

Honeywell  
 301 Plainfield Road  
 Suite 330  
 Syracuse, NY 13212  
 315-552-9700  
 315-552-9780 Fax

*LML -> File*

June 15, 2015

Mr. Richard Mustico  
 New York State Department of Environmental Conservation  
 Division of Environmental Remediation  
 Remedial Bureau D  
 625 Broadway, 12<sup>th</sup> Floor  
 Albany, NY 12233-7016

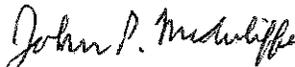
**RE: LCP OU-1 Final Cover  
 Stormwater Pollution Prevention Plan  
 Final Cover Construction  
 May 2015**

Dear Mr. Mustico

Enclosed you will find one hard copies and one PDF and original electronic copy of the LCP OU-1 Final Cover Stormwater Pollution Prevention Plan, dated May 2015.

Please feel free to contact Ray D'Hollander at 315-451-9560 or me if you have any questions.

Sincerely,

  
 John P. McAuliffe, P.E.  
 Program Director, Syracuse

Enclosure

cc: Margaret Sheen, Esq., NYSDEC (Cover Ltr Only)  
 Harry Warner, NYSDEC (1 bound, 1 PDF)  
 Mark Granger, USEPA (1 bound, 1 PDF)  
 Argie Cirillo, Esq., USEPA (Cover Ltr Only)  
 Mark Sergott, NYSDOH (1 bound, 1 PDF)  
 Maureen Schuck, NYSDOH (Cover Ltr Only)  
 Joseph Heath, Esq., (ec Cover Ltr Only)  
 Thane Joyal, Esq. (1 bound, 1 PDF)  
 Jeanne Shenandoah, Onondaga Nation (1 bound plus ec Cover Ltr Only)  
 Curtis Waterman, HETF (1 PDF)  
 Alma Lowry, Esq. (ec Cover Ltr Only)  
 Bill Hague, Honeywell (Cover Ltr Only)  
 Ray D'Hollander, Parsons (1 bound)  
 Stephen J. Miller, Parsons (1 PDF)

---

---

**STORMWATER POLLUTION  
PREVENTION PLAN  
LCP OU-1 FINAL COVER  
Syracuse, New York**

---

---

*Prepared For:*

**Honeywell**

301 Plainfield Road, Suite 330  
Syracuse, New York 13212

*Prepared By:*

**PARSONS**

301 Plainfield Road, Suite 350  
Syracuse, New York 13212  
Phone: 315.451.9560  
Fax: 315.451.9570

**MAY 2015**

**TABLE OF CONTENTS**

	<u>Page</u>
<b>LIST OF ACRONYMS .....</b>	<b>V</b>
<b>SECTION 1 INTRODUCTION.....</b>	<b>1-1</b>
1.1 BACKGROUND AND OBJECTIVES .....	1-1
1.1.1 SWPPP Development.....	1-1
1.1.2 SWPPP Updates .....	1-2
1.2 GENERAL PROJECT DESCRIPTION.....	1-2
1.3 SITE LOCATION .....	1-3
1.4 GENERAL SITE DESCRIPTION AND BACKGROUND .....	1-3
1.5 SITE CONTACT INFORMATION .....	1-4
<b>SECTION 2 EXISTING SITE CONDITIONS.....</b>	<b>2-1</b>
2.1 TOPOGRAPHY .....	2-1
2.2 SOILS .....	2-1
2.3 RECEIVING WATERS .....	2-1
2.4 DRAINAGE STRUCTURES.....	2-1
2.5 WATERSHED BOUNDARIES.....	2-2
<b>SECTION 3 PROPOSED SITE WORK .....</b>	<b>3-1</b>
3.1 DESIGN OBJECTIVES.....	3-1
3.2 SITE WORK FOR LCP COVER AREA .....	3-1
3.3 MANAGEMENT OF STAGED MATERIALS.....	3-1
3.4 CONSTRUCTION WATER MANAGEMENT .....	3-1
3.5 ADDITIONAL STORMWATER CONTROLS .....	3-2

**TABLE OF CONTENTS  
(CONTINUED)**

	<u>Page</u>
3.6 SITE RESTORATION .....	3-3
3.7 GENERAL CONSTRUCTION SCHEDULE .....	3-3
<b>SECTION 4 EROSION AND SEDIMENT CONTROL MEASURES.....</b>	<b>4-1</b>
4.1 GENERAL.....	4-1
4.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL .....	4-1
4.2.1. Stabilization Practices .....	4-1
4.2.2 Control of Surface Runoff from Disturbed Areas .....	4-1
4.2.3 Diversion of Runoff to Disturbed Areas .....	4-2
4.2.4 Stabilized Construction Entrances, Roads, and Decontamination Pads..	4-2
4.3 PERMANENT EROSION CONTROL.....	4-2
4.4 INSPECTION AND MAINTENANCE REQUIREMENTS .....	4-3
4.4.1 Owner Requirements .....	4-3
4.4.2 Qualified Inspector Requirements .....	4-3
<b>SECTION 5 HYDROLOGIC ANALYSIS .....</b>	<b>5-1</b>
5.1 GENERAL.....	5-1
5.2 WATER QUALITY AND VOLUME.....	5-1
5.3 ANALYSIS METHOD .....	5-1
5.4 WATERSHED BOUNDARIES.....	5-2
5.5 DESIGN STORM.....	5-3
5.6 RUNOFF CURVE NUMBER.....	5-3
5.7 TIME OF CONCENTRATION .....	5-4

**TABLE OF CONTENTS  
(CONTINUED)**

	<u>Page</u>
5.8 PEAK FLOW.....	5-4
5.9 TOTAL RUNOFF .....	5-5
5.10 SUMMARY RESULTS .....	5-6
<b>SECTION 6 CONTRACTOR CERTIFICATION.....</b>	<b>6-1</b>
<b>SECTION 7 REFERENCES.....</b>	<b>7-1</b>

**LIST OF FIGURES**

- Figure 1.1 LCP Site Location Map
- Figure 1.2 LCP Site Plan
- Figure 2.1 LCP Final Cover Pre-Construction Watershed Conditions
- Figure 3.1 Anticipated Construction Sequencing
- Figure 4.1 SWPPP Site Preparation Erosion and Sediment Control Plan

**TABLE OF CONTENTS  
(CONTINUED)****LIST OF APPENDICES**

<b>APPENDIX A</b>	<b>NOTICE OF INTENT (NOI)</b>
<b>APPENDIX B</b>	<b>HYDROLOGIC SOIL MAPS</b>
<b>APPENDIX C</b>	<b>DESIGN DRAWINGS</b>
<b>APPENDIX D</b>	<b>SPECIFICATIONS</b>
<b>APPENDIX E</b>	<b>CONSTRUCTION LOGS AND INSPECTION TEMPLATES</b>
<b>APPENDIX F</b>	<b>CALCULATIONS</b>
<b>F-1</b>	<b>PRE-EXISTING STORMWATER CONDITION CALCULATIONS</b>
<b>F-2</b>	<b>POST-CONSTRUCTION STORMWATER CONDITION CALCULATIONS</b>
<b>F-3</b>	<b>FINAL COVER SWALE DESIGN CALCULATIONS</b>

**LIST OF ACRONYMS**

cfs	cubic feet per second
CPESC	Certified Professional in Erosion and Sediment Control
CWTP	Construction Water Treatment Plant
GDC	Geosynthetic Drainage Composite
HDPE	High Density Polyethylene
HSG	Hydrologic Soil Groups
IRM	Interim Remedial Measure
LCP	Linden Chemical and Plastics
LLDPE	linear low-density polyethylene
NOI	Notice of Intent
NRCS	National Resources Conservation Service
NYSDEC	New York State Department of Environmental Conservation
RCN	runoff curve number
RECP	rolled erosion control product
SCS	Soil Conservation Service
SPDES	State Pollutant Discharge Elimination System
SWPPP	Stormwater Pollution Protection Plan
Tc	time of concentration
USGS	United States Geological Survey

**SECTION 1****INTRODUCTION****1.1 BACKGROUND AND OBJECTIVES**

The Linden Chemical and Plastics (LCP) OU-1 Final Cover Area cover installation will be the final major remediation effort at the LCP site. The cover design and installation is being performed under the order of Consent Index No. D7 0001-00-12 dated March 21, 2002 for Site No. 734049.

Prior to 2008, numerous remedial construction activities were completed as part of a comprehensive program by Honeywell to address legacy contamination at the site, a former Allied Chemical property that was a source of mercury contamination. During prior site remediation activities, Honeywell removed for recycling more than seven tons of mercury from the plant property through “soil washing.” Under the direction of the New York State Department of Environmental Conservation (NYSDEC), the restoration also involved excavation of contaminated sediments in surrounding areas, wetland restoration, installation of an on-site groundwater collection system, and the construction of an underground cutoff wall to prevent any future migration from the site.

As a continuing effort of the LCP remediation activities, Geddes Brook and Ninemile Creek soils/sediment have been removed and relocated back to their source, (i.e., within the LCP slurry wall). The last of the sediments were removed and relocated from Ninemile Creek in August 2014.

The final cover construction includes installation of a low permeability geomembrane barrier to minimize infiltration, construction of a permanent stormwater drainage system designed to increase flows to Wetland A, and restoration as a native grass and wildflower meadow. Other future potential site uses are possible based on the closure design.

**1.1.1 SWPPP Development**

This Stormwater Pollution Prevention Plan (SWPPP) was developed with accepted engineering practices to achieve the following:

- The reduction or elimination of erosion and/or sediment loading to the wetlands and the West Flume
- The identification and control of potential sources of sediment that may affect water quantity and quality
- The maintenance of stormwater controls during and after remediation

The SWPPP summarizes the proposed site work, describes the erosion control methods selected, and includes a hydrologic analysis for the pre- and post-remediation conditions of the site.

**1.1.2 SWPPP Updates**

This SWPPP will be amended if and when:

- The provisions are proven inadequate in reducing sediments in stormwater discharges during the construction phase
- There is a change in the design, construction or operation that could potentially affect stormwater discharge quality and quantity
- Deficiencies are identified by a qualified inspector or regulatory agency

If deficiencies are identified by the NYSDEC, the SWPPP will be updated and written notification of such updates will be submitted to the Department within fourteen calendar days of issuance of the notice of deficiency.

**1.2 GENERAL PROJECT DESCRIPTION**

Following the receipt of all material from the Ninemile Creek remediation, the final low permeability cover will be installed. In accordance with the ROD, a 6 NYCRR Part 360 equivalent final cover physically tied into the subsurface barrier wall has been designed to cover and contain mercury-impacted soils and excavated sediments/soils, brine muds and materials from LCP OU-1 and the Geddes Brook/Ninemile Creek site. The final cover will be approximately 16.5 acres of the LCP OU-1 site. The Final Cover Design has been presented in the LCP OU-1 Final Cover Area 100% Design Report Final Cover Construction (Parsons, 2014) and revised in Field Change Form No. 1 (Parsons, 2015). The Final Cover Design was approved on June 10, 2014 and the subsequent Field Change Form No. 1 was approved on May 18, 2015.

The final cover will use a 40-mil linear low-density polyethylene (LLDPE) geomembrane as the infiltration barrier. The multi-layer final cover composite cap will consist of the following layers as shown on Contract Drawings (Parsons 2015), from the top down:

- Vegetated topsoil (6-inches thick)
- A barrier protection soil layer (18-inches thick)
- A geosynthetic drainage composite (GDC)
- Textured 40 mil. LLDPE geomembrane
- 16-ounce non-woven geotextile

An access road will be constructed to provide access to vehicles to the top of the cover, as shown on the contract drawings.

This SWPPP addresses the installation of the final cover at the LCP OU-1 site.

As this is a remediation project, Honeywell is responsible for completing a Notice of Intent (NOI) Form for information only. Filing of the NOI is not required. A copy of the completed NOI is provided as Appendix A.

### **1.3 SITE LOCATION**

The LCP OU-1 site is located approximately two miles west of Syracuse in the Village of Solvay, Town of Geddes, Onondaga County, New York (Figure 1.1). The site is located in an industrial area south of the New York State Fairgrounds complex and a Conrail right-of-way and north of Belle Isle Road. The Ben Weitsman and Sons scrapyards and the former NAKOH Chemical Company are located northeast of the site. The WPS Syracuse Cogeneration facility (formerly known as Kamine) is located immediately west of the site. Figure 1.2 shows the site layout.

### **1.4 GENERAL SITE DESCRIPTION AND BACKGROUND**

The LCP OU-1 former facility encompasses approximately 20 acres and was host to various former industrial, storage, and office buildings, as well as storage tanks and railroad tracks. These structures were remediated (e.g., tank cleaning, lead and asbestos abatement) and demolished during an Interim Remedial Measure (IRM) completed in 2001 (BBL, 2001).

The West Flume, a man-made drainage channel, runs east-west through the northern portion of the site. The flume typically ranges in width from 5 to 10 ft. In addition to runoff from the main site, the flume conveys stormwater from a portion of the Village of Solvay. The West Flume is a New York State Class C water body. The West Flume converges with Geddes Brook under Interstate 695 approximately 4,500 ft. west of the site. Geddes Brook flows into Ninemile Creek, which eventually discharges into Onondaga Lake.

Three wetlands, Wetlands A, B, and C, are located to the west of the LCP site (Figure 1.2). These wetlands are part of the New York State regulated wetland complex SYW-14.

Wetland A is located immediately west of the LCP site and is approximately 0.9 acres. It includes a portion of the West Ditch, a shallow man-made ditch that conveys surface water from the western portion of the LCP facility and other upstream areas to the main body of Wetland A. Surface water discharges from Wetland A to Wetland B via a spillway that was constructed during the remedial action.

Wetland B is approximately 6.4 acres. The main body of Wetland B is located several hundred feet west of Wetland A. Wetland B discharges to the West Flume downstream of the LCP facility.

Wetland C is approximately 1.5 acres and generally ground-water fed and not impacted by surface water from the LCP OU-1 Final Cover Area.

The East Ditch is a shallow man-made ditch located along the east side of the facility. The East Ditch transports surface water runoff from the eastern portion of the main site and from upstream areas to the West Flume.

The LCP OU-1 Final Cover Area is approximately 16.5 acres and is located between Wetland A, the East Ditch, and the West Flume. Remedial action work elements directly related to the cover area that were completed in 2007 (Parsons, 2009) are listed below:

- Installation of a slurry cut-off wall keyed 3 ft. into the underlying low-permeability glacial till to prevent groundwater migration from the site

- Tie the cut-off wall into a low-permeability cap to protect the wall from desiccation and to provide physical protection to the top of the wall
- Excavation of mercury-impacted soils and sediments
- Soil-washing of mercury-impacted Principal Threat Wastes
- Off-site recycling of mercury from soil-washing
- Stabilization of soil washing sludges
- Building demolition
- Consolidation of excavated mercury-impacted soils and sediments from several site areas within the cover area
- Installation of a interim low-permeability cap over the soil/sediment cover area
- Installation of groundwater extraction wells and monitoring wells to maintain an inward and upward hydraulic gradient within the soil/sediment cover area
- Restoration of wetlands

## 1.5 SITE CONTACT INFORMATION

John McAuliffe  
Remediation Manager  
Honeywell International, Inc.  
301 Plainfield Road  
Suite 330  
Syracuse, NY 13212

Phone: 315.552.9782  
Fax: 315.552.9780  
email: [john.mcauliffe@honeywell.com](mailto:john.mcauliffe@honeywell.com)

Rebecca Serven  
Project Manager  
Parsons  
301 Plainfield Road  
Suite 350  
Syracuse, NY 13212

Cell: 315.569.9467  
email: [rebecca.serven@parsons.com](mailto:rebecca.serven@parsons.com)

## **SECTION 2**

### **EXISTING SITE CONDITIONS**

The pre-Geddes Brook/Ninemile Creek projects site conditions, (topography, land-use, drainage structures, and sub-watersheds) for areas associated with the LCP OU-1 Final Cover Area, are indicated on Figure 2.1.

#### **2.1 TOPOGRAPHY**

Currently, all of the sediments in the LCP OU-1 Final Cover Area have been graded off to a maximum elevation of 430' with minimum 4% slopes on the top and up to 33% on the side slopes. The existing conditions, based on a topography following final placement and grading of all sediments from GB/NMC, has been provided in Appendix C.

#### **2.2 SOILS**

Maps of soil surveys depicting Hydrologic Soil Groups (HSG) and subsequent ratings are provided in Appendix B.

The USDA Soil Conservation Service Web Site Soil Survey Map for Onondaga County identifies the LCP OU-1 Final Cover Area as Urban Land. The existing soils in the Final Cover Area are generally fine-grained with relatively low permeability. The soils used in constructing the final cover are generally expected to be fine-grained and will be underlain by a geomembrane layer. Therefore, we have classified the soil as type "D" for HSG which creates the most runoff.

#### **2.3 RECEIVING WATERS**

In the pre-construction watershed condition, as shown previously on Figure 2.1, stormwater ran off the cover area in three ways:

- Flows south and then to Wetland A via the west ditch
- Flows east and then to the West Flume via the east ditch
- Sheetflow north directly to the West Flume

Wetland A is connected to Wetland B via a weir at elevation 382.0 ft. Wetland B outlets to the West Flume which discharges in Geddes Brook. Geddes Brook discharges to Ninemile Creek, which discharges to Onondaga Lake, which is part of the Seneca Watershed, United States Geological Survey (USGS) Hydrologic Unit 04140201.

(<http://water.usgs.gov/wsc/cat/04140201.html>).

#### **2.4 DRAINAGE STRUCTURES**

Drainage structures details, including size and invert elevations are included on the pre-construction drawing, Figure 2.1. A 36-in. culvert connects the eastern drainage ditch to the West Flume. The western drainage ditch includes two 24-in. high density polyethylene (HDPE) culverts connecting it to Wetlands A and B.

**2.5 WATERSHED BOUNDARIES**

At the LCP OU-1 Final Cover Area, runoff is currently directed to the perimeter drainage ditch to the west where it contributes to Wetlands A and B, and to the east where it contributes to the West Flume. Runoff to the north flows directly to the West Flume. The area is divided into two sub-watersheds (A and B). Sub-watershed A includes the Wetland A and West Ditch excavation areas, sub-watershed B includes areas to the north. Wetland A has been identified by NYSDEC as being “under-hydrated” so a future shift of post-construction watershed boundaries to divert more water to Wetland A from the West Flume than in the pre-existing site condition is desired.

## **SECTION 3**

### **PROPOSED SITE WORK**

#### **3.1 DESIGN OBJECTIVES**

The design requires the LCP OU-1 Final Cover Area to be restored as a vegetated upland. The final condition will consist of a collection of swales, downchutes and culverts to take water from the surface of the cover and divert it to either Wetland A or the West Flume, with the majority of the water going to Wetland A. Wetland A is connected to Wetland B which discharges to the West Flume. The wetland complex also serves as storm water retention prior to discharge to the West Flume.

The anticipated post-construction watershed condition is shown in attached contract drawing (Appendix C).

#### **3.2 SITE WORK FOR LCP FINAL COVER AREA**

Site work for the LCP OU-1 Final Cover Area will generally consist of the following:

- Final Cover Area grading and surface preparation
- Construction water collection and treatment at the existing LCP Construction Water Treatment Plant (CWTP)
- Installation of a minimum of 6 inches of imported material may be placed over existing waste
- Installation of a 16-ounce non-woven geotextile
- Installation of a 40-mil LLDPE geomembrane keyed into the existing slurry wall
- Installation of a GDC
- Installation of 18 in. of barrier protection material
- Installation of 0.5 ft. of vegetated topsoil
- Continued long term operation of existing leachate collection system

#### **3.3 MANAGEMENT OF STAGED MATERIALS**

If temporary staging areas for borrow materials are needed, they will be bermed around the perimeter.

#### **3.4 CONSTRUCTION WATER MANAGEMENT**

Stormwater contacting contaminated materials will be defined as construction water and will be collected for treatment at the CWTP prior to discharge. The CWTP will discharge treated construction water directly to the West Flume or to the METRO Sewage Treatment Plant through a pump station located to the northwest of Wetland B at a rate of 200 gpm. Temporary rock outlet protection has been constructed at the discharge outlet in the West Flume to reduce scour and turbidity, per a previous SWPPP.

A minimum of 6 inches of imported material will be placed on the previously-shaped contaminated material subgrade. The imported material will be tested prior to placement, and reviewed according to the procedure documented in Specification Section 02200.1.5 of the LCP OU-1 Final Cover Design. Storm water contacting a surface consisting of approved imported material will be deemed “clean,” and will not require additional treatment prior to migrating to any of the existing discharge areas.

Efforts will be made to minimize the volume of construction water requiring treatment. Work will be sequenced accordingly for this purpose and is anticipated to proceed as follows:

- The existing discharge swale at the northwest end of the landfill will be filled with clean imported material, eliminating this location as a potential stormwater outlet. Construction water produced during placement of the initial 6 inch layer will collect in the existing perimeter swale, drain to the sump at the southeast end of the LCP OU-1 Final Cover Area, and be pumped to the CWTP for treatment.
- Once all construction water is diverted to the southeast sump, the existing temporary liner will be removed from the side slopes.
- The initial 6 inch layer of clean imported material will then be placed on top of the contaminated material, working from the northwest corner to the southeast corner. As placement progresses, a plug will be installed in the existing perimeter swale perpendicular to the edge of the clean imported material working face. This will allow for stormwater contacting “clean” surfaces to sheet flow from the side slopes, and stormwater contacting contaminated surfaces to collect in the perimeter swale and drain to the southeast sump.
- Upon completing the placement of the initial 6 inch layer, the remainder of the perimeter swale will be graded into the slope, allowing “clean” stormwater to sheet flow from the side slopes onto the surrounding ground through various erosion and sediment control measures without further treatment prior to entering surface water.
- The clean layer of soil will be inspected to ensure its integrity until the geotextile and liner is installed.

Figure 3.1 shows the anticipated construction sequencing.

### **3.5 ADDITIONAL STORMWATER CONTROLS**

Additional controls and measures that will be implemented at the site are listed below:

- Precautions will be taken to prevent spills onto public thoroughfares (e.g., leaking hydraulic lines, fuel leaks) so that they do not enter surface and subsurface drainage systems.
- Dust control measures will be provided to reduce the potential for dust migration. Measures may include water application or mulching, but will not include the use of chemical additives.
- Solid waste disposal dumpsters and containers will be covered and emptied regularly. Solid waste will be disposed of properly in accordance with local, state, and/or federal regulations.

- Portable toilets will be installed, secured in place and cleaned regularly, with proper disposal of waste.
- Building materials will be properly stored and contained on-site with fuels in appropriate secondary containment.

### 3.6 SITE RESTORATION

The restoration approach is detailed in the 100% Design Report for the LCP OU-1 Final Cover Area (Parsons, 2014).

### 3.7 GENERAL CONSTRUCTION SCHEDULE

The anticipated schedule for the LCP OU-1 cover area activities is noted below:

April – May 2015	LCP Cover Area Preparation and Mobilization
May – August 2015	Installation of Final Cover
August - September 2015	Restoration

## **SECTION 4**

### **EROSION AND SEDIMENT CONTROL MEASURES**

#### **4.1 GENERAL**

The erosion and sediment control measures described in this plan conform to the latest version of the New York State Standards and Specifications for Erosion and Sediment Control (the Blue Book).

A qualified inspector will inspect the erosion and sediment control measures and disturbed areas of the site for compliance with this SWPPP. A typical Construction Log and Inspection Report Form are included in Appendix E.

#### **4.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL**

Temporary erosion and sedimentation controls will be installed prior to disturbance of areas to mitigate the potential for offsite erosion and sedimentation. These controls are a dynamic project element, requiring modification as the construction needs alter over time.

##### **4.2.1. Stabilization Practices**

Mulch, wood chips, geotextile, or rolled erosion control products (RECP) may be used for soil stabilization over bare soils if exposure over extended periods is anticipated.

For portions of the site where soil disturbance activities have temporarily or permanently ceased, stabilization measures will be implemented within 14 days of the conclusion of activities. This requirement does not apply if the installation of stabilization measures is precluded by snow cover or frozen ground conditions; however, measures will be implemented as soon as practicable.

Stabilization methods on the surface of the final cover area are included in Specification - h02990 Topsoil Seeding and Grading. See Appendix D for specifications. In general, this includes seeding on all topsoil surfaces and placement of RECP on seeded topsoil slopes greater than 10%.

##### **4.2.2 Control of Surface Runoff from Disturbed Areas**

Locations for initial erosion and sedimentation control features are indicated on attached Figure 4.1. The initial locations will be adapted as necessary, depending on actual field conditions. Figure 4.1 also shows the limits of disturbed areas, which will be contained inside silt fence. Runoff from the disturbed area will either be sent to an on-site treatment plant or discharged directly to surface water, as discussed in Section 3.4. Runoff discharged to the nearby wetland will pass through a series of check dams or equivalent to limit sediment transport to the wetland.

Installed silt fence will intercept potentially sediment-laden runoff along the down-slope perimeter of disturbed site areas during construction. The geotextile filter fabric fence requires periodic maintenance and will be checked for tears or clogging with silt or debris as part of

weekly site inspections. Silt will be removed from the woven filter cloth with a stiff brush if clogging occurs. Strawbale sediment barriers will only be used when the lengths of the protected slope do not exceed the limits described in Specification – 02370 Erosion Control (Appendix D). Strawbales will be repaired and/or replaced as necessary.

Silt fence and/or strawbale sediment barriers will remain in place until permanent vegetation is established over disturbed areas.

### **4.2.3 Diversion of Runoff to Disturbed Areas**

Perimeter dike and swale elements will be installed as required to prevent run-on into disturbed areas. Grades will promote positive drainage and runoff will discharge to a stabilized outlet. If necessary, check dams will be incorporated within the swales. Weekly inspection and maintenance of the dike/swale will occur, and after each rain event at a minimum.

### **4.2.4 Stabilized Construction Entrances, Roads, and Decontamination Pads**

Stabilized construction entrances have been constructed where site traffic enters/exits public roads. Periodic top dressing with additional aggregate may be required. Staging/laydown areas for vehicles and construction equipment will also be located on stabilized portions of the site.

A minimum 50 ft. long asphalt pad has been constructed at the Bridge Street entrance and exit of the LCP OU-1 site, in order to minimize the migration of sediment onto public roads.

Decontamination pads will be constructed as needed, and built per the details provided in Appendix D. The subgrade of the pads will be sloped towards a collection sump. Construction water collected will be directed to the temporary CWTP. Decontamination pads will be covered with poly sheets out-of-hours, to limit the collection of rainfall to be treated.

## **4.3 PERMANENT EROSION CONTROL**

Temporary erosion and sediment controls will remain in place until vegetation is established over the restored areas.

Permanent erosion controls will be installed during restoration of the site as an inherent component of the project. These are fully described in the 100% Design Report for the LCP Final Cover Area. These controls include:

- Seeding of all topsoil surfaces on the final cover area (Section 02290, Appendix D)
- Placement of rolled erosion control product on the slopes of the LCP Final Cover Area as appropriate (Section 02290, Appendix D)
- Collection swales will be installed along the cover area sides slopes to develop desired drainage and promote long term stability
- Construction support areas will be removed, topsoiled and seeded, as necessary.

## **4.4 INSPECTION AND MAINTENANCE REQUIREMENTS**

### **4.4.1 Owner Requirements**

Erosion and sediment control and stormwater management practices identified in the SWPPP will be inspected and maintained in effective operating condition. Inspections will be carried out by a qualified inspector.

If soil disturbance activities are temporarily suspended and temporary stabilization measures have been applied to disturbed areas, the inspections may be stopped and begin once soil disturbance activities resume.

If soil disturbance activities have been shut down with partial project completion, maintenance inspections may be stopped if areas disturbed as of the project shutdown date have achieved final stabilization and post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

### **4.4.2 Qualified Inspector Requirements**

A qualified inspector is a person who is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, a Certified Professional in Erosion and Sediment Control (CPESC), a Registered Landscape Architect or other NYSDEC endorsed individual.

The qualified inspector will conduct site inspections at least once every fourteen calendar days. At a minimum, the qualified inspector will inspect:

- Erosion and sediment control practices to ascertain integrity and effectiveness
- Stormwater management practices to ensure that they are constructed in conformance with the design
- Areas of disturbance that have not achieved final stabilization
- Points of discharge to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site, and points of discharge from the construction site

The qualified inspector will also:

- Prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:
  - a. Date and time of inspection
  - b. Name and title of person(s) performing inspection
  - c. A description of the weather and soil conditions (e.g., dry, wet, saturated) at the time of the inspection
  - d. A description of the condition of the runoff at points of discharge from the construction site. This shall include identification of any discharges of sediment from the construction site. Include discharges from conveyance systems (i.e., pipes, culverts, ditches) and overland flow.

- e. A description of the condition of natural surface water bodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface water body.
  - f. Identification of erosion and sediment control practices in need of repair or maintenance
  - g. Identification of erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced
  - h. Description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since the last inspection
  - i. Current phase of construction of post-construction stormwater management practices and identification of construction that is not in conformance with the SWPPP and technical standards
  - j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s).
  - k. Digital photographs, with date stamp, that clearly show the condition of practices that have been identified as needing corrective actions. The qualified inspector shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven calendar days of the date of the inspection. The qualified inspector shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The qualified inspector shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven calendar days of that inspection.
- Notify Honeywell or an appropriate subcontractor of any corrective actions that need to be taken within one business day. The corrective actions will be initiated within one business day of this notification and be completed in a reasonable time frame.
  - Sign all inspection reports.

The inspection reports will be maintained on site with the SWPPP. The site log book will be maintained on site and will be made available to the permitting authority upon request. A summary of the site inspection activities will be posted at the site on a monthly basis. A typical Construction Log and Inspection Report Form are included in Appendix E.

A site sketch map will be maintained on the project site indicating the extent of disturbed onsite areas and drainage ways throughout the duration of construction. The site sketch map will identify areas expected to undergo initial disturbance or significant site work within every 14-day period. The sketch will indicate areas of the site that have undergone temporary or

permanent stabilization. Disturbed areas that have not undergone active site work during the previous 14-day inspection period will be noted.

Sediment control measures will be inspected and the degree of accumulation as a percentage of the sediment storage volume will be recorded. Maintenance required for installed erosion and sediment control structures will be noted, and documentation of areas where adjustments are needed to those measures will be provided. Deficiencies identified with the implementation of the SWPPP will be recorded.

## **SECTION 5**

### **HYDROLOGIC ANALYSIS**

#### **5.1 GENERAL**

A hydrologic analysis for the pre- and post-development conditions of the site has been performed. These hydrologic analysis packages are included in Appendix F. The following sections below describe a summary of the methods used for analysis, assumptions, and computational results.

The pre-construction condition analysis evaluated the site condition with a temporary grass cover on the Final Cover Area installed after the 2008 LCP remediation. The temporary cover consisted of fine-grained soils seeded with grass. Runoff that landed on the cover area in this condition was directed to the perimeter drainage ditch to the west where it would contribute to Wetland A, or to the east where it would contribute to the West Flume. Runoff to the north flowed directly to the West Flume.

The post-development condition will consist of a series of collection swales around the perimeter of the cover area that direct water to a discharge swale to Wetland A to assist in hydrating the nearby wetland complex. This system is expected to capture greater than 80% of the runoff and direct it into Wetland A, per NYSDEC request. This is an increase in the volume of water into the wetlands from the pre-construction condition. Water from the Cover Area will enter Wetland A and then go through a weir to Wetland B, and if Wetland B fills, then water flows through a weir to the West Flume. The remaining storm water not discharged to the wetlands will flow into the West Flume.

#### **5.2 WATER QUALITY AND VOLUME**

NYSDEC has developed stormwater management regulations for the purposes of pollutant removal. The water quality and volume criteria is designed to capture and treat 90% of the average annual stormwater runoff volume from impervious paved surfaces. The water quality and volume is a function of the amount of permanent impervious cover created at a site. Since the subject project is not a development project and the improvement of water quality is inherent in the LCP OU-1 Final Cover, which has no impervious surfaces, the water quality and volume criteria is not required. However, the diversion of most runoff to Wetland A instead of the West Flume will reduce peak flow in Geddes Brook and Ninemile Creek as well as allowing the wetlands to perform their natural runoff buffering function.

#### **5.3 ANALYSIS METHOD**

A hydrologic and hydraulic analysis of the existing and proposed site was computed using WIN TR-55 Hydrologic Modeling Software. The peak stormwater runoff and runoff volume were determined for each site condition. WIN TR-55 is a single event rainfall-runoff small watershed model. The model generates hydrographs from both urban and agricultural areas and

at selected points along the stream system. Multiple sub-areas can be modeled within a watershed.

The model inputs include drainage area, design storm amounts and distribution, runoff curve number (RCN), time of concentration (Tc), reach and structure data. The following sections discuss the input data for the computations and present the results of the analysis.

The results of the hydrologic analysis for both the pre and post-construction conditions are presented in Appendix F.

## 5.4 WATERSHED BOUNDARIES

The pre-construction watersheds are divided into sub areas related to their locations as shown on Figure 2.1 in Appendix F and are described as follows:

- The LCP Containment Area delineations are divided into two sub-watersheds, Area A and Area B. Area A flows west and south off the LCP Containment Area to Wetland A via the West Ditch. Area B flows to the West Flume via surface run-off directly to the north and via the drainage swale to the east. The containment area is currently grassed and Wetland A is open water and brush.

A summary of the watershed boundaries used for the analysis is provided in the table below. Pre- and post-construction watersheds are presented on Figures 2.1 (pre) and Appendix F, Figure 1 (post). These figures also depict the current and future land-uses.

**Watershed Boundaries**

<b>Sub-watershed ID</b>	<b>Pre-Construction (ac)</b>	<b>Post-Construction (ac)</b>
<b>Area A</b>	6.97	-
<b>Area B</b>	9.48	-
<b>Sub-Area 1</b>	-	1.41
<b>Sub-Area 2</b>	-	1.00
<b>Sub-Area 3</b>	-	2.23
<b>Sub-Area 4</b>	-	0.86
<b>Sub-Area 5</b>	-	1.33
<b>Sub-Area 6</b>	-	1.51
<b>Sub-Area 7</b>	-	1.08
<b>Sub-Area 8</b>	-	0.42
<b>Sub-Area 9</b>	-	0.66
<b>Sub-Area 10</b>	-	0.65
<b>Sub-Area 11</b>	-	0.58

<b>Sub-Area 12</b>	-	0.47
<b>Sub-Area 13</b>	-	0.32
<b>Sub-Area 14</b>	-	1.79
<b>Sub-Area 15</b>	-	2.19
<b>Total</b>	16.5	16.5

Note that the sub-watersheds A, B were developed pre-construction. Areas outside of the slurry wall remain unchanged from their pre-construction condition and have not been considered in post-construction analysis.

## 5.5 DESIGN STORM

The analysis included the 2-year, 25-year, and 100-year, 24-hour design-storm events. Rainfall data were compiled from the National Resources Conservation Service (NRCS) for Onondaga County and provided in the WIN TR-55 program database. Type II synthetic rainfall distributions were used in the analysis based on the site location and the corresponding Soil Conservation Service (SCS) rainfall distribution boundary map. The 24-hour rainfall amounts used for the Hydraulic and Hydrologic analysis are provided in the table below:

### 24-Hour Rainfall for Onondaga County

<b>Design Storm Event</b>	<b>Rainfall (in)</b>
2 Year	2.35
25 Year	4.14
100 Year	5.66

## 5.6 RUNOFF CURVE NUMBER

The SCS has developed curve numbers that represent the ground cover types for urban areas and agricultural lands.

The weighted curve number for each sub watershed for the pre and post-construction conditions is shown below.

### Weighted Curve Numbers

<b>Sub-watershed ID</b>	<b>Pre-Construction</b>	<b>Post-Construction</b>
<b>Area A</b>	78	78
<b>Area B</b>	78	78

## 5.7 TIME OF CONCENTRATION

Tc is the duration taken for runoff to travel from the hydraulically most distant point of the watershed to a point of interest (outfall) within the watershed. (This is the sum of the travel times from the various consecutive flow segments along the flow path of the watershed to the outfall.) Tc is dependent on the velocity of the runoff and is a function of the surface roughness, slope of the surface, and flow segment length.

The following table displays Tc in hours for sub-watersheds for both pre and post-construction conditions.

<b>Pre and Post-Construction Time of Concentration (hrs)</b>		
<b>Sub-watershed ID</b>	<b>Pre-Construction</b>	<b>Post-Construction</b>
<b>Area A</b>	<b>0.94</b>	-
<b>Area B</b>	<b>0.80</b>	-
<b>Sub-Area 1</b>	-	<b>0.280</b>
<b>Sub-Area 2</b>	-	<b>0.287</b>
<b>Sub-Area 3</b>	-	<b>0.332</b>
<b>Sub-Area 4</b>	-	<b>0.290</b>
<b>Sub-Area 5</b>	-	<b>0.198</b>
<b>Sub-Area 6</b>	-	<b>0.271</b>
<b>Sub-Area 7</b>	-	<b>0.267</b>
<b>Sub-Area 8</b>	-	<b>0.138</b>
<b>Sub-Area 9</b>	-	<b>0.152</b>
<b>Sub-Area 10</b>	-	<b>0.155</b>
<b>Sub-Area 11, 12, 13</b>	-	<b>0.147</b>
<b>Sub-Area 14</b>	-	<b>0.263</b>
<b>Sub-Area 15</b>	-	<b>0.100</b>

Note that Sub-Areas 11, 12, and 13 were combined for this calculation because of their similar slopes and surface conditions.

## 5.8 PEAK FLOW

The following table illustrates the peak flows, in cubic feet per second (cfs), anticipated to be discharged from the pre- and post-construction sub watersheds of the project site based on the results of hydrologic modeling.

### Pre-Construction Peak Discharge Generated (cfs)

Design Storm Event	Flow to Wetland A	Flow to West Flume
2 Year	2.51	3.82
25 Year	7.98	12.16
100 Year	13.27	20.17

### Post-Construction Peak Discharge Generated (cfs)

Design Storm Event	Flow to Wetland A	Flow to West Flume
2 Year	10.02	3.27
25 Year	30.53	9.79
100 Year	50.06	16.13

## 5.9 TOTAL RUNOFF

The following table below illustrates estimated total runoff flows to each outlet, the West Flume and the Wetland A. The table compares pre- and post- construction conditions based on the results of hydraulic modeling.

### Pre-Existing Conditions

	West Flume	Wetland A
Area	412,949	303,613
Runoff Volume (cf)	79,890	58,677
% Volume	58%	42%
Peak Flow (25-year storm, cfs)	12.16	7.98

**Post-Construction Conditions**

	West Flume	Wetland A
Area (sf)	160,736	558,004
Runoff Volume (cf)	31,080	107,896
% Volume	22%	78%
Peak Flow (25-year storm, cfs)	9.79	30.53

**5.10 SUMMARY RESULTS**

The post-development condition will consist of a vegetated surface. Since both the pre- and post-construction conditions are vegetated surfaces with similar soils, the total post-construction runoff is essentially unchanged.

Comment #16 of the NYSDEC comments to the 95% Design Report for the Geddes Brook IRM, requested that the Final Cover Area stormwater drainage design significantly increase the storm flows directed to Wetland A because NYSDEC identified it as under-hydrated in the pre-construction condition. The post-construction stormwater collection and discharge system design will direct over 75% of the runoff into Wetland A, an 80% increase in total stormwater flow, per NYSDEC request.

This modified Final Cover Area stormwater flow pattern has the additional benefit of reducing both the peak and total stormwater flow that is directly discharged into the East Ditch and West Flume by 20% and 60% respectively for 25-year, 24-hour flows. These are directly connected with Geddes Brook without intervening detention, so directing a significant percentage of the stormwater flow into Wetlands A and B will provide increased detention of runoff from the Final Cover Area under post-development condition, which will reduce peak flows in Geddes Brook and Ninemile Creek. Wetland A provides over 1.5 acre-ft. of storage above its design elevation of 380 ft and Wetland B provides approximately 7 acre-ft of storage above its design elevation of 376 ft while a 25-year, 24-hour storm will only provide about 2.5 acre-ft of stormwater, substantially below the combined retention capacity of the two wetlands.

**SECTION 6**

**CONTRACTOR CERTIFICATION**

All Contractors and Sub-Contractors agree to the following certification statement referenced from SPDES General Permit GP-0-10-001:

Certification Statement

*"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings."*

**Contractor:** \_\_\_\_\_

Contact Person (Print): \_\_\_\_\_

Contact Person (Signature): \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

**Sub Contractor:** \_\_\_\_\_

Contact Person (Print): \_\_\_\_\_

Contact Person (Signature): \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

\_\_\_\_\_

**Sub Contractor:** \_\_\_\_\_

Contact Person (Print): \_\_\_\_\_

Contact Person (Signature): \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

\_\_\_\_\_

**Sub Contractor:** \_\_\_\_\_

Contact Person (Print): \_\_\_\_\_

Contact Person (Signature): \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

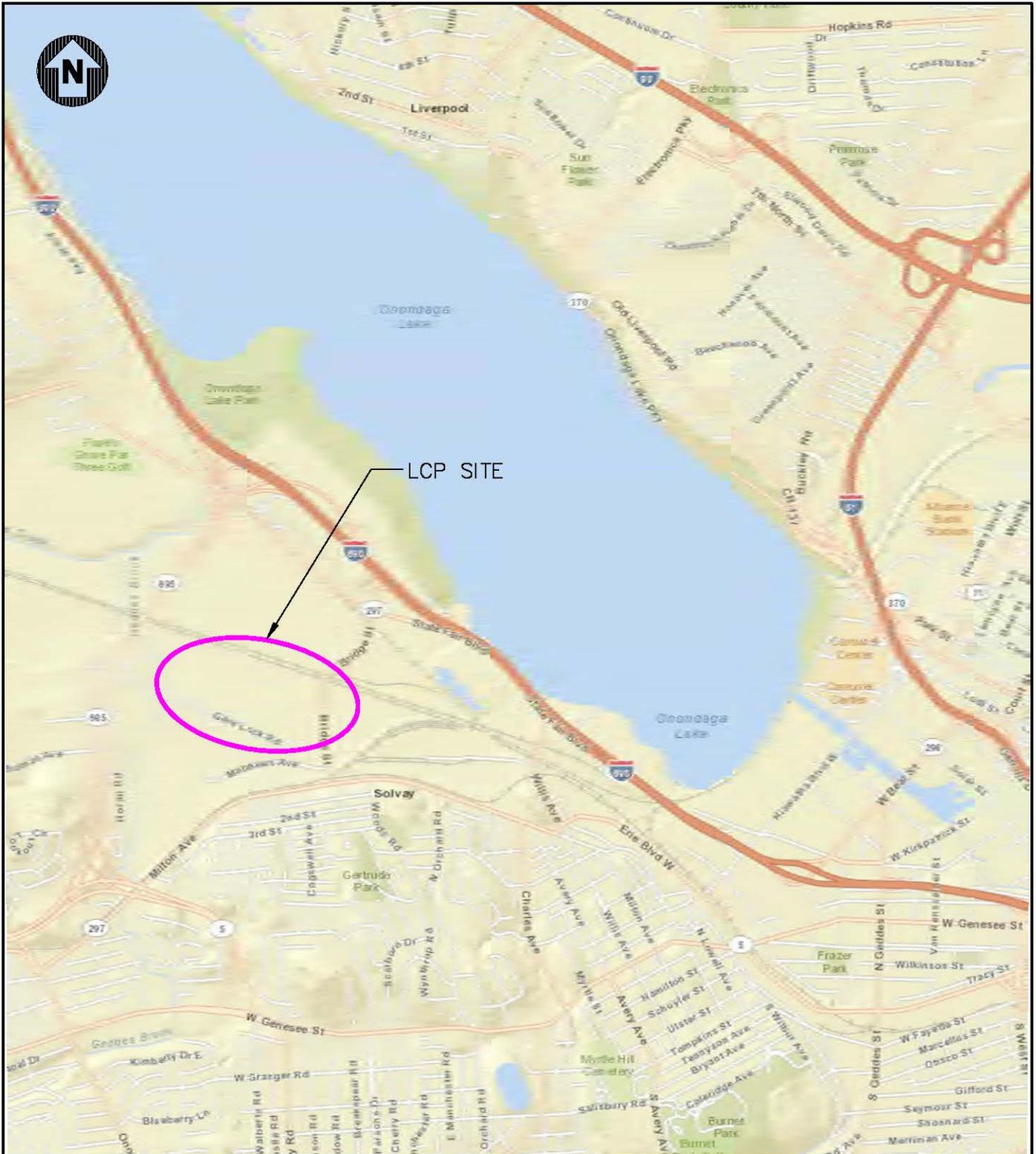
Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

**SECTION 7****REFERENCES**

- BBL, 2001. Decontamination and Demolition Interim Remedial Measure Completion Report. Prepared for Honeywell by Blasland, Bouck and Lee, Inc. in November 2001.
- Parsons, 2015. LCP OU-1 Final Cover Area Field Change Form No. 1. Prepared for Honeywell, Morristown, New Jersey. Syracuse, New York.
- Parsons, 2014. LCP OU-1 Final Cover Area 100% Design Report Final Cover Construction. Prepared for Honeywell, Morristown, New Jersey. Syracuse, New York.
- Parsons, 2013. Draft 100% Design Report for the LCP OU-1 Final Cover Area. Prepared for Honeywell, Morristown, New Jersey. Syracuse, New York.
- Parsons, 2009. Final Remedial Action Report for the Soil Washing, Soil and Sediment Consolidation, Sewers, Slurry Wall, Groundwater Containment/Pretreatment and Interim Soil Cover at the LCP Bridge Street Site (OU 1). Prepared for Honeywell, Syracuse, NY. November 2009.

**FIGURES**



LATITUDE: N43° 04' 30"  
 LONGITUDE: W76° 13' 56"  
 SOURCE: ARCVIEW GIS- WORLD  
 STREET MAP

FIGURE 1.1

**Honeywell**

LCP BRIDGE STREET  
 SOLVAY, NEW YORK

LCP SITE LOCATION MAP

**PARSONS**

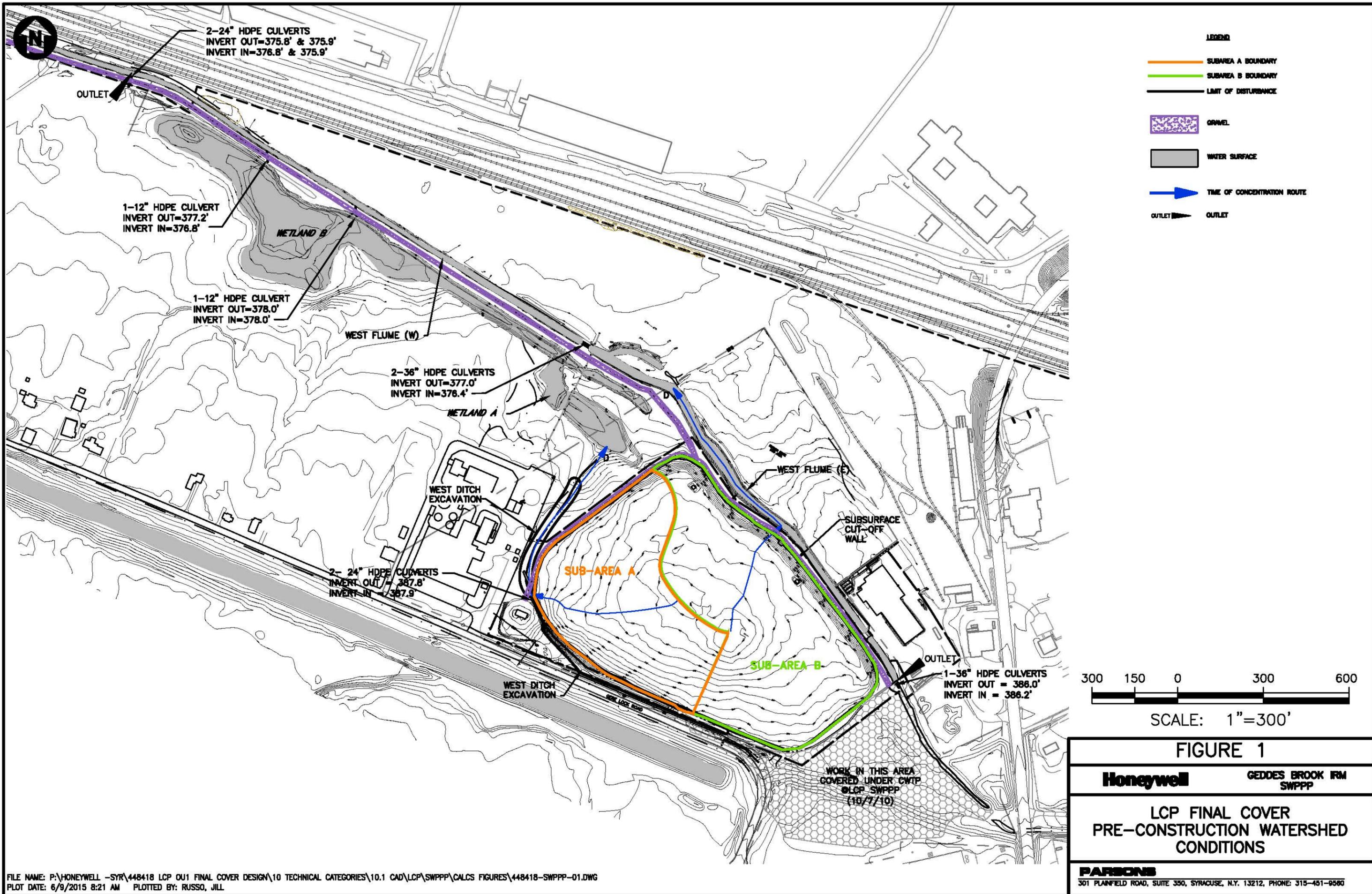
301 PLAINFIELD ROAD • SUITE 350 • SYRACUSE, NY 13212 • 315/451-9560  
 OFFICES IN PRINCIPAL CITIES



FIGURE 1.2  
**Honeywell** LCP BRIDGE STREET SITE  
 SYRACUSE, NY

**LCP SITE PLAN**

**PARSONS**  
 301 PLAINFIELD ROAD \* SITE 350 \* SYRACUSE, NY 13212 PHONE: (315) 451-9550



2-24" HDPE CULVERTS  
INVERT OUT=375.8' & 375.9'  
INVERT IN=376.8' & 375.9'

OUTLET

1-12" HDPE CULVERT  
INVERT OUT=377.2'  
INVERT IN=376.8'

WETLAND B

1-12" HDPE CULVERT  
INVERT OUT=378.0'  
INVERT IN=378.0'

WEST FLUME (W)

2-36" HDPE CULVERTS  
INVERT OUT=377.0'  
INVERT IN=376.4'

WETLAND A

WEST FLUME (E)

WEST DITCH EXCAVATION

SUBSURFACE CUT-OFF WALL

2- 24" HDPE CULVERTS  
INVERT OUT = 387.8'  
INVERT IN = 387.9'

SUB-AREA A

WEST DITCH EXCAVATION

SUB-AREA B

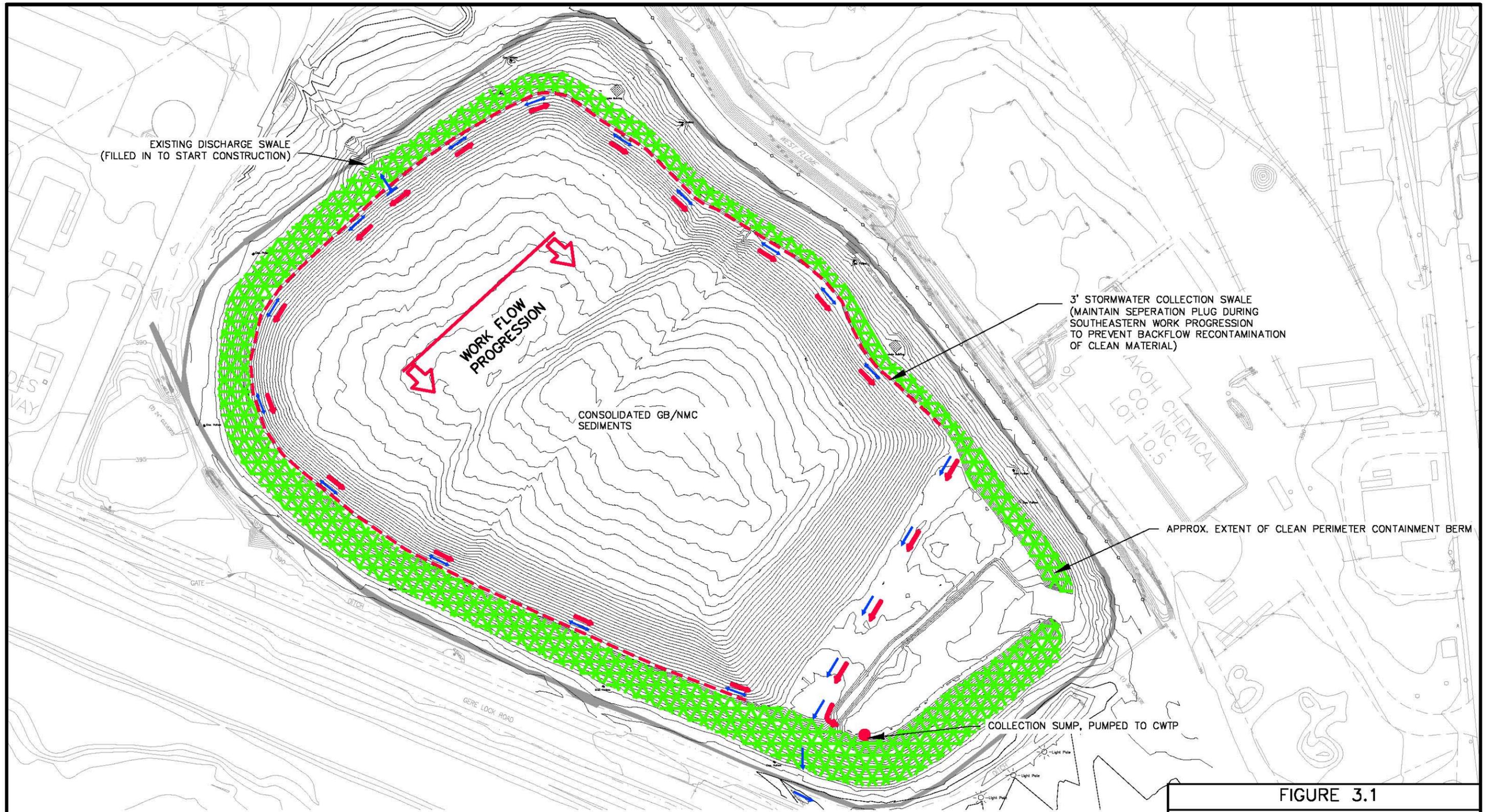
1-36" HDPE CULVERTS  
INVERT OUT = 386.0'  
INVERT IN = 386.2'

OUTLET



SCALE: 1"=300'

WORK IN THIS AREA  
COVERED UNDER CWP  
@LCP SWPPP  
(10/7/10)



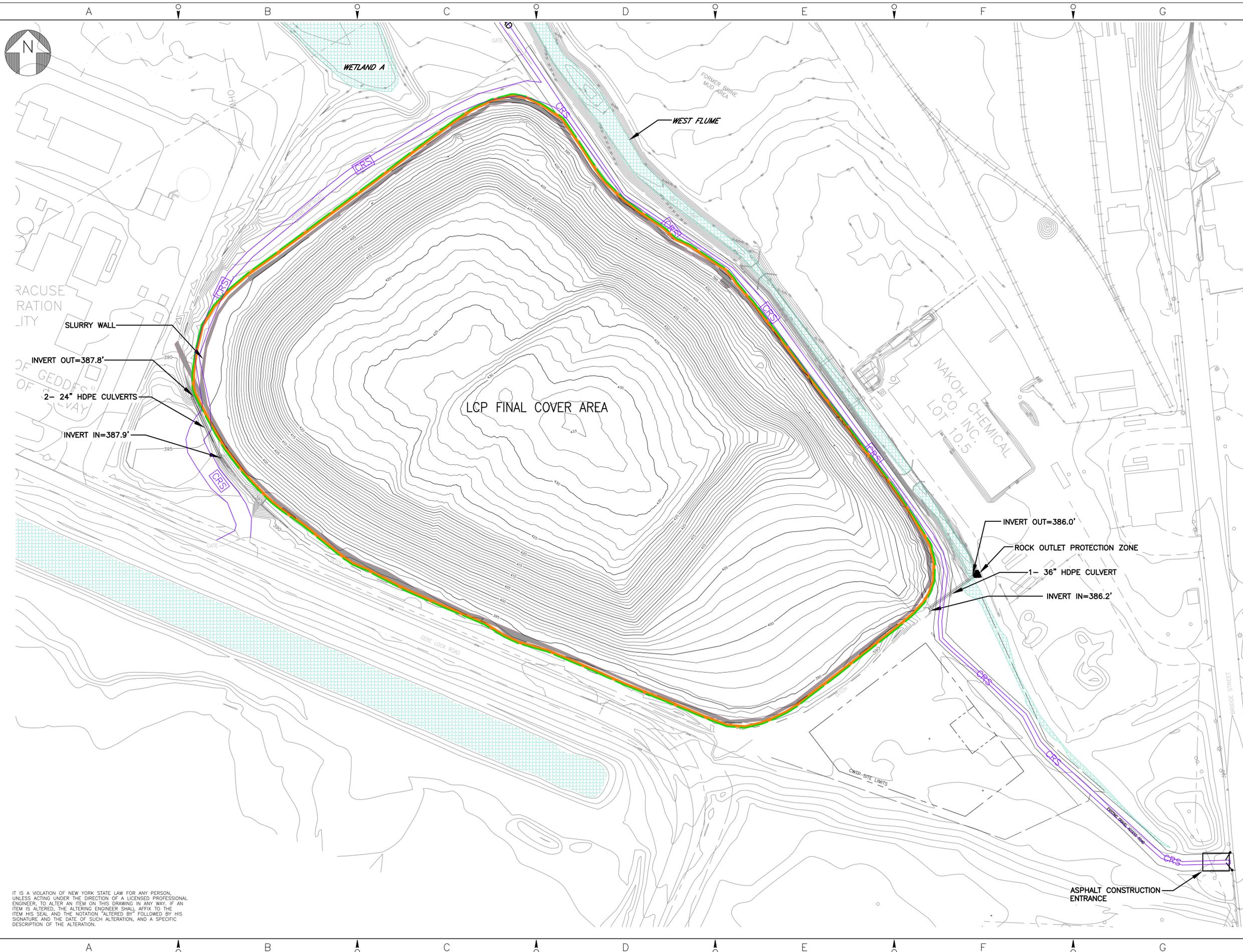
**Legend:**  
 ← RUNOFF FLOW PRIOR TO CONSTRUCTION.  
 → RUNOFF FLOW UNTIL LANDFILL COVERED AND SECURED

120 60 0 120 240  
 SCALE: 1"=120'

**FIGURE 3.1**  
**Honeywell**  
 ANTICIPATED CONSTRUCTION SEQUENCING

**PARSONS**  
 301 PLAINFIELD ROAD \* SUITE 350 \* SYRACUSE, NY 13212 \* 315/451-9560  
 OFFICES IN PRINCIPAL CITIES

NOTICE: THIS DRAWING, THE PROPERTY OF HONEYWELL, IS FURNISHED SUBJECT TO RETURN ON DEMAND AND THE CONDITION THAT THE INFORMATION AND TECHNOLOGY EMBODIED HEREIN SHALL NOT BE DISCLOSED OR USED AND THE DRAWING SHALL NOT BE REPRODUCED OR COPIED IN WHOLE OR IN PART EXCEPT AS PREVIOUSLY AUTHORIZED IN WRITING. ANY PERSON WHO MAY RECEIVE OR OBSERVE THIS DESIGN WILL BE HELD STRICTLY LIABLE FOR ANY VIOLATION WHETHER WILLFUL OR NEGLIGENT.

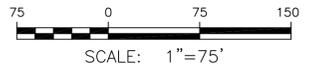


**LEGEND**

	CONSTRUCTION ROAD STABILIZATION
	SILT FENCE
	LIMITS OF DISTURBANCE
	WATER SURFACE
	SLURRY WALL

**NOTE:**

- LOCATIONS FOR INITIAL EROSION AND SEDIMENTATION CONTROL FEATURES WILL BE ADAPTED AS NECESSARY, DEPENDING ON ACTUAL FIELD CONDITIONS.
- DESIGN DETAILS FOR EACH STORMWATER, EROSION AND SEDIMENT CONTROL FEATURE ARE SHOWN IN THE LCP 011 FINAL COVER AREA DESIGN REPORT, AND ARE IN ACCORDANCE WITH THE NYSDEC STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.



B	UPDATED	4/8/15	JCN	
A	ISSUED FOR AGENCY REVIEW	6/13/14	JJH	PR RDD

NO.	DESCRIPTION	DATE	SEAL	DRAWN	CHK'D	APP'VD
1	DRAWN BY	JJH	6/10/14			
2	CHECKED BY	PR	6/10/14			
3	APPROVED BY	RDD	6/10/14			
4	PROJECT MGR.	RDD	6/10/14			

**PARSONS**  
COMMERCIAL TECHNOLOGY GROUP

OFFICE: 301 PLAINFIELD ROAD, SYRACUSE, NY 13212, (315) 451-9560  
 JOB: 448418  
 WBS: 04125

**Honeywell**  
LCP FINAL COVER DESIGN  
SYRACUSE, NEW YORK

DRAWING TITLE  
SWPPP SITE PREPARATION,  
EROSION AND  
SEDIMENT CONTROL PLAN

SCALE: SCALE 1"=75'  
DRAWING NO. **FIGURE 4.1** REV. **B**

IT IS A VIOLATION OF NEW YORK STATE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER AN ITEM ON THIS DRAWING IN ANY WAY. IF AN ITEM IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.