

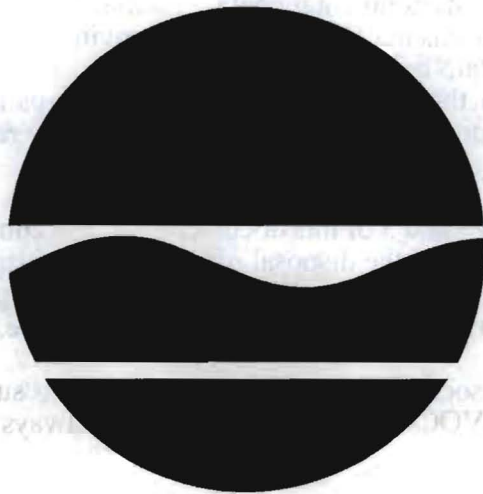
# PROPOSED REMEDIAL ACTION PLAN

**36 Elm Street**

## Environmental Restoration Project

**Glens Falls, Warren County, New York**

**Site No. E557019**



Prepared by:

Division of Environmental Remediation  
New York State Department of Environmental Conservation

# *A 1996 Clean Water/Clean Air Bond Act Environmental Restoration Project* **PROPOSED REMEDIAL ACTION PLAN**

**36 Elm Street Site  
Glens Falls, Warren County, New York  
Site No. E557019  
October 2008**

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## **SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN**

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the 36 Elm Street Site in Glens Falls, Warren County.

The 1996 Clean Water/ Clean Air Bond Act provides funding to municipalities for the investigation and cleanup of brownfields. Brownfields are abandoned, idled, or under-used properties where redevelopment is complicated by real or perceived environmental contamination. They typically are former industrial or commercial properties where operations may have resulted in environmental contamination. Brownfields often pose not only environmental, but legal and financial burdens on communities. Under the Environmental Restoration Program, the state provides grants to municipalities to reimburse up to 90 percent of eligible costs for site investigation and remediation activities. Once remediated, the property can then be reused.

As more fully described in Sections 3 and 5 of this document, various commercial activities and operation of an oil-fired heating system resulted in the disposal of hazardous substances, including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and inorganics (metals). These hazardous substances contaminated the subsurface soils and groundwater at the site, and resulted in:

- a threat to human health associated with potential exposure to subsurface soils and groundwater contaminated with VOCs, SVOCs, and metals. Exposure pathways include direct contact, ingestion, and inhalation.
- an environmental threat associated with the VOCs and SVOCs contaminants in the subsurface soil, and the potential migration of these materials into the groundwater.

During the course of the investigation certain actions, known as interim remedial measures (IRMs), were undertaken at the Elm Street Site in response to the threats identified above. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the site investigation/remedial alternatives report (SI/RAR). The IRMs undertaken at this site included:

-Asbestos abatement and lead-based paint removal activities.

-Proper cleaning and closure of a 1,000 gallon underground storage tank and 4-500 gallon aboveground storage tanks. Approximately 12 tons of petroleum contaminated soils were removed and properly disposed of during tank closure operations.

-Removal of miscellaneous containers and jars at the site, including commercial dishwashing liquid, chlorinated cleaning agents, gas cylinders, and PCB light ballasts.

Based on the implementation of the above IRMs, the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment; therefore No Further Action is proposed as the remedy for this site.

The proposed remedy, discussed in detail in Section 6, is intended to attain the remediation goals identified for this site in Section 6. The remedy must conform with officially promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called SCGs.

This Proposed Remedial Action Plan (PRAP) identifies the preferred remedy and discusses the reasons for this preference. The Department will select a final remedy for the site only after careful consideration of all comments received during the public comment period.

The Department has issued this PRAP as a component of the Citizen Participation Plan developed pursuant to the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375. This document is a summary of the information that can be found in greater detail in the May 2008 Site Investigation Report, the May 2008 Remedial Alternatives Report, and other relevant documents. The public is encouraged to review the project documents, which are available at the following repositories:

Greater Glens Falls Local Development Corporation  
City Hall, 42 Ridge Street, 2<sup>nd</sup> Floor  
Glens Falls, New York 12801  
Contact: Ms. Jacqueline Townsend  
Telephone: 518-761-3883  
Hours: M-F 8AM - 3PM

Crandall Public Library  
251 Glen Street  
Glens Falls, New York 12801  
Telephone: 518-792-6508  
Hours: M-Th 9AM - 9PM, F 9AM - 6PM, Sat 9AM - 5PM, Sun 1PM - 5PM

NYSDEC-Region 5 Office  
P.O. Box 296, Route 86  
Ray Brook, New York 12977  
Contact: Michael P. McLean, P.E.  
Telephone: (518) 897-1242  
Hours: M-F 8AM-4PM

The Department seeks input from the community on all PRAPs. A public comment period has been set from {dates} to provide an opportunity for public participation in the remedy selection process. A public meeting is scheduled for {date} at the {location} beginning at {time}.

At the meeting, the results of the SI/RAR and IRM will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the PRAP. Written comments may also be sent to Mr. McLean at the above address through {date comment period ends}.

The Department may modify the proposed remedy or select another based on new information or public comments. Therefore, the public is encouraged to review and comment on all of the alternatives identified here.

Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the Department's final selection of the remedy for this site.

## **SECTION 2: SITE LOCATION AND DESCRIPTION**

36 Elm Street is located in the City of Glens Falls, Warren County. It is 0.14 acre in size and is located on the southwest side of Elm Street, approximately 100 feet northwest of the intersection of Elm Street and

South Street. The site is designated on the City of Glens Falls tax map as parcel number 309.28-1-13 and is surrounded by commercial properties. The Hudson River is located approximately 2,000 feet to the southeast of the site. A three story masonry building covers the vast majority of the site. Refer to Figure 1 - Site Location and Figure 2 - Location Plan.

Site soils consist of Oakville loamy fine sand, according to the United States Department of Agriculture's Soil Survey for Warren County, New York. Soil borings were advanced to 20 feet in depth and encountered well sorted medium to fine sand with trace to fine gravel. Bedrock was not encountered. Groundwater was encountered approximately 10-12 feet below grade and flows to the east at a gradient of 0.007 ft/ft.

## **SECTION 3: SITE HISTORY**

### **3.1: Operational/Disposal History**

The site was used for residential purposes prior to the construction of the existing site structure in the early 1920s. The structure was used as a shirt factory from the 1920s-1940s, ladies garments manufacturing from the 1950s through the early 1970s, and a restaurant supply from the 1970s until purchase by the City of Glens Falls in 2005. An automotive repair facility occupied the southern portion of the building from the early 1920s through the 1960s.

### **3.2: Remedial History**

A Phase I Site Assessment was conducted at the location in November of 2003 and is included in the Site Investigation Report. Prior to 2003, no investigations evaluating soil, groundwater, or soil gas are known to have been performed at the site.

## **SECTION 4: ENFORCEMENT STATUS**

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past owners and operators, waste generators, and haulers.

The PRPs for the site documented to date include several former site owners. Previous owners include the Milestone Foundation (ownership 1948-1952), Milestone Undergarment Corporation (1952-1955), Simon Milberg (1955-1956), Iser Realty Corporation (1956-1971), Jack and Philip Lebowitz (1971-1998), Jack Lebowitz (1998), and U.J. Limited Partnership (1998-2005).

The City of Glens Falls will assist the state in their efforts by providing all information to the state which identifies PRPs. The City will also not enter into any agreement regarding response costs without the approval of the Department.

## **SECTION 5: SITE CONTAMINATION**

The City of Glens Falls has recently completed a site investigation/remedial alternatives report (SI/RAR) to determine the nature and extent of any contamination by hazardous substances at this environmental restoration site.

### **5.1: Summary of the Site Investigation**

The purpose of the SI was to define the nature and extent of any contamination resulting from previous activities at the site. The SI was conducted between April of 2006 and May of 2008. The field activities and findings of the investigation are described in the SI report.

The following activities were conducted during the SI: site survey, asbestos and harmful/hazardous material survey, geophysical survey to identify buried structures, the installation of 8 soil borings and 5 monitoring wells on or adjacent to the site, the installation of 3 soil vapor and 2 sub-slab vapor monitoring points, and the collection of soil, groundwater, basement standing water (considered groundwater), and vapor samples.

### 5.1.1: Standards, Criteria, and Guidance (SCGs)

To determine whether the soil, groundwater, and soil vapor contain contamination at levels of concern, data from the investigation were compared to the following SCGs:

- Groundwater, drinking water, and surface water SCGs are based on June 1998 NYSDEC "Ambient Water Quality Standards and Guidance Values" and Part 5 of the New York State Sanitary Code.
- Soil SCGs are based on the NYSDEC 6 NYCRR Part 375-6.8(b) Environmental Remediation Programs effective December 14, 2006.
- Concentrations of VOCs in air were evaluated using the air guidelines provided in the NYSDOH guidance document titled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York," dated October 2006.

Based on the SI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site required remediation. These are summarized in Section 5.1.2. More complete information can be found in the SI report.

### 5.1.2: Nature and Extent of Contamination

This section describes the findings of the investigation for all environmental media that were investigated.

As described in the SI report, soil, groundwater, and soil vapor samples were collected to characterize the nature and extent of contamination. As summarized in Table 1, the main categories of contaminants that exceed their SCGs are semivolatile organic compounds (SVOCs), and inorganics (metals). For comparison purposes, where applicable, SCGs are provided for each medium.

Chemical concentrations are reported in parts per billion (ppb) for water and parts per million (ppm) for soil. Air samples are reported in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ).

Table 1 summarizes the degree of contamination for the contaminants of concern in soil, soil vapor, and groundwater and compares the data with the SCGs for the site. The following are the media which were investigated and a summary of the findings of the investigation.

#### **Waste Materials**

A significant volume of waste materials were identified and removed from the site. Wastes included asbestos and lead-based paint, underground and aboveground tank liquids and sludge, fuel oil contaminated sand, containers and jars of commercial dishwashing liquids and chlorinated cleaning agents, PCB light ballasts, and refrigerant gas cylinders. Waste identified during the SI/RAR was addressed during the interim remedial measures (IRMs) described in Section 5.2.

#### **Surface Soil**

Surface soil is defined as soil less than two inches below the vegetative cover. The building foot print takes up the vast majority of the site; the remainder of the site is covered with concrete or asphalt surfaces. No surface soil exists at the location and no surface soil samples were collected. Therefore, no remedial alternatives need be evaluated for surface soil.

#### **Subsurface Soil**

Subsurface soil at the site is defined as soil greater than two inches below the ground surface. **No subsurface soil contaminants were identified on site. SVOC contamination was found at an off-site location adjacent to the site. Contaminants identified above SCGs at this off-site location included five SVOCs (benzo(a)anthracene, benzo(a) pyrene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, and dibenzo(a,h)anthracene). The off-site SVOC contamination is side gradient and is not related to activities at the location. No site-related subsurface soil contamination of concern was identified during the SI/RAR.**

Therefore, no remedial alternatives need to be evaluated for subsurface soil. Refer to Figure 3-IRMs/Subsurface Soil Contaminants for specific location and concentrations.

#### Groundwater

Five groundwater monitoring wells were installed outside the building to a depth of approximately eighteen feet below grade. Three temporary monitoring wells were installed within the basement of the structure. The static groundwater level was subsequently determined to be approximately eleven feet below grade. Groundwater samples were collected from site monitoring wells on May 30, 2007. Contaminants identified above SCGs included 5 SVOCs (benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, and benzo(a)pyrene) and 6 inorganics (antimony, iron, lead, manganese, selenium, and sodium). As with the subsurface soil SVOCs, the groundwater SVOCs are located off-site and side gradient, and are not related to activities at the location. The elevated levels of antimony, iron, selenium, manganese, and sodium are considered background and are not related to site activities. Elevated lead levels were detected in B&L6 off-site at 30.3 ppb and B&L7 on-site at 50ppb and may be related to site activities. Groundwater is not utilized on or near the location. **An institutional control in the form of an environmental easement restricting the use of groundwater will be imposed.** Refer to Figure 4- Groundwater Contaminants for specific location and concentrations.

#### Surface Water

No surface water is present at the location or near the location. No surface water sampling was conducted.

#### Sediments

No sediments are present at or near the location. No sediment sampling was conducted.

#### Standing Water (Groundwater) in Basement

During the spring 2007 IRM work, samples were collected from the standing water present in the area of the former boiler in the site basement. A pit 2-3 feet below basement floor level exists and housed the oil-fired furnace. This pit acts as a collection point for groundwater infiltrating into the basement. The true groundwater depth is one-two feet below the elevation of the standing water. Contaminants identified above SCGs included 6 SVOCs (benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, and indeno(1,2,3-cd)pyrene); and 5 inorganics (arsenic, cadmium, lead, mercury, and selenium). Due to high sedimentation in three 2007 samples, the standing water was resampled in the spring of 2008 and found to be non-detect for SVOC contamination. The elevated levels of many of the inorganics are considered background. The elevated level of lead is consistent with groundwater levels and may be related to site activities. The standing water/ground water is not utilized at the location and will most probably not exist upon the refurbishing and heating of the site structure. **An institutional control in the form of an environmental easement controlling entry of groundwater (standing water) in the basement will be imposed.** Refer to Figure 5-Standing Water, Soil Vapor and Sub-slab Vapor Monitoring Points.

#### Soil Vapor/Sub-Slab Vapor/Air

Seven soil vapor and sub-slab vapor samples were collected from the basement area of the site. **No site-related vapor contamination of concern was identified during the SI/RAR. Therefore, no remedial alternatives need to be evaluated for this medium.** Results of the soil vapor sampling are included in Table 1, and soil vapor location points are identified in Figure 5-Standing Water, Soil Vapor and Sub-slab Vapor Monitoring Points.

### 5.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the SI/RAR. From May 2006 to July 2007, several IRMs were conducted at the site during the investigation activities and included the closure and removal of one underground and four aboveground tanks, an asbestos and lead-based paint survey and removal, the disposal of 12 tons of petroleum contaminated soil, and the disposal of miscellaneous containers and jars including dishwashing liquids, chlorinated cleaning agents, PCB light ballasts and gas cylinders. **Refer to Figure 3- IRMs/Subsurface Soil Contaminants for specific locations of closed petroleum storage tanks.**

### **5.3: Summary of Human Exposure Pathways:**

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the human exposure pathways can be found in Section 2.10 of the SI report.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

Currently, there are no complete exposure pathways at the site. There are potential exposure pathways associated with groundwater at the site, standing water in the on-site building, and contaminated sub-surface soil near the site.

Groundwater at the site contains elevated inorganic compounds, including lead, iron and manganese. Some inorganics, such as iron, may be naturally occurring and are not considered associated with former operations at the site. It is unclear if elevated lead levels in groundwater are a result of former operations at the site or if they represent local background and impacts from off-site properties. Regardless, groundwater could present a potential for exposure if a well was developed at the property for potable water use. This exposure pathway is unlikely since the site and surrounding properties are serviced with public water. Public drinking water is routinely tested and must comply with federal and state drinking water standards.

Currently, a vacant commercial building exists on the property. Inside the building, standing water was noted and sampled from an excavation pit near the former boiler. The water contained elevated levels of inorganic compounds, including cadmium and lead. Future users of the site could be exposed to these compounds through dermal contact with the standing water. Future renovations of the building to address standing water in the basement could remove this potential exposure pathway.

The potential for contaminated vapors in soil to enter the building at the site (via soil vapor intrusion) was evaluated. Based on the results of this investigation, soil vapor intrusion does not present an exposure pathway of concern for future users of the site.

Sub-surface soil and groundwater immediately south of the property are contaminated with SVOCs and are not considered site-related. A spill number has been assigned to the adjoining property.

### **5.4: Summary of Environmental Assessment**

This section summarizes the assessment of existing and potential future environmental impacts presented by the site prior to the IRM. Environmental impacts include existing and potential future exposure pathways to fish and wildlife receptors, as well as damage to natural resources such as aquifers and wetlands.

Since the site is in downtown Glens Falls and the building footprint covers the majority of the site, the likelihood of wildlife impact is minimal. No wetlands are present at the location or in the immediate area. A Fish and Wildlife Impact Analysis was not necessary for the location.

Site contamination (lead) has impacted the shallow groundwater aquifer. This shallow aquifer is not utilized as the area is served by a public water system. No private wells are known to exist in the immediate area of the site.

No environmental exposure pathways and ecological risks have been identified at the site.

## **SECTION 6: SUMMARY OF THE REMEDIATION GOALS, PROPOSED REMEDY, AND THE PROPOSED USE OF THE SITE**

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous substances disposed at the site through the proper application of scientific and engineering principles.

Prior to the completion of the IRM described in Section 5.2, the remediation goals for this site were to eliminate or reduce to the extent practicable:

- exposures of persons at or around the site to SVOCs and inorganics (metals) in subsurface soils and groundwater at the site.
- the release of contaminants from subsurface soil into groundwater that may create exceedances of groundwater quality standards; and
- the release of contaminants from subsurface soil, including under the site building into indoor and ambient air through soil vapor and wind borne dust.

During the IRM process, SVOC contaminated subsurface soil above TAGM levels was excavated and properly disposed of off-site.

The main SCGs applicable to this project are as follows:

- Groundwater SCGs are based on the Department's "Ambient Water Quality Standards and Guidance Values"
- Soil SCGs are based on the NYSDEC Part 375-6.8(b) Environmental Restoration Programs, for Commercial Protection of Public health, effective December 14, 2006;

The Department believes that the IRM has accomplished the remediation goals and satisfied the SCGs for the site.

Based on the results of the investigations at the site, the IRM that has been performed, and the evaluation presented here, the Department is proposing No Further Action as the preferred alternative for the site. The Department believes that this alternative would be protective of human health and the environment and would satisfy all SCGs as described above. Overall protectiveness is achieved through meeting the remediation goals listed above.

Therefore, the Department concludes that No Further Action is needed other than operation, maintenance, monitoring, and institutional and engineering controls. The elements of the IRM already completed and the institutional and engineering controls are listed below:

1. Elements of the IRM that have been completed and comprise the remedy for the site include the closure and removal of one underground and four aboveground tanks, an asbestos and lead-based paint survey and removal, the disposal of 12 tons of petroleum contaminated soil, and the disposal



of miscellaneous containers and jars including dishwashing liquids, chlorinated cleaning agents, PCB light ballasts and gas cylinders.

2. Imposition of an institutional control in the form of an environmental easement that would require (a) limiting the use and development of the property to commercial use, which would also permit industrial use; (b) control entry of groundwater (standing water) in the basement area and restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (c) the property owner to complete and submit to the Department a periodic certification of the institutional controls.

The proposed future use for the Elm Street Site is commercial.

**TABLE 1**  
**Nature and Extent of Contamination**  
 May 2007-April 2008

<b>SUBSURFACE SOIL</b>	<b>Contaminants of Concern</b>	<b>Concentration Range Detected (ppm)<sup>a</sup></b>	<b>SCG<sup>b</sup> (ppm)<sup>a</sup></b>	<b>Frequency of Exceeding SCG</b>
<b>Semivolatile Organic Compounds (SVOCs)</b>	Benzo(a) anthracene	ND <sup>c</sup> to 51	5.6	1 of 11 <sup>d</sup>
	Benzo(a)pyrene	ND to 32	1.0	1 of 11 <sup>d</sup>
	Benzo(b)fluoranthene	ND to 43	5.6	1 of 11 <sup>d</sup>
	Indeno(1,2,3-cd)pyrene	ND to 20	5.6	1 of 11 <sup>d</sup>
	Dibenzo(a,h)anthracene	ND to 7.3	0.56	1 of 11 <sup>d</sup>

<b>GROUNDWATER</b>	<b>Contaminants of Concern</b>	<b>Concentration Range Detected (ppb)<sup>a</sup></b>	<b>SCG<sup>b</sup> (ppb)<sup>a</sup></b>	<b>Frequency of Exceeding SCG</b>
<b>Semivolatile Organic Compounds (SVOCs)</b>	Benzo(a) anthracene	ND to 6	.002	1 of 6 <sup>e</sup>
	Chrysene	ND to 5	.002	1 of 6 <sup>e</sup>
	Benzo(b)fluoranthene	ND to 5	.002	1 of 6 <sup>e</sup>
	Benzo(k)fluoranthene	ND to 2	.002	1 of 6 <sup>e</sup>
	Benzo(a)pyrene	ND to 4	.002	1 of 6 <sup>e</sup>
<b>Inorganic Compounds</b>	Antimony	4.2 to 9.8	3	8 of 8
	Iron	34.3 to 4,700	300	6 of 8
	Lead	ND to 50	25	2 of 8
	Manganese	4.4 to 314	300	1 of 8
	Selenium	17.9 to 37.6	10	8 of 8
	Sodium	110,000 to 1,760,324	20,000	8 of 8

**TABLE 1 (cont.)**  
**Nature and Extent of Contamination**  
 May 2007-April 2008

Standing Water (Groundwater)	Contaminants of Concern	Concentration Range Detected (ppb) <sup>a</sup>	SCG <sup>b</sup> (ppb) <sup>a</sup>	Frequency of Exceeding SCG
<b>Semivolatile Organic Compounds (SVOCs)</b>	Benzo(a) anthracene	ND to 4.3	.002	1 of 3
	Benzo(a)pyrene	ND to 1.9	.002	1 of 3
	Benzo(b)fluoranthene	ND to 4.9	.002	1 of 3
	Chrysene	ND to 4.5	.002	1 of 3
	Indeno(1,2,3-cd)pyrene	ND to 1.9	.002	1 of 3
<b>Inorganic Compounds</b>	Arsenic	62	25	1 of 1
	Cadmium	25	5	1 of 1
	Lead	680	25	1 of 1
	Selenium	39	10	1 of 1
	Mercury	0.78	0.7	1 of 1

SOIL VAPOR	Contaminants of Concern	Concentration Range Detected ( $\mu\text{g}/\text{m}^3$ ) <sup>a</sup>	SCG <sup>b</sup> ( $\mu\text{g}/\text{m}^3$ ) <sup>a</sup>	Frequency of Exceeding SCG
<b>Volatile Organic Compounds (VOCs)</b>	1,2,4-Trimethylbenzene	ND to 1.2	NA	NA
	Carbon Tetrachloride	ND to .77	NA	NA
	Freon 11	ND to 1.4	NA	NA
	Freon 12	ND to 2.7	NA	NA
	Xylene (m,p)	ND to 1.7	NA	NA
	Methylene Chloride	ND to .64	NA	NA
	Xylene (o)	ND to .66	NA	NA
	Trichloroethene	ND to .71	NA	NA
	Acetone	0.8 to 6.5	NA	NA
Toluene	ND to 1.5	NA	NA	

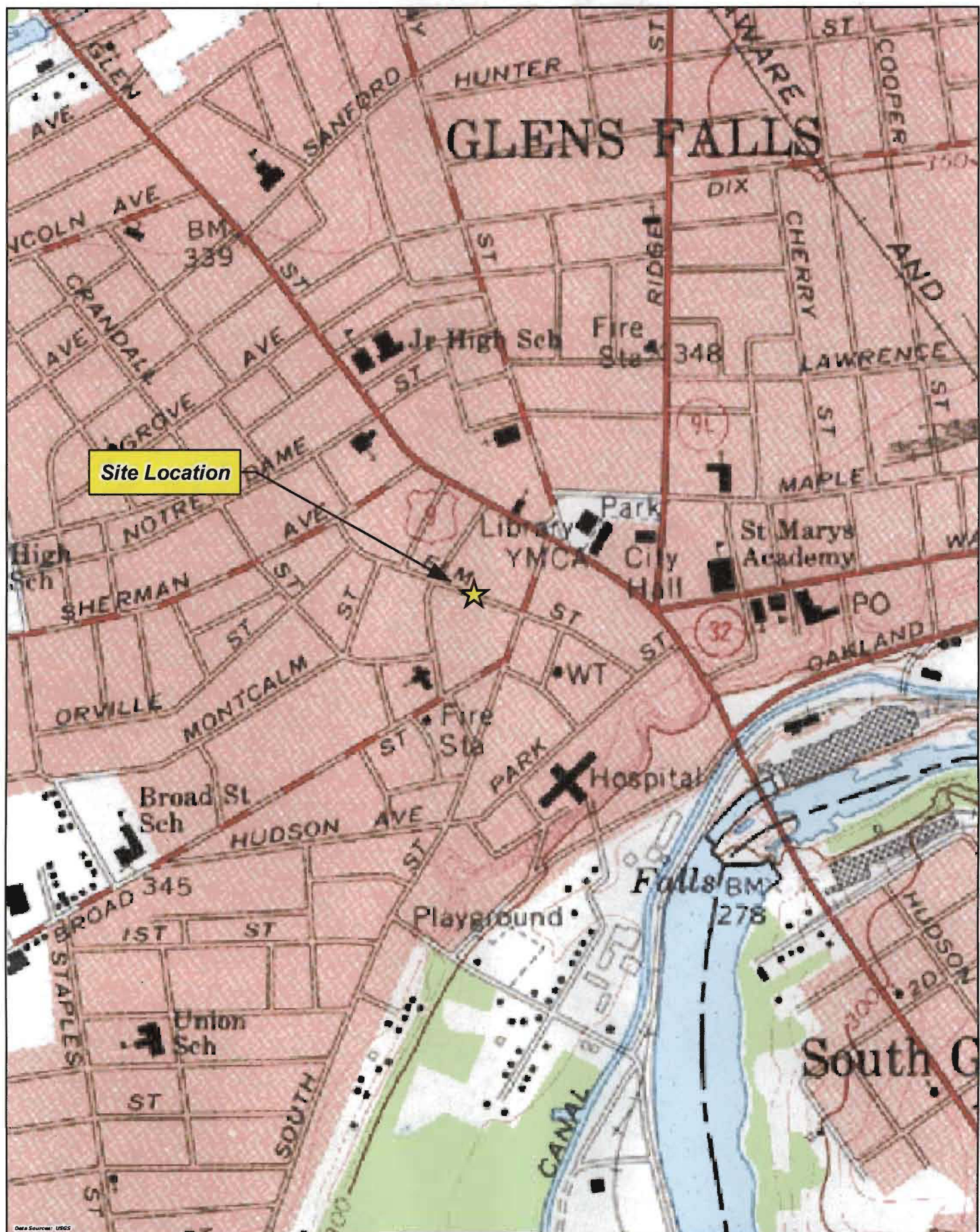
<sup>a</sup> ppb = parts per billion, which is equivalent to micrograms per liter,  $\mu\text{g}/\text{L}$ , in water;  
 ppm = parts per million, which is equivalent to milligrams per kilogram,  $\text{mg}/\text{kg}$ , in soil;  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter

<sup>b</sup> SCG = standards, criteria, and guidance values for planned Commercial Use

<sup>c</sup> ND= no contaminants detected above method detection limit

<sup>d</sup> Subsurface soil exceedances occurred at an off-site location and is not related to site activities

<sup>e</sup> Groundwater exceedances occurred at an off-site location and is not related to site activities



Data Source: USGS



Engineers • Environmental Scientists • Planners • Landscape Architects



1 inch equals 800 feet

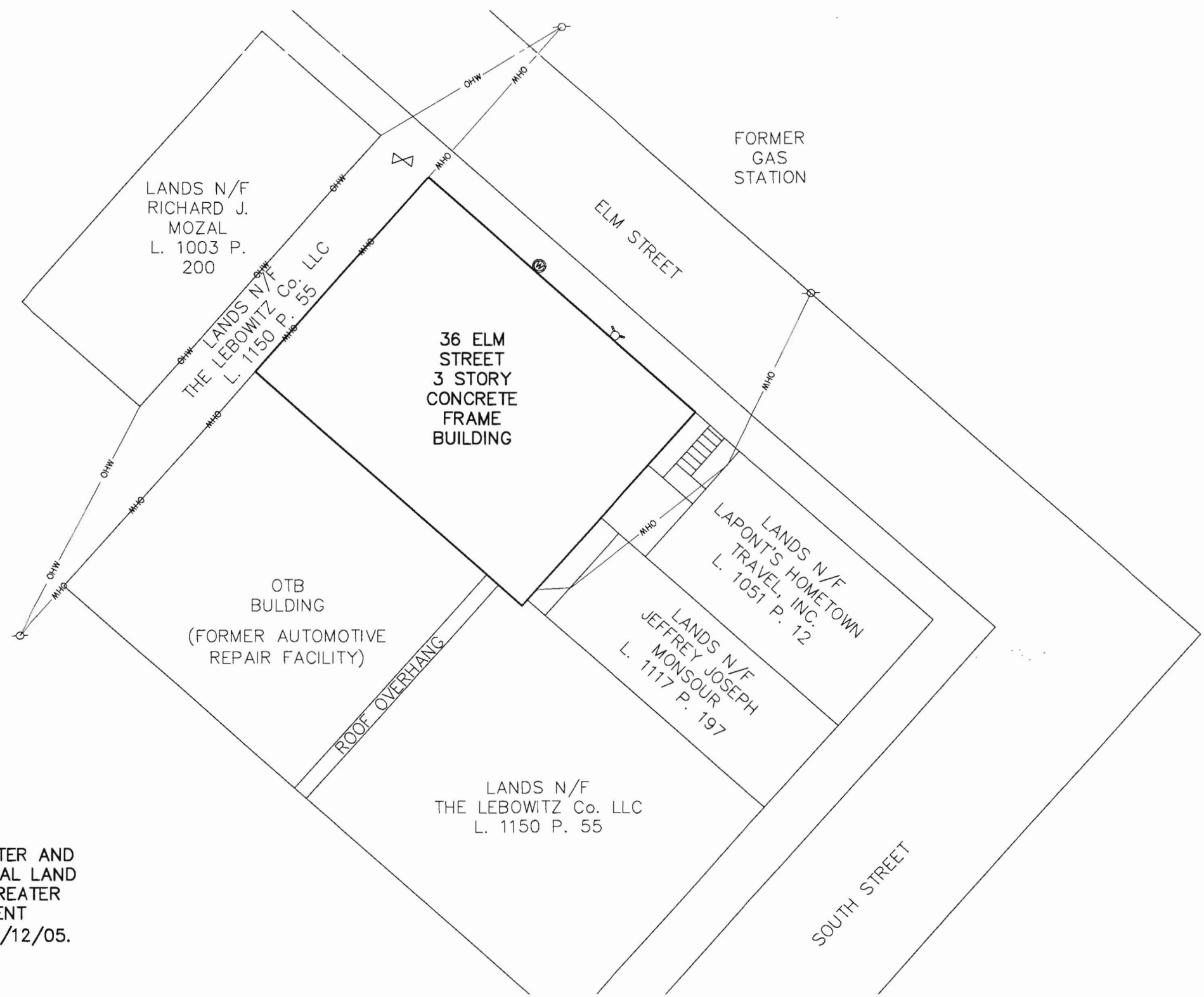
City of Glens Falls	
<b>Site Location</b>	
Warren County	New York

Figure	1
Project No.	1032.001

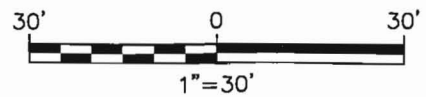
K:\Projects\1000\1032001\Project\Site\Site Location.mxd



- LEGEND:**
- EXISTING GAS VALVE
  - HISTORIC MONITORING WELL
  - EXISTING HYDRANT
  - EXISTING UTILITY POLE
  - EXISTING OVERHEAD WIRE



**MAP REFERENCE:**  
 MAP PROVIDED BY BOLSTER AND ASSOCIATES PROFESSIONAL LAND SURVEYORS, ENTITLED GREATER GLENS FALLS DEVELOPMENT CORPORATION, DATED 10/12/05.



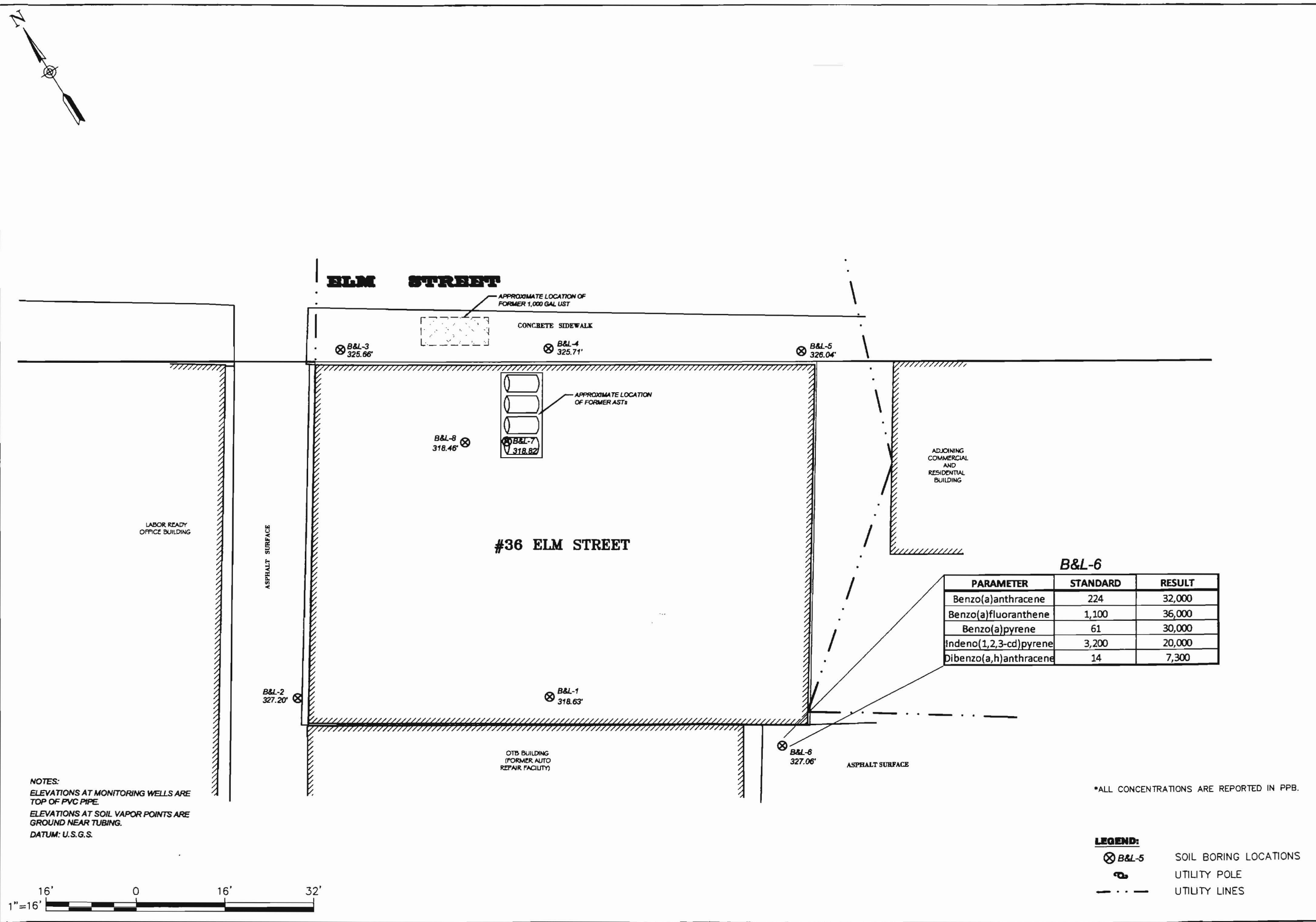
**Barton & Loguidice, P.C.**  
 Engineers · Environmental Scientists · Planners · Landscape Architects

CITY OF GLENS FALLS  
 36 ELM STREET  
**LOCATION PLAN**  
 CITY OF GLENS FALLS WARREN COUNTY, NEW YORK

Figure  
**2**  
 Project No.  
 1032.001

X: NONE  
 LM: PLOT  
 P: BANDMONCHROME.CTB  
 12/5/05-ALB-TAH, 02/07/08-JGS  
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Plotted: Aug 08, 2008 - 1:19PM SYR By: mdm  
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NOTES:  
 ELEVATIONS AT MONITORING WELLS ARE TOP OF PVC PIPE.  
 ELEVATIONS AT SOIL VAPOR POINTS ARE GROUND NEAR TUBING.  
 DATUM: U.S.G.S.

**B&L-6**

PARAMETER	STANDARD	RESULT
Benzo(a)anthracene	224	32,000
Benzo(a)fluoranthene	1,100	36,000
Benzo(a)pyrene	61	30,000
Indeno(1,2,3-cd)pyrene	3,200	20,000
Dibenzo(a,h)anthracene	14	7,300

\*ALL CONCENTRATIONS ARE REPORTED IN PPB.

**LEGEND:**  
 ⊗ B&L-5 SOIL BORING LOCATIONS  
 ⊕ UTILITY POLE  
 - - - UTILITY LINES

CITY OF GLENS FALLS  
 36 ELM STREET

**IRM/SUBSURFACE SOIL CONTAMINANTS**

CITY OF GLENS FALLS  
 WARREN COUNTY, NEW YORK

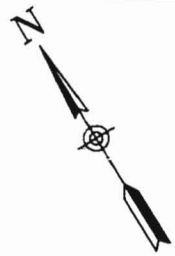
**Barton Roguice, P.C.**

Date  
 JUNE, 2008

Scale  
 AS SHOWN

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\*ALL CONCENTRATIONS ARE REPORTED IN PPB.

MODIFIER LEGEND:  
 B - INDICATES THAT THE COMPOUND IS FOUND IN THE METHOD BLANK AND THE SAMPLE.  
 J - ESTIMATED VALUE

**B&L-3**

PARAMETER	STANDARD	RESULT
Antimony	3	4.2B
Iron	300	1,390
Selenium	10	38
Sodium	20,000	160,000

**B&L-4**

PARAMETER	STANDARD	RESULT
Antimony	3	4.3B
Selenium	10	19.9B
Sodium	20,000	174,000

**B&L-5**

PARAMETER	STANDARD	RESULT
Antimony	3	10
Iron	300	3,980
Selenium	10	25.2B
Sodium	20,000	185,000

**B&L-7**

PARAMETER	STANDARD	RESULT
Antimony	3	2.9B
Iron	300	4,700
Lead	25	50
Manganese	300	314
Selenium	10	17.9B
Sodium	20,000	123,000

**B&L-2**

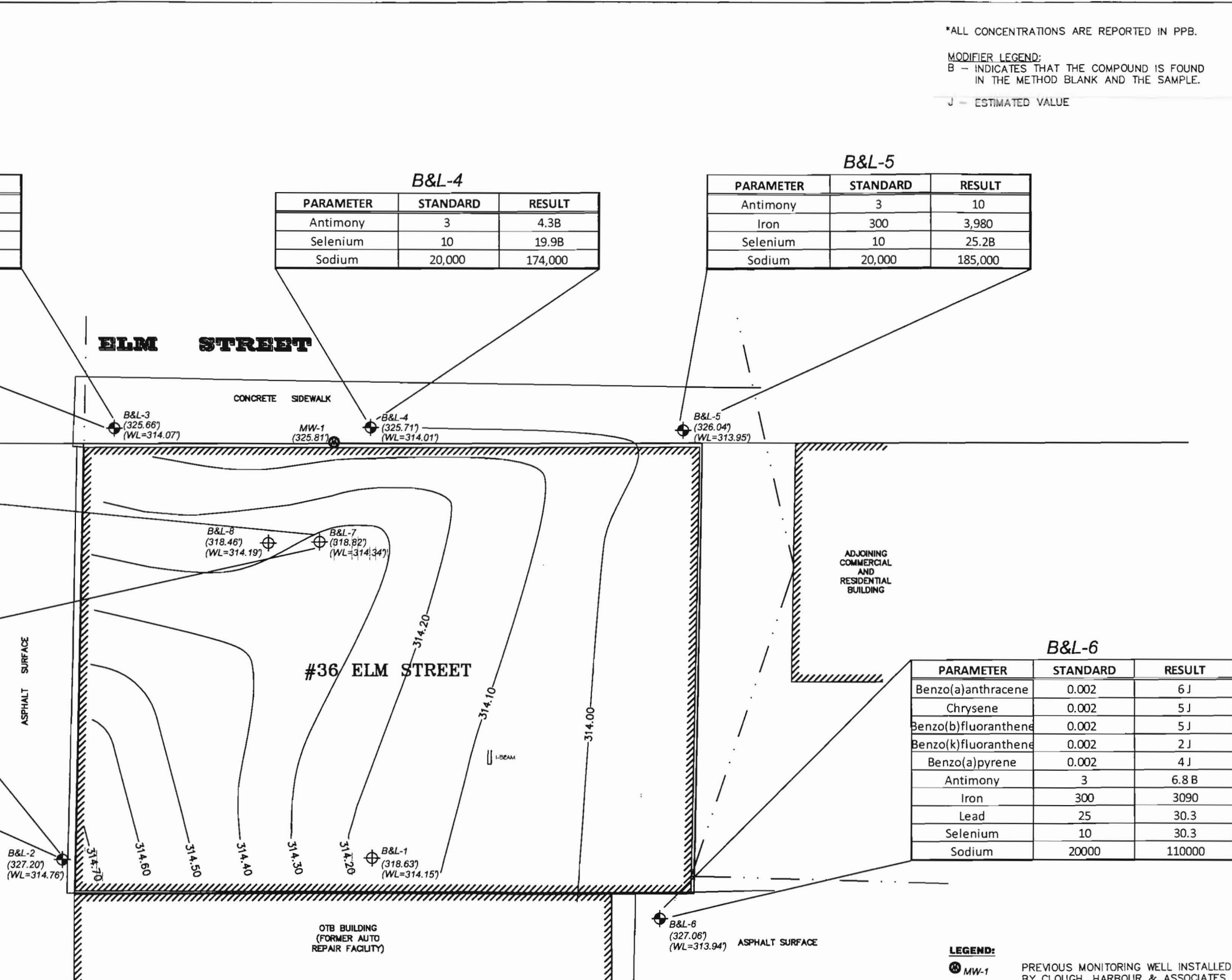
PARAMETER	STANDARD	RESULT
Antimony	3	5.0B
Iron	300	962
Selenium	10	27.9B
Sodium	20,000	124,000

**B&L-6**

PARAMETER	STANDARD	RESULT
Benzo(a)anthracene	0.002	6 J
Chrysene	0.002	5 J
Benzo(b)fluoranthene	0.002	5 J
Benzo(k)fluoranthene	0.002	2 J
Benzo(a)pyrene	0.002	4 J
Antimony	3	6.8 B
Iron	300	3090
Lead	25	30.3
Selenium	10	30.3
Sodium	20000	110000

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NOTES:  
 ELEVATIONS AT MONITORING WELLS ARE TOP OF PVC PIPE.  
 ELEVATIONS AT SOIL VAPOR POINTS ARE GROUND NEAR TUBING.  
 DATUM: U.S.G.S.



- LEGEND:**
- MW-1 PREVIOUS MONITORING WELL INSTALLED BY CLOUGH, HARBOUR & ASSOCIATES
  - B&L-7 TEMPORARY WELLS INSTALLED BY BARTON & LOGUIDICE, P.C.
  - B&L-5 PERMANENT MONITORING WELLS INSTALLED BY BARTON & LOGUIDICE, P.C.
  - (326.04) ELEVATION OF TOP OF WELL RISER
  - (WL=315.50) MEASURED GROUNDWATER LEVEL
  - UTILITY POLE
  - UTILITY LINES

CITY OF GLENS FALLS  
 36 ELM STREET

GROUNDWATER CONTAMINANTS WITH  
 SEPTEMBER 20, 2007 GROUNDWATER LEVEL CONTOURS  
 WARREN COUNTY, NEW YORK



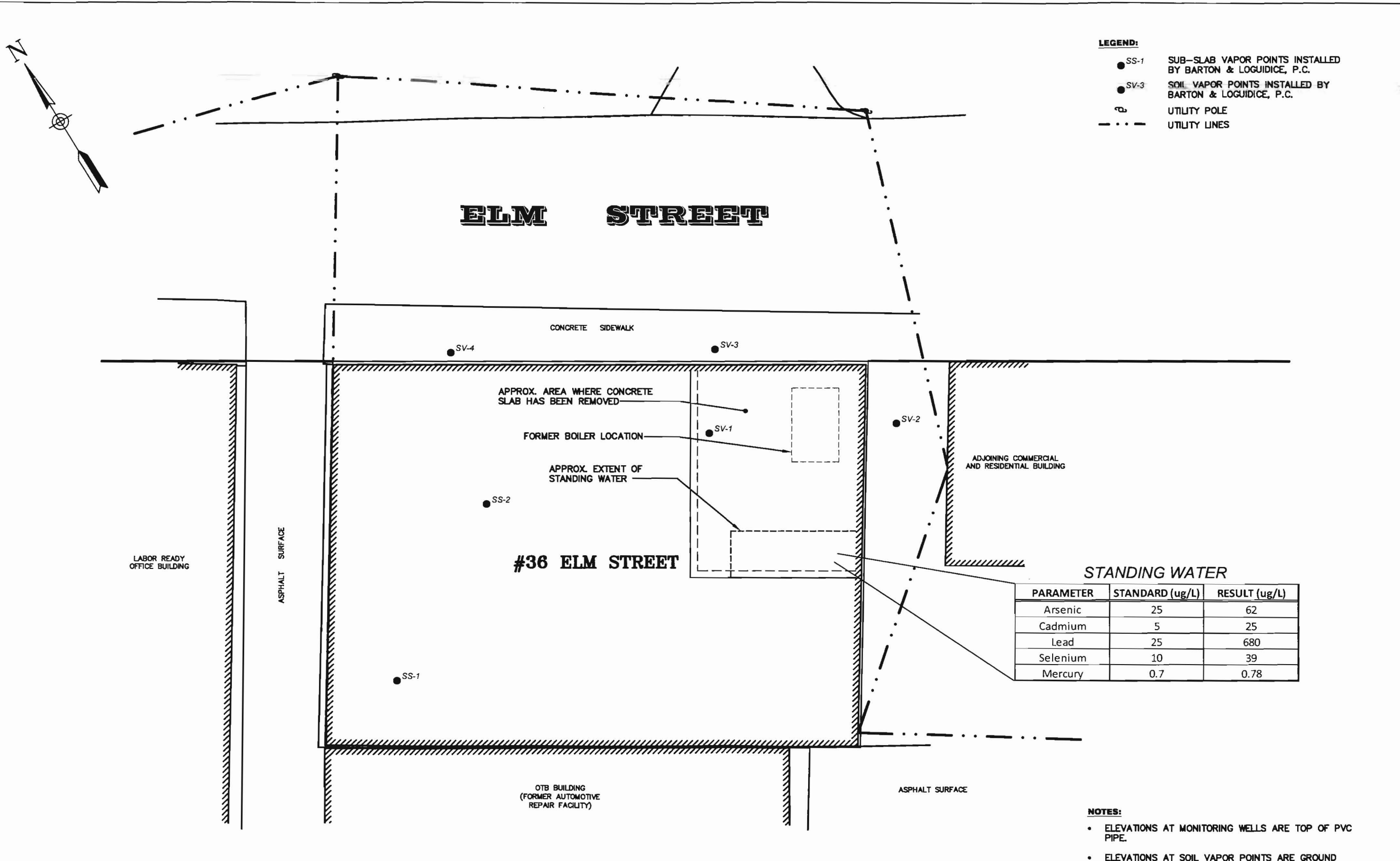
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**ELM STREET**

**#36 ELM STREET**

- LEGEND:**
- SS-1 SUB-SLAB VAPOR POINTS INSTALLED BY BARTON & LOGUIDICE, P.C.
  - SS-2 SUB-SLAB VAPOR POINTS INSTALLED BY BARTON & LOGUIDICE, P.C.
  - SV-1 SOIL VAPOR POINTS INSTALLED BY BARTON & LOGUIDICE, P.C.
  - SV-2 SOIL VAPOR POINTS INSTALLED BY BARTON & LOGUIDICE, P.C.
  - SV-3 SOIL VAPOR POINTS INSTALLED BY BARTON & LOGUIDICE, P.C.
  - SV-4 SOIL VAPOR POINTS INSTALLED BY BARTON & LOGUIDICE, P.C.
  - ⊕ UTILITY POLE
  - · - · - UTILITY LINES

**STANDING WATER**

PARAMETER	STANDARD (ug/L)	RESULT (ug/L)
Arsenic	25	62
Cadmium	5	25
Lead	25	680
Selenium	10	39
Mercury	0.7	0.78

**SITE PLAN**  
 SCALE: 1"=16'-0"

- NOTES:**
- ELEVATIONS AT MONITORING WELLS ARE TOP OF PVC PIPE.
  - ELEVATIONS AT SOIL VAPOR POINTS ARE GROUND NEAR TUBING.
  - DATUM: U.S.G.S.
  - ELEVATION OF STANDING WATER IS APPROXIMATELY EQUAL TO STATIC WATER LEVEL IN MONITORING WELLS.

GREATER GLENS FALLS LOCAL DEVELOPMENT CORPORATION (GGFLDC)  
 36 ELM STREET  
 STANDING WATER, SOIL VAPOR AND  
 SUB-SLAB VAPOR MONITORING POINTS  
 CITY OF GLENS FALLS  
 WARREN COUNTY, NEW YORK



Date  
 JULY, 2008

Scale  
 1" = 16'

Figure Number  
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Project Number  
 1032.001-A