

March 1, 2011
File: 147-111388

Mr. Robert Filkins
Senior Engineering Geologist, Remedial Bureau B
Division of Environmental Remediation, NYSDEC
625 Broadway, 12th Floor
Albany NY 12233-7016

Re: Former Mimi Cleaners: 58 Christie Place, Scarsdale, NY
VP Site No. V00306-3
Revised Work Scope for Evaluating Current Sub-Slab Vapor Conditions
In the Area of the Former Mimi Cleaners Site

Dear Mr. Filkins:

Currently there are six sub-slab depressurization systems (SSDSs) in operation by the landlord of the former Mimi Cleaners ("the Site") to mitigate sub-slab vapors beneath the Site and in the vicinity of the former cleaners Site. Five SSDSs installed in this area have been running for a minimum of 21 months (for the system installed in the Harwood Building) to 40 months (for the initial system installed in the Spencer Place Building). The sixth SSDS was recently installed in the southern portion of the East Parkway Building (EPB) and is currently undergoing its operational testing phase. These SSDSs were installed as part of our investigation activities and mitigation requirements in accordance the New York State Department of Health (NYSDOH) *Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006*, and requirements from New York State Department of Environmental Conservation (NYSDEC) representatives overseeing the project.

HDR proposes to ascertain the current sub-slab vapor contaminant concentrations under the buildings between Spencer Place and Christie Place to determine if any of the four SSDSs or portions thereof that have been operating for two years or more may be shut down or operated intermittently. Such refinements to the system operations are consistent with the NYSDEC green remediation policy as outlined in DER-31 (Green Remediation). They would substantially reduce the consumption of electricity. The locations to be assessed include the Scarsdale Post Office Building (SPOB), the Spencer Place Building (SPB), the Christie Place Building (CPB), and the DeCicco Building (DCB). The assessment study would allow a refined interpretation of the PCE contaminant concentrations to determine temporal trends, possible sources, and mitigation effects. If conditions still exist that warrant the continued operation of SSDSs, HDR will recommend pulsed operation of one or more of the systems, while maintaining consistency with NYSDOH and NYSDEC requirements. Currently the SSDSs run constantly. Figure 1 shows an aerial photograph with the location of the former Mimi Cleaners and the four buildings proposed for this assessment study.

Excavation of soils under the area of the dry cleaning equipment in the CPB in July-August 2000 removed as much of the contaminated soils as possible (72 tons) without compromising the building structure. Subsequent installation and operation of a soil vapor extraction (SVE) system in this area of the CPB between May 2001 and May 2005 removed residual contamination remaining in the soils. The removal of the source soils and operation of the SVE system and the SSDS in this building from 2001 to the present removed the sub-slab contaminant vapors in this area. Recently, investigations downgradient from the Site have shown higher concentrations of PCE under some of the building slabs when compared to the results of the samples collected in the CPB and SPB in 2004. It is our interpretation that the plume is dissipating in the area of the Site and/or the contaminant plume may be moving downgradient away from the Site. As more buildings further away from the Site have been investigated, other potential sources of PCE and TCE contamination have been identified such as the shoe repair shop in the HWB and the active dry cleaner in the 2 Spencer Place Building. During the initial testing in the HWB, elevated concentrations of TCE in indoor air samples were detected. These elevated concentrations were traced to the usage of a spray shine containing TCE by the shoe repair shop. The indoor air concentration of PCE was elevated in a sample collected from the 2 Spencer Place Building. This building contains an active dry cleaning establishment that has been there for more than four decades. The current owner of the building has informed NYSDEC that they are planning to install a sub-slab depressurization system to mitigate potential vapor intrusion concerns at this location.

Background Information

HDR conducted indoor air sampling and sub-slab vapor testing in the CPB and the SPB in March 2004. The indoor air samples were collected with 3M Passive Diffusion Air Monitoring Badges and analyzed for tetrachloroethylene (PCE) by NYSDOH Method 311-9. Figure 2 shows the locations of the indoor air samples and the PCE sample results. A total of nine (9) indoor air samples were collected (including a blind duplicate sample). A total of five (5) sub-slab vapor samples were collected with mini-canisters (400 cc) and analyzed for PCE by OSHA Method PV2120. At a sixth location (SG-F) the mini-canister malfunctioned, therefore, no sample was collected during this sampling event; however, this sample location was sampled during a subsequent sampling event for the DCB. Figures 3 and 4 shows the sub-slab sample locations and PCE sample results in these two buildings.

As shown on Figure 2 the indoor air PCE sample results ranged from 38 to 562 $\mu\text{g}/\text{m}^3$. The highest concentrations (532 $\mu\text{g}/\text{m}^3$, and 562 $\mu\text{g}/\text{m}^3$ in the blind duplicate sample) were detected in the Embassy Cleaners space where they store dry-cleaned clothing. It is believed that these elevated PCE concentrations were likely caused by off-gassing of residual PCE from the dry-cleaned clothing rather than vapor intrusion. As shown on Figures 3 and 4 the sub-slab vapor PCE results ranged from 100 to 1,200 $\mu\text{g}/\text{m}^3$. The highest concentration was detected in the SG-B sub-slab sample collected from the foot print area of the former Mimi Cleaners.

Sub-slab vapor testing was conducted in the DCB in July of 2004. Three (3) sub-slab vapor samples from the DCB were collected with air sample canisters (6-liter) and analyzed for volatile organic compounds (VOCs) by OSHA Method TO-15. In addition, the SG-F location sample in the SPB was collected during this sampling event. Figure 5 shows the sub-slab sample locations and PCE and TCE results in the DCB; the sub-slab vapor PCE results ranged from 100 to 1,500 $\mu\text{g}/\text{m}^3$. The highest concentration was detected in the D-3 sample collected from the basement area adjacent to the SPB.

In June 2006 two (2) soil gas samples were collected from the Post Office parking lot adjacent to the CPB and the former Mimi Cleaners Site as shown on Figure 6. The PCE concentrations detected in these two soil gas samples were 1,400 and 430 $\mu\text{g}/\text{m}^3$. Based on these results, two (2) soil gas samples and two (2) sub-slab vapor samples were collected from within the SPOB in December 2007. Due to regulator malfunctions, two additional sub-slab vapor samples proposed for this location were not collected. The eastern portion of the basement in the SPOB has a dirt floor, therefore, soil gas samples were collected in this area. The PCE results detected in these two soil gas samples were 2 and 270 $\mu\text{g}/\text{m}^3$; the PCE concentrations detected in the two sub-slab vapor samples were 1,700 and 1,800 $\mu\text{g}/\text{m}^3$.

Sub-Slab Vapor Assessment Procedures

To assess the current concentrations of contaminants of concern in the area of the Site, HDR proposes to shut down the four SSDSs operating in the SPOB, CPB, SPB, and the DCB for a six-week interval. After allowing the sub-slab vapor conditions to equilibrate under natural conditions for six weeks, sub-slab vapor and co-located indoor air samples will be collected from two locations in each building to provide an assessment of the current vapor conditions under the slab at each location and also the indoor air within the buildings. The proposed sample locations are shown on the previously mentioned figures with the sample locations highlighted. The locations selected for the assessment after the 6-week shutdown interval showed the highest sub-slab vapor concentrations of PCE during the previous investigations. Sampling procedures will be consistent with prior data collection procedures used for this project.

In the CPB a tenant, (Embassy Cleaners) stores dry-cleaned clothing as part of its pickup/drop-off operations. Due to concerns with the potential for off-gassing of residual PCE vapors from stored clothing in Embassy Cleaners. Therefore HDR will collect an indoor air sample from the southwest portion of the building as shown on Figure 3 instead of inside the Embassy Cleaners store. This indoor air sample location will provide more representative data to determine if indoor air concentrations of the contaminants of concern, if present in the building at elevated concentrations, are due to vapor intrusion rather than off-gassing of residual PCE vapors from clothing in Embassy Cleaners.

The sub-slab vapor and indoor air sample results will be compared to the NYSDOH Matrix 2 for PCE and Matrix 1 for trichloroethylene (TCE). If the results of the samples show that the sub-slab PCE & TCE concentrations are below 1,000 and 250 $\mu\text{g}/\text{m}^3$, respectively, and the indoor air concentrations of PCE & TCE are below 30 and 1 $\mu\text{g}/\text{m}^3$, respectively at both sample locations in a building then the SSDS at this location will remain shut down for an additional 20-week interval (6 months total) to

assess the potential for contaminant vapors to accumulate under the slab over time. If PCE and TCE concentrations in the sub-slab vapor and indoor air samples remain below the NYSDOH criteria after the 6-month interval then the system at this location will be shut down permanently. If a system is shut down permanently, a sub-slab vapor and indoor air sample will be collected from one sample location in this building on an annual basis for two years to confirm that the concentrations remains below the NYSDOH guidance values. After the two-year interval an assessment will be made to determine if additional sampling will be required.

If the sample results are above the NYSDOH criteria for PCE or TCE after the 6-week shut down interval, the SSDS for this building will be turned back on and an assessment will be made to determine the feasibility of pulsing the system to conserve electricity and reduce the carbon footprint of the system while still meeting the NYSDOH and NYSDEC objectives for the mitigation system. All of the buildings included in this assessment have commercial tenants; the buildings are not occupied on a continuous basis.

If sample results are below the NYSDOH criteria for PCE and TCE after the 6-week shut down interval, but above the NYSDOH criteria for PCE or TCE after the 6-month shut down interval, an assessment will be made as to what pulsing interval (e.g. one month on and one month off) would provide sufficient protection against potential migration of contaminant vapors into the building.

Sampling Procedures

For the sub-slab vapor sample locations, permanent sample ports have already been installed as part of previous investigation activities. The sample ports are constructed of a brass tube threaded to a brass coupler. The brass tube extends below the bottom of the slab so that the brass coupler is flush with the top of the slab. The brass coupler accepts a threaded plug to seal the port when it is not in use.

On the day of sampling, at each sub-slab location the threaded plug will be removed from the sub-slab vapor sample port and a temporary NPT thread to compression fitting coupler will be used to connect the probe to a section of Teflon® tubing outfitted with compression fittings. The tubing and point will be purged and attached to an air sample canister. For the purging process, the tubing will be connected to a personal air sampling pump which will be run at a flowrate of <0.2 L/min to purge a minimum of three volumes of air from the tubing and sample port. The air will be purged into a Tedlar bag so it cannot possibly contaminate the indoor air. After purging, the tubing will be connected to a laboratory-supplied flow control regulator attached to an air sample canister of appropriate size. Vacuum on the canister will be recorded, and the valve on the canister will be opened to collect the sub-slab vapor. The flow regulator will be set by the laboratory to collect the sample over a 4-5 hour period (~20-25 ml/min).

The indoor air samples will be collected using laboratory-supplied flow control regulator attached to a air sample canister following the procedures listed in the NYSDOH October 2006 Guidance. The vacuum on each canister will be recorded, and the valve on the canister will be opened to collect the indoor air. The flow control valve on the air sample canister will be set by the laboratory to collect the sample over a 4-5 hour period (~20-25 ml/min).

During the sampling, the vacuum on each canister will be periodically recorded. At the end of the targeted 4-5 hour sampling period, but before the vacuum on the canister is completely exhausted, the canister valve will be closed. The final vacuum reading will be recorded, the tubing will be disconnected, and the canister will be prepared for shipment.

The field notes and documentation for the sampling will include the following, where applicable:

- sample identification,
- date and time of sample collection,
- sampling depth,
- identity of samplers,
- sampling methods and devices,
- volume of soil vapor extracted,
- canisters vacuum before and after samples collected,
- apparent moisture content (dry, moist, saturated, etc.) of the sampling zone, and
- chain of custody protocols and records used to track samples from sampling point to analysis.

Samples will be shipped via overnight courier under proper chain-of-custody to a NYSDOH-certified laboratory for VOC analyses (chlorinated solvents only) by EPA T0-15. Based on a 4-5 hour sample collection the practical quantitation limit is less than $1 \mu\text{g}/\text{m}^3$ for PCE. Analytical results of the sub-slab vapor and indoor air sampling investigation will be summarized and submitted to NYSDEC and NYSDOH in a data summary report.

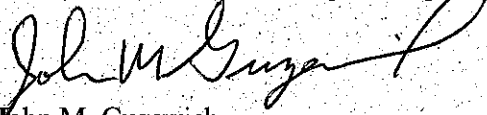
Schedule

Please expedite your review if possible, as the work is planned to commence as soon as the plan is approved and access arrangements have been coordinated with the building owners.

If you have any questions, please feel free to contact me at (845) 735-8300.

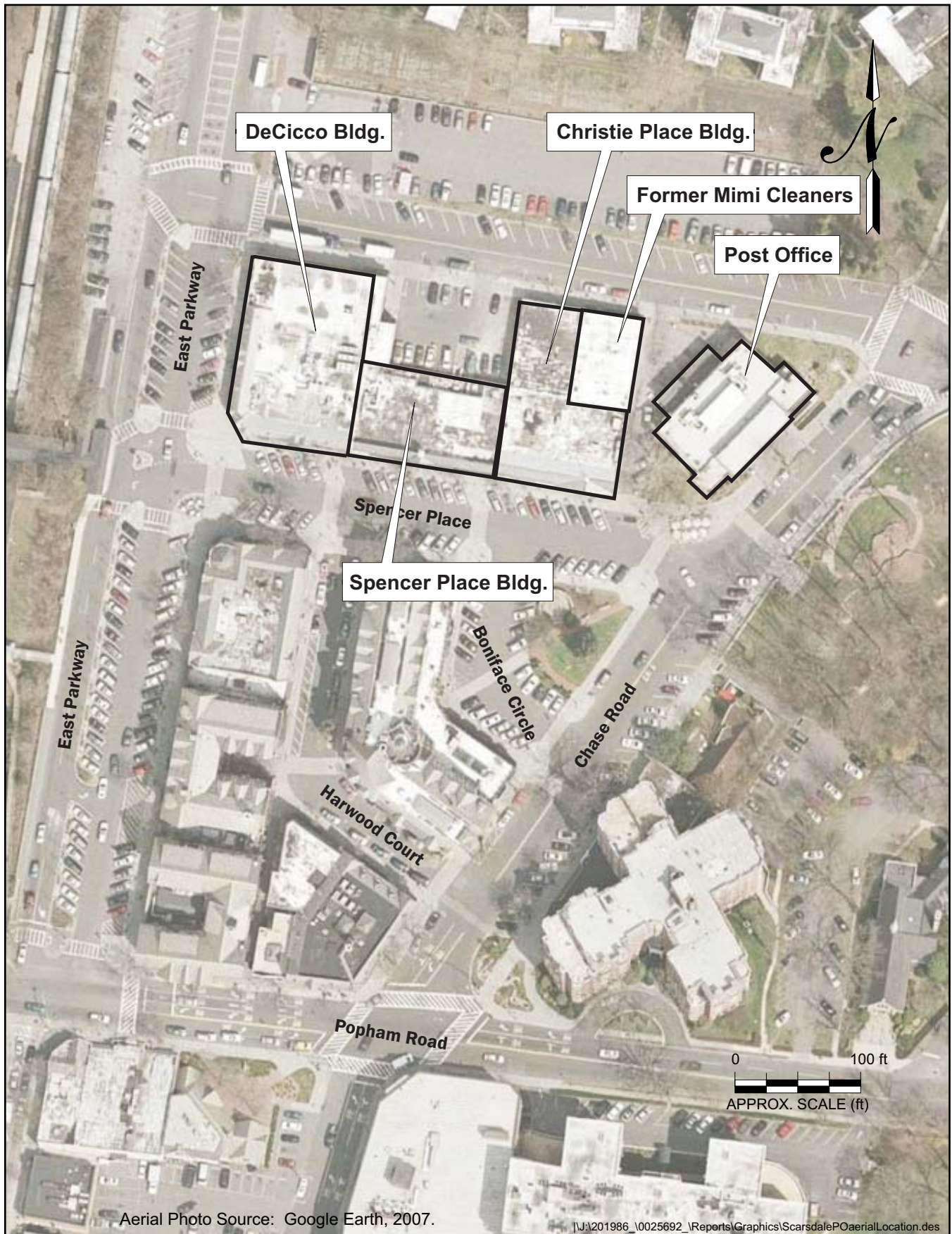
Very truly yours,

Henningson, Durham & Richardson Architecture and Engineering, P.C.
in association with HDR Engineering Inc.

A handwritten signature in black ink, appearing to read "John M. Guzewich". The signature is fluid and cursive, with a large, stylized "G" at the end.

John M. Guzewich
Project Manager

Cc: N. Walz, NYSDOH
B. Groden, West-Ex Associates
C. Leas, Esq. Sive, Paget & Riesel, P.C.



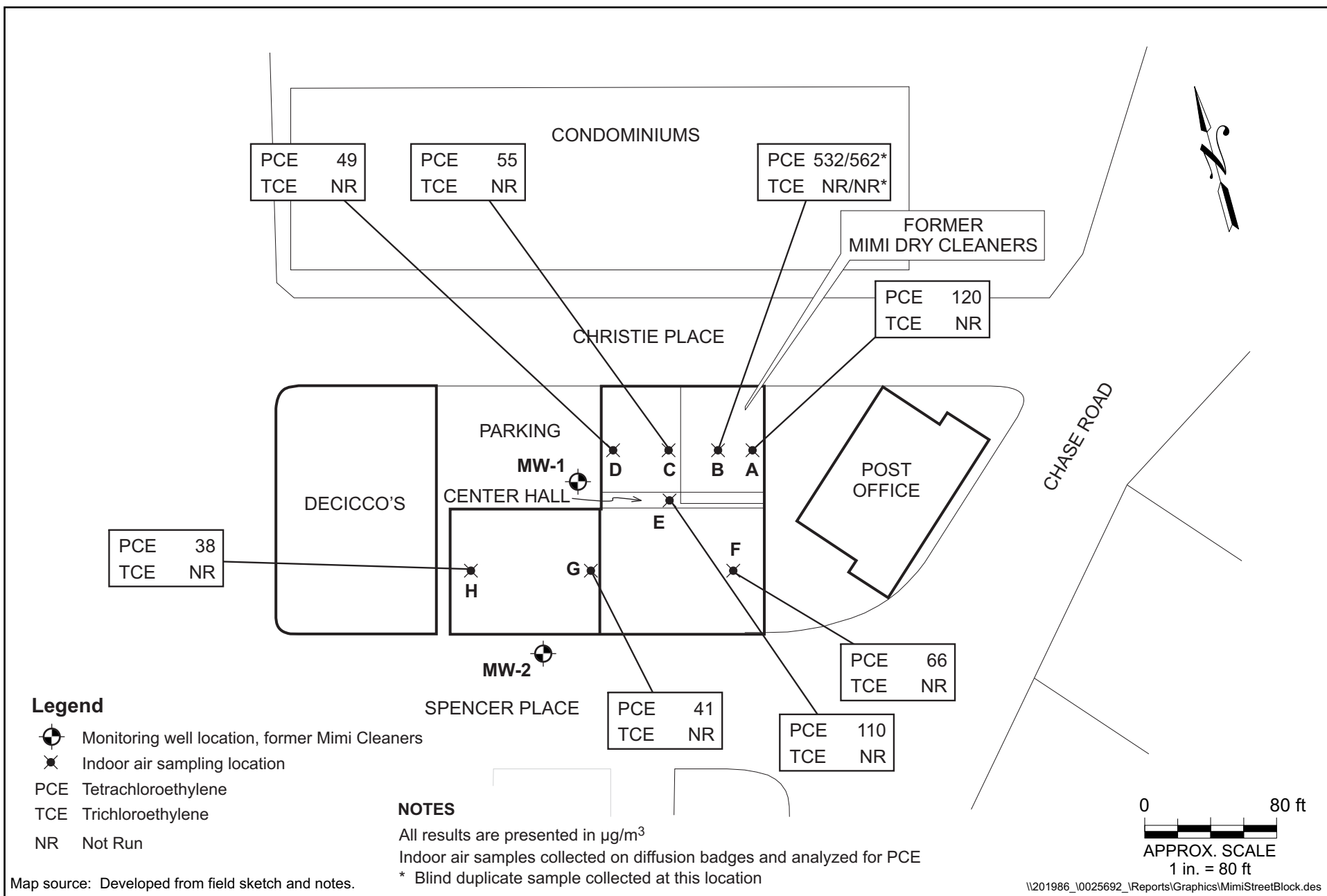
Henningson, Durham & Richardson
Architecture and Engineering, P.C.
One Blue Hill Plaza
Pearl River, NY 10965

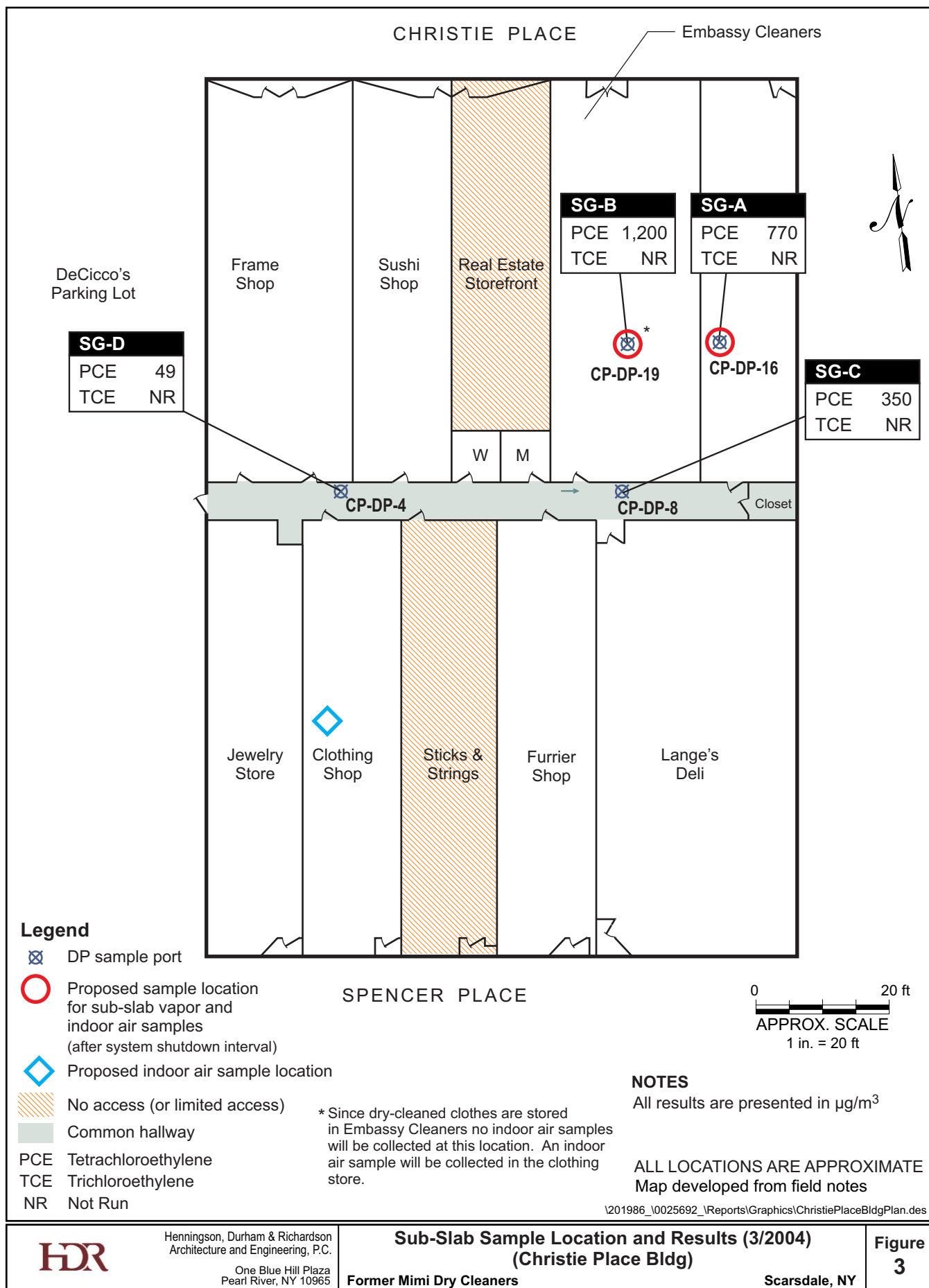
Location of Buildings in Study Area

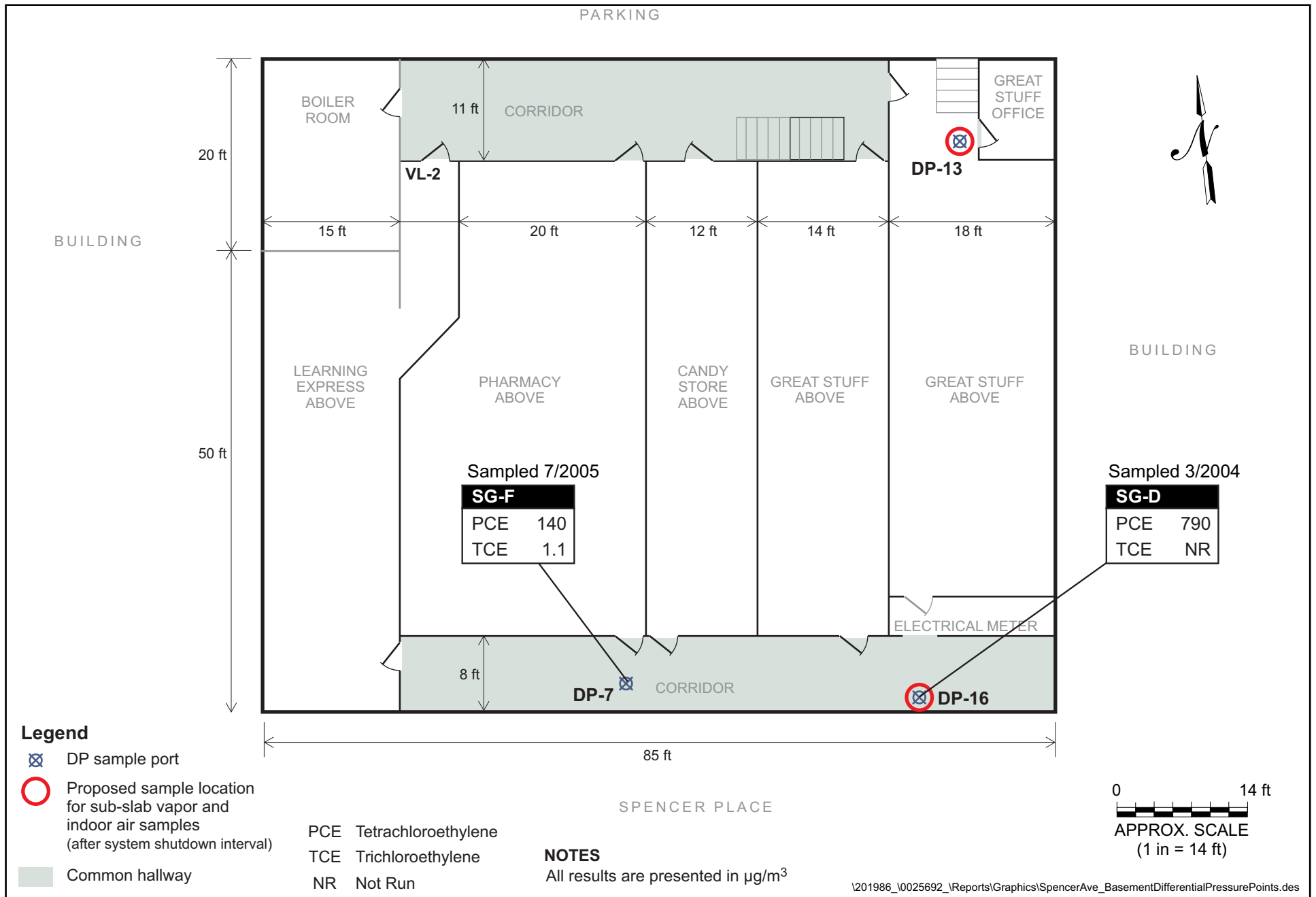
Former Mimi Dry Cleaners

Scarsdale, NY

Figure
1







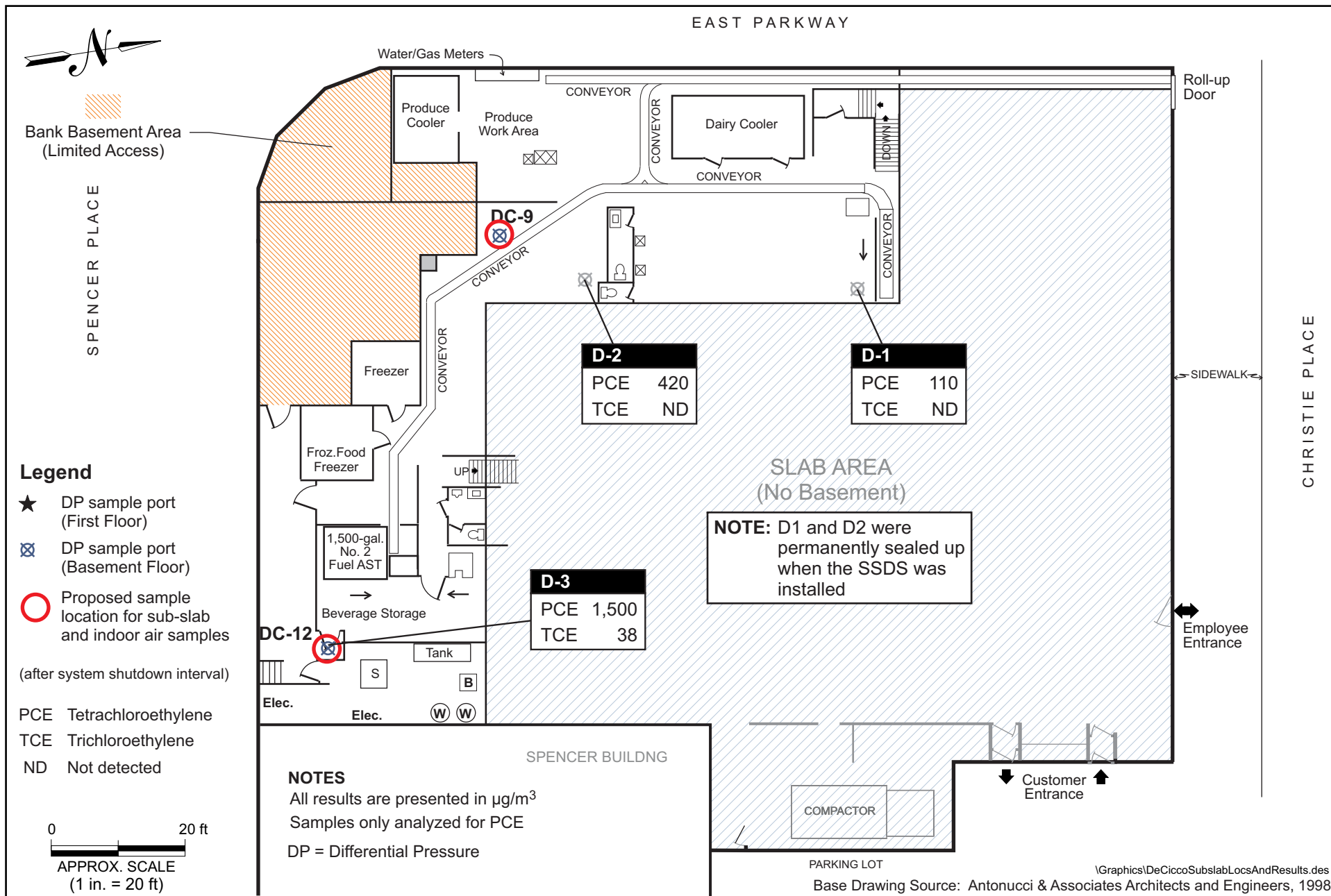
Henningson, Durham & Richardson
Architecture and Engineering, P.C.
in association with HDR Engineering, Inc.
One Blue Hill Plaza
Pearl River, NY 10965

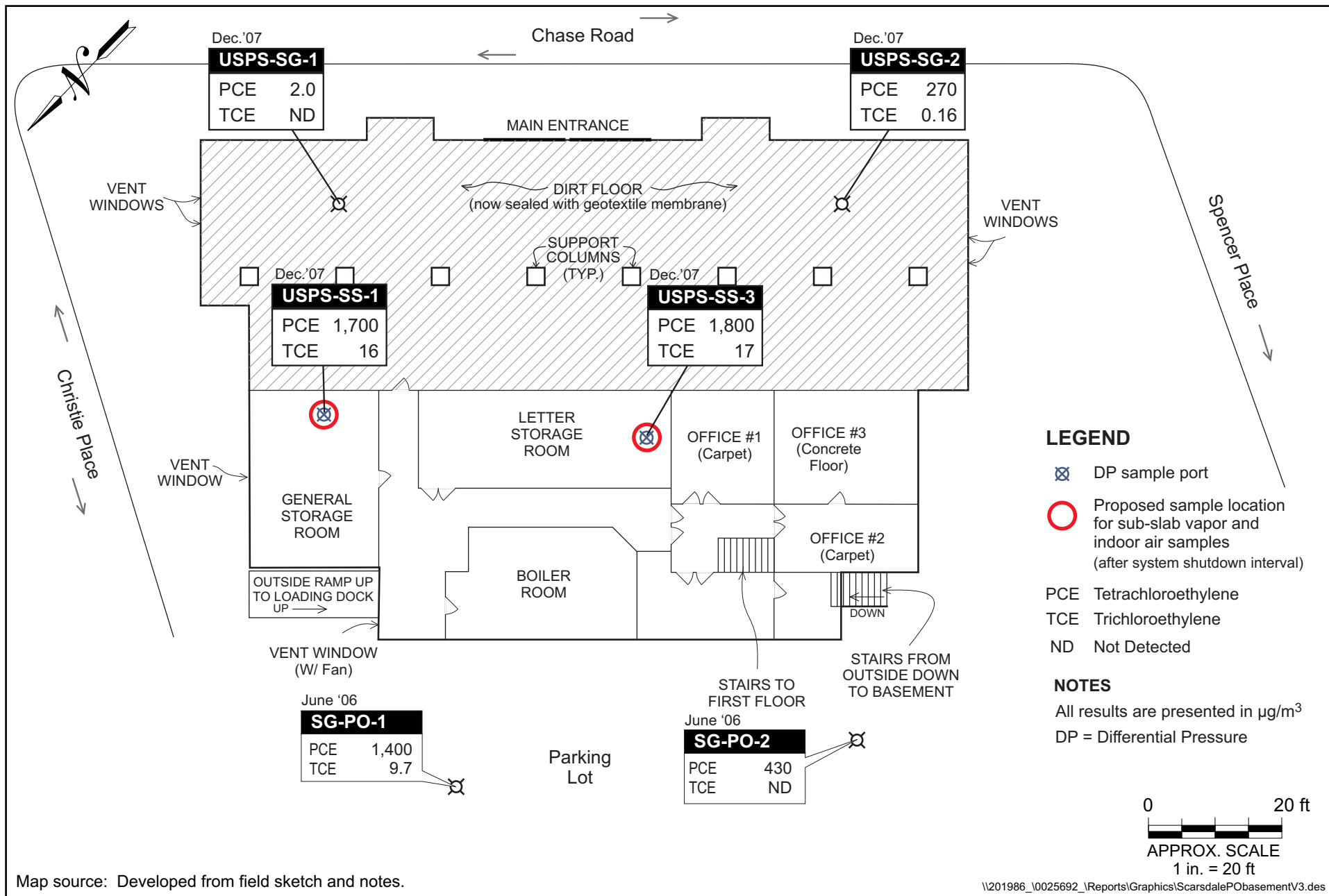
Former Mimi Dry Cleaners

Sub-Slab Sample Locations and Results (Spencer Place Bldg)

Scarsdale, NY

Figure
4





Henningson, Durham & Richardson
Architecture and Engineering, P.C.
in association with HDR Engineering, Inc.
One Blue Hill Plaza
Pearl River, NY 10965

Former Mimi Dry Cleaners

Sub-Slab Vapor and Soil Gas Sampling (Post Office Building)

Scarsdale, NY

Figure
6

\\201986_0025692_1\Reports\Graphics\ScarsdalePObasementV3.des