Revised Scope of Work (Schedule 1) for:

DEC ASH ROAD PROPERTIES OFFSITE CHARACTERIZATION INVESTIGATION VESTAL, NEW YORK (DEC SITE # C704032A)

Prepared For:

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233-7012

Prepared By:

PARSONS

301 Plainfield Rd, Suite 350
Syracuse, New York 13212
Phone: (315) 451-9560
Fax: (315) 451-9570

May 2015
Resubmitted June 2015

TABLE OF CONTENTS

Page

TABLE OF CONTENTS
(continued)

LIST OF TABLES

LIST OF FIGURES

ACRONYMS

bgs	Below Ground Surface
COC	Contaminates of Concern
CZ	Central Zone
DER	Division of Environmental Remediation
DI	Deionized
DUSR	Data Usability Summary Report
ESA	Environmental Site Assessment
ft.	foot/feet
IDW	Investigative-Derived Waste
IRM	Interim Remedial Measure
Mg/kg	Milligrams per kilogram
MIPs	Membrane Interphase Probe
NAD	North American Datum
NAVD	North American Vertical Datum
NTU	Neophelometric Turbidity Unit
NYCRR	New York State Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
PID	Photoionization Detector
PVC	Polyvinyl Chloride
SOP	Standard Operating Procedure
QAPP	Quality Assurance Project Plan
TCL	Target Compound List
TOGS	Technical and Operational Guidance Series
Ug/l	Micrograms per Liter
VOCs	Volatile Organic Compounds

SCHEDULE 1

SCOPE OF WORK

SITE CHARACTERIZATION WORK PLAN FOR THE ASH ROAD PROPERTIES OFFSITE INVESTIGATION VESTAL, NEW YORK (SITE # C704032A)

1.0 PROJECT OBJECTIVES AND BACKGROUND

The investigation property (herein forth known as the "Subject Site") is located west-northwest of the Ash Road Properties and west-northwest of the Ash Road and Sycamore Road intersection. The address for the offsite investigation property is 221 Sycamore Road, Town of Vestal, New York, 13850 (See Figure 1). The investigation property is an asphalt parking lot with intermittent grass areas along perimeter). See Figure 2 showing approximate boundaries of Subject Site.

The Ash Road Properties (hereafter known as the "Site") occupies a portion of the Lowe's Home Center 14.47–acre property, tax map number 158.10-2-13. The Site has been identified by four tax map parcel designations prior to the incorporation of these four parcels, as well as other parcels into the one current 14.47–acre parcel. The Site encompasses perimeter parking for an existing Lowe's Home Center store.

The Site is roughly rectangular in shape and encompasses about 1.54 acres with Ash Road forming the southern property boundary and Sycamore Road forming the western property boundary. Further south is a restaurant, an automotive supply business, and an automotive rental and repair business. A parking area for the Lowe's Home Center borders the Site on the north with the Lowe's Home Center building located approximately three-hundred (300) feet (ft.) north. Residential properties border the Site on the east. Commercial buildings were formerly present on the Site from at least 1965 until 1996.

The Site was formerly occupied by two businesses: Town Square Body Shop and Hall Plumbing. Town Square Body Shop performed auto-body repairs as well as automotive painting, washing, and waxing (see Figure 2). The Hall Plumbing building was occupied by a contractor's office and warehouse.

1.1 PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

Previous investigations that have been completed at the Site have identified elevated concentrations of chlorinated solvents that have exceeded New York State Department of Environmental Conservation (NYSDEC) Technical Operational Guidance Series (TOGS) 1.1.1

Ambient Water Quality Standards (NYSDEC water quality standards), and 6 New York State Codes, Rules, and Regulations (NYCRR) Part 375, subpart 375-6.8 Soil Cleanup Objectives. Two (2) studies discussed below identified the highest levels of contamination near the southwest corner of the former Town Square Body Shop. The contaminants of concern (COCs) were chlorinated solvents, specifically Tetrachloroethene, and its transformation products, Trichloroethene, cis and trans-1,2-Dichloroethene, 1,1-Dichloroethene, Vinyl Chloride, 1,1,1-Trichloroethane, 1,1-Dichlorothane, 1,2-Dichloroethane, and Chloroethane.

Petroleum fuel-related compounds were also been detected in groundwater at the Site at concentrations generally less than 10 ug/L (micrograms per liter).

1.1.1 Phase I/Limited Phase II Environmental Site Assessment, Town Square Body Shop and Hall Plumbing, Vestal, New York

Gaynor Associates, Inc. completed a Phase I and Limited II Environmental Site Assessment (ESA) in January 1996 of the Ash Road Properties Site. The Phase I ESA included a visual inspection of the Site, a review of historical database listings, and review of local and regional geologic/hydrogeologic conditions. In 1996 there were two buildings on the Site, one occupied by Town Square Body Shop and the other by Hall Plumbing. Monarch Chemical was identified as a prior occupant of the Town Square Body Shop property; Dean Fowler Oil Company formerly occupied Hall Plumbing. The report identified floor drains in both buildings that were not connected to the municipal sewer system, poor housekeeping practices of various automotive products inside the body shop, and the dumping of sediments on the Site from an adjacent business. Contamination by petroleum and chlorinated compounds were detected in the sediments placed on the Site and in groundwater that exceeded NYSDEC water quality standards. No petroleum bulk storage tanks were identified on the property.

A total of nine (9) borings and three (3) monitoring wells were completed at the Site in 1996. The groundwater evaluation identified an area southwest of the then existing Town Square Body Shop building with the highest concentrations of chlorinated solvents, which ranged from 4 to 27 ug/L for the individual COCs.

1.1.2 Site Characterization Report, Ash Road Site (7-04-032), Vestal, New York

In September 2009, field investigation activities were completed by EA Engineering, P.C. for the NYSDEC. The site characterization indicated that there was a limited shallow source area of primarily chlorinated compounds located in the west portion of the Site with the highest contaminant concentration observed near the southwest corner of the former Town Square Body Shop building. The source area appeared to have impacted groundwater quality migrating northwesterly in the direction of groundwater flow. The results of the evaluation suggested that contamination from the Site had migrated offsite and might be following a former creek that once existed in the Ash Road Properties site and flowed from an east to west direction. The creek was filled in when the area was developed. The Site Characterization completed by EA Engineering included the advancement of twenty-three (23) soil borings in the area of the former Hall Plumbing

and Town Square Body Shop. Acetone was noted as the only compound detected in soil samples analyzed from these borings at concentrations that exceeded 6 NYCRR 375 Unrestricted Use Soil Cleanup Objective (Unrestricted SCOs) of 0.05 milligrams per kilogram (mg/kg). Acetone concentrations ranged from 0.05 to 0.27 mg/kg in soils. During a membrane interphase probe (MIP) evaluation, the COCs were detected in soils at levels that exceed the Unrestricted SCOs with the highest concentrations observed at the southwest corner of the former Town Square Body Shop building. A MIPs investigation was also performed on the adjacent property located to the west of the Site and elevated measurements within the vadose and saturated zones were detected indicating possible migration of the groundwater plume located under the Ash Road Properties site.

EA recommended interim remedial measures including the excavation of soil in the identified source area, and additional remedial investigation of the Site.

The conclusions reached from this characterization initiated a NYSDEC notification letter to West Covina Royale, LP of the Department's intent to consider 221 Sycamore Road for inclusion on the Registry of Inactive Hazardous Waste Disposal Sites in New York State.

1.1.3 Remedial Investigation and Interim Remedial Measure

In 2010, 2011, and 2012 Geologic NY performed Remedial Investigation and Interim Remedial Measure (IRM) activities at the Ash Road Properties site under the direction of the NYSDEC. Investigation and remedial measure activities are summarized below.

- In 2010, existing groundwater monitoring wells were sampled to evaluate current groundwater quality and to assess the direction of groundwater flow at the Ash Road Properties site. Two (2) wells (MW-01 and MW-02(S)) exhibited elevated COCs and a northwestern groundwater flow was concluded.
- An IRM was implemented to remove the source area at the Ash Road Properties site in order to reduce continuing receptor exposure to the COCs within the subsurface. Source removal (soil) was achieved via excavation. The IRM activities were completed between September 26 and November 7, 2011. An area of approximately thirty-five (35) ft. by forty (40) ft. was excavated to a depth ranging between nine (9) to eleven (11) ft. All excavated soils were staged onsite and then properly disposed of at an NYSDEC approved disposal facility. The excavation was then backfilled and paved over with asphalt. Excavation samples collected from the bottom and sidewalls indicated that some impacted soils remained within the subsurface, but could not be removed due to subsurface constraints (e.g., underground utilities).
- During the spring of 2012, five (5) groundwater monitoring wells were installed following IRM activities to evaluate groundwater quality within the aquifer at both shallow and deep zones. Two soil samples were collected from one of the 5 wells installed, while groundwater samples were collected from all wells installed. No elevated COCs were observed from the soil samples, while groundwater samples

exhibited concentrations of COCs in 2 of the 5 wells installed (MW-09(S) and MW-10(S)). No deep impacts to the aquifer were observed.

- In 2013, four (4) soil vapor samples were collected from the west, east, north, and south boundaries of the Ash Road Properties site to evaluate potential subsurface sources of vapor contamination and to determine if vapor contamination from the Site's groundwater plume was migrating off-site. Each soil vapor monitoring point was installed to a depth of 4.5 ft. below ground surface (bgs). Soil vapor concentrations were detected in all 4 samples with tetrachloroethene and cis-1,2-dichloroethene being present in all samples collected.

2.0 PRELIMINARY ACTIVITIES (TASK 1)

Preliminary activities include preparing this scope of work and associated NYSDEC contract-related forms, participating in the initial site visit and reviewing available site file information (Ash Road Properties Maps) provided by NYSDEC to date.

3.0 SITE CHARACTERIZATION AND REPORT GENERATION (TASK 2)

3.1 UNDERGROUND UTILITY AND BUILDING CONSTRUCTION INVESTIGATION

Parsons' approach to determine how underground utilities and buildings on the Subject Site affect groundwater flow, contaminant migration, and the potential of soil gas vapors migrating into existing buildings will follow these initial steps in coordination with the NYSDEC project manager:

1. Contact Town of Vestal Engineer and get copies of public underground utilities that exist at Subject Site.
2. Contact Town of Vestal Engineer and Subject Site owner(s) to obtain building construction details and private underground utilities that exist at Subject Site.
3. Review information and determine if utilities are effecting groundwater flow underneath the Ash Road Properties and Subject Site.
4. Review building construction details and determine if soil gas vapors have potential of migrating into building structures located on the Subject Site.

Data will be compiled from the town engineer and property owner(s) and analyzed to determine factors affecting groundwater flow and soil gas migration. These will be used to determine the severity of soil gas migration and if any remedial steps are required.

3.2 SITE CHARACTERIZATION

The site characterization will consist of a geophysical and initial site survey, installation of soil borings, groundwater sampling, and soil vapor sampling. Each portion of the site

characterization work will follow NYSDEC guidelines outlined in Division of Environmental Remediation (DER)-10 Technical Guidance document. The site characterization will consist of:

1. Geophysical investigation and site survey (Stake out of drilling locations and surveying of installed groundwater monitoring well points and soil vapor monitoring points (Subcontractor)
2. Monitoring well point installations and groundwater investigation (Parsons/ Subcontractor)
3. Soil vapor monitoring point installations and soil vapor investigation (Parsons/NYSDEC Contractor)

Field activities will be conducted in accordance with the Generic Quality Assurance Project Plan and the Generic Health and Safety Plan prepared and approved for this contract. Site-specific elements and specific activity hazard analysis for soil borings, monitoring well and soil vapor point installations, and groundwater and soil vapor sampling will be added to the Health and Safety Plan.

Investigation-derived waste (IDW), including excess soils from soil borings, decontamination rinsates, well development water, purge water, and personal protective equipment, will be placed in Department of Transportation -approved fifty-five (55)-gallon seventeen (17)-H type drums. The IDW will be classified as hazardous or non-hazardous based on characterization results and will be disposed of in accordance with applicable NYSDEC regulations.

The laboratory work scope for this work is summarized in Table 1.

3.3 GEOPHYSICAL AND SITE SURVEY

A geophysical survey will initially be performed at the site to locate subsurface utility lines. Any underground site utilities or obstructions will also be marked in the field. Site survey tasks will include collecting the as-built sample coordinates and elevation information, as well as the as-built monitoring well point elevations and soil vapor monitoring points. Elevations will be based on the North American Vertical Datum (NAVD) eighty-eight (88).

Geophysical survey activities will be performed utilizing ground penetrating radar equipment (Mala Easy Locator, Model EL-HDR) and electromagnetic equipment (SPXRD7000Plus). All equipment will be operated by an experienced technician.

3.4 SOIL BORING DRILLING

Based on the results of the geophysical investigation, twenty-two (22) soil borings will be identified and converted to well points or soil vapor monitoring points to determine the extent of groundwater contamination on the Subject Site, to determine if the groundwater plume that exists underneath the Ash Road Properties site has been satisfactory delineated to the northwest of the site, and to determine if soil vapor migration to structures located on the Subject Site is occurring. Tentative soil boring locations are shown in Figure 2. Actual soil boring locations will be agreed upon in advance with the NYSDEC project manager. Eight (8) of these soil borings will be

converted to soil vapor monitoring points, while fourteen (14) soil borings will be converted to monitoring well points. Soil samples from borings will be screened on site but not analyzed in a laboratory.

Following hand clearance to five (5) ft below ground surface to confirm no utility interference, the 22 direct push soil borings will be drilled into the overburden and sampled continuously using Macrocore samplers to approximately thirty (30) ft. bgs. Anticipated depth of soil borings/wells based on previous subsurface investigations performed at the Site and adjacent properties. If a layer of refusal is encountered prior to 30 ft., the drilling will cease and the rig will offset a few feet to attempt a new hole to target depth. Soil samples retrieved from each boring will be visually classified for soil type, grain size, texture, moisture content, and visible evidence of staining or impacts. Each sample will also be screened for the presence of volatile organic compounds (VOCs) with a photoionization detector (PID). In addition, a sample from each two (2)-ft. interval will be collected in a sealed plastic bag and the sample headspace will be screened for the presence of VOCs with a PID. Each soil boring will then be converted to either a monitoring well point or soil vapor monitoring point.

3.5 MONITORING WELL POINT INSTALLATIONS AND GROUNDWATER SAMPLING

Fourteen of the proposed soil boring locations will be selected in advance for installation of monitoring well points to identify the horizontal extent of potential groundwater contamination and to determine groundwater flow direction at the Subject Site. The well points will also be installed to determine if the groundwater plume that exists underneath the Ash Road Properties site has been satisfactory delineated to the northwest of the site.

Monitoring well points will be constructed of one-inch polyvinyl chloride (PVC) casing with 10-ft. long, #10-slot pre-packed screen. The annulus around the outside of the screen will be backfilled with sand to 2 ft. above the screen, followed by a bentonite seal (minimum 2 ft. thick) above the sand pack. The seal in each new monitoring well point will be allowed to hydrate prior to the placement of grout above it to near the ground surface. Each well will be completed with a four (4)-inch steel protective flush mount cover and locking adjustable cap.

Following installation, the new monitoring well points will be developed to remove material which may have settled in and around the well screen. Development will occur a minimum of twenty-four (24) hours after well point installation to allow bentonite and grout to hydrate and set. Development will consist of the removal of ten well volumes, or achieving a turbidity reading of fifty (50) neophelometric turbidity units (NTUs) or lower. Development water will be temporarily contained using drums, stored on-site at a central waste accumulation area, and characterized for disposal.

Once well installation and development is complete, two rounds of groundwater sampling will be conducted using low flow sampling techniques. Sample events will occur shortly after well

installations and again three months after the initial round of sampling. The second round of sampling is to compare against the initial round.

Dedicated groundwater sampling equipment (e.g., polyurethane and silicon tubing) will be used during groundwater sampling events and changed out between each well sampled. Purge water and decontamination water will be transferred to drums for characterization and disposal.

Groundwater samples will be analyzed for volatile organic compounds as shown on Table 1 and results from the laboratory will be compared to NYSDEC Ambient Water Quality Standards presented in TOGS 1.1.1 (6NYCRR Part 703). Trip blanks will also be included in VOC sample coolers and analyzed for Target Compound List (TCL) VOCs.

3.6 SOIL VAPOR POINT INSTALLATIONS AND SAMPLING

Eight of the soil borings will be converted to permanent soil vapor monitoring points along the north, east, south, and west boundaries of the Subject Site. Boring depths will be based on depth to groundwater, and soil vapor points will be installed three (3) to five (5) feet above the water table. Borings will be drilled using direct push methods. Six (6) -inch steel mesh implants will be installed and fitted with 0.25-inch outer-diameter Teflon tubing. Excess tubing will be left in place within the protective flush mount cover for use during sampling events and will be capped with a plug. The annulus will be backfilled with glass beads or sand, with bentonite backfill to the bottom of the protective flush mount cover. A 4-inch steel protective flush mount cover will be installed at each location to protect the monitoring point.

After installation, soil vapor will be sampled from these eight points for volatile organics TO-15+Napthalene using USEPA Method TO-15. A NYSDEC subcontractor will collect these samples under supervision of a Parsons field geologist.

If non-dedicated sampling equipment is used (e.g., hand augers, shovels) the equipment will be decontaminated between samples by washing equipment with an Alconox® solution followed by a DI water rinse. Decontamination water will be transferred to drums for characterization and disposal.

3.7 REPORT GENERATION

Data obtained during the field investigations identified in this scope of work will be compiled, evaluated, and summarized. A Site Characterization Report will then be prepared following completion of the investigation and receipt of analytical data. This report will document investigation activities specified in this work plan. Groundwater flow direction will be documented from water level measurements. Chemical analytical results for groundwater will be compared to 6 NYCRR Part 375 guidelines for various potential future land uses and State of New York Class GA water quality standards respectively. Parsons will also perform data validation in accordance with the USEPA Region 2 RCRA and CERCLA Data Validation Standard Operating Procedures (SOPs) for organic and inorganic data review. In addition, Parsons will refer to the project Quality

Assurance Project Plan (QAPP) to verify that project quality objectives are met and generate a Data Usability Summary Report (DUSR).

6.0 SCHEDULE

Following approval of this Scope of Work by NYSDEC, the schedule shown below will be implemented assuming no unexpected constraints are encountered such as lack of access to the investigation area. The work scope described herein is assumed to be completed between the summer of 2015 and first quarter of 2016.

Task Name	Start	Finish
Underground utility and Buildings Construction Investigation	Week 1	Week 3
Geophysical Investigation	Week 3	Week 3
Drilling Mobilization	Week 4	Week 4
Utility Clearing/Drilling/Monitoring Well and Soil Vapor Point Installations	Week 4	Week 5
Well Development	Week 4	Week 5
As-built Survey	Week 6	Week 6
First Round of Groundwater Sampling (summer event)	Week 6	Week 6
Soil Vapor Sampling	Week 6	Week 6
Data Management/Preliminary Reporting Tasks	Fall 2015	Late Fall 2015
Second Round of Groundwater Sampling (late fall event)	Early November 2015	Early November 2015
Data Management (including validation)/Final Reporting	Mid-Late December 2015	Early Winter 2016

7.0 OTHER COST ASSUMPTIONS

- Field efforts will be conducted in Level D or modified Level D personal protection. Personal protection level for the sampling of the drums will be determined based on input from the waste management subcontractor.

- One Parsons Geologist will be on-site during survey/geophysical activities, drilling and well/soil vapor point installations, and soil vapor sampling.
- Two Parsons Geologists/Scientists will be on-site implementing the buddy system during groundwater sampling activities. Two separate sampling events scheduled.
- Data management includes providing a Category B data validation contract-required data deliverable for the site characterization data.
- Report preparation includes completing a draft data summary report, responding to one round of comments from the agencies, and revising the data summary report based on the single round of comments.
- No likely-hood of short circuiting of contamination through sewer lines is anticipated and sampling of such utility lines is not part of this investigation.
- IDW generated during drilling and sampling tasks can be disposed of as non-hazardous wastes.
- IDW drums will be stored in a secured storage cargo container in an area designated on-site. The storage cargo container will be lined with poly sheeting for secondary containment.
- No public notifications or other public relations support is includes as part of this work scope.
- Soil vapor sampling will be conducted by a NYSDEC subcontractor and analytical data will be forwarded to Parsons for evaluation. Use of NYSDEC subcontractor requested by Work Assignment Project Manager.

TABLES

NYSDEC

TABLE 1
GROUNDWATER, WASTE CHARACTERIZATION, AND SOIL VAPOR ANALYTICAL SUMMARY
ASH ROAD PROPERTIES OFFSITE SITE CHARACTERIZATION
VESTAL, NEW YORK

		Soil Analyses[1]		Groundwater Analyses[2]										Soil Vapor Analysis
Location ID		Solids IDW Characterization		Liquid IDW Characterization									Well Sampling-VOCs	Soil Vapor Sampling-VOCs
		RCRA Characterization for Disposal	TCLP-VOCs, SVOCs, pest., herbs, metals	VOCs	SVOCs	Pest/Herbs	PCBS	TAL Metals	Total CN	pH	Ignitability	Reactive CN/Sulfide	EPA Method 624	TO-15+MTBE+TBA
Soil Borings	Composite Soil Cuttings/Waste	1	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	NA
Monitoring Well Points	Composite Purge Water IDW	NA	NA	1	1	1	1	1	1	1	1	1	1	NA
Monitoring Well Points	Groundwater[3]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46	NA
Soil Vapor Points	Soil Vapor	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9

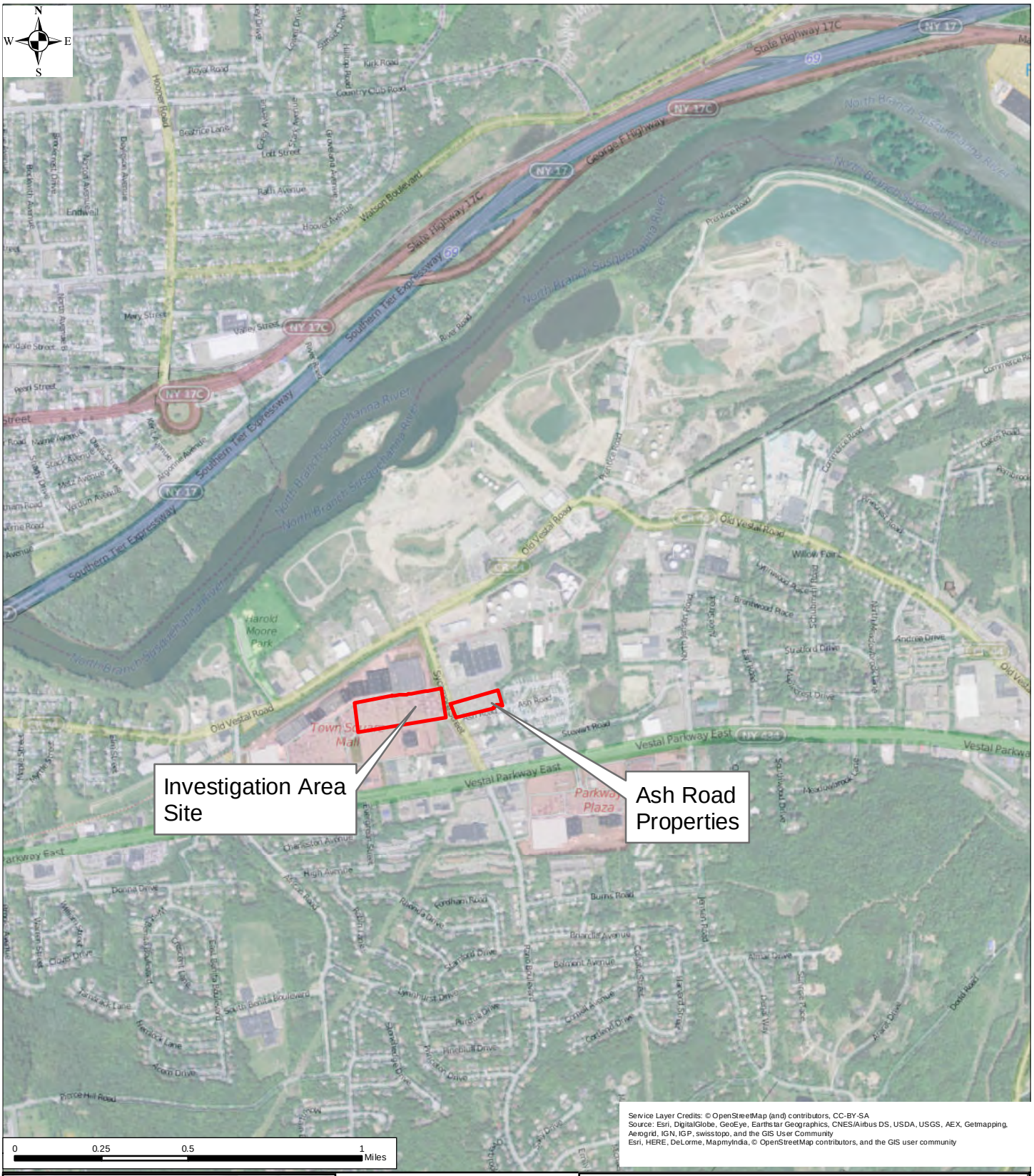
Notes:

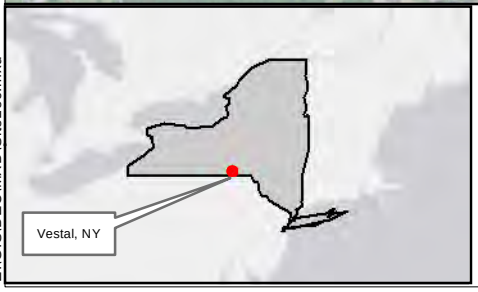
1. NYCRR Subpart 375 Compounds

2. NYSDEC Ambient Water Quality Standard TOGS 1.1.1

3. Represents two rounds of groundwater sampling. Quality Assurance samples included in total number of samples.

FIGURES



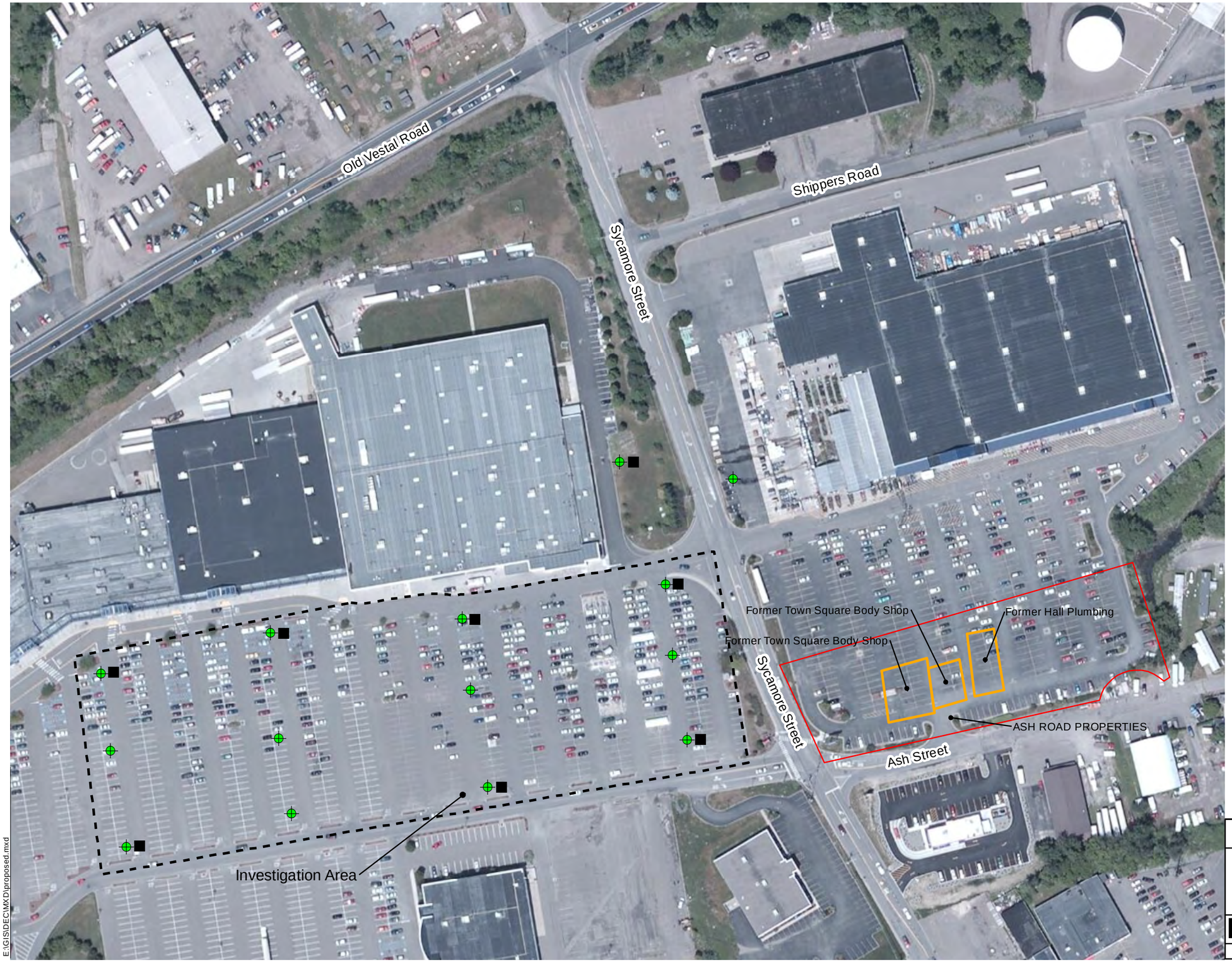


E:\GIS\DEC\MXD\SiteLoc.mxd

FIGURE 1

Ash Road Properties Off Site
Site Characterization
Town of Vestal, New York
SITE LOCATION MAP

PARSONS
301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560



LEGEND

- Proposed Soil Boring/ Soil Vapor Monitoring Point Location
- Proposed Soil Boring/ Monitoring Well Point Location
- Investigation Area Boundary
- Boundary of Ash Road Properties

N
W E
S

0 0.025 0.05 0.1 Miles

FIGURE 2

Ash Road Properties Off Site
Site Characterization
Town of Vestal, New York
PROPOSED SAMPLE LOCATION MAP

PARSONS

301 Plainfield Road, Suite 350; Syracuse, NY 13212 315-451-9560

E:\GIS\DEC\MXD\proposed.mxd