SOIL SAMPLING LOG

ECOLOGY AND ENVIRONMENT, INC.

DRILLING & TESTING

Sea Coast Construction

Batavia, N.Y.

SHEET 1 of 1

PROJ. NO. SZ-1940-41

LOCATION

LINE & STA.

OFFSET

GROUND ELEVATION

HOLE NO. W-2

| | CASING | SAMPLER | CORE-BARREL |
|---|---|---|---|
| TYPE | HSA | SS | |
| SIZE I.D. | 3¼" | 1 3/8" | |

ART 4/10/87

FINISH 4/10/87

OF HAMMER 140 300

FALL 30" 24"

GROUND WATER OBSERVATIONS

| E | TIME | DEPTH |
|---|---|---|
| 10/87 | 1205 | 9.0' |

O.D. 2" I.D. 1 3/8"

RIG Diedrich D-50

| SAMPLE NO. DEPTHS ELEV. FT. | Type of Sample | BLOWS PER 6" ON SAMPLER From 0-6 | To 6-12 | To 12-18 | DENSITY OR CONSIST. MOISTURE | PROFILE CHANGE DEPTH ELEV. | FIELD IDENTIFICATION OF SOILS REMARKS | SAMPLE NO. | PEN | REC. |
|---|---|---|---|---|---|---|---|---|---|---|
| 0' to 2' | SS | 5 | 5 | 7 | dry | | Fill-combination of crushed limestone, ashphalt, and coarse sand. | 1 | 18 | 6 |
| 5' to 7' | SS | 11 | 9 | 15 | moist | | Light to dark olive brown silty sand; sand is fine to coarse, poorly sorted, subangular subrounded. | 2 | 18 | 14 |
| 10' to 12' | SS | 9 | 5 | 16 | wet | | Light olive brown (5/6) clayey sand. Sand is fine to coarse grain, moderately sorted, angular to subrounded. Clay is moist with low plasticity. | 3 | 18 | 16 |
| 15' to 17' | SS | not recorded | | | wet | | Dark grayish brown sand and clay. Sand is fine to medium grain, moderatly sorted. Clay is moist, low to medium plasticity and contains fragments of black shale. | 4 | 18 | 18 |
| 20' to 22' | SS | 25 | 27 | 50 | wet | | Dark to very dark clay with black shale. Clay is moderatly dense, medium plasticity and contains fragments of black shale. | 5 | 18 | 8 |
| | | | | | | | Boring terminated at 22'-encountered refusal water at 9.0' | | | |

Proportions used trace = 0-10%, little = 10-20%, some = 20-35%, and = 35-50%

DRILLER R. Holtz

HELPER G. Jones

SOILS ENGINEER D. Sutton

DRILLING INSPECTOR

SAMPLE TYPE

C = CORED W = WASHED

SS = SPLIT SPOON

UP = UNDISTURBED PISTON

TP = TEST PIT

UT = UNDISTURBED THINWALL

COHESIONLESS DENSITY

0-10 LOOSE

10-30 MED COMP

30-50 DENSE

50+ VERY DENSE

TOTAL FOOTAGE

Earth Boring Ft.

Rock Coring Ft.

HOLE NO

SOIL SAMPLING LOG

SHEET 1 of 1

ECOLOGY AND ENVIRONMENT, INC.

DRILLING & TESTING

Sea Coast Construction

Batavia, New York

PROJ. NO. S2-1940-41

LOCATION U.S. Chrome Batavia, NY

LINE & STA.

OFFSET

GROUND ELEVATION

HOLE NO. W-1

| | CASING | SAMPLER | CORE BARREL |
|---|---|---|---|
| TYPE | HSA | SS | |
| SIZE I.D. | 3¼" | 1 3/8" | |

/10/87

/10/87

HAMMER (140) 350

ALL (30") 24"

GROUND WATER OBSERVATIONS

| TIME | DEPTH |
|---|---|
| 0925 | 9.0' |

.0/87

D. 2" I.D. 1 3/8"

Diedrich D-50

| SAMPLE NO. DEPTHS ELEV FT. | Type of Sample | BLOWS PER 6" ON SAMPLER From 0-6 | To 6-12 | To 12-18 | DENSITY OR CONSIST. MOISTURE | PROFILE CHANGE DEPTH ELEV | FIELD IDENTIFICATION OF SOILS REMARKS | SAMPLE NO. | PEN | REC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0' to 2' | SS | 7 | 9 | 12 | dry | | Fill, mixture of sand, gravel, asphalt and trace amounts of clay. | 1 | 18 | 6 |
| 5' to 7' | SS | 8 | 12 | 12 | dry | | Pale yellow to dark grayish brown fine to medium sand, small pebble size gravel also present. | 2 | 18 | 10 |
| 10' to 12' | SS | not collected | | | (wet) | | Light olive brown silty sand, sand is medium to coarse, poorly sorted, silt is very fine grain, cohesive. | 3 | 18 | 14 |
| 15' to 17' | SS | 20 | 16 | 18 | wet | | Dark grayish brown sandy gravel and clay, sand, fine to coarse grain, poorly sorted gravel-subrounded to angular, poorly sorted. Clay-moist, with low plasticity. | 4 | 18 | 18 |
| 20' to 22' | SS | 21 | 15 | 20 | wet | | Dark gray sandy clay. Clay is slightly plastic wet, some cohesion, sand fine to coarse poorly sorted. Shale fragments found in clay. | 5 | 18 | 16 |
| 25' to 27' | SS | 30 | 30 | 40 | moist | | Dark grayish brown sandy gravel, sand is poorly sorted, coarse grain, gravel is subangular to subrounded and contains fragments of weathered black shale. Boring terminated at 25' water at 9.0' | 6 | 18 | 17 |

Proportional well space 0-10% trace 10-20% some 20-35% and 35-50%

LLER G. Jones

LPER R. Holtz

LLS ENGINEER D. Sutton

LLING INSPECTOR

SAMPLE TYPE

C CORED W WASHED

SS SPLIT SPOON

P UNDISTURBED PISTON

TP TEST PIT

T UNDISTURBED THINWALL

COHESIONLESS DENSITY

0-10 LOOSE

10-30 MED COMP

30-50 DENSE

50+ VERY DENSE

TOTAL FOOTAGE

Earth Boring ft

Rock Coring ft

HOLE NO

SOIL SAMPLING LOG

SHEET 1 of 1

/87

4/9/87

HAMMER (140) 300

ALL (90°) 24"

GROUND WATER OBSERVATIONS

| TIME | DEPTH |
|---|---|
| 1210 | 9' |

/87

D. 2" I.D. 1 3/8"

Diedrich D-50

ECOLOGY AND ENVIRONMENT, INC.

DRILLING & TESTING

Sea Coast Construction

Batavia, New York

PROJ. NO. SZ-1940-41

LOCATION U.S. Chrome, Batavia, NY

LINE & STA.

OFFSET

GROUND ELEVATION

HOLE NO. E-2

| | CASING | SAMPLER | CORE BARR |
|---|---|---|---|
| TYPE | HSA | SS | |
| SIZE I.D. | 3¼" | 1 3/8" | |

| SAMPLE NO. DEPTHS ELEV. FT. | Type of Sample | BLOWS PER 6" ON SAMPLER From 0-6 | To 6-12 | To 12-18 | DENSITY OR CONSIST. MOISTURE | PROFILE CHANGE DEPTH ELEV | FIELD IDENTIFICATION OF SOILS REMARKS | SAMPLE NO. | PEN | REC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0' to 2' | SS | 7 | 9 | 7 | dry | | Very dark grey to brown sandy gravel. Sand is medium to coarse, subrounded to subangular with small chunks of asphalt. Gravel is medium to coarse, pea gravel. Small amount of clay also noted. | 1 | 18 | 9 |
| 5' to 7' | SS | – | – | – | moist | | Olive to dark grayish brown sandy clay. Sand is fine to coarse with small cobbles. Clay is damp and has low plasticity. | 2 | 18 | 14 |
| 10' to 12' | SS | 5 | 7 | 12 | wet | | Dark olive brown, very fine to coarse, poorly sorted, subangular to rounded sand. Small amount of dark brown, low plasticity clay. | 3 | 18 | 18 |
| 15' to 17' | SS | 12 | 14 | 16 | wet | | Dark grayish brown, poorly sorted, subangular to rounded, sand with trace amounts of gray to black clay. | 4 | 18 | 16 |
| 20' to 22' | SS | – | – | – | wet | | Olive gray, poorly sorted, coarse sand with clay. | 5 | 18 | 18 |
| 25' to 27' | SS | 20 | 25 | 40 | wet | | Dark brownish gray clay with black, friable shale. Slight pertoleum oder noticed<br>Boring terminated at 25' water at 9' | 6 | 18 | 14 |

Proportions used: trace = 0-10%, little = 10-20%, some = 20-35%, and = 35-50%

DRILLER: G. Jones

HELPER: R. Holtz

SOILS ENGINEER: D. Sutton

DRILLING INSPECTOR

SAMPLE TYPE

C CORED W WASHED

SS SPLIT SPOON

UP UNDISTURBED PISTON

TP TEST PIT

T UNDISTURBED THINWALL

COHESIONLESS DENSITY

0-10 LOOSE

10-30 MED. DENSE

30-50 DENSE

50+ VERY DENSE

TOTAL FOOTAGE

Earth Boring ft

Rock Coring "

HOLE NO

SOIL SAMPLING LOG

SHEET 1 of 1

/87

4/9/87

HAMMER (140) 300

ALL (30") 24"

GROUND WATER OBSERVATIONS

| TIME | DEPTH |
|---|---|
| 9/87 0850 | 9.0' |

O.D. 2" I.D. 1 3/8"

G Diedrich D-50

ECOLOGY AND ENVIRONMENT, INC.

DRILLING & TESTING

Sea Coast Construction

Batavia, N.Y.

PROJ. NO. S2-1940-41

LOCATION U.S. Chrome Batavia, NY

LINE & STA.

OFFSET

GROUND ELEVATION

HOLE NO. E-1

| | CASING | SAMPLER | CORE BAR |
|---|---|---|---|
| TYPE | HSA | SS | |
| SIZE I.D. | 3¼" | 1 3/8 | |

| SAMPLE NO. DEPTHS ELEV. FT. | Type of Sample | BLOWS PER 6" ON SAMPLER From 0-6 | To 6-12 | To 12-18 | DENSITY OR CONSIST. MOISTURE | PROFILE CHANGE DEPTH ELEV | FIELD IDENTIFICATION OF SOILS REMARKS | SAMPLE NO. | PEN | REC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0' to 2' | SS | 3 | 8 | 5 | dry | | Brown to dark brown sandy clay, medium plasticity with medium to coarse, angular sand. | 1 | 18 | 10 |
| 5' to 7' | SS | 3 | 3 | 1 | moist | | Brown to grayish brown clay with medium to coarse sand. Clay has low plasticity. | 2 | 18 | 16 |
| 10' to 12' | SS | 5 | 7 | 8 | wet | | Olive brown, medium to coarse, sand, subangular to rounded, cohesive, with interstical silt. | 3 | 18 | 10 |
| 15' to 17' | SS | 8 | 6 | 12 | very wet | | Dark greyish brown, coarse to very coarse, subangular to rounded, sand with some silt. | 4 | 18 | 13 |
| 20' to 22' | Grab | | | | very wet | | Dark grayish brown silty, sand, and clay. Fine grain sand, clay has low plasticity | – | – | – |
| 25' to 27' | Grab | | | | very wet | | Dark grayish brown, sandy clay. Sand is fine to medium grain, subangular to angular. Clay is slightly plastic. | – | – | – |
| | | | | | | | Boring terminated a 25' water at 9' | | | |

Proportions used trace = 0-10%, little = 10-20%, some = 20-35%, and = 35-50%

DRILLER: G. Jones

HELPER: R. Holtz

SOILS ENGINEER D. Sutton

DRILLING INSPECTOR

SAMPLE TYPE

C CORED W WASHED

SS SPLIT SPOON

P UNDISTURBED PISTON

TP TEST PIT

T UNDISTURBED THINWALL

COHESIONLESS DENSITY

0-10 LOOSE

10-30 MED. DENSE

30-50 DENSE

50+ VERY DENSE

TOTAL FOOTAGE

Earth Boring ft

Rock Coring ft

HOLE NO

SOIL SAMPLING LOG

SHEET 1 of 1

/8/87

/4/8/87

HAMMER (140) 300

ALL (30") 24"

GROUND WATER OBSERVATIONS

| | TIME | DEPTH |
|---|---|---|
| /87 | 1440 | 9.0' |

O.D. 2" I.D. 1 3/8"

Diedrich D-50

ECOLOGY AND ENVIRONMENT, INC.

DRILLING & TESTING

Sea Coast Construction

Batavia, N.Y.

PROJ. NO. S2-1940-41

LOCATION U.S. Chrome, Batavia, NY

LINE & STA.

OFFSET

GROUND ELEVATION

HOLE NO. M-1

| | CASING | SAMPLER | CORE BARR |
|---|---|---|---|
| TYPE | HSA | SS | |
| SIZE I.D. | 3¼" | 1 3/8" | |

| SAMPLE NO. DEPTHS ELEV. FT. | Type of Sample | BLOWS PER 6" ON SAMPLER From 0-6 | To 6-12 | To 12-18 | DENSITY OR CONSIST. MOISTURE | PROFILE CHANGE DEPTH ELEV | FIELD IDENTIFICATION OF SOILS REMARKS | SAMPLE NO. | PEN | REC |
|---|---|---|---|---|---|---|---|---|---|---|
| 0' to 2' | SS | 5 | 7 | 10 | dry | | Light brownish gray, poorly sorted, fine gravel and coarse sand. | 1 | 18 | 8 |
| 5' to 7' | SS | 3 | 6 | 11 | moist | | Brown poorly sorted gravel with medium to coarse sand. | 2 | 18 | 11 |
| 10' to 12' | SS | 10 | 6 | 15 | wet | | Grayish brown, poorly sorted gravels with medium to coarse, moderatly sorted sand. | 3 | 18 | 7 |
| | | | | | | | HSA and Spoon Refusal at 15.5' water at 9.0' | | | |

Proportions used: trace 0-10%, little 10-20%, some 20-35%, and 35-50%

DRILLER G. Jones

HELPER R. Holtz

SOILS ENGINEER D. Sutton

DRILLING INSPECTOR

SAMPLE TYPE

C CORED W WASHED

SS SPLIT SPOON

UP UNDISTURBED PISTON

TP TEST PIT

UT UNDISTURBED THINWALL

COHESIONLESS DENSITY

0-10 LOOSE

10-30 MED. COMP.

30-50 DENSE

50+ VERY DENSE

TOTAL FOOTAGE

Earth Boring ft

Rock Coring ft

HOLE NO

/87

SOIL SAMPLING LOG

SHEET 1 of 1

/10/87

HAMMER 140 300 N/A

L 30" 24" N/A

GROUND WATER OBSERVATIONS

| TIME | DEPTH |
|---|---|
| )/87 1410 | 9.0' |

N/A I.D. N/A

Diedrich D-50

ECOLOGY AND ENVIRONMENT, INC.

DRILLING & TESTING

PROJ. NO. SZ-1940-41

LOCATION Swan and School Streets

LINE & STA.

OFFSET

GROUND ELEVATION

HOLE NO. MW-1

| | CASING | SAMPLER | CORE BAR |
|---|---|---|---|
| TYPE | HSA | – | |
| SIZE I.D. | 4¼" | – | |

| SAMPLE NO. DEPTHS ELEV FT. | Type of Sample | BLOWS PER 6" ON SAMPLER From 0-6 | To 6-12 | To 12-18 | DENSITY OR CONSIST. MOISTURE | PROFILE | FIELD IDENTIFICATION OF SOILS REMARKS | SAMPLE NO. | PEN | REC |
|---|---|---|---|---|---|---|---|---|---|---|
| ' to ' | | | | | dry | | Fill-consisting of crushed stone, coarse sand, cobbles and cemented asphalt. 2" PVC Riser | | | |
| o | | | | | moist | | Fine to coarse grain poorly sorted sands with pebble size, subangular gravel | | | |
| | | | | | | | Water Table | | | |
| 2' | | | | | wet | | Sandy clay-fine to coarse grain sand poorly sorted with moist, loose to medium cohesive clay. | | | |
| o | | | | | | | | | | |
| 8' | | | | | wet | | Clay-medium plasticity trace amounts of fine sand with fragments of black shale intermixed 2" PVC .010 slotted screen | | | |
| o | | | | | | | | | | |
| 5' | | | | | | | | | | |
| | | | | | | | Boring terminated at 25' well set at 23' water at 9.0' | | | |

Proportions used were: 0-10% trace, 10-20% some, 20-35% and, 35-50%

ER R. Holtz

ER G. Jones

S ENGINEER R. Holtz

SAMPLE TYPE

C CORER W WASHED

SS SPLIT SPOON

P PISTON FIXED PISTON

COHESIONLESS DENSITY

0-10 LOOSE

10-30 MED. COMP.

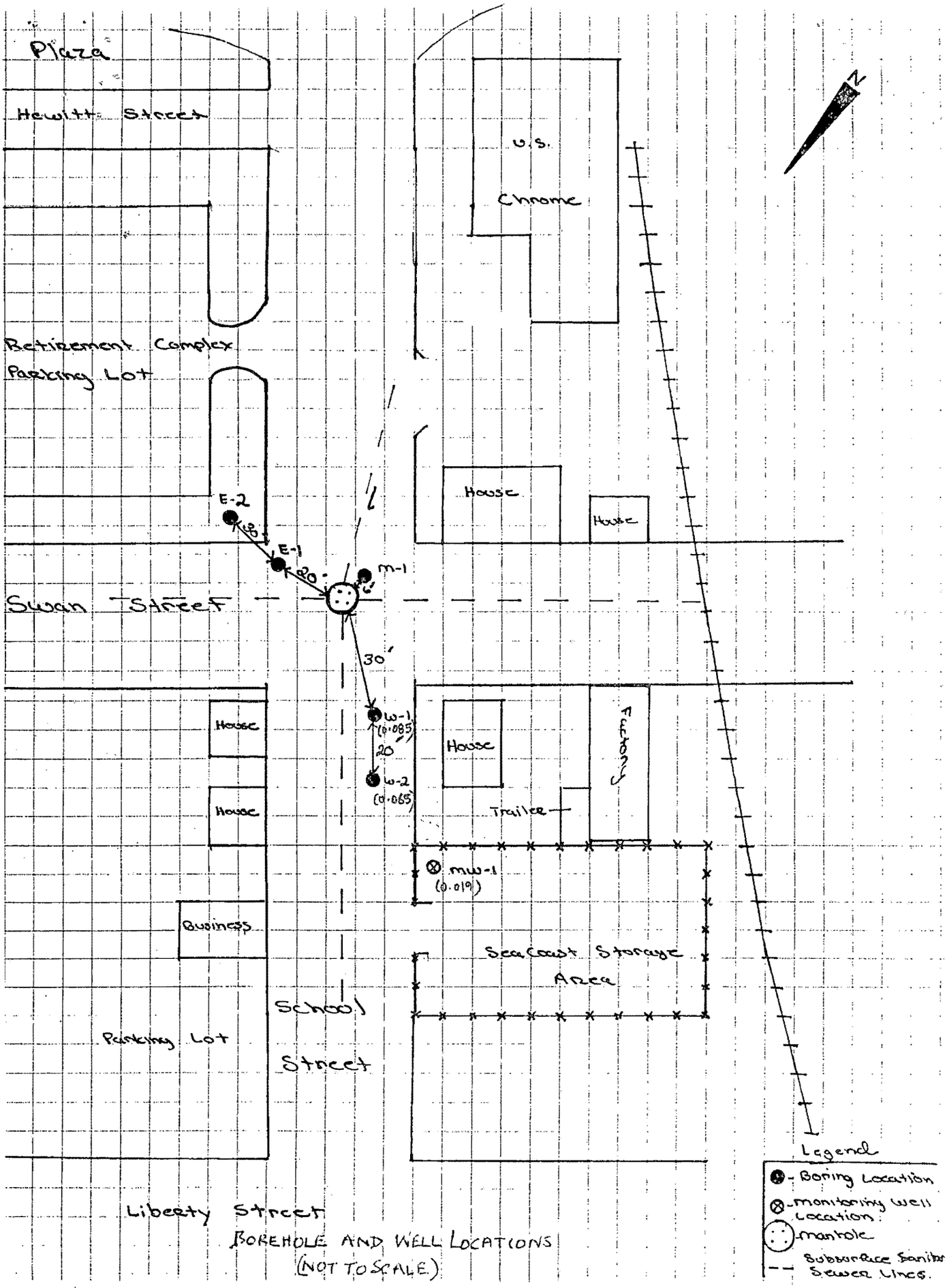
30-50 DENSE

50 VERY DENSE

TOTAL FOOTAGE

Earth Boring "

Rock Coring "




BOREHOLE AND WELL LOCATIONS
(NOT TO SCALE)

RESULTS OF SOIL AND WATER ANALYSIS FOR CHROMIUM
SEACOAST CONSTRUCTION - BATAVIA SEWER PROJECT

| SAMPLE # | LOCATION | TYPE | EP TOX CHROMIUM (Mg/L) | HEXAVALENT CHROMIUM (Mg/L) | TOTAL CHROMIUM (Mg/Kg) |
|---|---|---|---|---|---|
| 2774 | Boring W1 | Soil-Above Water Table Composite | <0.5 | - | 7.33 |
| 2775 | Boring W1 | Soil-Below Water Table Composite | <0.5 | - | 8.97 |
| 2776 | Boring W2 | Soil-Above Water Table Composite | <0.5 | - | 8.07 |
| 2777 | Boring W2 | Soil-Below Water Table Composite | <0.5 | - | 8.30 |
| 2778 | Boring W1 | Groundwater | - | 0.085 | 8.67* |
| 2779 | Boring W2 School Street | Groundwater | - | 0.065 | 7.27* |
| 2317 | Manhole #18 | Tile Sewer Pipe | <0.5 | - | - |
| 2640 | Boring M | Groundwater | - | 0.063 | 22.2* |
| 2644 | Boring M | Soil-Below Water Table Composite | <0.5 | - | 88.2 |
| 2645 | Boring M | Soil-Above Water Table Composite | <0.5 | - | 3.37 |
| 2675 | Boring E1 | Soil-Above Water Table Composite | <0.5 | - | 9.22 |
| 2676 | Boring E1 | Soil-Below Water Table Composite | <0.5 | - | 13.6 |
| 2677 | Boring E2 | Soil-Above Water Table Composite | <0.5 | - | 8.42 |
| 2678 | Boring E2 | Soil-Below Water Table Composite | <0.5 | - | 7.09 |
| 2679 | Boring E1 | Groundwater | - | <0.01 | - |
| 2680 | Boring E2 | Groundwater | - | <0.01 | - |
| 2802 | MW-1 Monitoring Well | Groundwater | - | 0.019 | .056* |

*Amount is in Mg/L.