B-9	251.67	1184912.1	759236.98										
	FH-B-1	289.79	1185295.5	758569.1										
	FH-B-10	256.98	1185181.6	759587.83										
	FH-B-11	256.89	1184939.6	759545.62										
	FH-B-12	254.69	1185137.1	759762.03										
	FH-B-13	253.18	1185162.5	759952.78										
	FH-B-14	251.97	1185098.5	760109.9										
	FH-B-201	289.76	1185247.36	758604.89										
	FH-B-202	288.08	1185316.02	758630.65										
	FH-B-203	291.08	1185224.7	758591.8										
	FH-B-305	253.05	1184888.39	759408.73										
	FH-B-306	253.97	1184816.52	759408.82										
	FH-B-307	251.77	1184906.29	759381.4										
	FH-B-308	251.77	1184858	759294.24										
	FH-B-309	251.60	1184917.01	759230.91										
	FH-B-310	251.51	1184910.43	759225.38										
	FH-B-311	251.44	1184925.8	759340.53										
	FH-B-312	251.37	1184977.85	759281.94										
	FH-B-6	250.49	1185243.1	759210.41										
	FH-B-7	251.47	1184991.6	759088.96										
	FH-B-8	250.78	1185053.7	759323.52										
Wave Surge Protection Project Army Corp April-95	D94-1	224.33	1189750	761500	0.0-2.0									GRAIN SIZE
					6.0-8.0									GRAIN SIZE
					20.0-22.0		34	25	9					
	D94-2	232.33	1188762	761356	0.0-2.0		37	27	10					
					5.0-7.0									GRAIN SIZE
	D94-3	238.33	1187239	760364	10.0-12.0	69.9								GRAIN SIZE
														LOI = 7.6%
Rehabilitation of East Pier Army Corp June-85	D79-6	238.43	1188337.56	760567.11	12.0-12.7									GRAIN SIZE
					16.3-17.8		40	23	17					GRAIN SIZE
					31.3-32.8									GRAIN SIZE

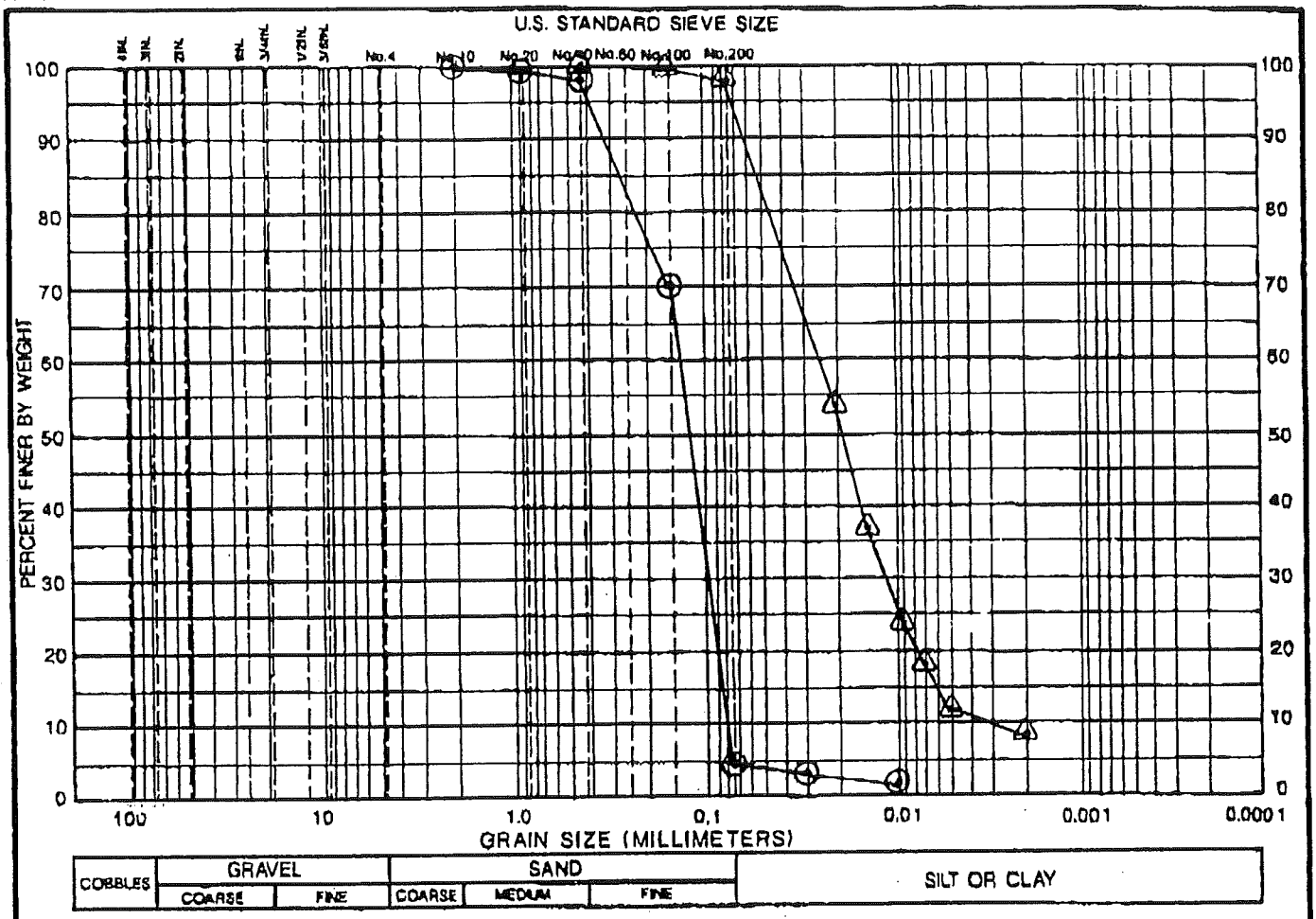
NOTES: 1. SPT and probe blow counts are recorded on the subsurface exploration logs included in Appendix ???

APPENDIX C

Records of Earlier Subsurface Explorations

C-1 Stutson Street Water Main
C-2 Genesee River Crossing
C-3 Stutson Street Bridge
C-4 Dredge Probes – Army Corp of Engineers
C-5 Wave Surge Protection Project
C-6 Rehabilitation of East Pier
C-7 Lake Avenue Improvements

H&A FORM No. 505 JUNE 1988



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

UNIFIED SOIL CLASSIFICATION SYSTEM

SYMBOL	EXPL. NO.	SAMPLE NO.	DEPTH (feet)	SAMPLE SOURCE	PROPOSED USE	SAMPLE DESCRIPTION
⊙	HA101	7	10-12			Gray brown fine to medium SAND, tr silt and organics
△	HA101	17	60-62			Gray brown SILT, little clay, trace fine sand.

SYMBOL	EXPL. NO.	SAMPLE NO.	C_u	C_c	NATURAL WATER CONTENT(%)	ATTERBERG LIMITS (%) W_L	W_p	I_p	LOI (% by wgt.)	

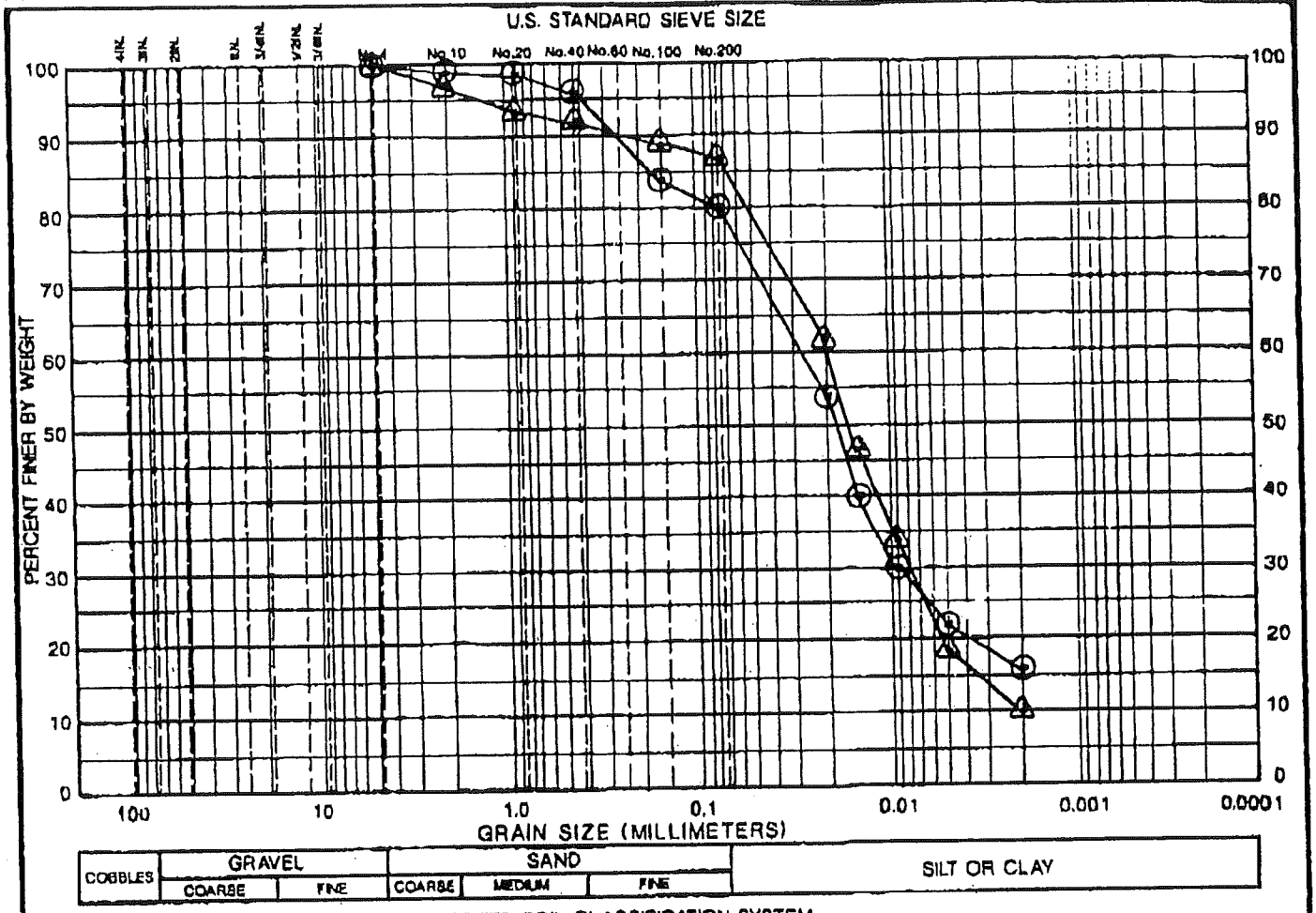
Haley & Aldrich, Inc.
Consulting Geotechnical Engineers, Geologists and Hydrogeologists

GRAIN SIZE DISTRIBUTION

FILE NO.

DATE:

H&A FORM No. 505 JUNE 1988



UNIFIED SOIL CLASSIFICATION SYSTEM

SYMBOL	EXPL. NO.	SAMPLE NO.	DEPTH (feet)	SAMPLE SOURCE	PROPOSED USE	SAMPLE DESCRIPTION
⊙	HA122	11	30-32			Gray brown clayey SILT, little fine sand, little organics
△	HA123	10	24-26			Gray brown SILT, little clayey sand.

SYMBOL	EXPL. NO.	SAMPLE NO.	C_u	C_c	NATURAL WATER CONTENT(%)	ATTERBERG LIMITS (%) W_L	W_p	I_p	L O I (% by wgt.)	

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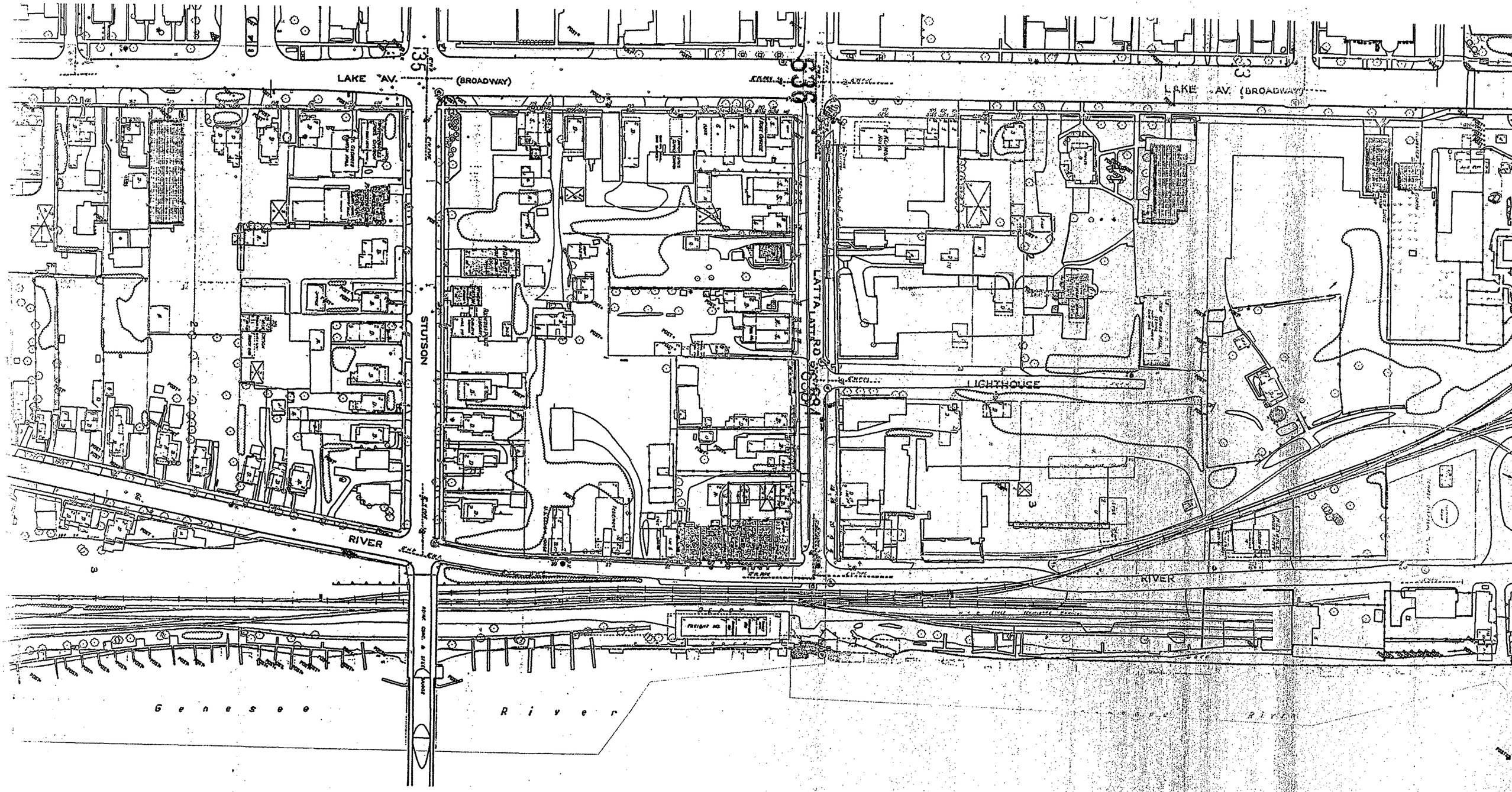
GRAIN SIZE DISTRIBUTION

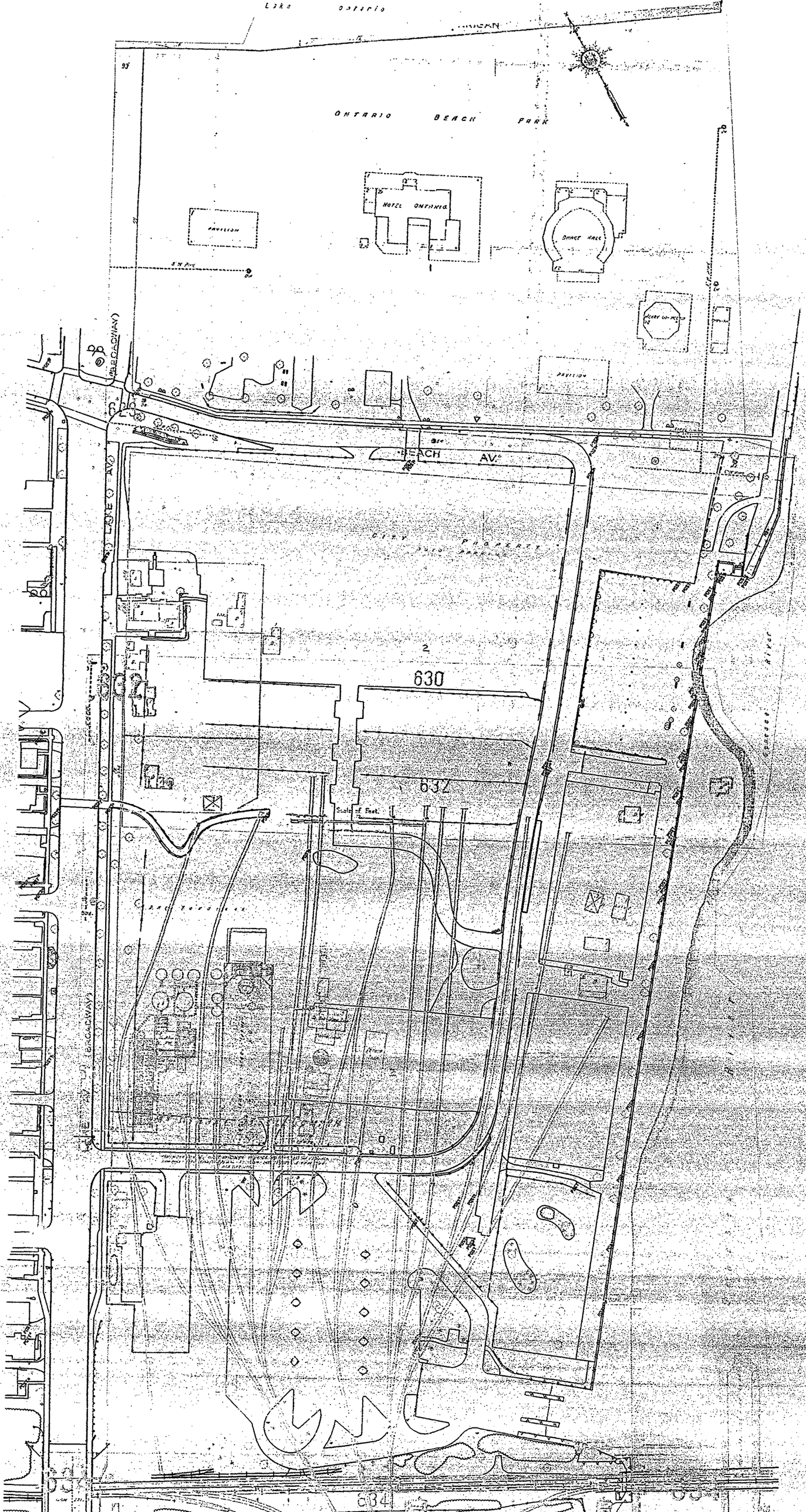
FILE NO.

DATE:

APPENDIX D

Historic (Sanborn) Maps


LAKE AV.
(BROADWAY)
135
LAKE AV. (BROADWAY)
STUTSON
LATTA RD
LIGHTHOUSE
RIVER
RIVER
Genesee
River


Lake Ontario
ONTARIO BEACH PARK
HOTEL ONTARIO
DANCE HALL
PAVILION
BEACH AV.
LAKE AV. (BROADWAY)
630
632
634
Scale of Feet