**LOG OF TEST PIT LTP-28**

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**DATE**
6/26/2013

**LOCATION**
Niagara Falls, NY

**ELEVATION**
Approx. el. 574.16

**EXCAVATION CONTRACTOR**
Mark Gerrone Inc.

**EQUIPMENT**
Komatsu PC 228USLC

**FOREMAN**
Alison Corriveau

**ELEV (feet)**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>Depth Scale</th>
<th>Sample</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>574.2</td>
<td>TOPSOIL</td>
<td>0</td>
<td>S-1</td>
<td>Collect sample LTP-28-A from 4'-6' @ 15:50</td>
</tr>
<tr>
<td>573.7</td>
<td>Dark brown-black f-c SAND, tr. organics (wood, roots) (dry)</td>
<td>0</td>
<td>S-2</td>
<td>Collect sample LTP-28-B from 6'-8' @ 16:00</td>
</tr>
<tr>
<td>569.7</td>
<td>Gray-reddish brown f-c SAND, tr. silt, tr. clay, (moist) (dry)</td>
<td>0</td>
<td>S-3</td>
<td></td>
</tr>
<tr>
<td>564.2</td>
<td>Gray-reddish brown f-c SAND, tr. silt, tr. clay, (wet)</td>
<td>0</td>
<td>S-4</td>
<td></td>
</tr>
</tbody>
</table>

**End of Test Pit @ 10'**

**REMARKS**

**WATER LEVEL - Completion**
- 8 ft
- 10 ft

**EQUIPMENT LOCATION**
Komatsu PC 228USLC

**LANGAN PERSONNEL**
Alison Corriveau

---

**LANGAN**
Collect sample LTP-29-A from 0'-2' @ 09:24
Collect sample LTP-29-B from 2'-4' @ 09:39

Brown TOPSOIL, f-m sand, tr. silt
Brown f-m SAND, tr. silt (dry)
Brown FILL (construction debris), sm. c-f gravel (dry)
Grey-red CLAY, sm. c-f gravel, sm. fill (slag) tr. silt, tr. f-gravel (dry)
Grey-red CLAY, sm. c-f gravel, tr. silt, tr. f-gravel (dry)
Grey-red CLAY, tr. silt, tr. f-gravel (moist)

End of Test Pit @ 10'

Collect sample LTP-29-A from 0'-2' @ 09:24
Collect sample LTP-29-B from 2'-4' @ 09:39
**LOG OF TEST PIT LTP-30**

**LOCATION**
Niagara Falls, NY

**ELEVATION**
Approx. el. 574.81

**EXCAVATION CONTRACTOR**
Mark Garrone Inc.

**EQUIPMENT**
Komatsu PC 228USLC

**FOREMAN**
Alison Corriveau

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**DATE**
6/26/2013

**DEPTH**
10.5 ft

**WATER LEVEL - First**
N/A

**WATER LEVEL - Completion**

**LOG OF TEST PIT LTP-30**

<table>
<thead>
<tr>
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<th>DESCRIPTION</th>
<th>Depth Scale</th>
<th>SAMPLE</th>
<th>REMARKS</th>
</tr>
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<tbody>
<tr>
<td>+574.3</td>
<td>Topsoil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brown f-c SAND, sm. silt, tr. f-gravel (dry)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brown f-c SAND, sm. fill (concrete blocks, concrete slabs, brick), tr. c-gravel, tr. organics (dry)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>+564.3</td>
<td>Topsoil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brown f-c SAND, sm. silt (dry)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dark brown-black f-c SAND, sm. silt, tr. organics (roots, wood) (moist)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gray-brown CLAY, sm. silt, tr. red-orange clay, tr. f-sand (wet)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**End of Test Pit @ 10.5’**

**REMARKS**
Collect sample LTP-30-A from 1'-3' @ 09:35

Collect sample LTP-30-B from 4'-6' @ 09:43
**LOG OF TEST PIT  LTP-31**

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**DATE**
6/26/2013

**LOCATION**
Niagara Falls, NY

**ELEVATION**
Approx. el. 574.28

**EXCAVATION CONTRACTOR**
Mark Cerrone Inc.

**EQUIPMENT**
Komatsu PC 228USLC

**FOREMAN**
Alison Corriveau

<table>
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<tr>
<th>SYMBOL</th>
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<th>DESCRIPTION</th>
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<tr>
<td></td>
<td>574.3</td>
<td>TOPSOIL</td>
</tr>
<tr>
<td></td>
<td>573.8</td>
<td>Brown f-c SAND, tr. organics, tr. clay (dry)</td>
</tr>
<tr>
<td></td>
<td>570.3</td>
<td>Reddish-brown f-c SAND, sm. fill (bricks, concrete), tr. f-gravel, (dry)</td>
</tr>
<tr>
<td></td>
<td>564.3</td>
<td>Gray-brown f-c SAND, tr. organics (dry)</td>
</tr>
</tbody>
</table>

**REMARKS**
- Collect sample LTP-31-A from 4'-6' @ 11:45
- Perched water @ 7', Collect sample LTP-31-B from 7'-9' @ 11:55
- End of Test Pit @ 10'
**LOG OF TEST PIT  LTP-32**

**PROJECT NAME**: FONF Expansion Sabre Park BCP  
**PROJECT NUMBER**: 140091401  
**DATE**: 6/26/2013  
**LOCATION**: Niagara Falls, NY  
**ELEVATION**: Approx. el. 574.43  
**EXCAVATION CONTRACTOR**: Mark Cerrone Inc.  
**EQUIPMENT**: Komatsu PC 228USLC  
**FOREMAN**: Alison Corriveau

<table>
<thead>
<tr>
<th>Symbol</th>
<th>ELEV (feet)</th>
<th>DESCRIPTION</th>
<th>DEPTH</th>
<th>WATER LEVEL - First</th>
<th>WATER LEVEL - Completion</th>
<th>EQUIPMENT</th>
<th>LOCATION</th>
<th>FOREMAN</th>
</tr>
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<tbody>
<tr>
<td>-</td>
<td>574.4</td>
<td>TOPSOIL</td>
<td></td>
<td>10 ft</td>
<td></td>
<td>Komatsu PC 228USLC</td>
<td>Niagara Falls, NY</td>
<td>Alison Corriveau</td>
</tr>
<tr>
<td></td>
<td>573.9</td>
<td>Brown f-m SAND, sm. f-c gravel, sm. fill (construction debris concrete, bricks, wood), tr. silt (dry)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>570.4</td>
<td>Grey-red CLAY, tr. silt, tr. f-gravel (dry)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>564.4</td>
<td>End of Test Pit @ 10’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>Groundwater @ 10’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**REMARKS**

- Collect sample LTP-32-A from 1'-2' @ 11:30
- PID 5.5 @ 4'=6', strong odor @ 4'-6', Collect sample LTP-32-B from 4'-6' @ 11:35
<table>
<thead>
<tr>
<th>Symbol</th>
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<th>SAMPLE</th>
<th>REMARKS</th>
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<tbody>
<tr>
<td></td>
<td>TOPSOIL</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brown f-c SAND, tr. f-gravel, tr. organics</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reddish-brown f-c SAND, sm. clay, sm. fill (bricks, conc. slabs), tr. silt</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dark brown-black organic FILL (moist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>573.6</td>
<td>Grayish-brown SILTY CLAY (dense)</td>
<td>S-1</td>
<td>GRAB</td>
</tr>
<tr>
<td></td>
<td>Grayish-brown f-m SILTY CLAY, sm. f-m sand (loose)</td>
<td>S-2</td>
<td>GRAB</td>
</tr>
<tr>
<td>566.6</td>
<td>Reddish-brown CLAY</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>End of Test Pit @ 7.5'</td>
<td></td>
<td></td>
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</tbody>
</table>

Collect sample LTP-33-A from 3'-5' @ 11:10
Collect sample LTP-33-B from 5'-7' @ 11:20
**LOG OF TEST PIT  LTP-34**

**PROJECT NAME**  
FONF Expansion Sabre Park BCP

**LOCATION**  
Niagara Falls, NY

**EXCAVATION CONTRACTOR**  
Mark Cerrone Inc.

**EQUIPMENT**  
Komatsu PC 228USLC

**FOREMAN**  
-----

**PROJECT NUMBER**  
140091401

**DATE**  
7/2/2013

**ELEVATION**  
Approx. el. 573.88

**DEPTH**  
9 ft

**WATER LEVEL - First**  
6.5 ft

**WATER LEVEL - Completion**  
N/A

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<tr>
<td></td>
<td></td>
<td>0</td>
<td>S-1</td>
<td>GRAB</td>
</tr>
<tr>
<td></td>
<td>TOPSOIL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brown f-c SAND, sm. f-gravel, tr. organics, sm. clay (dry)</td>
<td></td>
<td>Collect sample LTP-34-A from 0'-2' @ 12:40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brown f-c SAND, sm. fill (bricks, conc, asphalt, wood)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dark brown-black organic FILL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gray f-m SAND, sm. silt (moist)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reddish-brown CLAY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>End of Test Pit @ 9'</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Symbol</th>
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<th>REMARKS</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>0</td>
<td>S-2</td>
<td>GRAB</td>
</tr>
</tbody>
</table>

Collect sample LTP-34-B from 5'-7' @ 12:50

---

**LANGAN PERSONNEL**

---

**LANGAN.COM**
**DATA**
**NH**
**DATA4**
**140091401**
**ENGINEERING DATA**
**ENVIRONMENTAL**
**GINTLOGS**
**GINT**
**140091401 - COMPILED TEST PIT AND BORINGS.GPJ**
**7/24/2013 2:34:00 PM**
**Report: Log - LANGANTP**
**Template TEMPLATE.GDT**
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<tbody>
<tr>
<td></td>
<td>+574.7</td>
<td>TOPSOIL</td>
<td>0</td>
<td>S-1</td>
<td>GRAB</td>
</tr>
<tr>
<td></td>
<td>+574.2</td>
<td>FILL material, 5&quot; of topsoil, roots, brown f-c sand, sm. silt, sm. f-c gravel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+571.7</td>
<td>Gray to red CLAY, tr. silt, sm. f-sand</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+565.7</td>
<td>End of Test Pit @ 9'</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Collect sample from 0'-2'
Collect sample from 7'-9'
End of Test Pit @ 9'

**LOG OF TEST PIT  LTP-35**

**LOCATION**
Niagara Falls, NY

**EXCAVATION CONTRACTOR**
Mark Cerrone Inc.

**FOREMAN**
Hannah Griesbach

**LANGAN PERSONNEL**

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**ELEVATION**
Approx. el. 574.65

**DATE**
7/2/2013

**ELEVATION**
+574.2
+574.7
+575.7

**DEPTH**
9 ft

**WATER LEVEL - First**
N/A

**WATER LEVEL - Completion**
N/A

**LOG OF TEST PIT  LTP-35**

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**DATE**
7/2/2013

**ELEVATION**
Approx. el. 574.65

**ELEVATION**
+574.2
+574.7
+575.7

**DEPTH**
9 ft

**WATER LEVEL - First**
N/A

**WATER LEVEL - Completion**
N/A

**LOG OF TEST PIT  LTP-35**

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**DATE**
7/2/2013

**ELEVATION**
Approx. el. 574.65

**ELEVATION**
+574.2
+574.7
+575.7

**DEPTH**
9 ft

**WATER LEVEL - First**
N/A

**WATER LEVEL - Completion**
N/A
Collect sample from 0'-2'

Collect sample from 6'-8'

End of Test Pit @ 8'

**DESCRIPTION**

**TOPSOIL**
Fill material, brown f-c sand, sm. silt, sm. f-c gravel, construction debris, bricks, roots

Gray to red CLAY, tr. silt, tr. f-gravel, sm. f-m sand

**REMARKS**

Collect sample from 0'-2'

Collect sample from 6'-8'

**LOG OF TEST PIT  LTP-36**

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**DATE**
7/2/2013

**LOCATION**
Niagara Falls, NY

**ELEVATION**
Approx. el. 574.98

**EXCAVATION CONTRACTOR**
Mark Gerrone Inc.

**EQUIPMENT**
Komatsu PC 228USLC

**FOREMAN**
Hannah Griesbach

**PROJECT NUMBER**
140091401

**DEPTH**
8 ft

**WATER LEVEL - First**
N/A

**WATER LEVEL - Completion**
N/A

**S-1**
GRAB

**REM**

**REMARKS**

Collect sample from 0'-2'

Collect sample from 6'-8'

**END OF TEST PIT @ 8'**
### LOG OF TEST PIT  LTP-37

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**DATE**
7/2/2013

**LOCATION**
Niagara Falls, NY

**EXCAVATION CONTRACTOR**
Mark Cerrone Inc.

**ELEVATION**
Approx. el.

**DEPTH**
10 ft

**WATER LEVEL - First**
N/A

**WATER LEVEL - Completion**
N/A

**EQUIPMENT**
Komatsu PC 228USLC

**FOREMAN**
Langan Personnel
Hannah Griesbach

<table>
<thead>
<tr>
<th>Symbol</th>
<th>ELEV (feet)</th>
<th>DESCRIPTION</th>
<th>Depth Scale</th>
<th>SAMPLE</th>
<th>REMARKS</th>
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<td>TOPSOIL</td>
<td>0</td>
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<td></td>
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<tr>
<td></td>
<td>1</td>
<td>FILL material, brown f-c sand, sm. silt, sm. f-c gravel, construction debris, pieces of metal, bricks, roots, slag @ 2.5' (1'-2.5' in length)</td>
<td>1</td>
<td>S-1</td>
<td>Collect sample from 2'-4'</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Gray to red CLAY, tr. silt, tr. f-gravel, intrusion of black organic material @ 4'</td>
<td>3</td>
<td>S-2</td>
<td>Groundwater @ 6.5'</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Collect sample from 8'-10'</td>
<td>8</td>
<td>S-2</td>
<td></td>
</tr>
<tr>
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<td>10</td>
<td>End of Test Pit @ 10'</td>
<td>10</td>
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</table>

#### LANGAN
Langan.com
<table>
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<th>Depth Scale</th>
<th>SAMPLE</th>
<th>REMARKS</th>
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<tbody>
<tr>
<td></td>
<td>574.2</td>
<td>TOPSOIL</td>
<td>0</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>FILL material, gray to brown m-c sand, tr. silt, sm. f-c gravel, organic material, bricks, large rocks 2'-3' in length, construction debris, metal, possibly old bucket</td>
<td>1</td>
<td>S-1</td>
<td>Collect sample from 2'-4'</td>
</tr>
<tr>
<td></td>
<td>572.2</td>
<td></td>
<td>2</td>
<td>GRAB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>570.2</td>
<td>Gray to red CLAY, sm. silt, tr. f-gravel, sm. f-sand, black organic material 4'-4.5'</td>
<td>3</td>
<td>S-2</td>
<td>Collect sample from 5'-7'</td>
</tr>
<tr>
<td></td>
<td>564.7</td>
<td></td>
<td>4</td>
<td>GRAB</td>
<td></td>
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<td>End of Test Pit @ 10'</td>
<td>5</td>
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<td>Groundwater @ 8'</td>
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END OF TEST PIT @ 10'
<table>
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<th>DESCRIPTION</th>
<th>SAMPLE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>574.2</td>
<td>FILL material, brown to gray m-c sand, sm. silt, sm. f-c gravel, sm. clay, organic material</td>
<td>S-1</td>
<td>Collect sample from 0'-2'</td>
</tr>
<tr>
<td>573.7</td>
<td>Gray to red CLAY, sm. f-gravel, organic material, sm. f-m sand</td>
<td>S-2</td>
<td>Collect sample from 5'-7'</td>
</tr>
<tr>
<td>571.2</td>
<td>Groundwater @ 8'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>564.2</td>
<td>End of Test Pit @ 10'</td>
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<td></td>
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### LOG OF TEST PIT  LTP-40

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</thead>
<tbody>
<tr>
<td>TOPSOIL</td>
<td>Brown f-c SAND, sm. f-gravel</td>
<td>Collect sample LTP-40-A from 0'-1' @ 10:30</td>
</tr>
<tr>
<td></td>
<td>Reddish-brown CLAY, sm. fill</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brown f-c SAND, sm. fill, tr. cobbles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grayish-dark gray CLAY, sm. silt, tr. f-m sand</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gray CLAY, sm. silt, sm. f-m sand (moist)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reddish-brown CLAY, tr. silt, tr. f-sand (moist)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>End of Test Pit @ 9'</td>
<td></td>
</tr>
</tbody>
</table>

**ELEVATION**

- Approx. el. 574.9
- Elevation of 574.4
- Elevation of 571.9
- Elevation of 565.9

**Location**

- Niagara Falls, NY

**Excavation Contractor**

- Mark Cerrone Inc.

**Equipment**

- Komatsu PC 228USLC

**Log Information**

- FONF Expansion Sabre Park BCP
- Project Name
- Project Number: 140091401
- Date: 7/3/2013
- Langan Personnel: Alison Corriveau

**Samples**

- Sample S-1: GRAB, Collect sample LTP-40-A from 0'-1' @ 10:30
- Sample S-2: GRAB, Collect sample LTP-40-B from 1'-3'

**Remarks**

- WATER LEVEL - First
- WATER LEVEL - Completion
Collect sample LTP-41-A from 1'-3' @ 14:25
Collect sample LTP-41-B from 7'-9' @ 14:35

TOPSOIL
Brown f-c SAND, tr. organics, tr. clay (dry)

Dark brown-black f-c SAND, sm. clay, tr. organics, tr. silt (dry)

Gray-reddish brown CLAY, sm. c-f sand (moist)

Gray-reddish brown CLAY, sm. c-f sand (wet)

End of Test Pit @ 10'

REMARS
Collect sample LTP-41-A from 1'-3' @ 14:25
Collect sample LTP-41-B from 7'-9' @ 14:35
**LOG OF TEST PIT  LTP-42**

- **PROJECT NAME**: FONF Expansion Sabre Park BCP
- **PROJECT NUMBER**: 140091401
- **DATE**: 6/28/2013
- **LOCATION**: Niagara Falls, NY
- **ELEVATION**: Approx. el. 575.02

<table>
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<th>DESCRIPTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+575.0</td>
<td>TOPSOIL</td>
<td>Collect sample LTP-42-A from 0'-2' @ 12:30</td>
</tr>
<tr>
<td></td>
<td>+574.5</td>
<td>Brown f-c SAND, sm. silt, sm. f-c gravel, sm. fill (construction debris concrete, wood, organic material) (dry)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+572.0</td>
<td>Grey-red CLAY, tr. silt, tr. f-m gravel, tr. intrusions of black material, tr. organic material (dry)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+565.0</td>
<td>Grey-red CLAY, tr. silt, tr. f-m gravel, tr. intrusions of black material, tr. organic material (wet)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+565.0</td>
<td>End of Test Pit @ 10'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+565.0</td>
<td>Groundwater @ 8', Collect sample LTP-42-B from 8'-10' @ 12:00</td>
<td></td>
</tr>
</tbody>
</table>

**FOREMAN**: Hannah Griesbach

**EQUIPMENT**: Komatsu PC 228USLC

**PROJECT NUMBER**: 140091401

**DESCRIPTION**:
- **DEPTH**: 10 ft
- **WATER LEVEL - First**: 8 ft
- **WATER LEVEL - Completion**: --

**PROJECT NAME**: FONF Expansion Sabre Park BCP

**PROJECT NUMBER**: 140091401

**DATE**: 6/28/2013

**LOCATION**: Niagara Falls, NY

**ELEVATION**: Approx. el. 575.02
Collect sample LTP-43-A from 1'-3' @ 14:37

Collect sample LTP-43-B from 8'-10' @ 14:23

End of Test Pit @ 10'

TOPSOIL
Brown m-c SAND, sm. fill, sm. f-gravel, tr. large gravel, tr. silt (dry)

Grey-red CLAY, sm. organic material, tr. silt, tr. f-gravel (dry)
<table>
<thead>
<tr>
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<th>DESCRIPTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>575.1</td>
<td>5&quot; TOPSOIL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>574.6</td>
<td>Brown f-c SAND, sm. f-c gravel, sm. fill (construction debris organic material) tr. silt (dry)</td>
<td>Collect sample LTP-44-A from 0'-2' @ 08:54</td>
</tr>
<tr>
<td></td>
<td>571.1</td>
<td>Grey-black CLAY, sm. silt, tr. f-gravel, tr. f-sand, tr. organic material (dry)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>565.1</td>
<td>Grey-red CLAY, tr. silt, tr. f-gravel, tr. intrusions of brown f-sand, tr. organic material (moist)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grey-red CLAY, tr. silt, tr. f-gravel, tr. intrusions of brown f-sand, tr. organic material (wet)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>End of Test Pit @ 10'</td>
<td></td>
</tr>
<tr>
<td>SYMBOL</td>
<td>DESCRIPTION</td>
<td>DEPTH SCALE</td>
<td>SAMPLE NUMBER</td>
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<tr>
<td>--------</td>
<td>--------------------------------------------------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>S-1</td>
<td>Collect sample LTP-46-A from 0'-2' @ 18:40</td>
<td>0</td>
<td>S-1</td>
</tr>
<tr>
<td>S-2</td>
<td>Collect sample LTP-46-B from 2'-4' @ 18:50</td>
<td>2</td>
<td>S-2</td>
</tr>
</tbody>
</table>

**TOPSOIL**

- Brown f-c SAND, sm. fill (conc, slag)
- Dark brown-black organic FILL, sm. f-c sand, sm. silt
- Gray f-m SAND, sm. silt

End of Test Pit @ 7.5'
**LOG OF TEST PIT LTP-47**

**PROJECT NAME:** FONF Expansion Sabre Park BCP  
**PROJECT NUMBER:** 140091401  
**DATE:** 7/1/2013

**LOCATION:** Niagara Falls, NY  
**ELEVATION:** Approx. el. 574.76

**EXCAVATION CONTRACTOR:** Mark Gerrone Inc.  
**EQUIPMENT:** Komatsu PC 228USLC

**FOREMAN:** Hannah Griesbach  
**LANGAN PERSONNEL:**

<table>
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<tbody>
<tr>
<td>S-1</td>
<td>+574.8</td>
<td>TOPSOIL</td>
<td>Collect sample LTP-47-A from 0'-2' @ 16:30</td>
</tr>
<tr>
<td></td>
<td>+574.3</td>
<td>Brown-black f-c SAND, sm. fill (bricks, organic material), sm. silt, sm. f-c gravel (dry)</td>
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<tr>
<td></td>
<td>+568.8</td>
<td>Gray CLAY, sm. f-gravel, sm. f-sand (dry)</td>
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</tr>
<tr>
<td></td>
<td>+564.8</td>
<td>Black FILL, (garbage, wood, plastic), sm. silt (wet)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Grey-red CLAY, tr. silt, tr. f-gravel</td>
<td>Collect sample LTP-47-B from 5'-7' @ 16:15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>End of Test Pit @ 10'</td>
<td>Perched water @ 6'</td>
</tr>
</tbody>
</table>

**DEPT:** 10 ft

**WATER LEVEL - First:** 6 ft

**WATER LEVEL - Completion:** N/A

**ELEVATION:**

- +574.3
- +568.8
- +564.8

**PROJECT NUMBER:** 140091401  
**DATE:** 7/1/2013  
**FOREMAN:** Hannah Griesbach  
**LANGAN PERSONNEL:**

---

**LANGAN.COM**

**DATA:**

**NH:**

**DATA4:**

**140091401:**

**ENGINEERING DATA:**

**ENVIRONMENTAL:**

**GINTLOGS:**

**GINT:**

**140091401 - COMPILED TEST PIT AND BORINGS.GPJ**

**REPORT:** Log - LANGAN.

**TEMP FILE:** TEMPLATE.GDT

**7/24/2013 2:34:09 PM**

**Report:** Log - LANGAN.

**TEMP FILE:** TEMPLATE.GDT

---

**LANGAN**
### LOG OF TEST PIT  LTP-48

**Project Name:** FONF Expansion Sabre Park BCP  
**Project Number:** 140091401  
**Date:** 7/1/2013  
**Location:** Niagara Falls, NY

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<td>574.9</td>
<td>TOPSOIL</td>
<td></td>
<td></td>
<td>S-1</td>
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<tr>
<td></td>
<td>574.4</td>
<td>Brown f-c SAND (dry)</td>
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<tr>
<td></td>
<td></td>
<td>Dark brown-black f-c SAND, sm. silt, sm. fill (wood, trash, concrete, fdn, 3' x 3' 4&quot; slabs conc., slag @ 1' and 2') (Saturated)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>570.4</td>
<td>End of Test Pit @ 4.5'</td>
<td></td>
<td></td>
<td>S-2</td>
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</table>

**Excavation Contractor:** Mark Cerrone Inc.  
**Equipment:** Komatsu PC 228USLC  
**Foreman:** Alison Corriveau

**Log of Test Pit LTP-48**

- **Date:** 7/1/2013
- **Location:** Niagara Falls, NY
- **Excavation Contractor:** Mark Cerrone Inc.
- **Equipment:** Komatsu PC 228USLC
- **Foreman:** Alison Corriveau

**Sample Collection**

- **Sample LTP-48-A:**
  - Depth: 0.5'-2.5' @ 08:30
  - Sample Type: GRAB
  - Remarks: Collect sample LTP-48-A from 0.5'-2.5' @ 08:30

- **Sample LTP-48-B:**
  - Depth: 3'-4.5' @ 09:25
  - Sample Type: GRAB
  - Remarks: Collect sample LTP-48-B from 3'-4.5' @ 09:25

**Equipment**

- **Komatsu PC 228USLC**

**Remarks**

End of Test Pit @ 4.5'

---

**Elevation:**

- **Approx. el. 574.91**
- **+574.9**
- **+570.4**

**Description**

- **Topsoil:**
  - BROWN F-C SAND (dry)
  - Dark brown-black f-c SAND, sm. silt, sm. fill (wood, trash, concrete, fdn, 3' x 3' 4" slabs conc., slag @ 1' and 2') (Saturated)
Collect sample LTP-49-A from 0'-2' @ 10:35 Concrete slab at 3.5'. Investigated extents of slab. No extents found. Digging stopped in N-S direction due to proximity of water to the south and gas to the north. Slab is at least 27' in N-S direction.

Concrete slab at 3.5'. Investigated extents of slab. No extents found. Digging stopped in N-S direction due to proximity of water to the south and gas to the north. Slab is at least 27' in N-S direction.

End of Test Pit @ 3.5'
### LOG OF TEST PIT  LTP-50

#### LOCATIONS
- **Niagra Falls, NY**
- **Mark Cerrone Inc.**
- **Komatsu PC 228USLC**

#### PROJECT INFORMATION
- **PROJECT NAME:** FONF Expansion Sabre Park BCP
- **PROJECT NUMBER:** 140091401
- **DATE:** 6/30/13
- **FOREMAN:** Alison Corriueve

#### EQUIPMENT
- **ELEVATION:** Approx. el. 574.98
- **DEPTH:** 4 ft
- **WATER LEVEL - First:** 2 ft
- **WATER LEVEL - Completion:** 4 ft

#### REMARKS
- **Symbol:** S-1
- **Type:** GRAB
- **REMARKS:** Collect sample LTP-50-A from 1'-3' @ 17:40

#### DESCRIPTION

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<tr>
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<tbody>
<tr>
<td>574.5</td>
<td>TOPSOIL</td>
<td>Brown f-c SAND, tr. organics (dry)</td>
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<tr>
<td></td>
<td></td>
<td>Dark brown-black SAND, sm. silt, sm. fill (wood, concrete, tar-like material), tr. cobbles (saturated)</td>
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<tr>
<td>571.0</td>
<td></td>
<td>End of Test Pit @ 4'</td>
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#### DEPTH SCALE

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**LOG OF TEST PIT LTP-51**

- **Project Name:** FONF Expansion Sabre Park BCP
- **Project Number:** 140091401
- **Date:** 7/1/2013

**Location:** Niagara Falls, NY

**Excavation Contractor:** Mark Gerrone Inc.

**Equipment:** Komatsu PC 228USLC

**FOREMAN:** Hannah Griesbach

<table>
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<th>Depth Scale</th>
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<tbody>
<tr>
<td></td>
<td>+574.6</td>
<td>TOPSOIL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+574.1</td>
<td>Brown-black f-c SAND, sm. fill (bricks, wood), sm. silt, sm. f-gravel (dry)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Red CLAY, tr. f-m sand (dry)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gray m-c SAND, sm. fill, tr. f-gravel (dry)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brown-gray CLAY, sm. f-sand, organic material (dry)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+569.6</td>
<td>Black-gray-red CLAY, sm. silt, tr. f-gravel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+564.6</td>
<td>End of Test Pit @ 10’</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**
- Collect sample LTP-51-A from 0'-1' @ 11:30
- Collect sample LTP-51-B from 4'-5' @ 10:37
- Groundwater @ 8’

**Elevation:**
- Approx. el. 574.62

**Remarks on Elevation:**
- WATER LEVEL - First:
  - 8 ft
- WATER LEVEL - Completion:
  - N/A
Collect sample LTP-52-A from 0'-2' @ 08:54

Collect sample LTP-52-B from 4'-5' @ 08:37

Black CLAY, sm. silt, sm. f-m gravel, sm. organic material (wood, roots) (dry)

Gray-red CLAY, tr. silt, tr. f-gravel (dry)

End of Test Pit @ 10'

Collect sample LTP-52-B from 4'-5' @ 08:37
**LOG OF TEST PIT  LTP-53**

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**DATE**
6/28/2013

**LOCATION**
Niagra Falls, NY

**ELEVATION**
Approx. el. 574.98

**EXCAVATION CONTRACTOR**
Mark Gerrone Inc.

**EQUIPMENT**
Komatsu PC 228USLC

**FOREMAN**
Hannah Griesbach

<table>
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<th>REMARKS</th>
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<tbody>
<tr>
<td>S-1</td>
<td>571.0</td>
<td>7” TOPSOIL, Brown f-c SAND, tr. roots</td>
<td>Collect sample LTP-53-A from 0'-2' @ 10:48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brown f-c SAND, sm. f-c gravel, sm. fill (large concrete blocks) (dry)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Black CLAY, sm. silt, sm. m-c gravel, tr. organic material, tr. wood (dry)</td>
<td></td>
</tr>
<tr>
<td>S-2</td>
<td>565.0</td>
<td>Gray-red CLAY, sm. f-gravel, tr. silt (dry)</td>
<td>Collect sample LTP-53-B from 8'-10' @ 10:16</td>
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**END OF TEST PIT @ 10’**
<table>
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<th>Depth Scale</th>
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<th>REMARKS</th>
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<tbody>
<tr>
<td></td>
<td>-575.0</td>
<td>TOPSOIL</td>
<td>0</td>
<td>S-1</td>
<td>Collect sample LTP-54-A from 0'-2' @ 16:15</td>
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<tr>
<td></td>
<td>-574.5</td>
<td>Brown f-c SAND, tr. clay, tr. f-gravel (dry)</td>
<td>1</td>
<td>(MS/MSD)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-571.0</td>
<td>Dark brown-black f-c SAND, sm. fill, tr. silt (dry)</td>
<td>2</td>
<td>GRAB</td>
<td>Electrical conduit encountered during soft dig offset ~5' to the north. LTP-54-A and MSMSD-8 taken from primary location. LTP-54-B taken from offset location.</td>
</tr>
<tr>
<td></td>
<td>-566.0</td>
<td>Gray-brown f-m SAND, tr. clay (dry)</td>
<td>3</td>
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<tr>
<td></td>
<td>-565.0</td>
<td>Reddish brown CLAY, tr. f-sand (dry)</td>
<td>4</td>
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<tr>
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<td>-560.0</td>
<td>End of Test Pit @ 10'</td>
<td>5</td>
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Project Name: FONF Expansion Sabre Park BCP
Project Number: 140091401
Date: 6/28/2013
Location: Niagara Falls, NY
Excavation Contractor: Mark Cerrone Inc.
Equipment: Komatsu PC 228USLC
Foreman: Alison Coriveau

---

**LOG OF TEST PIT LTP-54**

ELEV (feet):

-575.0
-574.5
-571.0
-566.0
-565.0

**DEPTH**

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<tr>
<th>Number</th>
<th>Type</th>
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</thead>
<tbody>
<tr>
<td>S-1</td>
<td>(MS/MSD)</td>
</tr>
<tr>
<td>S-2</td>
<td>GRAB</td>
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**REMARKS**

- Collect sample LTP-54-A from 0'-2' @ 16:15
- Electrical conduit encountered during soft dig offset ~5' to the north. LTP-54-A and MSMSD-8 taken from primary location. LTP-54-B taken from offset location.
- Collect sample LTP-54-B from 6'-8' @ 16:45

---

**LANGAN PERSONNEL**

Alison Coriveau

---

**LANGAN.COM**

DATA NH DATA4 140091401 ENGINEERING DATA ENVIRONMENTAL LANGANTP TEMPLATE GDT
### LOG OF TEST PIT  LTP-55

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**DATE**
6/28/2013

**LOCATION**
Niagara Falls, NY

**ELEVATION**
Approx. el. 574.56

**EXCAVATION CONTRACTOR**
Mark Gereone Inc.

**EQUIPMENT**
Komatsu PC 228USLC

**FOREMAN**
Hannah Griesbach

<table>
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<th>Symbol</th>
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<tr>
<td>S-1</td>
<td>574.6</td>
<td>TOPSOIL</td>
<td>N/A</td>
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<td></td>
<td>574.1</td>
<td>Brown f-c SAND, sm. silt, sm. f-c gravel, sm. fill (construction debris) (dry)</td>
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<td></td>
</tr>
<tr>
<td>S-2</td>
<td>571.1</td>
<td>Black CLAY, sm. silt, sm. f-m gravel (wet)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>564.6</td>
<td>Gray-red CLAY, tr. f-gravel, tr. silt (wet)</td>
<td></td>
<td></td>
</tr>
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</table>

**DEPTH**
10 ft

**REMARKS**
- Collect sample LTP-55-B from 0'-2' @ 17:30
- Perched water observed @ 3'
- Collect sample LTP-55-A from 6'-8' @ 17:15
- End of Test Pit @ 10'

**LANGAN PERSONNEL**

**NUMBER**
11

**FONF Expansion Sabre Park BCP**

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**DATE**
6/28/2013

**EXCAVATION CONTRACTOR**
Mark Gereone Inc.

**EQUIPMENT**
Komatsu PC 228USLC

**FOREMAN**
Hannah Griesbach

**ELEVATION**
Approx. el. 574.56

**WATER LEVEL - First**
N/A

**WATER LEVEL - Completion**
N/A
**LOG OF TEST PIT LTP-56**

**PROJECT NAME:** FONF Expansion Sabre Park BCP  
**PROJECT NUMBER:** 140091401  
**DATE:** 6/29/2013

**LOCATION:** Niagara Falls, NY  
**ELEVATION:** Approx. el. 574.65

**EXCAVATION CONTRACTOR:** Mark Gereone Inc.

**EQUIPMENT:** Komatsu PC 228USLC  
**FOREMAN:** Hannah Griesbach

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### SYMBOLS

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<tr>
<td>+574.7</td>
<td>Brown f-GRAVEL, sm. f-c sand (dry)</td>
</tr>
<tr>
<td>+574.2</td>
<td>Gray-dark brown f-c SAND, sm. f-gravel (dry)</td>
</tr>
<tr>
<td>+570.2</td>
<td>Gray-brown f-c SAND, tr. silt, tr. fill (asphalt, concrete) (wet)</td>
</tr>
<tr>
<td>+566.7</td>
<td>Dark brown-black f-c SAND, tr. organics (wood) (wet)</td>
</tr>
<tr>
<td>+564.7</td>
<td>Reddish brown CLAY, tr. f-sand (wet)</td>
</tr>
</tbody>
</table>

---

### DESCRIPTIONS

- Perched water observed @ 4'
- Collect sample LTP-56-A from 5'-7' @ 08:33
- Collect sample LTP-56-B from 8'-10' @ 08:50
- End of Test Pit @ 10'

---

**REMARKS**

- Collect sample LTP-56-B from 8'-10' @ 08:50

---

**Langran Personnel:** Hannah Griesbach

---

**Log of Test Pit LTP-56**

---

**FONF Expansion Sabre Park BCP**

---

**LANGAN.COM**

**DATA**

**NH**

**DATA4**

**140091401**

**ENGINEERING DATA**

**ENVIRONMENTAL**

**GINTLOGS**

**GINT**

**140091401 - COMPILED TEST PIT AND BORINGS.GPJ**

---

**Report:** Log - LANGANTP

---

**Template TEMPLATE.GDT**
LOG OF TEST PIT  LTP-57

PROJECT NAME: FONF Expansion Sabre Park BCP
PROJECT NUMBER: 140091401
LOCATION: Niagra Falls, NY
EXCAVATION CONTRACTOR: Mark Cerrone Inc.

DETAILED LOG:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>ELEV (feet)</th>
<th>DESCRIPTION</th>
<th>SAMPLE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>-575.0</td>
<td>-574.5</td>
<td>ASPHALT and subbase</td>
<td>S-1</td>
<td>LTP-57-A: 0'-2' @ 17:35</td>
</tr>
<tr>
<td></td>
<td>-572.5</td>
<td>Brown f-c SAND, sm. fill (bricks, conc, rock), tr. gravel</td>
<td></td>
<td>Slag @ 1'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WATER @ 2.5', can't dig due to no visibility</td>
<td></td>
<td>End of Test Pit @ 2.5'</td>
</tr>
</tbody>
</table>

WATER LEVEL - First: N/A
WATER LEVEL - Completion: N/A

EQUIPMENT: Komatsu PC 228USLC

FOREMAN: ----
EQUIPMENT: ----
LANGAN PERSONNEL: ----

LANGAN
07/24/2013 2:34:17 PM
Report: Log - LANGANTP
Template TEMPLATE.GDT

GINTLOGS\GINT\140091401 - COMPILED TEST PIT AND BORINGS.GPJ

GINTLOGS\GINT\140091401 - COMPILED TEST PIT AND BORINGS.GPJ

GINTLOGS\GINT\140091401 - COMPILED TEST PIT AND BORINGS.GPJ
<table>
<thead>
<tr>
<th>Symbol</th>
<th>ELEV (feet)</th>
<th>DESCRIPTION</th>
<th>Depth Scale</th>
<th>SAMPLE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>575.2</td>
<td></td>
<td>Brown TOPSOIL, m-c SAND, sm. silt, sm. f-gravel (dry)</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>573.2</td>
<td></td>
<td>Brown FILL, m-c sand, sm. large gravel (dry)</td>
<td>2</td>
<td>S-1</td>
<td>Collect sample LTP-58-A from 4'-6' @ 17:17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FILL (large concrete blocks), sm. organic material (dry)</td>
<td>4</td>
<td>S-2</td>
<td>Perched water observed @ 6', minor staining observed @ 6', Collect sample LTP-58-B from 6'-8' @ 17:00</td>
</tr>
<tr>
<td>569.2</td>
<td></td>
<td>Grey CLAY, sm-f gravel (wet)</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>565.2</td>
<td></td>
<td>End of Test Pit @ 10'</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Collect sample LTP-59-A from 3'-5' @ 16:10

Collect sample LTP-59-B from 6'-8' @ 16:25

End of Test Pit @ 8'

Brown f-c SAND, tr. clay, tr. silt, tr. fill (brick, concrete, sidewalk), slag

Dark brown-black f-c SAND, sm. fill (organic), slag (light blue-green porous material) @ 4' (wet)

Reddish-gray-brown f-m SAND, sm. silt (wet)
GRAB

Collect sample LTP-60-A from 0'-2' @ 17:25

Collect sample LTP-60-B from 3'-5' @ 17:45

ASPHALT (dry)
c-f GRAVEL

Brown f-c SAND, tr. organics, tr. f-gravel (dry)

Brown f-c SAND, sm. fill (slag, concrete, bricks, rocks), tr. silt (wet)

Dark brown-black SAND (wet)

Grayish-reddish-brown CLAY, tr. silt (dense) (moist)

Grayish-brown CLAY, sm. f-m sand, sm. silt (moist)

Reddish-brown CLAY (moist)

End of Test Pit @ 8'
**LOG OF TEST PIT LTP-61**

**Project Name:** FONF Expansion Sabre Park BCP  
**Location:** Niagara Falls, NY  
**Excavation Contractor:** Mark Cerrone Inc.  
**Equipment:** Komatsu PC 228USLC  
**Elevation:** Approx. el. 575.17  
**Elevation:** 6/30/2013  
**Excavation Contractor:** Alison Corriveau

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Description</th>
<th>Sample</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>+570.2</td>
<td>5&quot; ASPHALT</td>
<td></td>
<td>Collect sample LTP-61-A from 0.5'-2' @ 13:00</td>
</tr>
<tr>
<td>+574.2</td>
<td>Reddish brown-orange f-c SAND, sm. silt (dry)</td>
<td>S-1</td>
<td></td>
</tr>
<tr>
<td>+574.7</td>
<td>Dark brown-black f-s SAND, sm. silt, sm. slag, tr. fill, tr. organics (dry)</td>
<td>S-2</td>
<td>Collect sample LTP-61-B from 4'-6' @ 13:20</td>
</tr>
<tr>
<td>+574.7</td>
<td>Reddish-brown f-m SAND, sm. clay (dry)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+565.2</td>
<td>Grayish-brown CLAY, sm. f-m SAND, sm. silt (moist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+570.0</td>
<td>Grayish-brown CLAY, sm. f-m SAND, sm. silt (wet)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reddish-brown CLAY (wet)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>End of Test Pit @ 10'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Temperature:**
- 7.5 ft  
- 10 ft

**Remarks:**
- WATER LEVEL - First  
- WATER LEVEL - Completion
**LOG OF TEST PIT LTP-62**

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**DATE**
6/24/2013

**LOCATION**
Niagara Falls, NY

**ELEVATION**
Approx. el. 574.84

**EXCAVATION CONTRACTOR**
Mark Cerrone Inc.

**EQUIPMENT**
Komatsu PC 228USLC

**FOREMAN**
LANGAN PERSONNEL
Hannah Griesbach

### SYMBOL | DESCRIPTION | DEPTH SCALE | SAMPLE | REMARKS
---|---|---|---|---
| | | | | Collect sample LTP-62-A from 2'-4' @ 17:25

<table>
<thead>
<tr>
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<th>Description</th>
<th>Depth Scale</th>
<th>Sample</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOPSOIL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brown f-c SAND</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(dry)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dark brown-black f-c SAND, tr. organics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(dry)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reddish-brown f-c SAND</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(dry)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dark brown f-c SAND, tr. gravel, tr. fill (bricks, wood)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(moist)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gray-brown, silty CLAY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(moist)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>End of Test Pit @ 10'</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**LOG OF TEST PIT  LTP-63**

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**DATE**
6/25/2013

**LOCATION**
Niagara Falls, NY

**EXCAVATION CONTRACTOR**
Mark Gereone Inc.

**ELEVATION**
Approx. el. 574.52

**EQUIPMENT**
Komatsu PC 228USLC

**FOREMAN**
Hannah Griesbach

---

**Symbol**

**Description**

- 3" ASPHALT
  - Brown m-c SAND, sm. silt, tr. f-gravel (dry)

- FILL (construction debris, bricks, wood, concrete), tr. organic material (dry)

- Gray CLAY, sm. silt, tr. f-gravel (moist)

- End of Test Pit @ 10'

**Sample**

<table>
<thead>
<tr>
<th>Depth Scale</th>
<th>Sample</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>S-1</td>
<td>GRAB</td>
</tr>
<tr>
<td>1</td>
<td>S-2</td>
<td>GRAB</td>
</tr>
</tbody>
</table>

**Remarks**

- Collect sample LTP-63-A from 1'-3' @ 08:05
- Collect sample LTP-63-B from 3'-4' @ 09:00
- Black material; perched water observed @ 5', staining observed @ 5'
**LOG OF TEST PIT  LTP-64**

**PROJECT NUMBER**  140091401

**LOCATION**
- **Niagara Falls, NY**

**EXCAVATION CONTRACTOR**
- **Mark Cerrone Inc.**

**EQUIPMENT**
- **Komatsu PC 228USLC**

**FOREMAN**
- **Alison Corrioueau**

**PROJECT NAME**
- **FONF Expansion Sabre Park BCP**

**PROJECT NUMBER**
- 140091401

**DATE**
- 6/25/2013

**ELEVATION**
- Approx. el. 574.03

**DEPTH**
- 10.5 ft

**WATER LEVEL - First**
- N/A

**WATER LEVEL - Completion**
- N/A

<table>
<thead>
<tr>
<th>Symbol</th>
<th>ELEV (feet)</th>
<th>DESCRIPTION</th>
<th>Depth Scale</th>
<th>SAMPLE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>+574.0</td>
<td>4&quot; TOPSOIL</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+573.6</td>
<td>Brown, c-f SAND, sm. silt, sm. clay, tr. gravel, tr. fill (wood, concrete, asphalt) (dry)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>+569.0</td>
<td>Dark brown-black CLAY, little f-m sand, little fill (brick, wood), tr. organics (roots) (dry)</td>
<td></td>
<td></td>
<td>Collect sample LTP-64-B from 3'-5' @ 08:30</td>
</tr>
<tr>
<td></td>
<td>+563.5</td>
<td>Gray CLAY, tr. f-sand (moist)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reddish-brown-gray CLAY, tr. f-sand (moist)</td>
<td></td>
<td></td>
<td>Collect sample LTP-64-A from 5'-7' @ 08:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>End of Test Pit @ 10.5&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**LOG OF TEST PIT  LTP-65**

**FONF Expansion Sabre Park BCP**

**Niagara Falls, NY**

**EXCAVATION CONTRACTOR**
Mark Cerrone Inc.

**ELEVATION**
Approx. el. 574.22

**DEPT**
2 ft

**WATER LEVEL** - First
N/A

**WATER LEVEL** - Completion
N/A

**Symbol**

<table>
<thead>
<tr>
<th>ELEV (feet)</th>
<th>DESCRIPTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>574.2</td>
<td>ASPHALT Gray-brown f-c SAND, sm. f-gravel (moist)</td>
<td>Collect sample LTP-65-A from 0'-2' @ 11:00</td>
</tr>
<tr>
<td>573.9</td>
<td>Pooling water @ 2', rose to 1' below grade. Assumed to be perched water from recent rain. Flooding in area.</td>
<td></td>
</tr>
<tr>
<td>572.2</td>
<td>End of Test Pit @ 2'</td>
<td></td>
</tr>
</tbody>
</table>

**PROJECT NUMBER**
140091401

**DATE**
6/29/2013

**FOREMAN**
Alison Corriveau

**EQUIPMENT**
Komatsu PC 228USLC

**LANGAN PERSONNEL**
Alison Corriveau

**PROJECT NAME**
FONF Expansion Sabre Park BCP

**PROJECT NUMBER**
140091401

**DATE**
6/29/2013

**FOREMAN**
Alison Corriveau

**EQUIPMENT**
Komatsu PC 228USLC

**LOG OF TEST PIT  LTP-65**

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>ELEV (feet)</th>
<th>DESCRIPTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>574.2</td>
<td>ASPHALT Gray-brown f-c SAND, sm. f-gravel (moist)</td>
<td>Collect sample LTP-65-A from 0'-2' @ 11:00</td>
</tr>
<tr>
<td></td>
<td>573.9</td>
<td>Pooling water @ 2', rose to 1' below grade. Assumed to be perched water from recent rain. Flooding in area.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>572.2</td>
<td>End of Test Pit @ 2'</td>
<td></td>
</tr>
</tbody>
</table>
Encountered electrical wire @ 1'

Collect sample LTP-66-A from 5'-7' @ 15:00

Collect sample LTP-66-B from 7'-9' @ 15:25

End of Test Pit @ 10'

TOPSOIL, f-c sand (dry)
Brown f-c SAND, tr. clay (dry)
Gray f-m SAND, sm. silt, tr. clay (dry)

Dark brown-black f-m SAND, sm. silt (dry)

Gray f-m SAND, sm. silt (moist)

Reddish brown CLAY (dense) (dry)
**LOG OF TEST PIT  LTP-67**

**PROJECT NAME**: FONF Expansion Sabre Park BCP  
**PROJECT NUMBER**: 140091401  
**LOCATION**: Niagara Falls, NY  
**ELEVATION**: Approx. el. 574.61  
**EXCAVATION CONTRACTOR**: Mark Gerrone Inc.  
**FOREMAN**: Hanna Griesbach  
**EQUIPMENT**: Komatsu PC 228USLC  

<table>
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<tr>
<th>SYMBOL</th>
<th>ELEV (feet)</th>
<th>DESCRIPTION</th>
<th>DEPTH</th>
<th>WATER LEVEL - First</th>
<th>WATER LEVEL - Completion</th>
<th>REMARKS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>574.6</td>
<td>TOPSOIL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>574.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>571.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>564.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **TOPSOIL**: Brown-black f-c SAND, sm. fill, sm. silt, sm. f-c gravel (dry)
- **Gray-red CLAY**: sm. silt, tr. f-gravel, tr. intrusions of m-c sand (wet)

**End of Test Pit @ 10’**

**REMARKS**:
- Collect sample LTP-67-A from 0'-2' @ 08:44
- Collect sample LTP-67-B from 5'-7' @ 08:30
<table>
<thead>
<tr>
<th>Symbol</th>
<th>DESCRIPTION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOPSOIL</td>
<td>Brown f-c SAND, tr. organics (roots) (dry)</td>
<td>Collect sample LTP-68-A from 1'-3' @ 17:20</td>
</tr>
<tr>
<td>TOPSOIL</td>
<td>Dark brown-black f-c SAND, tr. organics (roots, wood) tr. fill (bricks, concrete, wood) (dry)</td>
<td></td>
</tr>
<tr>
<td>Gray SILTY CLAY, sm. f-m sand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gray SILTY CLAY, sm. f-m sand (wet)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>reddish brown CLAY (wet)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>End of Test Pit @ 10'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LOG OF TEST PIT LTP-68**

**PROJECT NAME:** FONF Expansion Sabre Park BCP

**PROJECT NUMBER:** 140091401

**DATE:** 6/29/2013

**LOCATION:** Niagara Falls, NY

**ELEVATION:** Approx. el. 574.47

**DEPTH:** 10 ft

**WATER LEVEL - First:** 7 ft

**WATER LEVEL - Completion:** --

**EXCAVATION CONTRACTOR:** Mark Cerrone Inc.

**FOREMAN:** Langan Personnel Alison Corriuveau

**EQUIPMENT:** Komatsu PC 228USLC

**NUMBERS:** 1, 2

**SYMBOLS:** S-1, S-2

**DESCRIPTION:**

- S-1: GRAB
- S-2: GRAB

**REMARKS:**

- Collect sample LTP-68 from 1'-3' @ 17:20
- Collect sample LTP-68 from 6'-8' @ 17:30
**LOG OF TEST PIT  LTP-69**

**FONF Expansion Sabre Park BCP**

**Project Number**: 140091401  **Date**: 6/29/2013

**Location**: Niagara Falls, NY  **Elevation**: Approx. el. 575.06

**Excavation Contractor**: Mark Cerrone Inc.  **Equipment**: Komatsu PC 228USLC

**FOREMAN**: Hannah Griesbach

---

**Symbol** | **ELEV (feet)** | **DESCRIPTION** | **Depth Scale** | **SAMPLE** | **REMARKS**
---|---|---|---|---|---
|  | TOPSOIL | Brown-gray f-c SAND, sm. silt, sm. f-c gravel (dry) | | | Collect sample LTP-69-A from 4'-5' @ 18:01
|  |  | Black SILT, tr. f-c sand, sm. m-f gravel, tr. c-gravel (dry) | | | Collect sample LTP-69-B from 5'-7' @ 17:17
|  |  | Grey-red CLAY, tr. m-c sand, tr. f-gravel (moist) | | |  
|  |  | Grey-red CLAY, tr. m-c sand, tr. f-gravel (wet) | | |  
|  |  | End of Test Pit @ 10' | | |  

**ELEVATION**

1. +574.6
2. +570.1
3. +565.1

---

**LANGAN PERSONNEL**

---

**LANGAN.COM**

---

**DATA\NH\DATA4\140091401\ENGINEERING DATA\ENVIRONMENTAL LOGS\GINT\140091401 - COMPILED TEST PIT AND BORINGS.GPJ**

---

**Report: Log - LANGAN TP 7/24/2013 2:34:25 PM**

---

**Template TEMPLATE.GDT**

---

**LANGAN**
### LOG OF TEST PIT LTP-70

**Location:** Niagara Falls, NY  
**Excavation Contractor:** Mark Gerrone Inc.  
**Equipment:** Komatsu PC 228USLC  
**Foreman:** Hannah Griesbach  
**Date:** 6/29/2013  
**Approx. Elev.:** 575.05

<table>
<thead>
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<th>ELEV (feet)</th>
<th>DESCRIPTION</th>
<th>Depth Scale</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>575.1</td>
<td>6&quot; TOPSOIL</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>574.6</td>
<td>Brown f-c SAND, sm. f-c gravel, sm. fill (construction debris, concrete blocks, bricks, wood), tr. silt, (dry)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>571.1</td>
<td>Brown-black CLAY, sm. silt, sm. f-m gravel, sm. fill (construction debris), sm. organic material (dry)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>565.1</td>
<td>Grey-red CLAY, tr. silt, tr. f-gravel, tr. intrusions of f-sand, tr. organic material (moist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>564.6</td>
<td>Grey-red CLAY, tr. silt, tr. f-gravel, tr. intrusions of f-sand, tr. organic material (wet)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>565.1</td>
<td>End of Test Pit @ 10'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Collect sample LTP-70-A from 0'-2' @ 11:10
- Collect sample LTP-70-B from 8'-10' @ 10:36