REQUEST FOR PROPOSALS

1901-09 N. 33RD STREET AND
1911-1915 N. 33RD STREET
PHILADELPHIA, PA 19121

FEBRUARY 26, 2018

PHILADELPHIA LAND BANK
1234 MARKET STREET, 16TH FLOOR
PHILADELPHIA, PENNSYLVANIA 19107

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I. INTRODUCTION

The Philadelphia Land Bank ("Land Bank") is soliciting proposals from developers to acquire and develop some or all of eight (8) contiguous parcels along the 1900 block of North 33rd Street.

The site consists of the following addresses: 1901-1909 N. 33 Street and 1911-1915 N. 33 Street (collectively "Development Site"). The Development Site is currently in the ownership of the Philadelphia Redevelopment Authority ("PRA"), but will be conveyed to the Land Bank prior to settlement. The Land Bank will be the managing entity for all aspects of this solicitation process, and will coordinate disposition of the Development Site to the winning developer.

The Land Bank expects competitive offer prices and invites proposals for the entire Development Site. There are no restrictions on the type of development proposed.

Funding used to acquire the Development Site requires its disposition for "fair market value". Due to this restriction, the Land Bank may disqualify any applicant whose bid price is deemed unreasonably below fair market value. It is up to the applicant to engage in their own research to determine an appropriate and competitive bid price.

II. SUMMARY DATA

- Development Site: Attached as Exhibit “A”
- Deposit: 10% of Bid Price
- Zoning Classification: RM-1

III. OBTAINING PROPOSAL MATERIALS

All proposal materials must be downloaded from The Philadelphia Land Bank website at www.philadelphialandbank.org.

IV. PRE-SUBMISSION CONFERENCE

A pre-submission conference (non-mandatory) will be held on March 12, 2018 at 10:00 AM in The Philadelphia Housing Development Corporation Boardroom, 1234 Market Street, 17th Floor, Philadelphia, PA 19107 to answer any questions regarding this RFP. Interested parties are urged to attend this conference.

V. SUBMISSION SCHEDULE & DEADLINES

All proposals, **including a good faith deposit in the amount of 10% of the bid price,** must be received on or before 4 PM on April 6, 2018. All submissions must be addressed to the attention of Christi M. Jackson, Director of Real Estate, Philadelphia Land Bank, 1234 Market Street, 16th Floor, Philadelphia, PA 19107.

The only acceptable evidence of timely delivery will be (i) a U.S. mail return receipt or a receipt from a nationally recognized delivery service (*e.g.*, FedEx) showing the date of delivery, or (ii) a time-stamped receipt from the Land Bank receptionist if hand delivering a proposal.

The dates indicated below are estimates only and the Land Bank reserves the right, in its sole and absolute discretion, to alter this schedule as it deems necessary or appropriate.

Schedule	**Date**
RFP Posted	February 26, 2018
Pre-submission Conference	March 12, 2018; 10:00 AM
Questions/Requests for Information Due *	March 16, 2018 4:30 PM
Questions and Answers posted to Land Bank's Website	March 23, 2018
Submissions Deadline	April 6, 2018; 4:00 PM
Developer Interviews ***Request Developers Tentatively Hold Date Open***	April 27, 2018
Developer(s) Selection Target Date	May 11, 2018

* All questions or comments regarding this RFP must be submitted in writing by email to: christi.jackson@phila.gov. Questions will not be accepted by telephone. Questions and requests for information will only be accepted until March 16, 2018. Questions and requests for information and the Land Bank responses to them will be posted on the Land Bank website.

VI. PROPOSAL SUBMISSION REQUIREMENTS

All responses to this Request for Proposals ("RFP") must contain an original and five unbound copies of the submission, as well as a flash drive containing all the materials in PDF format. The submission must contain the substantive information described below and conform to the following format:

A. Executive Summary

A written narrative of the proposed development should be provided in the form of a cover letter addressed to Christi M. Jackson, Director of Real Estate. The narrative should be no longer than two (2) pages in length and should succinctly summarize and describe the proposed

development. At a minimum, it should seek to address all of the evaluation criteria addressed in this Section VI. Specifically, please boldface the following elements in the body of the narrative:

1. Purchase Price – A lump sum offer price is required. Proposals that seek nominal consideration or a development subsidy will not be considered. Please note any contingencies to the submitted offer price.
2. General overview of the development.
3. Total size (floors and square footage).
4. Total development cost.
5. Requested zoning classification and any variances or exceptions that may be sought beyond the requested base zoning.

B. Forms to be Completed and Included in the Proposal

1. Economic Opportunity Plan — **Exhibit D**
2. Application and Development Sources and Uses of Funds Statement – **Exhibit E**
3. Certificate of Non-Indebtedness – **Exhibit F**
4. Developer's Statement of Tax Clearance and Conflict of Interest-**Exhibit G**
5. Campaign Disclosure Forms -**Exhibit H**

C. Development Schedule & Milestones

1. Predevelopment Schedule- Include a schedule listing important milestones and dates, beginning with due diligence activity (no more than 45 days); signing the Purchase and Development Agreement; securing all required approvals, permits, and financing commitments; and an anticipated settlement date.

2. Post-Closing Construction Schedule- This section should include, at a minimum, a schedule showing critical milestones such as, construction commencement and completion deadlines, any phasing that may be required, and projected sales and occupancy timeframe.

D. Architectural Submission

A schematic design must be prepared by a registered architect and submitted on 11" x 17" size paper. Each copy of the proposal must contain an 11" x 17" set of the plans and include, at a minimum, the following:

1. Site Plan
2. All proposed buildings/improvements with dimensions, horizontal, vertical, and ground elevations
3. Materials, finishes, and colors for each of the façades of the proposed buildings and improvements

4. Ground floor dimensioned and principal floor plans
5. Site dimensions and lot coverage
6. If the Development Site is to be subdivided, the dimensions for each new parcel
7. Tree plantings, fencing, lighting, and streetscape
8. Proposed setbacks, side yards, back yards, driveways, and parking
9. Materials for parking, yard drains, or other impervious surfaces

E. Project Financial Summary

Responses must demonstrate financial wherewithal and development capacity to carry out the proposed development. Submissions must provide documentation of availability of funds in an amount no less than the total development cost of the project. All lending institutions must be acceptable to the Land Bank and demonstrate the capability and commitment to provide the financing required to successfully complete the proposed development project. Failure to provide clear evidence of funding for the proposal to purchase and develop the Development Site will disqualify submissions.

Please include the following elements when describing the financial components of the proposed development.

a) Completion of the Sources and Uses of Funds Statement (Exhibit E)

b) A written narrative of the project financing plan.

c) Project financials including development budget(s), sources/uses, assumptions, and operating pro forma(s) demonstrating feasibility through predevelopment, construction, and exit.

d) Evidence of financial capability to fund the total cost of the development. Acceptable forms of evidence include:

   i) personal or business bank statements for the developer entity (for latest 3 consecutive months),

   ii) audited financial statements for the last fiscal year plus internal financial statements ending the most recent quarter for the developer entity,

   iii) the most current audited financial statements for all members of the development team,

   iv) signed commitment letter(s) that specifically references the proposed project and the amount of funding pursuant to the project budget, or

v) other written evidence of access to capital that specifically references the proposed project and the amount of funding pursuant to the project budget (e.g., line of credit with statement of available funds, commitment letter from private investors)

e) Litigation/Judgments – The proposal must contain information regarding all litigation (pending or threatened) in which the developer entity or any of the members of the development team are, or may become, involved and all judgments against the development entity or any members of the development team that may affect the ability to successfully execute the proposed project.

F. Deposit

Proposals must include a deposit of ten percent (10%) of the offer price in a form acceptable to the Land Bank. These forms include, in order of preference, a cashier's check, certified check, or money order made payable to the "Philadelphia Land Bank".

The deposit of the development team(s) selected to acquire and develop the Development Site and will become "hard" money upon signing the Purchase and Development Agreement. For those applicants not selected, the deposit will be refunded within thirty (30) days after mailing of a rejection notice. Interest earned on any deposits will not be paid. The deposit will be applied towards the performance deposit required under the Purchase and Development Agreement.

G. Development Team

Provide information regarding the project team, scope, and financial structure. The Developer should also provide a statement of qualifications including, without limitation, projects completed, total development costs, number of units, year completed, and type of project. The statement of qualifications must include a section detailing the Developer's experience dealing with public funds and/or properties. All members of the development team and their roles should be clearly identified. The qualification statement should include information regarding any other projects the team has engaged in together and the status of those projects. The applicant must include in their proposal evidence that the legal entity expected to sign the Purchase and Development Agreement and take title to the Development Site is validity existing, and qualified to do business, in the Commonwealth of Pennsylvania.

H. Social Impact

The development team should define the project's social impact within their proposal. Social impact refers to the way that a project can have a positive effect on people and communities. Applicants may engage a consultant to assist in developing an approach to impact assessment. Such impact should be described and quantified with relevant metrics (*i.e.*, approximate number of people to be served by the social impact component). Examples of social impact may include, without limitation:

- Providing affordable housing.
- Creating or retaining jobs.
- Providing quality commercial goods and services to under-served communities.
- Providing high-quality community services.
- Providing affordable healthy food access.
- Providing opportunities for minority businesses.
- Flexible lease rates for community-serving nonprofits, locally-owned or minority-owned businesses.
- Goods, services, and facilities specifically targeted at serving low-income persons.
- Financial contributions from the developer to local community-based groups, nonprofits or community funds.

VII. SUBMISSION OF PROPOSALS

Proposals are due at the offices of the Philadelphia Land Bank no later than **4 PM on April 6, 2018**.

Absolutely no proposals will be accepted after this time.

One original and five unbound copies of the submission, as well as a flash drive containing all the materials in PDF format, to:

Christi Jackson
Director of Real Estate
Philadelphia Land Bank
1234 Market Street, 16th Floor
Philadelphia, PA 19107

An applicant, whether an individual, partnership, LLC, non-profit, for profit or other entity may submit only one response to the RFP. Individuals that are related to each other or business entities that are related to each other or to a common entity may not submit separate proposals. The Land Bank, in its sole and absolute discretion, retains the right to reject any proposal where: 1) applicants or principals of applicants are substantially similar or substantially related parties; or 2) the Land Bank has determined that the applicant has violated these conditions or the spirit of these conditions.

The Land Bank will not pay any fees, commissions, or other amounts to any parties acting as agents, brokers, consultants, or contractors as part of this transaction. Payment to any agents, brokers, consultants, or contractors will be the responsibility of the purchaser.

VIII. THRESHOLD REVIEW

The Land Bank will initially review the proposals to determine compliance with the requirements of this RFP including, without limitation, the Proposal Submission Requirements in Section VI. Only complete, timely submitted proposals that are in compliance with the requirements of this RFP will be considered for evaluation. If no proposal meets these requirements, the Land Bank may allow all applicants to supplement their submissions to conform to these requirements.

IX. EVALUATION OF PROPOSALS

Proposals deemed satisfactory pursuant to the Threshold Review will be evaluated by a Proposal Review Team. Proposals will be evaluated in their entirety – *i.e.*, no one factor, but rather a combination of factors will determine the successful developer. Final selection is subject to approval as stated in Land Bank Disposition Process in Section XII. Proposals will be evaluated using a combination of factors as determined by the Land Bank including, but not limited to, the following:

1. **Purchase Price**

   Total purchase price will be taken into consideration along with the proposed development plans. The Land Bank will award this project to the response that scores the highest according to the selection criteria. Purchase price is one of these criteria, though the project will not necessarily be awarded to the highest bidder. Funding used to acquire the Development Site requires its disposition for "fair market value". Due to this restriction, the Land Bank may disqualify any applicant whose bid price is deemed unreasonably below fair market value. It is up to the applicant to engage in their own research to determine an appropriate and competitive bid price.

2. **Financial Feasibility**

   Identification and documentation evidencing proposed sources of funds needed to undertake and complete the proposed development in a timely manner. No City funds have been dedicated to this project. Only proposals that demonstrate the ability to complete the proposed development using entirely private sources will be considered.

3. **Urban Design, Sustainability, and Conformity with Existing Zoning**

   a) Quality Urban Design- The Land Bank encourages proposals that (i) eliminate front-loading garages, (i) limit curb cuts (yet still provide for off-street parking), (iii) maximize open-space opportunities, (iv) are built with quality materials and finishes, and (v) demonstrate appropriate scale with the surrounding residential uses. Structures should be sensitive to the pedestrian environment through building

facades that are engaging and put many eyes on the street. Building size and scale should be designed to enhance walkability and provide quality buildings by respecting the rhythms found in the size, placement, and proportion of entries and windows in other buildings. Avoid false historic design and garages that dominate the streetscape. Dumpsters, electrical and mechanical equipment should be permanently screened.

b) Sustainable Design- The Land Bank encourages proposals that incorporate sustainable "green" design features materials, and processes, including, but not limited to, LEED Certification, Energy Star, and other features that consider building performance objectives and building design guidelines that integrate energy efficiency.

c) Existing Zoning- The Development Site is zoned RM-1. Effort must be made to comply with the existing underlying zoning. If this is not feasible, Developer must provide a clear, rational explanation as to why.

4. Current in Financial Obligations to City of Philadelphia

Applicants must provide evidence satisfactory to the Land Bank that all municipal taxes, including business taxes, real estate, school, water and sewer charges, if applicable, are current for both the individual applicant, the applicant's firm, and all principals of the development team and neither is currently indebted to the City; will at any time during the term of the Purchase and Development Agreement be indebted to the City, for or on account of any delinquent taxes, liens, judgments, fees, or other debts for which no written agreement or payment plan satisfactory to the City has been established. Please complete the Philadelphia Tax Status Certification and Conflict of Interest forms and submit them with your proposal.

5. Development Timeline

The speed at which predevelopment, due diligence, settlement, and construction activity occur will be carefully considered. The project should be able to be completed within twenty-four (24) months of execution of the Purchase and Development Agreement.

6. Properties Required for Development

The Land Bank requires proposals that seek to develop all of the Development Site in a comprehensive manner.

7. Compliance with the Land Bank's Disposition Policy

The Land Bank's disposition policy can be found on the Land Bank's website at www.philadelphialandbank.org.

8. Economic Opportunity Plan

The development team should demonstrate their experience working with Certified M/W/DBE firms—defined as Minority Business Enterprises (MBE), Woman Business Enterprises (WBE), or Disabled Business Enterprises (DBE). The Land Bank strongly encourages and promotes the employment of qualified MBE/WBE/DBE firms. If the applicant is a Certified M/W/DBE, please submit information to confirm certification as part of the proposal. Firms must complete the "City of Philadelphia Economic Opportunity Plan" form (Exhibit D). Baseline goals established by the City of Philadelphia are (i) 18% MBE and 7% WBE or (ii) 15% MBE and 10% WBE; however, the Land Bank encourages applicants to seek the highest levels of M/W/DBE attainment that is reasonably feasible.

In addition, applicants must provide a narrative describing the Developer's track record in M/W/DBE inclusion. The narrative must discuss the Developer's plan and track record for engaging minority workforce. Applicants should note whether the applicant itself and/or other key partners, consultants, or contractors who are part of the development team are minority or woman-owned. Consideration will be given to the applicant's Economic Opportunity Plan as compared to the City's baseline goals.

X. RESERVATION OF RIGHTS AND DISCLOSURES

ALL INFORMATION IN THIS RFP IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. WHILE EVERY EFFORT HAS BEEN MADE TO ENSURE THE ACCURACY OF THE INFORMATION CONTAINED IN THIS RFP, IT IS NOT, AND SHALL NOT BE CONSTRUED TO BE OR CONSTITUTE, A REPRESENTATION, WARRANTY OR GUARANTEE BY THE LAND BANK, THE CITY OF PHILADELPHIA, OR THE PRA REGARDING THE CONTENT, COMPLETENESS, OR ACCURACY OF SUCH INFORMATION, OR THE QUALIFICATIONS OR EXPERTISE OF THE INDIVIDUAL(S) OR FIRM(S) PROVIDING OR PREPARING SUCH INFORMATION. EACH APPLICANT SHALL RELY SOLELY ON ITS OWN INSPECTION, INVESTIGATION, CONFIRMATION, AND ANALYSIS OF (I) THE DEVELOPMENT SITE; (II) THE INFORMATION CONTAINED IN OR DELIVERED PURSUANT TO THIS RFP AND (III) ANY OTHER INFORMATION THAT SUCH APPLICANT DEEMS NECESSARY OR PRUDENT IN EVALUATING AND ANALYZING THE PROPOSED PURCHASE AND DEVELOPMENT OF THE DEVELOPMENT SITE.

The Land Bank shall not be under any obligation to convey the Development Site to any applicant unless and until the Land Bank (or its designee) and such applicant have fully signed a legally binding Purchase and Development Agreement. In no event shall the Land Bank be responsible for any costs, expenses, or fees incurred by, or on behalf of any applicant, in connection with this RFP. All applicants shall be solely responsible for all such costs, expenses, and fees.

Prior to the disposition of the Development Site, the Land Bank will be the legal title holder of the Development Site, and intends to convey the Development Site to the selected developer pursuant to a Purchase and Development Agreement (a draft of which is included as Exhibit I which is subject to change) within a timeframe specified by the Land Bank.

ATTACHED AS EXHIBIT C TO THIS RFP ARE (I) REPORT ON THE ENVIRONMENTAL SITE ASSESSMENT ("PHASE I REPORT") DATED JUNE 6, 2013, PREPARED BY BATTA ENVIRONMENTAL ASSOCIATES, INC. AND (II) A PHASE II ENVIRONMENTAL SITE INVESTIGATION ("PHASE II REPORT") DATED DECEMBER 2013, PREPARED BY G&C ENVIRONMENTAL SERVICES, INC. THE PHASE I REPORT AND THE PHASE II REPORT ARE COLLECTIVELY REFERRED TO AS THE "ENVIRONMENTAL REPORTS". EACH APPLICANT IS STRONGLY ENCOURAGED TO READ THE ATTACHED ENVIRONMENTAL REPORTS (EXHIBIT C).

THE ENVIRONMENTAL REPORTS ARE BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY WITHOUT ANY REPRESENTATION, WARRANTY, OR GUARANTEE BY THE LAND BANK, THE CITY OF PHILADELPHIA, PRA, OR THE PHILADELPHIA HOUSING AUTHORITY REGARDING, IN ANY WAY, (I) THE CONTENT, COMPLETENESS, OR ACCURACY OF THE ENVIRONMENTAL REPORTS OR THE INFORMATION CONTAINED THEREIN; (II) THE PAST, PRESENT, OR FUTURE CONDITION OF THE DEVELOPMENT SITE; (III) THE PAST, PRESENT, OR FUTURE PRESENCE OR ABSENCE OF ANY HAZARDOUS WASTE, MATERIAL, SUBSTANCE, OR CONTAMINATION AT, ON, UNDER, ADJACENT TO, OR IN THE VICINITY OF THE DEVELOPMENT SITE; (IV) THE CONDITION OF THE DEVELOPMENT SITE, OR (V) THE QUALIFICATIONS OR EXPERTISE OF THE INDIVIDUAL(S) OR FIRM(S) PROVIDING OR PREPARING THE ENVIRONMENTAL REPORTS.

NO FUNDS FROM THE LAND BANK, THE CITY OF PHILADELPHIA, PRA, OR ANY OTHER GOVERNMENTAL OR QUASI-GOVERNMENTAL AGENCY WILL BE PROVIDED FOR THE REMEDIATION OF THE DEVELOPMENT SITE, OR PORTION THEREOF. ALL ENVIRONMENTAL REMEDIATION INCLUDING, WITHOUT LIMITATION, ALL COSTS AND EXPENSES, WILL BE THE SOLE RESPONSIBILITY OF THE SELECTED DEVELOPER AND MUST BE INCLUDED IN THE DEVELOPMENT SOURCES AND USES OF FUNDS STATEMENT (EXHIBIT E).

GROUNDWATER TESTING WILL <u>NOT</u> BE PERMITTED AT ANY TIME PRIOR TO SETTLEMENT.

THE DEVELOPMENT SITE IS BEING OFFERED IN ITS "AS IS, WHERE IS" CONDITION "WITH ALL FAULTS", INCLUDING, WITHOUT LIMITATION, ANY AND ALL DEFECTS, KNOWN AND UNKNOWN, AND SPECIFICALLY AND EXPRESSLY WITHOUT ANY WARRANTIES, REPRESENTATIONS, OR GUARANTEES, EXPRESS OR IMPLIED, OF ANY KIND, NATURE, OR TYPE WHATSOEVER FROM OR ON BEHALF OF THE LAND BANK, THE CITY OF PHILADELPHIA, PRA, THE PHILADELPHIA HOUSING AUTHORITY, OR THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, OR AGENTS. TO THE MAXIMUM EXTENT OF THE LAW, THE LAND BANK DISCLAIMS, AND DEVELOPER EXPRESSLY WAIVES ANY AND ALL IMPLIED WARRANTY OF HABITABILITY (INCLUDING POTENTIAL OR ACTUAL LATENT DEFECTS), REASONABLE WORKMANSHIP, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE.

By submitting a proposal in response to this RFP, each applicant acknowledges that it is not entitled to, has not relied, and is not relying upon this RFP or any information, document, report, statement, map, sketch, projection, pro forma, representation, guarantee, or warranty, whether express or implied, oral or written, past or present, or material or immaterial, that may have been given, or made by, or on behalf of, the Land Bank, the City of Philadelphia, PRA, the Philadelphia Housing Authority, or any of their respective directors, officers, employees, or agents, including, without limitation, any representation, guarantee, or warranty concerning:

a) **the quality, nature, adequacy, or condition of the Development Site, or any portion thereof, including, without limitation, appurtenances and access;**

b) **the quality, existence, nature, adequacy, or condition of soil, ground water, sub-surface support, structural integrity, and geology at the Development Site, or any portion thereof,**

c) **the quality, existence, nature, adequacy, or condition of any utilities serving the Development Site, or any portion thereof;**

d) **the quality, existence, nature, adequacy, or condition of the ability to access utilities at the Development Site, or any portion thereof;**

e) **the quality, existence, nature, adequacy, condition, or ability to access any rights of way or roads of any kind;**

f) **the development potential of the Development Site, or any portion thereof, its habitability, merchantability, or fitness, suitability or adequacy of the Development Site, or any portion thereof, for any particular purpose;**

g) **the zoning classification, use, or other legal status of the Development Site, or any portion thereof, including, without limitation, any permits, approvals, zoning, or land development issues;**

h) **compliance with any applicable codes, laws, rules, regulations, statutes, ordinances, covenants, conditions, or restrictions including, without limitation, any environmental pollution laws, rules, regulations, orders or requirements;**

i) **the condition of title to the Development Site, or any portion thereof, or the nature, status, and extent of any right, encumbrance, license, reservation, covenant, condition, restriction, or any other matter affecting title to the Development Site, or any portion thereof;**

j) the presence or absence of any hazardous waste, material, substance, or contamination at, on, under, adjacent to, or in the vicinity of the Development Site, or any portion thereof; the handling, generating, treating, storing, or disposing of any hazardous waste, material, or substance at, on, under, adjacent to, or in the vicinity of the Development Site, or any portion thereof; or any other environmental matter or condition of the Development Site, or any portion thereof, including, without limitation, mold and radon in or near the Development Site, or any portion thereof;

k) the habitability, merchantability, marketability, profitability, or fitness for a particular purpose of the Development Site, or any portion thereof; or

l) the income to be derived from, or the value, profitability, or marketability of the Development Site, or any portion thereof.

Any entry upon any portion of the Development Site will require that the applicant's contractors and subcontractors enter into a license agreement as provided by the Land Bank, which will require a security deposit.

By submitting a proposal in response to this RFP, an applicant affirmatively acknowledges its acceptance of the terms and conditions of this RFP and that the Land Bank reserves and may exercise, in its sole and absolute discretion, the following rights at any time and without notice to any applicant :

1. to reject any and all proposals;
2. to request one or more applicants to provide additional material, clarification, confirmation, or modification of any information in any and all proposals;
3. to supplement, amend, substitute, modify or re-issue this RFP with terms and conditions materially different from those set forth herein
4. to cancel this RFP with or without issuing another RFP;
5. to extend the time period for responding to this RFP or any other time periods referred to in this RFP;
6. to conduct personal interviews with any applicant;
7. to negotiate with one or more applicants concerning any aspect of a proposal, including, without limitation, price;
8. to terminate negotiations regarding any and all proposals at any time;
9. to expressly waive any defect or technicality in any proposal;
10. to solicit new proposals;
11. to rescind a selection prior to execution of the Purchase and Development Agreement if the Land Bank determines, in its sole and absolute discretion, that a proposal does not conform to the specifications of this RFP;
12. to rescind a selection prior to execution of the Purchase and Development Agreement if the Land Bank determines, in its sole and absolute discretion, that the specifications

contained in this RFP are not in conformity with law or that the process in selection of a proposal was not in conformity with law or with the legal obligations of the Land Bank.

13. in the event a contract is awarded, the successful applicant or applicants shall procure and maintain during the life of the contract liability insurance in an amount to be determined prior to the award of any contract;
14. in the event a contract is awarded, all applicants agree to perform their services as an independent contractor and not as an employee or agent of the Land Bank;
15. in the event a contract is awarded, all applicants agree that no portion of performance of the contract shall be subcontracted without the prior written approval of the Land Bank; and
16. each applicant agrees to indemnify, protect and hold harmless the Land Bank and the City of Philadelphia from any and all losses, injuries, expenses, demands and claims against the Land Bank or the City of Philadelphia sustained or alleged to have been sustained in connection with or resulting from (i) the submission of the applicant's proposal; (ii) the delivery by the applicant to the Land Bank of any documents or information; and (iii) any conduct undertaken by the applicant in furtherance of or in relation to the applicant's proposal. Each applicant agrees that its duty to indemnify and hold harmless shall not be limited to the terms of any liability insurance, if any, required under this RFP or subsequent contract.

NOTICE: The Philadelphia Land Bank is subject to the Pennsylvania Right to Know Law. Any information provided in your response to this Request for Proposals may be subject to disclosure to the public.

XI. SELECTION OF DEVELOPER

It should be noted that the disclosure statements and other documentation submitted to the Land Bank are important sources of information upon which the Land Bank may base its selection of a developer. Accordingly, any misrepresentation, misstatement, or omission, either willful or inadvertent, in any document submitted to the Land Bank in connection with this RFP will be sufficient for the Land Bank to reject the applicant and their proposal. Subject to any applicable reservation of rights and the Land Bank's disposition process, upon completion of the review and evaluation, the Proposal Review Team shall recommend a course of action to the Land Bank Board of Directors. The Land Bank will notify all applicants of the results and return all deposits (without interest) to all other applicants within thirty (30) days after mailing of a rejection notice.

XII. PHILADELPHIA LAND BANK DISPOSITION PROCESS

After the Proposal Review Team reviews the proposals and an applicant’s proposal is selected, approval by the Vacant Property Review Committee, Philadelphia City Council, and the Land

Bank Board of Directors is required prior to the Land Bank executing the Purchase and Development Agreement and construction commencing. Following is a general sequence of events in this approval process:

1. Staff review and approval of proposal and conceptual plans in consultation with the Planning Commission;
2. Execution of a Purchase and Development Agreement by the selected developer (Exhibit I – draft only, subject to change);
3. Approval by the Vacant Property Review Committee;
4. Approval by Philadelphia City Council;
5. Approval by the Land Bank Board of Directors;
6. Execution of a Purchase and Development Agreement by the Land Bank;
7. Settlement;
8. Pre-construction conference;
9. Construction period;
10. Review of the completed development by the Land Bank to determine compliance with the Purchase and Development Agreement. If the development is found to be in compliance with the Purchase and Development Agreement, the Land Bank issues a Certificate of Completion and the deposit is returned as more specifically set forth in the Purchase and Development Agreement.

The developer shall be responsible for securing all necessary permits, licenses, approvals, lot line relocations, or variances, at the developer's sole cost and expense, necessary to comply with the development controls, City Codes, and the approved design development and construction drawings.

XIII. EVENTS OF DISQUALIFICATION OR DEFAULT

A. Events of Disqualification or Default

Subsequent to the selection of a developer and before the execution of the Purchase and Development Agreement by all parties, the Land Bank may treat any of the following as an event of disqualification or default:

1. Unilateral withdrawal by the selected developer;
2. Failure to proceed substantially in accordance with the proposal as submitted;
3. Failure by the developer for any reason whatsoever to timely execute the Purchase and Development Agreement when tendered;
4. Material misrepresentation, omission, or inaccuracy contained in any document submitted either as part of this RFP, or subsequent thereto. For the purposes of this section, the Land Bank places particular importance on the information required by the Certificate of Non-Indebtedness, Developer's Statement of Tax Clearance and Conflict of

Interest, Developer's qualifications and financial information, and the Developer's Statement for Public Disclosure; or

5. Failure to provide in a timely manner any additional material required after selection and throughout the Land Bank's disposition process.

B. Remedies

Upon the happening of an Event of Disqualification or Default by a selected developer, the Philadelphia Land Bank shall have the right, at its election, to:

1. Rescind its selection of the developer;
2. Declare null and void the Purchase and Development Agreement even if it may have already have been executed; and/or
3. Retain the deposit as full, fixed and liquidated damages, and not a penalty.

EXHIBIT A

LEGAL DESCRIPTION

ALL THAT CERTAIN lot or piece of ground situate in the 32nd Ward of the City of
Philadelphia and described as follows:

BEGINNING at the intersection of the East side of 33rd Street (100 feet wide, erroneously cited as 50 feet wide in prior deed) and the North side of Berks Street (50 feet wide).

CONTAINING in front or breadth on the said side of 33rd Street 88 feet and extending of that width in length or depth Eastward between parallel lines at right angles to the said 33rd Street 90 feet to a point on the West side of a certain 10 feet wide alley that extends Southward into the said Berks Street, said alley communicating with a certain
4 feet wide alley that extends Eastward.

BEING NO. 1901- 09 North 33rd Street

MAP REGISTRY NO. 016N140173

OPA/BRT ACCOUNT NO. 781030010

ALL THAT CERTAIN lot or piece of ground situate in the 32nd Ward of the City of
Philadelphia and described as follows:

BEGINNING on the Southeast corner at the intersection of North 33rd Street (100 feet wide) and West Monument St (36 feet wide).

CONTAINING in front or breadth on the East side of the said 33rd Street 55 feet and extending of that width in length or depth Eastward between parallel lines at right angles to the said 33rd Street and along the South side of the said Monument street 90 feet to the West side of a certain 10 feet wide cartway extending Northward into the said Monument Street and Southward into Berks Street (50 feet wide).

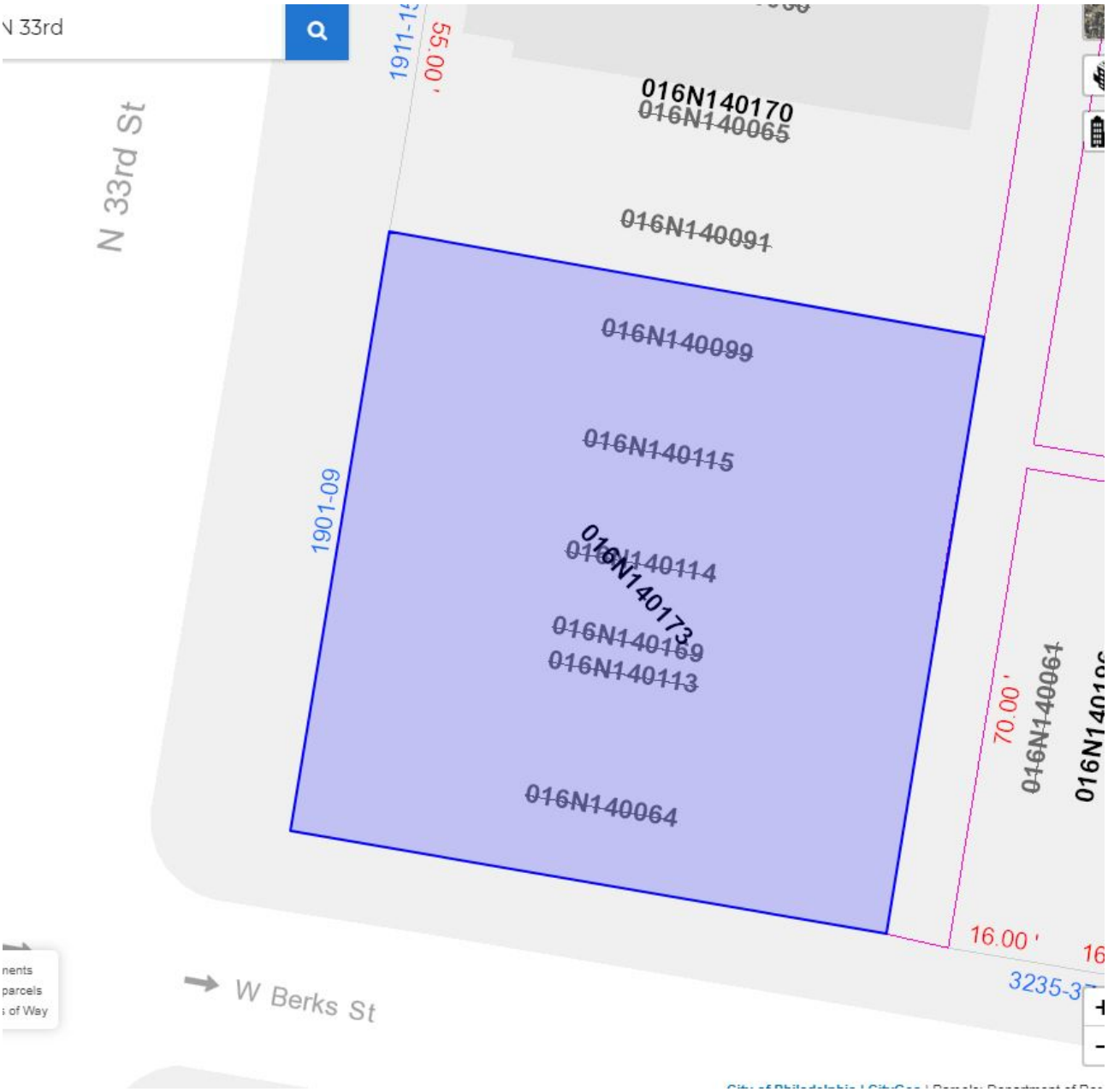
BEING NO. 1911-15 North 33rd Street

MAP REGISTRY NO. 016N140170

OPA/BRT ACCOUNT NOS. 323341400 (1911), 323341500 (1913), 323341600 (1915)
(to be consolidated into one account prior to conveyance)

EXHIBIT B

SITE PLAN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1911-15
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016N140170
016N140065
016N140091
016N140099
016N140115
1901-09
016N140114
016N140173
016N140169
016N140113
016N140064
70.00 '
016N140061
016N140190
16.00 '
3235-37
W Berks St
nents
parcels
of Way


90.00 '
Monument St
90.00 '
016N140060
1911-15
55.00 '
016N140170
016N140065
N 33rd St
016N140091
016N140099
016N140115
1901-09
016N140114
Easements
Transparcels
Rights of Way

EXHIBIT C

PHASE I AND PHASE II ENVIRONMENTAL REPORTS

EXHIBIT D

ECONOMIC OPPORTUNITY PLAN

CITY OF PHILADELPHIA
ECONOMIC OPPORTUNITY PLAN

[PROJECT NAME/ADDRESS]

I. INTRODUCTION, DEFINITIONS, GOALS AND DIVERSITY PRACTICES

The City of Philadelphia, acting through its offices of the Division of Housing and Community Development ("DHCDHCD") and Office of Economic Opportunity ("OEO") (collectively, "City") and the Philadelphia Redevelopment Authority ("PRA") strongly encourage the use of certified Minority ("MBE"), Women ("WBE"), Disabled ("DSBE") and Disadvantaged[1] ("DBEs") Business Enterprises (collectively, "M/W/DSBEs") and minority and female workers in all aspects of the development and use of a parcel(s) of land located at _____, which may include financial investment, design, construction and operations (Project). In support of this objective, City and PRA will require that the Purchaser of this parcel commit to this Economic Opportunity Plan ("EOP" or "Plan") as required by Section 17-1602 of The Philadelphia Code, as amended.

This Plan contains ranges of projected M/W/DSBE utilization and goals for the employment of minority and female workers in connection with the Project. Purchaser shall cause this Plan to be made part of and incorporated into all bids, proposals and solicitations and any resulting agreement(s) entered into between Purchaser and any participant in connection with the development and use of the parcel. By submission of this Plan, Purchaser makes a legally binding commitment to the City and PRA to abide by the provisions of this Plan which include its commitment to exercise its Best and Good Faith Efforts throughout the project and its commitment to cause its participants to use their Best and Good Faith Efforts to provide subcontracting opportunities for M/W/DSBEs in all phases of the project and to employ a diverse workforce. This Plan expressly applies to all contracts awarded in connection with the Project.

Neither Purchaser nor any participant shall discriminate on the basis of race, color, religion, sex, national origin, sexual orientation, gender identity, ancestry, age, or handicap in the award and performance of contracts pertaining to this Plan. Purchaser has summarized its current and past practices relating to Purchaser's diversity practices ("Diversity Practices Statement"). This statement, included as Attachment "A" to this Plan, identifies and describes Purchaser's processes used to develop diversity at all

[1]Disadvantaged Business Enterprises ("DBEs") are those socially or economically disadvantaged minority and woman owned businesses certified under 49 C.F.R. Part 26.

levels of Purchaser's organization including, but not limited to, board and managerial positions. This Diversity Practices Statement summarizes Purchaser's strategic business plans specific to its current or past practices of M/W/DSBE utilization on its government and non-government projects and procurement activities. Purchaser further agrees to identify any "Equity Ownership" held in connection with this Project which shall mean the percentage of beneficial ownership in the Purchaser's organization or development team that is held by minority persons, women and disabled persons. In the event Equity Ownership is identified, Purchaser agrees to abide by the reporting requirements enumerated in Section 17-1603 (1)(g)(.3).

Purchaser hereby verifies that all information submitted to the City in response to this Plan, is true and correct and is notified that the submission of false information is subject to the penalties of 18 Pa.C.S. Section 4904 (relating to unsworn falsification to authorities) and 18 Pa.C.S. Section 4107.2 (a)(4) (relating to fraud in connection with **minority business** enterprises or women's business enterprises).

For the purposes of this Plan, MBE, WBE, DBE and DSBE shall refer to certified businesses so recognized by OEO. Only the work or supply effort of firms that are certified as M/W/DSBEs by an OEO approved certifying agency[2] will be eligible to receive credit as a Best and Good Faith Effort. In order to be counted, certified firms must successfully complete and submit to the OEO an application to be included in the OEO Registry which is a list of registered M/W/DSBEs maintained by the OEO and available online at www.phila.gov/oeo/directory.

For this Plan, the term "Best and Good Faith Efforts," the sufficiency of which shall be in the sole determination of the City, means: efforts, the scope, intensity and appropriateness of which are designed and performed to foster meaningful and representative opportunities for participation by M/W/DSBEs and an appropriately diverse workforce and to achieve the objectives herein stated. Best and Good Faith Efforts are rebuttably presumed met, when commitments are made within the M/W/DSBE Participation Ranges established for this development and a commitment is made to employ a diverse workforce as enumerated herein.

II. GOALS

A. M/W/DSBE PARTICIPATION RANGES

[2]A list of "OEO approved certifying agencies" can be found at www.phila.gov/oeo

AS A BENCHMARK FOR THE EXPRESSION OF "BEST AND GOOD FAITH EFFORTS" TO PROVIDE MEANINGFUL AND REPRESENTATIVE OPPORTUNITIES FOR M/W/DSBES IN THE PROJECT, THE FOLLOWING PARTICIPATION RANGES HAVE BEEN AGREED TO. THESE PARTICIPATION RANGES REPRESENT, IN THE ABSENCE OF DISCRIMINATION IN THE SOLICITATION AND SELECTION OF M/W/DSBES, THE PERCENTAGE OF MBE, WBE AND DSBE PARTICIPATION THAT IS REASONABLY ATTAINABLE THROUGH THE EXERCISE OF BEST AND GOOD FAITH EFFORTS. THESE PERCENTAGES RELATE TO THE GOOD FAITH ESTIMATED COST OF THE ENTIRE PROJECT. IN ORDER TO MAXIMIZE OPPORTUNITIES FOR AS MANY BUSINESSES AS POSSIBLE, A FIRM THAT IS CERTIFIED IN TWO OR MORE CATEGORIES (E.G. MBE AND WBE AND DSBE OR WBE AND DSBE) WILL ONLY BE CREDITED TOWARD ONE PARTICIPATION RANGE AS EITHER AN MBE OR WBE OR DSBE. THE FIRM WILL NOT BE CREDITED TOWARD MORE THAN ONE CATEGORY. THESE RANGES ARE BASED UPON AN ANALYSIS OF FACTORS SUCH AS THE SIZE AND SCOPE OF THE DEVELOPMENT AND THE AVAILABILITY OF MBES, WBES, DSBES AND DBES TO PARTICIPATE IN THIS PROJECT:

MBE	WBE

B. Workforce Goals for a Diverse Workforce

As a benchmark for the expression of "Best and Good Faith Efforts" to provide meaningful and representative opportunities for diverse workers in the Project, the following goals have been established for the employment of minority persons and females in the Project workforce of apprentices and journeymen at the following levels[3]:

African American Journeypersons – 22% of all journey hours worked across all trades
Asian Journeypersons –3% of all journey hours worked across all trades
Hispanic Journeypersons – 15% of all journey hours worked across all trades
Female Journeypersons – 5% of all journey hours worked across all trades

Minority Apprentices – 50% of all hours worked by all apprentices
Female Apprentices – 5% of all hours worked by all apprentices

[3] These goals are informed by the City of Philadelphia's annual disparity assessment of workforce diversity, the "Economic Opportunity Plan Employment Composition Analysis Fiscal Year 2016."

III. RESPONSIVENESS

A. PURCHASER SHALL, AND SHALL CAUSE ITS PARTICIPANTS TO IDENTIFY ALL M/W/DSBE COMMITMENTS AND AGREE TO EMPLOY A DIVERSE WORKFORCE ON THE FORM ENTITLED, "M/W/DSBE PARTICIPATION AND WORKFORCE COMMITMENTS." THE COMMITMENTS ON THIS FORM CONSTITUTE A REPRESENTATION THAT THE IDENTIFIED M/W/DSBE IS CAPABLE OF PROVIDING COMMERCIALLY USEFUL GOODS OR SERVICES RELEVANT TO THE COMMITMENTS AND THAT THE PURCHASER AND ITS PARTICIPANTS HAVE ENTERED INTO LEGALLY BINDING AGREEMENTS WITH THE LISTED M/W/DSBES FOR THE WORK OR SUPPLY EFFORT DESCRIBED AND THE DOLLAR/PERCENTAGE AMOUNT(S) SET FORTH ON THE FORM. IN CALCULATING THE PERCENTAGE OF M/W/DSBE PARTICIPATION, THE STANDARD MATHEMATICAL RULES APPLY IN ROUNDING OFF NUMBERS. IN THE EVENT OF INCONSISTENCY BETWEEN THE DOLLAR AND PERCENTAGE AMOUNTS LISTED ON THE FORM, THE PERCENTAGE WILL GOVERN.

B. M/W/DSBE COMMITMENTS ARE TO BE MEMORIALIZED IN A WRITTEN SUBCONTRACT AGREEMENT. LETTERS OF INTENT, QUOTATIONS, CONTRACTS, SUBCONTRACTS AND ANY OTHER DOCUMENTS EVIDENCING COMMITMENTS WITH M/W/DSBES, INCLUDING THE M/W/DSBE PARTICIPATION AND WORKFORCE COMMITMENTS FORM, BECOME PART OF AND AN EXHIBIT TO THIS PLAN.

C. DHCD will review the M/W/DSBE Participation and Workforce Commitments Form for the purpose of determining whether Best and Good Faith Efforts have been made. DHCD reserves the right to request further documentation and/or clarifying information at any time during the construction and development of the Project.

D. IF PURCHASER, ITS PARTICIPANTS OR ANY SUBSEQUENT DEVELOPER MAKES ANY CHANGES IN CONTRACTS THAT HAVE BEEN REVIEWED BY DHCD UNDER THE PLAN, OR IF PURCHASER AT THE TIME OF CLOSING HAS NOT YET IDENTIFIED CONTRACTS ENTERED INTO FOR THE DEVELOPMENT OF THE PROJECT, THEN PURCHASER, ITS PARTICIPANTS OR ANY SUBSEQUENT DEVELOPER SHALL HAVE THE OBLIGATION TO INFORM DHCD OF ANY CHANGES TO THE APPROVED PLAN AND SHALL USE BEST AND GOOD FAITH EFFORTS TO USE M/W/DSBES FOR ANY NEW CONTRACTS.

IV. Compliance and Monitoring of Best and Good Faith Efforts

A. A hard copy of this Plan, as certified below by OEO, shall be filed with the Chief Clerk of City Council within fifteen (15) days of Closing. The Plan shall be filed with:

Michael Decker, Chief Clerk of City Council
Room 402 City Hall
Philadelphia, Pennsylvania 19107

B. Purchaser and its participants agree to cooperate with DHCD in its compliance monitoring efforts, and to submit, upon the request of DHCD, documentation relative to their implementation of the Plan, including the items described below:

- Copies of signed contracts and purchase orders with M/W/DSBE subcontractors;

- Evidence of payments (cancelled checks, invoices, etc.) to subcontractors and suppliers to verify participation; and

- Telephone logs and correspondence relating to M/W/DSBE commitments.

- To the extent required by law, the Purchaser and its participants shall ensure that all its on-site contractors maintain certified payrolls which include a breakout of hours worked by minority and female apprentices and journeypersons; these documents are subject to inspection by the City.

C. Prompt Payment of M/W/DSBEs

1. The Purchaser and its participants agree and shall cause all its contractors to ensure that all M/W/DSBEs participating in the Project receive payment for their work or supply effort within five (5) business days after receipt of a proper invoice following satisfactory performance.

D. Oversight Process

1. For this Project, DHCD's Compliance Unit will implement the Oversight Process, as required by Section 17-1603(b) of The Philadelphia Code. DHCD

V. Remedies and Penalties for Non-Compliance

A. The Purchaser acknowledges and agrees that its compliance with the requirements of this Plan is a material inducement for the Ordinance of City Council and Purchaser's failure to substantially comply with the Plan may result in enforcement actions and the imposition of penalties as authorized by Sections 17-1605 and 17-1606 of The Philadelphia Code. Notwithstanding the foregoing, no privity of contract exists between PRA, the City and any M/W/DSBE identified in any contract resulting from implementation of the Plan. Neither PRA nor the City intends to give or confer upon any such M/W/DSBE any legal rights or remedies in connection with subcontracted services under any law or policy or by any reason of any contract resulting from implementation of the Plan except such rights or remedies that the M/W/DSBE may seek as a private cause of action under any legally binding contract to which it may be a party.

_____

PRINT NAME OF PURCHASER DATE

_____

SIGNATURE OF PURCHASER DATE

_____

LYNN NEWSOME, DHCD COMPLIANCE DIRECTOR DATE

_____

IOLA HARPER, DIRECTOR, OFFICE OF ECONOMIC OPPORTUNITY[4] DATE

[4] Pursuant to Section 17-1603 (2) of The Philadelphia Code, the representative of the City of Philadelphia's Office of Economic Opportunity, the "certifying agency", certifies that the contents of this Plan are in compliance with Chapter 17-1600.

1901-1909 AND 1911-1915 N 33RD ST
PRE-SUBMISSION CONFERENCE
MARCH 12, 2018

Name	Company	Address	Telephone #	Email Address
Lousy St Vil			(929)344-1743	Lousy.stvil@gmail.com
KETH ROLER			215-305-7547	C2SINVESTOR@GMAIL.COM
ANSEL HACKNEY	MORGAN Construct.		2674815855	AHACKNEY@MORGANCML.COM
~~David Ross~~	Argo		814 932 2917	~~david@argopg.com~~
AARON YACKEY	Mosaic Management		347-235 7188	ayancel1911@gmail.com
KETH ROLER	BRICKHOUSE BUILDERS	3211 CECIL B. MOORE 19121	215-305-7547	C2SINESTOR@GMAIL.COM
David Ross	Argo Property Group			david@argopg.com

EXHIBIT A

LEGAL DESCRIPTION

ALL THAT CERTAIN lot or piece of ground situate in the 32nd Ward of the City of Philadelphia and described as follows:

BEGINNING at the intersection of the East side of 33rd Street (100 feet wide, erroneously cited as 50 feet wide in prior deed) and the North side of Berks Street (50 feet wide).

CONTAINING in front or breadth on the said side of 33rd Street 88 feet and extending of that width in length or depth Eastward between parallel lines at right angles to the said 33rd Street 90 feet to a point on the West side of a certain 10 feet wide alley that extends Southward into the said Berks Street, said alley communicating with a certain 4 feet wide alley that extends Eastward.

BEING NO. 1901- 09 North 33rd Street

MAP REGISTRY NO. 016N140173

OPA/BRT ACCOUNT NO. 781030010

ALL THAT CERTAIN lot or piece of ground situate in the 32nd Ward of the City of Philadelphia and described as follows:

BEGINNING on the Southeast corner at the intersection of North 33rd Street (100 feet wide) and West Monument St (36 feet wide).

CONTAINING in front or breadth on the East side of the said 33rd Street 55 feet and extending of that width in length or depth Eastward between parallel lines at right angles to the said 33rd Street and along the South side of the said Monument street 90 feet to the West side of a certain 10 feet wide cartway extending Northward into the said Monument Street and Southward into Berks Street (50 feet wide).

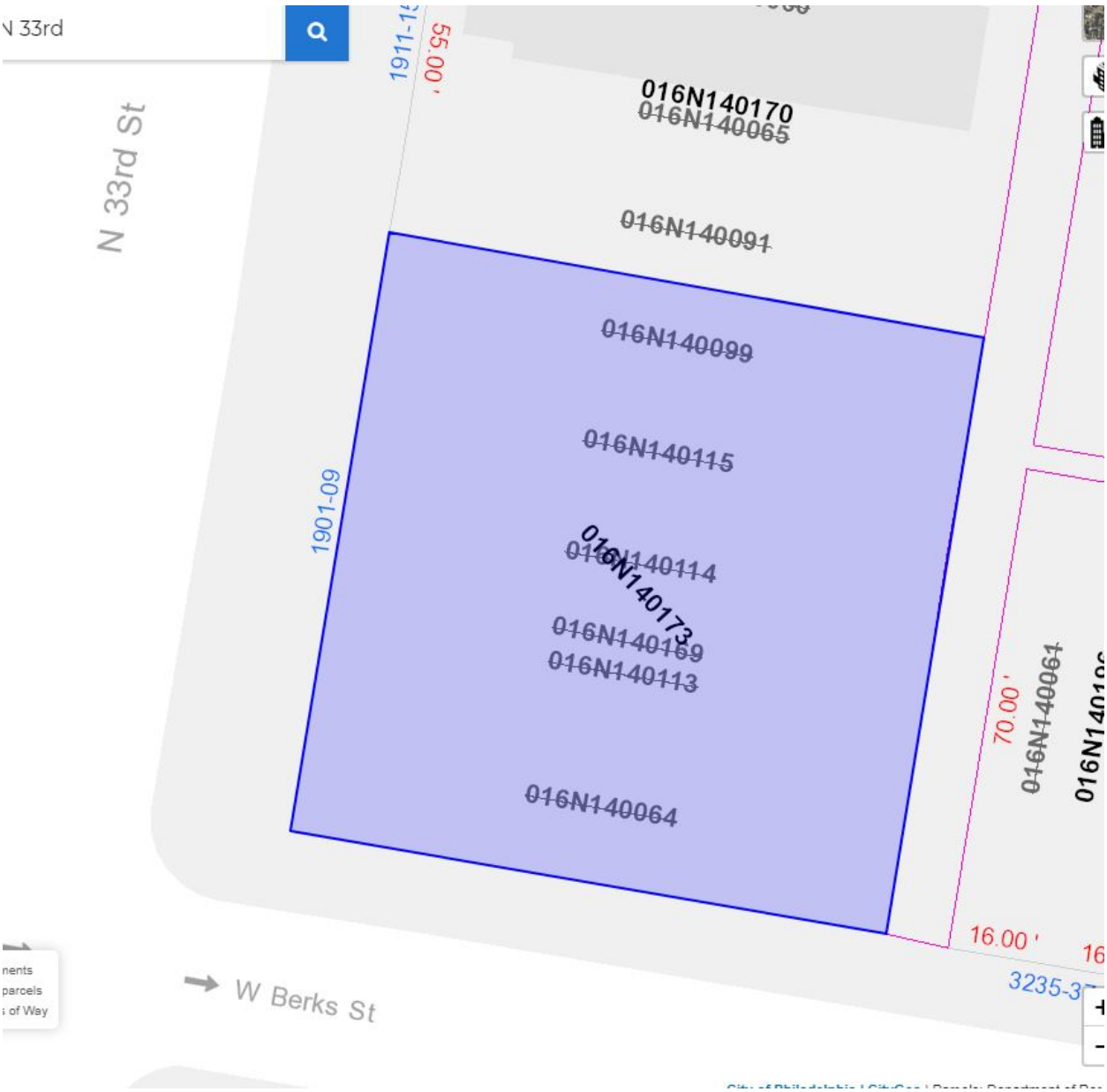
BEING NO. 1911-15 North 33rd Street

MAP REGISTRY NO. 016N140170

OPA/BRT ACCOUNT NOS. 323341400 (1911), 323341500 (1913), 323341600 (1915) (to be consolidated into one account prior to conveyance)

EXHIBIT B

SITE PLAN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3235-37
W Berks St
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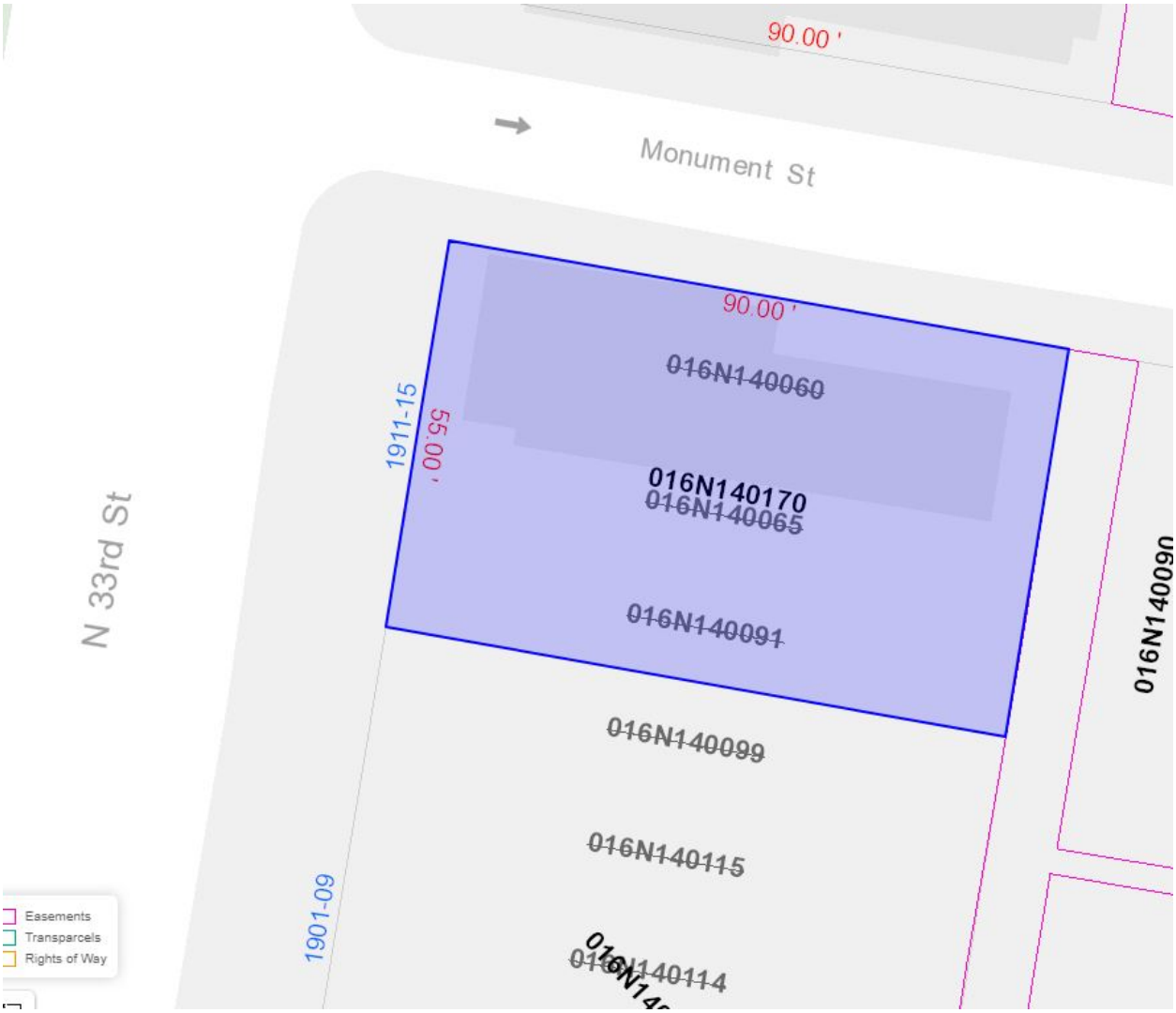
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90.00 '
016N140060
1911-15
56.00 '
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016N140065
016N140091
016N140099
016N140115
016N140114
016N140090
N 33rd St
1901-09
Easements
Transparcels
Rights of Way

BATTA ENVIRONMENTAL ASSOCIATES, INC.
Delaware Industrial Park
6 Garfield Way
Newark, DE 19713-5817
Ph (302) 737-3376
Fx (302) 737-5764
www.battaenv.com

REPORT ON THE ENVIRONMENTAL SITE ASSESSMENT

for

Strawberry Mansion Site: RFP Number P-004215
Philadelphia, PA

Prepared For:

Philadelphia Housing Authority
3100 Penrose Ferry Road,
Philadelphia, PA 19145

BEA Project #699812

Submitted by:
BATTA ENVIRONMENTAL ASSOCIATES, INC.
Delaware Industrial Park
6 Garfield Way
Newark, Delaware 19713-5817

June 6, 2013

Prepared By:

Larry Tornambe
Environmental Assessor

Reviewed By:

Neeraj Batta, PE
Vice President

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Purpose

The following Phase 1 Environmental Site Assessment (ESA) was performed at the request of Philadelphia Housing Authority. The subject property addresses, hereinafter referred to as the 'Strawberry Mansion Site' sites include:

1901 to 1915 North 33rd Street and 1933 to 1941 North 33rd Street (odd numbered addresses only),
3210 to 3237 Arlington Street (all addresses inclusive),
3225, 3227, 3233, 3235, 3237 West Berks Street, and
3210 to 3237 Monument Street (all addresses inclusive).

1.2 Scope of Services

The database searches were performed under the guidelines of the American Society for Testing Materials (ASTM)'s Standard Practice for Environmental Site Assessments: E 1527-05 Phase I Environmental Site Assessment Process. Under the 2002 Small Business Liability and Brownfields Revitalization Act, Congress ordered the U.S. EPA to codify the first federal environmental site assessment rule in history to address each of ten steps that must be satisfied prior to a property purchase to qualify a landowner for liability protection under CERCLA. Effective November 1, 2006, a property purchaser must comply with either the federal rule entitled "Standards and Practices for All Appropriate Inquiries" (40 CFR Part 312) or ASTM's revised Phase I environmental site assessment standard (ASTM E 1527-05) to qualify as an innocent landowner, contiguous property owner or bona fide prospective purchaser under CERCLA.

The Phase I ESA determines the likelihood if environmental contamination exists at a site due to current or previous activities on or in the vicinity of the property.

To be specific, the Site Assessment conducted on this parcel included the following tasks:

1. A history of actual usage, utilizing available information from title insurance companies, historical groups and interviews with past and present property owners.
2. A review of available information which could relate to potential environmental impairment. This information includes, but is not necessarily limited to:
   --Aerial Photographs
   --Non-tidal Wetland Inventory Maps
   --Federal, State and local environmental agency records, including permits and permit applications, spill information, compliance information, storage tank registrations, etc.
   --Environmental Database Resources (EDR) Radius Map Report with Geo Check.

3. A physical site inspection assessing unusual discolorations, odors and physical irregularities, as well as underground or above ground storage tanks, electrical equipment

that may contain polychlorinated biphenyls (PCB's), and an evaluation of current land use, and an inventory of petroleum and chemical storage and usage and wastes generated.

4. Interviews with local and state health and environmental agency personnel to determine the history or environmental compliance or non-compliance at the property, as well as whether any hazardous material incidents have occurred in the area, including recorded or known landfill sites, spill, discharges, etc.

5. A record review of the adjacent properties for current land use conditions that may adversely affect the subject property including, underground or above ground storage tanks, manufacturing activities, landfills, etc.

6. A review of available soil and groundwater reports and other data available from engineers, architects, environmental consultants, the property owner or others.

7. A search of federal and state environmental agencies regarding the locations of hazardous or regulated substance release within a radial distance in accordance with the ASTM guidelines.

8. Additional Guidelines set forth by the "PHFA Additional Requirements" were also researched. Many of them are included in the EDR Radius Map Report. The City of Philadelphia Fire Department Records and the City of Philadelphia Office of Housing and Community Development were separate from the EDR Radius Map Report research and were requested through the Open Records Officer, Ms. Jo Rosenberger-Altman.

2.0 SITE DESCRIPTION

2.1 Location and Legal Description

The addresses, property owners, brief descriptions and tax parcel numbers of the properties included in this assessment are listed below:

Loc	OWNER1	OWNER2	DESC	Vacant/Occupied	Lot/Structure	PARCEL
1901-07 N 33RD ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323341200
1909 N 33RD ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323341300
1911 N 33RD ST	REDEVELOPMENT AUTHORITY	OF PHILA	ROW CONV/APT 3STY MASONRY			323341400
1913 N 33RD ST	NORTH 33RD STREET DEVELOP		ROW 3 STY MASONRY			323341500
1915 N 33RD ST	REDEVELOPMENT AUTHORITY	OF PHILA	ROW 3 STY MASONRY			323341600
1933 N 33RD ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323342500
1935 N 33RD ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323342601
1937 N 33RD ST	CITY OF PHILA	DEPT OF PUBLIC PROP	VAC LAND RES < ACRE	Occupied	Lot	323342701
1939 N 33RD ST	RED OAK DEVELOPMENT COMPA		VAC LAND RES < ACRE	Occupied	Lot	323342800
1941 N 33RD ST	RANEY ANTHONY		ROW CONV/APT 3STY MASONRY	Vacant	Structure	323342901
3210 ARLINGTON ST	CARTER FRANK		VAC LAND RES < ACRE	Vacant	Lot	323066700
3212 ARLINGTON ST	CLARK SAUD S		VAC LAND RES < ACRE	Occupied	Structure	323066800
3214 ARLINGTON ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323066901
3216 ARLINGTON ST	HART DOCK S	ELIZABETH	ROW 3 STY MASONRY	Vacant	Structure	323067000
3218 ARLINGTON ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323067101
3220 ARLINGTON ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323067200
3222 ARLINGTON ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323067301
3224 ARLINGTON ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323067400
3226 ARLINGTON ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323067500
3228 ARLINGTON ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE	Occupied		323067601
3230 ARLINGTON ST	BENSON DELORES		VAC LAND RES < ACRE	Vacant	Lot	323067700
3232 ARLINGTON ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323067801
3234 ARLINGTON ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323067901
3236 ARLINGTON ST	CITY OF PHILA		VAC LAND RES < ACRE			323068001
3211 ARLINGTON ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323068701
3213 ARLINGTON ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323068800
3215 ARLINGTON ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323068900
3217 ARLINGTON ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323069000
3219 ARLINGTON ST	FRANK MYERS	LUCY H/W	VAC LAND RES < ACRE	Vacant	Lot	323069100
3221 ARLINGTON ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323069201
3223 ARLINGTON ST	COOPER OPHELIA		ROW 3 STY MASONRY	Occupied	Structure	323069300
3225 ARLINGTON ST	MITCHELL LILLIAN		ROW 3 STY MASONRY	Vacant	Lot	323069400
3227 ARLINGTON ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323069501
3229 ARLINGTON ST	JESSIE ELDER	JULIA	ROW 3 STY MASONRY	Occupied	Structure	323069600
3231 ARLINGTON ST	BAXTER MARC		ROW 3 STY MASONRY	Occupied	Structure	323069700
3233 ARLINGTON ST	MC NAIR JOHN W	MC NAIR HELEN	ROW 3 STY MASONRY	Occupied	Structure	323069800
3235 ARLINGTON ST	SAMUEL JOHNSON SR		ROW 3 STY MASONRY	Occupied	Structure	323069900
3237 ARLINGTON ST	CHARLES WASHINGTON		VAC LAND RES < ACRE	Vacant	Lot	323070000
3225 W BERKS ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			
3227 W BERKS ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			

3233 W BERKS ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			
3235 W BERKS ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			
3237 W BERKS ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			
3210 MONUMENT ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323062600
3212 MONUMENT ST	PATTERSON SAUNDRE		VAC LAND RES < ACRE	Vacant	Lot	323062701
3214 MONUMENT ST	PATTERSON SAUNDRA		ROW 3 STY MASONRY	Occupied	Structure	323062800
3216 MONUMENT ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323062901
3218 MONUMENT ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323063001
3220 MONUMENT ST	POINDEXTER THOMAS F		VAC LAND RES < ACRE	Vacant	Lot	323063100
3222 MONUMENT ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323063201
3224 MONUMENT ST	JOHN ABRAM OVERTON	MARIE	VAC LAND RES < ACRE	Vacant	Lot	323063300
3226 MONUMENT ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323063401
3228 MONUMENT ST	KAREN ALBRIGHT		VAC LAND RES < ACRE	Vacant	Lot	323063500
3230 MONUMENT ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323063601
3232 MONUMENT ST	WARREN NORA		ROW CONV/APT 3STY MASONRY	Occupied	Structure	323063700
3234 MONUMENT ST	JOHN S WILKINS	MAGGIE EVA H/W	VAC LAND RES < ACRE	Vacant	Lot	323063800
3236 MONUMENT ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323063901
3211 MONUMENT ST	ALFONSA HAGINS		VAC LAND RES < ACRE	Vacant	Lot	323064500
3213 MONUMENT ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323064601
3215 MONUMENT ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323064701
3217 MONUMENT ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323064800
3219 MONUMENT ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323064901
3221 MONUMENT ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323065001
3223 MONUMENT ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323065100
3225 MONUMENT ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323065200
3227 MONUMENT ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323065301
3229 MONUMENT ST	DESHIELDS MARY ELIZABETH		ROW 3 STY MASONRY	Occupied	Structure	323065400
3231 MONUMENT ST	PHILA HOUSING AUTHORITY		VAC LAND RES < ACRE			323065501
3233 MONUMENT ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323065600
3235 MONUMENT ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323065701
3237 MONUMENT ST	REDEVELOPMENT AUTHORITY	OF PHILA	VAC LAND RES < ACRE			323065801

Multiple owners possess the subject property parcels. The environmental liens and user restrictions were researched by BATTA and EDR. BATTA accessed available deeds from www.philadox.com and subcontracted with EDR to assist with remaining deeds. None of the deeds indicated environmental liens or user restrictions for environmental matters in any of the deeds. Many of the properties appeared in a Deed of Condemnation, in which it appears the City of Philadelphia obtained the condemned and abandoned properties.

2.2 Site and Vicinity General Characteristics

The properties were developed as residences in the late 1800s. The Strawberry Mansion site is an urbanized areas with several occupied residences, vacant dilapidated residences, and empty lots. The local urbanized areas were developed out of former open estate or agrarian use lands during the late 1880s.

The subject property area was developed in the former North Penn Village Township of Philadelphia County, PA. The Consolidation Act of 1854 consolidated all townships within Philadelphia County to be within the City Limits. Subdivision and urbanization of the former rural lands of Philadelphia County began in 1854.

The Strawberry Mansion neighborhood, (formerly known as Summerville), is located east of East Fairmount Park in North Philadelphia. The neighborhood is roughly bounded by 33rd Street to the west, 29th Street to the east, Lehigh Avenue to the north, and Oxford Street to the south.

Strawberry Mansion, circa 1789, contained a restaurant, famous for strawberries and cream. Prior to the Consolidation Act, Strawberry Mansion was home to a number of Philadelphia's wealthiest families. In 1867 Strawberry Mansion and its land were sold to the city. The purchase of the mansion, along with a great deal of the surrounding land, was part of an effort to

protect the source of the city's drinking water, the Schuylkill River. The area surrounding the mansion came to be known as East Fairmount Park, under the supervision of the Fairmount Park Commission. 33rd Street currently separates East Fairmont Park from the subject property.

East Fairmont Park was developed to include the properties to the west of 33rd Street in 1868. The City's East Park Storage Reservoir was developed west of the subject property between 1869 and 1889. The Strawberry Mansion Site is indicated to be developed between Norris and Berks and 32nd and 33rd Sts. by 1901. Properties along the east side of N. 33rd Street were developed for the view of the park. 1915 N. 33rd St. remains as one of these properties on the subject site. The adjoining 1917-1931 33rd St. (larger westward facing properties which are being redeveloped as part of a separate project), were initially developed for their unique frontage and view of the park.

2.3 Current Uses of the Subject Property

Residential buildings and vacant lots comprise nearly all of the subject parcels.

Strawberry Mansion Sites observed as vacant lots include:

1901 to 1913 North 33rd Street and 1933 to 1939 North 33rd Street - vegetated lots;
3225, 3227, (3229-3231 not included) 3233, 3235 Berks Street-vegetated lots, grass and a concrete sidewalk are observed on 3237 Berks Street;

3210-3213, 3216-3227, 3230-3231 and 3233-3237 Monument Street are vegetated lots with household trash and building debris noted on most of the parcels;

Arlington Street lots that are vacant land include: 3210, 3211, 3213, 3214, 3215, 3217-3221, 3222, 3221, 3226, 3227, 3220, 3232, 3224, 3226 and 3237. Household trash and appliances are noted throughout 3211-3217 Arlington Street. The debris appears to be non-hazardous and is not considered to be a Recognized Environmental Concern (REC).

Remaining Strawberry Mansion Sites include dilapidated former residences on 1915 North 33rd Street, 3229, 3232, Monument Street and on 3225, 3228, 3212, 3216 Arlington Street. Residences that were occupied and not accessible include 1941 North 33rd Street, 3223, 3229, 3231, 3233, 3235 Arlington and 3214 Monument Street.

2.4 Current Uses of Adjoining Properties

Current uses of the adjoining properties to the Strawberry Mansion Sites are predominately residential and vacant properties with a reservoir to the west of 33rd Street.

3.0 RECORDS REVIEW

3.1 Regulatory Agency Review

Federal, state or local agencies with jurisdiction over the property were identified to determine:

- The status of relevant and accessible environmental permits
- Whether any notice of violation, cease and desist order, and/or memorandum of understanding injunction have been issued with respect to the property.
- Whether any reported violations or complaints on the property have been made, which are not in compliance with environmental laws, regulations or standards.
- Whether any other pertinent information relating to the property or the surrounding sites is contained in the files of relevant regulatory authorities.

Strawberry Mansion

The Environmental Data Resources (EDR) Radius Map Report identifies known contaminated sites in accordance with required searches as specified in ASTM E-1527-05. Although several database sites were identified within the required search radii, none of the sites appear to present an environmental concern to the subject site based on their location, status or probable groundwater flow.

EDR supplied an "Orphan List" for sites with inadequate location information. Based on the location, topography and status, none of these sites are expected to present an environmental concern to the subject properties.

The EDR Vapor Encroachment Screen is included in Appendix IV. It indicates the nearby database sites that may have releases of vapors that have the potential to impact the subject property. Seven "Historical Dry Cleaners" were identified in the Screen. They are all down-gradient and approximately 0.3 miles to the east of the Strawberry Mansion Site. Because the new construction plan is for buildings on a concrete slab or with a crawl space, the vapor encroachment does not appear to present an environmental concern.

The City of Philadelphia License and Inspections (L & I) records were accessed on www.phila.gov. All addresses were located in their database; some addresses had no records on file, some records showed violations for trash (non-hazardous) and others for condemned, damaged or unsafe buildings. None of the records presented environmental concerns or RECs.

The City of Philadelphia Air Services Department responded to the open records request. They stated that they had no files for the subject addresses.

3.2 Physical Setting Sources

Topography

The topographic slope of the Strawberry Mansion site is to the east-southeast (ESE). The elevation of the Strawberry Mansion site is approximately 124 feet, according to the Physical Setting Source Map – TC3523675 from EDR, which is included in the Appendix.

Geology

As reported by EDR, according to Geologic Age and Rock Stratigraphic Unit Source of P.G. Schruben, R.E. Arndt and W.J. Bawiec (1994 Geology of the Conterminous U.S. at 1:2,500,000 Scale – a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS – 11) the site is situated in the Paleozoic Era Cambrian Eugeosynclinal Deposits.

According to Bedrock Geologic Map Of A Portion Of The Philadelphia Quadrangle, Montgomery And Philadelphia Counties, Pennsylvania, Howell Bosbyshell, Department of Geology and Astronomy, West Chester University, West Chester, PA 19383, 2008, the subject property is indicated as part of the Wissahickon Formation's Fairmont Member of Late Proterozoic and Cambrian age. This unit is generally more feldspathic and less pelitic than the remainder of the Wissahickon Formation. The Fairmount member of the Wissahickon Formation consists of fine- to coarse-grained, psammitic to semipelitic and pelitic schist,and include quartz, plagioclase, biotite, muscovite, and minor garnet. In places, the rock has undergone partial melting, so that centimeter- to decimeter-scale quartzofeldspathic lenses may be present.

Piedmont Providence

The site is located in rocks of the Piedmont Providence. The Piedmont is the remnant of several ancient mountain chains that have since been eroded away. The Piedmont's hard rock resists uniform erosion. Rivers, rain, gravity, and wind eventually eat into even the hardest areas, but cut more quickly and deeply into weak spots like folds, cracks, and other isolated areas of soft rock. This type of uneven erosion makes for a hilly landscape, which contrasts with the low, level Coastal Plain. The "Fall Line" is the eastern limit of the Piedmont Providence, and is sometime referred to as the "First Rapids", upon which many East Coast cities were formed. Rocks in the Philadelphia quadrangle are characterized by shallowly to moderately north dipping foliation and multiple generations of folds. Although all rocks in the map area are highly tectonized, no significant faults are present. Fairmont Park highlights some of these Piedmont rocks through various outcrops.

The high relief offered by the Piedmont landscape provided the water power for Colonial settlers. By the mid-1800's steam power allowed the development of industries away from streams and rivers. The Schuylkill River was dammed in the early 1800's below the natural "Fall Line", (Falls Bridge area near U.S. Route 1 west of Queens Reservoir).

Fairmont Park
Fairmont Park was largely established as a buffer to further protect the City's drinking water supply above the dam. The park prevented industry from establishing along the six (6) mile long reservoir created by the original Schuylkill River Dam project, circa 1816 (to the southwest of the site).

Fairmont Park: East Park Reservoir
During the late 1800's, the large East Park Reservoir was developed in Fairmont Park, to the west of 33rd St., to supply additional water, from the Schuylkill River, to some of the City's growing industrial and domestic water needs, as the city grew. The East Park Reservoir, at an elevation of 130 feet above city datum, could contain 635,704,200 gallons of water. The size of the East Park Reservoir embankment measures nearly one and one-half miles in length, (PWD). By the 1900's electricity allowed further development away from the local streams and rivers.

According to Soil Conservation Service STATSGO data, the site lies in Urban Land of variable texture. Local development follows the natural grades of the area. A copy of this map is included in the Appendix.

The U.S. Department of Agriculture does not list the series as a hydric soil (Soil Conservation Service Dec. 1987 Hydric Soils of the United States: U.S. Government Printing Office 1988-519-431/63063). "A hydric soil is a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part."

3.3 Historical Use Information on the Properties

The historical uses of the sites were reviewed through deed records, web searches, city directories, building permits, historical maps and atlases, USGS topographical quadrangle maps, Sanborn maps, and aerial photographs from 1808 to 2011.

The subject property was developed in the North Penn Village Township of Philadelphia County. The Consolidation Act of 1854 consolidated all townships within the county to be within the City Limits. 33rd Street bounds the subject property to the west. Fairmont Park was developed to include the properties to the west of 33rd Street in 1868. The City's East Park Storage Reservoir was developed west of the subject property between 1869 and 1889. The Strawberry Mansion Site is indicated to be developed between Norris and Berks and 32nd and 33rd Sts. by 1901. The site was named after the historic Strawberry Mansion which was originally built 1789. The mansion is located in East Fairmount Park. In 1867 Strawberry Mansion was sold to the city. The purchase of the mansion, along with a great deal of the surrounding land, was part of an effort to protect the source of the city's drinking water, the Schuylkill River. The area came to be known as East Fairmount Park, under the supervision of the Fairmount Park Commission.

The following is a summary of the history of the properties as observed from historical maps, USGS topographical quadrangle maps, Sanborn maps, and aerial photographs (Appendix III):

Strawberry Mansion Sites

The area appeared to be undeveloped in the following atlases: 1808 John Hills, 1843 Charles Ellet, 1855 R.L. Barnes and the 1862 Smedley atlases. The first map to show the properties contained buildings is the 1895 Bromley Atlas. The 1910 Bromley Atlas and the 1928 Regional Planning Federation Maps did not show any changes from the 1895 Bromley Atlas.

Topographic Maps

1898 Topographical Map from EDR:

The property is shown as undeveloped land with an elevation of approximately 120 feet above sea level. The surrounding streets are in place. The topography indicates the groundwater would flow to the southeast from the subject properties. The reservoir is in place to the west, across 33rd Street.

1901, 1906, 1943, 1956, 1967, 1973, 1985, 1994, 1995 Topographical Maps from EDR:

No changes are observed from the 1898 topographic map in regards to topography. These maps typically do not show buildings or property uses in densely populated areas.

Sanborn ® Fire Insurance Maps

1918 Sanborn Map from EDR:

Each of the Strawberry Mansion parcels contains a residential building. Adjoining parcels to the southeast of Berks Street are residential and the Stokley Public School. The map does not extend to the west to show the reservoir. The remaining surrounding lands appear as residential.

1925 Sanborn Map from EDR:

This map does not show any development on the properties or any detail, other than identifying street names.

1951 Sanborn Map from EDR:

The 1901 to 1907 North 33rd Street Property is identified as a Filling Station with at least two gasoline tanks present on the property.

1976 Sanborn Map from EDR:

The Filling Station is identified as 'vacant'. The residences have been removed from 3211-3215 Arlington Street. No other changes are observed to the Strawberry Mansion parcels or the surrounding land uses.

1980 Sanborn Map from EDR:

The Filling Station building has been removed. The 3217 Arlington Street residence has been removed. No other changes to the land uses are observed.

1989 Sanborn Map EDR:

The 1901-07 N. 33rd Street parcel remains vacant. The 1909 N. 33rd Street residence has been removed. The 1915 N. 33rd Street building is identified as "fire ruins'. 3233-37 Monument

Street structures have been removed. The residences at 3236, 3227, 3228 Arlington Street have been removed. No changes are noted on Berks Street or on the remaining subject parcels or surrounding lands.

2002 Sanborn Map from EDR:

The Berks Street parcels were all vacant lots. Residences were removed from 3210, 3212, 3215, 3217, 3219, 3221, 3223, 3225 Monument Street and they were shown as vacant lots. Changes on Arlington Street include the removal of the residences at 3211, 3213, 3215, 3220, 3222, 3224, 3226 Arlington Street. The residence at 1933 N. 33rd Street has been removed, although it was incorrectly identified as 1993 N. 33rd Street. No changes are noted to the adjacent land uses.

2004 Sanborn Map from EDR:

No changes are observed to Berks Street and N. 33rd Street. The Monument Street parcels which contain buildings were 3232, 3229, 3214, 3213, 3211. The remaining Monument Street parcels were vacant land. Residences remained at 3235, 3233, 3231, 3230, 3228, 3229, 3225, 3223, 3221, 3219, 3216 and 3212 Arlington Street. The remainder of Arlington Street was identified as vacant lots. No changes are noted to the adjoining land uses.

2006 Sanborn Map from EDR:

No changes are observed to Berks Street and North 33d Street. Monument Street only contains residences at 3214, 3229, and 3232; the remaining addresses are vacant land. Residences were removed from 3230, 3219 and 3221 Arlington Street. No changes are noted to the adjoining land uses.

Aerial Photographs

1942 Aerial Photograph from EDR:

The Strawberry Mansion Sites appear as residential on all properties, **except for the gasoline filling station on 1901-07 N. 33rd Street.** Nearby properties appear as residential buildings to the north, south and east. The reservoir and Fairmount Park are observed to the west and northwest, across 33rd Street.

1950 Aerial Photograph from EDR:

No changes are observed from the 1942 photograph.

1953 Aerial Photograph from EDR:

No changes are observed.

1981 Aerial Photograph from EDR:

The gasoline filling station building was removed and that parcel was a vacant lot. Some of the residences were removed from Arlington Street. No changes are noted to the surrounding land uses.

1986 Aerial Photograph from EDR:

It appears as though additional residences were removed from Arlington and Monument Streets. The surrounding lands appear as above.

1992-1999-2005-2008-2010 Aerial Photographs from EDR:

These photographs show the further deterioration of the neighborhood structures becoming vacant lots. The former school building to the southeast of Berks Street appeared to have been demolished between 2005 and 2008 and replaced with two buildings (currently a church) by 2010. No changes are noted to the subject parcels or the surrounding lands.

Summary

- Topographic maps do not show any changes in the site elevation throughout the series from 1898 to 1998.
- Sanborn Fire Insurance Maps indicated the properties were developed as residential prior to 1918. A gasoline filling station was identified on the 1901-07 North 33rd Street parcels beginning between 1918 and 1951.
- The 1942 aerial photograph concurs with the Sanborn Maps in identifying the size and shape of the gasoline filling station. It became vacant at some time between 1951 and 1976, according to the Sanborn Maps.
- The aerial photographs show the properties to be residentially developed prior to 1948, with the exception of the gasoline station at 1901-07 North 33rd Street. The gasoline filling station was identified as "vacant in the 1976 Sanborn map and was removed in the 1981 photograph. The subject site buildings deteriorated and were increasingly removed as the photographic series continued until 2010. Surrounding lands were used as a reservoir to the west, a school and later a church to the southeast of the Berks Street parcels, and residences.

Please see the Appendix III for additional historical information and resources.

3.4 Historical Use Information on Adjoining or nearby Properties

The local urbanized areas were developed out of former open lands during the late 1880s.

Strawberry Mansion is located east of East Fairmount Park in North Philadelphia. The neighborhood is bounded by 33rd Street to the west, 29th Street to the east, Lehigh Avenue to the north, and Oxford Street to the south. It is often associated with the historic house of the same name, Historic Strawberry Mansion, located adjacent to the neighborhood and generally thought to be the source of the community's name.

Strawberry Mansion Site

The surrounding lands were predominantly residential to the north, east and south. The reservoir is located to the west, across 33rd Street.

4.0 SITE RECONNAISSANCE

Batta Environmental Associates, Inc., (BATTA) conducted the site visit on February 21, 2013. BATTA was on-site to observe the subject property and to review the local and nearby areas for land use and any perceived or observed environmental concerns.

The '**Strawberry Mansion Site'** includes:
1901 to 1915 North 33rd Street and 1933 to 1941 North 33rd Street (odd numbered addresses only),
3210 to 3237 Arlington Street (all addresses inclusive),
3225, 3227, 3233, 3235, 3237 West Berks Street, and
3210 to 3237 Monument Street (all addresses inclusive).

The Strawberry Mansion Site contains dilapidated former residences on 1915 North 33rd Street, 3229, 3232, Monument Street and on 3225, 3228, 3212, 3216 Arlington Street. Residences that were occupied and not accessible include 1941 North 33rd Street and 3223, 3229, 3231, 3233, 3235 Arlington and 3214 Monument Street. The remaining parcels are vacant lots.

Batta Environmental Associates, Inc. met the client, Mr. Ismail Abdul-Hamid of PHA, at 33rd and Berks Streets at 1100 a.m. on Thursday February 21 2013. For the Strawberry Mansion and Oakdale housing project, PHA is to take ownership of the above listed properties. Any standing or occupied properties, within the project area, at the beginning of the construction phase, will be demolished as required by PHA. Several occupied lots will remain in the Strawberry Mansion project area, and these lots will be outside the scope of work for this project. Any standing structures, within the project area, were not accessed during the site visit.

Per the client, any demolition work on the subject sites, including properties that have been previously condemned, surveyed, leveled, demolished and/or backfilled have been overseen by Philadelphia's Department of Licensing and Inspection (L&I). The demolition process or protocol included the survey, abatement, demolition, and backfill of the individual lots. Basement areas were backfilled with brick, block, concrete and stone, after first punching through any existing basement slab areas. Hazardous or regulated materials were removed from the properties prior to demolition and backfill. Any heating oil tanks encountered were properly removed from the properties. Demolition materials were surveyed and segregated for proper disposal or reuse. Basement areas were backfilled with building demolition material free of paint, wood and other deleterious materials. This included "clean" brick and block material. Soil was placed above any initial brick/ block material. Soil met the definition of Clean Fill, and was free of any odors, stains, and deleterious material. Exposed areas, which have been previously backfilled, appear to consist of clean fill material of various compositions. The vacant lots are maintained and appear to be free of signs of spills or releases. Inert, urban materials (including refuse, broken glass, and metal) appear to be controlled and routinely picked up from the various properties. Many of the vacant city lots include wooden fencing to allow access to the open areas by local residents.

Any remaining structures in the project area, which may require demolition and backfill, will be handled per L&I and Philadelphia Air Management standards. This includes the remaining structures along the north and south sides of both Arlington St. and Monument St. The remaining structures include currently vacant, condemned and occupied housing units. Currently backfilled lots were reviewed and well kept. Wooden fences have been erected along the previous PHA properties that have been demolished. The existing structure being demolished at 3216 Arlington St. is being demolished by hand with segregation of waste streams. Additional structures, located along Arlington St. and Monument St., are condemned.

Previous heating oil tanks may have been present, prior to demolition, in currently open land lots. The client indicated all known work was through Phila. L&I. No known heating oil tank concerns were known at this time, although several sites may contain existing AST's in basement areas, with visible fill ports in the porch walls. Soil testing for Poly Aromatic Hydrocarbons (PAHs) can identify issue(s) if it is discovered that a spill or release has occurred during demolition. Inert debris was located in some isolated areas of the subject parcels.

Former gas station lot (1901-1907 N 33rd St):

Currently grass covered with wooden perimeter fence. Historic references produced no additional information at this time. A historical Philadelphia city directory review stated a Gulf gasoline station occupied 1901-1907 North 33rd Street in 1930. This is the only year listed in the city directories for 1901-1907 N 33rd Street. Vapor Intrusion might be anticipated due to the prior presence of petroleum products on the site. The gas station usage was prior to environmental records and regulations; therefore the possibility of remaining underground storage tanks or impacted soil might be present. A tank removal project is on-going in a similar location at the corner of N. 33rd St. and Cecil B. Moore Avenue, to the south of the Strawberry Mansion site.

Construction Staging- Modular units

Staging for the Strawberry Mansion units will be in multiple areas. Due to time constraints, any lot not ready, will be built around. Options in the 3230-3236 Arlington area include a possible partial assembly of the prefabricated unit on site. This area may include a twenty foot wide unit. Units will be stacked to produce the two to three story units as planned. 3229-3233 Berks St. plus 3211-3213 Berks St. are owned by others and will be built around. 3215-3223 Berks St. is currently open land owned by others.

Overall the properties were well kept. No odors and stains were indicated for the area of the subject properties.

Adjoining properties were a combination of structures in various stages of repair. Street usage was developed to limit cross traffic, i.e. no thoroughfares, local traffic only. The 1917-1931 33rd St. (westward facing adjoining properties) are being redeveloped as part of a separate project.

5.0 INTERVIEWS/CORRESPONDENCE

Information supplied by occupant interviews and other correspondence has been reported in other sections throughout this report. Site history and building history was discussed with Mr. Ismail Abdul-Hamid, the Program Manager of Capital Projects and Development Department for the Philadelphia Housing Authority. The comments and concerns were incorporated into the previous sections of this report. Other information relevant to the subject parcel has also been included into the body of the report.

Mr. Abdul-Hamid completed the ASTM required Phase 1 User Questionnaire. His responses did not present any further environmental concerns or RECs (See Appendix V).

The City of Philadelphia Fire Department Records, the Fire Marshal Office, City of Philadelphia Air Management Services, and the City of Philadelphia Office of Housing and Community Development were separate from the EDR Radius Map Report research and were requested through the Open Records Officer, Ms. Jo Rosenberger-Altman. Ms. Altman indicated that she would initiate the search with the proper departments (License and Inspections, Water Department, and the Fire Marshal); however the normal turn-around time is about 37 working days. She stated the Office of Housing and Community does not maintain their own property records. Responses from the City of Philadelphia Fire Department or Fire Marshal were not returned at the time of this writing. This is considered a data gap that can be addressed and satisfied when the departments respond to the request.

The environmental lien and user restriction research subcontracted to EDR has not revealed any environmental liens or user restrictions for any of the subject properties.

6.0 FINDINGS

The report shall have a findings section which identifies known or suspect recognized environmental conditions (REC) and historically recognized environmental conditions (HREC), and de minimis conditions.

The information gathered while researching the prior use of the property and during the site reconnaissance highlighted that the site has the following suspect recognized environmental concerns.

1) The 1901-07 N. 33rd Street property was used as a gasoline filling station prior to 1942 to sometime between 1951 and 1976. The property usage as a gasoline station was prior to environmental regulation and recordkeeping. No information is available regarding existence of tanks, closure of tanks or past spills and releases.

2) At one time all of the parcels on the Strawberry Mansion Site contained dwellings, which likely utilized heating oil stored in above ground tanks in the basement. The existing structures show the current or historic evidence of heating oil tanks in their basements.

3) Asbestos-containing materials (ACM) are likely to be present in current residences and structures due to the age of the buildings.

7.0 OPINIONS

The report shall include environmental professional's opinion(s) of the impact on the property of conditions identified in the findings section. The logic and reasoning used by the environmental professional in evaluating information collected during the course of the investigation related to such conditions shall be discussed. Frequently, items initially suspected to be a recognized environmental condition are subsequently determined, upon further evaluation, to not be considered a recognized environmental condition. The opinion shall specifically include the environmental professional's rationale for concluding that a condition is or is not currently a recognized environmental condition. Conditions identified by the environmental professional as recognized environmental conditions, shall be listed in the conclusions section of the report.

1901-07 N. 33rd St. – Past Use as a Gasoline Filling Station:

It is assumed that petroleum products were used at this property during a given time. The current review of the property including site visit shows no indication of release or past release. However there are no records and a lack of information regarding tank(s) that were used at the site and the operation of the gasoline filling station. There is no way of knowing if tanks are present, contain product, were closed-in-place or removed. Therefore, we cannot offer a further opinion regarding a material threat of a release, whether the release would be classified as *de minimis*, or if an enforcement action would be brought upon by Pennsylvania Department of the Environment (PADEP) if a release did previously occur or would occur. **This condition is a recognized environmental concern.**

Above-ground Heating Oil Tanks in Basements – Past Use and Current Use

At one time all of the parcels on the Strawberry Mansion Site contained dwellings, which likely utilized heating oil stored in above ground tanks in the basement. Per the client, any demolition work on the subject sites, including properties that have been previously condemned, surveyed, leveled, demolished and/or backfilled have been overseen by Philadelphia's Department of Licensing and Inspection (L&I). The demolition process or protocol included the survey, abatement, demolition, and backfill of the individual lots. Basement areas were backfilled with brick, block, concrete and stone, after first punching through any existing basement slab areas. Hazardous or regulated materials were removed from the properties prior to demolition and backfill. Any heating oil tanks encountered were properly removed from the properties. The existing structures indicate current or historic evidence of heating oil tanks in their basements. If a release were to occur, it would most likely be *de minimis* and would most likely not warrant enforcement action. **This condition is not a recognized environmental concern.**

Asbestos-containing materials (ACM) - Likely to be Present in Current Residences and Structures.

The Philadelphia Housing Authority (PHA) has a policy with respect to handling and abatement of asbestos-containing materials. This policy conforms to the City of Philadelphia-Department of Public Health, Air Management Services, Asbestos Control Unit's "Asbestos Control Regulation" (ACR). **This condition is not a recognized environmental concern.**

8.0 DATA GAPS

Data gaps at the time of this publication include the following

- The City of Philadelphia Fire Department Records, the Fire Marshal Office, City of Philadelphia Air Management Services, and the City of Philadelphia Office of Housing and Community Development were separate from the EDR Radius Map Report research and were requested through the Open Records Officer, Ms. Jo Rosenberger-Altman. Ms. Altman indicated that she would initiate the search with the proper departments (License and Inspections, Water Department, and the Fire Marshal); however the normal turn-around time is about 37 working days. She stated the Office of Housing and Community does not maintain their own property records. Responses from the City of Philadelphia Fire Department or Fire Marshal were not returned at the time of this writing.

9.0 CONCLUSIONS

BATTA performed a *Phase I Environmental Assessment* in conformance with the scope and limitations of ASTM Practice E 1527-05 and the Guidelines of the PHFA Additional Requirements of Strawberry Mansion Site: RFP Number P-004215. Reference Section 2.0 for complete list of locations and legal descriptions.

This assessment has revealed the following *recognized environmental conditions* in connection with the *properties*, at this time.

1901-07 N. 33rd St. – Past Use as a Gasoline Filling Station:

The property at 1901-07 North 33rd Street (Strawberry Mansion Sites) was used as a gasoline station from sometime between 1925 and 1942 until it was listed as 'vacant' in the 1976 Sanborn Fire Insurance Map. The gas station usage was prior to environmental records and regulations. It is assumed that petroleum products were used at this property during a given time. The current review of the property including site visit shows no indication of release or past release. However there are no records and a lack of information regarding tank(s) that were used at the site and the operation of the gasoline filling station. There is no way of knowing if tanks are present, contain product, were closed-in-place or removed. Therefore, we cannot offer a further opinion regarding a material threat of a release, whether the release would be classified as *de minimis*, or if an enforcement action would be brought upon by Pennsylvania Department of the Environment (PADEP). **This condition is a recognized environmental concern.**

10.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

We declare to the best of our professional knowledge and belief, we meet the definition of Environmental professional as defined in section 312.10 or 40CFR 312.

We have the specific qualifications based on education, training, and experience to assess a property of the nature, history and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40CFR Part 312.

Prepared By:

_____

Charles Rhodes, PG
Professional Geologist

Due to the limited nature of the Phase I Environmental Site Assessment, Batta Environmental Associates, Inc. cannot guarantee that there are no environmental liabilities at the site beyond what was revealed by the physical inspection, existing conditions, historical reviews and available records at the time of the investigation.

Be advised that the data provided with this report only represents conditions that existed at the time of the investigation. If additional information becomes known, then an additional environmental site assessment may be warranted.

The data, information, interpretations, and recommendations contained in this technical report are presented solely as a basis and guide to the existing conditions at the evaluated properties expressed in this report. Batta Environmental Associates, Inc. developed the conclusions and professional opinions presented herein in accordance with ASTM E1527-05 Standards. As with all Phase I Environmental Site Assessments and reports, the opinions expressed here are subject to revision in light of new information that may be developed in the future, and no warranties are expressed or implied.

This report has not been prepared for use by parties other than that of the client. It may not contain sufficient information for the purpose of the other parties or other uses. If any significant changes are made to site conditions described in this report, the conclusions and recommendations contained herein may be invalid, unless the changes are reviewed by Batta Environmental Associates, Inc. and the conclusions and recommendations are modified or approved in writing.

11.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

Professional Qualifications and Experience for Batta Environmental Associates, Inc. to perform Phase I Assessments

Since 1982, Batta Environmental Associates, Inc. (BATTA) has provided environmental consulting and analytical services to public and private sector clients in the states of Pennsylvania, New Jersey, Delaware and Maryland. The office is composed of Batta Environmental Associates, Inc., which consists of the Industrial Hygiene and the Geo-Environmental Groups, and of Batta Laboratories, Inc. Together, these groups provide a broad base of talents and disciplines to solve complex environmental problems in a practical and economic manner.

Our staff of approximately 40 multi-disciplinary scientific professionals has routinely performed Phase I Environmental Site Assessments, Intrusive Soil Studies, Remedial Investigations, and Feasibility Studies, etc. on behalf of clients such as Wells Fargo,
M & T Bank (Wilmington Trust Company), Beneficial National Bank, PNC Bank, Wilmington Savings Fund Society (WSFS), Artisans Savings Bank, real estate developers, and general contractors.

12.0 REFERENCES

Environmental Data Resources (EDR)

City of Philadelphia Open Records Officer, Jo Rosenberger-Altman

City of Philadelphia Air Services Department

City of Philadelphia Fire Marshal (referred BATTA to the Open Records Officer)

www.phila.gov

http://www.philageohistory.org/geohistory/

http://www.philageohistory.org/tiles/viewer/

www.philadox.gov

Philadelphia License and Inspections Department

Bosbyshell, Howell, 2008, Bedrock geologic map of a portion of the Philadelphia quadrangle, Montgomery and Philadelphia Counties, Pennsylvania: Pennsylvania Geological Survey, 4th ser., Open-File Report OFBM 08–05.0, 21 p., Portable Document Format (PDF).

PHASE II ENVIRONMENTAL SITE INVESTIGATION

Strawberry Mansion
1901-1907 N. 33rd Street
Philadelphia, Pennsylvania 19121

Project # 13-11-1066

Prepared for:

The Philadelphia Housing Authority

Submitted to:

Blackney Hayes Architects

December 2013

Delivering Sustainable Solutions ...Globally

G&C Environmental Services, Inc.

2 Street Road
Newtown Square, PA 19073
(610) 993-9202
www.GCenviro.com
gmconner@gcenviro.com

John P. Mihalich, P.G.
#PG001034G

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EXECUTIVE SUMMARY

This report is being submitted to Blackney Hayes Architects, Inc. (BHA) for a focused Phase II site investigation soil sampling conducted at the Strawberry Mansion Apartments site located at 1901-07 North 33rd Street in Philadelphia, Pennsylvania (the Site).

A previous Phase I Environmental Site Assessment (ESA) conducted by Batta Environmental in June 2013 identified the former presence of a gasoline station on the Site. Based on the findings of the Phase I ESA, a surface geophysical survey was conducted by Batta Environmental in September 2013 and identified two anomalies which appeared to be underground storage tanks (USTs).

- One anomaly was observed in the central portion of the Site in the area of the former gasoline tanks noted on historical Sanborn® fire insurance maps. This central anomaly was 11 feet (N-S) by 16 feet (E-W). The estimated depth to the anomaly was four (4) feet below ground surface (ft-bgs).
- A second anomaly was observed in the southwestern corner of the Site. The southwestern anomaly was estimated to be 4.5 feet (N-S) by 29 feet (E-W).

This Phase II site investigation was conducted to assess potential soil impacts resulting from the operation of the suspect USTs.

Field observations during sample collection identified soil staining, odors, and detectable levels of volatile organic vapors based on readings taken with a photoionization detector (PID). Subsequent analysis of select soil samples detected concentrations of regulated compounds, consistent with petroleum hydrocarbon storage and use, in the area of the geophysical anomalies. Some of the detected compounds were at concentrations above the Pennsylvania Department of Environmental Protection (PADEP) Medium Specific Concentrations (MSCs). Field observations and laboratory results are summarized below.

Soil impacts (beginning at approximately 5 to 7 ft-bgs) appear to be concentrated around the southwestern anomaly but generally within a horizontal extent of less than 20 feet from the southwestern anomaly (although sampling was not conducted offsite to the west or south of the anomaly). Shallow impacts were observed to the west of the central anomaly based on PID readings at a depth of approximately 7 to 9 ft-bgs, but they also appear to be limited in extent and were not observed to the north, east, and south of the central anomaly.

In the area of the southwestern anomaly, the impacts (staining, petroleum-like odors, concentrations of volatile organic vapors above background, and laboratory analytical results) extend vertically to groundwater. Groundwater was first encountered at depths of approximately 20 ft-bgs. In the area of the central anomaly, deeper impacts were observed only near the water table, except in the boring to the west where elevated PID readings were observed from 7 to 9 ft-bgs.

Benzene, toluene, ethylbenzene, xylenes, isopropylbenzene (cumene), naphthalene, 1,2,4-trimethylbenzene, and/or 1,3,5-trimethylbenzene were detected in all laboratory-analyzed soil samples. Of these compounds, benzene, ethylbenzene, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene were detected at concentrations above the PADEP *Soil-to-Groundwater* MSCs and

1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene were detected at concentrations above the PADEP *Residential Direct Contact* MSCs.

With regard to vapor intrusion into buildings, chemicals of potential indoor air concern (COPIACs) were detected in soil samples at the Site, including benzene, ethylbenzene, toluene, and xylenes. Non-COPIACs (cumene, naphthalene, 1,2,4-trimethylbenzene, and 1,3.5-trimethylbenzene) were also detected at concentrations that exceed the *Soil-to-Groundwater* MSCs. *Soil Screening Values for Protection of Indoor Air – Residential* were exceeded at three locations (benzene, ethylbenzene, xylenes, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene at S-2 and xylenes, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene at S-1 and S-3), indicating the potential for vapor intrusion into buildings.

1.0 INTRODUCTION

G&C Environmental Services, Inc. is providing this report to Blackney Hayes (BHA) for soil sampling conducted at the Strawberry Mansion Apartments site located at 1901-07 North 33rd Street in Philadelphia, Pennsylvania (the Site). The objective of the work performed was to assess potential impacts from suspect underground storage tanks (USTs). The Site location is shown on Figure 1.

2.0 SITE BACKGROUND

Batta Environmental (Batta) conducted a Phase I Environmental Site Assessment (ESA) in June 2013 that included the Site. The Batta Phase I ESA identified a former gas station on the Site dating back to prior to 1942 to sometime between 1951 and 1976. Based on the results of the Phase I ESA, Batta conducted a surface geophysical study including ground penetrating radar (GPR) and an electromagnetic (EM) survey of the Site in September 2013. The geophysical study identified the likely presence of two areas containing structures that were presumed by Batta to be related to the former gas station's USTs:

1. The central anomaly was 11 feet (N-S) by 16 feet (E-W). This appeared to be magnetic and had two unknowns, one to the north and one to the east. The estimated depth to the anomaly was four (4) feet below ground surface (ft-bgs).
2. The southwestern anomaly was estimated as 4.5 feet (N-S) by 29 feet (E-W).

G&C was contracted to install soil borings for the collection of soil samples to assess potential impacts from the suspect USTs.

3.0 WORK PERFORMED AND METHODS USED

G&C conducted a focused soil sampling program to assess overall Site conditions around the suspect USTs (i.e., geophysical anomalies) as identified in the Batta geophysical study. The edges of the central geophysical anomaly were marked by Batta in the field by orange pin flags at the Site labeled "Master Locators." Master Locators was retained by Batta to conduct the geophysical survey. The soil boring investigation is summarized below:

- Soil borings were located approximately three to four feet from the anomalies identified in the Batta geophysical survey and by the orange pin flags at the Site associated with suspect USTs.

- Prior to the initiation of any subsurface related activities, a Pennsylvania One Call was conducted to identify any utilities entering the Site.

- Following the completion of the Pennsylvania One Call, the soil boring locations were cleared to a depth of five ft-bgs) using an air-knife at the boring locations near the anomalies to avoid hitting a potential UST. As noted above, the pin flags were an interpretation of the central suspect buried anomaly.

- Using a Geoprobe®, soil borings were advanced at eight initial locations (one boring on each side of the suspected USTs) to a completion depth of 10- to 15 ft-bgs. Based on field observations, select borings were advanced deeper to evaluate the vertical extent of suspected impacts to depths of 25 ft-bgs. Two additional borings were advanced 20 feet from the initial borings, in the areas to the north and east of the southwestern anomaly, to evaluate the horizontal extent of suspected impacts. The additional borings were drilled to depths of 15 ft-bgs based on field observations.

- Soil samples were screened both visually and with a photoionization detector (PID) for total volatile organic vapors (VOVs) on approximate six-inch intervals, along stratigraphic breaks, and in horizons with potential impacts (i.e., staining, odors).

- One soil sample per boring was selected for laboratory analysis, based on the Pennsylvania Department of Environmental Protection (PADEP) Short List of Petroleum Products, specifically for Leaded Gasoline, from the horizon having the highest potential impacts based on field screening observations. Analytical methods consisted of SW846 8260B for VOCs and SW846 6010B for lead. Samples for VOC analysis were preserved in the field using Encore® samplers.

- Upon completion the borings were backfilled with bentonite chips mixed with extra soil cuttings (i.e., those not consumed when filling analytical bottleware).

- Analytical data were compared to the Pennsylvania's Land Recycling Program *Direct Contact* and *Soil-to-Groundwater* Medium-Specific Concentrations (MSCs) based on a current and future residential site use scenario, hereinafter referred to as the *Direct Contact MSCs and Soil-to-Groundwater MSCs*.

- The analytical data were also evaluated in accordance with PADEP's *Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standard* guidance.

4.0 PRESENTATION AND EVALUATION OF INFORMATION AND DATA ACQUIRED

Analytical data collected during this investigation was compared to the Act 2 MSCs for both the *Direct Contact MSCs* and the *Soil-to-Groundwater MSCs*. The analytical data were also evaluated in accordance with PADEP's *Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standard* guidance. The geophysical anomalies and the soil boring locations are shown on Figure 2, along with constituents detected at concentrations exceeding the Act 2 MSCs. The analytical data is summarized in Table 1 and the complete laboratory data package is provided in Appendix A. Soil boring logs, which include geological descriptions and total VOC concentrations based on PID measurements collected in the field, are provided in Appendix B.

4.1 FIELD OBSERVATIONS

The Site is underlain predominantly by tan to brown clayey silt with evidence of fill material (bricks and concrete rubble in the first 5 ft-bgs to a depth of approximately 10 ft-bgs, which is further underlain predominantly by red to brown gravelly silty sand to a depth of at least 25 ft-bgs, the depth of the deepest borings. Groundwater (i.e., wet soil conditions) was observed between the depths of 20 and 25 ft-bgs.

4.1.1 Central Anomaly

PID readings and field observations indicated little to no impacts in the area of the central anomaly to depths of up to approximately 20 ft-bgs, except for some PID readings (less than 400 parts per million-air (ppm)) on the western side of the anomaly at a depth of approximately 7 to 9 ft-bgs.

In the area of the central anomaly, there were no odors or soil staining observed except for just above the water table.

4.1.2 Southwestern Anomaly

In the area of the southwestern anomaly, significant PID readings (i.e., readings greater than 1,000 ppm) were observed at depths of 5 to 7 ft-bgs on the northern, eastern, and southern sides of the anomaly and continued to to groundwater encountered at a depth of approximately 20 ft-bgs. Based on field observations, impacts on the western side were not as significant as impacts on the north, south, and east.

To avoid striking the suspect USTs, soil borings within 3 to 4 feet of the anomalies were cleared to a depth of 5 ft-bgs with an air knife. Therefore, observations of soil conditions in the upper 5 feet of the soil column could not be made in these borings. At all locations except for one (S-2), PID readings were not elevated until approximately 6 to 7 ft-bgs. At soil boring S-2, however, PID readings of over 1,400 ppm-air were observed immediately at 5 ft-bgs, identifying a potential for impacts at this location at a depth shallower than 5 ft-bgs.

4.2 LABORATORY ANALYTICAL RESULTS

Laboratory analytical results are summarized in Table 1 and on Figure 2 and discussed below.

4.2.1 Central Anomaly

The following VOCs were detected in soil samples collected in the area of the central anomaly: benzene, toluene, ethylbenzene, xylenes, isopropylbenzene (cumene), naphthalene, 1,2,4-trimethylbenzene, and/or 1,3,5-trimethylbenzene. However, only 1,2,4-trimethylbenzene was detected at a concentration above the Act 2 *Soil-to-Groundwater* MSC. No constituents were detected at concentrations above the Act 2 *Residential Direct Contact* MSCs. Lead concentrations ranged from 6.7 to 13.8 mg/kg, compared to

the Act 2 *Soil-to-Groundwater* MSC of 450 mg/kg and the Act 2 *Residential Direct Contact* MSC of 500 mg/kg.

4.2.2 Southwestern Anomaly

Analytical results from the southwestern anomaly are summarized below:

- There were no exceedances of the Act 2 *Direct Contact* MSCs for gasoline constituents in any of the samples with the exception of 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene at boring location S-2, to the east of the southwestern anomaly.
- There were no exceedances of either the *Direct Contact* or *Soil-to-Groundwater* MSCs for gasoline constituents in a shallow soil sample analyzed 20 feet to the east of the observed impacts related to the southwestern anomaly, indicating that the shallow impacts are limited.
- There were exceedances of the Act *Soil-to-Groundwater MSCs* for gasoline constituents in samples surrounding the southwestern anomaly to the east and south (locations S-2 and S-3) and to the north (locations S-2), indicating a deeper impact to soil and a potential impact to groundwater from constituents in soil.
- Benzene, ethylbenzene, and naphthalene were detected above the Act 2 *Soil-to-Groundwater* MSCs at only one location (S-2, to the east of the southwestern anomaly).
- 1,2,4-Trimethylbenzene was detected above the Act 2 *Soil-to-Groundwater* MSCs at five locations (S-1, S-2, S-3, and S-5).
- 1,3-5-Trimethylbenzene was above the Act 2 *Soil-to-Groundwater* MSCs at four locations (S-1, S-2, S-3, and S-5).
- Samples collected from just above the water table had exceedances of the Act 2 *Soil-to Groundwater* MSCs indicating a potential impact to groundwater.
- With regard to vapor intrusion into buildings, chemicals of potential indoor air concern (COPIACs) were detected in soil samples at the Site, including benzene, ethylbenzene, toluene, and xylenes. Non-COPIACs (cumene, naphthalene, 1,2,4-trimethylbenzene, and 1,3.5-trimethylbenzene) were also detected at concentrations that exceed the *Soil-to-Groundwater* MSCs. *Soil Screening Values for Protection of Indoor Air – Residential* were exceeded at three locations (benzene, ethylbenzene, xylenes, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene at S-2 and xylenes, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene at S-1 and S-3), indicating the potential for vapor intrusion into buildings.
- Lead concentrations ranged from 7.7 to 81.7 mg/kg, compared to the Act 2 *Soil-to-Groundwater* MSC of 450 mg/kg and the Act 2 *Residential Direct Contact* MSC of 500 mg/kg.

5.0 INTERPRETATION OF RESULTS AND CONCEPTUAL SITE MODEL

The objective of the work performed was to assess potential impacts from the suspect USTs.

The results of this Site investigation indicate an impact to the environment in relation to the anomalies based on both field observations and laboratory analytical results. The anomalies are suspect USTs (as determined by Batta) which were part of a former gas station that operated at the Site. The results are discussed below, summarized in Table 1 and on Figure 2, and shown graphically as a conceptual site model on Figure 3.

5.1 FIELD OBSERVATIONS

Based on field PID readings, the shallow impacts (beginning at approximately 5 to 7 ft-bgs) appear to be concentrated around the southwestern anomaly and appear to be limited in extent to less than 20 feet from the southwestern anomaly. Shallow impacts were observed to the west of the central anomaly at a depth of approximately 7 to 9 ft-bgs, but they also appear to be limited in extent and were not observed to the north, east, and south of the central anomaly.

In the area of the southwestern anomaly, the impacts extended to depths of approximately 20 ft-bgs, with elevated field PID readings (i.e., above background) to the water table. In the area of the central anomaly, based on field PID readings, deeper impacts were generally observed only near the water table. Staining of soils was observed below the water table.

5.2 LABORATORY ANALYTICAL RESULTS

Laboratory analytical results indicate that gasoline constituents were detected to some extent in all of the samples collected but at concentrations which generally do not exceed the *Residential Direct Contact MSCs*, except for 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene which were detected at concentrations above the *Residential Direct Contact* MSCs at the S-2 boring location. There were, however, exceedances of the Act 2 *Soil-to-Groundwater* MSCs in the area of both anomalies, indicating an impact to deeper soils and a potential impact to groundwater associated with, most likely, the southwestern anomaly. With regard to vapor intrusion into buildings, COPIACs were detected in soil samples at the Site, including benzene, ethylbenzene, toluene, and xylenes. Non-COPIACs (cumene, naphthalene, 1,2,4-trimethylbenzene, and 1,3.5-trimethylbenzene) were also detected at concentrations that exceed the *Soil-to-Groundwater* MSCs.

In the area of the central anomaly, VOC concentrations exceed the Act 2 *Soil-to-Groundwater MSCs* in one of the four borings (C-1, to the north of the anomaly). There were no exceedances of the *Residential Direct Contact* MSCs or the *Soil Screening Values for Protection of Indoor Air – Residential* in the area of the central anomaly.

In the area of the southwestern anomaly, VOC concentrations exceed the Act 2 *Soil-to-Groundwater* in four of the six borings (S-1, S-2, S-3, and S-5). VOC concentrations exceed the *Residential Direct Contact* MSCs for two compounds (1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene) in one of the 10 borings (S-2, to the east of the southwestern anomaly). *Soil Screening Values for Protection of Indoor Air – Residential* were exceeded at three locations (benzene, ethylbenzene, xylenes, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene at S-2 and xylenes, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene at

S-1 and S-3), indicating the potential for vapor intrusion into buildings. Lead concentrations did not exceed the *Soil-to-Groundwater* or *Residential Direct Contact* MSCs.

5.3 CONCEPTUAL SITE MODEL

A conceptual site model is depicted on Figure 3 and summarized below:

- The Site is underlain by unconsolidated silt, sand, and gravel to depths of at least 25 ft-bgs. Evidence of fill material (brick and concrete rubble) was observed in the upper 5 feet.
- USTs from a former gasoline station appear to remain onsite.
- Groundwater occurs at a depth of approximately 20 ft-bgs.
- Impacts to soil were observed at depths ranging from 5 to 20 ft-bgs, particularly in the area of the southwestern anomaly; shallower impacts may also be present in some areas.
- Based on soil concentrations, there is a potential impact for groundwater impacts across the Site, a potential for vapor intrusion into future buildings, and a potential for offsite impacts.

TABLES

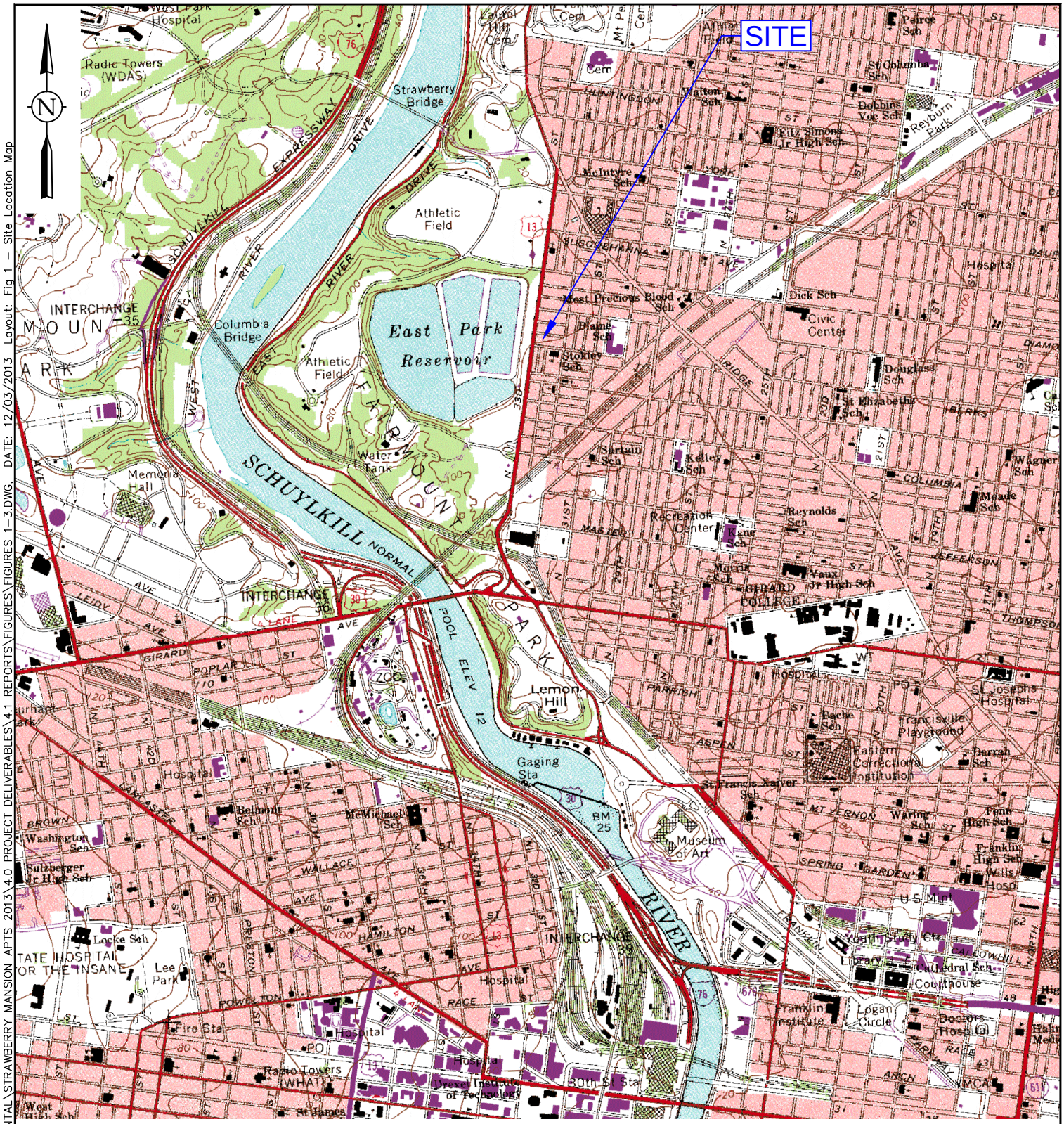
Table 1
Soil Analytical Results
Strawberry Mansion Apartments
1901-07 North 33rd Street
Philadelphia, Pennsylvania
Project No. 13-11-1066

Sample ID:					S-1			S-2			S-3			S-4			S-5			S-6		
PADEP STANDARDS:	Soil Screening Values for Protection of Indoor Air PA Defaults Residential Volatilization to Indoor Air Screen (mg/kg)	Soil to Groundwater Used Aquifer TDS ≤ 2500 Generic Value (mg/kg)	Direct Contact 0 to 15 feet (mg/kg)	Statewide Health Standard (mg/kg)																		
Lab ID:					JB53396-5			JB53396-6			JB53396-7			JB53396-8			JB53396-9			JB53396-10		
Date Sampled:					11/15/2013			11/15/2013			11/15/2013			11/15/2013			11/15/2013			11/15/2013		
Matrix:					Soil			Soil			Soil			Soil			Soil			Soil		
Constituent of Concern (mg/kg)					Result	Q	RLs	Result	Q	RLs	Result	Q	RLs	Result	Q	RLs	Result	Q	RLs	Result	Q	RLs
Benzene	0.37*	0.5	57	0.5	0.185	J	0.200	*1.710*		1.000	0.246	J	0.470	ND		0.110	ND		0.110	0.0042		0.00088
Ethylbenzene	57*	70	10000	70	13.600		0.200	*140.000*		1.000	20.200		0.470	2.390		0.110	9.060		0.110	0.00059	J	0.00088
Isopropylbenzene (Cumene)	360	600	7700	600	2.730		0.980	31.000		5.000	4.990		2.300	7.450		0.570	0.934		0.560	0.00055	J	0.0044
Naphthalene	64	25	4400	25	4.820		0.980	*26.400*		5.000	6.280		2.300	3.170		0.570	0.171	J	0.560	0.00068	J	0.0044
Toluene	76*	100	10000	100	0.984		0.200	4.450		1.000	0.391	J	0.470	ND		0.110	ND		0.110	0.00024	J	0.00088
Xylenes	55*	1000	1900	1000	*84.900*		0.200	*886.000*		5.000	*1.000*		0.470	0.355		0.110	20.500		0.110	0.0197		0.00088
1,2-Dichloroethane	0.49*	0.5	17	0.5	ND		0.200	ND		1.000	ND		0.470	ND		0.110	ND		0.110	ND		0.00088
1,2-Dibromoethane	0.17	0.005	0.74	0.005	ND		0.200	ND		1.000	ND		0.470	ND		0.110	ND		0.110	ND		0.00088
1,2,4-Trimethylbenzene	20	8.4	130	8.4	*36.800*		9.800	***379.000***		25.000	*65.900*		2.300	1.750		0.570	9.570		0.560	0.0127		0.0044
1,3,5-Trimethylbenzene	4.6	2.3	110	2.3	*14.300*		0.980	***127.000***		5.000	*23.100*		2.300	ND		0.570	3.360		0.560	0.0035	J	0.0044
Methyl Tertiary Butyl Ether (MTBE)	51	2	620	2	ND		0.200	ND		1.000	ND		0.470	ND		0.110	ND		0.110	ND		0.00088
Lead	N/A	450	500	450	81.7		0.87	17.2		1.0	14.6		0.93	7.7		0.97	16.8		0.97	12.0		0.94

Sample ID:					C-1			C-2			C-3			C-4		
PADEP STANDARDS:	Protection of Indoor Air PA Defaults Residential Volatilization to Indoor Air Screen (mg/kg)	Used Aquifer TDS ≤ 2500 Generic Value (mg/kg)	Contact 0 to 15 feet (mg/kg)	Statewide Health Standard (mg/kg)												
Lab ID:					JB53396-1			JB53396-2			JB53396-3			JB53396-4		
Date Sampled:					11/15/2013			11/15/2013			11/15/2013			11/15/2013		
Matrix:					Soil			Soil			Soil			Soil		
Constituent of Concern (mg/kg)					Result	Q	RLs	Result	Q	RLs	Result	Q	RLs	Result	Q	RLs
Benzene	0.37*	0.5	57	0.5	0.0292	J	0.091	ND		0.00086	ND		0.095	ND		0.087
Ethylbenzene	57*	70	10000	70	0.031	J	0.091	0.00082	J	0.00086	ND		0.095	0.0907		0.087
Isopropylbenzene (Cumene)	360	600	7700	600	0.840		0.450	0.0035	J	0.0043	0.0259	J	0.480	0.0701	J	0.430
Naphthalene	64	25	4400	25	ND		0.450	0.00095	J	0.0043	ND		0.480	ND		0.430
Toluene	76*	100	10000	100	0.0192	J	0.091	0.00021	J	0.00086	ND		0.095	0.0596	J	0.087
Xylenes	55*	1000	1900	1000	ND		0.091	0.00088		0.00086	ND		0.095	0.0771	J	0.087
1,2-Dichloroethane	0.49*	0.5	17	0.5	ND		0.091	ND		0.00086	ND		0.095	ND		0.087
1,2-Dibromoethane	0.17	0.005	0.74	0.005	ND		0.091	ND		0.00086	ND		0.095	ND		0.087
1,2,4-Trimethylbenzene	20	8.4	130	8.4	9.340		0.450	0.0014	J	0.0043	0.0424	J	0.480	0.102	J	0.430
1,3,5-Trimethylbenzene	4.6	2.3	110	2.3	0.167	J	0.450	ND		0.0043	ND		0.480	0.0297	J	0.430
Methyl Tertiary Butyl Ether (MTBE)	51	2	620	2	ND		0.091	ND		0.00086	ND		0.095	ND		0.087
Lead	N/A	450	500	450	7.5		1.1	6.7		0.84	6.9		0.93	13.8		0.90

Notes:
Yellow Highlight: Indicates exceedence of an Act 2 Statewide Health Standard (SHS)
Bold and Yellow Highlight: Indicates exceedence of the Act 2 Medium Specific Concentration (MSC), Residential Direct Contac
Italics: Indicates exceedance of PA Defaults Residential Volatilization to Indoor Air Screer
ND: Not detected
RLs: Reporting limits
mg/kg: milligrams per kilogram, equivalent to parts per millior
J: Indicates an estimated value

FIGURES



REFERENCE:
USGS 7.5-MINUTE QUADRANGLE MAP "PHILADELPHIA, PA.", REVISED 1994.

0' 1,000' 2,000'

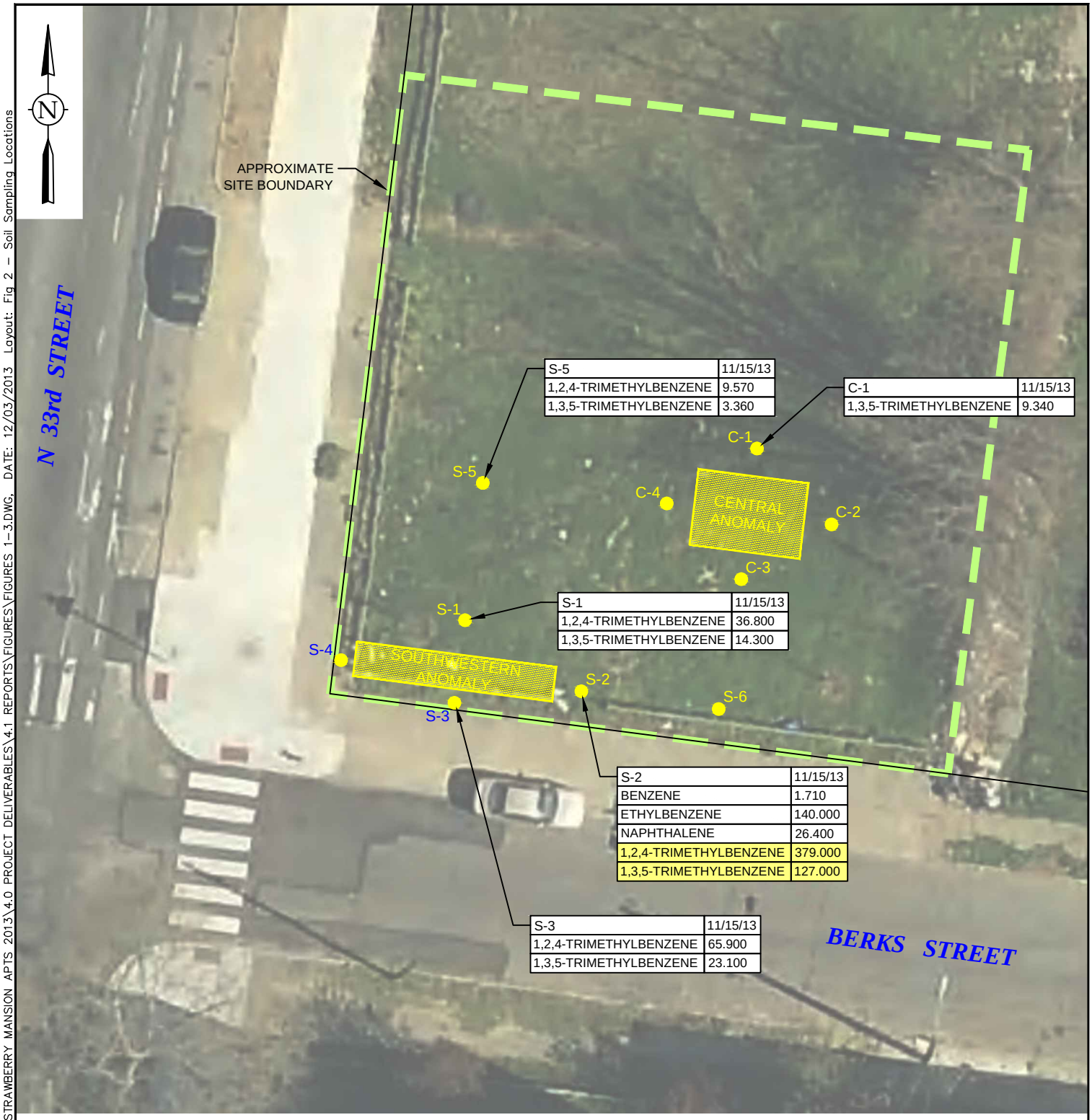
CLIENT

PROJECT
STRAWBERRY MANSION APARTMENTS
1901 N. 33rd STREET - PHILADELPHIA, PENNSYLVANIA 19121

TITLE
SITE LOCATION MAP

DRAWN BY:	PROJECTION:	DATE:
PJC	NAD-83	DECEMBER 2013
CHECKED BY:	REV. NO.:	PROJECT NO.:
JLM	0	13-11-1066
REVIEWED BY:	SCALE:	FIGURE NO.:
JLM	1" = 2000'	1

FILE: \\PHL-FS1\PHOFFICE\G&C ENVIRONMENTAL\STRAWBERRY MANSION APTS 2013\4.0 PROJECT DELIVERABLES\4.1 REPORTS\FIGURES\FIGURES 1-3.DWG, DATE: 12/03/2013 Layout: Fig 1 - Site Location Map



NOTES:

1. ONLY EXCEEDANCES OF THE ACT 2 MEDIUM SPECIFIC CONCENTRATIONS (MSCs) SHOWN.
2. EXCEEDANCES OF THE STATEWIDE HEALTH STANDARD SHOWN IN BOLD.
3. EXCEEDANCES OF THE DIRECT CONTACT MSCs SHOWN IN BOLD AND SHADED.

0' 10' 20'

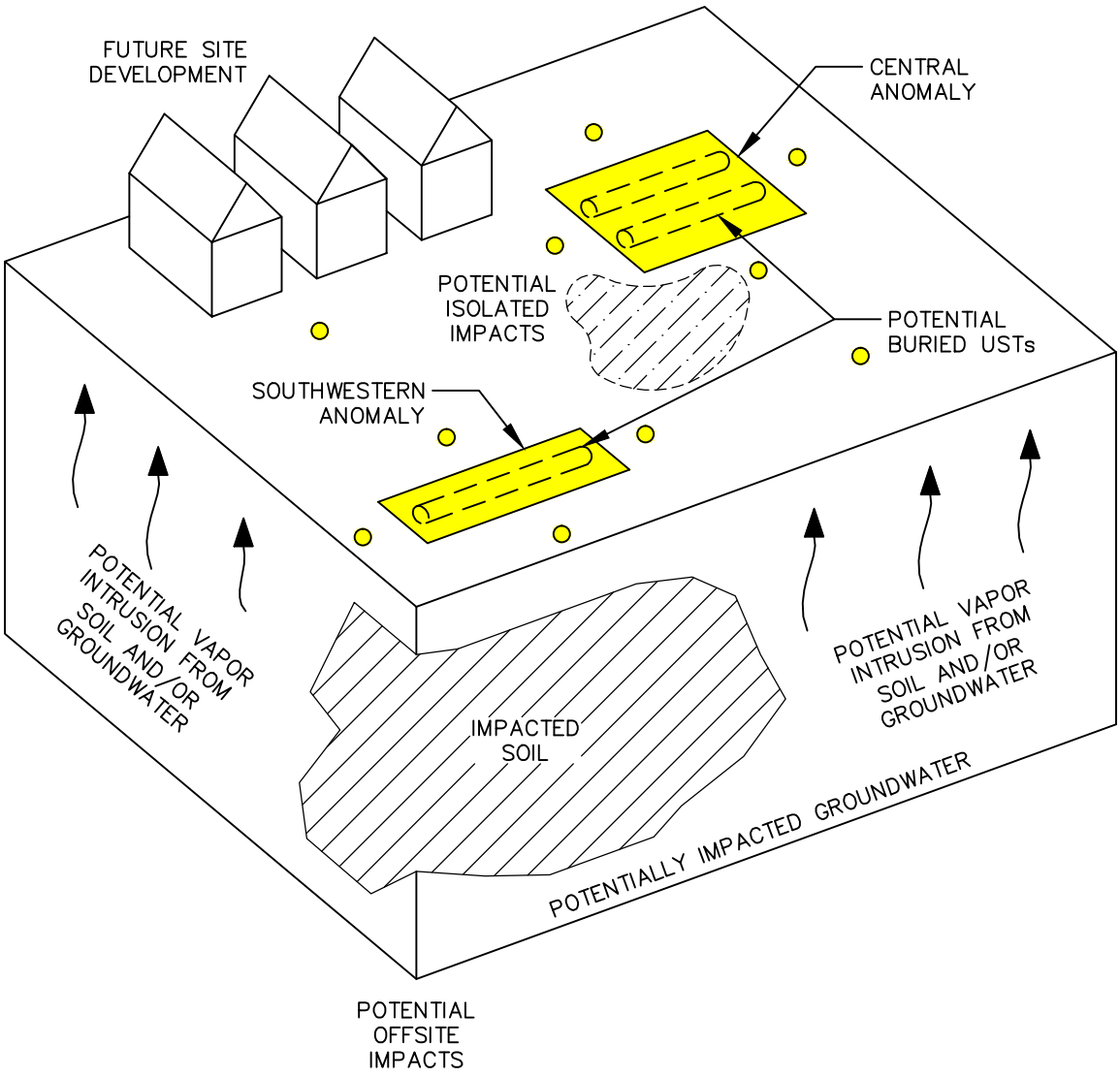
CLIENT

PROJECT
STRAWBERRY MANSION APARTMENTS
1901 N. 33rd STREET - PHILADELPHIA, PENNSYLVANIA 19121

TITLE
SOIL SAMPLING LOCATIONS

DRAWN BY:	PROJECTION:	DATE:
PJC	NAD-83	DECEMBER 2013
CHECKED BY:	REV. NO.:	PROJECT NO.:
JLM	0	13-11-1066
REVIEWED BY:	SCALE:	FIGURE NO.:
JLM	1" = 20'	2

FILE: \\PHL-FS1\PHOFFICE\G&C ENVIRONMENTAL\STRAWBERRY MANSION APTS 2013\4.0 PROJECT DELIVERABLES\4.1 REPORTS\FIGURES\FIGURES 1-3.DWG, DATE: 12/03/2013 Layout: Fig 2 - Soil Sampling Locations



CLIENT

PROJECT
STRAWBERRY MANSION APARTMENTS
1901 N. 33rd STREET - PHILADELPHIA, PENNSYLVANIA 19121

TITLE
SITE CONCEPTUAL MODEL

DRAWN BY:	PROJECTION:	DATE:
PJC	NAD-83	DECEMBER 2013
CHECKED BY:	REV. NO.:	PROJECT NO.:
JLM	0	13-11-1066
REVIEWED BY:	SCALE:	FIGURE NO.:
JLM	NO SCALE	3

FILE: \\PHL-FS1\PHOFFICE\G&C ENVIRONMENTAL\STRAWBERRY MANSION APTS 2013\4.0 PROJECT DELIVERABLES\4.1 REPORTS\FIGURES\FIGURES 1-3.DWG, DATE: 12/04/2013 Layout: Fig 3 - Site Conceptual Model

APPENDIX A

Laboratory Analytical Results

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Sample Summary

AMEC Environment & Infrastructure, Inc.

Job No: JB53396

Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA
Project No: 7772161000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JB53396-1	11/15/13	11:35	MT	11/16/13	SO	Soil	C-1 (20.5-21)
JB53396-2	11/15/13	12:15	MT	11/16/13	SO	Soil	C-2 (19.5-20)
JB53396-3	11/15/13	12:45	MT	11/16/13	SO	Soil	C-3 (19-19.5)
JB53396-4	11/15/13	11:00	MT	11/16/13	SO	Soil	C-4 (20-20.5)
JB53396-5	11/15/13	10:30	MT	11/16/13	SO	Soil	S-1 (18-18.5)
JB53396-6	11/15/13	13:20	MT	11/16/13	SO	Soil	S-2 (19-19.5)
JB53396-7	11/15/13	09:20	MT	11/16/13	SO	Soil	S-3 (19-19.5)
JB53396-8	11/15/13	09:45	MT	11/16/13	SO	Soil	S-4 (20-20.5)
JB53396-9	11/15/13	16:00	MT	11/16/13	SO	Soil	S-5 (10-10.5)
JB53396-10	11/15/13	16:20	MT	11/16/13	SO	Soil	S-6 (12-12.5)

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: JB53396
Account: AMEC Environment & Infrastructure, Inc.
Project: Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA
Collected: 11/15/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB53396-1	**C-1 (20.5-21)**					
Benzene		29.2 J	91	11	ug/kg	SW846 8260B
Toluene		19.2 J	91	13	ug/kg	SW846 8260B
Ethylbenzene		31.0 J	91	16	ug/kg	SW846 8260B
Isopropylbenzene		840	450	13	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene		9340	450	15	ug/kg	SW846 8260B
1,3,5-Trimethylbenzene		167 J	450	20	ug/kg	SW846 8260B
Lead [a]		7.5	1.1		mg/kg	SW846 6010C
JB53396-2	**C-2 (19.5-20)**					
Toluene		0.21 J	0.86	0.12	ug/kg	SW846 8260B
Ethylbenzene		0.82 J	0.86	0.15	ug/kg	SW846 8260B
Xylene (total)		0.88	0.86	0.15	ug/kg	SW846 8260B
Naphthalene		0.95 J	4.3	0.16	ug/kg	SW846 8260B
Isopropylbenzene		3.5 J	4.3	0.13	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene		1.4 J	4.3	0.14	ug/kg	SW846 8260B
Lead [a]		6.7	0.84		mg/kg	SW846 6010C
JB53396-3	**C-3 (19-19.5)**					
Isopropylbenzene [b]		25.9 J	480	14	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene [b]		42.4 J	480	15	ug/kg	SW846 8260B
Lead [a]		6.9	0.93		mg/kg	SW846 6010C
JB53396-4	**C-4 (20-20.5)**					
Toluene		59.6 J	87	12	ug/kg	SW846 8260B
Ethylbenzene		90.7	87	15	ug/kg	SW846 8260B
Xylene (total)		77.1 J	87	15	ug/kg	SW846 8260B
Isopropylbenzene		70.1 J	430	13	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene		102 J	430	14	ug/kg	SW846 8260B
1,3,5-Trimethylbenzene		29.7 J	430	19	ug/kg	SW846 8260B
Lead [a]		13.8	0.90		mg/kg	SW846 6010C
JB53396-5	**S-1 (18-18.5)**					
Benzene		185 J	200	25	ug/kg	SW846 8260B
Toluene		984	200	28	ug/kg	SW846 8260B
Ethylbenzene		13600	200	34	ug/kg	SW846 8260B
Xylene (total)		84900	200	35	ug/kg	SW846 8260B
Naphthalene		4820	980	36	ug/kg	SW846 8260B
Isopropylbenzene		2730	980	29	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene		36800	9800	310	ug/kg	SW846 8260B

Summary of Hits

Job Number: JB53396
Account: AMEC Environment & Infrastructure, Inc.
Project: Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA
Collected: 11/15/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
1,3,5-Trimethylbenzene		14300	980	43	ug/kg	SW846 8260B
Lead [a]		81.7	0.87		mg/kg	SW846 6010C
JB53396-6	**S-2 (19-19.5)**					
Benzene		1710	1000	130	ug/kg	SW846 8260B
Toluene		4450	1000	140	ug/kg	SW846 8260B
Ethylbenzene		140000	1000	180	ug/kg	SW846 8260B
Xylene (total)		886000	5000	900	ug/kg	SW846 8260B
Naphthalene		26400	5000	180	ug/kg	SW846 8260B
Isopropylbenzene		31000	5000	150	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene		379000	25000	810	ug/kg	SW846 8260B
1,3,5-Trimethylbenzene		127000	5000	220	ug/kg	SW846 8260B
Lead [a]		17.2	0.97		mg/kg	SW846 6010C
JB53396-7	**S-3 (19-19.5)**					
Benzene		246 J	470	59	ug/kg	SW846 8260B
Toluene		391 J	470	66	ug/kg	SW846 8260B
Ethylbenzene		20200	470	81	ug/kg	SW846 8260B
Xylene (total)		116000	470	83	ug/kg	SW846 8260B
Naphthalene		6280	2300	85	ug/kg	SW846 8260B
Isopropylbenzene		4990	2300	68	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene		65900	2300	75	ug/kg	SW846 8260B
1,3,5-Trimethylbenzene		23100	2300	100	ug/kg	SW846 8260B
Lead [a]		14.6	0.93		mg/kg	SW846 6010C
JB53396-8	**S-4 (20-20.5)**					
Ethylbenzene		2390	110	20	ug/kg	SW846 8260B
Xylene (total)		355	110	20	ug/kg	SW846 8260B
Naphthalene		3170	570	21	ug/kg	SW846 8260B
Isopropylbenzene		7450	570	17	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene		1750	570	18	ug/kg	SW846 8260B
Lead [a]		7.7	0.97		mg/kg	SW846 6010C
JB53396-9	**S-5 (10-10.5)**					
Ethylbenzene		9060	110	20	ug/kg	SW846 8260B
Xylene (total)		20500	110	20	ug/kg	SW846 8260B
Naphthalene		171 J	560	20	ug/kg	SW846 8260B
Isopropylbenzene		934	560	17	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene		9570	560	18	ug/kg	SW846 8260B
1,3,5-Trimethylbenzene		3360	560	25	ug/kg	SW846 8260B
Lead [a]		16.8	0.97		mg/kg	SW846 6010C

Summary of Hits

Job Number: JB53396
Account: AMEC Environment & Infrastructure, Inc.
Project: Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA
Collected: 11/15/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JB53396-10	**S-6 (12-12.5)**					
Benzene		4.2	0.88	0.11	ug/kg	SW846 8260B
Toluene		0.24 J	0.88	0.12	ug/kg	SW846 8260B
Ethylbenzene		0.59 J	0.88	0.15	ug/kg	SW846 8260B
Xylene (total)		19.7	0.88	0.16	ug/kg	SW846 8260B
Naphthalene		0.68 J	4.4	0.16	ug/kg	SW846 8260B
Isopropylbenzene		0.55 J	4.4	0.13	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene		12.7	4.4	0.14	ug/kg	SW846 8260B
1,3,5-Trimethylbenzene		3.5 J	4.4	0.19	ug/kg	SW846 8260B
Lead [a]		12.0	0.94		mg/kg	SW846 6010C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.
(b) Dilution required due to matrix interference.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	C-1 (20.5-21)		
Lab Sample ID:	JB53396-1	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
Method:	SW846 8260B	**Percent Solids:**	91.1
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D215537.D	1	11/22/13	CM	n/a	n/a	VD8802
Run #2 [a]	D215490.D	1	11/21/13	CM	n/a	n/a	VD8801

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.4 g	10.0 ml	100 ul
Run #2	6.4 g	10.0 ml	50.0 ul

PA Leaded Gasoline and Aviation Gas list

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	29.2	91	11	ug/kg	J
108-88-3	Toluene	19.2	91	13	ug/kg	J
100-41-4	Ethylbenzene	31.0	91	16	ug/kg	J
1330-20-7	Xylene (total)	ND	91	16	ug/kg	
91-20-3	Naphthalene	ND	450	16	ug/kg	
106-93-4	1,2-Dibromoethane	ND	91	50	ug/kg	
107-06-2	1,2-Dichloroethane	ND	91	29	ug/kg	
98-82-8	Isopropylbenzene	840	450	13	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	91	31	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	9340	450	15	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	167	450	20	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	94%	59-130%
17060-07-0	1,2-Dichloroethane-D4	97%	105%	65-123%
2037-26-5	Toluene-D8	133% [b]	125%	80-124%
460-00-4	4-Bromofluorobenzene	117%	98%	71-132%

(a) Confirmation run for surrogate recoveries.
(b) Outside control limits due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-1 (20.5-21)		
Lab Sample ID:	JB53396-1	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
		Percent Solids:	91.1
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	7.5	1.1	mg/kg	1	11/26/13	11/28/13	AMA	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: M:MA16484
(2) Prep QC Batch: M:MP22138

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

RL = Reporting Limit

Report of Analysis

Client Sample ID: C-2 (19.5-20)
Lab Sample ID: JB53396-2 **Date Sampled:** 11/15/13
Matrix: SO - Soil **Date Received:** 11/16/13
Method: SW846 8260B **Percent Solids:** 92.2
Project: Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X142301.D	1	11/22/13	NT	n/a	n/a	VX6157
Run #2							

	Initial Weight
Run #1	6.3 g
Run #2	

PA Leaded Gasoline and Aviation Gas list

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.86	0.11	ug/kg	
108-88-3	Toluene	0.21	0.86	0.12	ug/kg	J
100-41-4	Ethylbenzene	0.82	0.86	0.15	ug/kg	J
1330-20-7	Xylene (total)	0.88	0.86	0.15	ug/kg	
91-20-3	Naphthalene	0.95	4.3	0.16	ug/kg	J
106-93-4	1,2-Dibromoethane	ND	0.86	0.47	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.86	0.28	ug/kg	
98-82-8	Isopropylbenzene	3.5	4.3	0.13	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	0.86	0.30	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1.4	4.3	0.14	ug/kg	J
108-67-8	1,3,5-Trimethylbenzene	ND	4.3	0.19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		59-130%
17060-07-0	1,2-Dichloroethane-D4	102%		65-123%
2037-26-5	Toluene-D8	103%		80-124%
460-00-4	4-Bromofluorobenzene	109%		71-132%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-2 (19.5-20)		
Lab Sample ID:	JB53396-2	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
		Percent Solids:	92.2
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	6.7	0.84	mg/kg	1	11/27/13	11/28/13	AMA	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: M:MA16486
(2) Prep QC Batch: M:MP22149

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	C-3 (19-19.5)		
Lab Sample ID:	JB53396-3	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
Method:	SW846 8260B	**Percent Solids:**	86.6
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	D215492.D	1	11/21/13	CM	n/a	n/a	VD8801
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.6 g	10.0 ml	100 ul
Run #2			

PA Leaded Gasoline and Aviation Gas list

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	95	12	ug/kg	
108-88-3	Toluene	ND	95	14	ug/kg	
100-41-4	Ethylbenzene	ND	95	17	ug/kg	
1330-20-7	Xylene (total)	ND	95	17	ug/kg	
91-20-3	Naphthalene	ND	480	17	ug/kg	
106-93-4	1,2-Dibromoethane	ND	95	52	ug/kg	
107-06-2	1,2-Dichloroethane	ND	95	31	ug/kg	
98-82-8	Isopropylbenzene	25.9	480	14	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	95	33	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	42.4	480	15	ug/kg	J
108-67-8	1,3,5-Trimethylbenzene	ND	480	21	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		59-130%
17060-07-0	1,2-Dichloroethane-D4	102%		65-123%
2037-26-5	Toluene-D8	113%		80-124%
460-00-4	4-Bromofluorobenzene	95%		71-132%

(a) Dilution required due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-3 (19-19.5)		
Lab Sample ID:	JB53396-3	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
		Percent Solids:	86.6
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	6.9	0.93	mg/kg	1	11/27/13	11/28/13	AMA	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: M:MA16486
(2) Prep QC Batch: M:MP22149

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	C-4 (20-20.5)		
Lab Sample ID:	JB53396-4	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
Method:	SW846 8260B	**Percent Solids:**	90.2
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D215534.D	1	11/22/13	CM	n/a	n/a	VD8802
Run #2 [a]	D215493.D	1	11/21/13	CM	n/a	n/a	VD8801

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.8 g	10.0 ml	100 ul
Run #2	6.8 g	10.0 ml	10.0 ul

PA Leaded Gasoline and Aviation Gas list

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	87	11	ug/kg	
108-88-3	Toluene	59.6	87	12	ug/kg	J
100-41-4	Ethylbenzene	90.7	87	15	ug/kg	
1330-20-7	Xylene (total)	77.1	87	15	ug/kg	J
91-20-3	Naphthalene	ND	430	16	ug/kg	
106-93-4	1,2-Dibromoethane	ND	87	48	ug/kg	
107-06-2	1,2-Dichloroethane	ND	87	28	ug/kg	
98-82-8	Isopropylbenzene	70.1	430	13	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	87	30	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	102	430	14	ug/kg	J
108-67-8	1,3,5-Trimethylbenzene	29.7	430	19	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	94%	59-130%
17060-07-0	1,2-Dichloroethane-D4	97%	105%	65-123%
2037-26-5	Toluene-D8	135% [b]	114%	80-124%
460-00-4	4-Bromofluorobenzene	130%	94%	71-132%

(a) Confirmation run for surrogate recoveries.
(b) Outside control limits due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	C-4 (20-20.5)		
Lab Sample ID:	JB53396-4	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
		Percent Solids:	90.2
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	13.8	0.90	mg/kg	1	11/27/13	11/28/13	AMA	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: M:MA16486
(2) Prep QC Batch: M:MP22149

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-1 (18-18.5)		
Lab Sample ID:	JB53396-5	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
Method:	SW846 8260B	**Percent Solids:**	91.0
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D215494.D	1	11/21/13	CM	n/a	n/a	VD8801
Run #2	D215535.D	1	11/22/13	CM	n/a	n/a	VD8802

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.9 g	10.0 ml	50.0 ul
Run #2	5.9 g	10.0 ml	5.0 ul

PA Leaded Gasoline and Aviation Gas list

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	185	200	25	ug/kg	J
108-88-3	Toluene	984	200	28	ug/kg	
100-41-4	Ethylbenzene	13600	200	34	ug/kg	
1330-20-7	Xylene (total)	84900	200	35	ug/kg	
91-20-3	Naphthalene	4820	980	36	ug/kg	
106-93-4	1,2-Dibromoethane	ND	200	110	ug/kg	
107-06-2	1,2-Dichloroethane	ND	200	63	ug/kg	
98-82-8	Isopropylbenzene	2730	980	29	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	200	67	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	36800 [a]	9800	310	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	14300	980	43	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%	97%	59-130%
17060-07-0	1,2-Dichloroethane-D4	103%	98%	65-123%
2037-26-5	Toluene-D8	112%	108%	80-124%
460-00-4	4-Bromofluorobenzene	92%	99%	71-132%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-1 (18-18.5)		
Lab Sample ID:	JB53396-5	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
		Percent Solids:	91.0
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	81.7	0.87	mg/kg	1	11/27/13	11/28/13	AMA	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: M:MA16486
(2) Prep QC Batch: M:MP22149

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-2 (19-19.5)		
Lab Sample ID:	JB53396-6	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
Method:	SW846 8260B	**Percent Solids:**	89.3
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D215561.D	1	11/22/13	CM	n/a	n/a	VD8803
Run #2	D215489.D	1	11/21/13	CM	n/a	n/a	VD8801

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.9 g	10.0 ml	10.0 ul
Run #2	5.9 g	10.0 ml	2.0 ul

PA Leaded Gasoline and Aviation Gas list

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1710	1000	130	ug/kg	
108-88-3	Toluene	4450	1000	140	ug/kg	
100-41-4	Ethylbenzene	140000	1000	180	ug/kg	
1330-20-7	Xylene (total)	886000 [a]	5000	900	ug/kg	
91-20-3	Naphthalene	26400	5000	180	ug/kg	
106-93-4	1,2-Dibromoethane	ND	1000	550	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1000	320	ug/kg	
98-82-8	Isopropylbenzene	31000	5000	150	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1000	350	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	379000 [a]	25000	810	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	127000	5000	220	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	95%	59-130%
17060-07-0	1,2-Dichloroethane-D4	96%	103%	65-123%
2037-26-5	Toluene-D8	117%	111%	80-124%
460-00-4	4-Bromofluorobenzene	102%	94%	71-132%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-2 (19-19.5)		
Lab Sample ID:	JB53396-6	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
		Percent Solids:	89.3
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	17.2	0.97	mg/kg	1	11/27/13	11/28/13	AMA	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: M:MA16486
(2) Prep QC Batch: M:MP22149

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-3 (19-19.5)		
Lab Sample ID:	JB53396-7	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
Method:	SW846 8260B	**Percent Solids:**	92.2
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D215562.D	1	11/22/13	CM	n/a	n/a	VD8803
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.1 g	10.0 ml	20.0 ul
Run #2			

PA Leaded Gasoline and Aviation Gas list

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	246	470	59	ug/kg	J
108-88-3	Toluene	391	470	66	ug/kg	J
100-41-4	Ethylbenzene	20200	470	81	ug/kg	
1330-20-7	Xylene (total)	116000	470	83	ug/kg	
91-20-3	Naphthalene	6280	2300	85	ug/kg	
106-93-4	1,2-Dibromoethane	ND	470	260	ug/kg	
107-06-2	1,2-Dichloroethane	ND	470	150	ug/kg	
98-82-8	Isopropylbenzene	4990	2300	68	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	470	160	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	65900	2300	75	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	23100	2300	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		59-130%
17060-07-0	1,2-Dichloroethane-D4	96%		65-123%
2037-26-5	Toluene-D8	110%		80-124%
460-00-4	4-Bromofluorobenzene	98%		71-132%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-3 (19-19.5)		
Lab Sample ID:	JB53396-7	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
		Percent Solids:	92.2
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	14.6	0.93	mg/kg	1	11/27/13	11/28/13	AMA	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: M:MA16486
(2) Prep QC Batch: M:MP22149

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-4 (20-20.5)		
Lab Sample ID:	JB53396-8	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
Method:	SW846 8260B	**Percent Solids:**	89.9
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D215559.D	1	11/22/13	CM	n/a	n/a	VD8803
Run #2 [a]	D215496.D	1	11/21/13	CM	n/a	n/a	VD8801

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.1 g	10.0 ml	100 ul
Run #2	5.1 g	10.0 ml	10.0 ul

PA Leaded Gasoline and Aviation Gas list

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	110	14	ug/kg	
108-88-3	Toluene	ND	110	16	ug/kg	
100-41-4	Ethylbenzene	2390	110	20	ug/kg	
1330-20-7	Xylene (total)	355	110	20	ug/kg	
91-20-3	Naphthalene	3170	570	21	ug/kg	
106-93-4	1,2-Dibromoethane	ND	110	63	ug/kg	
107-06-2	1,2-Dichloroethane	ND	110	37	ug/kg	
98-82-8	Isopropylbenzene	7450	570	17	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	110	39	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	1750	570	18	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	570	25	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%	95%	59-130%
17060-07-0	1,2-Dichloroethane-D4	98%	104%	65-123%
2037-26-5	Toluene-D8	137% [b]	113%	80-124%
460-00-4	4-Bromofluorobenzene	132%	93%	71-132%

(a) Confirmation run for surrogate recoveries.
(b) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-4 (20-20.5)		
Lab Sample ID:	JB53396-8	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
		Percent Solids:	89.9
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	7.7	0.97	mg/kg	1	11/27/13	11/28/13	AMA	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: M:MA16486
(2) Prep QC Batch: M:MP22149

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	S-5 (10-10.5)		
Lab Sample ID:	JB53396-9	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
Method:	SW846 8260B	**Percent Solids:**	78.9
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	D215560.D	1	11/22/13	CM	n/a	n/a	VD8803
Run #2 [a]	D215497.D	1	11/21/13	CM	n/a	n/a	VD8801

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.4 g	10.0 ml	100 ul
Run #2	6.4 g	10.0 ml	10.0 ul

PA Leaded Gasoline and Aviation Gas list

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	110	14	ug/kg	
108-88-3	Toluene	ND	110	16	ug/kg	
100-41-4	Ethylbenzene	9060	110	20	ug/kg	
1330-20-7	Xylene (total)	20500	110	20	ug/kg	
91-20-3	Naphthalene	171	560	20	ug/kg	J
106-93-4	1,2-Dibromoethane	ND	110	62	ug/kg	
107-06-2	1,2-Dichloroethane	ND	110	36	ug/kg	
98-82-8	Isopropylbenzene	934	560	17	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	110	39	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	9570	560	18	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	3360	560	25	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%	94%	59-130%
17060-07-0	1,2-Dichloroethane-D4	96%	103%	65-123%
2037-26-5	Toluene-D8	125% [b]	112%	80-124%
460-00-4	4-Bromofluorobenzene	107%	91%	71-132%

(a) Confirmation run for surrogate recoveries.
(b) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-5 (10-10.5)		
Lab Sample ID:	JB53396-9	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
		Percent Solids:	78.9
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	16.8	0.97	mg/kg	1	11/27/13	11/28/13	AMA	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: M:MA16486
(2) Prep QC Batch: M:MP22149

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

RL = Reporting Limit

Report of Analysis

Client Sample ID: S-6 (12-12.5)
Lab Sample ID: JB53396-10 **Date Sampled:** 11/15/13
Matrix: SO - Soil **Date Received:** 11/16/13
Method: SW846 8260B **Percent Solids:** 85.0
Project: Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X142302.D	1	11/22/13	NT	n/a	n/a	VX6157
Run #2							

	Initial Weight
Run #1	6.7 g
Run #2	

PA Leaded Gasoline and Aviation Gas list

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	4.2	0.88	0.11	ug/kg	
108-88-3	Toluene	0.24	0.88	0.12	ug/kg	J
100-41-4	Ethylbenzene	0.59	0.88	0.15	ug/kg	J
1330-20-7	Xylene (total)	19.7	0.88	0.16	ug/kg	
91-20-3	Naphthalene	0.68	4.4	0.16	ug/kg	J
106-93-4	1,2-Dibromoethane	ND	0.88	0.48	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.88	0.28	ug/kg	
98-82-8	Isopropylbenzene	0.55	4.4	0.13	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	0.88	0.30	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	12.7	4.4	0.14	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	3.5	4.4	0.19	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		59-130%
17060-07-0	1,2-Dichloroethane-D4	98%		65-123%
2037-26-5	Toluene-D8	104%		80-124%
460-00-4	4-Bromofluorobenzene	101%		71-132%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	S-6 (12-12.5)		
Lab Sample ID:	JB53396-10	**Date Sampled:**	11/15/13
Matrix:	SO - Soil	**Date Received:**	11/16/13
		Percent Solids:	85.0
Project:	Strawberry Mansion, 1901-07 North 33rd Street, Philadelphia, PA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Lead [a]	12.0	0.94	mg/kg	1	11/27/13	11/28/13	AMA	SW846 6010C [1]	SW846 3050B [2]

(1) Instrument QC Batch: M:MA16486
(2) Prep QC Batch: M:MP22149

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

RL = Reporting Limit

APPENDIX B

Soil Boring Logs

Environmental Services, Inc.

Project:	Strawberry Mansion Apartments	**Boring:**	**S-1**
Location:	Philadelphia, PA	**File No.:**	
Client:	Blackney Hayes Architects		

Contractor:	AmeriDrill, Inc.	**Drilling Method:**	Geoprobe
Operator:	M. Nally	**Bore Hole ID/OD:**	2.25"
Logged By:	M. Thomas	**Auger ID/OD:**	2.25"
Checked By:	J. Mihalich	**Sampler:**	M. Thomas
Date Start/Finish:	11/15/2013	**Hammer Wt./ Fall:**	NA
Boring Location:	S-1	**Water Level:**	NA
Ref. Elevation:			

Definitions:
S = Split Spoon Sample
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
q_p = Unconfined Compressive Strength (psf)
woh = weight of 140 lb. hammer
wor = weight of rods
wc = Water Content, percent

Depth (ft. bg	Sample Information: Sample Name	Sample Depth (ft. bgs)	Sample Time	Recovery	PID Reading	Sample Description and Classification	Unified Classificati	Analytical Collected (Y/N)	Elevation
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5				N/A		N/A (air knife used from 0 to 5 feet)			
5 5.5 6 6.5 7 7.5 8 8.5 9 9.5				4.5	9 43 251 591 1767 1142 1861 1807 1749 1690	3 feet grey/green brown medium soft clayey silt, moist, odor; 1.5 feet red medium soft clayey silt, most, petroleum-like odor			
10 11 11 12 12 13 13 14 14 15				4.5	1815 1875 1895 1785 1459 1596 1551 1619 1379	Medium soft red clay/clayey silt and fine gravel, few sand, moist			
15 16 16 17 17 18 18 19 19 20	S-1	18-18.5	1030	4	1675 1804 1825 **2024** 1924 1668 1142 638	1 foot brown moderately stiff sandy silt, dry; 3 feet moderately dense brow/tan silty fine to coarse sand and fine to coarse gravel; wet at 19; black stain 19 to 20			
20 21 21 22 22 23 23 24 24 25				3.5	393 140 57 52 23 29 31	medium dense oragne/tan silty fine to coarse sand and fine to coarse gravel, wet, black staining top 6 inches **End of Boring at 25 feet**			

Notes

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Environmental Services, Inc.

Project:	Strawberry Mansion Apartments	**Boring:**	S-2
Location:	Philadelphia, PA	**File No.:**	
Client:	Blackney Hayes Architects		

Contractor:	AmeriDrill, Inc.	**Drilling Method:**	Geoprobe
Operator:	M. Nally	**Bore Hole ID/OD:**	2.25"
Logged By:	M. Thomas	**Auger ID/OD:**	2.25"
Checked By:	J. Mihalich	**Sampler:**	M. Thomas
Date Start/Finish:	11/15/2013	**Hammer Wt./ Fall:**	NA
Boring Location:	S-2	**Water Level:**	NA
Ref. Elevation:			

Definitions:
S = Split Spoon Sample
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
q_p = Unconfined Compressive Strength (psf)
woh = weight of 140 lb. hammer
wor = weight of rods
wc = Water Content, percent
oc = Organic Content, percent

Depth (ft. bg	Sample Information: Sample Name	Sample Depth (ft. bgs)	Sample Time	Recovery	PID Reading	Sample Description and Classification	Unified Classificati	Analytical Collected (Y/N)	Elevation
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5				N/A		N/A (air knife used from 0 to 5 feet)			
5 5.5 6 6.5 7 7.5 8 8.5 9 9.5				5	1425 1449 1468 1380 1330 1275 776 1112 1137	2.5 feet grey/olive green, medium soft clayey silt, moist, odor; 2.5 feet red medium soft silty clay, moist, petroleum-like odor			
10 11 11 12 12 13 13 14 14 15				4.5	1187 1483 1329 1268 1159 1056 1448 1502	2 feet red medium soft silty clay, moist, odor; 2.5 feet red brown medium soft sandy silt and fine to coarse gravel, moist, petroleum-like odor			
15 16 16 17 17 18 18 19 19 20	S-2	19-19.5	1320	3.5	796 662 833 922 647 853 **1362** 1196	2 feet red brown medium soft sandy silt and fine to coarse gravel, moist, odor; 1 foot moderately dense brown silty fine to coarse sand and fine gravel, moist, petroleum-like odor, possible staining at 19 feet.			
20 21 21 22 22 23 23 24 24 25				3	601 244 97 62 42 15	1.5 medium dense brown silty fine to coarse sand and fine gravel, wet, petroleum-like odor; 1.5 feet medium dense orange silty fine to coarse sand and fine gravel, wet, petroleum-like odor **End of Boring at 25 feet**			

Notes

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Environmental Services, Inc.

Project:	Strawberry Mansion Apartments	**Boring:**	**S-3**
Location:	Philadelphia, PA	**File No.:**	
Client:	Blackney Hayes Architects		

Contractor:	AmeriDrill, Inc.	**Drilling Method:**	Geoprobe
Operator:	M. Nally	**Bore Hole ID/OD:**	2.25"
Logged By:	M. Thomas	**Auger ID/OD:**	2.25"
Checked By:	J. Mihalich	**Sampler:**	M. Thomas
Date Start/Finish:	11/15/2013	**Hammer Wt./ Fall:**	NA
Boring Location:	S-3	**Water Level:**	NA
Ref. Elevation:			

Definitions:
S = Split Spoon Sample
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
q_u = Unconfined Compressive Strength (psf)
woh = weight of 140 lb. hammer
wor = weight of rods
wc = Water Content, percent
oc = Organic Content, percent

Depth (ft. bgs)	Sample Information: Sample Name	Sample Depth (ft. bgs)	Sample Time	Recovery	PID Reading	Sample Description and Classification	Unified Classification	Analytical Collected (Y/N)	Elevation
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5				N/A		N/A (air knife used from 0 to 5 feet)			
5 5.5 6 6.5 7 7.5 8 8.5 9 9.5				5	0 0 0 0.3 1410 1087 1616 1149 1340	2 feet medium soft orange/tan clayey silt, moist; 2 feet grey clayey silt some staining, petroleum-like odor moist; 1 foot red/brown clayey silt, moist			
10 11 11 12 12 13 13 14 14 15				4	126 130 186 1374 741 787 1439 1093	2 feet medium soft red gravelly clay, moist; 2 feet medium soft brown sandy silt and fine to coarse gravel, dry			
15 16 16 17 17 18 18 19 19 20	S-3	19-19.5	0920	5	488 104 562 1284 1150 1772 1375 2333 **2485** 1810	medium dense brown/tan silty sand (fine to coarse) and fine to coarse gravel, moist, staining 19 to 20 feet; petroleum-like odor			
20 21 21 22 22 23 23 24 24 25				4.5	2020 582 465 135 103 26 27 22 13	1 foot brown coarse sand and fine to coarse gravel, wet, petroleum-like odor; 3.5 feet borwn/orange silty fine to coarse sand and fine gravel, wet. **End of Boring at 25 feet**			

Notes

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

GC Environmental Services, Inc.	**Project:**	Strawberry Mansion Apartments	**Boring:** S-4
	Location:	Philadelphia, PA	**File No.:**
	Client:	Blackney Hayes Architects	

Contractor:	AmeriDrill, Inc.	**Drilling Method:**	Geoprobe
Operator:	M. Nally	**Bore Hole ID/OD:**	2.25"
Logged By:	M. Thomas	**Auger ID/OD:**	2.25"
Checked By:	J. Mihalich	**Sampler:**	M. Thomas
Date Start/Finish:	11/15/2013	**Hammer Wt./ Fall:**	NA
Boring Location:	S-4	**Water Level:**	NA
Ref. Elevation:			

Definitions:
S = Split Spoon Sample
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
q_u = Unconfined Compressive Strength (psf)
woh = weight of 140 lb. hammer
wor = weight of rods
wc = Water Content, percent
oc = Organic Content, percent

Depth (ft. bgs)	Sample Information: Sample Name	Sample Depth (ft. bgs)	Sample Time	Recovery	PID Reading	Sample Description and Classification	Unified Classification	Analytical Collected (Y/N)	Elevation
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5				N/A		N/A (air knife used from 0 to 5 feet)			
5 5.5 6 6.5 7 7.5 8 8.5 9 9.5				5	0 0 0 0 0 0 0 0 0 2.6	4 feet medium soft tan clayey silt, moist; 1 foot red clay, moist			
10 11 11 12 12 13 13 14 14 15				4	2.8 3.0 10.1 14.8 6.8 17.8 17.8	2.2 feet red clay, few medium rounded gravel, moist, medium soft; 1.8 feet medium stiff, brown sandy silt and fine to coarse gravel, moist to dry, slight petroleum-like odor, possible black staining			
15 16 16 17 17 18 18 19 19 20				3.5	44 24 18 34 44 32 585	Brown, medium dense silty fine to coarse sand and fine to coarse gravel, moist, petroleum-like odor at 19 to 20 feet			
20 21 21 22 22 23 23 24 24 25	S-4	20-20.5	0945	5	**687** 311 186 76 46 19 23 14 14 12	Brown/orange, medium dense silty fine to coarse sand and fine to coarse gravel, wet at 20.5 feet, some dark grey discoloration at 20 to 21 feet.			

Notes

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

GC Environmental Services, Inc.	**Project:**	Strawberry Mansion Apartments	**Boring:** S-5
	Location:	Philadelphia, PA	**File No.:**
	Client:	Blackney Hayes Architects	

Contractor:	AmeriDrill, Inc.	**Drilling Method:**	Geoprobe
Operator:	M. Nally	**Bore Hole ID/OD:**	2.25"
Logged By:	M. Thomas	**Auger ID/OD:**	2.25"
Checked By:	J. Mihalich	**Sampler:**	M. Thomas
Date Start/Finish:	11/15/2013	**Hammer Wt./ Fall:**	NA
Boring Location:	S-5	**Water Level:**	NA
Ref. Elevation:			

Definitions:
S = Split Spoon Sample
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
q_u = Unconfined Compressive Strength (psf)
woh = weight of 140 lb. hammer
wor = weight of rods
wc = Water Content, percent
oc = Organic Content, percent

Depth (ft. bgs)	Sample Information: Sample Name	Sample Depth (ft. bgs)	Sample Time	Recovery	PID Reading	Sample Description and Classification	Unified Classification	Analytical Collected (Y/N)	Elevation
0				3					
0.5					0				
1					0				
1.5					0				
2					0	2.5 feet brown/tan silt and brick, dry; 0.5 feet tan silt, moist, black stain, petroleum-like odor			
2.5					0				
3					0				
3.5					62				
4									
4.5									
5				4.5					
5.5					54				
6					89				
6.5					89				
7					112				
7.5					119	2 feet grey/olive silt; 1.5 feet grey/olive clay; 1 foot red clay			
8					85				
8.5					155				
9					527				
9.5					542				
10	S-5	10-10.5	1600	4					
11									
11					**581**				
12					378				
12					364				
13					255	3 feet red clay; moist; 1 foot brown sandy silt and gravel, moist			
13					237	**End of Boring at 15 feet**			
14					148				
14					385				
15									
15									
16									
16									
17									
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24									
24									
25									

Notes

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

GC Environmental Services, Inc.	**Project:**	Strawberry Mansion Apartments	**Boring:** S-6
	Location:	Philadelphia, PA	**File No.:**
	Client:	Blackney Hayes Architects	

Contractor:	AmeriDrill, Inc.	**Drilling Method:**	Geoprobe
Operator:	M. Nally	**Bore Hole ID/OD:**	2.25"
Logged By:	M. Thomas	**Auger ID/OD:**	2.25"
Checked By:	J. Mihalich	**Sampler:**	M. Thomas
Date Start/Finish:	11/15/2013	**Hammer Wt./ Fall:**	NA
Boring Location:	S-6	**Water Level:**	NA
Ref. Elevation:			

Definitions:
S = Split Spoon Sample
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
q_u = Unconfined Compressive Strength (psf)
woh = weight of 140 lb. hammer
wor = weight of rods
wc = Water Content, percent
oc = Organic Content, percent

Depth (ft. bgs)	Sample Information: Sample Name	Sample Depth (ft. bgs)	Sample Time	Recovery	PID Reading	Sample Description and Classification	Unified Classification	Analytical Collected (Y/N)	Elevation
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5				3	13 2 1 0 0 0	2.5 feet brown silt and concrete rubble; 0.5 feet tan silt, moist			
5 5.5 6 6.5 7 7.5 8 8.5 9 9.5				3.5	0 0 0 0 0 0 0	2 feet tan silt; 1 foot tan clay; 0.5 feet red clay			
10 11 11 12 12 13 13 14 14 15	S-6	12-12.5	1620	3.5	0 6 7 9 8 **11** 8 4	1 foot red clay and gravel; 2.5 feet brown sandy silt and gravel, black staining top 1 foot **End of Boring at 15 feet**			
15 16 16 17 17 18 18 19 19 20									
20 21 21 22 22 23 23 24 24 25									

Notes

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Environmental Services, Inc.

Project:	Strawberry Mansion Apartments	**Boring:**	**C-1**
Location:	Philadelphia, PA	**File No.:**	
Client:	Blackney Hayes Architects		

Contractor:	AmeriDrill, Inc.	**Drilling Method:**	Geoprobe
Operator:	M. Nally	**Bore Hole ID/OD:**	2.25"
Logged By:	M. Thomas	**Auger ID/OD:**	2.25"
Checked By:	J. Mihalich	**Sampler:**	M. Thomas
Date Start/Finish:	11/15/2013	**Hammer Wt./ Fall:**	NA
Boring Location:	C-1	**Water Level:**	NA
Ref. Elevation:			

Definitions:
S = Split Spoon Sample
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
q_u = Unconfined Compressive Strength (psf)
woh = weight of 140 lb. hammer
wor = weight of rods
wc = Water Content, percent
oc = Organic Content, percent

Depth (ft. bgs)	Sample Information: Sample Name	Sample Depth (ft. bgs)	Sample Time	Recovery	PID Reading	Sample Description and Classification	Unified Classification	Analytical Collected (Y/N)	Elevation
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5				4		N/A (air knife used from 0 to 5 feet)			
5 5.5 6 6.5 7 7.5 8 8.5 9 9.5				3.5	0 3 2 2 0 0 3	0.5 feet brown medium soft silty clay, moist; 2 feet red medium soft silty clay, moist; 1 foot red medium soft silty clay with fine to coarse gravel, moist			
10 11 11 12 12 13 13 14 14 15				3.5	0 3 2 2 0 0 3	0.5 feet brown medium soft silty clay, moist; 2 feet red medium soft silty clay, moist; 1 foot red medium soft silty clay with fine to coarse gravel, moist			
15 16 16 17 17 18 18 19 19 20				4	1 1 3 3 2 3 3	brown medium dense silty sand and fine to coarse gravel, dry			
20 21 21 22 22 23 23 24 24 25	C-1	20.5-21	1135	2.5	2 4 271 **376** 46 18	brown medium dense silty sand and fine to coarse gravel, wet at 21 feet **End of Boring at 25 feet**			

Notes

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

Environmental Services, Inc.

Project:	Strawberry Mansion Apartments	**Boring:**	**C-2**
Location:	Philadelphia, PA	**File No.:**	
Client:	Blackney Hayes Architects		

Contractor:	AmeriDrill, Inc.	**Drilling Method:**	Geoprobe
Operator:	M. Nally	**Bore Hole ID/OD:**	2.25"
Logged By:	M. Thomas	**Auger ID/OD:**	2.25"
Checked By:	J. Mihalich	**Sampler:**	M. Thomas
Date Start/Finish:	11/15/2013	**Hammer Wt./ Fall:**	NA
Boring Location:	C-2	**Water Level:**	NA
Ref. Elevation:			

Definitions:
S = Split Spoon Sample
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
q_u = Unconfined Compressive Strength (psf)
woh = weight of 140 lb. hammer
wor = weight of rods
wc = Water Content, percent
oc = Organic Content, percent

Depth (ft. bgs)	Sample Information: Sample Name	Sample Depth (ft. bgs)	Sample Time	Recovery	PID Reading	Sample Description and Classification	Unified Classification	Analytical Collected (Y/N)	Elevation
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5				N/A		N/A (air knife used from 0 to 5 feet)			
5 5.5 6 6.5 7 7.5 8 8.5 9 9.5				4.5	7 3 5 3 2 3 2 2	3.5 feet medium soft tan clayey silt, moist; 1 foot red medium soft silty clay, trace coarse gravel, moist			
10 11 11 12 12 13 13 14 14 15				4	1 1 2 4 2 3 2 4 2	1.5 feet red medium soft silty clay, trace coarse gravel, moist; 2.5 feet medium stiff brown sandy silt and fine gravel, dry			
15 16 16 17 17 18 18 19 19 20	C-2	19.5-20	1215	3.5	11 5 4 10 5 18 **41**	medium stiff brown sandy silt and fine gravel; black staining 19 to 20 feet; moist			
20 21 21 22 22 23 23 24 24 25				3.5	8 5 3 5 2 1	medium dense brown silty coarse sand and fine gravel, wet, black staining 20 to 20.5 feet **End of Boring at 25 feet**			

Notes

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

GC Environmental Services, Inc.	**Project:**	Strawberry Mansion Apartments	**Boring:** C-3
	Location:	Philadelphia, PA	**File No.:**
	Client:	Blackney Hayes Architects	

Contractor:	AmeriDrill, Inc.	**Drilling Method:**	Geoprobe
Operator:	M. Nally	**Bore Hole ID/OD:**	2.25"
Logged By:	M. Thomas	**Auger ID/OD:**	2.25"
Checked By:	J. Mihalich	**Sampler:**	M. Thomas
Date Start/Finish:	11/15/2013	**Hammer Wt./ Fall:**	NA
Boring Location:	C-3	**Water Level:**	NA
Ref. Elevation:			

Definitions:
S = Split Spoon Sample
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
q_u = Unconfined Compressive Strength (psf)
woh = weight of 140 lb. hammer
wor = weight of rods
wc = Water Content, percent
oc = Organic Content, percent

Depth (ft. bgs)	Sample Information: Sample Name	Sample Depth (ft. bgs)	Sample Time	Recovery	PID Reading	Sample Description and Classification	Unified Classification	Analytical Collected (Y/N)	Elevation
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5				N/A		N/A (air knife used from 0 to 5 feet)			
5 5.5 6 6.5 7 7.5 8 8.5 9 9.5				3.5	0 0 0 1 0 0 0	2 feet medium soft tan clayey silt, moist; 1.5 feet red medium soft silty clay, moist			
10 11 11 12 12 13 13 14 14 15				3.5	4 4 2 3 7 6 5	0.5 feet red medum soft silty clay, moist; 2.5 feet red/brown medium soft sandy clay and fine to coarse gravel, moist			
15 16 16 17 17 18 18 19 19 20	C-3	19-19.5	1245	4	2 2 5 5 12 47 **513** 34	2 feet brown medium stiff sandy silt and fine to coarse gravel, moist; 2 feet brown, loose silty fine sand, wet at 19.5			
20 21 21 22 22 23 23 24 24 25				3.5	5 4 2 1 1 0	Brown silty fine to coarse sand and fine gravel, wet, black staining top 6 inches **End of Boring at 25 feet**			

Notes

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

GC Environmental Services, Inc.	**Project:**	Strawberry Mansion Apartments	**Boring:** C-4
	Location:	Philadelphia, PA	**File No.:**
	Client:	Blackney Hayes Architects	

Contractor:	AmeriDrill, Inc.	**Drilling Method:**	Geoprobe
Operator:	M. Nally	**Bore Hole ID/OD:**	2.25"
Logged By:	M. Thomas	**Auger ID/OD:**	2.25"
Checked By:		**Sampler:**	M. Thomas
Date Start/Finish:	11/15/2013	**Hammer Wt./ Fall:**	NA
Boring Location:	C-4	**Water Level:**	NA
Ref. Elevation:			

Definitions:
S = Split Spoon Sample
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
q_u = Unconfined Compressive Strength (psf)
woh = weight of 140 lb. hammer
wor = weight of rods
wc = Water Content, percent
oc = Organic Content, percent

Depth (ft. bgs)	Sample Information: Sample Name	Sample Depth (ft. bgs)	Sample Time	Recovery	PID Reading	Sample Description and Classification	Unified Classification	Analytical Collected (Y/N)	Elevation
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5				N/A		N/A (air knife used from 0 to 5 feet)			
5 5.5 6 6.5 7 7.5 8 8.5 9 9.5				4.5	19 11 14 10 186 342 24	2 feet tan medium soft clayey silt, moist; 2.5 feet brown medium soft clay, trace fine gravel, moist, bottom one foot red			
10 11 11 12 12 13 13 14 14 15				4	10 15 12 11 12 10 10 14 7	2 feet red medium soft clay, trace fine gravel, moist; 2 feet medium dense red/brown silty sand and fine to coarse gravel, dry			
15 16 16 17 17 18 18 19 19 20				3.5	12 11 7 9 12 57 44 607	medium dense red/brown silty sand and fine to coarse gravel, dry, black staining 19 to 20 feet			
20 21 21 22 22 23 23 24 24 25	C-4	20-20.5	1100	1.5	522 **745** 75 39	medium dense brown fine to coarse silty sand and fine to coarse gravel, wet at 20.5 feet, top 1 foot black stain **End of Boring at 25 feet**			

Notes

Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.