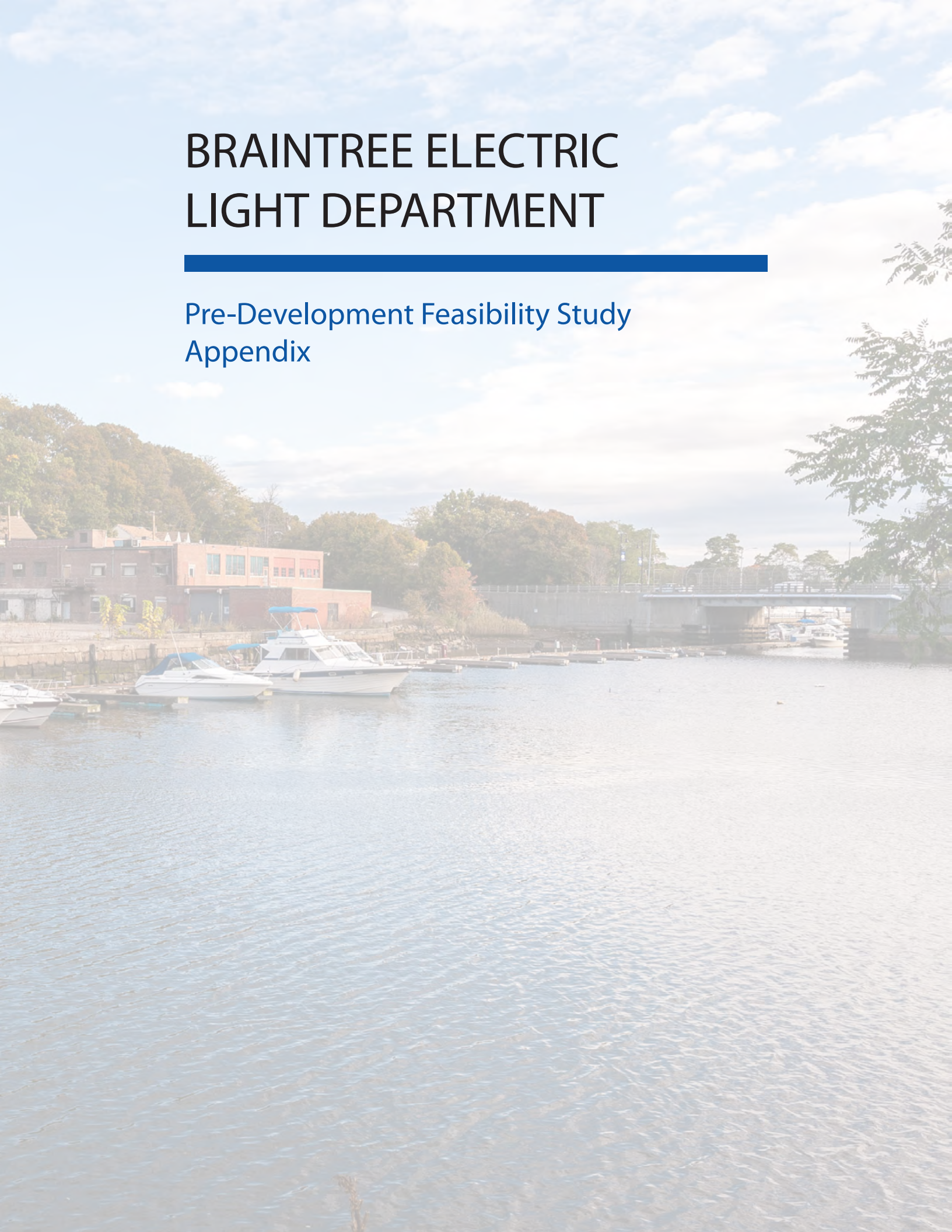
BRAINTREE ELECTRIC LIGHT DEPARTMENT

Pre-Development Feasibility Study Appendix



APPENDIX APRIL 2014

Submitted to:

TOWN OF BRAINTREE

1 John F. Kennedy Memorial Drive, Braintree, MA 02184

Contents:

architecture
urban design
GAMBLE ASSOCIATES
CITYVISIONS ASSOCIATES

PREPARED FOR THE TOWN OF BRAINTREE
BRAINTREE ELECTRIC LIGHT DEPARTMENT
44 ALLEN STREET

THE STORY

> *It is remarkable how the intense purity in a granite country seems to influence the character of its inhabitants. It is impossible to make a cottage built in a granite country look absolutely miserable. Rough it may be - neglected, cold, full of aspects and hardships, but it can never look foul no matter how carelessly, how indolently its inhabitants may live; the water at their doors will not stagnate, trodden into slime, they cannot so much as dirty their face or hands if they try.*
>
> *Do the worse they can there will be a feeling of firm ground under them, and pure air about them and inherent wholesomeness about them which will need the misery of years to conquer. The inhabitants of granite countries have too, a force and healthiness of character about them abated or modified according to their other circumstances of life that clearly distinguishes them from other inhabitants of other countries.* – Ruskin [Still looking for direct source of this quote from Mrs. E. S. Watson's paper read on December 1, 1891].

The site at 44 Allen Street is historically significant to the Town of Braintree, but more importantly, the future development of this site has the potential to continue in the tradition of smart resource consumption for the community.

Inspiration for the current development strategies of the former BELD site has been primarily drawn from the community-at-large in recent public meetings. Similarly, a glance at the significant events from the 17th through the 21st centuries in the Braintree-Weymouth-Quincy landscape provide a time-honored blueprint for innovation, conservation, and commerce for the responsible use of the land, water, and physical resources at 44 Allen Street.

From the early days of ironworks and granite quarries to shoemaking and shipbuilding, East Braintree and its hardworking inhabitants have a legacy of and passionate tenacity for setting an uncompromising course to prosperity through the challenges of unstable markets and economies.

Thomas A. Watson, founder of BELD, is the primary character in the story and evolution of the former BELD site. While Mr. Watson is more notorious for his part in the shipbuilding industry, his contributions to the former BELD site and his influence in the East Braintree community (and beyond) are integral selling points for the responsible redevelopment and strategic revitalization of this site.

A significant portion of the activity on and/or near 44 Allen Street from 1640 until current day reveals the culture of persistence that the community and its leaders

Key dates in consideration of the story development for the site include:

Century Dates	Event
17th Century	• 1640: Incorporated as a Town of Braintree • 1641/1644: Iron works – The Company Undertakers of the Iron Works founded by John Winthrop, Jr. son of then Governor of MA on 3,000 acres of land adjoining the Monatiquot River (2 plots) o 2,860 acres (east boundary – Weymouth town line; north line Union and Commercial Streets; south – Holbrook town line o 140 acres Commercial and Adams Streets • 1696 *Unity* was launched from Ship's Cove (Quincy Neck)
18th Century	• 1749-1754: Stone (King's) Chapel built from Quincy granite (first recorded architectural use of stone from this area by *first* (still in research area for this purpose) professionally trained architect (Peter Harrison)
19th Century	• 1854: T.A. Watson born Salem, MA • 1872 – 1881: Watson works with A.G. Bell on phone company • 1882: Watson marries Elizabeth Seaver Kimball • 1883: Watson buys 60-acre farm in East Braintree where he starts his engine company & the first kindergarten • 1884-1885: Watson hires Frank O. Wellington to build steam rotary engine for a yacht owner (the start of his future shipyard operation) • [Year still TBD]: Watson & Wellington move to larger property in East Braintree for engine company • 1889: Mr. & Mrs. Watson fitted the building where he first began manufacture of steam engines for first Kindergarten classroom • 1890: Mr. & Mrs. Watson enter the geology class of Lowell Institute under Professor Barton • 1892: Mr. & Mrs. Watson enroll at MIT as special students in geology and paleontology • **1892: Town of Braintree appropriated the sum estimated by Watson to build BELD** • 1892 – 1910: Watson elected to school board • 1899: Watson awarded contract for 3,000 ton cruiser Des Moines and bought 100 acres at Qunicy Point to grow his shipyard enterprise
20th Century	• 1900: Major shift in Fore River Ship & Engine Co. (Watson) with the notable event of moving office building from Braintree to Quincy while occupied with workers (drawing plans for ships) • 1900: weekly payroll for 300 people employed by

	Watson/Shipyard equals $6,500.00 • 1902: purchase of private property to complete railway for shipyard (Watson) • 1913 – 1964: Bethlehem Steel ownership of Watson's shipyard • 1970's: BELD relocates to Potter St. site • 1986: Fore River Shipyard closes • 1997: BELD site vacated
21st Century	• 2007: Braintree/Weymouth Commuter Station • 2011: Site transfer from BELD to Town of Braintree • 2012: National Parks Grant for Riverwalk • 2013: Pre-Development Study

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report

ASTM Phase I Environmental Site Assessment (ESA)

Former BELD Property
44 Allen Street
Braintree, Massachusetts

DRAFT

May, 2013

This ESA was prepared by Qualified Environmental Professionals (EPs) as defined in ASTM E1527-05 and EPA's AAI Final Rule. We declare that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in § 312.20 of 40 CFR 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 40 CFR 312. Please note that the signatories are not acting in their LSP capacity or as an LSP-of-Record under the provisions of the Massachusetts Contingency Plan, 310 CMR 40.0000

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EXECUTIVE SUMMARY

Weston & Sampson was contracted by Gamble Associates to perform a Phase I Environmental Site Assessment (ESA) of 44 Allen Street in Braintree, Massachusetts (the Site). The Phase I ESA was performed to evaluate environmental conditions as part of a Pre-Development Feasibility Study of the Site on behalf of the Town of Braintree. The major findings of the Phase I ESA are as follows:

- The Site consists of a 1.6 acre parcel of land that was previously occupied by the Braintree Electric Light Department (BELD). The Site is developed with a vacant office building, switch house, screen house, and pipe shop. BELD operated a power station at the Site from the 1890's until the 1970s when the Site was then used as storage / office space.
- Historically BELD utilized numerous above ground tanks (ASTs) and underground storage tanks (USTs) at the Site as detailed in this report.
- The Site is listed as a release Site with the Massachusetts Department of Environmental Protection (DEP) relative to a release of gasoline from a historic UST. Remedial actions were performed to remove impacted soil and groundwater and closure report was submitted to the DEP.
- A previous environmental assessment was performed in 1997 by Earth Tech to assess potential impacts from historic USTs and transformers. The investigation did not identify petroleum constituents or polychlorinated biphenyls (PCBs) above Massachusetts Department of Environmental Protection (DEP) reportable standards in soil or groundwater samples. However, the investigation did not assess the area of a former 500-gallon gasoline UST with no closure documentation. Additionally the assessment identified fill material at the Site which as not fully characterized.
- Braintree Fire Department records include a 1992 UST removal permit and tank receipt for an additional 2,000-gallon #2 fuel oil UST at the Site. Additional information regarding the closure of this UST was not identified.
- Historic atlas maps dated 1948 and 1969 depict a fuel oil storage tank south of the former boiler house. Additional information regarding this tank was not identified and this area was not assessed by Earth Tech.
- During our Site visit, approximately 100 cubic yards of sand and 60 cubic yards of loam were stockpiled on-Site. Information regarding the source of this stockpiled material was not identified.

In summary, our Phase I ESA has identified the following potential recognized environmental conditions (RECs) associated with the Site:

- A former 500-gallon gasoline UST without closure documentation that has not been assessed.
- A former 2,000-gallon fuel oil UST that was removed in 1992 with no additional closure information or assessment.
- A former fuel oil tank depicted south of the boiler house on historic atlas maps which has not been assessed.
- Subsurface fill material at the Site that has not been fully characterized.
- Undocumented soil stockpiles at the Site.

We recommend a Phase II Environmental Site Assessment to assess these potential RECs. We also recommend a hazardous material building survey to assess potential ACM, lead based paint, mold and other potential hazardous equipment and building components.

1.0 INTRODUCTION

Weston & Sampson, on behalf of Gamble Associates, performed a Phase I Environmental Site Assessment (ESA) of the former Braintree Electric Light Department (BELD) property located at 44 Allen Street in Braintree, Massachusetts (the Site). The Phase I ESA was performed to evaluate environmental conditions as part of a Pre-Development Feasibility Study of the Site on behalf of the Town of Braintree. Please see Figure 1 and 2 for a depiction of the Site and surrounding properties.

The ESA was performed in April 2013 in general accordance with the Phase I ESA Process (Standard Practice E 1527-05), as developed by the American Society for Testing and Materials (ASTM), the Oil and Hazardous Material Release Prevention and Response Act, Massachusetts General Law Chapter 21E (MGL c. 21E) and in general accordance with EPA's All Appropriate Inquiry (AAI) standard. This Phase I ESA was performed in accordance with the limitations and exceptions identified in Section 10.0 of this report and included the following tasks:

- Site reconnaissance to observe conditions exposed at ground surface for evidence of previous and current property usage, and indications of environmental impact (e.g., stressed vegetation, staining, etc.).
- Curbside reconnaissance of surrounding properties to identify potential off-Site sources of contamination.
- Review of an environmental database search report for Sites identified on databases including National Priorities List (NPL); Comprehensive Environmental Response Compensation and Liability Act (CERCLA); Resource Conservation and Recovery Act (RCRA); emergency response notification sites; and state spill, release, and landfill sites.
- Review of files at the Town of Braintree Assessor's Office, Clerk's Office, Building Department, Engineering Department, Health Department, and Fire Department.
- Review of historic documents including historic atlas maps, aerial photographs, topographic maps and previous environmental assessments pertaining to the Site.
- Preparation of a Phase I ESA Report documenting the assessment, findings and conclusions.
- The Phase I ESA did not include a property title search and did not include an evaluation of asbestos containing material (ACMs), lead based paint or radon.

Site photographs are included as Appendix A, an environmental database report in Appendix B, municipal records in Appendix C, historical documents in Appendix D, and user questionnaire in Appendix E.

1.1 Purpose

The purpose of the ESA was to evaluate business environmental risk, defined as a risk which can have an impact on the business associated with the current or planned use of a parcel of commercial real estate.

This assessment utilized the general quality principles and practices towards the preparation of this report that incorporated suggested methods under the ASTM. The term "recognized

environmental condition" (REC) referenced in the ASTM refers to "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property." The ASTM definition does not include "de minimis" conditions, which generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of the appropriate government agencies. Therefore, de minimis conditions are not considered RECs.

2.0 SITE DESCRIPTION

2.1 Site Ownership and Location

Site Owner:	Town of Braintree, Electric Light Department
Site Occupants:	None. Vacant Buildings
Site Location:	44 Allen Street, Braintree, Massachusetts
County:	Norfolk County
Parcel ID:	Map 3004 Lots 7, 8 and 9
Latitude/Longitude:	42° 13' 24" North
	70° 58' 11" West
UTM Coordinates:	337,440 meters East
	4,676,465 meters North
Size:	1.6 acres

The Site is located at 44 Allen Street in Braintree Massachusetts, approximately 80 feet south west of the intersection of Allen Street and Quincy Avenue. See Figures 1 and 2 for a depiction of the Site.

2.2 Current and Historic Use of the Property

The Site is 1.6 acre parcel of land located at 44 Allen Street in Braintree, Massachusetts. The Site is currently unoccupied and was previously occupied by BELD. The property was owned and operated by BELD since the early 1890's and was used as a power generating station from 1892 to the early 1970s when the operations were shifted to the BELD Potter Station facility. From the 1970s to the 1990's the Site was primarily used as storage and office space by BELD.

When operated as a power station the Site was developed with and office building, a boiler house, a switch gear house, a screen house and a pipe shop. Historically the station utilized the following storage tanks:

- Four 30,000-gallon No. 6 fuel oil ASTs located in concrete containment dike;
- One 30,000-gallon concrete No. 6 fuel oil UST;
- One 3,000-gallon gasoline UST;
- One 500-gallon gasoline UST; and
- One 275-gallon fuel oil AST.

See Section 5.1.1 for additional details relative to these historic USTs and ASTs.

Additionally, three large transformers were previously located in a small substation yard just south of the switch house building and it was not known if the transformers contained PCBs, the transformers were removed from the Site in the 1970s. See Figure 2 for the AST, UST and former transformer locations.

2.3 Description of Structures, Roads, Other Improvements on the Site

The Site is currently developed with four former BELD buildings; an office / storage building, a switch house building, a screen house (former steam water filtration building), and a pipe shop (former cable pipe storage building). A former boiler house was previously located in the north

central portion of the Site and was razed in 1993. Portions of the concrete foundation remain in this area. The remainder of the Site is partially paved.

2.4 Current Uses of Adjoining Properties

The Site is located on the southeastern side of Allen Street in Braintree Massachusetts. Allen Street borders the Site to the northwest and north, beyond which are residential properties. A vacant lot and Quincy Avenue border the Site to the east, beyond which is a marina. The Site is bordered to the south and southwest by the Monatiquot River. Starling Furniture Company borders the Site to the west. A storm water outfall is located adjacent and west of the Site. Concerns regarding adjacent property use were not identified during the ESA.

3.0 SITE RECONNAISSANCE

Weston & Sampson performed a Site reconnaissance on April 8, 2013. Ms. Gail Cohen, Support Service Manager at BELD provided access to the Site buildings during the Site visit. The Site was observed by walking the exterior and interior of the property and observing the surrounding properties from curb side. At the time of the Site visit the weather was overcast with a temperature of approximately 55 degrees Fahrenheit. Photographs of the Site visit are provided in Appendix A.

3.1 Physical Setting and Characteristics

3.1.1 Site Setting and Topography

The Site is a 1.6 acre parcel of land located at 44 Allen Street in Braintree, Massachusetts. The Site is located in a residential and commercial area of Braintree. Topography of the Site slopes to the south-southeast towards the Monatiquot River. The Site elevation ranges from approximately 20 feet above mean sea level (amsl) on the northern portion of the Site to 8 feet amsl on the southern portion of the Site.

3.1.2 Land Area

At the time of the Site visit, the Site was developed with the former BELD buildings described below. The majority of the remainder of the Site was paved. Stockpiles of soil were observed stored on the northern portion of the Site. The soil appeared to be approximately 100 cubic yards of fine sandy material (possible street sweepings) and 60 cubic yards of loam material that appears to have been stored at the Site by the Town of Braintree. Information regarding the source of this stockpiled soil was not identified. Due to the lack of information this material is considered a potential REC.

3.1.3 Buildings

At the time of the Site visit, the Site was developed with a former BELD office building, switch house, screen house and pipe shop. All buildings were vacant at the time of the visit. Weston & Sampson was not provided access to the garage/storage area located in the lower level of the office building as BELD did not have a key for this area. Access to the screen house was also not provided, as the building was boarded up due to safety concerns.

Ms. Cohen provided the following information pertaining to historic building uses between the late 1980s and 1990s during her time at the BELD facility:

- The office building was historically utilized for administrative staff and lower level garage/storage area was utilized mainly for storage of cable type materials and vehicle maintenance activities were not performed in this area.
- The switch house was utilized to store BELD vehicles and equipment and for office and employee space.
- The screen house was utilized to screen water discharged from the steam boiler plant.
- The pipe shop was used for the storage cable pipe and reels and for a worker break room.

Ms. Cohen indicated that maintenance of BELD equipment and vehicles was performed off-Site and there were no maintenance activities performed on-Site.

3.1.4 Utilities

According to Ms. Cohen the Site buildings are currently heated and cooled via electric systems. Personnel at the Braintree Engineering Department indicated that the Site has been serviced with municipal sewer since at least the 1930s and municipal water since the late 1800's.

3.1.5 Potential Environmental Receptors

As shown in the attached Figure 3 - Area Receptors Map prepared using the MassGIS Environmental Receptors Database, there are no wetlands located at the Site and the Site is not located within an Estimated Habitat of Rare of Wildlife or Species. The Monatiquot River is located adjacent and south-southeast of the Site.

3.2 On-Site Assessment

3.2.1 Oil and Hazardous Material Use and Storage

During the Site visit Weston & Sampson identified the following evidence of oil and/or hazardous material use and storage at the Site:

- At the pipe shop building, one 5-gallon can of gasoline, and five 5-gallon buckets of maintenance asphalt and hydraulic fluid were observed. Staining was observed in the area of these containers on the concrete floor within the building. However, the concrete floor was observed to be in good condition with no cracks or seems or potential routes to the subsurface environment.
- A 275-gallon fuel oil AST was observed adjacent to the northwest corner of the switch house building. The tank was observed to be in fair condition with no signs of staining in the area of the tank.

Given the history and nature of the Site use, the Site buildings may have equipment and building components with potential to contain certain hazardous material such as PCBs in light ballasts or building caulk or mercury in switches, or other materials. An inventory of hazardous materials was beyond the scope of this assessment; however such equipment and building components would require removal and disposal prior to building demolition or renovation.

3.2.2 Underground Storage Tanks / Aboveground Storage Tanks

As indicated above during the Site visit, one out of use 275-gallon fuel oil AST was observed adjacent to the switch house building. No other ASTs were observed during the Site visit and no evidence of former USTs was observed. See Section 5.1.1 for a discussion of historic USTs and ASTs at the Site.

3.2.3 Polychlorinated Biphenyls (PCBs) Containing Equipment

There were no pad mounted transformers observed during the Site visit. Adjacent and south of the switch house three concrete pads were observed. Ms. Cohen indicated that historic pad mounted transformers were previously located in this area. During the Site visit there was no staining or evidence of release in this area.

3.2.4 Asbestos Containing Materials

Considering the age of the Site buildings, there is potential that asbestos containing materials (ACM) may be present within building materials. Potential materials observed during the Site

visit that could contain asbestos included ceiling tiles and floor tiles and mastic observed within the buildings. A survey of potential ACM was beyond the scope of this assessment.

3.2.5 Lead Based Paint

Considering the age of the Site buildings, there is potential that lead based paint (LBP) could be present within the buildings. Painted surface in some areas of the office and switch house buildings were observed to be in poor condition with significant flaking and peeling. A survey of potential LBP was beyond the scope of this assessment.

3.2.6 Potential Mold

During the Site visit potential mold growth was observed along numerous wall boards in the former engineering library and adjacent offices on the second floor of the switch house building. A survey of potential mold was beyond the scope of this assessment.

4.0 DATABASE SEARCH RESULTS AND MUNICIPAL RECORDS

As part of the Phase I ESA, Weston & Sampson performed a regulatory database search (based on ASTM standards) of applicable State and Federal environmental databases and conducted local research of municipal records. A summary of information obtained is provided in this Section.

4.1 Standard Environmental Record Sources

Weston & Sampson obtained a regulatory database report from Environmental Data Resources (EDR) Inc. A complete database report is included as Appendix B. A summary of the database information is provided below.

EDR Regulatory Database Search Summary			
Database	**Radius**	**Target Property**	**Surrounding Facilities**
National Priorities List (NPL)/De-listed NPL	1 Mile	-	0
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Sites	½ Mile	-	0
CERCLIS No Further Remedial Action Planned (NFRAP) Sites	½ Mile	-	0
Corrective Action Report (CORRACTS)	1 Mile	-	0
Resource Conservation and Recovery Act (RCRA) Corrective Action Treatment, Storage, and Disposal (TSD) Facilities	½ Mile	-	0
RCRA Waste Quantity Generators	¼ Mile	-	2
Emergency Response Notification System (ERNS) Sites	Target Property	-	-
Facility Index System (FINDS) Sites	Target Property	1	-
State Hazardous Waste Sites	1 Mile	-	44
Solid Waste Facilities/Landfills (SWF/LF)	½ Mile	-	0
Leaking Underground Storage Tank (LUST)	½ Mile	1	9
Leaking Aboveground Storage Tank (LAST)	½ Mile	-	1
Underground Storage Tank (UST) Sites	¼ Mile	1	3
Institutional Control	½ Mile	-	3
State Spills Sites	Target Property	2	-
State Release Sites	1 Mile	1	62

¶

In general terms, surrounding properties identified in the above table were evaluated to determine if they might pose a risk to the Site based on characteristics such as proximity, elevation, type of contaminant, and regulatory status. Whether or not an off-Site source has the potential to impact the Site depends on the distance of the source from the Site, its direction from the Site, relative to groundwater flow direction, magnitude of release, contaminant type, and location. Based on topography, the assumed direction of groundwater flow at the Site is to the south-southeast towards the Monatiquot River.

4.1.1 On-Site Listings from Database Search

The Site is listed as a state LUST, Spills Site, and Release Site under Massachusetts Department of Environmental Protection (DEP) Release Tracking Number (RTN) 3-4321. The release is associated with a former 3,000 gallon gasoline UST (for which the Site is also listed in the database report) that was removed from the Site in April 1992. The former UST was located south of the switch house building. A Licensed Site Professional (LSP) Opinion was submitted to the DEP for this RTN in July 1997 by Earth Tech, Inc. in support of regulatory closure of the release. Weston & Sampson obtained a copy of the LSP Opinion from the DEP website. The LSP Opinion indicates that no holes were observed in the tank following removal; however, a sheen was noticed on groundwater within the excavation and notification of a potential release was made to the DEP on May 13, 1992. The DEP subsequently assigned RTN 3-4321. Response actions were performed to remove approximately 60 cubic yards of impacted soil and 650 gallons of impacted groundwater encountered during the excavation. Analysis of post excavation soil and groundwater samples did not identify concentrations of petroleum constituents above applicable DEP Method 1 S-1 and GW-2/3 standards. As such, this former UST and release is not considered a concern.

The Site is also listed as a Spills Site under DEP Spill number N89-1586. The listing is for a spill of less than 10 gallons of waste diesel/hydraulic oil that occurred from pipe/hose/line at the Site in 1989. The listing indicates the spill was cleaned by a contractor. No additional information is provided; however, based on the limited amount of the spill it is not considered a concern.

The Site is also listed in Facility Index System (FINDS) database. This database contains facility information and pointers to other data base sources that contain more detail. The listing is relative to information concerning potential historic air emissions from the former power plant operations at the Site. Based on the information obtained in the database, this listing is not a concern to this assessment.

The Site was not listed in any other database searched by EDR.

4.1.2 Off-Site Listings from EDR Database Search

As indicated in the table above, a review of regulatory records identified 2 RCRA sites, 44 SHWS sites, 9 UST sites, 1 LAST site, 3 UST sites, 3 Institutional Control sites, and 62 State Spill sites within ASTM-standard search distances of the Site. Of these, only 1 facility is located potentially up gradient and within ¼ mile of the subject Site. This facility is discussed below.

The Braintree Yacht Club is located approximately 600 feet northeast of the Site and is listed as a UST site. A former 2,000 gasoline UST was located at this facility and was removed in 1998. The facility is not listed with the DEP as a release Site. Based on the status of the UST and lack of any reported releases, it is not considered a concern.

Based on factors such as distance from the Site, assumed groundwater flow direction in the Site vicinity, and/or regulatory status, Weston & Sampson considers the remaining facilities to have a low potential to adversely impact the Site.

4.2 Municipal Records

As part of this ESA, Weston & Sampson performed file reviews at Town of Braintree municipal offices. Files were reviewed for the current and historic street address for the property. Significant information pertaining to the Site are included in Appendix C and discussed below.

4.2.1 Assessor's Office

The assessor's office provided a field card, an assessor map, and property parcel information for the Site. The assessor's records indicate that the Site includes three lots of contiguous land which occupies a total of 1.6 acres. The lots are identified on the Town of Braintree Assessors Map 3004 as Lots 7, 8 and 9. According to the property record cards, the Site is owned by the Town of Braintree.

4.2.2 Fire Department

The Town of Braintree Fire Department had the following records for USTs at the Site:

Town of Braintree Fire Department Records			
Date	**Tank**	**Document**	**Potential Tank Location**
1974	One 3,000-gallon gasoline. Installed in 1974 and removed 1992.	UST Data Management System Facility List.	South of switch house. See Figure 2.
1992	One 2,000-gallon #2 fuel oil.	UST removal permit and tank disposal receipt.	Location unknown.

See Section 4.1.1 for a discussion of the removal of the 3,000-gallon gasoline UST and subsequent remedial activities.

As shown in the table above the Fire Department had a record of a 1992 UST removal permit for a 2,000-gallon #2 fuel oil UST. Additional information regarding this UST was not identified. Due to the lack of information, this former UST is considered a potential REC.

4.2.3 Building Department

The Town of Braintree Building Department permit application files were reviewed for the Site. Permit applications reviewed including permits for various constructions, building renovations, and building demolition at the Site. However, due to the age of the permits, the Building Department did not have building plans on file for the Site.

4.2.4 Board of Health

The Board of Health was contacted relative to files for the Site pertaining to any historic septic tanks, water quality issues, or environmental releases at the Site. The only file on records was a 1993 letter to the Board of Health from the DEP relative to a historic release (DEP RTN 3-

4321) stating that the RTN was being classified as a Location to Be Investigated in the future by the DEP. However, as discussed in Section 4.1.1 above this RTN has been closed and is no longer considered a concern.

4.3 Site and Area History

4.3.1 Prior Ownership and Usage

Ownership records at the Town of Braintree Assessor's Department and online records with the Norfolk County Registry of Deeds were reviewed for the Site. The information was reviewed for the purposes of land use determination. The Site is identified on the Town of Braintree Assessors Map 3004 as Lots 7, 8 and 9. A summary of the information obtained during this review is provided in the table below.

Prior Ownership Records		
Date	**Owner**	**Reference**
Lot 7 1931	Town of Braintree, BELD	Property record cards. Deed Book 8201 page 487.
Lot 8 1931	Town of Braintree, BELD	Property record cards.
Lot 9 1947	Town of Braintree, BELD	Property record cards. Deed Book 2663, page 530.

No environmental liens or Activity and Use Limitations (AULs) were identified. Previous owners of the Site were not available to be interviewed.

4.3.1 Sanborn® Maps

Weston & Sampson obtained Sanborn® Fire Insurance Maps from EDR in order to gain knowledge of the Site and area history. Maps were available for the years 1899, 1906, 1910, 1911, 1926, 1948, and 1969. The following table summarizes information obtained from the maps:

Historic Sanborn Atlas Maps			
Year	**Summary On-Site**	**Summary Off-Site**	**Concerns**
1899	The western portion of the Site is developed with a BELD plant with two unlabeled accessory structures. The eastern portion of the Site is developed with two residential dwellings.	Allen Street is depicted north of the Site, beyond which are residential dwellings. Quincy Ave. is depicted to the east of the Site, beyond which is a Fore River Engine Co. facility. The Monatiqout River is depicted to the south of the Site. Residential dwellings are depicted to the west of the Site.	None.
1901	The Site is depicted as it is in the 1899 atlas map.	The surrounding area is depicted as in the 1899 map with the following exception: Properties to the east of the Site are not depicted.	None.

1904 through 1926	The Site is depicted as it is in the 1901 atlas map.	The surrounding area is depicted as in the 1901 map with the following exception: The Fore River Engine Co. facility is no longer depicted east of the Site. A boat house is depicted in this location.	None.
1948 and 1969	The Site is developed with the former BELD facility. Four fuel oil ASTs are depicted on the southern portion of the Site inside a concrete containment area. A fuel oil storage tank is also depicted adjacent and south of the former boiler house.	The surrounding area is depicted as in the previous maps with the following exceptions: A boat storage building is located adjacent and west of the Site and the Braintree yacht club is depicted to the east of the Site across Quincy Avenue.	Potential impact from historic fuel storage tank is a concern. See below.

Information pertaining to the fuel oil storage tank depicted in the 1948 and 1969 atlas map adjacent and south of the former boiler house was not identified. Therefore this former tank is considered a potential REC. It is possible that this tank was the 2,000 gallon fuel oil UST that was removed from the Site in 1992 as discussed in Section 4.2.2 above.

In addition to the above atlas maps, Weston & Sampson reviewed a Record Sewer Plan dated 1936 which was provided by the Town of Braintree. The plan indicates that the land to the north of the screen house building on-Site was "recently filled". As discussed in Section 5.1.1 the existence of fill material at the Site that has not been characterized is considered a concern.

4.3.2 City Directories

A review of historic city directories was also provided by EDR. The following is a summary of the City Directory review.

Historic City Directories			
Year	**Summary On-Site**	**Summary Off-Site**	**Concerns**
1970	Braintree Light Department	No properties off concern noted.	None.
1975	Electric Light Department – 44 Allen Street	No properties off concern noted.	None.
1985	Town Electric and Light Department – 44 Allen Street	No properties off concern noted.	None.
1990	Town Electric and Light Department – 44 Allen Street	No properties off concern noted.	None.
1995	Braintree Electric Light – 44 Allen Street	No properties off concern noted.	None.
2008	Not Listed	No properties off concern noted.	None.

As indicated in the table above, directories indicate the Site was historically occupied by the Braintree Electric Light Department. No other uses of the Site were listed. Review of the directories did not identify any potential properties of concern in the immediate vicinity of the Site.

4.3.3 Aerial Photographs

Historical aerial photographs depicting the Site from 1957 to 1995 were obtained from EDR reviewed. The following is a summary of the aerial photograph review.

Historic Aerial Photographs			
Year	**Summary On-Site**	**Summary Off-Site**	**Concerns**
1957	This photo depicts the Site as developed with the BELD facility.	Allen Street is depicted north of the Site, beyond which appear to be residential dwellings. Quincy Ave is depicted to the east of the Site, beyond which appears to be commercial development. The Monatiqout River is south of the Site. Residential and commercial buildings are to the west.	None.
1960	Due to the scale and quality of this photograph, details of the Site and surrounding area cannot be ascertained.	Due to the scale and quality of this photograph, details of the Site and surrounding area cannot be ascertained.	None.
1969 and 1978	The Site is depicted as it is in the 1957 aerial.	The surrounding area is depicted as in the1957 areal map.	None.
1986 and 1991	Due to the scale and quality of these photographs, details of the Site and surrounding area cannot be ascertained.	Due to the scale and quality of these photographs, details of the Site and surrounding area cannot be ascertained.	None.
1995	The Site and surrounding properties are depicted as they are today.	The Site and surrounding properties are depicted as they are today.	None.

Review of the historic aerial photographs did not identify concerns.

4.3.4 Topographic Maps

Historical topographic maps depicting the Site from 1893 to 1995 were obtained from EDR reviewed. Review of the topographic maps did not identify any concerns. The level of detail in the early maps does not provide information to confirm historic filling of the Site.

4.3.5 Flood Insurance Rate Map Information

According to a Flood Insurance Rate Map (Panel #250230002C) the Site is located in a 100 year flood zone.

5.0 EXISITING ENVIRONMENTAL INFORMATION

5.1 Previous Environmental Investigations

5.1.1 Earth Tech Environmental Assessment, 1997

Weston & Sampson was provided with a report previous Environmental Site Assessment prepared by Earth Tech dated April 1997. The assessment was conducted on behalf of BELD and included a review of Site history, Site visits, state and local file reviews, and a limited subsurface investigation. The report provided the following information:

- BELD owned the Site since the early 1890s and historically utilized the Site as a power generating station from 1892 until the early 1970s when the power generation operations were shifted to the BELD Potter Station facility. The Site was utilized for storage and office space from the early 1970s until the 1990s. The Site at one time consisted of an office building, a boiler house, a switch gear house, a pipe shop and a screen house. The former boiler house and generator rooms were razed in 1993 leaving the current office building, screen house, pipe shop and switch house on-Site.

- Earth Tech indicated that previous operations at the Site utilized oil and/or hazardous materials such as fuel oils, gasoline, boiler chemicals, dielectric fluids, and other materials associated within power generation and distribution, no hazardous materials were observed in storage or use at the property during their reconnaissance in 1997.

- The report indicates that coal was the primary fuel at the power station until conversion to No. 6 fuel oil in the early to mid-1940's. From the mid-1940s until the decommissioning of the station in the early 1970's, No. 6 fuel oil was reportedly stored in four 30,000-gallon ASTs and one 30,000 gallon No. 6 fuel oil UST at the Site that were located adjacent and south of the former boiler house.

- The report indicates the following information regarding historic storage tanks at the Site:

Historic Storage Tanks			
Tanks	**Location**	**Status**	**Concern**
Four 30,000-gallon No. 6 fuel oil ASTs	Formerly located south of the boiler house within a concrete containment dike.	Removed during facility decommissioning.	None.
One 30,000-gallon No.6 fuel oil UST.	Formerly located south of the boiler house adjacent to the above ASTs.	Closed in place. Information regarding this tank closure is provided below.	None. See below
One 500-gallon gasoline UST.	Depicted south of former office building in Earth Tech figure.	Status unknown.	Due to lack of information this former tank is considered a potential REC.
One 3,000 gallon gasoline UST.	Formerly located adjacent and south of the switch house.	Removed in 1992. See Section 4.1.1.	None. See Section 4.1.1.

One 275-gallon No. 2 fuel oil AST	Located adjacent to the northwest corner of switch house building.	Remains in place.	None.

- The Earth Tech report indicated that BELD representative reported a substantial release of No. 6 fuel oil occurred sometime in the 1960s from one of the No. 6 fuel oil ASTs at the Site. Records of the release were not identified; however Earth Tech indicated that the release was likely contained within the concrete containment structure surrounding the tanks.

- The report indicated that three large transformers containing transformer oil were previously located in a small substation yard just south of the switch house building and it was not known if the transformers contained PCBs, the transformers were removed from the Site in the 1970s.

- Earth Tech performed a limited subsurface investigation at the Site which included the installation of three soil borings (MW-1, 2 and 3) which were completed as groundwater monitoring wells. See Figure 2 for locations. Soil samples collected from the borings and groundwater samples were collected from the monitoring were submitted for laboratory analysis of Total Petroleum Hydrocarbons (TPH), Polynuclear Aromatic Hydrocarbons (PAHs) and/or Volatile Organic Compounds (VOCs). Additionally 4 surficial soil samples (SS-1, 2 and TX Pad 1 and 2) were collected in the vicinity of three former transformers for PCB analysis.

- The investigation identified fill material beneath the Site to depth of 10 to 12 feet below grade surface. The fill consists of brown sand and gravel and is underlain by organic silt and clay. Bedrock was encountered at approximately 14.5 feet below grade surface (bgs) in two of the borings.

- Analysis of soil samples did not identify concentrations of TPH, PAHs or PCBs above DEP S-1 reportable standards. Analysis of groundwater samples did not identify concentrations of TPH, PAHs or VOCs above applicable DEP GW-2 reportable standards.

Earth Tech concluded that based on their ESA and subsurface investigation there were no significant areas of environmental concern at the Site and recommended no further investigation.

Earth Tech also indicated that the storm water outfall located adjacent and west of the Site, while not part of the Site, may have released oil and/or hazardous material in the past. And if the outfall was connected to the Site and a release was identified at the out fall location, it is possible that current or futures owners of the Site could be liable for potential cleanup.

Although Earth Tech did not recommend further investigation, Weston & Sampson identified the following concerns relative to the previous investigation that are considered potential RECs:

- Fill material was identified and was not fully characterized via laboratory analysis.

- Investigation was not performed in the area of the former 500-gallon gasoline UST that was located south of the office building.

5.1.2 UST Closure Report, 30,000-gallon No.6 Fuel Oil UST

Weston & Sampson was provided with UST Closure Report prepared by ATC Associates in 2011. The report documents the closure of the 30,000-gallon concrete No.6 Fuel Oil UST located south of the former boiler house at the Site. The tank was closed in place due to the presence of a utility lines located adjacent to the tank. Tank closure activities were performed between May 23rd and 26th 2011 and included removal and disposal of all contents (oily water, sand and sediment), cleaning of the tanks fiberglass interior. Soil samples were collected adjacent to the tank via the installation of soil borings and excavation of test pits. Photoionization detector (PID) field screening of soil sample identify ranged from below instrument detection to 65 parts per million by volume (ppmv) total volatile organics (TVOCs).

The soil stratigraphy observed in the borings consisted of fine sand rock fragments and pebbles from 0 to 5 feet bgs, followed by fine to course sand with increasing silt with depth and brick and rock fragments from 5 to 10 feet bgs, and brown and gray silt from 10-15' bgs. Groundwater was identified at 8 to 10 feet bgs in the soil borings.

Soil samples collected from the soil borings were submitted for analysis of Extractable Petroleum Hydrocarbons (EPH) and PAHs. Analysis did not identify concentrations above DEP S-1 reportable standards.

As part of the tank closure activities, temporary groundwater monitoring wells were installed and were gauged on July 1, 2011 using an oil water interface probe and disposable polyethylene bailer. There was no free phase product or sheens observed on the groundwater during the gauging event. Groundwater samples were not collected for laboratory analysis.

Based on the information provided in the tank closure report, this former UST is not considered a REC

6.0 USER PROVIDED INFORMATION

A User Questionnaire was completed by Ms. Christine Stickney, Director Department of Planning and Community Development for Town of Braintree. A summary of the information obtained by Ms. Stickney is provided below. A copy of the completed User Questionnaire is provided in Appendix A. Information in this section was based primarily on the information obtained from Ms. Stickney.

6.1 Environmental Liens

The user reported that she is unaware of any environmental cleanup liens against the property (the Site) filed or recorded under federal, tribal, state or local law.

6.2 Activity and Use Limitations

The user reported that she is unaware of any Activity and Use Limitations on the property.

6.3 Specialized Knowledge

The user reported no specialized knowledge related to the property or nearby properties other than knowledge of the previous environmental investigations detailed in Section 5.3 of this report.

6.4 Commonly Known or Reasonable Ascertainable Information

The user reported that she is aware of no commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases other than knowledge of the previous environmental investigations detailed in Section 5.3 of this report.

6.5 Valuation Reduction for Environmental Issues

This task was beyond the scope of the Phase I.

6.6 Degree of Obviousness of Contamination

The user indicated that she has no knowledge of any obvious indicators that point to the presence or likely presence of contamination at the property other than knowledge of the previous environmental investigations detailed in Section 5.1 of this report.

7.0 INTERVIEWS

7.1 User

As part of this ESA an interview was conducted with Ms. Christine Stickney, Director Department of Planning and Community Development for Town of Braintree. With the exception of the information obtained during previous investigations as detailed in this report, Ms. Stickney indicated that she has no knowledge of any other obvious indicators that point to the presence or likely presence of contamination at the Site.

7.2 Owner

The Town of Braintree is the owner of the Site. Please see above for information provided by Ms. Stickney.

7.3 State Government Officials

As part of this ESA, interviews were conducted with the Town of New Braintree Fire Department, Building Department, Board of Health, and Assessor's Office. Information provided by these officials is presented in Section 4.2.

7.4 Others

No other interviews were performed as part of the assessment. Previous owners of the Site were not available for interview.

8.0 DATA GAPS

Weston & Sampson identified the following data gaps during Site reconnaissance and records review:

- At the time of the Site visit Weston & Sampson was not provided access to the garage/storage area located in the lower level of the office building as BELD did not have a key for this area. Access to the screen house was also not provided, as the building was boarded up due to safety concerns.

Based on the limited access we cannot make a conclusion relative to potential RECs in these areas of the Site.

9.0 CONCLUSIONS AND RECOMMENDATIONS

Weston & Sampson has performed a Phase I ESA in general accordance with ASTM E 1527-05 of 44 Allen Street in Braintree, Massachusetts (the Site). The Phase I ESA was performed to evaluate environmental conditions as part of a Pre-Development Feasibility Study of the Site for the City of Braintree. Based on the results of the Phase I ESA the following potential RECs were identified:

- A former 500-gallon gasoline UST without closure documentation that has not been assessed.
- A potential former 2,000-gallon fuel oil UST that may have been removed in 1992.
- A former fuel oil tank that is depicted south of the boiler house on historic atlas maps.
- Subsurface fill material at the Site that has not been fully characterized.
- Undocumented soil stockpiles at the Site.

We recommend a Phase II Environmental Site Assessment to assess these potential RECs. We also recommend a hazardous material building survey to assess potential ACM, lead based paint, mold and other potential hazardous equipment and building components.

10.0 LIMITATIONS

This report was prepared exclusively for the use of Gamble Associates. The findings provided by Weston & Sampson in this report are based solely on the information reported in this document. Future investigations, and/or information that were not available to Weston & Sampson at the time of the investigation, may result in a modification of the findings stated in this report.

Should additional information become available concerning this Site, or neighboring properties that could directly impact the Site in the future, that information should be made available to Weston & Sampson for review so that, if necessary, conclusions presented in this report may be modified. The conclusions of this report are based on Site conditions observed by Weston & Sampson personnel at the time of the investigation and information provided by federal, state and local agencies. This report has been prepared in accordance with generally accepted engineering and geological practices. No other warranty, express or implied, is made.

11.0 REFERENCES

ASTM. 2000, E 1527-05. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

Massachusetts Department of Environmental Protection (MADEP). June 26, 2009, *Massachusetts Contingency Plan*. 310 CMR 40.0000, Bureau of Waste Site Cleanup.

12.0 SIGNATURE AND QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

This ESA was prepared by a Qualified Environmental Professional (EP) as defined in ASTM E1527-05 and EPA's proposed AAI. The EP has over 15 years of environmental experience with degrees in relevant disciplines.

_____

Sean F. Healey

5/7/2012

_____

Date

FIGURES

FIGURE 1
TOWN OF BRAINTREE, MASSACHUSETTS
44 Allen Street

LOCUS MAP

0 2,000 4,000 **Feet**

Weston&Sampson

Q:\Resources\Templates\ThemeMaps\MA - Locus Map.mxd 11/30/2007 10:01:39 AM kastanom

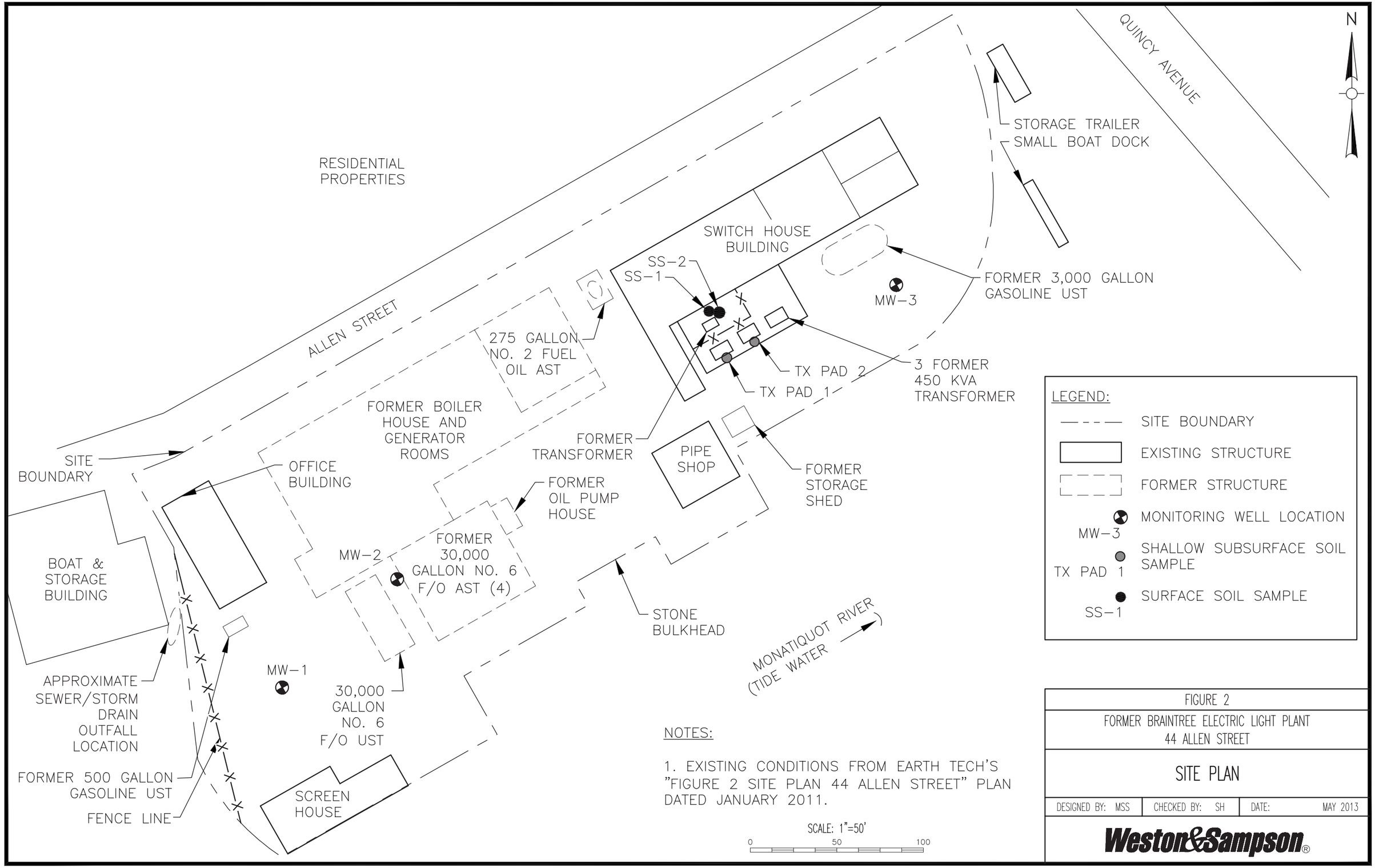


FIGURE 2

FORMER BRAINTREE ELECTRIC LIGHT PLANT
44 ALLEN STREET

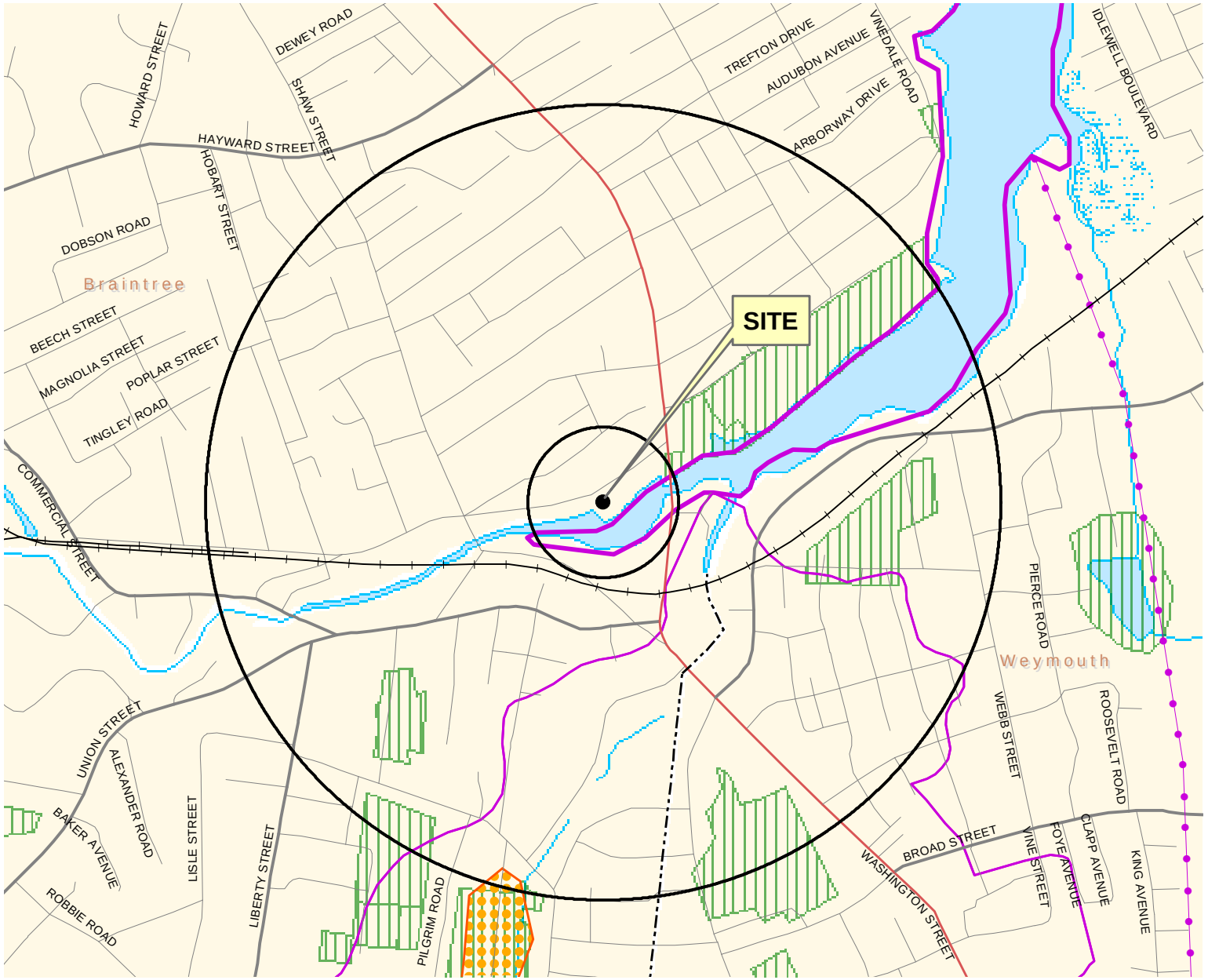
SITE PLAN

DESIGNED BY: MSS	CHECKED BY: SH	DATE: MAY 2013

Weston&Sampson®

Z:\MA-Foxboro-Projects\SH ESS Projects\Braintree Electric- Allen Street\CADD\Figure2.dwg

Q:\Resources\Templates\ThemeMaps\Area Receptors Map.mxd 10/23/2007 9:53:33 AM kastanom



N
W E
S

1,000 500 0 1,000 Feet

0.5 0.25 0 Miles

Data Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

Notes: Radii shown are approximately 500-feet and 1/2-mile from center of Site.

Legend

- Town Boundaries
- State Boundary
- Ground Water
- Surface Water
- Non-Community
- NHESP Certified Vernal Pools
- Railroads by Ownership
- Pipeline
- Pipeline Arbitrary Extension
- Powerline
- Powerline Arbitrary Extension
- Ski Lift/Tramway
- Substation
- Landing Strip/Airport
- Highway Exit Locations

All Roads

Road Classification

- Limited Access Highway
- Multi-lane Hwy, not limited access
- Other Numbered Highway
- Major Road, Collector
- Minor Road, Arterial
- Sub-basins
- Major Basins
- Solid Waste Facilities
- Protected Open Space
- ACECs
- Zone A
- IWPAs
- DEP Approved Zone IIs
- River, Stream, Shoreline
- Water
- Wetland
- Sole Source Aquifers
- NHESP Estimated Habitats of Rare Wildlife
- NHESP Priority Habitats of Rare Species

Non Potential Drinking Water Source Area

- High Yield
- Medium Yield

Aquifers

- High Yield
- Medium Yield

MA Towns (from Survey Points)

- MA Towns (from Survey Points)

FIGURE 3

Area Receptors Map
44 Allen Street
Braintree, MA

Weston&Sampson®

APPENDIX A

Site Photographs

APPENDIX B

Environmental Database Report

APPENDIX C

Municipal Records

APPENDIX D

Historical Documentation

APPENDIX E

User Questionnaire

100 Foxborough Blvd., Suite 250
Foxborough, MA 02035
tel: 508-698-3034 fax: 508-698-0843
www.westonandsampson.com

December 11, 2013

Ms. Christine Stickney
Town of Braintree
Director, Planning and Community Development
Town Hall
90 Pond Street, Second Floor
Braintree, Massachusetts 02184

Re: Hazardous Materials Assessment
Former BELD Facility
44 Allen Street
Braintree, Massachusetts

Dear Ms. Stickney:

Weston & Sampson is pleased to submit this report detailing the results of a hazardous materials assessment of the Former Braintree Electric Light Department (BELD) facility located at 44 Allen Street in Braintree, Massachusetts (Site). The purpose of the assessment was to identify hazardous materials which may be encountered during future building renovation/demolition activities. As detailed in the attached report, our hazardous materials sub consultant, VERTEX Air Quality Services, performed an assessment of the facility buildings in October and November 2013. The assessment included:

- Asbestos Containing Material (ACM) Survey
- Lead Based Paint (LBP) Survey
- Polychlorinated Biphenyl (PCB) Materials Survey
- Regulated Materials Survey

In summary, as detailed in the attached report, the assessment identified the following:

ACM Survey
As part of the ACM survey, 143 building material samples were collected for asbestos analysis. The samples were submitted to EMSL Analytical in Woburn, Massachusetts for asbestos analysis using Polarized Light Microscopy (PLM). In summary, analysis identified the following ACMs:

Switch House Building: Asbestos was identified in floor tiles, mastic, pipe fitting insulation, window caulking, building caulking, window glazing, pipe insulation, panel divider, and exterior window and door caulking within the Switch House Building.

Office Building: Asbestos was identified in glue daubs, window caulking and glazing, and wall sealant within the Office Building.

The attached report depicts the location of the above materials and estimate quantities. Additionally, pipe gaskets and water proofing foundation mastic were not accessible and were not sampled and are assumed to contain asbestos.

LBP Survey

A LBP survey was performed which included a survey of interior and exterior painted surfaces of the Site buildings. Lead concentrations were measured utilizing an X-Ray Fluorescence (XRF) Analyzer. As detailed in the attached report, lead was positively identified in painted surfaces at the Site buildings at varying lead content. At the time of the inspection, in general, painted surfaces were observed to be in defective condition (i.e. flaking, peeling, and/or delaminating).

PCB Survey

A PCB in building material survey was performed and included the collection of 15 representative samples of window and door caulking and window glaze. Fifteen (15) samples were submitted to Contest Laboratories in East Longmeadow, Massachusetts for analysis of PCBs via EPA Method 8082 with Soxhlet Extraction. Analysis identified low levels of PCBs in three window glazing samples. The maximum PCB concentration was 6.8 mg/kg, which is well below the Toxic Substance Control Act (TSCA) regulation levels of 50 mg/kg. PCBs were not detected in the remaining samples.

Regulated Material Survey

A visual inspection for evidence of regulated building materials and an inventory of any remaining chemicals in the buildings was performed. The survey identified fluorescent tubes and light ballasts, mercury thermostats, AC Units, fire extinguishers, fire exit signs and doors, batteries, a radiant heat pad, 1 unlabeled 55 gallon drum, insulators, 2 pad mounted transformers, and miscellaneous chemical containers (five 5-gallon unlabeled buckets, one 5-gallon container of diesel fuel, and one 5-gallon gasoline container) within the buildings.

Please refer to Section 5.0 of the attached report for detailed recommendations from VERTEX relative to the findings of the Hazardous Materials Assessment. Cost estimates for potential removal of ACM and regulated materials are also provided in Section 6.0 of the attached report. The cost estimate is $48,000 for the removal of ACM and $7,000 for other regulated materials. Additionally, we recommend exposing the foundation to evaluate if mastic is present and then take and analyze representative samples for ACM. Additionally, prior to removal of pipe gaskets, the gaskets should also be analyzed for ACM.

Thank you very much for the opportunity to provide these services to the Town of Braintree. If you have any questions regarding this letter report, or need any additional information please do not hesitate to contact the undersigned at (978) 532-1900.

Very truly yours,
WESTON & SAMPSON

Sean F. Healey, LSP
Project Manager

George Naslas, PG, LSP
Vice President

Cc: Mr. David Gamble, Gamble Associates, LLC

Attachment: *"Pre-Renovation Asbestos Containing Materials, Lead Based Paint, Regulated Materials, and Suspect PCB in Caulking Inspection Report"*, by VERTEX Air Quality Services, dated November 2013.

Pre-Renovation Asbestos Containing Materials, Lead Based Paint, Regulated Materials and Suspect PCBs in Caulking Inspection Report
Former BELD Facility
44 Allen Street
Braintree, Massachusetts
VERTEX Project No. 27038

Prepared by:

VERTEX Air Quality Services, LLC
398 Libbey Parkway
Weymouth, Massachusetts 02189

November 2013

Prepared For:

Weston and Sampson
100 Foxborough Blvd. Suite 250
Foxborough, Massachusetts 02035

Attention: Mr. Sean Healey

Table of Contents

1.0 ASBESTOS CONTAINING MATERIALS INSPECTION

1.1 Introduction

VERTEX Air Quality Services, LLC (VERTEX) conducted a Pre-Demolition/Renovation Asbestos-Containing Materials (ACMs) survey of the unoccupied Former Switch House, Office, Screen House, and Garage Structures located at 44 Allen Street in Braintree, Massachusetts (herein referred to as the "site") between October 22 and October 23, 2013. The inspection included all accessible interior and exterior areas of the site buildings.

From all the information and data compiled in the inspections and the report, Weston and Sampson and/or the owner can identify ACMs that exist within the site buildings scheduled for demolition/renovation activities.

1.2 Sampling Methodology

Bulk samples were collected and analyzed in order to determine the identity of suspect materials and their composition. Bulk samples were collected in the following sampling scheme which is derived from AHERA: For friable surfacing materials, 3, 5, 7, or 9 random samples are taken to determine asbestos content depending on the amount of material in the homogeneous area. For non-friable materials, two (2) or more random samples are collected to determine asbestos content. To determine asbestos content of thermal system insulation, three (3) or more samples are collected. For friable and non-friable miscellaneous materials, two (2) or more samples are collected to determine asbestos content. Sampling locations for friable surfacing materials are determined using a random numbers table, which is a non-systematic, random method of collecting bulk samples designed to reduce potential bias in bulk sample collection and analysis. Sampling locations for thermal system insulation or random locations where minimal damage would be inflicted on the insulation include areas where there are exposed or damaged materials, or where the protective covering or jacket is missing. Miscellaneous material samples are collected in locations where minimal damage would be inflicted on the material during sample collection.

The purpose of the surveys were to identify accessible interior and exterior ACMs which may exist at the site buildings and will be required to be properly abated prior to any demolition/renovation activities which have the potential to disturb the identified ACMs at the site buildings.

EMSL Analytical Inc. of Woburn, MA, using Polarized Light Microscopy (PLM) as described in 40 CFR 763, analyzed the bulk sample results attached. Each bulk sample was analyzed in accordance with U.S. Environmental Protection Agency (EPA) 600/R-93/116 recommended protocol-using PLM.

EMSL Analytical Inc is accredited through the National Voluntary Laboratory Accreditation Program (#101147-0) and is a Massachusetts certified analytical laboratory (AA000188).

Please refer to **APPENDIX F** which includes the EMSL Laboratory Reports for the bulk sample analysis of the materials identified at the site buildings.

1.3 Inspection Report

Massachusetts Department of Labor Standards Certified Asbestos Inspectors, Jason Mohre (AI#000262) and Jeremy Kent (AI#900519) performed the inspection work. The inspection survey procedures included a visual inspection to identify the locations of suspect ACMs, touching of all suspect ACMs to determine if it is friable (capable of being reduced to powder by hand pressure), identification of all homogeneous areas of suspect friable and non-friable ACM, collection of bulk samples of suspect friable and non-friable ACM for analysis and assessment of friable materials suspected or assumed to be ACM.

The following is a list of materials that were determined to be asbestos-containing:

Switch House Building

12" x 12" Gray w/ White Spec Floor Tile
Black Residual Mastic
Pipe Fitting Insulation
Exterior White Window Caulking
Exterior Building Caulking
Interior Window Glazing
12" x 12" Gray w/ White Spec Mastic
Pipe Insulation
Panel Divider
Exterior Gray Window Caulking
Exterior Door Caulking

Office Building

Brown Glue Daubs
Exterior Window Caulking (Gray)
Exterior Window Glazing
Interior Window Glazing
Exterior Window Caulking (White)
Roof Parapet Wall Sealant

Garage

Based on the laboratory results, asbestos was not detected within the representative bulk samples collected and analyzed.

Screen House

Based on the laboratory results, asbestos was not detected within the representative bulk samples collected and analyzed.

The following is assumed to exist and have a potential to be asbestos-containing:

Black waterproofing foundation mastic
Pipe Gaskets

VERTEX assumes that there is a potential for hidden exterior below grade waterproofing mastic to exist on the exterior foundation walls as well as pipe gaskets associated with the site buildings. As such, VERTEX recommends additional sampling and analysis of the suspected waterproofing mastic once the foundation walls have been exposed prior to disposal and/or recycling, if discovered. Additionally, VERTEX recommends that prior to removal and disposal of pipe gaskets, representative bulk samples should be collected and submitted for analysis to determine asbestos content.

The following is a list of materials that were found and determined to be <u>non asbestos-containing (NAD):</u>

<u>Switch House Building</u>

12" x 12" Blue Floor Tile	12" x 12" Blue Floor Tile Mastic
Carpet Adhesive (Yellow)	Floor Leveler
Black Covebase	Black Covebase Adhesive
Brown Covebase	Brown Covebase Adhesive
Gray Covebase	Gray Covebase Adhesive
Drywall	Joint Compound
Plaster Skim Coat	Plaster Base Coat
2' x 4' Ceiling Tile (fissure/dot)	2' x 2' Ceiling Tile (fissure/dot)
Red Fire Brick	Yellow Fire Brick
Under Sink Coating	White Flash Caulking
Roof Field Material	Roof Flashing Material
Black Parapet Wall Flashing Material	Pitch Pocket Material

<u>Office Building</u>

6" x 6" Brown Floor Tile	6" x 6" Brown Floor Tile Mastic
Beige Sheetflooring	Beige Sheetflooring Adhesive
Black Covebase	Black Covebase Adhesive
Gray Covebase	Gray Covebase Adhesive
Plaster Skim Coat	Plaster Base Coat
2' x 4' Ceiling Tile	1' x 1' Ceiling Tile (Hole Pattern)
1' x 1' Ceiling Tile (Fissure Pattern)	Black Glue Daubs
Interior Window Caulking	
Roof Field Material	Roof Flashing Material

<u>Garage</u>

Interior Window Glazing	Interior Window Caulking
Roof Field Material	Roof Flashing Material
Parapet Wall Flashing Material	

<u>Screen House</u>

Interior Window Glazing	Window Flashing Paper
Roof Field Material	Roof Flashing Material

VERTEX's asbestos inspectors performed the inspections to identify suspect ACMs which may be potentially impacted and/or disturbed during the scheduled demolition activities. Through the sampling and analysis of the suspect materials identified, it has been determined that ACMs are found to exist at the site buildings scheduled for demolition/renovation activities located in Braintree, Massachusetts. Please refer to **APPENDIX A** which includes the locations and quantities of the identified ACMs.

Please refer to Table 1 below which summarizes the sample locations and analytical results. **APPENDIX F** includes the EMSL Laboratory Reports for the bulk sample analysis of the materials identified at the site buildings.

BELD-44 Allen Street
Braintree, Massachusetts
Sample Locations and Results
Table I

Sample Number	Sample Description	Sample Location	Asbestos Content
	Switch House		
BS-1023-01A	12" x 12" Blue Floor Tile	1st Floor, Computer Room	None Detected
BS-1023-01B	12" x 12" Blue Floor Tile	1st Floor, Computer Room	None Detected
BS-1023-02A	12" x 12" Blue Floor Tile Mastic	1st Floor, Computer Room	None Detected
BS-1023-02B	12" x 12" Blue Floor Tile Mastic	1st Floor, Computer Room	None Detected
BS-1023-03A	**12" x 12" Gray w/ White Spec Floor Tile**	**Ground Floor, Hallway 3**	**7 % Chrysotile**
BS-1023-03B	**12" x 12" Gray w/ White Spec Floor Tile**	**Ground Floor, Sump Room**	**Positive Stop**
BS-1023-04A	**12" x 12" Gray w/ White Spec Floor Tile Mastic**	**Ground Floor, Hallway 3**	**5 % Chrysotile**
BS-1023-04B	**12" x 12" Gray w/ White Spec Floor Tile Mastic**	**Ground Floor, Sump Room**	**Positive Stop**
BS-1023-05A	Carpet Adhesive (Yellow)	1st Floor, Office 1	None Detected
BS-1023-05B	Carpet Adhesive (Yellow)	Ground Floor, Office 10	None Detected
BS-1023-06A	**Black Residual Mastic**	**1st Floor, Office Area 5**	**5 % Chrysotile**
BS-1023-06B	**Black Residual Mastic**	**Ground Floor, Open Area 2**	**Positive Stop**
BS-1023-07A	Floor Leveler	1st Floor, Storage Room	None Detected
BS-1023-07B	Floor Leveler	1st Floor, Office 6	None Detected
BS-1023-08A	Black Covebase	Ground Floor, Hallway 3	None Detected
BS-1023-08B	Black Covebase	Ground Floor, Bath 5	None Detected
BS-1023-09A	Black Covebase Adhesive	Ground Floor, Hallway 3	None Detected
BS-1023-09B	Black Covebase Adhesive	Ground Floor, Bath 5	None Detected
BS-1023-10A	Brown Covebase	1st Floor, Hallway 1	None Detected
BS-1023-10B	Brown Covebase	1st Floor, Hallway 1	None Detected
BS-1023-11A	Brown Covebase Adhesive	1st Floor, Hallway 1	None Detected
BS-1023-11B	Brown Covebase Adhesive	1st Floor, Hallway 1	None Detected
BS-1023-12A	Gray Covebase	1st Floor, Office 6	None Detected
BS-1023-12B	Gray Covebase	1st Floor, Office 6	None Detected
BS-1023-13A	Gray Covebase Adhesive	1st Floor, Office 6	None Detected
BS-1023-13B	Gray Covebase Adhesive	1st Floor, Office 6	None Detected
BS-1023-14A	Under Sink Coating	Ground Floor, Hallway 3	None Detected
BS-1023-14B	Under Sink Coating	Ground Floor, Hallway 3	None Detected
BS-1023-15A	Drywall	1st Floor, Open Area 1	None Detected
BS-1023-15B	Drywall	1st Floor, Office 4	None Detected
BS-1023-16A	Joint Compound	1st Floor, Open Area 1	None Detected
BS-1023-16B	Joint Compound	1st Floor, Computer Room	None Detected
BS-1023-16C	Joint Compound	1st Floor, Office 2	None Detected
BS-1023-16D	Joint Compound	1st Floor, Office 7	None Detected
BS-1023-16E	Joint Compound	1st Floor, Hallway 1	None Detected
BS-1023-16F	Joint Compound	1st Floor, Hallway 2	None Detected
BS-1023-16G	Joint Compound	1st Floor, Bath 1	None Detected

BELD-44 Allen Street
Braintree, Massachusetts
Sample Locations and Results
Table I (Continued)

Sample Number	Sample Description	Sample Location	Asbestos Content
Switch House (Continued)			
BS-1023-17A	Plaster Skim Coat	1st Floor, Open Area 1	None Detected
BS-1023-17B	Plaster Skim Coat	1st Floor, Office 1	None Detected
BS-1023-17C	Plaster Skim Coat	1st Floor, Office 4	None Detected
BS-1023-17D	Plaster Skim Coat	1st Floor, Office 5	None Detected
BS-1023-17E	Plaster Skim Coat	1st Floor, Office Area 8	None Detected
BS-1023-17F	Plaster Skim Coat	1st Floor, Hallway 1	None Detected
BS-1023-17G	Plaster Skim Coat	1st Floor, Bath 2	None Detected
BS-1023-18A	Plaster Base Coat	1st Floor, Open Area 1	None Detected
BS-1023-18B	Plaster Base Coat	1st Floor, Office 1	None Detected
BS-1023-18C	Plaster Base Coat	1st Floor, Office 4	None Detected
BS-1023-18D	Plaster Base Coat	1st Floor, Office 5	None Detected
BS-1023-18E	Plaster Base Coat	1st Floor, Office Area 8	None Detected
BS-1023-18F	Plaster Base Coat	1st Floor, Hallway 1	None Detected
BS-1023-18G	Plaster Base Coat	1st Floor, Bath 2	None Detected
BS-1023-19A	2' x 4' Ceiling Tile (fissure/dot)	1st Floor, Office 4	None Detected
BS-1023-19B	2' x 4' Ceiling Tile (fissure/dot)	1st Floor, Switch Room	None Detected
BS-1023-20A	2' x 2' Ceiling Tile (fissure/dot)	1st Floor, Office 9	None Detected
BS-1023-20B	2' x 2' Ceiling Tile (fissure/dot)	Ground Floor, Hallway 3	None Detected
BS-1023-21A	**Pipe Insulation**	**1st Floor, Hallway 1**	**10 % Chrysotile**
BS-1023-21B	**Pipe Insulation**	**1st Floor, Hallway 1**	**Positive Stop**
BS-1023-21C	**Pipe Insulation**	**1st Floor, Hallway 1**	**Positive Stop**
BS-1023-22A	**Pipe Fitting Insulation**	**1st Floor, Hallway 1**	**10 % Chrysotile**
BS-1023-22B	**Pipe Fitting Insulation**	**1st Floor, Hallway 1**	**Positive Stop**
BS-1023-22C	**Pipe Fitting Insulation**	**1st Floor, Storage Room**	**Positive Stop**
BS-1023-23A	Red Fire Brick	Ground Floor, Mechanical Room	None Detected
BS-1023-23B	Red Fire Brick	Ground Floor, Mechanical Room	None Detected
BS-1023-24A	Yellow Fire Brick	Ground Floor, Mechanical Room	None Detected
BS-1023-24B	Yellow Fire Brick	Ground Floor, Mechanical Room	None Detected
BS-1023-25A	**Panel Divider**	**Ground Floor, Storage Room**	**30 % Chrysotile**
BS-1023-25B	**Panel Divider**	**Ground Floor, Storage Room**	**Positive Stop**
BS-1023-26A	**Exterior White Caulking on Window**	**Exterior, Side C**	**2 % Chrysotile**
BS-1023-26B	**Exterior White Caulking on Window**	**Exterior, Side C**	**Positive Stop**
BS-1023-27A	**Exterior Gray Caulking on Window**	**Exterior, Side C**	**5 % Chrysotile**
BS-1023-27B	**Exterior Gray Caulking on Window**	**Exterior, Side C**	**Positive Stop**
BS-1023-28A	**Exterior Gray Caulking on Door**	**Exterior, Side C**	**2 % Chrysotile**
BS-1023-28B	**Exterior Gray Caulking on Door**	**Exterior, Side C**	**Positive Stop**
BS-1023-29A	Exterior Gray Caulking on Door	Exterior, Side A	None Detected
BS-1023-29B	Exterior Gray Caulking on Door	Exterior, Side A	None Detected

BELD-44 Allen Street
Braintree, Massachusetts
Sample Locations and Results
Table I (Continued)

Sample Number	Sample Description	Sample Location	Asbestos Content
Switch House (Continued)			
BS-1023-30A	**Exterior Building Caulking**	**Exterior, Side A**	**3 % Chrysotile**
BS-1023-30B	**Exterior Building Caulking**	**Exterior, Side A**	**Positive Stop**
BS-1023-31A	**Interior Window Glazing**	**1st Floor, Office 7**	**2 % Chrysotile**
BS-1023-31B	**Interior Window Glazing**	**Ground Floor, Open Area 2**	**Positive Stop**
BS-1023-32A	Roof Field Material	Exterior, Roof	None Detected
BS-1023-32B	Roof Field Material	Exterior, Roof	None Detected
BS-1023-33A	Roof Flashing Material	Exterior, Roof	None Detected
BS-1023-33B	Roof Flashing Material	Exterior, Roof	None Detected
BS-1023-34A	Black Parapet Wall Flashing Material	Exterior, Roof	None Detected
BS-1023-34B	Black Parapet Wall Flashing Material	Exterior, Roof	None Detected
BS-1023-35A	Pitch Pocket Material	Exterior, Roof	None Detected
BS-1023-35B	Pitch Pocket Material	Exterior, Roof	None Detected
BS-1023-36A	White Flash Caulking	Exterior, Roof	None Detected
BS-1023-36B	White Flash Caulking	Exterior, Roof	None Detected

BELD-44 Allen Street
Braintree, Massachusetts
Sample Locations and Results
Table I (Continued)

Sample Number	Sample Description	Sample Location	Asbestos Content
	Office		
BS-1023-37A	6" x 6" Brown Floor Tile	1st Floor, Area 2	None Detected
BS-1023-37B	6" x 6" Brown Floor Tile	1st Floor, Area 1	None Detected
BS-1023-38A	6" x 6" Brown Floor Tile Mastic	1st Floor, Area 2	None Detected
BS-1023-38B	6" x 6" Brown Floor Tile Mastic	1st Floor, Area 1	None Detected
BS-1023-39A	Beige Sheetflooring	1st Floor, Counter Area	None Detected
BS-1023-39B	Beige Sheetflooring	1st Floor, Room 1	None Detected
BS-1023-40A	Beige Sheetflooring Adhesive	1st Floor, Counter Area	None Detected
BS-1023-40B	Beige Sheetflooring Adhesive	1st Floor, Room 1	None Detected
BS-1023-41A	Black Covebase	1st Floor, Men's Locker Room	None Detected
BS-1023-41B	Black Covebase	1st Floor, Men's Locker Room	None Detected
BS-1023-42A	Black Covebase Adhesive	1st Floor, Men's Locker Room	None Detected
BS-1023-42B	Black Covebase Adhesive	1st Floor, Men's Locker Room	None Detected
BS-1023-43A	Gray Covebase	1st Floor, Room 2	None Detected
BS-1023-43B	Gray Covebase	1st Floor, Room 2	None Detected
BS-1023-44A	Gray Covebase Adhesive	1st Floor, Room 2	None Detected
BS-1023-44B	Gray Covebase Adhesive	1st Floor, Room 2	None Detected
BS-1023-45A	Plaster Skim Coat	1st Floor, Area 1	None Detected
BS-1023-45B	Plaster Skim Coat	1st Floor, Area 2	None Detected
BS-1023-45C	Plaster Skim Coat	1st Floor, Area 1	None Detected
BS-1023-45D	Plaster Skim Coat	1st Floor, Room 2	None Detected
BS-1023-44E	Plaster Skim Coat	1st Floor, Room 1	None Detected
BS-1023-46A	Plaster Base Coat	1st Floor, Area 1	None Detected
BS-1023-46B	Plaster Base Coat	1st Floor, Area 2	None Detected
BS-1023-46C	Plaster Base Coat	1st Floor, Area 1	None Detected
BS-1023-46D	Plaster Base Coat	1st Floor, Room 2	None Detected
BS-1023-46E	Plaster Base Coat	1st Floor, Room 1	None Detected
BS-1023-47A	2' x 4' Ceiling Tile	1st Floor, Area 2	None Detected
BS-1023-47B	2' x 4' Ceiling Tile	1st Floor, Area 2	None Detected
BS-1023-48A	1' x 1' Ceiling Tile (Hole Pattern)	1st Floor, Men's Locker Room	None Detected
BS-1023-48B	1' x 1' Ceiling Tile (Hole Pattern)	1st Floor, Men's Locker Room	None Detected
BS-1023-49A	1' x 1' Ceiling Tile (Fissure Pattern)	1st Floor, Area 2	None Detected
BS-1023-49B	1' x 1' Ceiling Tile (Fissure Pattern)	1st Floor, Area 1	None Detected
BS-1023-50A	Black Glue Daubs	1st Floor, Room 2	None Detected
BS-1023-50B	Black Glue Daubs	1st Floor, Area 2	None Detected
BS-1023-51A	**Brown Glue Daubs**	**1st Floor, Men's Locker Room**	**5 % Anthophyllite**
BS-1023-51B	**Brown Glue Daubs**	**1st Floor, Men's Locker Room**	**Positive Stop**
BS-1023-52A	Interior Window Glazing	Basement	None Detected
BS-1023-52B	Interior Window Glazing	Basement	None Detected

BELD-44 Allen Street
Braintree, Massachusetts
Sample Locations and Results
Table I (Continued)

Sample Number	Sample Description	Sample Location	Asbestos Content
	Office (Continued)		
BS-1023-53A	**Interior Window Glazing**	**1st Floor, Area 1**	**8% Chrysotile**
BS-1023-53B	**Interior Window Glazing**	**1st Floor, Room 1**	**Positive Stop**
BS-1023-54A	Interior Window Caulking	1st Floor, Room 1	None Detected
BS-1023-54B	Interior Window Caulking	1st Floor, Area 1	None Detected
BS-1023-55A	**Exterior Window Caulking (Gray)**	**Exterior**	**8% Chrysotile**
BS-1023-55B	**Exterior Window Caulking (Gray)**	**Exterior**	**Positive Stop**
BS-1023-56A	**Exterior Window Caulking (White)**	**Exterior**	**8% Chrysotile**
BS-1023-56B	**Exterior Window Caulking (White)**	**Exterior**	**Positive Stop**
BS-1023-57A	**Exterior Door Caulking (White)**	**Exterior**	**8% Chrysotile**
BS-1023-57B	**Exterior Door Caulking (White)**	**Exterior**	**Positive Stop**
BS-1023-58A	**Exterior Window Glazing**	**Exterior**	**6% Chrysotile**
BS-1023-58B	**Exterior Window Glazing**	**Exterior**	**Positive Stop**
BS-1023-59A	Roof Field Material	Exterior	None Detected
BS-1023-59B	Roof Field Material	Exterior	None Detected
BS-1023-60A	Roof Flashing Material	Exterior	None Detected
BS-1023-60B	Roof Flashing Material	Exterior	None Detected
BS-1023-61A	**Roof Parapet Wall Sealant**	**Exterior**	**8 % Chrysotile**
BS-1023-61B	**Roof Parapet Wall Sealant**	**Exterior**	**Positive Stop**

Sample Number	Sample Description	Sample Location	Asbestos Content
	Garage		
BS-1023-62A	Interior Window Glazing	Interior	None Detected
BS-1023-62B	Interior Window Glazing	Interior	None Detected
BS-1023-63A	Interior Window Caulking	Interior	None Detected
BS-1023-63B	Interior Window Caulking	Interior	None Detected
BS-1023-64A	Roof Field Material	Exterior	None Detected
BS-1023-64B	Roof Field Material	Exterior	None Detected
BS-1023-65A	Roof Flashing Material	Exterior	None Detected
BS-1023-65B	Roof Flashing Material	Exterior	None Detected
BS-1023-66A	Parapet Wall Flashing Material	Exterior	None Detected
BS-1023-66B	Parapet Wall Flashing Material	Exterior	None Detected

BELD-44 Allen Street
Braintree, Massachusetts
Sample Locations and Results
Table I (Continued)

Sample Number	Sample Description	Sample Location	Asbestos Content
Screen House			
BS-1023-67A	Interior Window Glazing	Interior	None Detected
BS-1023-67B	Interior Window Glazing	Interior	None Detected
BS-1023-68A	Window Flashing Paper	Exterior	None Detected
BS-1023-68B	Window Flashing Paper	Exterior	None Detected
BS-1023-69A	Roof Field Material	Exterior	None Detected
BS-1023-69B	Roof Field Material	Exterior	None Detected
BS-1023-70A	Roof Flashing Material	Exterior	None Detected
BS-1023-70B	Roof Flashing Material	Exterior	None Detected
BS-1023-66A	Parapet Wall Flashing Material	Exterior	None Detected
BS-1023-66B	Parapet Wall Flashing Material	Exterior	None Detected

Bold indicates representative bulk sample analyzed positive for Asbestos (>1% asbestos containing)

Positive Stop indicates representative bulk sample analyzed positive for Asbestos.

2.0 LIMITED REGULATED MATERIALS INSPECTION

VERTEX concurrently performed a regulated materials inspection throughout the unoccupied Former Switch House, Office, Screen House, and Garage Structures located at 44 Allen Street in Braintree, Massachusetts.

The inspection involved identifying light ballasts and fluorescent tubes within the site buildings as well as other potential hazardous materials such as mercury switches, emergency light/exit sign batteries, etc. Please refer to **APPENDIX C** which includes a summary of the findings of the inspection.

3.0 LEAD BASED PAINT SURVEY

3.1 Introduction

VERTEX conducted a lead based paint inspection on October 22, 2013 at the unoccupied Former Switch House, Office, and Garage Structures located at 44 Allen Street in Braintree, Massachusetts. The inspection included the interior and exterior painted surfaces for lead content. The lead inspection was conducted by Licensed Lead Inspector John Flaherty (I#1272)

The purpose of the inspection was to determine which paints, if any, on the interior and exterior painted surfaces at the site buildings are considered “lead based paints”.

The lead concentrations on the interior and exterior painted surfaces varied in lead content. In general at the time of the inspection the painted surfaces were observed to be in Defective condition (i.e. flaking, peeling and/or delaminating). The regulations that currently apply concerning lead exposure during construction activities are the Occupational Safety and Health Administration (OSHA) regulations (construction personnel) for worker protection & Commonwealth of Massachusetts for safety procedures. These requirements relate to safety procedures and must be followed. It is also important to understand that OSHA regulations have a zero tolerance with regard to definition of lead paint while other state and federal regulators define lead paint using a specific level of lead in the paint.

When construction does take place, all impacted surfaces that contain lead, under the OSHA definition, will require compliance. The current state requirements and OSHA regulations with regard to worker safety and State of Massachusetts safety procedures shall be followed during construction work. Environmental Protection Agency (EPA), Massachusetts Department of Environmental Protection (MADEP) & the Commonwealth of Massachusetts regulations will also apply for disposal of material subject to these regulations.

3.2 XRF Methodology

Lead paint concentrations were analyzed using a RMD LPA-1 I Mobile X-Ray Fluorescence Analyzer. The LPA-1 measures the amount of lead within a given area of a painted surface using the principle of X-Ray Fluorescence (XRF). Atoms exposed to radiation become excited as they absorb the radiation. As these atoms settle back to their stable state, they fluoresce or release the stored energy back. The fluorescence energy level is unique for each particular element. In the case of the LPA-1, this fluorescence lays in the x-ray region of the energy spectrum, hence the term x-ray fluorescence.

The LPA-1 employs a low level, encapsulated radioactive source to excite lead atoms in the paint. The source is located behind a protective shutter mechanism in the probe. Depressing the probe trigger activates the shutter thereby espousing the cobalt source to the test surface. The source emits low-level gamma radiation, which penetrates all layers of paint into the background substrate. This gamma radiation excites atoms in the paint and the background substrate, which fluoresces x-rays back into the probe. Using a special x-ray sensor and filtering system the LPA-1 detects the fluorescing “K” x-rays, because of their penetrating power.

The LPA-1 converts the incoming x-ray fluorescence into electrical signals (counts). Counts increase and decrease with change in radiation density of various background materials. For instance, because concrete has a greater density than wood it fluoresces more and therefore produces more “counts”. A microcomputer controlled high voltage system stabilizes all incoming counts. The analyzer monitors the number of incoming counts and as these counts change, i.e. the densities of the material being tested change; the analyzer adjusts the high voltage to maintain a stable signal. This stabilized signal passes from the probe into the analyzer, which analyzes, calculates and displays the specific lead content in mg/cm2.

Various background conditions and environments affect the analyzer differently; therefore results can be somewhat interpretative. Magnetic flux and high frequency radio waves affect the operation of the probe. Readings taken near electrical outlets, switches and wiring may be elevated. Because the analyzer does not detect lead accurately through air, the accuracy of reading on curved and sculptured surfaces (e.g. window or door trim) is affected by the amount of air between the probe face and the test surface. Baseboards or window trim may contain nails, which could cause false readings. When background densities vary from test surface to test surface, the analyzer should be given one reading cycle to adjust the high voltage in the probe to accommodate the change of incoming counts.

In order to ensure that the XRF instrument is performing properly, the manufacturer recommends that the instrument be routinely tested against manufacturer’s standards (sample blocks of wood, gypsum, and lead) to ensure that the instrument should give a reading within the specified tolerance for each, especially the zero standard. This testing was performed before and after each inspection.

The XRF instrument will give a zero reading only on certain very simple substrates for which it is set to zero by the manufacturer. The XRF may give a nonzero reading for a surface that is lead-free, then either positive or negative. Massachusetts's regulations allow the instrument to be zeroed against the manufacturer's sample substrate without zeroing to the actual building substrate being inspected.

"State of the Art" protocols were used in zeroing the machine for the lead inspection performed at the site buildings in Braintree, Massachusetts.

The lead inspections were performed in compliance with M.G.L. Chapter 111, sections 194,197 197A, M.G.L. Chapter 773, 454 CMR 22.00 Regulations to Protects Deleaders, Lead Paint Inspectors and Workers in Removing, Covering or Disturbing Materials Containing Dangerous Levels of Lead Paint.

3.3 Inspection Report

Several painted surfaces at the site buildings contain lead as defined under OSHA and Commonwealth of Massachusetts Regulations. Lead compliance requirements do fall under OSHA and EPA regulations for the protection of construction workers and the environment as well as Commonwealth of Massachusetts for safety procedures. Under the OSHA Regulations any amount of lead detected would require compliance with OSHA Regulations for construction personnel.

Lead paint was determined to be present on various metal and non-metal surfaces tested (i.e. plaster, wood, metal and gypsum walls). For the purpose of this report lead paint is defined under OSHA Regulations and not the Commonwealth of Massachusetts Regulations as OSHA definition of lead is more stringent. As scheduled renovation activities will involve disturbing areas where lead paint was detected, OSHA Regulations would be applicable and must be complied with for worker protection.

APPENDIX D presents the detailed test data for the area tested by the XRF. Negative reading or zero readings indicated a lead free paint.

4.0 SUSPECT PCB CONTAINING CAULKING SAMPLING AND ANALYSIS

VERTEX concurrently performed sampling of suspect PCB-containing at the site buildings. VERTEX collected a total of fifteen (15) representative caulking samples which were submitted for Poly-Chlorinated Biphenyl (PCB) analysis via Environmental Protection Agency (EPA) Method 8082 with EPA Method 3540 Soxhlet Extraction. Please refer to **APPENDIX G**, which includes the laboratory results. Please refer to Table II below for a summary of the caulking sample results.

BELD-44 Allen Street
Braintree, Massachusetts
Sample Locations and Results
Table II

Sample Number	Material Identification	Sample Location	PCB Concentration (mg/kg)
CS-1023-01A	Interior Window Glazing	Interior, Screen House	BRL (0.79)
CS-1023-01B	Interior Window Glazing	Interior, Screen House	BRL (0.74)
CS-1023-02A	Interior Window Glazing (White)	Interior, Switch House	6.8
CS-1023-02B	Interior Window Glazing (White)	Interior, Switch House	3.0
CS-1023-03A	Exterior Door Caulking	Exterior, Switch House	BRL (0.67)
CS-1023-03B	Exterior Door Caulking	Exterior, Switch House	BRL (0.80)
CS-1023-04A	Building Caulking	Exterior, Switch House	BRL (0.68)
CS-1023-04B	Building Caulking	Exterior, Switch House	BRL (0.71)
CS-1023-05A	Exterior Window Caulking (White)	Exterior, Office	BRL (0.76)
CS-1023-05B	Exterior Window Caulking (White)	Exterior, Office	BRL (0.77)
CS-1023-06A	Exterior Window Caulking (Gray)	Exterior, Office	BRL (0.69)
CS-1023-06B	Exterior Window Caulking (Gray)	Exterior, Office	BRL (0.73)
CS-1023-07A	Exterior Window Glazing	Exterior, Office	BRL (0.72)
CS-1023-07B	Exterior Window Glazing	Exterior, Office	BRL (0.74)
CS-1023-08A	Interior Window Glazing	Interior, Office	0.88

Notes:

BRL = Below Reporting Limit
(0.74) = Laboratory Reporting Limit

5.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions

VERTEX conducted a Pre-Demolition/Renovation of the unoccupied Former Switch House, Office, Screen House, and Garage Structures located at 44 Allen Street in Braintree, Massachusetts between October 22 and October 23, 2013. Based on observations made at the time of the inspection and the laboratory results, VERTEX concludes the following:

- Based on the sampling and analysis of the suspect materials, it has been determined that ACMs were found to exist, and include the following:

  Switch House Building

  12" x 12" Gray w/ White Spec Floor Tile
  Black Residual Mastic
  Pipe Fitting Insulation
  Exterior White Window Caulking
  Exterior Building Caulking
  Interior Window Glazing
  12" x 12" Gray w/ White Spec Mastic
  Pipe Insulation
  Panel Divider
  Exterior Gray Window Caulking
  Exterior Door Caulking

  Office Building

  Brown Glue Daubs
  Exterior Window Caulking (Gray)
  Exterior Window Glazing
  Interior Window Glazing
  Exterior Window Caulking (White)
  Roof Parapet Wall Sealant

- VERTEX assumes that there is a potential for hidden exterior below grade waterproofing mastic to exist on the exterior foundation walls as well as pipe gaskets associated with the site buildings.

- Based on the observations made at the time inspection, regulated materials/universal wastes were identified.

- Based on review of the data from the XRF- Lead Survey, several painted surfaces at the site buildings contain lead as defined under OSHA and Commonwealth of Massachusetts Regulations.

- Laboratory analysis of the representative caulking and glazing samples did not indicate the presence of PCBs as a PCB bulk product waste. PCB bulk product waste and/or PCB containing caulking is defined within Chapter 40 CFR Section 761.62 of the Toxic Substance Control Act (TSCA) as if the concentration of PCBs detected in the caulk is greater than or equal to (=) 50 parts per million (ppm) or 50 milligrams per kilogram (mg/kg).

Recommendations

Based on the findings of the investigation, VERTEX recommends the following:

- VERTEX recommends retaining a Massachusetts certified Asbestos Contractor for the regulated abatement and disposal of the identified asbestos-containing materials, prior to scheduled demolition/renovation activities which will be disturbed.

- VERTEX recommends additional sampling and analysis of the suspected waterproofing mastic once the foundation walls have been exposed prior to disposal or recycling, if discovered.

- All identified regulated materials that may be impacted should be properly packaged, disposed and/or recycled in accordance with applicable regulations.

- VERTEX recommends the General Contractor must be notified of the lead results to ensure compliance with OSHA Regulations for protection of his workers. This information should be supplied with any Lead Compliance Specification. Regulations that currently apply concerning lead exposure during construction activities are the Environmental Protection Agency (EPA) Toxic Substance Control Act (TSCA) Sections 402 and 406 and 40 CFR Part 745 Subpart E and the Occupational Safety and Health Administration (OSHA) regulations (construction personnel) for worker protection. These requirements relate to safety procedures and must be followed. It is also important to understand that OSHA regulations have a zero tolerance with regard to definition of lead paint while other state and federal regulators define lead paint using a specific level of lead in the paint. The current state requirements and OSHA regulations with regard to worker safety shall be followed during construction work. Environmental Protection Agency (EPA), Massachusetts Department of Environmental Protection (MADEP) and the Commonwealth of Massachusetts regulations may also apply for disposal of material subject to these regulations.

  Composite samples of painted surfaces, including wood, require testing by the Toxicity Characteristics Leaching Procedure (TCLP) for waste classification in accordance with disposal requirements of the EPA. Through TCLP testing it can be determined how waste is to be handled. Based on the analytical results, VERTEX recommends TCLP sampling and analysis for proper disposal.

- All efforts were made to determine the locations and quantities of all ACMs, suspect caulking and other regulated materials associated with the site buildings. In the event additional suspect materials are discovered during future renovation activities, VERTEX recommends collecting/analyzing samples of the materials for asbestos content prior to disturbance.

6.0 ESTIMATED COSTS FOR ABATEMENT/REMOVAL

The following cost estimates are estimated using current abatement contractor estimates and environmental consulting rates. These estimates will vary according to competitive bidding, accessibility, location, and condition of ACMs/Regulated Materials, phasing of work, etc.

Estimated Cost for the Removal of ACMs: $48,000.00*
(A detailed Cost Estimate Worksheet can be found in APPENDIX B)

Estimated Cost for the Removal and Disposal of the Regulated Materials: $7,000.00

***Estimated cost above does not include the removal and/or disposal of the potential hidden exterior below grade waterproofing mastic on the exterior foundation walls and/or pipe gaskets associated with the site buildings. As such, VERTEX recommends additional sampling and analysis of the suspected waterproofing mastic once the foundation walls have been exposed prior to disposal and/or recycling, if discovered. Additionally, VERTEX recommends that prior to removal and disposal of pipe gaskets, representative bulk samples should be collected and submitted for analysis to determine asbestos content.**

7.0 LIMITATIONS AND SERVICE CONSTRAINTS

Professional opinions presented in this report are based on information made available to VERTEX either by review of data provided by others or data gained by VERTEX personnel.

VERTEX affirms that data gathered and presented by VERTEX in this report was collected in an appropriate manner in accordance with generally accepted methods and practices. VERTEX cannot be responsible for decisions made by our client solely on the basis of economic factors.

Conditions described in this report were observed at the time of the investigation, unless otherwise stated.

VERTEX did not conduct exploratory demolition in all permanent ceilings and/or walls. VERTEX attempted to quantify suspect materials above these ceilings and walls, based on accessible and observable areas. In consideration that suspect ACMs or other regulated materials may be present above permanent ceilings or within walls not readily accessible at the time of our inspection, VERTEX recommends that any future project specification documents include provisions for establishing unit pricing for the removal of potential hidden ACMs and/or other regulated materials that may be uncovered during proposed demotion activities.

Reasonable effort was made by VERTEX personnel to locate and sample suspect materials. However, for any facility the existence of unique or concealed ACMs, regulated materials and debris is a possibility. VERTEX does not warrant, guarantee or profess to have the ability to locate or identify all regulated materials and/or ACMs in a facility. The intent of this report is to be used in planning for demolition activities. If additional regulated materials and/or ACMs are discovered during demolition-related activities, these materials should be removed and disposed of in accordance with all local, Commonwealth and federal regulations prior to any demolition-related activities. Abatement of ACMs must be performed by an accredited/certified asbestos-abatement contractor prior to disturbance.

VERTEX analyzed only the substances, conditions, and locations described in the report at the time indicated.

VERTEX retains the right to revise this report if new information is later discovered or made available.

The report must be presented in its entirety.

APPENDIX A

LOCATIONS OF THE ASBESTOS CONTAINING MATERIALS

Appendix A-1: Switch House
Appendix A-2: Office Building
Appendix A-3: Screen House
Appendix A-4: Garage

Appendix A-1

Locations of the Asbestos-Containing Materials
Former Switch House-44 Allen Street
Braintree, Massachusetts

Location	Description	Estimated Quantity
Ground Floor		
Stair Hall	Black Residual Mastic	160 ft^2
Open Area 2	Black Residual Mastic	720 ft^2
	Interior Window Glazing/Exterior Window Caulking	6 Units
Hallway 3	12" x 12" Gray/White Spec Floor Tile and Mastic	300 ft^2
Bath 5	12" x 12" Gray/White Spec Floor Tile and Mastic	160 ft^2
	Interior Window Glazing/Exterior Window Caulking	2 Units
Office 9	12" x 12" Gray/White Spec Floor Tile and Mastic (Under Carpet)	350 ft^2
	Interior Window Glazing/Exterior Window Caulking	3 Units
Sump Room	12" x 12" Gray/White Spec Floor Tile and Mastic	150 ft^2
	Interior Window Glazing/Exterior Window Caulking	3 Units
Hallway 4	12" x 12" Gray/White Spec Floor Tile and Mastic	120 ft^2
	Interior Window Glazing/Exterior Window Caulking	2 Units
Office 10	12" x 12" Gray/White Spec Floor Tile and Mastic	140 ft^2
	Interior Window Glazing/Exterior Window Caulking	2 Units
Basement Garage Area	Interior Window Glazing/Exterior Window Caulking	6 Units
Basement Storage Area	Panel Dividers	19 Units
Shop	Interior Window Glazing/Exterior Window Caulking	6 Units
First Floor		
Entry Way Area	Interior Window Glazing/Exterior Window Caulking	4 Units
Open Area 1	Interior Window Glazing/Exterior Window Caulking	6 Units
Bath 1	Interior Window Glazing/Exterior Window Caulking	1 Unit
	Pipe Fitting Insulation (Assumed Behind Wall)	6 Units
Bath 2	Black Residual Mastic	64 ft^2
	Interior Window Glazing/Exterior Window Caulking	1 Unit
	Pipe Fitting Insulation (Assumed Behind Wall)	6 Units
Office 5	Black Residual Mastic	644 ft^2
	Interior Window Glazing/Exterior Window Caulking	8 Units
Hallway 1	Pipe Fitting Insulation	2 Units
	Pipe Insulation	46 lf
	Interior Window Glazing/Exterior Window Caulking	2 Units
Office 6	Interior Window Glazing/Exterior Window Caulking	2 Units
Office 7	Interior Window Glazing/Exterior Window Caulking	6 Units
Storage Room	Interior Window Glazing/Exterior Window Caulking	2 Units
	Pipe Fitting Insulation	2 Units
Bath 3	Pipe Fitting Insulation (Assumed Behind Wall)	6 Units

Appendix A-1

Locations of the Asbestos-Containing Materials
Former Switch House-44 Allen Street
Braintree, Massachusetts

Location	Description	Estimated Quantity
First Floor (Continued)		
Bath 4	Pipe Fitting Insulation (Assumed Behind Wall)	6 Units
Exterior		
Exterior-Side A	Exterior Building Caulking	15 lf
Exterior-Side C	Exterior Door Caulking	88 lf
Exterior-Side D	Exterior Door Caulking	51 lf

Notes:

ft^2 = Square Foot
lf = Linear Foot
Units = Each

Appendix A-2

Locations of the Asbestos-Containing Materials
Former Office Building-44 Allen Street
Braintree, Massachusetts

Location	Description	Estimated Quantity
First Floor		
Area 1	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	160 ft^2
	Window Glazing and Caulking	5 Units
Area 2	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	800 ft^2
	Window Glazing and Caulking	3 Units
Counter Area	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	144 ft^2
	Window Glazing and Caulking	4 Units
Room 1	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	153 ft^2
	Window Glazing and Caulking	3 Units
Room 2	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	140 ft^2
	Window Glazing and Caulking	4 Units
Kitchen	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	140 ft^2
	Window Glazing and Caulking	2 Units
Men's Locker Room	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	100 ft^2
Men's Room	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	40 ft^2
Ladies Room	Window Glazing and Caulking	1 Unit
Exterior		
Exterior-Side A	Exterior Door Caulking	17 lf
Exterior-Side B	Exterior Door Caulking	17 lf
Exterior-Roof	Parapet Wall Seam Sealant	100 ft^2

Notes:

ft^2 = Square Foot
lf = Linear Foot
Units = Each

Appendix A-3

Locations of the Asbestos-Containing Materials
Former Screen House-44 Allen Street
Braintree, Massachusetts

Location	Description	Estimated Quantity
Through Sampling and Analysis of the Suspect ACMs, ACMs were <u>not</u> identified.		

Appendix A-4

Locations of the Asbestos-Containing Materials
Former Garage-44 Allen Street
Braintree, Massachusetts

Location	Description	Estimated Quantity
Through Sampling and Analysis of the Suspect ACMs, ACMs were <u>not</u> identified.		

APPENDIX B

ESTIMATED COSTS FOR ABATEMENT OF THE ASBESTOS CONTAINING MATERIALS

Appendix B-1: Switch House
Appendix B-2: Office Building

Appendix B-1

Estimated Costs for the Abatement of the Identified Asbestos-Containing Materials
Former Switch House-44 Allen Street
Braintree, Massachusetts

Location	Description	Estimated Quantity	Estimated Costs
Ground Floor			
Stair Hall	Black Residual Mastic	160 ft^2	$800.00
Open Area 2	Black Residual Mastic	720 ft^2	$3,600.00
	Interior Window Glazing/Exterior Window Caulking	6 Units	$1,500.00
Hallway 3	12" x 12" Gray/White Spec Floor Tile and Mastic	300 ft^2	$1,950.00
Bath 5	12" x 12" Gray/White Spec Floor Tile and Mastic	160 ft^2	$1,040.00
	Interior Window Glazing/Exterior Window Caulking	2 Units	$500.00
Office 9	12" x 12" Gray/White Spec Floor Tile and Mastic (Under Carpet)	350 ft^2	$2,450.00
	Interior Window Glazing/Exterior Window Caulking	3 Units	$750.00
Sump Room	12" x 12" Gray/White Spec Floor Tile and Mastic	150 ft^2	$975.00
	Interior Window Glazing/Exterior Window Caulking	3 Units	$750.00
Hallway 4	12" x 12" Gray/White Spec Floor Tile and Mastic	120 ft^2	$780.00
	Interior Window Glazing/Exterior Window Caulking	2 Units	$500.00
Office 10	12" x 12" Gray/White Spec Floor Tile and Mastic	140 ft^2	$910.00
	Interior Window Glazing/Exterior Window Caulking	2 Units	$500.00
Basement Garage Area	Interior Window Glazing/Exterior Window Caulking	6 Units	$150.00
Basement Storage Area	Panel Dividers	19 Units	$57.00
Shop	Interior Window Glazing/Exterior Window Caulking	6 Units	$1,500.00
First Floor			
Entry Way Area	Interior Window Glazing/Exterior Window Caulking	4 Units	$1,000.00
Open Area 1	Interior Window Glazing/Exterior Window Caulking	6 Units	$1,500.00
Bath 1	Interior Window Glazing/Exterior Window Caulking	1 Unit	$250.00
	Pipe Fitting Insulation (Assumed Behind Wall)	6 Units	$150.00
Bath 2	Black Residual Mastic	64 ft^2	$320.00
	Interior Window Glazing/Exterior Window Caulking	1 Unit	$250.00
	Pipe Fitting Insulation (Assumed Behind Wall)	6 Units	$150.00
Office 5	Black Residual Mastic	644 ft^2	$3,220.00
	Interior Window Glazing/Exterior Window Caulking	8 Units	$2,000.00
Hallway 1	Pipe Fitting Insulation	2 Units	$50.00
	Pipe Insulation	46 lf	$1,150.00
	Interior Window Glazing/Exterior Window Caulking	2 Units	$500.00
Office 6	Interior Window Glazing/Exterior Window Caulking	2 Units	$500.00
Office 7	Interior Window Glazing/Exterior Window Caulking	6 Units	$1,500.00
Storage Room	Interior Window Glazing/Exterior Window Caulking	2 Units	$500.00
	Pipe Fitting Insulation	2 Units	$50.00
Bath 3	Pipe Fitting Insulation (Assumed Behind Wall)	6 Units	$150.00

Appendix B-1

Estimated Costs for the Abatement of the Identified Asbestos-Containing Materials
Former Switch House-44 Allen Street
Braintree, Massachusetts

Location	Description	Estimated Quantity	Estimated Costs
	First Floor (Continued)		
Bath 4	Pipe Fitting Insulation (Assumed Behind Wall)	6 Units	$150.00
	Exterior		
Exterior-Side A	Exterior Building Caulking	15 lf	$150.00
Exterior-Side C	Exterior Door Caulking	88 lf	$880.00
Exterior-Side D	Exterior Door Caulking	51 lf	$510.00

Notes:

ft^2 = Square Foot
lf = Linear Foot
Units = Each

Appendix B-2

Estimated Costs for the Abatement of the Identified Asbestos-Containing Materials
Former Office Building-44 Allen Street
Braintree, Massachusetts

Location	Description	Estimated Quantity	Estimated Cost
First Floor			
Area 1	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	160 ft^2	$960.00
	Window Glazing and Caulking	5 Units	$1,000.00
Area 2	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	800 ft^2	$4,800.00
	Window Glazing and Caulking	3 Units	$600.00
Counter Area	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	144 ft^2	$864.00
	Window Glazing and Caulking	4 Units	$800.00
Room 1	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	153 ft^2	$918.00
	Window Glazing and Caulking	3 Units	$600.00
Room 2	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	140 ft^2	$840.00
	Window Glazing and Caulking	4 Units	$800.00
Kitchen	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	140 ft^2	$840.00
	Window Glazing and Caulking	2 Units	$400.00
Men's Locker Room	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	100 ft^2	$600.00
Men's Room	Glue Daubs and Contaminated 1' x 1' Ceiling Tile	40 ft^2	$240.00
Ladies Room	Window Glazing and Caulking	1 Unit	$200.00
Exterior			
Exterior-Side A	Exterior Door Caulking	17 lf	$170.00
Exterior-Side B	Exterior Door Caulking	17 lf	$170.00
Exterior-Roof	Parapet Wall Seam Sealant	100 ft^2	$1,000.00

Notes:

ft^2 = Square Foot
lf = Linear Foot
Units = Each

APPENDIX C

LOCATIONS OF THE REGULATED MATERIALS

Appendix C-1: Switch House
Appendix C-2: Office Building
Appendix C-3: Screen House
Appendix C-4: Garage

Appendix C-1

BELD Buildings, Switch House
44 Allen Street, Braintree Massachusetts
Locations and Quantities of the Identified Regulated Materials

Location	Material	Quantity
Switch House		
First Floor		
Entry Way Area	8' Florescent Light Tubes	4
Entry Way Area	4' Florescent Light Tubes	2
Entry Way Area	PCB/Non PCB Florescent Light Ballasts	3
Entry Way Area	AC Unit	1
Entry Way Area	Mercury Thermostat	2
Entry Way Area	Fire Extinguisher	1
Switch Room	4' Florescent Light Tubes	16
Switch Room	PCB/Non PCB Florescent Light Ballasts	8
Switch Room	AC Unit	1
Computer Room	4' Florescent Light Tubes	24
Computer Room	PCB/Non PCB Florescent Light Ballasts	12
Computer Room	AC Unit	1
Computer Room	Mercury Thermostat	2
Open Area	8' Florescent Light Tubes	6
Open Area	PCB/Non PCB Florescent Light Ballasts	3
Open Area	Fire Exit	1
Open Area	7.5v Battery	2
Open Area	9v Battery	1
Office 1	4' Florescent Light Tubes	9
Office 1	PCB/Non PCB Florescent Light Ballasts	3
Office 1	Mercury Thermostat	1
Office 2	4' Florescent Light Tubes	12
Office 2	PCB/Non PCB Florescent Light Ballasts	4
Office 2	Mercury Thermostat	1
Office 3	4' Florescent Light Tubes	12
Office 3	PCB/Non PCB Florescent Light Ballasts	4
Office 3	Mercury Thermostat	2
Office 4	4' Florescent Light Tubes	30
Office 4	PCB/Non PCB Florescent Light Ballasts	10
Office 4	Mercury Thermostat	1
Office 4	AC Unit	1

Appendix C-1

BELD-Switch House
44 Allen Street, Braintree Massachusetts
Locations and Quantities of the Identified Regulated Materials

Location	Material	Quantity
First Floor (Continued)		
Bath 1	2' Florescent Light Tubes	2
Bath 1	PCB/Non PCB Florescent Light Ballasts	1
Bath 2	4' Florescent Light Tubes	1
Bath 2	PCB/Non PCB Florescent Light Ballasts	1
Bath 2	Mercury Thermostat	1
Office Area 5	4' Florescent Light Tubes	27
Office Area 5	PCB/Non PCB Florescent Light Ballasts	9
Office Area 5	Mercury Thermostat	1
Office Area 5	AC Unit	1
Office Area 5	Radiant Heat Pad	3
Hallway 1	4' Florescent Light Tubes	9
Hallway 1	PCB/Non PCB Florescent Light Ballasts	3
Hallway 1	Mercury Thermostat	1
Office 6	4' Florescent Light Tubes	9
Office 6	PCB/Non PCB Florescent Light Ballasts	3
Office 6	Mercury Thermostat	1
Office 7	4' Florescent Light Tubes	24
Office 7	PCB/Non PCB Florescent Light Ballasts	6
Office 7	Mercury Thermostat	2
Storage Room	4' Florescent Light Tubes	24
Storage Room	PCB/Non PCB Florescent Light Ballasts	8
Storage Room	Mercury Thermostat	1
Bath 3	2' Florescent Light Tubes	1
Bath 3	PCB/Non PCB Florescent Light Ballasts	1
Bath 4	2' Florescent Light Tubes	1
Bath 4	PCB/Non PCB Florescent Light Ballasts	1
Office 8	4' Florescent Light Tubes	72
Office 8	PCB/Non PCB Florescent Light Ballasts	24
Office 8	Mercury Thermostat	5
Office 8	Fire Door	1
Office 8	AC Unit	1

Appendix C-1

BELD-Switch House
44 Allen Street, Braintree Massachusetts
Locations and Quantities of the Identified Regulated Materials

Location	Material	Quantity
Ground Floor		
Stair Hall	4' Florescent Light Tubes	2
Stair Hall	PCB/Non PCB Florescent Light Ballasts	1
Stair Hall	Fire Exit Battery	1
Open Area 2	4' Florescent Light Tubes	4
Open Area 2	PCB/Non PCB Florescent Light Ballasts	2
Open Area 2	Electric Heater	1
Open Area 2	AC Unit	1
Hallway 3	4' Florescent Light Tubes	5
Hallway 3	8' Florescent Light Tubes	1
Hallway 3	PCB/Non PCB Florescent Light Ballasts	3
Bathroom 5	Mercury Thermostat	1
Office 9	4' Florescent Light Tubes	8
Office 9	PCB/Non PCB Florescent Light Ballasts	2
Sump Room	8' Florescent Light Tubes	2
Sump Room	PCB/Non PCB Florescent Light Ballasts	1
Sump Room	AC Unit	1
Sump Room	Mercury Thermostat	1
Hall 4	4' Florescent Light Tubes	2
Hall 4	PCB/Non PCB Florescent Light Ballasts	1
Hall 4	Fire Exit Battery	1
Office 10	4' Florescent Light Tubes	6
Office 10	PCB/Non PCB Florescent Light Ballasts	2
Basement Garage	Fire Door	1
Basement Garage	8' Florescent Light Tubes	18
Basement Garage	4' Florescent Light Tubes	14
Basement Garage	PCB/Non PCB Florescent Light Ballasts	16

Appendix C-1

BELD-Switch House
44 Allen Street, Braintree Massachusetts
Locations and Quantities of the Identified Regulated Materials

Location	Material	Quantity
Ground Floor (Continued)		
Basement Garage	55 Gallon Drums (unlabeled)	1
Basement Garage	Fire Exit Battery	1
File Room	8' Florescent Light Tubes	2
File Room	PCB/Non PCB Florescent Light Ballasts	1
Basement Storage	8' Florescent Light Tubes	18
Basement Storage	PCB/Non PCB Florescent Light Ballasts	9
Basement Storage	Insulators	200
Mechanical Room	Mercury Thermostat	1
Shop	8' Florescent Light Tubes	6
Shop	PCB/Non PCB Florescent Light Ballasts	3
Exterior		
Exterior-Side C	Pad Mount Transformers	2

Appendix C-2

BELD-Office
44 Allen Street, Braintree Massachusetts
Locations and Quantities of the Identified Regulated Materials

Location	Material	Quantity
Office Building		
Area 1	4' Florescent Light Tubes	6
Area 1	PCB/Non PCB Florescent Light Ballasts	2
Area 1	AC Unit	1
Area 2	4' Florescent Light Tubes	51
Area 2	PCB/Non PCB Florescent Light Ballasts	17
Area 2	Mercury Thermostat	2
Counter Area	AC Unit	2
Room 1	4' Florescent Light Tubes	12
Room 1	PCB/Non PCB Florescent Light Ballasts	4
Room 1	AC Unit	1
Room 2	4' Florescent Light Tubes	8
Room 2	PCB/Non PCB Florescent Light Ballasts	2
Room 2	AC Unit	1
Kitchen	4' Florescent Light Tubes	8
Kitchen	PCB/Non PCB Florescent Light Ballasts	2
Kitchen	AC Unit	1
Kitchen	Refrigerator	1
Men’s Locker Room	4' Florescent Light Tubes	4
Men’s Locker Room	PCB/Non PCB Florescent Light Ballasts	1
Men’s Locker Room	AC Unit	1
Men’s Room	2' Florescent Light Tubes	1
Men’s Room	PCB/Non PCB Florescent Light Ballasts	1
Women’s Room	2' Florescent Light Tubes	1
Women’s Room	PCB/Non PCB Florescent Light Ballasts	1
Basement	8' Florescent Light Tubes	2
Basement	PCB/Non PCB Florescent Light Ballasts	1

Appendix C-3

BELD-Screen House
44 Allen Street, Braintree Massachusetts
Locations and Quantities of the Identified Regulated Materials

Location	Material	Quantity
Screen House		
Screen House	Fire Exit Sign Battery	1

Appendix C-4

BELD-Garage
44 Allen Street, Braintree Massachusetts
Locations and Quantities of the Identified Regulated Materials

Location	Material	Quantity
	Garage	
Room 1	8' Florescent Light Tubes	6
Room 1	PCB/Non PCB Florescent Light Ballasts	3
Room 1	Fire Exit Sign	2
Room 1	Mercury Thermostat	1
Room 2	4' Florescent Light Tubes	24
Room 2	8' Florescent Light Tubes	2
Room 2	PCB/Non PCB Florescent Light Ballasts	7
Room 2	Fire Exit Sign	1
Room 2	Mercury Thermostat	1
Room 2	5 Gallon Buckets (unlabeled)	5
Room 2	5 Gallon Diesel Can	1
Room 2	1 Gallon Gas Can	1

APPENDIX D

LEAD XRF RESULTS

Appendix D-1: Switch House
Appendix D-2: Office Building
Appendix D-3: Garage

Appendix D-1

BELD-Former Switchhouse Building
44 Allen Street, Braintree, MA
Lead Inspection Results

Room	Side	Surface	Substrate	Color	Pb Level (mg/cm^2)	Condition	Comment
First Floor							
Foyer	A	Door Unit	Metal	Grey	1.0	D	
Foyer	B	Wall	Gypsum	White	-0.2	D	
Foyer	C	Door Unit	Wood	Natural	-0.0	I	
Foyer	D	Wall	Brick	White	3.7	D	
Entry Way #1	A	Lower Wall	Brick	Dark Blue	4.2	D	
Entry Way #1	A	Window	Metal	Gray	0.2	D	
Entry Way #1	B	Upper Wall	Brick	White	3.1	D	
Entry Way #1	C	Door Unit	Metal	Gray	>9.9	D	Fire Door
Entry Way #1	D	Window Sill	Concrete	Dark Grey	2.8	D	
Entry Way #2	A	Wall	CMU	White	0.1	D	
Entry Way #2	B	Door Unit	Metal	Grey	0.5	D	
Entry Way #2	D	Window	Metal	Black	0.3	D	
Entry Way #3	A	Wall	Brick	White	0.2	D	
Entry Way #3	C	Door Unit	Wood	Natural	-0.2	D	
Entry Way #3	C	Wall	Gypsum	White	0.4	D	
Entry Way #3	D	Door Unit	Metal	Grey	0.1	D	
Switch Room	A	Wall	Gypsum	White	-0.1	D	
Switch Room	B	Wall	Metal	Green	-0.2	D	
Switch Room	C	Door Unit	Wood	Natural	0.3	I	
Switch Room	D	Window	Wood	Natural	-0.0	I	
Computer Room	A	Wall	Gypsum	Blue	-0.1	D	
Computer Room	C	Door Unit	Metal	Brown	0.4	D	
Computer Room	D	Window	Wood	Natural	-0.3	D	
Office #1	A&D	Wall	Glazed Block	Beige	0.8	I	
Office #1	B&C	Wall	Gypsum	Blue	-0.2	I	
Office #1	C	Door Unit	Wood	Natural	0.2	I	
Office #1	C	Baseboard	Wood	Natural	0.0	I	
Office #2	A	Wall	Glazed Block	Beige	0.4	I	
Office #2	BCD	Wall	Gypsum	Beige	-0.0	D	
Office #2	C	Door	Wood	Natural	0.4	I	
Office #2	D	Baseboard	Wood	Natural	-0.0	I	
Office 3&4		SAME AS #2	SAME AS #2	SAME AS #2			
Office #5	A,B,C,D	Wall	Glazed Block	Beige	0.5	I	
Office #5	A	Door Frame	Metal	Grey	0.7	D	
Office #5	A	Door Unit	Wood	Natural	-0.2	I	
Office #5	B	Door Unit	Metal	Grey	1.0	D	
Office #5	C	Window Unit	Metal	Grey	-0.1	D	
Office #6	A	Wall	Gypsum	Beige	0.3	D	

Appendix D-1

BELD-Former Switchhouse Building
44 Allen Street, Braintree, MA
Lead Inspection Results

Room	Side	Surface	Substrate	Color	Pb Level (mg/cm^2)	Condition	Comment
First Floor							
Office #6	B	Door Unit	Wood	Natural	-0.0	D	
Office #6	C	Window Metal	Metal	Dark Grey	0.2	D	
Office #7 &	Storage Area	SAME AS #6	SAME AS #6	SAME AS #6			
Office #8 ABC	A	Wall	Gypsum	Beige	0.2	D	
Office #8 ABC	A	Door Unit	Wood	Natural	-0.1	D	
Office #8 ABC	B	Door Unit	Wood	White	-0.0	D	
Office #8 ABC		Baseboard	Wood	White	-0.3	D	
Office #8 ABC	C	Wall	Glazed Block	Beige	0.4	I	
Office #8 D	D	Fire Door	Metal	Beige	5.2	I	Fire Door
Office #8 E&F	A,B,C,D	Wall	Wood Panel	Natural	0.4	I	
Office #8 E&F	C	Door Unit	Wood	Natural	-0.1	I	
Office #8 E&F	All	Baseboard	Wood	Natural	0.0	I	
Open Area	A	Wall	Gypsum	White		D	
Open Area	A	Baseboard	Wood	Natural	-0.1	D	
Open Area	A	Door Unit	Wood	Natural	-0.1	D	
Open Area	B	Door	Metal	White	0.6	D	
Open Area	C	Wall	Glazed Block	Beige	0.4	D	
Open Area	C	Door Unit	Metal	Beige	0.8	D	
Open Area	C	Window Unit	Metal	Grey	-0.1	D	
Open Area	C	Post	Metal	Black	3.8	D	On Staircase To Lower Level
Open Area	D	Door Frame	Metal	Grey	1.0	D	
Bath #1	A	Door Unit	Wood	Natural	0.3	D	
Bath #1	A	Wall	Gypsum	Light Violet	0.0	D	
Bath #1	B	Wall	Glazed Block	Beige	0.6	D	
Bath #1	C	Window	Metal	Black	6.3	D	
Bath #1	A	Baseboard	Wood	Natural	-0.1	D	
Bath #2	A,B,C,D	Wall	Glazed Block	Beige	0.3	D	
Bath #2	A	Door Unit	Metal	Beige	0.4	D	
Bath #2	C	Window	Natural	Grey	3.9	D	
Hallway #1		Door Unit	Metal	Dark Brown	0.4	D	
Hallway #1	B	Wall	Gypsum	Beige	-0.2	D	
Hallway #1	B	Door Unit	Wood	Natural	0.1	D	
Hallway #1	C	Window	Metal	Grey	0.4	D	
Hallway #1	D	Door	Metal Folding	Beige	-0.0	D	
Hallway #2	A	Door Unit	Wood	Natural	0.3	D	
Hallway #2	B	Wall	Gypsum	Beige	-0.0	D	

Appendix D-1

BELD-Former Switchhouse Building
44 Allen Street, Braintree, MA
Lead Inspection Results

Room	Side	Surface	Substrate	Color	Pb Level (mg/cm^2)	Condition	Comment
First Floor							
Hallway #2	C	Door Unit	Wood	Natural	-0.1	D	
Hallway #2	D	Door Unit	Wood	Natural	0.4	D	
Bath #3	A	Wall	Gypsum	Beige	-0.1	D	
Bath #3	B	Door Unit	Wood	Natural	0.2	D	
Bath #3	All	Floor	C. Tile	Beige	-0.4	D	
Bath #4	A	Wall	Gypsum	Beige	-0.0	D	
Bath #4	B	Door Unit	Wood	Natural	0.0	D	
Bath #4	All	Floor	C. Tile	Beige	-0.1	D	

Appendix D-1

BELD-Former Switchhouse Building
44 Allen Street, Braintree, MA
Lead Inspection Results

Room	Side	Surface	Substrate	Color	Pb Level (mg/cm^2)	Condition	Comment
Basement							
Open Area #2	A	Upper Wall	CMU	Light Green	0.5	D	
Open Area #2	B	Door Unit	Metal	Light Blue	0.1	D	
Open Area #2	B	Lower Wall	CMU	Medium Green	0.8	D	
Open Area #2	C	Lower Wall	Concrete	Medium Green	0.3	D	
Open Area #2	D	Door Frame	Metal	Grey	0.6	D	
Stair Hall	A	Door Unit	Metal	Grey	-0.2	D	
Stair Hall	B	Wall	Plaster	Light Blue	1.6	D	
Stair Hall	C	Door Unit	Metal	Grey	0.7	D	
Bath #5	A	Door	Metal	Medium Blue	0.4	D	
Bath #5	B	Lower Wall	CMU	Medium Blue	0.5	D	
Bath #5	C	Window	Metal	Blue	2.3	D	
Bath #5	D	Upper Wall	CMU	Light Blue	0.5	D	
Sump Room	A	Door	Wood	Dark Brown	-0.0	D	
Sump Room	B	Lower Wall	CMU	Medium Blue	0.6	D	
Sump Room	C	Window	Metal	White	2.7	D	
Sump Room	C	Lower Wall	Concrete	Medium Blue	0.9	D	
Sump Room	D	Upper Wall	CMU	Light Blue	0.4	D	
Office #9	A	Wall	Wood Panel	Natural	0.2	D	
Office #9	A	Door Unit	Wood	Natural	-0.1	D	
Office #9	B	Door Unit	Wood	Natural	-0.1	D	
Office #9	C	Wall	Concrete	Beige	0.6	D	
Office #9	C	Window	Metal	Beige	3.8	D	
Office #9	D	Wall	CMU	Beige	0.2	D	
Hall #4	A	Window Frame	Wood	Natural	-0.4	D	
Hall #4	B	Wall	CMU	Medium Blue	0.5	D	
Hall #4	C	Upper Wall	CMU	Light Blue	0.9	D	
Hall #4	D	Wall	Wood Panel	Natural	-0.0	D	
Office #10	A	Wall	CMU	Beige	0.7	D	
Office #10	C	Door Unit	Wood	Natural	-0.2	D	
Office #10	D	Wall	Wood Panel	Natural	0.4	D	
Hallway #3	A	Upper Wall	CMU		0.2	D	
Hallway #3	A	Lower Wall	CMU		-0.1	D	
Hallway #3	B	Wall	Wood Panel	Natural	0.1	D	
Hallway #3	C	Kitchen Cabinets	Wood	Natural	-0.2	D	
Hallway #3	C	Door Frame	Metal	Blue	5.1	D	
Hallway #3	D	Door Unit	Metal	Blue	5.1	D	
Garage	A	Upper Wall	Concrete	Medium Green	0.7	D	
Garage	A	Lower Wall	Concrete	Light Green	0.5	D	

Appendix D-1

BELD-Former Switchhouse Building
44 Allen Street, Braintree, MA
Lead Inspection Results

Room	Side	Surface	Substrate	Color	Pb Level (mg/cm^2)
Basement (Continued)					
Garage	B	Window	Metal	Grey	1.6
Garage	C	Upper Wall	CMU	Light Green	0.2
Garage	D	Door	Metal	Grey	>9.9
Storage	No Painted Surfaces				
Exterior					
Side A	A	Door Unit	Metala	Grey	7.9
Side A	A	Overhead Unit	Metal	Grey	6.0
Side A	A	Door Unit	Metal	Red	0.6
Side B	B	Lower Foundation	Concrete	Grey	0.2
Side B	B	Window	Metal	Grey	0.4
Side C	C	Fire Escape	Metal	Grey	6.3
Side C	C	Window	Metal	Grey	0.2
Side C	C	Window	Metal	Red	2.1
Side C	C	Door Unit	Metal	Grey	2.6
Side C	C	Foundation	Concrete	White	0.5
Side D	D	Foundation	Concrete	White	0.1
Side D	D^1	Door Unit	Metal	Grey	>9.9
Side D	D^2	Door Unit	Metal	Grey	0.2
Side D	D^3	Door Unit	Metal	Grey	0.5

Pb = Lead
mg/cm^2 = milligrams per square centimeter
I = Intact
D = Defective

Appendix D-2

BELD-Former Office Building
44 Allen Street, Braintree, MA
Lead Inspection Results

Room	Side	Surface	Substrate	Color	Pb Level (mg/cm^2)	Condition	Comment
			First Floor				
Area #1	A	Window Sill	Wood	Blue	0.3	D	
Area #1	A	Sidestop	Wood	Blue	0.7	D	
Area #1	B	Window Frame	Wood	Natural	-0.0	D	
Area #1	B	Chair Rail	Wood	Blue	-0.2	D	
Area #1	B	Wall	Gypsum	Blue	-0.1	D	
Area #1	C	Wall	Gypsum	Blue	-0.0	D	
Area #1	D	Window Apron	Wood	Blue	0.1	D	
Area #1	D	Wall	Plaster	Blue	>9.9	D	
Room #1	A	Door	Wood	Blue	0.2	D	
Room #1	A	Door Casing	Wood	Blue	0.3	D	
Room #1	B	Wall	Plaster	Blue	8.5	D	
Room #1	B	Chair Rail	Wood	Blue	0.3	D	
Room #1	C	Door Frame	Wood	Natural	0.1	D	
Room #1	C	Wall	Gypsum	Blue	-0.0	D	
Room #1	D	Wall	Wood Panel	Natural	-0.3	D	
Room #1	D	Counter Supports	Wood	Natural	0.0	D	
Counter Area	A	Door Casing	Wood	Natural	-0.1	D	
Counter Area	A	Door	Wood	Natural	-0.3	D	
Counter Area	B	Upper Wall	Plaster	Blue	>9.9	D	
Counter Area	B	Window Sill	Wood	Blue	0.5	D	
Counter Area	B	Sidestop	Wood	Blue	0.0	D	
Counter Area	B	Window	Metal	Blue	>9.9	D	
Counter Area	B	Wall	Plaster	Blue	>9.9	D	
Counter Area	B	Door Casing	Wood	Blue	0.2	D	
Counter Area	C	Door	Wood	Natural	-0.1	D	
Counter Area	C	Door Casing	Wood	Natural	-0.0	D	
Counter Area	D	Wall Lower	Gypsum	Blue	-0.3	D	
Counter Area	D	Counter Top	Wood	Natural	-0.3	D	
Room #2	A	Wall	Wood Panel	Natural	0.0	D	
Room #2	A	Door	Wood	Natural	0.1	D	
Room #2	A	Door	Casing	Natural	-0.0	D	
Room #2	B	Wall	Wood Panel	Natural	0.0	D	
Room #2	B	Window	Metal	Brown	>9.9	D	
Room #2	C	Window	Metal	Brown	>9.9	D	
Room #2	D	Wall	Gypsum	White	-0.2	D	
Kitchen	A	Wall	Wood Panel	Natural	0.1	D	
Kitchen	A	Door	Wood	Natural	-0.0	D	
Kitchen	B	Wall	Gypsum	White	-0.2	D	

Appendix D-2

BELD-Former Office Building
44 Allen Street, Braintree, MA
Lead Inspection Results

Room	Side	Surface	Substrate	Color	Pb Level (mg/cm^2)	Condition	Comment
First Floor							
Kitchen	C	Window	Metal	Brown	8.6	D	
Kitchen	D	Wall	Wood Panel	Natural	-0.1	D	
Men's Locker	A	Wall	Plaster	Blue	0.5	D	
Men's Locker	A	Door	Wood	Blue	0.0	D	
Men's Locker	B	Chair Rail	Wood	Blue	0.3	D	
Men's Locker	C	Window Sill	Wood	Blue	0.1	D	
Men's Locker	D	Door Casing	Wood	Blue	0.4	D	
Men's Toilet	A	Wall	Plaster	Blue	3.4	D	
Men's Toilet	B	Door	Wood	Blue	0.5	D	
Men's Toilet	C	Wall	Gypsum	Blue	0.1	D	
Men's Toilet	D	Window Apron	Wood	Blue	0.2	D	
Ladies Room	A	Wall	Plaster	Blue	3.9	D	
Ladies Room	B	Door	Wood	Blue	-0.1	D	
Ladies Room	B	Door Casing	Wood	Blue	0.3	D	
Ladies Room	C	Wall	Plaster	Blue	2.6	D	
Ladies Room	D	Window	Metal	Blue	4.1	D	
Area #2	A	Chair Rail	Wood	Natural	-0.1	D	
Area #2	B	Lower Wall	Gypsum	Blue	-0.3	D	
Area #2	C	Door Casing	Wood	Natural	-0.0	D	
Area #2	D	Window	Metal	Blue	>9.9	D	

Appendix D-2

BELD-Former Office Building
44 Allen Street, Braintree, MA
Lead Inspection Results

Room	Side	Surface	Substrate	Color	Pb Level (mg/cm^2)	Condition	Comment
Exterior							
Exterior A	A	Door	Wood	Grey	-0.1	D	
Exterior A	A	Door Casing	Wood	Grey	0.2	D	
Exterior A	A	Door Frame	Stone	Grey	-0.0	D	
Exterior A	A	Window Sill	Stone	Grey	-0.2	D	
Exterior A	A	Corner Blocking	Stone	Grey	-0.2	D	
Exterior A	A	Bottom	Stone	Grey	-0.1	D	
Exterior A	A		Metal	Black	2.1	D	
Exterior B	B	Lower Window	Metal	Grey	3.6	D	
Exterior B	B	Lower Stone	Stone	Grey	0.1	D	
Exterior B	B	Handrail	Metal	Grey	0.4	D	
Exterior B	B	Door Molding	Wood	Grey	5.7	D	
Exterior B	B	Door	Wood	Grey	0.2	D	
Exterior B	B	Door	Wood	Brown	>9.9	D	Interior
Exterior C	C	Lower Foundation	Concrete	Grey	0.5	D	
Exterior C	C	Door Molding	Wood	Natural	6.2	D	
Exterior C	C	Overhead Door	Metal	Grey	-0.0	D	
Exterior C	C	Window	Metal	Grey	0.3	D	
Exterior D	D	Window	Metal	Grey	-0.1	D	
Exterior D	D	Foundation	Concrete	Cream	-0.0	D	

Pb = Lead
mg/cm^2 = milligrams per square centimeter
I = Intact
D = Defective

Appendix D-3

BELD-Former Garage Building
44 Allen Street, Braintree, MA
Lead Inspection Results

Room	Side	Surface	Substrate	Color	Pb Level (mg/cm^2)	Condition	Comment
First Floor							
Room #1	A	Wall	Brick	Unpainted Brick	N/A	D	
Room #1	B[1]	Window	Metal	No Color Left	N/A	D	
Room #1	B	Window Sill	Concrete	Grey	0.2	D	
Room #1	B[2]	Window	Metal	Grey	2.1	D	
Room #1	C	Door	Wood	Grey	>9.9	D	
Room #1	C	Door Casing	Wood	Grey	6.2	D	
Room #1	C	Window	Metal	Grey	3.0	D	
Room #1	D	Overhead Door Frame	Metal	Grey	1.4	D	Door Unpainted
Room #1	D	Door Frame	Metal	Grey	2.1	D	
Room #1	D	Double Doors (2)	Metal	Grey	1.8	D	
Room #2	A	Wall	Brick	Unpainted Brick		D	
Room #2	A	Window	Metal	Black	0.7	D	
Room #2	A	Door Unit	Metal	Grey	0.5	D	
Room #2	B, C, D	Wall	Wood	Unpainted		D	
Room #2	C	Window	Metal	White	1.3	D	

Appendix D-3

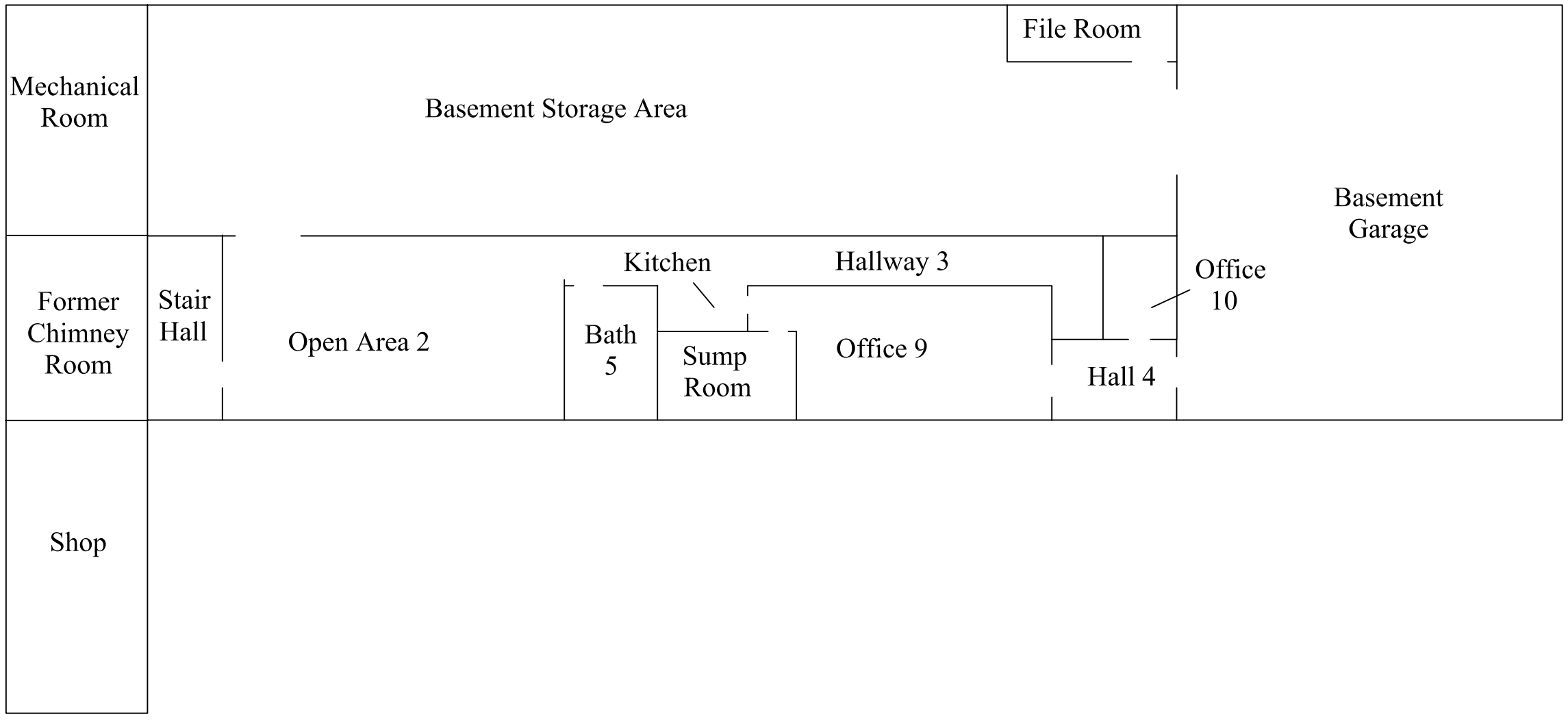
BELD-Former Garage Building
44 Allen Street, Braintree, MA
Lead Inspection Results

Room	Side	Surface	Substrate	Color	Pb Level (mg/cm^2)	Condition	Comment
Exterior							
Exterior	A	Unpainted Brick					
Exterior	B	Windows	Metal	No Color Left		D	
Exterior	C	Wall	Brick	Painted Red	0.1	D	
Exterior	C	Window	Metal	Red	1.9	D	
Exterior	D	Door	Metal	Red	0.4	D	
Exterior	D	Door Frame	Metal	Grey	0.5	D	
Exterior	D^1	Overhead Door Frame	Metal	Grey	0.3	D	
Exterior	D^2	Overhead Door Frame	Metal	Grey	1.4	D	

Pb = Lead
mg/cm^2 = milligrams per square centimeter
I = Intact
D = Defective

APPENDIX E

FIGURES



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BRAINTREE, MA

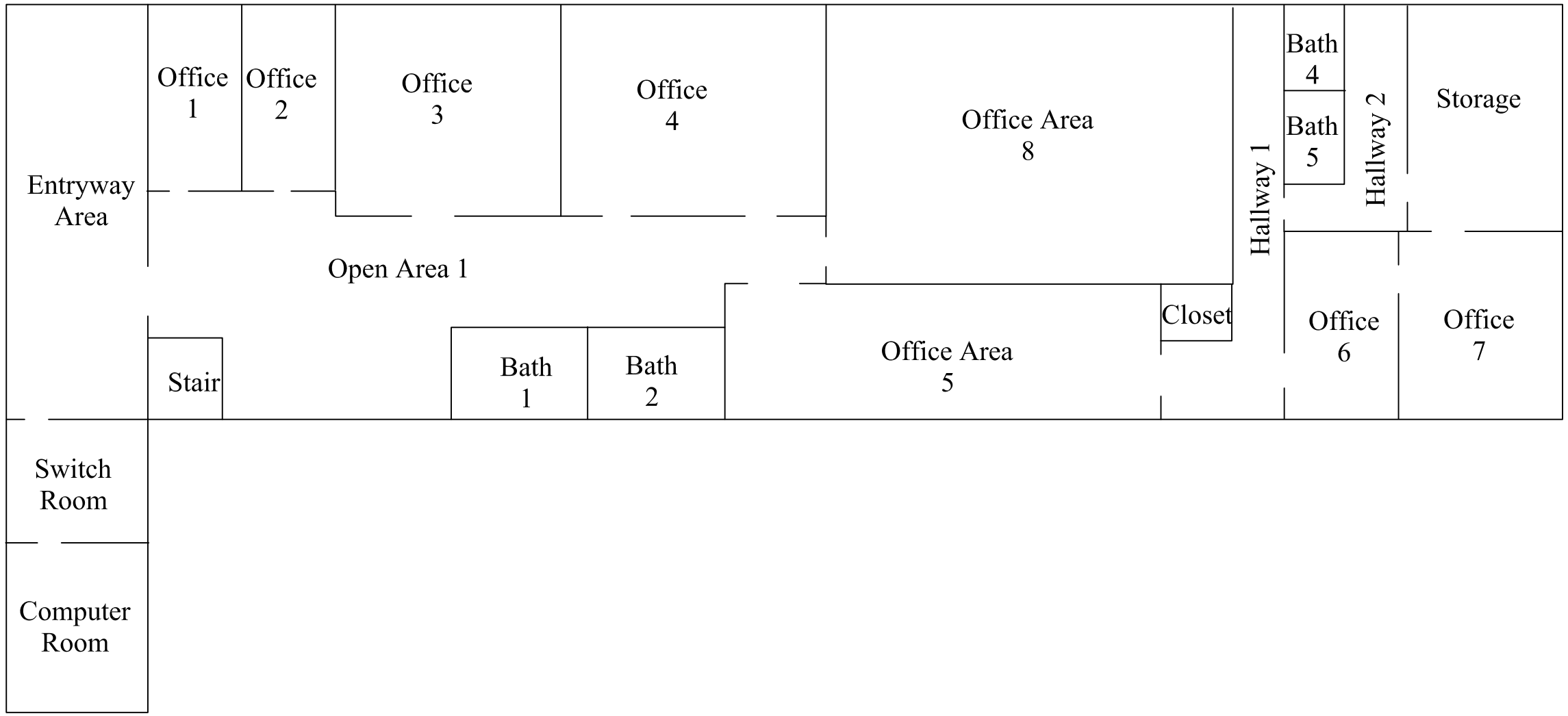
REVISIONS

BELD-Former Switch House Ground Floor

BELD-Braintree
44 Allen Street
BRAINTREE, MASSACHUSETTS

File No.:	27038
Date:	Nov. 2013
Drawn:	JM
Checked:	VA
Job No.:	27038

Figure 1



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BELD-Former Switch House First Floor

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Figure 2

SIDE A

SIDE D

SIDE B

SIDE C

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BELD-Former Switch House Roof and Exterior

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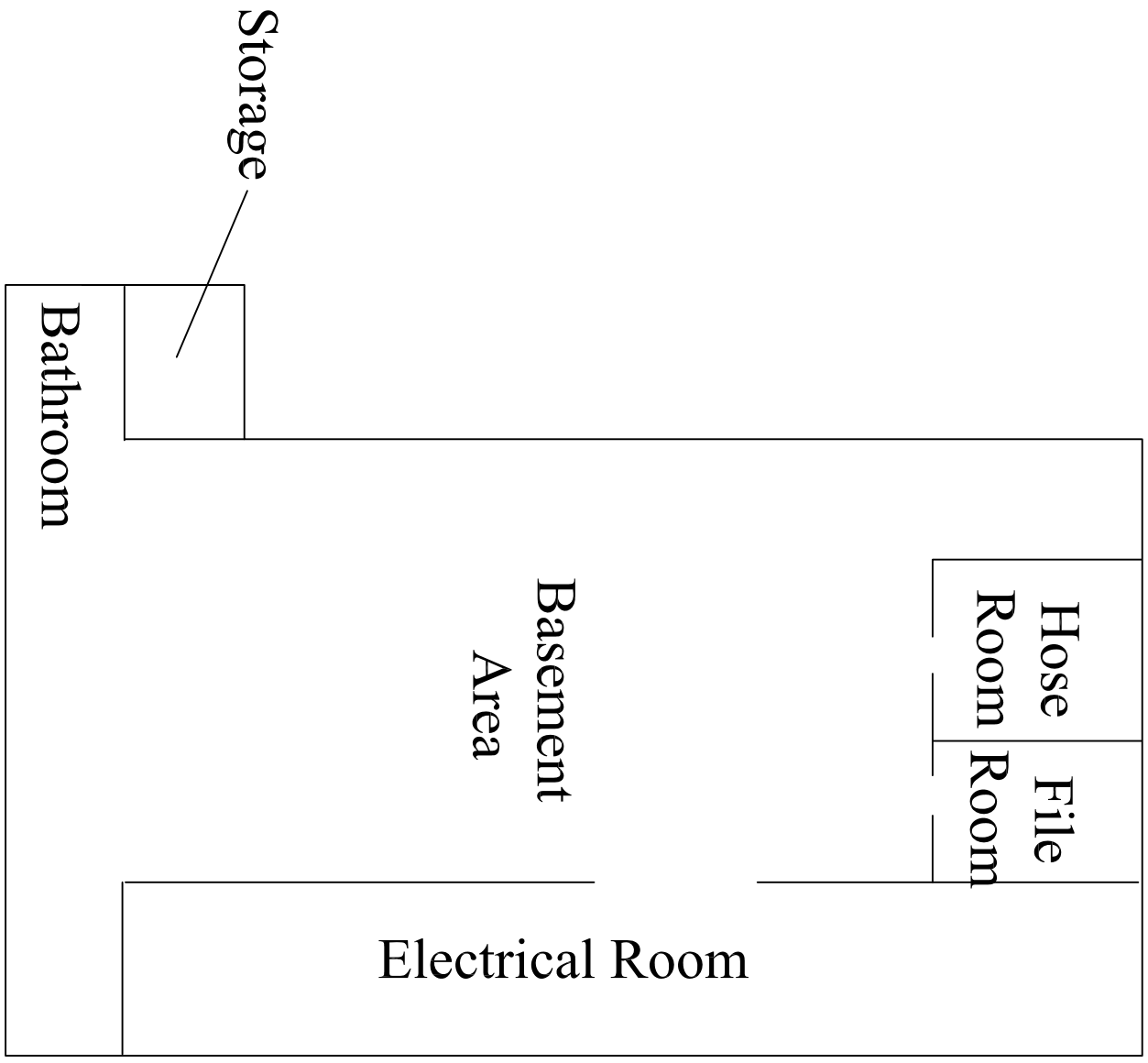
Figure 3



BELD-Former Office Basement

BELD-Braintree
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BRAINTREE, MASSACHUSETTS

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Figure
4

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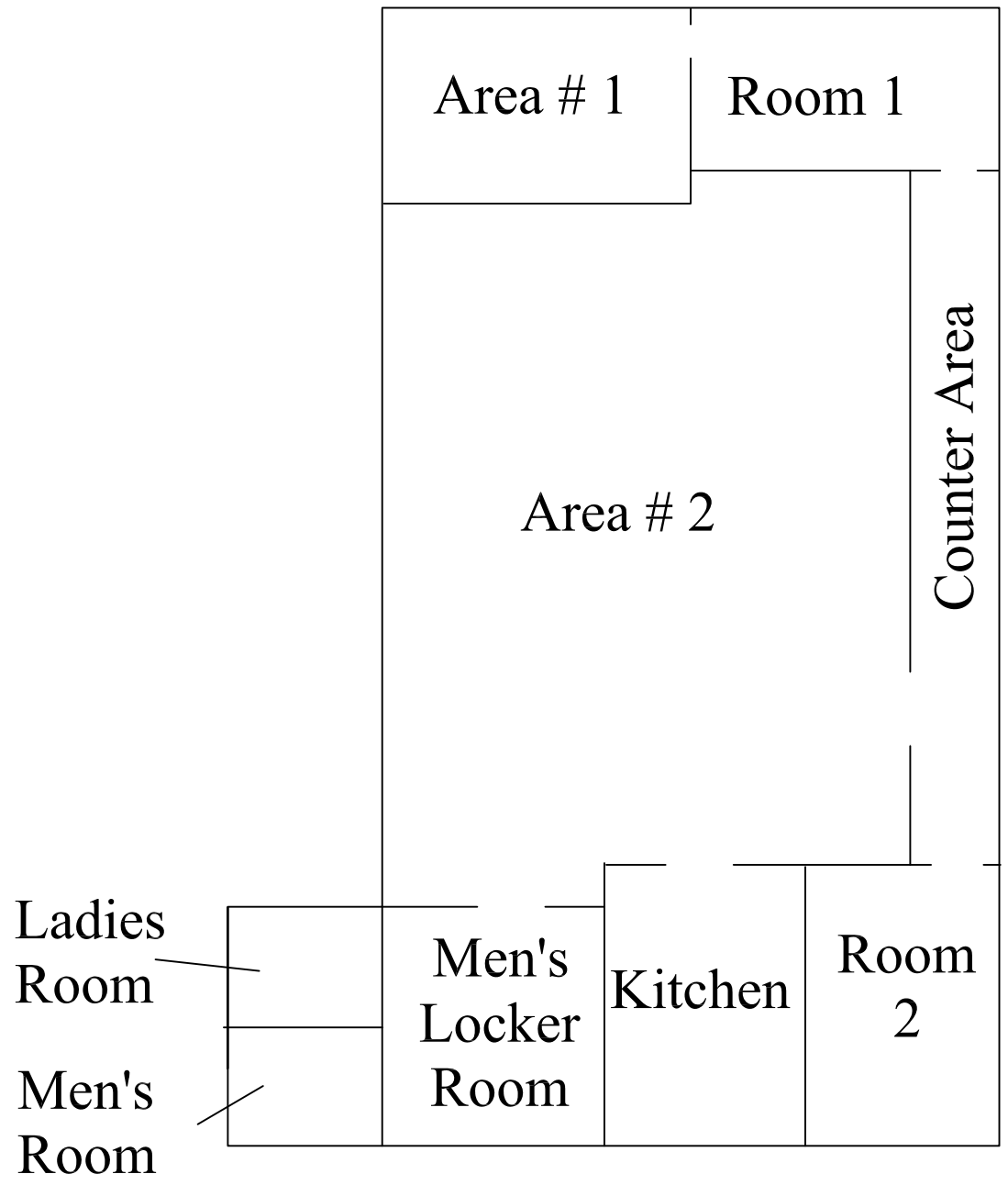

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BELD-Former Office First Floor

BELD-Braintree
44 Allen Street
BRAINTREE, MASSACHUSETTS

File No.:	27038
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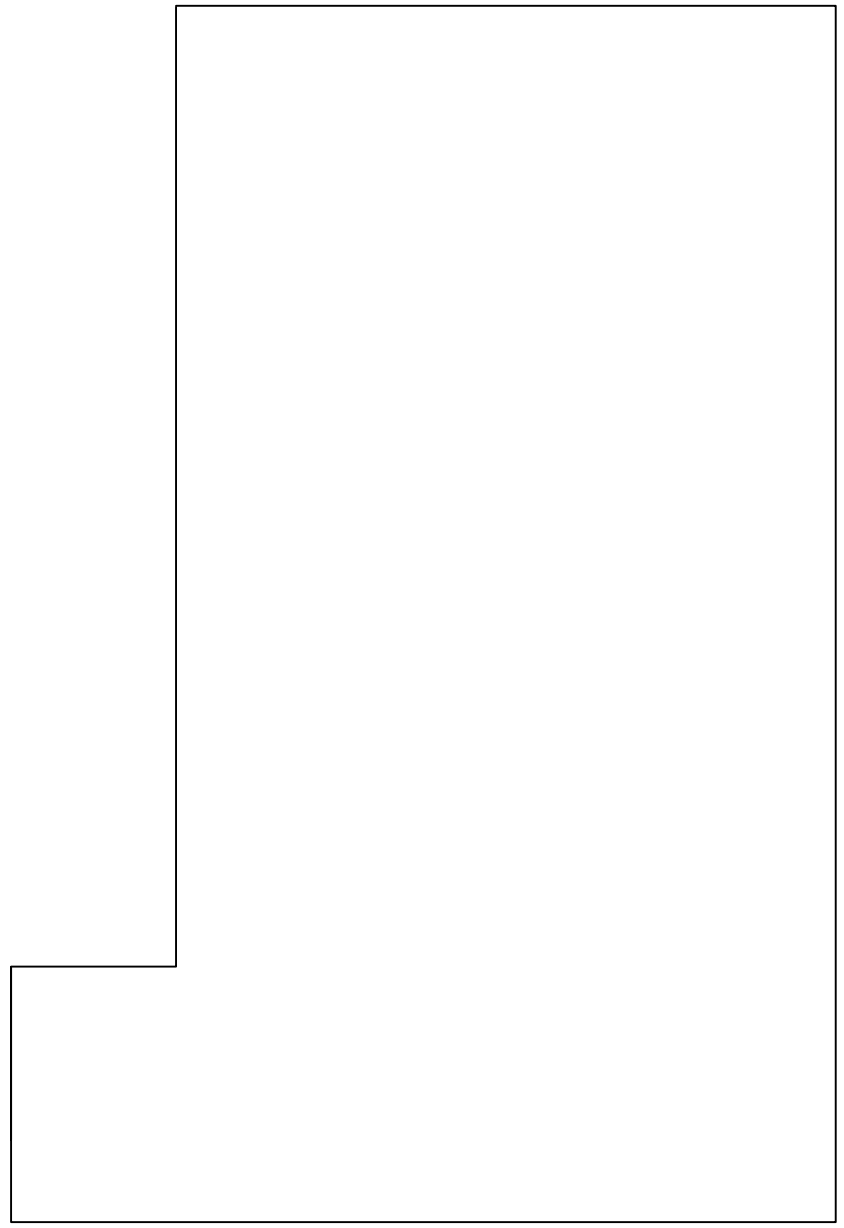
Figure 4

SIDE A

SIDE D



SIDE B

SIDE C

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BRAINTREE, MA

REVISIONS

BELD-Former Office Roof and Exterior

BELD-Braintree
44 Allen Street
BRAINTREE, MASSACHUSETTS

File No.:	27038
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Figure 6

APPENDIX F

ASBESTOS BULK SAMPLE ANALYSIS RESULTS BY PLM

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http://www.EMSL.com buffalolab@emsl.com

EMSL Order: 141304472
CustomerID: VERT51
CustomerPO:
ProjectID:

Attn: **Vincent Agostino**
Vertex Air Quality Services
400 Libbey Parkway

Weymouth, MA 02189

Phone: (781) 952-6000
Fax: (781) 335-3543
Received: 10/25/13 10:00 AM
Analysis Date: 10/28/2013
Collected: 10/23/2013

Project: **27038 / Weston & Sampson Beld, 44 Allen St. Braintree, MA**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos	
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**	
BS-1023-01A *141304472-0001*	switch house, 1st floor, computer room - 12x12 blue floor tile	Blue Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**	
BS-1023-01B *141304472-0002*	switch house, 1st floor, computer room - 12x12 blue floor tile	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**	
BS-1023-02A *141304472-0003*	switch house, 1st floor, computer room - 12x12 blue floor tile, mastic black	Blue Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**	
BS-1023-02B *141304472-0004*	switch house, 1st floor, computer room - 12x12 blue floor tile, mastic black	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**	
BS-1023-03A *141304472-0005*	switch house, basement, hallway - 12x12 gray w/white spec floor tile	Gray Fibrous Homogeneous		93% Non-fibrous (other)	**7%**	**Chrysotile**
BS-1023-03B *141304472-0006*	switch house, basement, sump pump - 12x12 gray w/white spec floor tile	Black Fibrous Homogeneous		95% Non-fibrous (other)	**5%**	**Chrysotile**

Analyst(s)
Tom Hanes (76)

Rhonda McGee

Rhonda McGee, Laboratory Manager
or other approved signatory

Initial report from 10/28/2013 16:12:11

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http://www.EMSL.com buffalolab@emsl.com

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Analysis Date: 10/28/2013
Collected: 10/23/2013

Project: **27038 / Weston & Sampson Beld, 44 Allen St. Braintree, MA**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
BS-1023-04A *141304472-0007*	switch house, basement, hallway - 12x12 gray w/white spec FT mastic				**Stop Positive (Not Analyzed)**
BS-1023-04B *141304472-0008*	switch house, basement, sump pump - 12x12 gray w/white spec FT mastic				**Stop Positive (Not Analyzed)**
BS-1023-05A *141304472-0009*	switch house, 1st floor, office 1 - carpet adhesive, yellow	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-05B *141304472-0010*	switch house, basement, office 10 - carpet adhesive, yellow	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-06A *141304472-0011*	switch house, 1st floor, office area 5 - black residual, mastic	Black Fibrous Homogeneous		95% Non-fibrous (other)	**5% Chrysotile**
BS-1023-06B *141304472-0012*	switch house, basement, office area 2 - black residual, mastic				**Stop Positive (Not Analyzed)**
BS-1023-07A *141304472-0013*	switch house, 1st floor, storage room - floor leveler	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

Analyst(s)
Tom Hanes (76)

Rhonda McGee
Rhonda McGee, Laboratory Manager
or other approved signatory

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Received: 10/25/13 10:00 AM
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Collected: 10/23/2013

Project: **27038 / Weston & Sampson Beld, 44 Allen St. Braintree, MA**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BS-1023-07B *141304472-0014*	switch house, 1st floor, office 6 - floor leveler	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-08A *141304472-0015*	switch house, basement, hallway 3 - black cove base	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-08B *141304472-0016*	switch house, basement, bath 5 - black cove base	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-09A *141304472-0017*	switch house, basement, hallway 3 - black cove base, adhesive, brown	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-09B *141304472-0018*	switch house, basement, bath 5 - black cove base, adhesive, brown	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-10A *141304472-0019*	switch house, 1st floor, hallway 1 - brown cove base	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-10B *141304472-0020*	switch house, 1st floor, hallway 1 - brown cove base	Tan Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-11A *141304472-0021*	switch house, 1st floor, hallway 1 - brown cove base adhesive, yellow	Brown Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

Analyst(s)

Tom Hanes (76)

Rhonda McGee

Rhonda McGee, Laboratory Manager
or other approved signatory

Initial report from 10/28/2013 16:12:11

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BS-1023-11B *141304472-0022*	switch house, 1st floor, hallway 1 - brown cove base adhesive, yellow	Tan Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-12A *141304472-0023*	switch house, 1st floor, office 6 - gray cove base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-12B *141304472-0024*	switch house, 1st floor, office 6 - gray cove base	Tan Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-13A *141304472-0025*	switch house, 1st floor, office 6 - gray cove base, adhesive, yellow	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-13B *141304472-0026*	switch house, 1st floor, office 6 - gray cove base, adhesive, yellow	Tan Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-14A *141304472-0027*	switch house, basement, hallway 3, kitchen area - under sink coating	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-14B *141304472-0028*	switch house, basement, hallway 3, kitchen area - under sink coating	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

Analyst(s)

Tom Hanes (76)

Rhonda McGee

Rhonda McGee, Laboratory Manager
or other approved signatory

Initial report from 10/28/2013 16:12:11

EMSL Analytical, Inc.
490 Rowley Road, Depew, NY 14043
Phone/Fax: (716) 651-0030 / (716) 651-0394
http://www.EMSL.com buffalolab@emsl.com

EMSL Order:	141304472
CustomerID:	VERT51
CustomerPO:	
ProjectID:	

Attn: **Vincent Agostino**
Vertex Air Quality Services
400 Libbey Parkway

Weymouth, MA 02189

Phone:	(781) 952-6000
Fax:	(781) 335-3543
Received:	10/25/13 10:00 AM
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Collected:	10/23/2013

Project: **27038 / Weston & Sampson Beld, 44 Allen St. Braintree, MA**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
BS-1023-15A *141304472-0029*	switch house, 1st floor, open area 1 - drywall	Brown/White Fibrous Heterogeneous	5%	Cellulose	95%	Non-fibrous (other)	**None Detected**
BS-1023-15B *141304472-0030*	switch house, 1st floor, office 4 - drywall	Brown/White Fibrous Heterogeneous	5%	Cellulose	95%	Non-fibrous (other)	**None Detected**
BS-1023-16A *141304472-0031*	switch house, 1st floor, open area 1 - joint compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BS-1023-16B *141304472-0032*	switch house, 1st floor, computer room - joint compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BS-1023-16C *141304472-0033*	switch house, 1st floor, office 2 - joint compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BS-1023-16D *141304472-0034*	switch house, 1st floor, office 7 - joint compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BS-1023-16E *141304472-0035*	switch house, 1st floor, hallway 1 - joint compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BS-1023-16F *141304472-0036*	switch house, 1st floor, hallway 2 - joint compound	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BS-1023-16G *141304472-0037*	switch house, 1st floor, bath 1 - joint compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-17A *141304472-0038*	switch house, 1st floor, open area 1 - plaster skim coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-17B *141304472-0039*	switch house, 1st floor, office 1 - plaster skim coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-17C *141304472-0040*	switch house, 1st floor, office 4 - plaster skim coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-17D *141304472-0041*	switch house, 1st floor, office area 5 - plaster skim coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-17E *141304472-0042*	switch house, 1st floor, office area 8 - plaster skim coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-17F *141304472-0043*	switch house, 1st floor, hallway 1 - plaster skim coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-17G *141304472-0044*	switch house, 1st floor, bath 2 - plaster skim coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BS-1023-18A *141304472-0045*	switch house, 1st floor, open area 1 - plaster base coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-18B *141304472-0046*	switch house, 1st floor, office 1 - plaster base coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-18C *141304472-0047*	switch house, 1st floor, office 4 - plaster base coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-18D *141304472-0048*	switch house, 1st floor, office area 5 - plaster base coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-18E *141304472-0049*	switch house, 1st floor, office area 8 - plaster base coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-18F *141304472-0050*	switch house, 1st floor, hallway 1 - plaster base coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-18G *141304472-0051*	switch house, 1st floor, bath 2 - plaster base coat	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-19A *141304472-0052*	switch house, 1st floor, office 4 - 2x4 ceiling tile, fissure/dot patter	Gray Fibrous Homogeneous	70% Cellulose 10% Min. Wool	20% Non-fibrous (other)	**None Detected**

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BS-1023-19B *141304472-0053*	switch house, 1st floor, switch room - 2x4 ceiling tile, fissure/dot patter	Gray Fibrous Homogeneous	70% Cellulose 10% Min. Wool	20% Non-fibrous (other)	**None Detected**
BS-1023-20A *141304472-0054*	switch house, 1st floor, office 9 - 2x2 ceiling tile, fissure/dot patter	Gray Fibrous Homogeneous	60% Cellulose 20% Min. Wool	20% Non-fibrous (other)	**None Detected**
BS-1023-20B *141304472-0055*	switch house, basement 3, kitchen area - 2x2 ceiling tile, fissure/dot patter	Gray Fibrous Homogeneous	60% Cellulose 20% Min. Wool	20% Non-fibrous (other)	**None Detected**
BS-1023-21A *141304472-0056*	switch house, 1st floor, hallway 1 - pipe insulation	Brown/Gray Fibrous Homogeneous	70% Cellulose	20% Non-fibrous (other)	**10% Chrysotile**
BS-1023-21B *141304472-0057*	switch house, 1st floor, hallway 1 - pipe insulation				**Stop Positive (Not Analyzed)**
BS-1023-21C *141304472-0058*	switch house, 1st floor, hallway 1 - pipe insulation				**Stop Positive (Not Analyzed)**
BS-1023-22A *141304472-0059*	switch house, 1st floor, hallway 1 - pipe fitting insulation	Gray Fibrous Homogeneous	20% Cellulose 50% Min. Wool	20% Non-fibrous (other)	**10% Chrysotile**

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Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
BS-1023-22B *141304472-0060*	switch house, 1st floor, hallway 1 - pipe fitting insulation				**Stop Positive (Not Analyzed)**
BS-1023-22C *141304472-0061*	switch house, 1st floor, storage room - pipe fitting insulation				**Stop Positive (Not Analyzed)**
BS-1023-23A *141304472-0062*	switch house, basement mechanical room - fire brick, red	Red Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-23B *141304472-0063*	switch house, basement mechanical room - fire brick, red	Red Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-24A *141304472-0064*	switch house, basement mechanical room - fire brick, yellow	Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-24B *141304472-0065*	switch house, basement mechanical room - fire brick, yellow	Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-25A *141304472-0066*	switch house, basement storage room - panel	Black Fibrous Homogeneous		70% Non-fibrous (other)	**30% Chrysotile**

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			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BS-1023-25B *141304472-0067*	switch house, basement storage room - panel				**Stop Positive (Not Analyzed)**
BS-1023-26A *141304472-0068*	switch house, side C, ext - ext white window caulking	White Fibrous Homogeneous		98% Non-fibrous (other)	**2% Chrysotile**
BS-1023-26B *141304472-0069*	switch house, side C, ext - ext white window caulking				**Stop Positive (Not Analyzed)**
BS-1023-27A *141304472-0070*	switch house, side C, ext - ext gray window caulk	Gray Fibrous Homogeneous		95% Non-fibrous (other)	**5% Chrysotile**
BS-1023-27B *141304472-0071*	switch house, side C, ext - ext gray window caulk				**Stop Positive (Not Analyzed)**
BS-1023-28A *141304472-0072*	switch house, side C, ext - ext gray door caulk	Gray Fibrous Homogeneous		98% Non-fibrous (other)	**2% Chrysotile**
BS-1023-28B *141304472-0073*	switch house, side C, ext - ext gray door caulk				**Stop Positive (Not Analyzed)**
BS-1023-29A *141304472-0074*	switch house, side A, ext - ext door caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-29B *141304472-0075*	switch house, side A, ext - ext door caulk	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

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			Non-Asbestos				Asbestos	
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**%**	**Type**
BS-1023-30A *141304472-0076*	switch house, side A, ext - building caulk	Gray Non-Fibrous Homogeneous			97%	Non-fibrous (other)	**3%**	**Chrysotile**
BS-1023-30B *141304472-0077*	switch house, side A, ext - building caulk						**Stop Positive (Not Analyzed)**	
BS-1023-31A *141304472-0078*	switch house, 1st floor, office 7 - interior window glazing	Gray Fibrous Homogeneous			98%	Non-fibrous (other)	**2%**	**Chrysotile**
BS-1023-31B *141304472-0079*	switch house, baseemnt, open area 2 - interior window glazing						**Stop Positive (Not Analyzed)**	
BS-1023-32A *141304472-0080*	switch house, roof, ext - roof field mat	Brown/Black Fibrous Homogeneous	50%	Cellulose	50%	Non-fibrous (other)	**None Detected**	
BS-1023-32B *141304472-0081*	switch house, roof, ext - roof field mat	Black Fibrous Homogeneous	20%	Cellulose	80%	Non-fibrous (other)	**None Detected**	
BS-1023-33A *141304472-0082*	switch house, roof, ext - roof flash mat	Black Fibrous Homogeneous	20%	Cellulose	80%	Non-fibrous (other)	**None Detected**	
BS-1023-33B *141304472-0083*	switch house, roof, ext - roof flash mat	Brown/Black Fibrous Homogeneous	50%	Cellulose	50%	Non-fibrous (other)	**None Detected**	

Analyst(s)

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			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
BS-1023-34A *141304472-0084*	switch house, roof, ext - roof parapet wall material	Black Fibrous Homogeneous	60%	Cellulose	40%	Non-fibrous (other)	**None Detected**
BS-1023-34B *141304472-0085*	switch house, roof, ext - roof parapet wall material	Black Fibrous Homogeneous	60%	Cellulose	40%	Non-fibrous (other)	**None Detected**
BS-1023-35A *141304472-0086*	switch house, roof, ext - pitch pocket material	Black Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BS-1023-35B *141304472-0087*	switch house, roof, ext - pitch pocket material	Black Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BS-1023-36A *141304472-0088*	switch house, roof, ext - flash caulking	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BS-1023-36B *141304472-0089*	switch house, roof, ext - flash caulking	White Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**

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141304472

VERTEX™ 141304472

Air Quality Services LLC

Bulk Sampling Log Form

Project Name: BELD-44 Allen Street, Braintree, MA Project #: 27038 Page: 1 of 8

Client: Weston and Sampson Date: 10/23/13 Inspector: J. Kent

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Switch House	1ST	Computer Room	12x12 Blue Floor File	BS-1023-01A		N
↓	↓	↓	↓	BS-1023-01B		N
↓	↓	↓	12x12 Blue Floor Tile Mastic (Black)	BS-1023-02A		N
↓	↓	↓	↓	BS-1023-02B		N
↓	Base-ment	Hallway 3	12x12 - Gray w/ White Spec Floor Tile	BS-1023-03A		N
↓	↓	Sump Room	↓	BS-1023-03B		N
↓	↓	Hallway 3	12x12 Gray w/ White Spec FT Mastic	BS-1023-04A		N
↓	↓	Sump Room	↓	BS-1023-04B		N
↓	1ST	Office 1	Carpet Adhesive (yellow)	BS1023-05A		N
↓	Base-ment	Office 10	↓	BS-1023-05B		N
↓	1ST	Office Area 5	Black Residual Mastic	BS-1022-06A		N
↓	Base-ment	Open Area 2	↓	BS-1023-06B		N

Delivered By	Date	#Samples	Received By	Date	Time	# Samples
Jimmy Kent		89	FP	10/25/13	10AM	

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PLM Analysis
Positive Stop
72 hr. TAT

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141304472

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Bulk Sampling Log Form

Project Name: BELD-44 Allen Street, Braintree, MA Project #: 27038 Page: 2 of 8

Client: Weston and Sampson Date: 10/23/13 Inspector: J. Kent

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Switch House	1ST	Storage Room	Floor Leveler	BS-1023-07A		
↓	↓	Office 6	↓	BS-1023-07B		
	Base-ment	Hallway 3	Black Cove Base	BS-1023-08A		
	↓	Bath 5	↓	BS-1023-08B		
		Hallway 3	Black Cove Base Adhesive (Brown)	BS-1023-09A		
	↓	Bath 5	↓	BS-1023-09B		
	1ST	Hallway 1	Brown Cove Base	BS-1023-10A		
	↓	↓	↓	BS-1023-10B		
			Brown Cove Base Adhesive (Yellow)	BS-1023-11A		
	↓	↓	↓	BS-1023-11B		
↓	↓	Office 6	Gray Cove Base	BS-1023-12A		
↓	↓	↓	↓	BS-1023-12B		

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Project Name: BELD-44 Allen Street, Braintree, MA Project #: 27038 Page: 3 of 8

Client: Weston and Sampson Date: 10/23/13 Inspector: J. Kent

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Switch House	1ST	Office 6	Gray Cove Base Adhesive (yellow)	BS-1023-13A		
↓	↓	↓	↓	BS-1023-13B		
	Base-ment	Hallway 3 (Kitchen Area)	Under Sink Coating	BS-1023-14A		
	↓	↓	↓	BS-1023-14B		
	1ST	Open Area 1	Drywall	BS-1023-15A		
	↓	Office 4	↓	BS-1023-15B		
		Open Area 1	Joint Compound	BS-1023-16A		
		Computer Room	↑	BS-1023-16B		
		Office 2		BS-1023-16C		
		Office 7		BS-1023-16D		
↓	↓	Hallway 1	↓	BS-1023-16E		
		Hallway 2		BS-1023-16F		

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Bulk Sampling Log Form

Project Name: BELD-44 Allen Street, Braintree, MA Project #: 27038 Page: 4 of 8

Client: Weston and Sampson Date: 10/23/13 Inspector: J. Kent

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Switch House	1ST	Bath 1	Joint Compound	BS-1023-16G		F
		Open Area 1	Plaster Skim Coat	BS-1023-17A		F
		Office 1		BS-1023-17B		F
		Office 4		BS-1023-17C		F
		Office Area 5		BS-1023-17D		F
		Office Area 8		BS-1023-17E		F
		Hallway 1		BS-1023-17F		F
		Bath 2		BS-1023-17G		F
		Open ~~Office~~ Area 1	Plaster Base Coat	BS-1023-18A		F
		Office 1		BS-1023-18B		F
		Office 4		BS-1023-18C		F
		Office Area 5		BS-1023-18D		F

Delivered By	Date	#Samples	Received By	Date	Time	# Samples
				10/25/13	10Am	

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Air Quality Services LLC
Bulk Sampling Log Form

Project Name: BELD-44 Allen Street, Braintree, MA Project #: 27038 Page: 5 of 8

Client: Weston and Sampson Date: 10/23/13 Inspector: J. Kelly

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Switch House	1ST	Office Area 8	Plaster Base Coat	BS-1023-18E		E
		Hallway 1	↓	BS-1023-18F		E
		Bath 2	↓	BS-1023-18G		NF
		Office 4	2x4 Ceiling Tile (Fissure/Dot Pattern)	BS-1023-19A		NF
		Switch Room	↓	BS-1023-19B		NF
		Office 9	2x2 Ceiling Tile (Fissure/Dot Pattern)	BS-1023-20A		E
	Basement	Hallway 3 (Kitchen Area)	↓	BS-1023-20B		C
	1ST	Hallway 1	Pipe Insulation	BS-1023-21A		NF
		↓	↓	BS-1023-21B		NF
		↓	↓	BS-1023-21C		NF
		Hallway 1	Pipe Fitting Insulation	BS-1023-22A		NF
		↓	↓	BS-1023-22B		NF

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Bulk Sampling Log Form

Project Name: BELD-44 Allen Street, Braintree, MA Project #: 27038 Page: 6 of 8

Client: Weston and Sampson Date: 10/23/13 Inspector: J. Kent

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Switch House	1ST	Storage Room	Pipe Fitting Insulation	BS-1023-22C		N
	Basement	Mechanical Room	Fire Brick (Red)	BS-1023-23A		N
	↓	↓	↓	BS-1023-23B		N
			Fire Brick (yellow)	BS-1023-24A		N
			↓	BS-1023-24B		N
		Basement Storage Rm.	Panel	BS-1023-25A		N
		↓	Panel	BS-1023-25B		N
	Side C	~~Side E~~ Ext.	Ext. White Window Caulking	BS-1023-26A		F
	↓	↓	↓	BS-1023-26B		F
			Ext. Gray Window Caulk	BS-1023-27A		N
			↓	BS-1023-27B		F
			Ext. Gray Door Caulk	BS-1023-28A		N

Delivered By	Date	#Samples	Received By	Date	Time	#Samples
				10/23/13	10 Am	

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Bulk Sampling Log Form

Project Name: BELD-44 Allen Street, Braintree, MA Project #: 27038 Page: 7 of 8

Client: Weston and Sampson Date: 10/23/13 Inspector: J. Kus

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Switch House	Side C	Ext.	Ext. Gray Door Caulk	BS-1023-28B		X
	Side A		Ext. Door Caulk	BS-1023-29A		6
	↓	↓	↓	BS-1023-29B		6
	↓	↓	Building Caulk	BS-1023-30A		X
	↓	↓	↓	BS-1023-30B		6
	1ST	Office 7	Interior Window Glazing	BS-1023-31A		X
	Basement	Open Area 2	↓	BS-1023-31B		6
	Roof	Ext.	Roof Field Mat.	BS-1023-32A		X
	↓	↓	↓	BS-1023-32B		X
	↓	↓	Roof Flash Mat.	BS-1023-33A		X
	↓	↓	↓	BS-1023-33B		6
	↓	↓	Roof Parapet Wall Material	BS-1023-34A		X

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10/25/13 10AM

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Bulk Sampling Log Form

Project Name: BELD-44 Allen Street, Braintree, MA Project #: 27038 Page: 8 of 8

Client: Weston and Sampson Date: 10/23/13 Inspector: J. Kent

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Switch House	Roof	Ext.	Roof Parapet Wall Material	BS-1023-34B		N
↓	↓	↓	Pitch Pocket Material	BS-1023-35A		N
			↓	BS-1023-35B		N
			Flash Caulking	BS-1023-36A		N
			↓	BS-1023-36B		N

Delivered By	Date	#Samples	Received By	Date	Time	# Samples
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EMSL Order:	181303075
CustomerID:	VERT51
CustomerPO:	27038
ProjectID:	

Attn: **Jason Mohre**
Vertex Air Quality Services
400 Libbey Parkway

Weymouth, MA 02189

Phone:	(781) 952-6000
Fax:	(781) 335-3543
Received:	10/24/13 9:25 AM
Analysis Date:	10/28/2013
Collected:	10/23/2013

Project: **BELD - 44 Allen Street, Braintree, MA - Weston and Sampson**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**		**% Non-Fibrous**		**% Type**
BS-1023-37A *181303075-0001*	Office 1st Floor - Area 2 - 6 x 6 Brown Floor Tile	Brown Non-Fibrous Homogeneous	30%	Cellulose	70%	Non-fibrous (other)	**None Detected**
BS-1023-37B *181303075-0002*	Office 1st Floor - Area 1 - 6 x 6 Brown Floor Tile	Brown Non-Fibrous Homogeneous	30%	Cellulose	70%	Non-fibrous (other)	**None Detected**
BS-1023-38A *181303075-0003*	Office 1st Floor - Area 2 - 6 x 6 Brown Floor Tile Mastic	Yellow Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BS-1023-38B *181303075-0004*	Office 1st Floor - Area 2 - 6 x 6 Brown Floor Tile Mastic	Yellow Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BS-1023-39A *181303075-0005*	Office 1st Floor - Counter Area - Beige Sheet Flooring	Beige Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BS-1023-39B *181303075-0006*	Office 1st Floor - Room 1 - Beige Sheet Flooring	Beige Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**
BS-1023-40A *181303075-0007*	Office 1st Floor - Counter Area - Beige Sheet Flooring Adhesive	Brown Fibrous Homogeneous	60%	Cellulose	40%	Non-fibrous (other)	**None Detected**

Analyst(s)

Michael Thoma (49)

Michael Thoma, Laboratory Manager
or other approved signatory

Initial report from 10/28/2013 12:56:48

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BS-1023-40B *181303075-0008*	Office 1st Floor - Room 1 - Beige Sheet Flooring Adhesive	Brown Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (other)	**None Detected**
BS-1023-41A *181303075-0009*	Office 1st Floor - Men's Locker Room - Black Cove Base	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-41B *181303075-0010*	Office 1st Floor - Men's Locker Room - Black Cove Base	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-42A *181303075-0011*	Office 1st Floor - Men's Locker Room - Black Cove Base Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-42B *181303075-0012*	Office 1st Floor - Men's Locker Room - Black Cove Base Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-43A *181303075-0013*	Office 1st Floor - Room 2 - Gray Cove Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-43B *181303075-0014*	Office 1st Floor - Room 2 - Gray Cove Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BS-1023-44A *181303075-0015*	Office 1st Floor - Room 2 - Gray Cove Base Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-44B *181303075-0016*	Office 1st Floor - Room 2 - Gray Cove Base Adhesive	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-45A *181303075-0017*	Office 1st Floor - Area 1 - Plaster Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-45B *181303075-0018*	Office 1st Floor - Area 2 - Plaster Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-45C *181303075-0019*	Office 1st Floor - Area 1 - Plaster Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-45D *181303075-0020*	Office 1st Floor - Room 2 - Plaster Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-45E *181303075-0021*	Office 1st Floor - Room 1 - Plaster Skim Coat	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-46A *181303075-0022*	Office 1st Floor - Area 1 - Plaster Base Coat	Gray Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (other)	**None Detected**

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
BS-1023-46B *181303075-0023*	Office 1st Floor - Area 2 - Plaster Base Coat	Gray Non-Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
BS-1023-46C *181303075-0024*	Office 1st Floor - Area 1 - Plaster Base Coat	Gray Non-Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
BS-1023-46D *181303075-0025*	Office 1st Floor - Room 2 - Plaster Base Coat	Gray Non-Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
BS-1023-46E *181303075-0026*	Office 1st Floor - Room 1 - Plaster Base Coat	Gray Non-Fibrous Homogeneous	2%	Cellulose	98%	Non-fibrous (other)	**None Detected**
BS-1023-47A *181303075-0027*	Office 1st Floor - Area 2 - 2 x 4 Ceiling Tile	Gray Fibrous Homogeneous	60% 30%	Cellulose Min. Wool	10%	Non-fibrous (other)	**None Detected**
BS-1023-47B *181303075-0028*	Office 1st Floor - Area 2 - 2 x 4 Ceiling Tile	Gray Fibrous Homogeneous	60% 30%	Cellulose Min. Wool	10%	Non-fibrous (other)	**None Detected**
BS-1023-48A *181303075-0029*	Office 1st Floor - Men's Locker Room - 1 x 1 Ceiling Tile (Hole Pattern)	Brown Fibrous Homogeneous	90%	Cellulose	10%	Non-fibrous (other)	**None Detected**
BS-1023-48B *181303075-0030*	Office 1st Floor - Men's Locker Room - 1 x 1 Ceiling Tile (Hole Pattern)	Brown Fibrous Homogeneous	90%	Cellulose	10%	Non-fibrous (other)	**None Detected**

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Project: **BELD - 44 Allen Street, Braintree, MA - Weston and Sampson**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BS-1023-49A *181303075-0031*	Office 1st Floor - Area 2 - 1 x 1 Ceiling Tile (Fissure Pattern)	White Fibrous Homogeneous	60% Min. Wool 30% Cellulose	10% Non-fibrous (other)	**None Detected**
BS-1023-49B *181303075-0032*	Office 1st Floor - Area 1 - 1 x 1 Ceiling Tile (Fissure Pattern)	White Fibrous Homogeneous	60% Min. Wool 30% Cellulose	10% Non-fibrous (other)	**None Detected**
BS-1023-50A *181303075-0033*	Office 1st Floor - Room 2 - Black Glue Daubs	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-50B *181303075-0034*	Office 1st Floor - Area 2 - Black Glue Daubs	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-51A *181303075-0035*	Office 1st Floor - Men's Locker Room - Brown Glue Daubs	Brown Non-Fibrous Homogeneous		95% Non-fibrous (other)	**5% Anthophyllite**
BS-1023-51B *181303075-0036*	Office 1st Floor - Men's Locker Room - Brown Glue Daubs				**Stop Positive (Not Analyzed)**
BS-1023-52A *181303075-0037*	Office Basement - Basement - Interior Window Glazing	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-52B *181303075-0038*	Office Basement - Basement - Interior Window Glazing	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

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Project: **BELD - 44 Allen Street, Braintree, MA - Weston and Sampson**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos	
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**%**	**Type**
BS-1023-53A *181303075-0039*	Office 1st Floor - Area 1 - Interior Window Glazing	Gray Non-Fibrous Homogeneous			92%	Non-fibrous (other)	**8%**	**Chrysotile**
BS-1023-53B *181303075-0040*	Office 1st Floor - Room 1 - Interior Window Glazing						**Stop Positive (Not Analyzed)**	
BS-1023-54A *181303075-0041*	Office 1st Floor - Room 1 - Interior Window Caulk	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**	
BS-1023-54B *181303075-0042*	Office 1st Floor - Area 1 - Interior Window Caulk	Gray Non-Fibrous Homogeneous			100%	Non-fibrous (other)	**None Detected**	
BS-1023-55A *181303075-0043*	Office Ext. - Ext. - Ext. Window Caulk (Gray)	Gray/Red Non-Fibrous Homogeneous	2%	Cellulose	90%	Non-fibrous (other)	**8%**	**Chrysotile**
BS-1023-55B *181303075-0044*	Office Ext. - Ext. - Ext. Window Caulk (Gray)						**Stop Positive (Not Analyzed)**	
BS-1023-56A *181303075-0045*	Office Ext. - Ext. - Ext. Window Caulk (White)	White/Red Non-Fibrous Homogeneous	2%	Cellulose	90%	Non-fibrous (other)	**8%**	**Chrysotile**
BS-1023-56B *181303075-0046*	Office Ext. - Ext. - Ext. Window Caulk (White)						**Stop Positive (Not Analyzed)**	
BS-1023-57A *181303075-0047*	Office Ext. - Ext. - Ext. Door Caulk	Gray/Tan Non-Fibrous Homogeneous			94%	Non-fibrous (other)	**6%**	**Chrysotile**

Analyst(s)

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Project: **BELD - 44 Allen Street, Braintree, MA - Weston and Sampson**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
BS-1023-57B *181303075-0048*	Office Ext. - Ext. - Ext. Door Caulk				**Stop Positive (Not Analyzed)**
BS-1023-58A *181303075-0049*	Office Ext. - Ext. - Ext. Window Glazing	Tan Non-Fibrous Homogeneous		94% Non-fibrous (other)	**6% Chrysotile**
BS-1023-58B *181303075-0050*	Office Ext. - Ext. - Ext. Window Glazing				**Stop Positive (Not Analyzed)**
BS-1023-59A *181303075-0051*	Office Roof - Ext. - Roof Field	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (other)	**None Detected**
BS-1023-59B *181303075-0052*	Office Roof - Ext. - Roof Field	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (other)	**None Detected**
BS-1023-60A *181303075-0053*	Office Roof - Ext. - Roof Flash Mat.	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (other)	**None Detected**
BS-1023-60B *181303075-0054*	Office Roof - Ext. - Roof Flash Mat.	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (other)	**None Detected**
BS-1023-61A *181303075-0055*	Office Roof - Ext. - Roof Parapet With Sealant	Black Non-Fibrous Homogeneous	30% Cellulose	62% Non-fibrous (other)	**8% Chrysotile**
BS-1023-61B *181303075-0056*	Office Roof - Ext. - Roof Parapet With Sealant				**Stop Positive (Not Analyzed)**

Analyst(s)

Michael Thoma (49)

Michael Thoma, Laboratory Manager
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Air Quality Services LLC
Bulk Sampling Log Form

181303075

Project Name: BELD-44 Allen Street, Braintree, MA Project #: 27038 Page: 1 of 5

Client: Weston and Sampson Date: 10/23/13 Inspector: J.K.A

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Office	1ST	Area 2	6x6 Brown Floor Tile	BS-1023-37A		N
↓	↓	Area 1	↓	BS-1023-37B		N
		Area 2	6x6 Brown Floor Tile Mastic	BS-1023-38A		N
		Area 2	↓	BS-1023-38B		N
		Counter Area	Beige Sheet Flooring	BS-1023-39A		N
		Room 1	↓	BS-1023-39B		N
		Counter Area	Beige Sheet Flooring Adhesive	BS-1023-40A		N
		Room 1	↓	BS-1023-40B		N
		Men's Locker Room	Black Cove Base	BS-1023-41A		N
		↓	↓	BS-1023-41B		N
			Black Cove Base Adhesive	BS-1023-42A		N
↓	↓	↓	↓	BS-1023-42B		N

Delivered By	Date	#Samples	Received By	Date	Time	#Samples
		56				

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PLM Analysis
Positive Stop
72 hr. TAT

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Bulk Sampling Log Form

181303075

Project Name: BELD-44 Allen Street, Braintree, MA Project #: 27038 Page: 2 of 5

Client: Weston and Sampson Date: 10/23/13 Inspector: J. Cad

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Office	1ST	Room 2	Gray Cove Base	BS-1023-43A		
				BS-1023-43B		
			Gray Cove Base Adhesive	BS-1023-44A		
				BS-1023-44B		
		Area 1	Plaster Skim Coat	BS-1023-45A		
		Area 2		BS-1023-45B		
		Area 1		BS-1023-45C		
		Room 2		BS-1023-45D		
		Room 1		BS-1023-45E		
		Area 1	Plaster Base Coat	BS-1023-46A		
		Area 2		BS-1023-46B		
		Area 1		BS-1023-46C		

Delivered By	Date	#Samples	Received By	Date	Time	# Samples

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181303075

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Bulk Sampling Log Form

181303075

Project Name: BELD-44 Allen Street, Braintree, MA Project #: 27038 Page: 3 of 5

Client: Weston and Sampson Date: 10/23/13 Inspector: J. Kent

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Office	1ST	Room 2	Plaster Base Coat	BS-1023-46D		
		Room 1	↓	BS-1023-46E		
		Area 2	2x4 Ceiling Tile	BS-1023-47A		
		↓	↓	BS-1023-47B		
		Mens Locker Rm.	2 1X1 Ceiling Tile (Hole Pattern)	BS-1023-48A		
		↓	↓	BS-1023-48B		
		Area 2	1X1 Ceiling Tile (Fissure Pattern)	BS-1023-49A		
		Area 1	↓	BS-1023-49B		
		~~Mens Rm 2~~ ~~Locker Rm.~~	Black Glue Dabs	BS-1023-50A		
		Area 2	↓	BS-1023-50B		
		Mens locker Room	Brown Glue Dabs	BS-1023-51A		
		↓	↓	BS-1023-51B		

Delivered By	Date	#Samples	Received By	Date	Time	# Samples

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Bulk Sampling Log Form

181303075

Project Name: BELD - 44 Allen St. Braintree MA Project #: 27038 Page: 4 of 5

Client: Weston & Sampson Date: 10/23/13 Inspector: J. Kent

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Office	~~1ST~~ Basement	~~Area~~ Basement	Interior Window Glazing	BS-1023-52A		
↓	Base-ment	Basement	↓	BS-1023-52B		
	1ST	Area 1	Interior Window Glazing	BS-1023-53A		
	↓	Room 1	↓	BS-1023-53B		
		Room 1	Int. Window Caulk	BS-1023-54A		
	↓	Area 1	↓	BS-1023-54B		
	Ext.	Ext.	Ext. Window Caulk (gray)	BS-1023-55A		
	↓	↓	↓	BS-1023-55B		
			Ext. Window Caulk (white)	BS-1023-56A		
			↓	BS-1023-56B		
			Ext. Door Caulk	BS-1023-57A		
↓	↓	↓	↓	BS-1023-57B		

Delivered By	Date	#Samples	Received By	Date	Time	#Samples

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Air Quality Services LLC
Bulk Sampling Log Form

181303075

Project Name: BELD - 44 Allen St. Braintree MA Project #: 27038 Page: 5 of 5

Client: Weston & Sampson Date: 10/23/13 Inspector: J. Kent

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Office	Ext	Ext.	Ext. Window Glazing	BS-1023-58A		
↓	↓	↓	↓	BS-1023-58B		
	Roof	Ext.	Roof Field	BS-1023-59A		
	↓	↓	↓	BS-1023-59B		
			Roof Flash Mat.	BS-1023-60A		
			↓	BS-1023-60B		
			Roof Parapet Wall Sealant	BS-1023-61A		
↓	↓	↓	↓	BS-1023-61B		

Delivered By	Date	#Samples	Received By	Date	Time	# Samples

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EMSL Analytical, Inc.
521 Plymouth Road, Suite 107, Plymouth Meeting, PA 19462
Phone/Fax: (610) 828-3102 / (610) 828-3122
http://www.EMSL.com plymouthmeetinglab@emsl.com

EMSL Order:	181303076
CustomerID:	VERT51
CustomerPO:	27038
ProjectID:	

Attn: **Jason Mohre**
Vertex Air Quality Services
400 Libbey Parkway

Weymouth, MA 02189

Phone:	(781) 952-6000
Fax:	(781) 335-3543
Received:	10/24/13 9:25 AM
Analysis Date:	10/28/2013
Collected:	10/23/2013

Project: **BELD - 44 Allen Street Braintree, MA - Weston and Sampson**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos	
Sample	**Description**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**%**	**Type**
BS-1023-67A *181303076-0001*	Screen House 1st Floor - SH - Interior Window Glazing	Tan Non-Fibrous Homogeneous			100%	Non-fibrous (other)		**None Detected**
BS-1023-67B *181303076-0002*	Screen House 1st Floor - SH - Interior Window Glazing	Tan Non-Fibrous Homogeneous			100%	Non-fibrous (other)		**None Detected**
BS-1023-68A *181303076-0003*	Screen House Ext. - Ext. - Window Flash Paper	Black Fibrous Homogeneous	80%	Cellulose	20%	Non-fibrous (other)		**None Detected**
BS-1023-68B *181303076-0004*	Screen House Ext. - Ext. - Window Flash Paper	Black Fibrous Homogeneous	80%	Cellulose	20%	Non-fibrous (other)		**None Detected**
BS-1023-69A *181303076-0005*	Screen House Roof - Ext. - Roof Field	Black Fibrous Homogeneous	80%	Cellulose	20%	Non-fibrous (other)		**None Detected**
BS-1023-69B *181303076-0006*	Screen House Roof - Ext. - Roof Field	Black Fibrous Homogeneous	80%	Cellulose	20%	Non-fibrous (other)		**None Detected**
BS-1023-70A *181303076-0007*	Screen House Roof - Ext. - Roof Flash Material	Black Fibrous Homogeneous	80%	Cellulose	20%	Non-fibrous (other)		**None Detected**
BS-1023-70B *181303076-0008*	Screen House Roof - Ext. - Roof Flash Material	Black Fibrous Homogeneous	80%	Cellulose	20%	Non-fibrous (other)		**None Detected**

Analyst(s)

Michael Thoma (8)

Michael Thoma, Laboratory Manager
or other approved signatory

Initial report from 10/28/2013 13:33:11

181303076

VERTEX™
Air Quality Services LLC
Bulk Sampling Log Form

181303076

Project Name: BELD - 44 Allen St. Braintree MA Project #: 27038 Page: 1 of 1

Client: Weston & Sampson Date: 10/23/13 Inspector: J. Kent

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Screen House	1ST	SH	Interior Window Glazing	BS-1023-67A		
↓	↓	↓	↓	BS-1023-67B		
	Ext.	Ext.	Window Flash Paper	BS-1023-68A		
	~~Roof~~ Ext.	Ext.	↓	BS-1023-68B		
	Roof	Ext.	Roof Field	BS-1023-69A		
	↓	↓	↓	BS-1023-69B		
			Roof Flash Material	BS-1023-70A		
↓	↓	↓	↓	BS-1023-70B		

Delivered By	Date	#Samples	Received By	Date	Time	# Samples
[signature]	10/23/13	8	RECEIVED OCT 24 2013 By JL		09:25	

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PLM Analysis
Positive Stop
72 hr. TAT

EMSL Analytical, Inc.
490 Rowley Road, Depew, NY 14043
Phone/Fax: (716) 651-0030 / (716) 651-0394
http://www.EMSL.com buffalolab@emsl.com

EMSL Order:	141304471
CustomerID:	VERT51
CustomerPO:	
ProjectID:	

Attn: **Vincent Agostino**
Vertex Air Quality Services
400 Libbey Parkway

Weymouth, MA 02189

Phone:	(781) 952-6000
Fax:	(781) 335-3543
Received:	10/25/13 10:00 AM
Analysis Date:	10/28/2013
Collected:	10/23/2013

Project: **27038 / Weston & Sampson Beld, 44 Allen St. Braintree, MA**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BS-1023-62A *141304471-0001*	garage, 1st floor, room G - interior window glazing	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-62B *141304471-0002*	garage, 1st floor, room G - interior window glazing	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-63A *141304471-0003*	garage, 1st floor, room G - interior window caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-63B *141304471-0004*	garage, 1st floor, room G - interior window caulking	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-64A *141304471-0005*	garage, roof, ext - roof field	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-64B *141304471-0006*	garage, roof, ext - roof field	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-65A *141304471-0007*	garage, roof, ext - roof flashing material	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-65B *141304471-0008*	garage, roof, ext - roof flashing material	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

Analyst(s)

Taron Williams (10)

Rhonda McGee

Rhonda McGee, Laboratory Manager
or other approved signatory

Initial report from 10/28/2013 15:28:44

EMSL Analytical, Inc.
490 Rowley Road, Depew, NY 14043
Phone/Fax: (716) 651-0030 / (716) 651-0394
http://www.EMSL.com buffalolab@emsl.com

EMSL Order:	141304471
CustomerID:	VERT51
CustomerPO:	
ProjectID:	

Attn: **Vincent Agostino**
Vertex Air Quality Services
400 Libbey Parkway

Weymouth, MA 02189

Phone:	(781) 952-6000
Fax:	(781) 335-3543
Received:	10/25/13 10:00 AM
Analysis Date:	10/28/2013
Collected:	10/23/2013

Project: **27038 / Weston & Sampson Beld, 44 Allen St. Braintree, MA**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BS-1023-66A *141304471-0009*	garage, roof, ext - roof parapet wall mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
BS-1023-66B *141304471-0010*	garage, roof, ext - roof parapet wall mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**

Analyst(s)

Taron Williams (10)

Rhonda McGee

Rhonda McGee, Laboratory Manager
or other approved signatory

Initial report from 10/28/2013 15:28:44

141304471

141304471

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Air Quality Services LLC
Bulk Sampling Log Form

Project Name: BELD - 44 Allen St. Braintree MA Project #: 27038 Page: 1 of 1

Client: Weston & Sampson Date: 10/23/13 Inspector: J. Kent

Building	Floor	Room	Description	Field #	Comments	Fri / Non-Fri
Garage	1ST	G	Interior Window Glazing	BS-1023-62A		N
			↓	BS-1023-62B		N
			Interior Window Caulking	BS-1023-63A		N
			↓	BS-1023-63B		N
	Roof	Ext	Roof Field	BS-1023-64A		N
			↓	BS-1023-64B		N
			Roof Flash Material	BS-1023-65A		N
			↓	BS-1023-65B		N
			Roof Parapet Wall Mastic	BS-1023-66A		N
			↓	BS-1023-66B		N

Delivered By	Date	#Samples	Received By	Date	Time	# Samples
		10				

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PLM Analysis
Positive Stop
72 hr. TAT

APPENDIX G

SUSPECT CAULKING ANALYSIS FOR PCBS RESULTS

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 4, 2013

Jason Mohre
Vertex Engineering - Weymouth
400 Libbey Parkway
Weymouth, MA 02189

Project Location: 44 Allen Street/BELD
Client Job Number:
Project Number: 27038
Laboratory Work Order Number: 13J1057

Enclosed are results of analyses for samples received by the laboratory on October 25, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Vertex Engineering - Weymouth
400 Libbey Parkway
Weymouth, MA 02189
ATTN: Jason Mohre

REPORT DATE: 11/4/2013

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 27038

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13J1057

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 44 Allen Street/BELD

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
CS-1023-01A	13J1057-01	Caulk		SW-846 8082A	
CS-1023-01B	13J1057-02	Caulk		SW-846 8082A	
CS-1023-02A	13J1057-03	Caulk		SW-846 8082A	
CS-1023-02B	13J1057-04	Caulk		SW-846 8082A	
CS-1023-03A	13J1057-05	Caulk		SW-846 8082A	
CS-1023-03B	13J1057-06	Caulk		SW-846 8082A	
CS-1023-04A	13J1057-07	Caulk		SW-846 8082A	
CS-1023-04B	13J1057-08	Caulk		SW-846 8082A	
CS-1023-05A	13J1057-09	Caulk		SW-846 8082A	
CS-1023-05B	13J1057-10	Caulk		SW-846 8082A	
CS-1023-06A	13J1057-11	Caulk		SW-846 8082A	
CS-1023-06B	13J1057-12	Caulk		SW-846 8082A	
CS-1023-07A	13J1057-13	Caulk		SW-846 8082A	
CS-1023-07B	13J1057-14	Caulk		SW-846 8082A	
CS-1023-08A	13J1057-15	Caulk		SW-846 8082A	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Daren J. Damboragian
Laboratory Manager

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-01A | Sampled: 10/23/2013 10:00

Sample ID: 13J1057-01

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:23	WSD
Aroclor-1221 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:23	WSD
Aroclor-1232 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:23	WSD
Aroclor-1242 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:23	WSD
Aroclor-1248 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:23	WSD
Aroclor-1254 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:23	WSD
Aroclor-1260 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:23	WSD
Aroclor-1262 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:23	WSD
Aroclor-1268 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:23	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.8	30-150		11/2/13 17:23
Decachlorobiphenyl [2]	86.7	30-150		11/2/13 17:23
Tetrachloro-m-xylene [1]	96.1	30-150		11/2/13 17:23
Tetrachloro-m-xylene [2]	90.4	30-150		11/2/13 17:23

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-01B | Sampled: 10/23/2013 10:15

Sample ID: 13J1057-02

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:36	WSD
Aroclor-1221 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:36	WSD
Aroclor-1232 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:36	WSD
Aroclor-1242 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:36	WSD
Aroclor-1248 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:36	WSD
Aroclor-1254 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:36	WSD
Aroclor-1260 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:36	WSD
Aroclor-1262 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:36	WSD
Aroclor-1268 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:36	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.3	30-150		11/2/13 17:36
Decachlorobiphenyl [2]	84.7	30-150		11/2/13 17:36
Tetrachloro-m-xylene [1]	91.9	30-150		11/2/13 17:36
Tetrachloro-m-xylene [2]	85.3	30-150		11/2/13 17:36

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-02A | Sampled: 10/23/2013 10:45

Sample ID: 13J1057-03

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:49	WSD
Aroclor-1221 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:49	WSD
Aroclor-1232 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:49	WSD
Aroclor-1242 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:49	WSD
Aroclor-1248 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:49	WSD
Aroclor-1254 [2]	4.3	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:49	WSD
Aroclor-1260 [2]	2.5	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:49	WSD
Aroclor-1262 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:49	WSD
Aroclor-1268 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 17:49	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	94.5	30-150		11/2/13 17:49
Decachlorobiphenyl [2]	88.8	30-150		11/2/13 17:49
Tetrachloro-m-xylene [1]	93.5	30-150		11/2/13 17:49
Tetrachloro-m-xylene [2]	87.4	30-150		11/2/13 17:49

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-02B | Sampled: 10/23/2013 11:00

Sample ID: 13J1057-04

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:02	WSD
Aroclor-1221 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:02	WSD
Aroclor-1232 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:02	WSD
Aroclor-1242 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:02	WSD
Aroclor-1248 [1]	1.3	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:02	WSD
Aroclor-1254 [2]	1.7	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:02	WSD
Aroclor-1260 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:02	WSD
Aroclor-1262 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:02	WSD
Aroclor-1268 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:02	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.6	30-150		11/2/13 18:02
Decachlorobiphenyl [2]	86.0	30-150		11/2/13 18:02
Tetrachloro-m-xylene [1]	92.9	30-150		11/2/13 18:02
Tetrachloro-m-xylene [2]	86.4	30-150		11/2/13 18:02

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-03A | Sampled: 10/23/2013 11:30

Sample ID: 13J1057-05

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.67	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:15	WSD
Aroclor-1221 [1]	ND	0.67	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:15	WSD
Aroclor-1232 [1]	ND	0.67	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:15	WSD
Aroclor-1242 [1]	ND	0.67	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:15	WSD
Aroclor-1248 [1]	ND	0.67	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:15	WSD
Aroclor-1254 [1]	ND	0.67	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:15	WSD
Aroclor-1260 [1]	ND	0.67	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:15	WSD
Aroclor-1262 [1]	ND	0.67	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:15	WSD
Aroclor-1268 [1]	ND	0.67	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:15	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.0	30-150		11/2/13 18:15
Decachlorobiphenyl [2]	85.9	30-150		11/2/13 18:15
Tetrachloro-m-xylene [1]	98.2	30-150		11/2/13 18:15
Tetrachloro-m-xylene [2]	91.4	30-150		11/2/13 18:15

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-03B | Sampled: 10/23/2013 11:45

Sample ID: 13J1057-06

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:28	WSD
Aroclor-1221 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:28	WSD
Aroclor-1232 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:28	WSD
Aroclor-1242 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:28	WSD
Aroclor-1248 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:28	WSD
Aroclor-1254 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:28	WSD
Aroclor-1260 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:28	WSD
Aroclor-1262 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:28	WSD
Aroclor-1268 [1]	ND	0.80	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:28	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.8	30-150		11/2/13 18:28
Decachlorobiphenyl [2]	87.3	30-150		11/2/13 18:28
Tetrachloro-m-xylene [1]	99.8	30-150		11/2/13 18:28
Tetrachloro-m-xylene [2]	91.4	30-150		11/2/13 18:28

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-04A | Sampled: 10/23/2013 12:00

Sample ID: 13J1057-07

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.68	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:40	WSD
Aroclor-1221 [1]	ND	0.68	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:40	WSD
Aroclor-1232 [1]	ND	0.68	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:40	WSD
Aroclor-1242 [1]	ND	0.68	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:40	WSD
Aroclor-1248 [1]	ND	0.68	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:40	WSD
Aroclor-1254 [1]	ND	0.68	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:40	WSD
Aroclor-1260 [1]	ND	0.68	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:40	WSD
Aroclor-1262 [1]	ND	0.68	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:40	WSD
Aroclor-1268 [1]	ND	0.68	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 18:40	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.4	30-150		11/2/13 18:40
Decachlorobiphenyl [2]	86.0	30-150		11/2/13 18:40
Tetrachloro-m-xylene [1]	97.0	30-150		11/2/13 18:40
Tetrachloro-m-xylene [2]	89.9	30-150		11/2/13 18:40

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-04B | Sampled: 10/23/2013 12:10

Sample ID: 13J1057-08

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:45	WSD
Aroclor-1221 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:45	WSD
Aroclor-1232 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:45	WSD
Aroclor-1242 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:45	WSD
Aroclor-1248 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:45	WSD
Aroclor-1254 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:45	WSD
Aroclor-1260 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:45	WSD
Aroclor-1262 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:45	WSD
Aroclor-1268 [1]	ND	0.71	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:45	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	95.1	30-150		11/2/13 19:45
Decachlorobiphenyl [2]	87.4	30-150		11/2/13 19:45
Tetrachloro-m-xylene [1]	101	30-150		11/2/13 19:45
Tetrachloro-m-xylene [2]	94.1	30-150		11/2/13 19:45

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Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-05A | Sampled: 10/23/2013 12:45

Sample ID: 13J1057-09

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:58	WSD
Aroclor-1221 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:58	WSD
Aroclor-1232 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:58	WSD
Aroclor-1242 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:58	WSD
Aroclor-1248 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:58	WSD
Aroclor-1254 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:58	WSD
Aroclor-1260 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:58	WSD
Aroclor-1262 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:58	WSD
Aroclor-1268 [1]	ND	0.76	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 19:58	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.9	30-150		11/2/13 19:58
Decachlorobiphenyl [2]	85.2	30-150		11/2/13 19:58
Tetrachloro-m-xylene [1]	97.8	30-150		11/2/13 19:58
Tetrachloro-m-xylene [2]	90.3	30-150		11/2/13 19:58

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Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-05B | Sampled: 10/23/2013 13:00

Sample ID: 13J1057-10

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:10	WSD
Aroclor-1221 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:10	WSD
Aroclor-1232 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:10	WSD
Aroclor-1242 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:10	WSD
Aroclor-1248 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:10	WSD
Aroclor-1254 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:10	WSD
Aroclor-1260 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:10	WSD
Aroclor-1262 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:10	WSD
Aroclor-1268 [1]	ND	0.77	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:10	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.0	30-150		11/2/13 20:10
Decachlorobiphenyl [2]	90.3	30-150		11/2/13 20:10
Tetrachloro-m-xylene [1]	105	30-150		11/2/13 20:10
Tetrachloro-m-xylene [2]	97.4	30-150		11/2/13 20:10

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-06A | Sampled: 10/23/2013 13:15

Sample ID: 13J1057-11

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.69	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:23	WSD
Aroclor-1221 [1]	ND	0.69	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:23	WSD
Aroclor-1232 [1]	ND	0.69	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:23	WSD
Aroclor-1242 [1]	ND	0.69	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:23	WSD
Aroclor-1248 [1]	ND	0.69	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:23	WSD
Aroclor-1254 [1]	ND	0.69	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:23	WSD
Aroclor-1260 [1]	ND	0.69	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:23	WSD
Aroclor-1262 [1]	ND	0.69	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:23	WSD
Aroclor-1268 [1]	ND	0.69	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:23	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	109	30-150		11/2/13 20:23
Decachlorobiphenyl [2]	95.0	30-150		11/2/13 20:23
Tetrachloro-m-xylene [1]	97.1	30-150		11/2/13 20:23
Tetrachloro-m-xylene [2]	90.2	30-150		11/2/13 20:23

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-06B | Sampled: 10/23/2013 13:30

Sample ID: 13J1057-12

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:36	WSD
Aroclor-1221 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:36	WSD
Aroclor-1232 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:36	WSD
Aroclor-1242 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:36	WSD
Aroclor-1248 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:36	WSD
Aroclor-1254 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:36	WSD
Aroclor-1260 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:36	WSD
Aroclor-1262 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:36	WSD
Aroclor-1268 [1]	ND	0.73	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:36	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.9	30-150		11/2/13 20:36
Decachlorobiphenyl [2]	90.4	30-150		11/2/13 20:36
Tetrachloro-m-xylene [1]	96.1	30-150		11/2/13 20:36
Tetrachloro-m-xylene [2]	90.0	30-150		11/2/13 20:36

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Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-07A | Sampled: 10/23/2013 14:00

Sample ID: 13J1057-13

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.72	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:49	WSD
Aroclor-1221 [1]	ND	0.72	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:49	WSD
Aroclor-1232 [1]	ND	0.72	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:49	WSD
Aroclor-1242 [1]	ND	0.72	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:49	WSD
Aroclor-1248 [1]	ND	0.72	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:49	WSD
Aroclor-1254 [1]	ND	0.72	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:49	WSD
Aroclor-1260 [1]	ND	0.72	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:49	WSD
Aroclor-1262 [1]	ND	0.72	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:49	WSD
Aroclor-1268 [1]	ND	0.72	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 20:49	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	126	30-150		11/2/13 20:49
Decachlorobiphenyl [2]	107	30-150		11/2/13 20:49
Tetrachloro-m-xylene [1]	99.5	30-150		11/2/13 20:49
Tetrachloro-m-xylene [2]	92.3	30-150		11/2/13 20:49

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-07B | Sampled: 10/23/2013 14:10

Sample ID: 13J1057-14

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:02	WSD
Aroclor-1221 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:02	WSD
Aroclor-1232 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:02	WSD
Aroclor-1242 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:02	WSD
Aroclor-1248 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:02	WSD
Aroclor-1254 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:02	WSD
Aroclor-1260 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:02	WSD
Aroclor-1262 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:02	WSD
Aroclor-1268 [1]	ND	0.74	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:02	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.5	30-150		11/2/13 21:02
Decachlorobiphenyl [2]	91.0	30-150		11/2/13 21:02
Tetrachloro-m-xylene [1]	97.5	30-150		11/2/13 21:02
Tetrachloro-m-xylene [2]	90.2	30-150		11/2/13 21:02

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Project Location: 44 Allen Street/BELD | Sample Description: | Work Order: 13J1057

Date Received: 10/25/2013

Field Sample #: CS-1023-08A | Sampled: 10/23/2013 14:30

Sample ID: 13J1057-15

Sample Matrix: Caulk

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:15	WSD
Aroclor-1221 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:15	WSD
Aroclor-1232 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:15	WSD
Aroclor-1242 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:15	WSD
Aroclor-1248 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:15	WSD
Aroclor-1254 [2]	0.88	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:15	WSD
Aroclor-1260 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:15	WSD
Aroclor-1262 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:15	WSD
Aroclor-1268 [1]	ND	0.79	mg/Kg	4		SW-846 8082A	10/31/13	11/2/13 21:15	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.7	30-150		11/2/13 21:15
Decachlorobiphenyl [2]	88.9	30-150		11/2/13 21:15
Tetrachloro-m-xylene [1]	91.8	30-150		11/2/13 21:15
Tetrachloro-m-xylene [2]	84.3	30-150		11/2/13 21:15

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Sample Extraction Data

Prep Method: SW-846 3540C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
13J1057-01 [CS-1023-01A]	B084000	0.508	10.0	10/31/13
13J1057-02 [CS-1023-01B]	B084000	0.540	10.0	10/31/13
13J1057-03 [CS-1023-02A]	B084000	0.501	10.0	10/31/13
13J1057-04 [CS-1023-02B]	B084000	0.530	10.0	10/31/13
13J1057-05 [CS-1023-03A]	B084000	0.594	10.0	10/31/13
13J1057-06 [CS-1023-03B]	B084000	0.501	10.0	10/31/13
13J1057-07 [CS-1023-04A]	B084000	0.592	10.0	10/31/13
13J1057-08 [CS-1023-04B]	B084000	0.565	10.0	10/31/13
13J1057-09 [CS-1023-05A]	B084000	0.524	10.0	10/31/13
13J1057-10 [CS-1023-05B]	B084000	0.522	10.0	10/31/13
13J1057-11 [CS-1023-06A]	B084000	0.582	10.0	10/31/13
13J1057-12 [CS-1023-06B]	B084000	0.548	10.0	10/31/13
13J1057-13 [CS-1023-07A]	B084000	0.554	10.0	10/31/13
13J1057-14 [CS-1023-07B]	B084000	0.538	10.0	10/31/13
13J1057-15 [CS-1023-08A]	B084000	0.508	10.0	10/31/13

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QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B084000 - SW-846 3540C										
Blank (B084000-BLK1)				Prepared: 10/30/13 Analyzed: 11/01/13						
Aroclor-1016	ND	0.20	mg/Kg							
Aroclor-1016 [2C]	ND	0.20	mg/Kg							
Aroclor-1221	ND	0.20	mg/Kg							
Aroclor-1221 [2C]	ND	0.20	mg/Kg							
Aroclor-1232	ND	0.20	mg/Kg							
Aroclor-1232 [2C]	ND	0.20	mg/Kg							
Aroclor-1242	ND	0.20	mg/Kg							
Aroclor-1242 [2C]	ND	0.20	mg/Kg							
Aroclor-1248	ND	0.20	mg/Kg							
Aroclor-1248 [2C]	ND	0.20	mg/Kg							
Aroclor-1254	ND	0.20	mg/Kg							
Aroclor-1254 [2C]	ND	0.20	mg/Kg							
Aroclor-1260	ND	0.20	mg/Kg							
Aroclor-1260 [2C]	ND	0.20	mg/Kg							
Aroclor-1262	ND	0.20	mg/Kg							
Aroclor-1262 [2C]	ND	0.20	mg/Kg							
Aroclor-1268	ND	0.20	mg/Kg							
Aroclor-1268 [2C]	ND	0.20	mg/Kg							
Surrogate: Decachlorobiphenyl	*3.86*		mg/Kg	4.00		96.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.95*		mg/Kg	4.00		98.6	30-150			
Surrogate: Tetrachloro-m-xylene	*3.49*		mg/Kg	4.00		87.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.58*		mg/Kg	4.00		89.5	30-150			
LCS (B084000-BS1)				Prepared: 10/30/13 Analyzed: 11/01/13						
Aroclor-1016	3.3	0.20	mg/Kg	4.00		81.3	40-140			
Aroclor-1016 [2C]	3.4	0.20	mg/Kg	4.00		84.3	40-140			
Aroclor-1260	3.3	0.20	mg/Kg	4.00		82.7	40-140			
Aroclor-1260 [2C]	3.3	0.20	mg/Kg	4.00		83.3	40-140			
Surrogate: Decachlorobiphenyl	*3.84*		mg/Kg	4.00		95.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.88*		mg/Kg	4.00		97.1	30-150			
Surrogate: Tetrachloro-m-xylene	*3.58*		mg/Kg	4.00		89.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.67*		mg/Kg	4.00		91.6	30-150			
LCS Dup (B084000-BSD1)				Prepared: 10/30/13 Analyzed: 11/01/13						
Aroclor-1016	3.4	0.20	mg/Kg	4.00		85.4	40-140	4.90	30	
Aroclor-1016 [2C]	3.5	0.20	mg/Kg	4.00		87.7	40-140	3.95	30	
Aroclor-1260	3.5	0.20	mg/Kg	4.00		88.3	40-140	6.55	30	
Aroclor-1260 [2C]	3.5	0.20	mg/Kg	4.00		88.6	40-140	6.14	30	
Surrogate: Decachlorobiphenyl	*3.99*		mg/Kg	4.00		99.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*4.08*		mg/Kg	4.00		102	30-150			
Surrogate: Tetrachloro-m-xylene	*3.61*		mg/Kg	4.00		90.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*3.70*		mg/Kg	4.00		92.6	30-150			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2014
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2014
FL	Florida Department of Health	E871027 NELAP	06/30/2014
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2014
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2013
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2014

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Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

13J1057

Rev 04.05.12

Company Name: VERTEX Air Quality Services
Telephone: 781-952-6000
Address: 398 Libby Parkway
Weymouth, Massachusetts 02189
Project #: 27038
Client PO#:
Attention: Jason Mohre
Project Location: 44 Allen Street/BELD
Sampled By: J. Kent

Project Proposal Provided? (for billing purposes)
O yes _____ proposal date

DATA DELIVERY (check all that apply)
O FAX ◎ EMAIL O WEBSITE
Fax #:
Email: jmohre@vertexeng.com
Format: ◎ PDF O EXCEL O GIS
O OTHER
O "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	# of Containers	** Preservation	***Container Code	ANALYSIS REQUESTED: PCBS W/ Soxhlet Ext
01	CS-1023-01A	10/23/13	10:00	X		S	U	16	—	A	X
02	CS-1023-01B		10:15								X
03	CS-1023-02A		10:45								X
04	CS-1023-02B		11:00								X
05	CS-1023-03A		11:30								X
06	CS-1023-03B		11:45								X
07	CS-1023-04A		12:00								X
08	CS-1023-04B		12:10								X
09	CS-1023-05A		12:45								X
10	CS-1023-05B		13:00								X

Dissolved Metals
O Field Filtered
O Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other_____

*Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other_____

Comments: ☆ Please Bill-Weston and Sampson
Invoice to 100 Foxborough Blvd. Suite 250
Foxborough, MA 02035

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time: 10/25/13	
Received by: (signature)	Date/Time: 1795	
Relinquished by: (signature)	Date/Time:	
Received by: (signature) 4.6 10/25/13	Date/Time: 1755	

Turnaround ††
☐ 7-Day
☐ 10-Day
☒ Other 5
RUSH
☐ †24-Hr ☐ †48-Hr
☐ †4-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts: lowest Reporting Limit Possible
Connecticut:
Other:

Is your project MCP or RCP ?
O MCP Form Required
O RCP Form Required
O MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

†† TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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Email: info@contestlabs.com
www.contestlabs.com
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East longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

13J1057

Rev 04.05.12

Company Name: VERTEX Air Quality Services
Telephone: 781-952-6000
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Project # 27038
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Attention: Jason Mohre
Project Location: 44 Allen Street/BELD
Sampled By: J. Kent

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

DATA DELIVERY (check all that apply)
○ FAX ◉ EMAIL ○ WEBSITE
Fax #
Email: jmohre@vertexeng.com
Format: ◉ PDF ○ EXCEL ○ GIS
○ OTHER_____
○ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	# of Containers	** Preservation	***Container Code	ANALYSIS REQUESTED: PCBS W/ Soxhlet Ext
11	CS-1023-06A	10/23/13	13:15	X		S	U	1	I	A	X
12	CS-1023-06B	↓	13:30	↓		↓	↓				X
13	CS-1023-07A		14:00								X
14	CS-1023-07B	↓	14:10	↓		↓	↓				X
15	CS-1023-08A		14:30								X

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other_____

*Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other_____

Comments: * Please Bill - Westonal Sampson
Invoice to 100 Foxborough BLVD Suite 250
Foxborough, MA 02035

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Turnaround ††
☐ 7-Day
☐ 10-Day
☒ Other 5 day
RUSH †
☐ †24-Hr ☐ †48-Hr
☒ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts: Lowest possible Reporting Limit
Connecticut:
Other:

Is your project MCP or RCP ?
○ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

†† TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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East Longmeadow, MA. 01028
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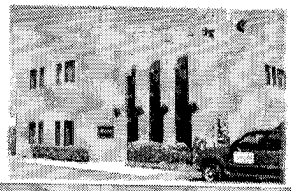

Sample Receipt Checklist

CLIENT NAME: Vertex RECEIVED BY: JMH DATE: 10/25/13

1) **Was the chain(s) of custody relinquished and signed?** (Yes) No No CoC Included

2) **Does the chain agree with the samples?** (Yes) No
If not, explain:

3) **Are all the samples in good condition?** (Yes) No
If not, explain:

4) **How were the samples received:**
On Ice (Y) Direct from Sampling ☐ Ambient ☐ In Cooler(s) (Y)

Were the samples received in Temperature Compliance of (2-6°C)? (Yes) No N/A

Temperature °C by Temp blank _____ Temperature °C by Temp gun 4.4°

5) **Are there Dissolved samples for the lab to filter?** Yes (No)
Who was notified _____ Date _____ Time _____

6) **Are there any RUSH or SHORT HOLDING TIME samples?** Yes (No)
Who was notified _____ Date _____ Time _____

7) **Location where samples are stored:** 19

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: _____

8) **Do all samples have the proper Acid pH:** Yes No (N/A) _____

9) **Do all samples have the proper Base pH:** Yes No (N/A) _____

10) **Was the PC notified of any discrepancies with the CoC vs the samples:** Yes No (N/A)

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	~~6~~ 15
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Plastic Bag / Ziploc	
500 mL Plastic		SOC Kit	
250 mL plastic		Non-ConTest Container	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

Laboratory Comments: ~~page 2 agrees with samples unaware of page 1~~

40 mL vials: # HCl _____ # Methanol _____
Bisulfate _____ # DI Water _____
Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	F T	only 1 page of COC received
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	NA	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** JMH **Date/Time:** 10/25/13 1755

ConsultEcon, Inc.

Memorandum

To: **David Gamble, Gamble Associates**

From: **ConsultEcon, Inc.**

Date: **July 26, 2013**

RE: **Summary Points from the Preliminary Assessment of the Market Potential for Housing at the Braintree Electric Light Department Site**

- **Target Market** - Based on the location and configuration of the proposed project, the target market segments are households most likely to live in multi-family housing, and may include both renters and home owners.
- **Housing Unit Growth** - Between 2000 and 2010, the average annual increase in the number of housing units in Braintree was 114 units per year. While owner occupied housing units account for 70 percent of the total number occupied units in Braintree, the number of rental housing units have been increasing faster than the number of owner occupied units. The average annual increase in the number of rental units was 84, compared to the average increase of 30 owner occupied units.
- **For Rent Listings** - Overall, there were 24 units listed for rent, with a range of rents from $1,100 to $2,800 per month. The median rent was $1,700 per month for available rental housing.
- **For Sale Listings** - Two bedroom units accounted for most of the condos for sale in the market. Two-bedroom units had an average listing price of $270,000 and an average of 1,220 SF. One-bedroom units had an average listing price of $133,000 and an average of 650 SF.
- **Trend in Condo Sales** - Between 2010 and 2012, the number of condos sold annually in Braintree has increased steadily, reflecting a strengthening real estate market. There were 142 condo sales in Braintree in 2012. The median sales price for a condo in Braintree peaked at $280,000 in 2005, 2006 and 2007, and reached a low of $253,000 in 2009. Like sales transactions, the median price of condos has increased steadily each year since then, reaching $277,000 in 2012.
- **Braintree's 1- and 2-bedroom Condo Sales in 2012** - The average price of 12 1-bedroom condos sold was $237,000, the average size was 900 SF and the average price per SF was $261. The average price of 54 2-bedroom condos sold was $274,000, the average size was 1,250 SF and the average price per SF was $219.
- **Potential Pricing as Rental Project** – For Reuse Options #1 and #2, the monthly rent for a unit is estimated to range from $1,200 to $1,450. For Reuse Options #3 and #4, the monthly rent for a unit is estimated to range from $1,700 to $2,250.
- **Potential Pricing as Condo Project** - For Reuse Options #1 and #2, the price for a condo is estimated to range from $195,000 to $222,000. For Reuse Options #3 and #4, the price for a condo is estimated to range from $275,000 to $333,000.
- **Absorption** - Because of the unique nature of the project and the relatively high price points, it is assumed that the units will be absorbed over a period of 3 to 9 months, based on current market conditions and timing of sales during the year.

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www.consultecon.com • info@consultecon.com

ConsultEcon, Inc.

Memorandum

To: **David Gamble, Gamble Associates**

From: **ConsultEcon, Inc.**

Date: **July 26, 2013**

RE: **Preliminary Assessment of the Market Potential for Housing at the Braintree Electric Light Department Site**

The following memorandum presents a preliminary assessment of the market potential for housing at the Braintree Electric Light Department (BELD) Site as an input into overall pre-development planning for the site. It includes a review of the proposed project and location in Braintree, MA, a review of for-sale and rental housing market data, and an overview of comparable multi-family housing developments in the area.

SITE AND PROJECT REVIEW

Location

The BELD site is located in East Braintree at 44 Allen Street near the intersection with Quincy Avenue. Quincy Avenue is a primary arterial street and is designated as State Highway 53. The intersection at Allen Street and Quincy Avenue is not signalized, although there is a pedestrian crossing approximately 200 feet away at the intersection of Quincy Avenue and Gordon Road.

Site and Building Description

The site is currently owned by the Town of Braintree. It was transferred from BELD to the Town in 2011. The site is approximately 1.6 acres, and roughly rectangular in shape. Historically used for industrial purposes, it is no longer used for industry. There are four existing buildings on site that have been vacant since the Braintree Electric Department vacated the site in 1993 when a new facility was constructed nearby. **Figure 1** shows a site plan of the BELD site.

Figure 1
BELD Site Plan

Source: *Braintree Electric Light Department: Brownfield Revitalization and Community Engagement, November 11, 2010*, Community Development Resource Center.

Adjacent Uses

The parcel fronts Allen Street to the north, a vacant, privately owned parcel without structures to the east, the Monatiquot River on the south, and a commercial use, Starling Furniture Company to the west. Opposite the parcel on Allen Street are four residences and a commercial establishment. The river frontage to the south contains non-permanent floating marina slips maintained under agreement with the Town of Braintree by the Braintree Yacht Club, which is located nearby on Gordon Road on other side of Quincy Avenue.

Nearby Uses

Following is a review of selected nearby uses:

- **Residential Neighborhood** – The site is located nearby residential neighborhoods in East Braintree.
- **Watson Park** – A public park operated by the Town of Braintree. Facilities include baseball/softball fields, tennis and basketball counts, playground, splash pad (new) and a

walking trail. The offices for the Town's Recreation Department are located at the intersection of Gordon Road and Quincy Ave.

- **Braintree Yacht Club** – This marina is located adjacent to Watson Park and the Recreation Department Offices. Includes boat slips and public boat launch.
- **Commuter Rail Station** - The East Braintree / Weymouth Landing MBTA station on the Greenbush Commuter Line is within 1,000 feet from the site, making it within easy walking distance. With service initiated in 2007, this line provides weekday commuter service to Boston's South Station. There is no service on the weekends.
- **Neighborhood Commercial District** – The East Braintree / Weymouth Landing commercial district is located within short walking distance from the site, across the Monatiquot River on Quincy Ave. The district recently was improved with a $2.4 million streetscaping project, funded by the state.

Future Developments

In addition to the recent streetscape project, there are plans for a Riverwalk trail that will provide additional recreational infrastructure to the area and include public access to the BELD site. The concept plan calls for a continuous trail on both sides of the Monatiquot River and on the Fore River in Watson Park. The trail would link the BELD Site with Watson Park and the East Braintree / Weymouth Landing commercial district.

Project Description

Based on planning and design completed to date, the first phase of development would focus on the adaptive reuse of the Switch House on the site. Based on design concepts prepared by Gamble Associates and dated June 12, 2013, there are four re-use options for the Switch House. Two of the variations depend on the addition of a third story, and two do not. Without the additional story, the Switch House can accommodate 8 units that range in size from 750 square feet (SF) to 880 SF. These units would be open plan, single floor units, with one or 1.5 bathrooms. With an additional third story on top of the existing two story building, the Switch House can accommodate 11 larger housing units. These units would be a mix of bi-level apartments, with 2 bedrooms and 2 bathrooms, and entrances on both sites of the building. Three units are estimated at 1,380 square foot (SF) and 8 units at 1,170 SF. Parking for all reuse options would be covered and located within the lower story of the building, and provided at one space per unit. In addition, for the options with and without the additional story, there is an option to add balconies and/or a green roof to the project.

Target Market Segments

Based on the location and configuration of the proposed project, the target market segments are households most likely to live in multi-family housing, and may include both renters and home owners. These households are typically comprised of one or two persons, including couples without children. The BELD site's key assets would be important elements of the lifestyle of these target market segments. These assets include the close proximity to public transportation, to regional highways, to neighborhood commercial district, to parks and recreation and to waterfront access. Based on the project planning to date, the decision on whether to develop the

property as a rental apartment building or as a condominium may be influenced by relative market demand, the expected time period for unit absorption and other factors such financial return on investment, the availability of project financing (if applicable), and any requirements related to public development incentive. The following is an overall housing market review and comparable projects.

MARKET REVIEW

Demographic and Housing Trends

Data in **Table 1** show demographic trends in the Town of Braintree compared to the Commonwealth of Massachusetts. Between 2000 and 2010, the population in Braintree increased 5.7 percent from 33,800 to 35,700. The rate of population increase was higher than the statewide increase of 3.1 percent. Like the rate of population increase, the number of occupied housing units (i.e. households) in Braintree increased at a higher rate than the Commonwealth as a whole between 2000 and 2010. In 2010, there were an estimated 13,736 occupied housing units in Braintree out of a total number of 14,302 units for an overall occupancy rate of 96 percent of total housing units, which was higher than the state's overall occupancy rate.

Between 2000 and 2010, the average annual increase in the number of housing units was 114 units per year. While owner occupied housing units account for 70 percent of the total number occupied units in Braintree, the number of rental housing units have been increasing faster than the number of owner occupied units. The average annual increase in the number of rental units was 84, compared to the average increase of 30 owner occupied units. It should be noted that these additional units might reflect the addition of new renter and owner-occupied units to the overall housing supply, as well as the conversion of owner-occupied units to rental units.

Table 1
Demographic and Housing Trends in Braintree and Massachusetts

	Braintree					Massachusetts		
	2000	2010	Change	Annual Change	Percent Change	2000	2010	Percent Change
Demographics								
Population	33,828	35,744	1,916	192	5.7%	6,349,097	6,547,629	3.1%
Median Age	40.0	40.2	0.2	0.0	0.5%	36.5	39.1	7.1%
Housing Units								
Housing Units	12,921	14,302	1,381	138	10.7%	2,621,989	2,808,254	7.1%
Occupied Units	12,600	13,736	1,136	114	9.0%	2,443,580	2,547,075	4.2%
Percent Occupied	*97.5%*	*96.0%*	*-1.5%*	*-0.1%*	*-1.5%*	*93.2%*	*90.7%*	*-2.7%*
Vacant Units	321	566	245	25	76.3%	178,409	261,179	46.4%
Housing Occupancy Status								
Owner Occupied	9,750	10,050	300	30	3.1%	1,508,052	1,587,158	5.2%
Percent Owner Occupied	*75.5%*	*70.3%*	*-5.2%*	*-0.5%*	*-6.9%*	*57.5%*	*56.5%*	*-1.7%*
Renter Occupied	2,850	3,686	836	84	29.3%	935,528	959,917	2.6%
Percent Renter Occupied	*22.1%*	*25.8%*	*3.7%*	*0.4%*	*16.8%*	*35.7%*	*34.2%*	*-4.2%*
Households								
Total Households	12,600	13,736	1,136	114	9.0%	2,443,580	2,547,075	4.2%
Family Households	8,877	9,214	337	34	3.8%	1,576,696	1,603,591	1.7%
Percent Family Households	*70.5%*	*67.1%*	*-3.4%*	*-0.3%*	*-4.8%*	*64.5%*	*63.0%*	*-2.4%*
Avg. Household Size	2.61	2.56	-0.05	-0.005	-1.9%	2.51	2.48	-1.2%
Avg. Family Size	3.16	3.18	0.02	0.002	0.6%	3.11	3.08	-1.0%
Income and Employment [1/]								
Median Houshold Income	$65,969	$83,710	$17,741	$1,774	26.9%	61,822	65,981	6.7%
Median Family Income	$80,550	$97,262	$16,712	$1,671	20.7%	73,552	83,371	13.3%
Workers 16 years and over	16,761	17,750	989	99	5.9%	3,102,837	3,202,521	3.2%
Workers as a Percent of Population	*49.5%*	*49.7%*	*0.1%*	*0.0%*	*0.2%*	*48.9%*	*48.9%*	*0.1%*
Commute to Work on Public Transportation	1,495	2,325	830	83	55.5%	270,742	291,160	7.5%
Percent of Workers Commuting on Public Transportation	*8.9%*	*13.1%*	*4.2%*	*0.4%*	*46.9%*	*8.7%*	*9.1%*	*4.2%*

1/ 2010 data for income and employment actually 5-year average (2007-2011) of American Commmunity Survey. 2000 data from 2000 Census long form. The Census long form was replaced by the American Community Survey. 2000 income data inflacted to 2011 dollars using Consumer Price Index.

Source: 2000 and 2010 Census, US Census Bureau, and ConsultEcon, Inc.

Housing Available for Rent

Data in **Table 2** summarize asking rents based on current listings for rental housing in Braintree and Weymouth from the Multiple Listing Service. Units in Weymouth are included because of the subject site's location near Weymouth and the overall similarity of rental prices in these two towns. Overall, there were 24 units listed for rent, with a range of rents from $1,100 to $2,800 per month. The median rent was $1,700 per month for available rental housing. The majority of the available units were 2 and 3 bedroom units. Two bedroom units averaged 1,100 SF, with average asking rents of $1,500 per month, or $1.37 per month per SF.

Table 2
Summary of For Rent Listings in Braintree and Weymouth

	Rent	Size in SF	Rent / SF
Number	25	25	25
High	$2,800	2,500	$2.75
Low	$1,100	400	$1.00
Median	$1,700	1,250	$1.33
Average	$1,766	1,306	$1.45

Number of Beds	Number	Average Rent	Average SF	Average Rent / SF
1	4	$1,100	650	$1.84
2	9	$1,528	1,099	$1.42
3	8	$2,150	1,654	$1.37
4	2	$2,300	1,813	$1.27
5	1	$2,800	2,300	$1.22
Average of All [1/]	**24**	**$1,766**	**1,306**	**$1.45**

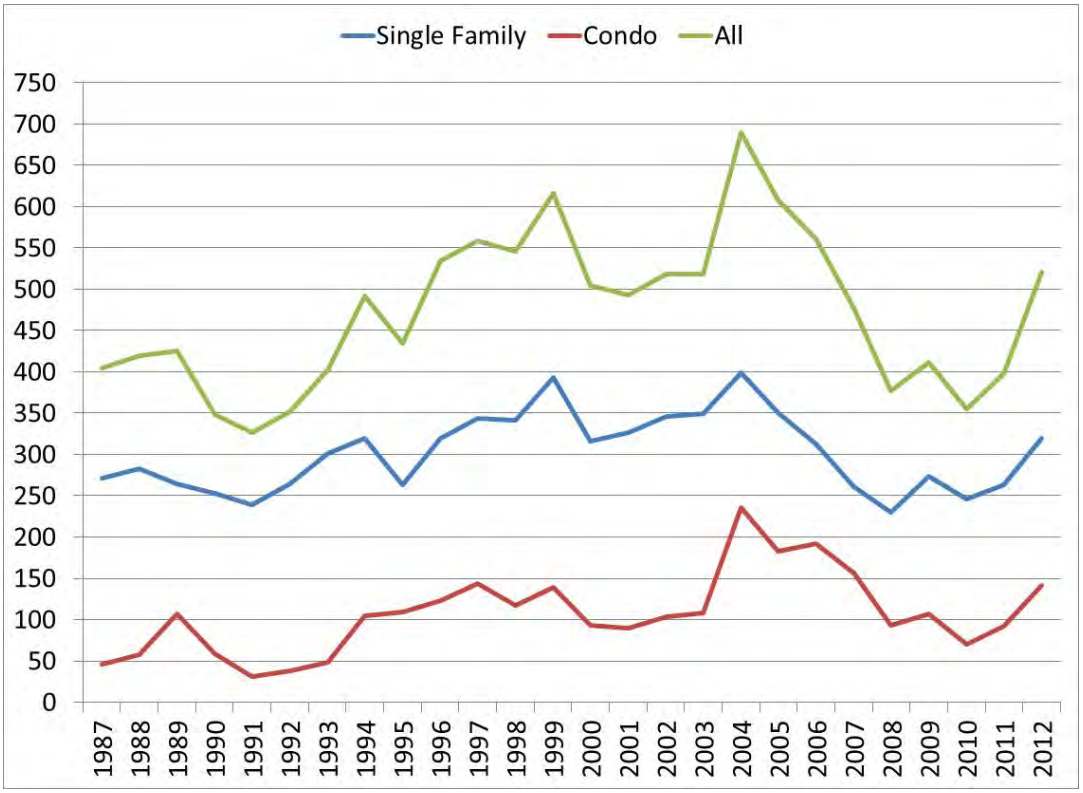
1/ One apartment listing did not identify the number of bedrooms and therefore is not reflected in the bottom section of this table.

Source: themlsonline.com retrieved on May 6, 2013 and ConsultEcon, Inc.

Trend in Condo Sales and Prices

Data in **Figure 2** show the trend in the number of sales of condos and single family homes in Braintree. The number of condo sales in Braintree peaked at 236 sales in 2004 and reached a low of 70 in 2010. Between 2010 and 2012, the number of condos sold annually has increased steadily, reflecting a strengthening real estate market. There were 142 condo sales in Braintree in 2012, as shown by data in Figure 2.

Figure 2
Number of Annual Sales of Condos and Single Family Homes in Braintree, MA

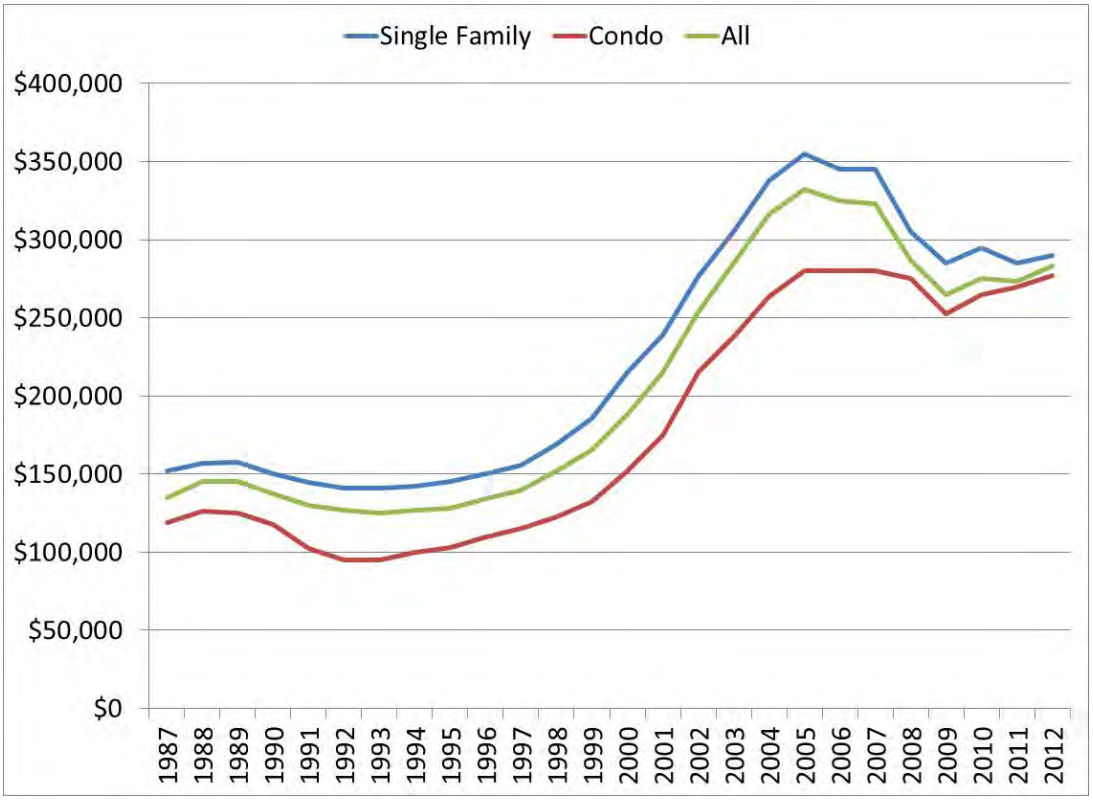


Source: The Warren Group and ConsultEcon, Inc.

Data in **Figure 3** show the trend in the median sales price of condos and single family homes in Braintree. The median sales price for a condo in Braintree peaked at $280,000 in 2005, 2006 and 2007, and reached a low of $253,000 in 2009. Like sales transactions, the median price of condos has increased steadily each year since then, reaching $277,000 in 2012.

As shown by data in Figure 3, the gap between the median price of condos and the median price of single family homes in Braintree has narrowed.

Figure 3
Annual Median Sales Price Trend for Condos and Single Family Homes in Braintree, MA



Source: The Warren Group and ConsultEcon, Inc.

Housing Available for Sale

Based on the type of project proposed for the BELD site, the for-sale market for condo housing was reviewed, and sales of single family homes were excluded. Data in **Table 3** summarize asking prices based on current listings for sale condo housing in Braintree and Weymouth from the Multiple Listing Service. The asking prices for 82 available condos ranged considerably, from $75,000 to $550,000. Prices per square foot ranged from $108 to $320. Two bedroom units accounted for most of the condos for sale in the market. (The large number of 2-bedroom units was largely due to the availability of 27 condos in one recently constructed condo project in Braintree, Jonathan's Landing.) Two-bedroom units had an average listing price of $270,000 and an average of 1,220 SF of space. The average price per SF was $217. One-bedroom units had an average listing price of $133,000 and an average of 650 SF of space. The average price per SF was $202.

Table 3
Summary of For Sale Condo Listings in Braintree and Weymouth

	Price	Size in SF	Price / SF
Number	82	82	82
High	$549,900	2,500	$320
Low	$74,800	395	$108
Median	$244,400	1,200	$216
Average	$250,821	1,174	$212

Number of Beds	Number	Average Price	Average SF	Average Price / SF
1	16	$133,081	654	$202
2	57	$269,904	1,221	$217
3	8	$352,325	1,751	$202
4	1	$234,900	2,181	$108
Average of All	**82**	**$250,821**	**1,174**	**$212**

Source: themlsonline.com retrieved on May 6, 2013 and ConsultEcon, Inc.

2012 Condo Sales in Braintree

Data in **Table 4** show a breakdown of 1- and 2-bedroom condos sold in Braintree in 2012. Sales of condominiums in Braintree are dominated by large condo communities, several of which contain hundreds of units. The average price of 12 1-bedroom condos sold in Braintree was $237,000. The average size of 1-bedroom condos sold was 900 SF and the average price per SF was $261. The average price of 54 2-bedroom condos sold in Braintree was $274,000. The average size of 2-bedroom condos sold was 1,250 SF and the average price per SF was $219.

Table 4
2012 Sales of 1- and 2-Bedroom Condos in Braintree by Community

		1-Bedroom Condo Sales				2-Bedroom Condo Sales			
Name	Year Built	Number Sold	Average Price	Average SF	Average Price per SF	Number Sold	Average Price	Average SF	Average Price per SF
Turtle Crossing	2004	3	$164,805	820	$201	10	$222,340	1,067	$208
Jonathan's Landing	2013	7	$281,987	982	$288	27	$328,000	1,413	$234
Devon Woods	1995		None Sold			6	$221,483	1,046	$212
Braintree Hills	1996		None Sold				None Sold		
Braintree Heights	1960's		None Sold				None Sold		
614 Pond Street	2006	2	$190,000	734	$260	7	$197,157	1,128	$174
660 Union Street	1983		None Sold			2	$192,450	966	$199
632 Washington St	1983		None Sold			2	$315,500	1,290	$245
Subtotal Communities		**12**	**$237,361**	**900**	**$261**	**54**	**$274,111**	**1,248**	**$219**
Other Condos		0				2			
Total Condos		**12**				**56**			

SF = Square Feet

Source: The Warren Group and ConsultEcon, Inc.

COMPARABLE PROJECTS

This section reviews selected multi-family housing projects as an input into this housing market assessment. Projects were selected based on a variety of comparable factors including the number of units, the size and configuration of the units, a location in Braintree or Weymouth, and proximity to the waterfront and to the Weymouth Landing / East Braintree train station. There are few comparable multi-family developments of a similar size and scale to the one proposed for the BELD site. However, the following projects were identified, as providing the most insight into the market context for the project, due primarily to their location near the site:

- 11 Brookside Rd., Braintree, MA
- Windjammer Cove Apartments, 79 Shaw St., Braintree, MA

Two additional projects were reviewed as an input to the market potential for the project, one in Braintree and one in Weymouth. While not proximate to the BELD site, they offer additional market insights due to their size and configuration. These include:

- 1535 Commercial St., Weymouth, MA
- Residences at Hancock Village (145 Hancock Street) Braintree, MA

Data in **Table 5** reviews these selected comparable projects to inform the market potential of multi-family housing on the BELD site. **Figure 6** through **Figure 9** show photos of each project.

Table 5
Characteristics of Selected Comparable Projects

	11 Brookside Rd.	Windjammer Cove Apartments	1535 Commercial St.	Residences at Hancock
Year Built	2007	Over 40 years old	2008	2007
Type	Owner	Rental	Owner	Owner
Description	11 units, townhouses New construction	72 units, 6 buildings three floors with 12 units each Pool, tennis court, balconies / patios with river views	10 units, townhomes New construction	Reuse of 40-year old, 3 story brick building 30 total units includes 3 affordable units
Unit Size	All units are 2 bedrooms 9 units, 1,418 SF with 2 full baths 2 units, 1,078 with 1.5 baths	All units are 2 bedrooms, 1 bathroom, and 830 SF	All units are 2 bedrooms, with 1.5 bathrooms All units 1,092 SF	All 2 bedroom units, with 1 or 2 bathrooms Units range in size from 819 to 1,219 – only three units over 1,000 SF, with most units in the 850 to 950 range
Parking	1 spot per unit	1 assigned, 1 unassigned spot per unit	2 spots per unit	30 car parking garage and 30-car outdoor parking lot plus 3 handicapped accessible spots
Sales Price	Large unit prices: initial sales ranged from $286,000 to $312,000 Smaller units sold for $270,000	$1,300 per month	Most units sold for approximately $250,000, with one unit, the first one sold for $265,000	Market rate units ranged in sales price from $220,000
Price per SF	Large units - $202 - $220 per SF Small units - $250 per SF	$1.56 per month	$227 to $242 per SF	$215 to $299 Larger units and ground floor units at low end, most other units in $260 to $290 range
Absorption / Occupancy	All units sold over an 17 month period between January, 2009 and May, 2010	100% occupancy	All units sold over a 7 month period, between June, 2009 and December, 2009	All units sold over a 17 month period, between June, 2008 and October, 2009
Re -sales	Re-sales of 2 larger units at $285,000 and $290,000 in 2012, slightly lower than units first sold for	Not applicable	Re-sales of one unit at $269,000, increase of almost $20,000 from initial sales price	4 re-sales reflect stable priced

Source: Warren Group and ConsultEcon, Inc.

Figure 4
Photos of 11 Brookside Rd., Braintree

Source: Gamble Associates.

Figure 5
Photos of 1535 Commercial St., Weymouth

Source: Gamble Associates.

Figure 6
Photo of Windjammer Cove

Source: Gamble Associates (top) and apartments.com (bottom).

Figure 7
Photos of Residences at Washington Hancock

Source: http://www.dibbledot.com/WH/

PRELIMINARY ASSESSMENT OF MARKET POTENTIAL

Based on a review of the project and location, rental and for-sale housing market data and comparable multi-family housing projects, the following section establishes a range of rental and condominium pricing for the project. Data in **Table 6** identify a range in rental pricing and gross annual income for each reuse scenario. Data in **Table 7** identify a range in condominium sales prices. It should be noted that this analysis evaluates the market potential of market-rate housing only. If required by the Town of Braintree or by potential sources of funding, affordable units would be priced lower based on the income and size of the resident household and thereby lower the annual gross rental income or the total sales of the project as appropriate.

Table 6
Preliminary Assessment of Potential Pricing as Rental Project

			Monthly Rent per SF		Total Monthly Rent per Unit		Annual Gross Rental Income	
Option	Units	Average Unit Size	Low Range	High Range	Low Range	High Range	Low Range	High Range
Reuse Option # 1	8	815	$1.50	$1.70	$1,223	$1,386	$117,360	$133,008
Reuse Option #2 [1/]	8	815	$1.58	$1.79	$1,284	$1,455	$123,228	$139,658
Reuse Option #3								
Large Units	3	1,380	$1.35	$1.55	$1,863	$2,139	$67,068	$77,004
Small Units	8	1,170	$1.45	$1.65	$1,697	$1,931	$162,864	$185,328
Total	**11**	**13,500**					**$229,932**	**$262,332**
Average		**1,227**	**$1.42**	**$1.62**	**$1,742**	**$1,987**		
Reuse Option #4 [1/]								
Large Units	3	1,380	$1.42	$1.63	$1,956	$2,246	$70,421	$80,854
Small Units	8	1,170	$1.52	$1.73	$1,781	$2,027	$171,007	$194,594
Total	**11**	**13,500**					**$241,429**	**$275,449**
Average		**1,227**	**$1.49**	**$1.70**	**$1,829**	**$2,087**		

1/ Assumes a 5% increase in price for private balconies and shared roof terrace.

Source: ConsultEcon, Inc.

Table 7
Preliminary Assessment of Potential Pricing as Condominiums for Sale

Option	Units	Average Unit Size	Price per SF Low Range	Price per SF High Range	Unit Price Low Range	Unit Price High Range	Total Sales Low Range	Total Sales High Range
Reuse Option # 1	8	815	$240	$260	$195,600	$211,900	$1,564,800	$1,695,200
Reuse Option #2 [1/]	8	815	$252	$273	$205,380	$222,495	$1,643,040	$1,779,960
Reuse Option #3								
Large Units	3	1,380	$210	$230	$289,800	$317,400	$869,400	$952,200
Small Units	8	1,170	$235	$255	$274,950	$298,350	$2,199,600	$2,386,800
Total	**11**	**13,500**					**$3,069,000**	**$3,339,000**
Average		**1,227**	**$227**	**$247**	**$279,000**	**$303,545**		
Reuse Option #4 [1/]								
Large Units	3	1,380	$221	$242	$304,290	$333,270	$912,870	$999,810
Small Units	8	1,170	$247	$268	$288,698	$313,268	$2,309,580	$2,506,140
Total	**11**	**13,500**					**$3,222,450**	**$3,505,950**
Average			**$239**	**$260**	**$292,950**	**$318,723**		

1/ Assumes a 5% increase in price for private balconies and shared roof terrace.

Source: ConsultEcon, Inc.

Discussion of Project Pricing and Absorption

There is a direct relationship between unit pricing and absorption. The higher the pricing relative to other available comparable housing, the longer the units will take to be absorbed by the marketplace. The pricing levels shown in Table 6 and Table 7 reflect relatively high pricing scenarios because there are limited comparable multi-family projects in Braintree, especially close by Weymouth Landing. Because of the unique nature of the project and the relatively high price points, it is assumed that the units will be absorbed over a period of 3 to 9 months, based on current market conditions and timing of sales during the year. As project planning and development advance, the development program, and market conditions change, it will be necessary to revisit these pricing and absorption assumptions for the project.

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MEMO

RE: 3 Possible Futures Braintree Electric Light Department – Landscape Perspective

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In pursuing spatial ideas about the landscape for the BELD site, the idea of maintaining flexibility has emerged as a top priority. The three themed strategies: Arts + Culture, Wellness, and Active Adult Community all have meritous spatial landscape components and programming idea about them, but each, at the same time, results in a somewhat limiting set of possibilities and vision for the site possible resulting in a landscape that is perceived as being welcoming to segments of the population instead of all. Ideally, components of each scheme will be considered and combined into a landscape strategy that strikes a balance of being inviting to people of all ages, interests and physical mobility to enjoy passive river edge recreation while respecting that this open space also serves as the front yard to a set of residents.

Specific considerations of each unique scheme is as follows:

Option 1: Arts+Culture:

The key landscape spatial component of this scheme is the amphitheater. Outdoor amphitheaters can be wonderful venues for outdoor cultural performing arts activities, but they must be supported by a administrative programming in order to be successful. There are few things more challenging in a landscape than an amphitheater that rarely can be supported with programming because it is a constant reminder to people that the space could have been used otherwise and can't because of the grading and seating walls.

Pursuing instead an open lawn area that could accommodate a temporary stage and allow people to bring their own lawn chairs to hear or watch a performance is a less formal and more flexible strategy to consider. This would not prohibit a performance or gathering to happen, and also would not tie the overall site strategy to a big move that would limit other uses and need on-going administrative programming support to be truly successful.

Option 2: Wellness Center

The significant landscape move in this option is for a series of walking paths, pavilions, and gardens for a quiet experience on the site. Additionally, a launching point for non-motorized water craft is also included in this scheme. The passive recreational concept here works well as an overall framework strategy and can be further pursued to ensure that other activities could also be included as mentioned above. More specifically, the construction of pavilions may be too formal and structured a strategy resulting in overly prescribed locations of gathering. Instead it may be worthwhile to pursue places to picnic within the tree canopy for shade, but without adding the visual noise of additional structures to the site.

Option 3: Active Adult Community

The spine of gardens parallel to the river is the big landscape move in this strategy. This site may in fact be conducive to a community garden strategy, but, as in Option 1 with the amphitheather it would be important to consider the need for management of the gardens. Unlike a dense city condition, most people living in Braintree own property on which they can garden. It therefore seems unlikely that most residetns would be interested in pursuing another location which would require using transportation, to garden. While it may be reasonable to pursue garden space for the residents as an option, extending garden space to other non-residents would present a series of management problems that could result in the site looking unkempt and then by extension being less used or valued.

Other considerations:

Materiality:

Materialty should be reflective of the existing building architecture and any proposed renovations while mediating with the river edge landscape. It will be important to make the open space read as being only part of the river edge and also not purely identifiable as part of the converted BELD buidings. This strategy will hold for the hardscape materials: paving, fencing, furnishings, as well as the planting material which should enhance and not detract from the naturalistic river corridor.

Programming:

Programming of the site needs to be carefully considered and should strike a balance of not eliminating possibilities for spontaneous gathering or activity whether it be a performance or a

pick-up Frisbee toss, and not being left too openended that the site lacks clarity. Commitment to any specialized court (bocce, basketball or other) that need a specific surface, size and shape in order to be successful must be carefully considered.

Braintree Electric Light Department
SWITCH HOUSE RESIDENTIAL UNITS

STRUCTURAL NARRATIVE

July 16th, 2013

1.0 EXISTING CONDTIONS

The existing 2-story Switch House at the former Braintree Electric Light Department site is a steel framed structure built into a significant slope. Information regarding the existing structure is drawn from original drawings dated February 1948, a Structural Conditions Assessment Report by AECOMM dated January 13, 2011, and a site visit by RSE on March 26, 2013.

The existing foundations consist of a large retaining wall along the high side of the site, interior footings on rock, and caissons. The lower level structure is a slab on grade. At the upper level, steel framing supports a 6" structural slab. The roof structure consists of long span truss joists identified as "Bethlehem Long Span". Exterior walls are brick masonry and some interior walls at the lower level appear to be CMU. It is assumed that the masonry provides lateral stability to the building.

The most recent use of the building included switch gear and vehicle maintenance on the lower level and offices on the upper level.

The AECOMM report concluded that the existing structural was generally sound and suitable for redevelopment with the possible exception of the roof. Due to limited access, AECOMM was unable to evaluate the roof structure.

Two older structures are connected to the main portion of the Switch House along the west side. It is understood that these elements will be demolished as part of the proposed renovations.

2.0 PROPOSED RENOVATIONS AND ADDITION

The proposed redevelopment of the Switch House involves converting the utility structure into a residential, multi-unit facility. Portions of the lower level will be used for parking with residential space along the south side of the building, looking out towards the Monatiquot River. The upper level will consist of residential units and a third level may be added above. This scope of work is expected to require seismic evaluation and may require upgrades to the building. These may include steel bracing which may require additional foundations.

The general design for this renovation has not been finalized and several options are under consideration. These include:

Option 1
- Retain existing structure and reconfigure interior space.

- No structural scope is anticipated for this option.

Option 2
- Replace existing roof.
- Reconfigure interior space.
- Add green roof or roof terraces above.
- Add balconies at the first floor (street) level.
- Structural scope:
    - New steel framing at the roof level designed for the higher roof loads.
    - Extend existing columns from the first floor to the roof.
    - Provide structure to support new balconies.
    - Perform seismic evaluation to review the additional roof loads.

Option 3
- Replace existing roof.
- Reconfigure interior space.
- Add third floor over the existing structure.
- Structural scope:
    - New steel framing at the current roof/ future floor level.
    - Extend existing columns from the first floor through the future floor level to the proposed roof.
    - Perform seismic evaluation to review additional loads.
    - Seismic upgrades as required.

Option 4
- Replace existing roof.
- Reconfigure interior space.
- Add third floor over the existing structure.
- Add balconies at the first (street) and second (propoased) levels.
- Structural scope:
    - New steel framing at the current roof/ future floor level.
    - Extend existing columns from the first floor through the future floor level to the proposed roof.
    - Provide structure to support new balconies.
    - Perform seismic evaluation to review additional loads.
    - Seismic upgrades as required.