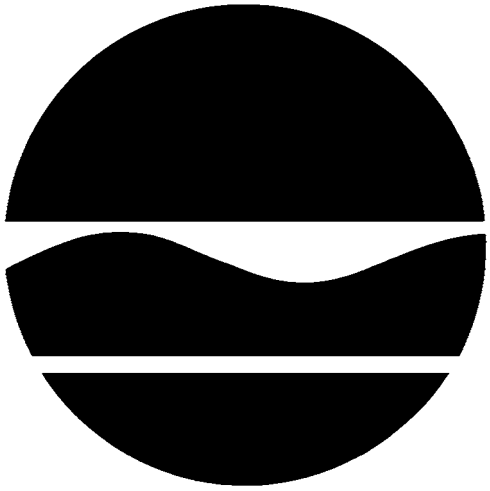
PROPOSED REMEDIAL ACTION PLAN
Richmond Avenue Site

Environmental Restoration Project
City of Lockport, Niagara County, New York
Site No. B00154-9

February 2004



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

RICHMOND AVENUE SITE

City of Lockport, Niagara County, New York
Site No. B00154-9
February 2004

SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the Richmond Avenue Site.

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 (Brownfields) Program, the state provides grants to municipalities to reimburse 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, leaks, spills and similar releases during many years of commercial and industrial activities at the site resulted in the disposal of hazardous substances, including various metals, volatile organic compounds and semi-volatile organic compounds. These hazardous substances contaminated the soils at the site, and resulted in a threat to human health associated with potential exposure to contaminated soils and wastes contained within the site buildings.

During the course of the investigation certain actions, known as interim remedial measures (IRMs), were undertaken at the Richmond Avenue 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 removal and demolition of a site building to provide access to petroleum storage tanks;
- removal and disposal of two petroleum storage tanks (one 1000 gallon underground storage tank (UST) and one 500 gallon aboveground storage tank(AST));
- removal and disposal of four hydraulic lifts, a cistern and associated floor drains, sumps and pits; and
- excavation and disposal of approximately 2400 tons of contaminated soil and replacement with clean earthen fill.

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 with institutional controls 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 NYSDEC will select a final remedy for the site only after careful consideration of all comments received during the public comment period.

The NYSDEC 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 March 14, 2003 "Site Investigation / Remedial Alternatives Report", and other relevant documents. The public is encouraged to review the project documents, which are available at the following repositories:

Lockport Public Library
23 East Avenue
Lockport, New York
Monday - Thursday 10:00 AM to 9:00 PM
Friday or Saturday 10:00 AM to 5:00 PM

NYSDEC Buffalo office
270 Michigan Avenue
Buffalo, New York 14203-2999
By Appointment Only:
Contact: Daniel King at (716) 851-7220

The NYSDEC seeks input from the community on all PRAPs. A public comment period has been set from February 21, 2004 to April 5, 2004 to provide an opportunity for public participation in the remedy selection process. A public meeting is scheduled for March 18, 2004 at the Lockport Municipal Building beginning at 7:00 PM.

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. Daniel King at the above address through.

The NYSDEC may modify the preferred alternative 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 NYSDEC's final selection of the remedy for this site.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Richmond Avenue Site is located in the downtown business district of the City of Lockport, Niagara County adjacent to the Erie Barge Canal lock system to the southeast and directly west of City Hall. The approximately two acre site includes several vacant or underutilized buildings and adjacent vacant lots, encompassing the majority of the small city block on which it is located. The triangular site, consisting of seven individual parcels obtained by the City, is bounded on the north by Ontario Street, to the southeast by Richmond Avenue and to the west by an automotive repair shop and the Hamilton House both situated along Church Street. Areas

near the site consist of a mixture of commercial, institutional, light industrial, historical, recreational and residential uses. Figures 1 and 2 of this PRAP provide the site location and configuration.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

Historical records indicate that the site was developed in the mid-to-late 1800's and has been used for a wide variety of residential, commercial and light industrial purposes since then. Past site uses have included such activities as automobile sales/service/repair, gasoline service station, dry cleaner, machine shop, junk yard, restaurant, commercial retail sales and miscellaneous manufacturing operations such as radiator and chain manufacturing. More recently, site use declined to a point of limited commercial use, including motorcycle repair, restaurant, taxi depot, and vending machine repair & storage. Contaminants found at the site are likely the result of spills, leaks and similar releases associated with various site uses. Contaminants potentially released include (but are not necessarily limited to) petroleum, antifreeze, dry cleaning fluids, solvents, lead & other metals, paints and other miscellaneous chemicals. In addition, site investigations suggest the presence of ash either generated and disposed on the site or brought in as fill as part of development activities.

3.2: Remedial History

Prior to the site investigation addressed in this PRAP and detailed in the SI/RAR, the following investigative and remedial activities were taken the site:

1999 - Phase I and II site investigations were conducted by InteGreyted Consultants to provide the City with a preliminary assessment of environmental conditions at the site. The Phase II investigation included installation of 12 soil borings, excavation of 24 test pits and analysis of 13 soil samples.

2001 - Two USTs were removed from 69 Richmond Avenue, one of the seven site parcels. The UST removal did not include removal of petroleum contaminated soils found in the tank excavation and under the adjacent site building. Prior to project completion, the parcel was purchased by the City (January 2002).

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.

Since no viable PRPs have been identified, there are currently no ongoing enforcement actions. However, legal action may be initiated at a future date by the state to recover state response costs should PRPs be identified. The City of Lockport will assist the state in its efforts by providing all information to the state which identifies PRPs. The City of Lockport will also not enter into any agreement regarding response costs without the approval of the NYSDEC.

SECTION 5: SITE CONTAMINATION

The City of Lockport 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 February 2002 and January 2003. The field activities and findings of the investigation are described in the SI report.

The following activities were conducted during the SI:

- Research of historical information;
- Excavation of 8 test pits to locate underground structures such as sumps and tanks, and to determine the nature and extent subsurface fill material;
- Installation of 40 soil borings and 4 monitoring wells for analysis of soils and groundwater as well as physical properties of soil and hydrogeologic conditions;

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

- Soil SCGs are based on the NYSDEC "Technical and Administrative Guidance Memorandum (TAGM) 4046; Determination of Soil Cleanup Objectives and Cleanup Levels",
- United States Environmental Protection Agency Lead Standard, 2001 (EPA Lead Standard).

As discussed in Section 5.1.1, significant groundwater resources do not exist at the site, and SCGs for this media were therefore not required.

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 require remediation. These are summarized below. More complete information can be found in the SI report.

5.1.1: Site Geology and Hydrogeology

The geology of the site consists primarily of historic fill materials (sand, gravel, ash, coal, cinders, crushed stone and brick) overlying a layer of silt and clay occasionally intermixed with sand and gravel. Immediately below the silt/clay layer is dolomite bedrock. Approximately 90% of the site is covered with buildings and paved parking lots and driveways. A distinct surface soil layer (sod and topsoil for example) does not exist at the site.

The fill materials were found throughout the site and extend from the ground surface to varying depths up to 12 feet. In general, the thickness of the silt/clay layer is approximately 1 to 2 feet and bedrock was encountered at varying depths between 6 and 12 feet below ground surface.

Groundwater was not found in the fill and silt/clay at the site. The site is adjacent to the Erie Barge Canal lock system constructed into the dolomite bedrock. Given site topography, water levels in the adjacent canal and site observations, it is expected that groundwater under the site is in deeper bedrock and is greater than approximately 25 feet below ground surface.

5.1.2: Nature of Contamination

As described in the SI report, many soil 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 inorganics (metals) and, to a lesser extent, semivolatile organic compounds (SVOCs). While two volatile organic compounds (VOCs) were detected at the site, the frequency of their detection (1 of 15 samples) indicates that this category of contaminants is not significant and therefore not a concern for this site. Pesticides were not detected above screening criteria and polychlorinated biphenyls (PCBs) were not found at the site.

Three metals of concern (arsenic, lead and mercury) were found in soils throughout the site at various depths. Sources of these inorganics are likely resultant of releases during past manufacturing operations and possibly fill which may have been imported to the site. Concentrations of other metals (barium, chromium and silver) present in site soils, seldom exceeded SCGs.

Five SVOCs of concern were found during the SI and are highlighted in Table 1. These SVOCs are likely the result of past petroleum releases and may also reflect the coal, cinder and ash fill and the asphalt paving at the site as well. As with metals, SVOCs were found at various depths in soils throughout the site.

5.1.3: Extent of Contamination

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

Chemical concentrations are reported in parts per million (ppm) for soil samples. For comparison purposes, where applicable, SCGs are provided for each medium.

Table 1 summarizes the degree of contamination for the contaminants of concern in soil 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

Waste materials found at the site consisted of a wide variety of refuse, debris, and other waste located in and around the site buildings. Abandoned automobiles, trash and debris were found outside site buildings. Building interiors contained a variety of generally smaller containers (five gallon pails for example) of such materials as oils, paints and detergents. These materials were removed and disposed by the City of Lockport and others prior to the start of the SI.

Asbestos containing materials (ACM) were also found in some of the site building interiors and roofing materials.

Soil

As indicated in Section 5.1.1, the geology of the site consists of a mixture of fill materials and silts and clay above bedrock. As a specific surface soil layer does not exist at the site, the SI collectively considered the unconsolidated materials as subsurface soil and evaluated the following three zones based on depth from the site surface:

- 0 - 2 feet
- 2 - 4 feet
- 4 feet - bedrock (generally 6 to 12 feet)

The three metals of concern (arsenic, lead and mercury) identified as the most prominent site contaminants, were present in soils throughout the site in areas external to site buildings. Metals exceeding SCGs were most common in the upper two feet of soil and decreased with increasing depth.

For example, lead in the 0-2 feet soil layer exceeded screening guidance (400 ppm) in 38% of 58 samples. In the 2- 4 feet range, 22% of 34 samples exceeded this guidance and below 4 feet exceedances were 5% of 21 soil samples. Similarly the range of concentrations of lead in soil decreased with increasing depth. Lead concentrations ranged from 11 ppm to 4120 ppm in 0-2 feet soils. For 2-4 feet the lead concentration range was 3 ppm to 1990 ppm, and below 4 feet it was 5 ppm to 1200 ppm. Similar distribution patterns in site soils were found for arsenic and mercury.

Toxicity Characteristic Leaching Procedure (TCLP) testing of select soil samples was conducted as part of the SI to provide information regarding the characteristics of the site soils and their ability to release contaminants through leaching. Fifteen soil samples, including several samples with the highest total metals concentrations, were tested utilizing TCLP for the site metals of concern. Eleven of the samples were collected from the 0-2 feet soil zone and four were from the 2-4 feet zone. Only one sample, taken in the 0-2 feet soil zone, exceeded TCLP screening criteria for lead (criteria- 5 ppm, result- 14.4 ppm). A second sample from the same location but at a depth of 2-4 feet was also tested utilizing TCLP. Analysis of this sample did not detect any release of metals. The TCLP results

suggest that while elevated concentrations of metals exist at the site, they do not pose a significant threat of contaminant release by leaching of site soils. Records from the previous 2001 UST removal noted in Section 3.2 also identify one TCLP failure for lead in the soils which were placed back in the UST excavation.

SVOCs were also found throughout the site. However, their distribution was not similar to that found for site metals. Generally, the frequency of SCG exceedance and range of concentrations for these SVOCs was similar in both the 0-2 feet and 4-12 feet zones. The middle soil zone of 2-4 feet may have reflected similar patterns as well. However only one SVOC analysis (results were ND - "not detected") was conducted on soils in the 2-4 feet range. This was due in part to the fact that SVOC analyses were more directed towards areas where petroleum releases were suspected; which resulted in investigation of surface staining (0-2 feet) and deeper UST locations (4-12 feet).

Test results for benzo(a)anthracene exemplify SVOC distribution at the site. In the 0-2 feet soils, benzo(a)anthracene exceeded TAGM guidance (0.224 ppm) in 22% of 9 samples analyzed. In the deeper 4-12 feet soil zone, benzo(a)anthracene exceeded TAGM guidance in 25% of 12 samples. Concentration ranges for this contaminant were ND to 2.1 ppm and ND to 5.3 ppm in the 0-2 feet and 4-12 feet zones respectively.

In general, the distribution and concentrations of the metals and SVOCs found at the site indicate that the upper 2 feet of soil is the most highly impacted. Areas of the most significant contamination in the deeper soils (approaching bedrock) are associated with USTs used for petroleum storage.

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.

The following IRMs were completed at the site:

49-53 Richmond Avenue (January 2002)

An abandoned in-ground hydraulic lift was found during the SI at the rear of the property. The lift and all associated hardware were removed and properly disposed off-site.

The basement of the building at 49 Richmond Avenue was found to contain a 500 gallon AST. Also, friable ACM on piping and on the earthen basement floor were found. ACM materials, the AST and areas of the earthen floor contaminated with petroleum were removed and properly disposed off-site.

69 Richmond Avenue (February 2002)

As noted in Section 3.1, two USTs adjacent to the building at 69 Richmond Avenue were removed by others prior to this SI. However, petroleum contaminated soils associated with this tank removal were not excavated and disposed. During the SI, a third 1000 gallon UST was found under the building slab. Inside the building three hydraulic lifts and petroleum contaminated sumps, drains and a dry well were found. Further, ACM was found in the building roof.

After asbestos abatement, the building was demolished and all lifts, sumps, drains and the dry well were removed and properly disposed off-site. The 1000 gallon UST and its contents were removed and disposed. Portions of the petroleum contaminated soils associated with this UST and that left from the previous removal of the 2 USTs were excavated and disposed off-site. The excavations were backfilled with clean earthen fill.

A total of approximately 300 tons of contaminated soils were removed and disposed during the January and February 2002 IRMs. The location of these IRM activities are presented in Figure 3.

Site-Wide Soils Removal (October 2002)

During the SI, it became evident that a significant part of the soils in the 0-2 feet zone were contaminated with metals and petroleum above TAGM soil cleanup guidance. A total of 12 areas reflecting these conditions were identified at the site. These included six areas where lead concentrations were greater than SCG values, four areas where additional petroleum contaminated soils required removal and two areas where TCLP lead was found to exist. Figure 4 depicts these 12 areas. Eleven of these areas were excavated to a depth of two feet and backfilled with clean soil. Excavations in the other area, additional soil excavation from the 2001 tank removal area, extended to bedrock (approximately 12 feet depth). This excavation is located at 69 Richmond Avenue and is depicted as "hazardous lead" on Figure 4. In total approximately 2100 tons of contaminated soils were removed by this IRM.

Sampling was conducted as part of this IRM to further define residual soil contaminants remaining after completion of soil removal. Samples collected on the upper 0 - 2 feet of site soils were collected in undisturbed areas near the excavation areas. Deeper samples were collected from the base of excavations. The results of analysis of these samples for the site contaminants of concern are provided in Table 2.

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 health risks can be found in Section 5.0 of the RI report.

An exposure pathway is the manner by which an individual may come into contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the 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. These elements of an exposure pathway may be based on past, present, or future events.

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.

At this site, residual contamination remaining from the IRMs exists in subsurface soil at depths generally greater than two feet. For a complete exposure pathway to occur, persons would have to come into contact with this soil. Currently, there are no completed pathways of exposure. There are no homes in the area, and businesses in the area are connected to a public water supply. Complete pathways could occur in the future during subsurface construction activities.

In summary, under the current site use scenario, the potential for contact with contaminated subsurface soils is low.

5.4: Summary of Environmental Impacts

This section summarizes the existing and potential future environmental impacts presented by the site. 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.

No environmental exposure pathways or ecological risks were identified for the site. The nearest environmental resource is the Erie Barge Canal, located adjacent to the site and south of Richmond Avenue. However, as discussed in Sections 5.1.1 and 5.1.3, the absence of groundwater in site soils and the low potential for contaminant leaching from these soils indicate a very low possibility for off-site contaminant release to the canal.

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 375-1.10. 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.

The proposed future use for the Richmond Avenue Site is commercial.

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

- existing or potential sources of contamination such as USTs, ASTs, and soils exceeding TCLP criteria;
- exposures of persons at or around the site to metals and SVOCs in site soils.

Further, the remediation goals for the site include attaining to the extent practicable:

- TAGM 4046 cleanup goals for metals and SVOCs in the upper 2 feet of site soils,
- EPA Lead Standard in the upper two feet of site soils.

The NYSDEC believes that the IRM has accomplished these remediation goals.

Based on the results of the investigations at the site, the IRMs that have been performed, and the evaluation discussed below, the NYSDEC is proposing No Further Action with institutional controls as the preferred alternative for the site.

The basis for this proposal is the NYSDEC's conclusion that No Further Action with institutionl controls would be protective of human health and the environment and would meet all SCGs. Overall protectiveness is achieved by meeting the remediation goals listed above through successful completion of the following IRM remedial actions:

- Asbestos removal and demolition of a site building to provide access to petroleum storage tanks;
- Removal and disposal of two petroleum storage tanks (one 1000 gallon underground storage tank (UST) and one 500 gallon aboveground storage tank(AST));
- Removal and disposal of four hydraulic lifts, a cistern and associated floor drains, sumps and pits; and
- Excavation and disposal of approximately 2400 tons of contaminated soil and replacement with clean earthen fill.

The primary SCGs applicable to this project are TAGM 4046 Recommended Soil Cleanup Levels and the EPA Lead Standard. Overall, soil removal has resulted in the upper two feet of site soils meeting these guidance values.

Therefore, the NYSDEC concludes that the elements of the completed IRMs discussed in this PRAP have achieved the remediation goals for the

site and that No Further Action is needed other than the institutional controls listed below:

1. Development of a site management plan to: (a) address residual contaminated soils that may be excavated from the site during future redevelopment. The plan would require soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations; and (b) identify any use restrictions.

2. The property owner would provide an annual certification, prepared and submitted by a professional engineer or environmental professional acceptable to the Department, which would certify that the institutional control put in place, is unchanged from the previous certification and nothing has occurred that would impair the ability of the control to protect public health or the environment or constitute a violation or failure to comply with any operation an maintenance or soil management plan.

3. Imposition of an institutional control in the form of an environmental easement that would: (a) require compliance with the approved site management plan, (b) limit the use and development of the property to commercial or industrial uses only and, (c) require the property owner to complete and submit to the NYSDEC an annual certification.

TABLE 1
Nature and Extent of Contamination
January 2002 - May 2002

SOIL 0' - 2'	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Inorganic (Metals)	Arsenic	1.2 - 46	7.5	20 of 55 (36%)
	Lead	10.9 - 4,120	400	21 of 55 (38%)
	Mercury	ND - 11	0.1	41 of 55 (74%)
Semivolatile Organic Compounds (SVOCs)	Benzo(a)anthracene	ND - 2.1	0.224	2 of 9 (22%)
	Benzo(a)pyrene	ND - 1.7	0.061	2 of 9 (22%)
	Benzo(b)fluoranthene	ND - 3.1	1.1	1 of 9 (11%)
	Benzo(k)fluoranthene	ND - 1.0	1.1	0 of 9 (0%)
	Chrysene	ND - 2.1	0.4	1 of 9 (11%)

SOIL 2' - 4'	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Inorganic (Metals)	Arsenic	2.8 - 14	7.5	6 of 27 (22%)
	Lead	3.9 - 1,990	400	6 of 27 (22%)
	Mercury	ND - 3.4	0.1	16 of 27 (60%)
Semivolatile Organic Compounds (SVOCs)	Benzo(a)anthracene	ND	0.224	0 of 1 (0%)
	Benzo(a)pyrene	ND	0.061	0 of 1 (0%)
	Benzo(b)fluoranthene	ND	1.1	0 of 1 (0%)
	Benzo(k)fluoranthene	ND	1.1	0 of 1 (0%)
	Chrysene	ND	0.4	0 of 1 (0%)

SOIL 4' - 12'	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Inorganic (Metals)	Arsenic	1.9 - 62	7.5	3 of 18 (17%)
	Lead	5 - 1200	400	1 of 18 (5%)
	Mercury	ND - 0.9	0.1	6 of 18 (33%)
Semivolatile Organic Compounds (SVOCs)	Benzo(a)anthracene	ND - 5.3	0.224	3 of 12 (25%)
	Benzo(a)pyrene	ND - 4.1	0.061	2 of 12 (17%)
	Benzo(b)fluoranthene	ND - 7.3	1.1	3 of 12 (25%)
	Benzo(k)fluoranthene	ND - 2.8	1.1	1 of 12 (8%)
	Chrysene	ND - 5.4	0.4	3 of 12 (25%)

[a] ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water;
ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
ug/m^3 = micrograms per cubic meter

[b] SCG = standards, criteria, and guidance values; soil - TAGM 4046 & USEPA Lead Standard (2001)
ND = contaminant not detected
SB = site background

TABLE 2
Residual Site Soils
October 2002

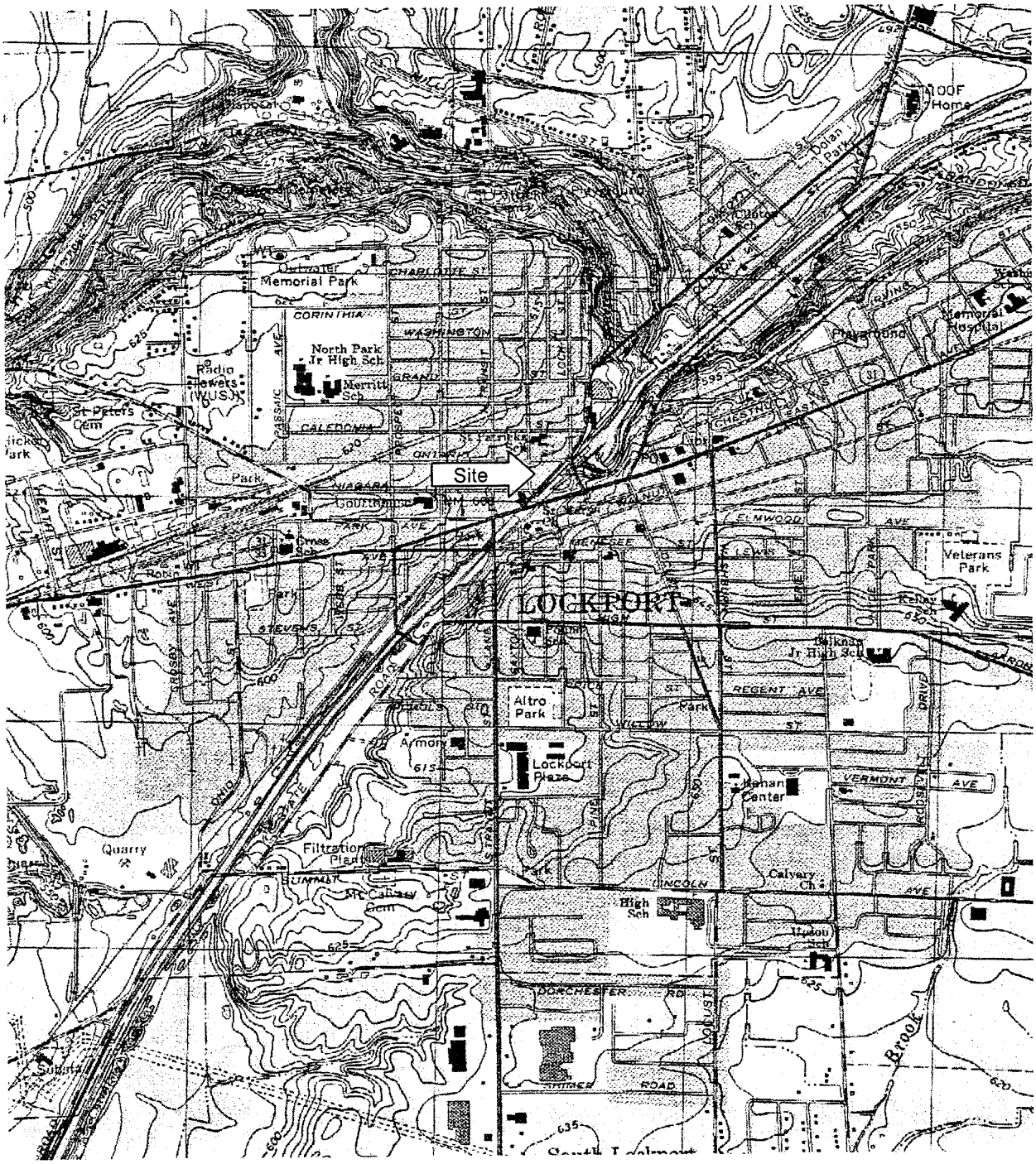
SOIL 0' - 2'	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Inorganic (Metals)	Arsenic	4.6 - 12.1	7.5	2 of 3
	Lead	80 - 569	400	1 of 3
	Mercury	ND - 0.25	0.1	1 of 3

SOIL 2' - 4'	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Inorganic (Metals)	Arsenic	3.6 - 12.2	7.5	6 of 7
	Lead	100 - 1,990	400	4 of 7
	Mercury	0.19 - 3.3	0.1	7 of 7
Semivolatile Organic Compounds (SVOCs)	Benzo(a)anthracene	ND - 11	0.224	5 of 7
	Benzo(a)pyrene	ND - 12	0.061	5 of 7
	Benzo(b)fluoranthene	ND - 12	1.1	3 of 7
	Benzo(k)fluoranthene	ND - 4.8	1.1	3 of 7
	Chrysene	ND - 12	0.4	5 of 7

SOIL 4' - 12'	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Inorganic (Metals)	Arsenic	5.1 - 15.4	7.5	1 of 3
	Lead	23 - 1490	400	2 of 3
	Mercury	0.17 - 0.42	0.1	3 of 3
Semivolatile Organic Compounds (SVOCs)	Benzo(a)anthracene	ND - 0.15	0.224	0 of 3
	Benzo(a)pyrene	ND - 0.14	0.061	0 of 3
	Benzo(b)fluoranthene	ND - 0.18	1.1	0 of 3
	Benzo(k)fluoranthene	ND - 0.09	1.1	0 of 3
	Chrysene	ND - 0.17	0.4	0 of 3

[a] ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water;
ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
ug/m^3 = micrograms per cubic meter

[b] SCG = standards, criteria, and guidance values; soil - TAGM 4046 & USEPA Lead Standard (2001)
ND = contaminant not detected
SB = site background



Map from U.S.G.S. - Lockport, NY Quadrangle -1980 Revision

InteGreyted consultants

4 Jamesville Road
Syracuse, New York 13214
Phone: (315) 445-0224
Fax: (315) 445-0793

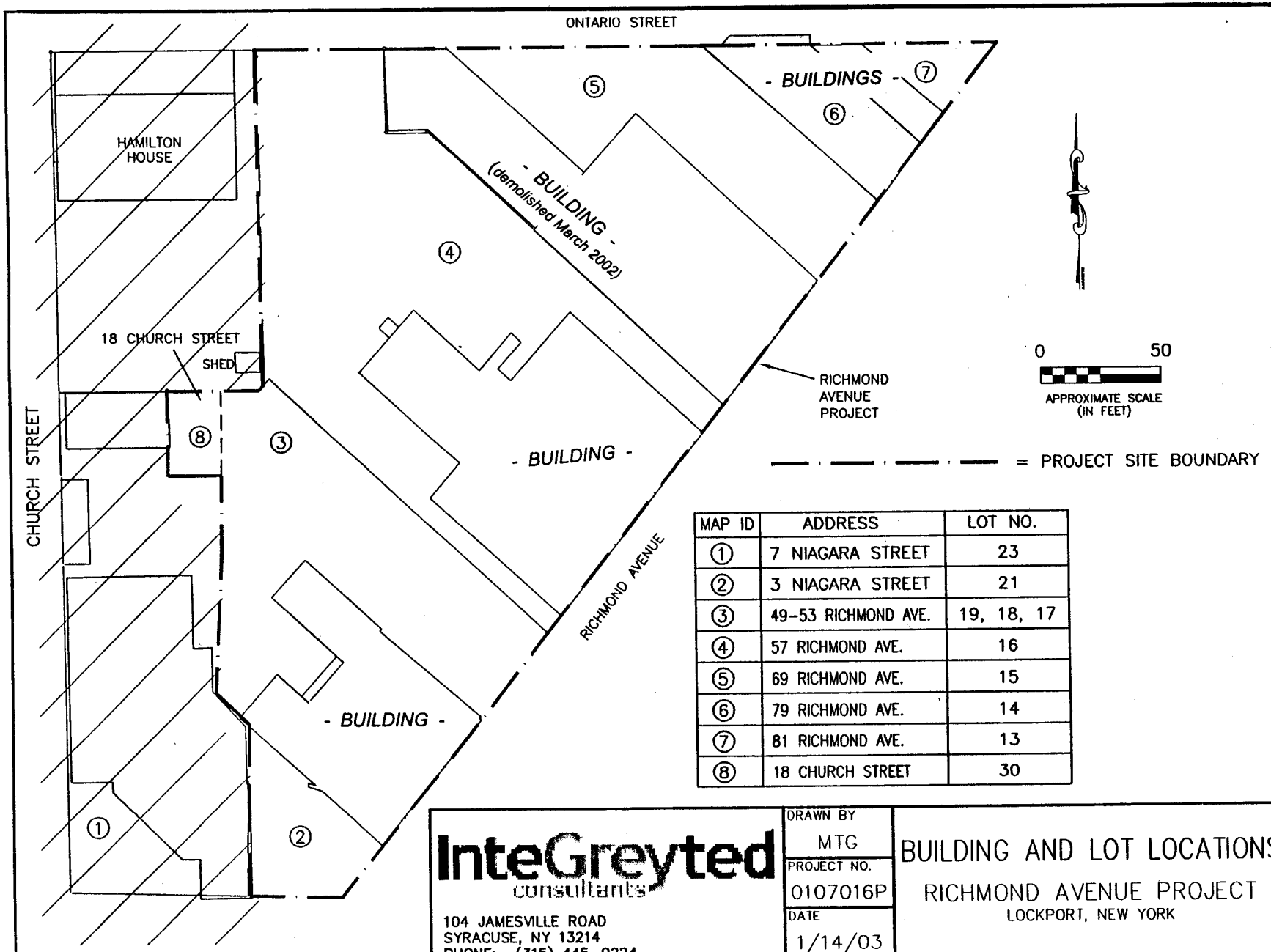
Drawn by:	PJM
Project No.:	0107016P
Date:	12-18-02
Scale:	1'=25,000'

SITE LOCATION MAP

Richmond Avenue Project
Lockport, NY

PREPARED FOR: **Greater Lockport Development Corp.**

FIGURE: 1



MAP ID	ADDRESS	LOT NO.
①	7 NIAGARA STREET	23
②	3 NIAGARA STREET	21
③	49-53 RICHMOND AVE.	19, 18, 17
④	57 RICHMOND AVE.	16
⑤	69 RICHMOND AVE.	15
⑥	79 RICHMOND AVE.	14
⑦	81 RICHMOND AVE.	13
⑧	18 CHURCH STREET	30

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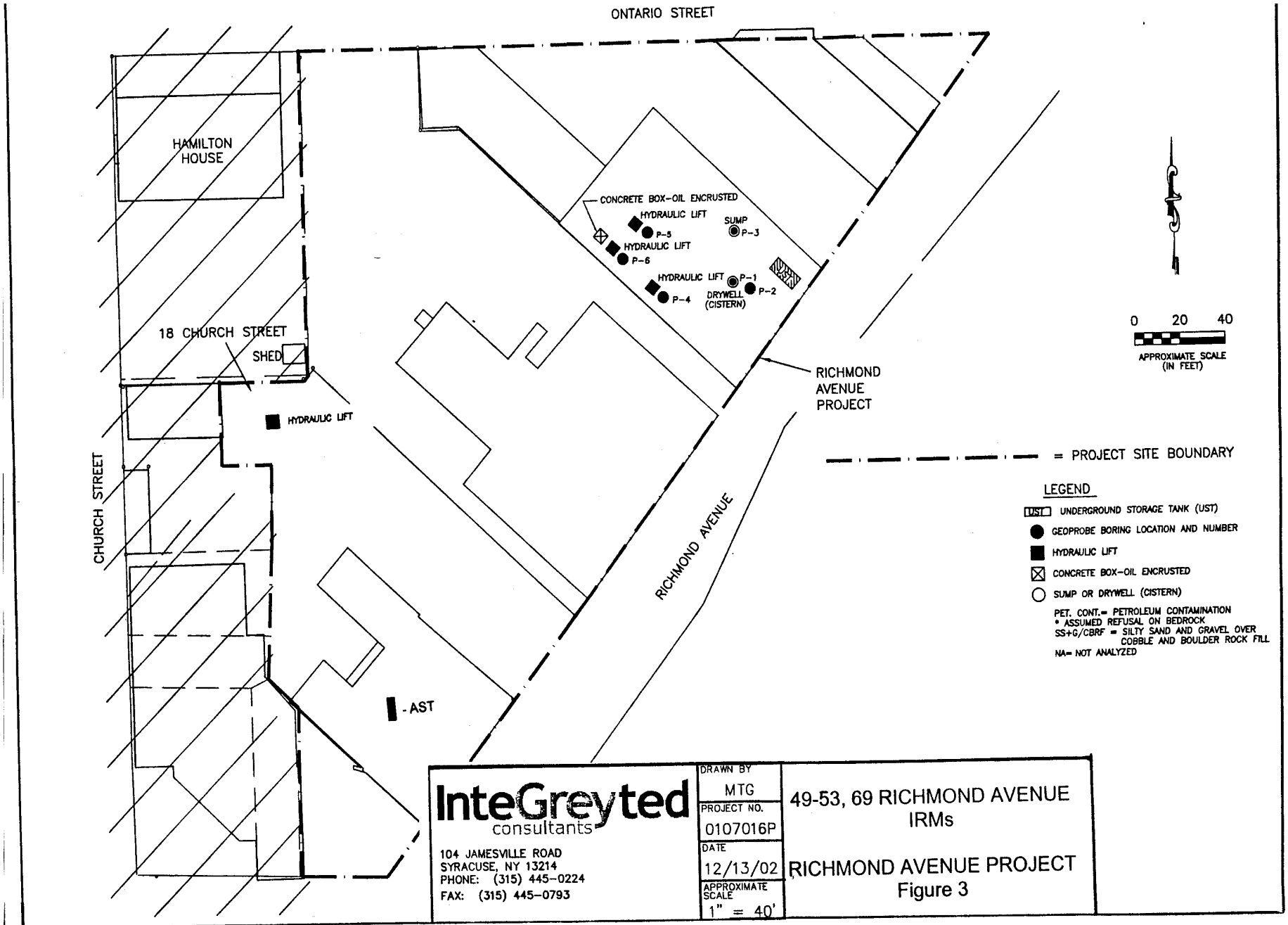
DRAWN BY: MTG
PROJECT NO.: 0107016P
DATE: 1/14/03
APPROXIMATE SCALE: 1" = 50'

BUILDING AND LOT LOCATIONS
RICHMOND AVENUE PROJECT
LOCKPORT, NEW YORK

PREPARED FOR: CITY OF LOCKPORT

FIGURE: 2



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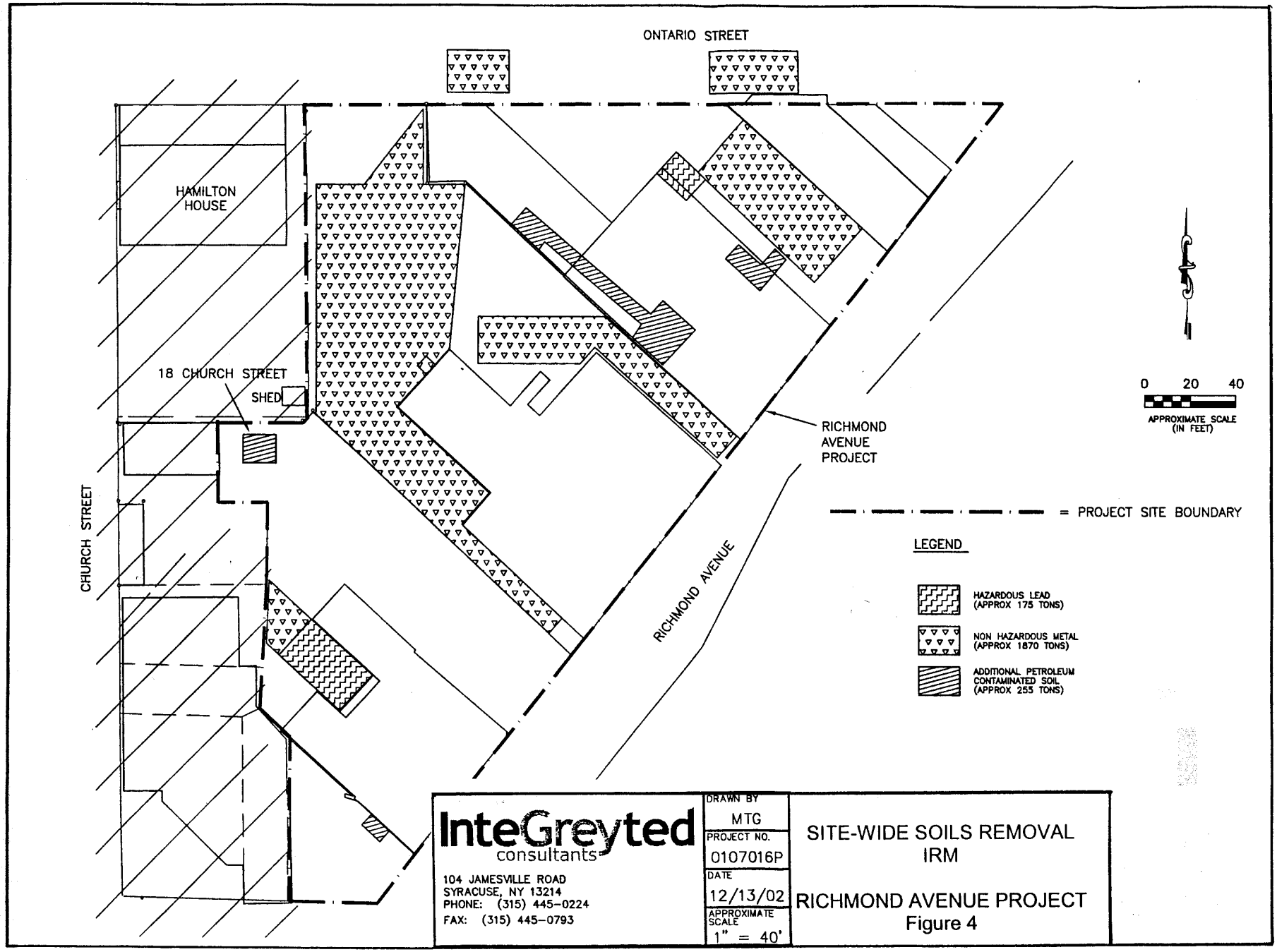
PROJECT NO.	0107016P
DATE	12/13/02
APPROXIMATE SCALE	1" = 40'

49-53, 69 RICHMOND AVENUE
IRMs

RICHMOND AVENUE PROJECT
Figure 3



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SITE-WIDE SOILS REMOVAL
IRM

RICHMOND AVENUE PROJECT
Figure 4