



**O'BRIEN & GERE**  
ENGINEERS, INC.

November 25, 1996

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Eileen Gilligan, Ph.D.  
Modernization Department  
Syracuse Housing Authority  
516 Burt Street  
Syracuse, New York 13202

Re: Salvation Army Site - Limited Phase II ESA  
Services

File: 3533.005

Dear Dr. Gilligan:

The following letter report summarizes the findings of O'Brien & Gere Engineers, Inc. (O'Brien & Gere) for the limited Phase II Environmental Site Assessment (ESA) that was conducted at the Salvation Army site located at the corner of South State Street and Burt Street, Syracuse, New York. Reportedly, the subject property is currently owned by the Salvation Army and is used as a clothing distribution center and retail store. In addition, a section of the building is currently used by the Salvation Army for apartments. It is understood that the Syracuse Housing Authority (SHA) is interested in purchasing the subject property to relocate its main office at the site. It is further understood that the relocation would require renovation of the building to meet the needs of the SHA.

The Phase II assessment was based on O'Brien & Gere's proposal of October 1, 1996 as authorized by the SHA on October 2, 1996. The purpose of this Phase II ESA was to screen for the presence of potential soil contamination and asbestos-containing materials (ACM) in building materials at the subject property. The SHA also requested that an environmental regulatory database search be conducted to identify whether regulated activities have occurred at the site.

Based on the scope of services, the format of this report has been divided into the following sections:

- Sample collection and analysis
  - Background
  - Soil sample collection
  - Soil sample analytical results
  - Soil sampling - recommendations
  - Asbestos samples
- Environmental regulatory database search
- Summary

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Information regarding each of these tasks is discussed in greater detail below.

Sample collection and analysis

Background:

On October 3, 1996, Ms. Linda Yates of O'Brien & Gere collected soil samples and asbestos samples from the subject property for analysis at O'Brien & Gere Laboratories, Inc. located in Syracuse, New York. O'Brien & Gere Laboratories is certified by the New York State Department of Health (NYSDOH) for analysis of the parameters collected as part of this assessment. Based on conversations between you and Ms. Yates, no water, radon, or lead samples were collected for analysis as part of this scope of services.

Soil sample collection:

The previous industrial use of the subject property suggests the potential for past use, storage, disposal, and/or releases of chemicals and waste materials. Based on this information, eight surface soil samples were collected at a depth of 4 - 18 inches in areas suspected of being used for previous drum and/or waste storage. Sampling locations were identified based on:

- information provided to O'Brien & Gere by Capt. Muhs of the Salvation Army regarding the history of the site,
- O'Brien & Gere's review of a September 1994 Phase I ESA report prepared by Moffa & Associates as provided by SHA, and
- observations made by O'Brien & Gere during tours of the subject property on May 3, 1996 and October 3, 1996.

The specific sampling locations are illustrated in Figure 1. Based on SHA direction, soil samples from beneath asphalt or buildings were not collected during the Phase II ESA. O'Brien & Gere marked the location of each sampling point with a small flag. The approximate sampling locations are illustrated in Figure 1 and identified as follows:

<u>Sample number</u>	<u>Location</u>	<u>Rational for sampling</u>
1	Paint can pile	Potential paint and solvent releases
2	East side of warehouse B	Potential past storage area
3	South boundary along fence	Potential past storage area
4	Southeast corner	Representative site sample
5	Northeast corner	Representative site sample
6	Center	Representative site sample
7	Northwest side of warehouse A	Potential past storage area
8	Northeast side of warehouse A	Potential past storage area

Since this assessment was a limited Phase II investigation and intended to screen for potential site contamination, and to minimize costs, the samples noted above were composited into two composite samples. The composite samples were labeled:

Composite 1 - 4  
Composite 5 - 8.

Composite 1 - 4 consists of equal quantities of soil from sample numbers 1 - 4, whereas Composite 5 - 8 consists of equal amounts of soil from sample numbers 5 - 8.

The two composite samples were analyzed for:

- Total petroleum hydrocarbon (TPH) scan for petroleum products by NYSDOH Method 310.13
- Total metals by SW846 Method 6010 (consisting of arsenic, barium, cadmium, chromium, lead, selenium and silver) and mercury by SW846 Method 7470.

Since agitation of a sample may result in a loss of part of the volatile fraction of the sample, compositing procedures are inappropriate for samples that are analyzed for VOCs. Based on this information, O'Brien & Gere collected three grab samples for VOC analysis. The grab samples were collected from:

<u>Sample number</u>	<u>Location</u>	<u>Rational for sampling</u>
1	Paint can pile	Potential paint and solvent releases
2	East side of warehouse B	Potential past storage area
7	Northwest side of warehouse A	Potential past storage area

The sites selected for VOC analysis were based on O'Brien & Gere's observations as noted above.

*Soil sample analytical results:*

Copies of the laboratory results from the analysis of the soil samples by O'Brien & Gere Laboratories are included in Attachment A.

VOCs

As indicated by the results, no detectable concentrations of VOCs were observed in the soil samples collected. Based on the limited number of samples collected for analysis, it does not appear that systemic VOC contamination of the subject property exists.

Metals

Various concentration of metals were observed in the four composite samples. As illustrated in Table 1, the concentrations of several metals observed in the composite samples exceeded the New York State Department of Environmental Conservation (NYSDEC) Recommended Soil Cleanup Objective (RSCO) concentrations listed in the NYSDEC Technical and Administrative Guidance Memorandum (TAGM)

Number 4046 - *Determination of Soil Cleanup Objectives and Cleanup Levels* (1/24/94). The concentrations of metals appear to represent a potential environmental impact at the site. Further investigation is warranted to identify the extent of contamination and to evaluate the potential implications of these findings.

Table 1- soil sample results

Parameter	RSCO (ppm)	Composite 1 - 4 (ppm)	Composite 5 - 8 (ppm)
Arsenic	7.5 or SB	16.	7.6
Barium	300 or SB	410.	170.
Cadmium	1 or SB	2.	3.
Chromium	10 or SB	17.	16.
Lead	SB**	69000.	1700.
Mercury	0.1	1.1	0.5
Selenium	2 or SB	1.6	<0.6
Silver	SB	<1.	<1.

Source: NYSDEC TAGM 4046 (1/24/94)

Notes: \*\* Background levels vary widely. Typical metropolitan area concentration is 200 - 500 ppm.  
 NA Not applicable  
 SB Site background

TPH

The composite samples were also analyzed for TPH to identify the presence of common petroleum products including fuels. As illustrated in Attachment A, the analytical results indicate the presence of fuel oil No. 6 (2500 ppm) in Composite 1 - 4 and the presence of lubricating, insulating or hydraulic oil (1800 ppm) in Composite 5 - 8. Currently, federal or New York State limitations for TPH in soil are not established. However, O'Brien & Gere's experience in New York State is that the NYSDEC generally considers, for screening purposes, TPH levels of 100 ppm or greater as representative of a potential environmental impact to a site. Based on the presence of these fuels at concentrations greater than NYSDEC guidelines, further investigation is warranted to identify the extent of contamination and to further evaluate the implications of these findings.

*Soil sampling - recommendations:*

Due to the presence of various metals and TPH at concentrations greater than NYSDEC cleanup objectives or guidelines, additional sampling is recommended to identify the extent of contamination and to identify whether site remediation is required. Depending on the sampling program, which could range from analyzing individual soil samples to conducting ground water monitoring, costs associated with additional

monitoring at the site could range between \$6000 (15 surface soil samples) and \$30,000 (5 wells and 5 ground water samples).

*Asbestos samples:*

Areas of suspected asbestos were observed by O'Brien & Gere in siding, floor tiles, pipe insulation and roofing materials. Based on this information, nine bulk samples for screening purposes were collected for analysis. As noted below, the sample locations were observed to be in various conditions.

Location

Insulation from piping at the entrance of the laundry room  
Insulation from the tank located in the basement  
Insulation from piping in the basement storage room  
Floor tiles from the first floor  
Siding material from the walk way area  
Three samples from roofing material  
White material from pile on the roof

General condition

Damaged, exposed (4 in dia., 100 ft length)  
Damaged, exposed (4 ft dia. 8 ft length)  
Damaged, exposed (4 in dia., 150 length)  
Undamaged, intact (1000 ft<sup>2</sup> est.)  
Undamaged, intact (300 ft<sup>2</sup> est.)  
Undamaged, intact (40,000 ft<sup>2</sup> est.)  
Damaged, exposed (25 ft<sup>2</sup> est.)

The friable asbestos samples (*i.e.*, insulation and pile of white material) were analyzed using polarized light microscopy (PLM). Asbestos samples from siding, roofing materials, and floor tile were analyzed using non-organically bound (NOB) PLM. Due to the fact that these samples were collected for screening purposes, negative results (non-detectable) were not confirmed through transmission electron microscopy (TEM). These samples represent a qualitative indication of the presences of ACM at the site, and are not intended to constitute or substitute for a comprehensive, quantitative asbestos survey.

As illustrated by the results in Attachment B, chrysotile asbestos was identified in the piping and tank insulation samples and two roof samples. The ACM in the building may constitute an environmental liability depending on the future use of the property. The presence of ACMs at the Salvation Army site should be evaluated in light of Occupational Safety and Health Administration (OSHA) regulations for asbestos in the workplace air. This can be accomplished by conducting a comprehensive, quantitative asbestos survey at the subject property. Additionally, if an area identified as containing asbestos is to undergo renovation or demolition, the ACM must be repaired or removed in accordance with the procedures outlined in Part 56 of Title 12 of the Official Compilation of Codes, Rules and Regulations of the State of New York ( 12 NYCRR Part 56). Based on O'Brien & Gere's observations, a comprehensive, quantitative asbestos survey at the subject property would likely cost between \$3000 and \$5000. Costs for the repair, removal, and/or replacement of ACM cannot be estimated at this time since the specific quantity of ACM that would require repair, removal, and/or replacement is unknown.

Environmental regulatory database search

To identify whether regulated activities have taken place at the site, O'Brien & Gere contracted the services of Environmental Data Resources, Inc. (EDR) of Southport, Connecticut, to conduct an environmental regulatory database search of the subject property (see Attachment C). The search distance was based on American Society for Testing and Materials (ASTM) Procedure Number E1527-94, the current standard of

practice for ESAs. The documents listed below were included in this database search and were reviewed by O'Brien & Gere:

- 1.0 mile - federal National Priority List (NPL) sites, federal Resource Conservation and Recovery Act (RCRA) treatment, storage, disposal (TSD) facilities;
- 0.5 mile - federal Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) sites, state landfills or solid waste disposal facilities, state leaking underground storage tanks (LUSTs);
- property and adjoining properties - federal RCRA generators, state registered USTs;
- property only - federal Emergency Response Notification System (ERNS) list.

The following databases were accessed in this search:

#### Federal

- CERCLIS: contains information on sites identified by the United States Environmental Protection Agency (USEPA) as potential abandoned, inactive or uncontrolled hazardous waste sites which may require remedial action.
- ERNS: stores information on reported releases of oil and hazardous substances from files of the USEPA and the National Response Center of the Coast Guard.
- RCRIS: Resource Conservation and Recovery Information System; large quantity generator (LQG) and small quantity generator (SQG). The USEPA list containing selective information on sites which generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA.
- FINDS: Facility Index System. This database contains summary information which may lead to more detail in other databases including RCRIS, PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), FATES (FIFRA and TSCA Enforcement System), FTTS (FIFRA/TSCA Tracking System), DOCKET (used to manage and track information on judicial enforcement cases for environmental statutes), FURS (Federal Underground Injection Control), DRDS (Federal Reporting Data System), SIA (Surface transporters and disposers), CICIS (TSCA Chemicals in Commerce Information System), and RCRA (medical waste transporters and disposers).
- PADS: PCB (polychlorinated biphenyl) Activity Database. Identifies generators, transporters, commercial stores and/or brokers and disposers of PCBs.

- RAATS: RCRA Administration Action Tracking System. Contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil action brought by the USEPA.
- TSCA: Toxic Substance Control Act. Identifies manufacturers and importers of chemical substances on the TSCA Chemical Sources Inventory List as of 1986. There have been no further updates of this list.
- TRIS: Toxic Release Inventory System. Identifies facilities which release toxic substances to the air, water, and land in reportable quantities under Superfund Amendments and Reauthorization Act (SARA) Title III, Section 313.
- HMIRS: Hazardous Materials Incident Report System. Contains hazardous material spill incidents reported to the New York State Department of Transportation (NYSDOT).

State

- LUST: Leaking Underground Storage Tank incident reports.
- SHWS: State Hazardous Waste Sites.
- SWF/LS: Solid Waste Facilities/Landfill Sites.
- UST: New York State Department of Environmental Conservation (NYSDEC) registered underground storage tanks.
- NYSDEC Quarterly Status Report of Inactive Hazardous Waste Disposal Sites - October 1996

The above documents were reviewed in order to evaluate whether the subject property, previous owners of the subject property, or properties within the applicable ASTM radius of the subject property were listed in the reports identified.

O'Brien & Gere's review of the above documents indicates that the Salvation Army site is registered with the NYSDEC for one UST. O'Brien & Gere's review of the database report indicates that the tank is a 5000 gallon tank for gasoline and is located in the northwest parking lot (see Figure 1). During the May and October site visits, O'Brien & Gere observed a pump and fill port located in this area. No other appurtenances associated with USTs were observed at the subject property during the O'Brien & Gere site visits.

Reportedly, the 5000 gallon UST was installed in 1987 to replace a 2000 gallon UST that was found to be leaking. Documentation reviewed by O'Brien & Gere appears to indicate that the contents of the 2000 gallon

tank, and the tank, were properly disposed off site. However, documentation regarding whether soil contamination was present during tank removal activities did not exist in the files provided to O'Brien & Gere by the Salvation Army. Based on this information, O'Brien & Gere cannot make findings regarding whether potential subsurface contamination from remaining residuals exist from the former, reportedly leaking UST. O'Brien & Gere recommends that proper documentation be obtained regarding potential soil contamination or, in the absence of such documentation conduct subsurface soil sampling. Should contaminated soils be identified, costs in the range of \$2000 (10 cubic yards of non-hazardous soil) and \$7000 (50 cubic yards of non-hazardous soil) could be incurred.

In addition to the UST, the database report indicated that a spill of 30 gallons of "non petroleum/non hazardous" material had occurred at the subject property in 1986. As reported in the Moffa Phase I ESA, the material was ethylene glycol. Capt. Muhs reported that the spill occurred in the parking lot of the subject property. O'Brien & Gere's review of NYSDEC records indicate that the status of the spill is "closed", and no further action is required. Based on this information, potential environmental impacts to the site do not appear to exist.

Three leaking UST with an active status were identified within the ASTM search distance of the subject property. These sites consist of:

<u>Spill name</u>	<u>Spill location</u>	<u>Spill date</u>
Harrison Parking Garage	Warren and Harrison Streets	1/5/91
Centro Parking	SUNY Health Service Center	12/23/93
HSM Packaging Corp.	123 Larned Street	7/24/96

Since these off site spills are listed as active and located within the ASTM search distance of the property, potential impacts to the subject property cannot be identified by O'Brien & Gere. It is recommended that the owner of the subject property continue to monitor the status of the above releases to identify possible impacts to the site.

*Summary:*

Based on the analytical results obtained from the samples collected from the Salvation Army site, environmental impacts appear to exist at the subject property:

- Soil sample results indicate the presence of various metals and TPH at concentrations greater than NYSDEC cleanup objectives or guidelines. Based on these findings, O'Brien & Gere recommends that additional sampling activities be conducted identify the extent of site contamination and to identify whether remediation of the site to meet NYSDEC cleanup objectives and guidelines is required. As noted previously, costs associated with additional monitoring at the site could range between \$6000 and \$30,000.
- Sampling of insulation and roofing materials indicates the presence of chrysotile asbestos. A comprehensive, quantitative asbestos survey (estimated \$3000 - \$5000) should be conducted. The



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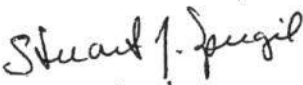
future use of the building would dictate whether areas of ACM should be repaired or removed and subsequent costs associated with its repair, removal, and/or replacement.

- Activities to document proper disposal off site of contaminated soil from the 2000 gallon UST should be conducted. As described in greater detail above, should this step require sampling and disposal of contaminated soils, costs could range between \$2000 and \$7000.

Should you have questions regarding this report and the above findings, please do not hesitate to contact me or Ms. Yates.

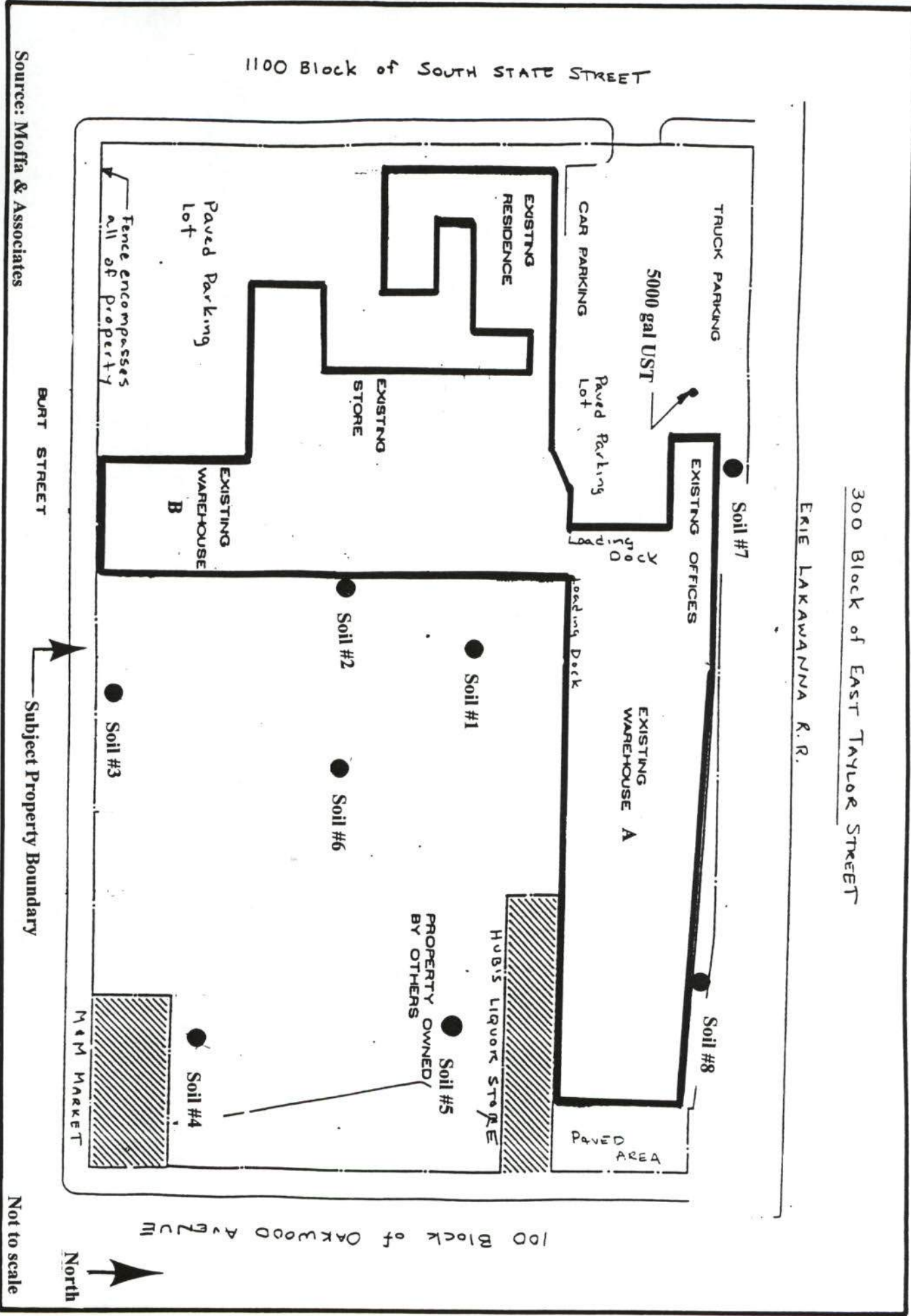
Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

  
Stuart J. Spiegel  
Managing Scientist

cc: Linda M. Yates - O'Brien & Gere  
Swiatoslaw W. Kaczmar, Ph.D., C.I.H. - O'Brien & Gere

FIGURE 1 - SITE PLAN



Source: Moffa & Associates

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