

# **ENVIRONMENTAL REVIEW REPORT**

**Community Development Block Grant – Disaster Recovery  
Owner Occupied Rehabilitation and Rebuilding Program**

**Applicant # 2112**

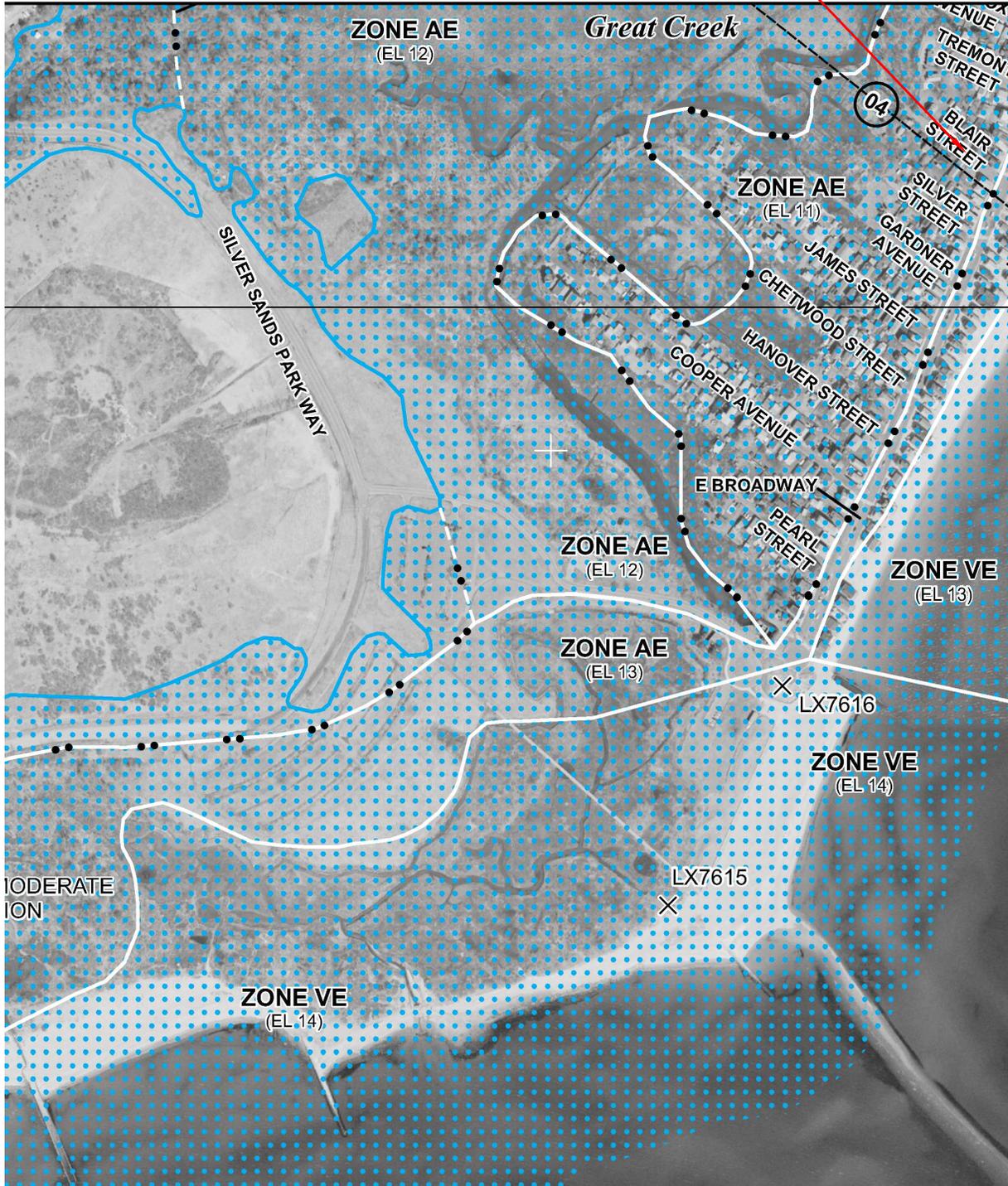
**13 Blair Street  
Milford, Connecticut**

**January 20, 2015**

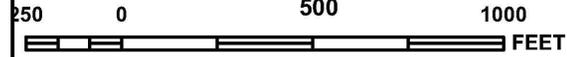
**Prepared by:**

**Diversified Technology Consultants  
2321 Whitney Avenue  
Hamden, Connecticut 06518**

PROPERTY LOCATION



MAP SCALE 1" = 500'



LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD  
The 1% annual chance flood (100-year flood), also known as the "base flood," is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
  - ZONE A** No Base Flood Elevations determined.
  - ZONE AE** Base Flood Elevations determined.
  - ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
  - ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
  - ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
  - ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
  - ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
  - ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
  - FLOODWAY AREAS IN ZONE AE  
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
  - OTHER FLOOD AREAS
  - ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
  - OTHER AREAS
  - ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
  - ZONE D** Areas in which flood hazards are undetermined, but possible.
  - COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
  - OTHERWISE PROTECTED AREAS (OPAs)
- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% Annual Chance Floodplain Boundary

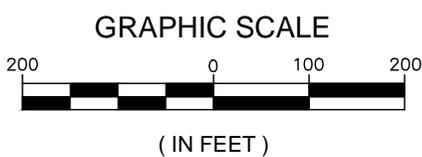
JOINS PANEL 0533

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

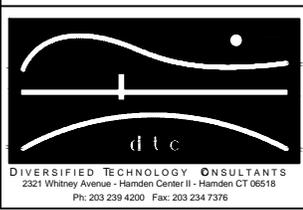


**Wetlands**

	Estuarine and Marine Deepwater
	Estuarine and Marine Wetland
	Freshwater Emergent Wetland
	Freshwater Forested/Shrub Wetland
	Freshwater Pond
	Lake
	Other
	Riverine



MAP SOURCE: U.S. FISH AND WILDLIFE SERVICE

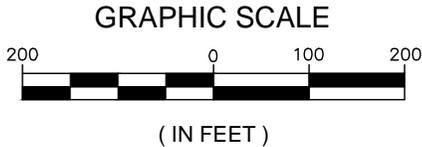
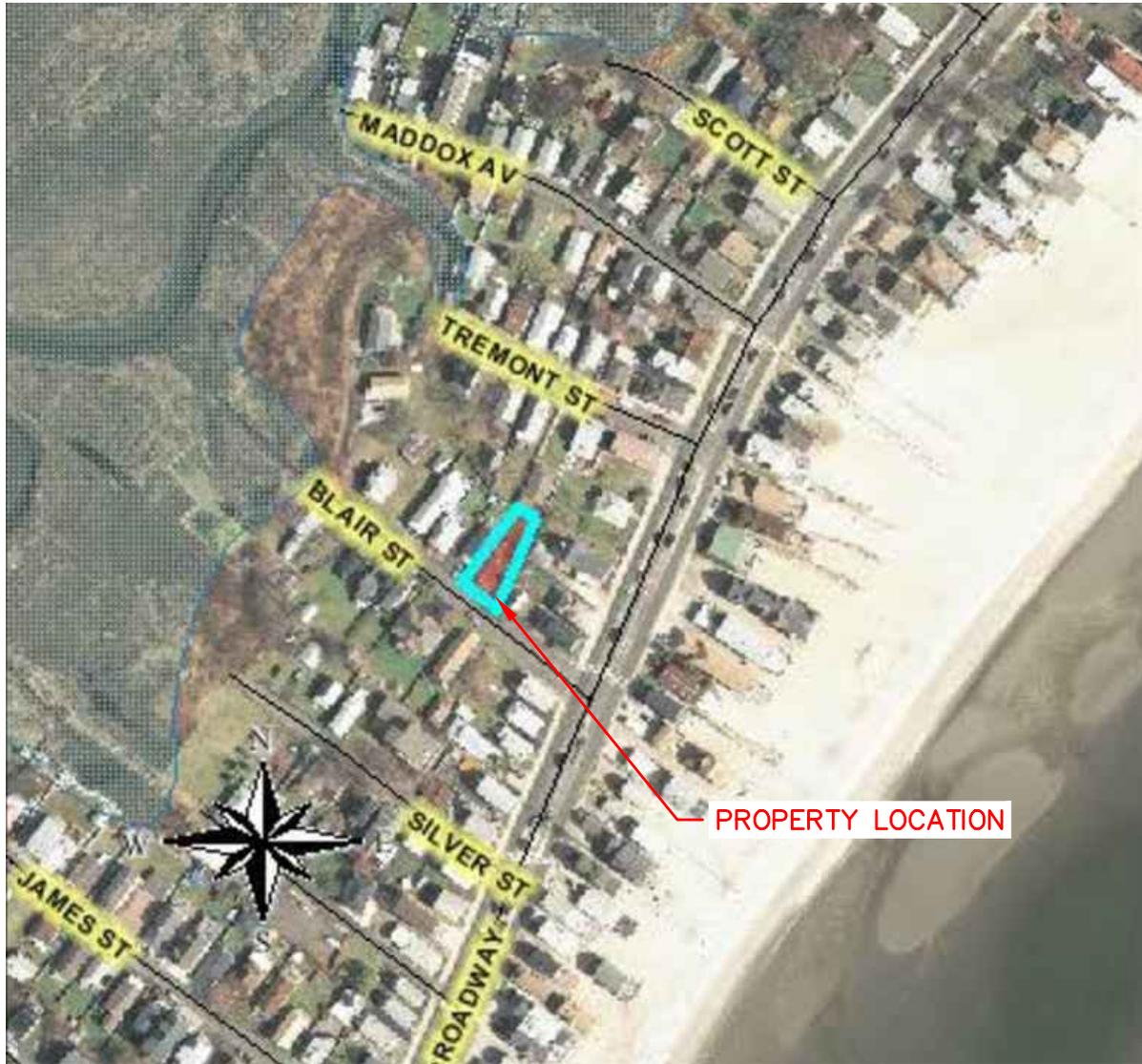


DEPARTMENT OF HOUSING  
 COMMUNITY DEVELOPMENT BLOCK GRANT  
 DISASTER RECOVERY  
 13 BLAIR STREET  
 MILFORD, CT

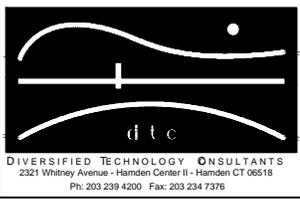
PROJECT NUMBER: 13-449-024    APPLICANT NO: 2112

ATTACHMENT 2  
 WETLANDS MAP

SCALE: 1"=200'    DRAWN BY: EPZ  
 DATE: 01/12/2015    CHECKED BY: JAB



MAP SOURCE: TOWN OF MILFORD GIS

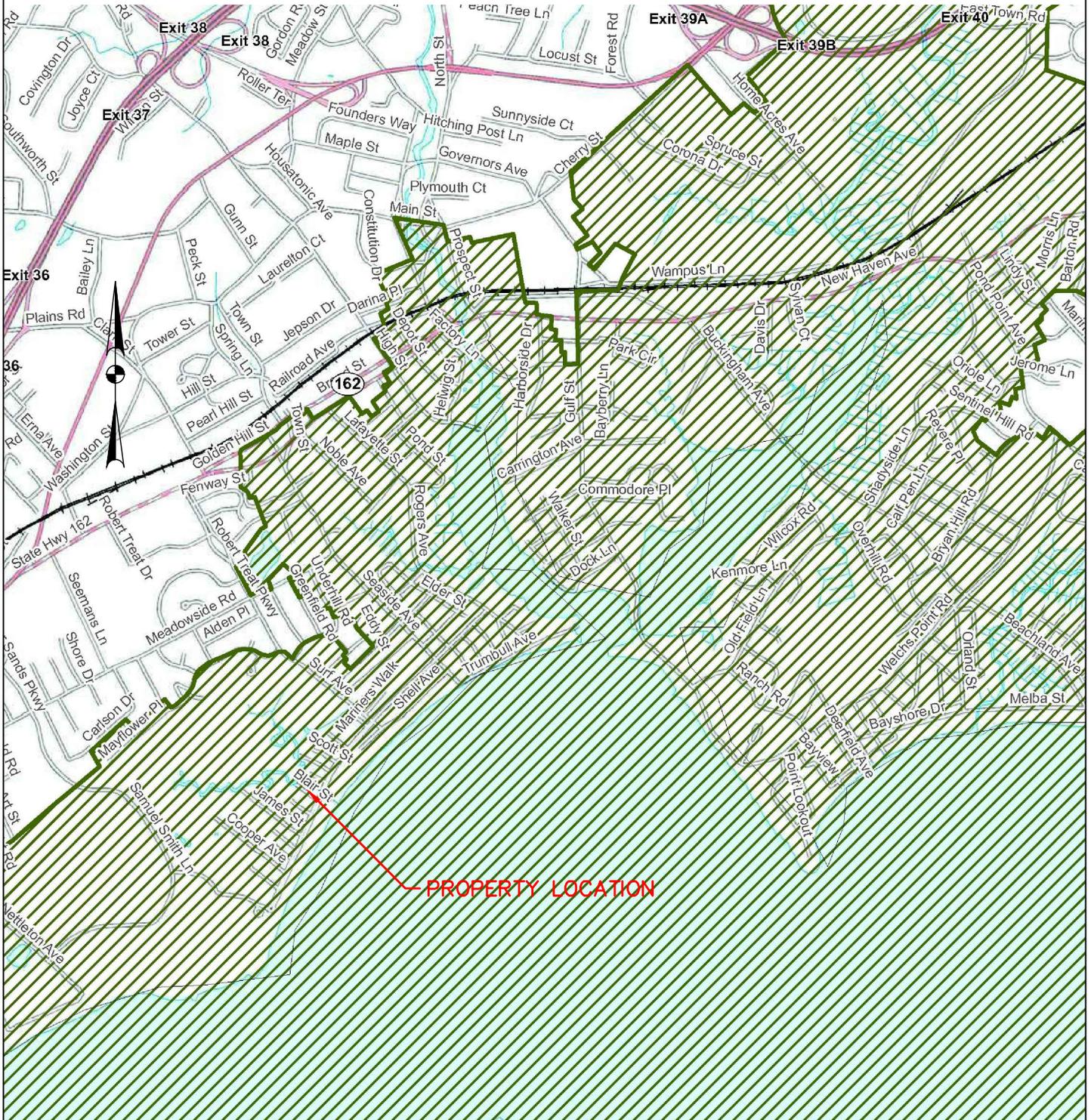


DEPARTMENT OF HOUSING  
 COMMUNITY DEVELOPMENT BLOCK GRANT  
 DISASTER RECOVERY  
 13 BLAIR STREET  
 MILFORD, CT

PROJECT NUMBER: 13-449-024    APPLICANT NO: 2112

ATTACHMENT 3  
 WETLANDS MAP

SCALE: 1"=200'    DRAWN BY: EPZ  
 DATE: 01/12/2015    CHECKED BY: JAB

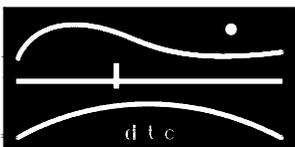


Coastal Boundary

GRAPHIC SCALE



( IN FEET )



DIVERSIFIED TECHNOLOGY CONSULTANTS  
2321 Whitney Avenue - Hamden Center II - Hamden CT 06518  
Ph: 203 239 4200 Fax: 203 234 7376

DEPARTMENT OF HOUSING  
COMMUNITY DEVELOPMENT BLOCK GRANT  
DISASTER RECOVERY

13 BLAIR STREET  
MILFORD, CT

ATTACHMENT 4  
CAM AREA MAP

SCALE: 1"=2000'

DRAWN BY: EPZ

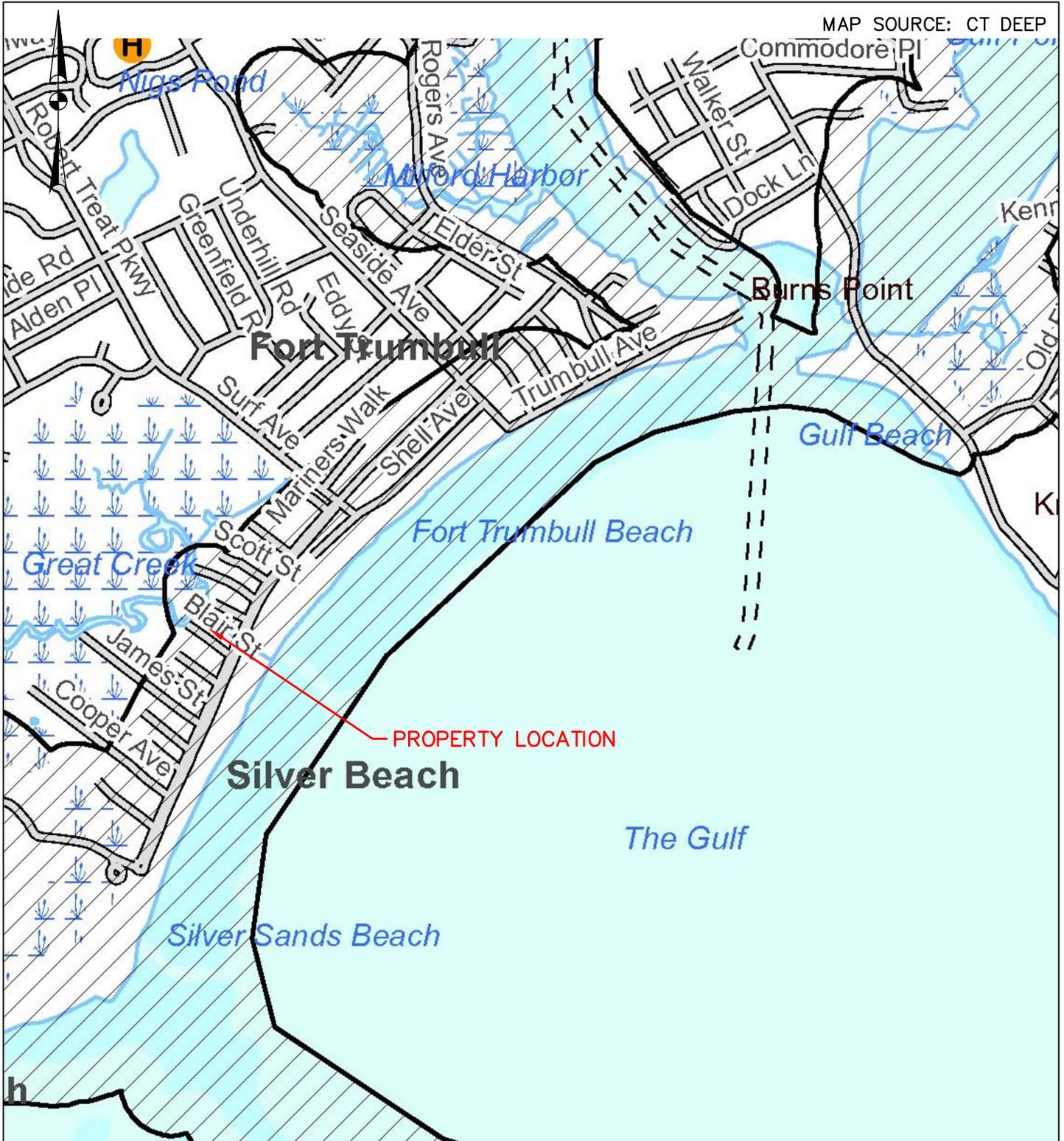
PROJECT NUMBER: 13-449-024

APPLICANT NO:

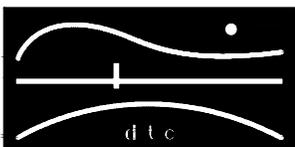
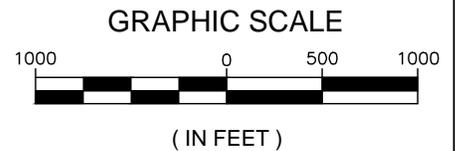
2112

DATE: 01/12/2015

CHECKED BY: JAB



 State and Federal Listed Species and Significant Natural Communities\*



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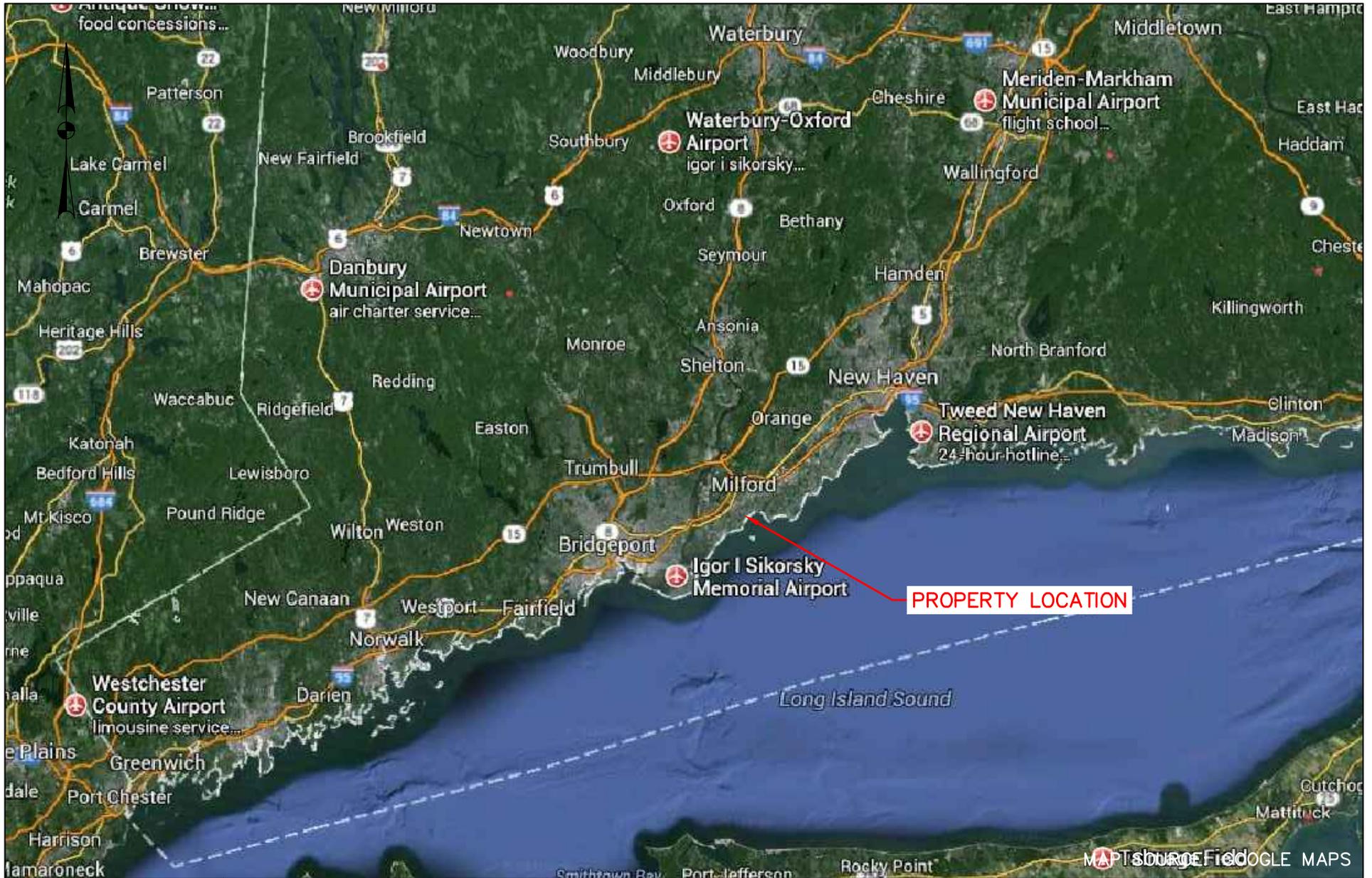
DEPARTMENT OF HOUSING  
COMMUNITY DEVELOPMENT BLOCK GRANT  
DISASTER RECOVERY

13 BLAIR STREET  
MILFORD, CT

ATTACHMENT 5  
NDDB AREAS

SCALE: 1"=1000'	DRAWN BY: EPZ
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DEPARTMENT OF HOUSING  
 COMMUNITY DEVELOPMENT BLOCK GRANT  
 DISASTER RECOVERY  
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 MILFORD, CT

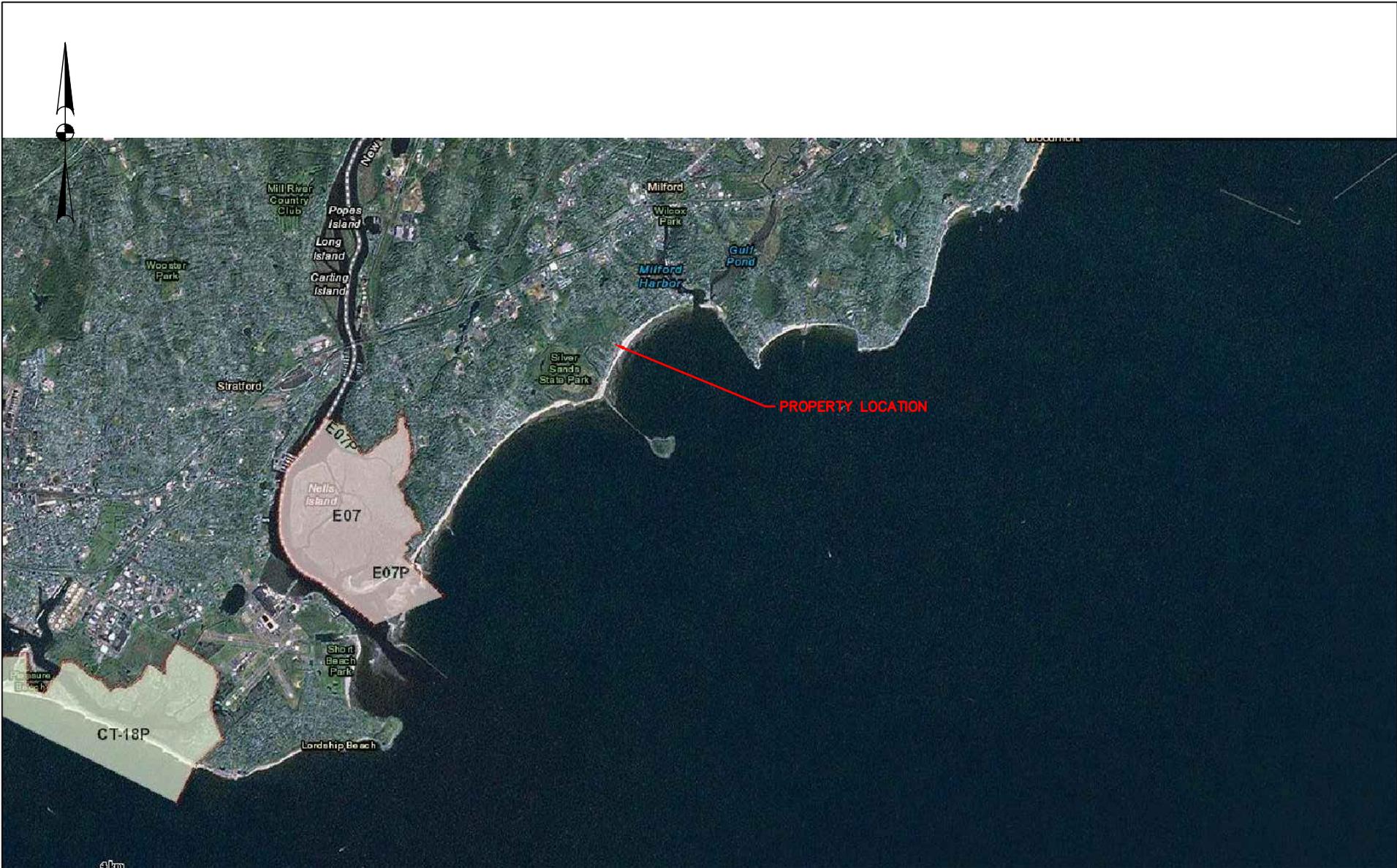
PROJECT NUMBER: 13-449-024

ATTACHMENT 6  
 AIRPORT VICINITY MAP

SCALE: NTS  
 DATE: 01/12/15

DRAWN BY: EPZ  
 CHECKED BY: JAB

APPLICANT NO: 2112



MAP SOURCE: U.S. FISH AND WILDLIFE SERVICE



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DEPARTMENT OF HOUSING  
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 DISASTER RECOVERY

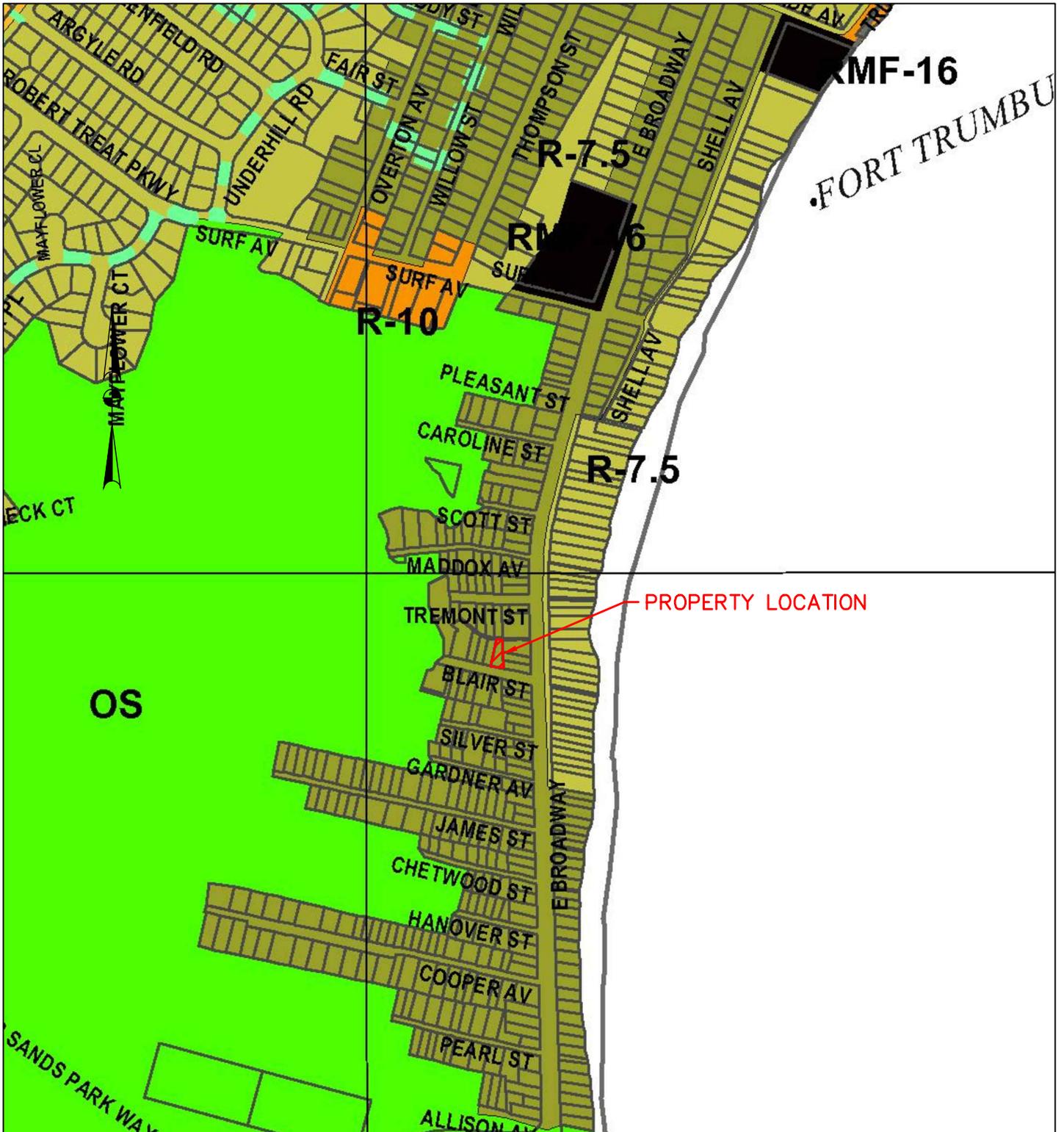
13 BLAIR STREET  
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ATTACHMENT 7  
 COASTAL BARRIER MAP

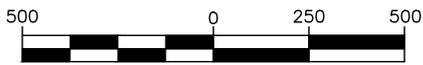
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DATE: 01/12/15	CHECKED BY: JAB

PROJECT NUMBER: 13-449-024

APPLICANT NO: 2112

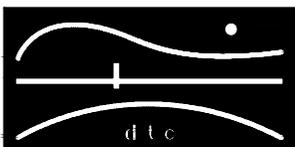


**GRAPHIC SCALE**



( IN FEET )

MAP SOURCE: TOWN OF MILFORD GIS



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Ph: 203 239 4200 Fax: 203 234 7376

DEPARTMENT OF HOUSING  
COMMUNITY DEVELOPMENT BLOCK GRANT  
DISASTER RECOVERY

13 BLAIR STREET  
MILFORD, CT

ATTACHMENT 8  
ZONING MAP

SCALE: 1"=500'

DRAWN BY: EPZ

DATE: 01/12/2015

CHECKED BY: JAB

PROJECT NUMBER: 13-449-024

APPLICANT NO: 2112



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 COMMERCIAL STREET, SUITE 300  
CONCORD, NH 3301  
PHONE: (603)223-2541 FAX: (603)223-0104  
URL: [www.fws.gov/newengland](http://www.fws.gov/newengland)

Consultation Code: 05E1NE00-2015-SLI-0199

January 09, 2015

Event Code: 05E1NE00-2015-E-00331

Project Name: 2112 Shapiro

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior  
Fish and Wildlife Service

Project name: 2112 Shapiro

## Official Species List

### Provided by:

New England Ecological Services Field Office

70 COMMERCIAL STREET, SUITE 300

CONCORD, NH 3301

(603) 223-2541

<http://www.fws.gov/newengland>

**Consultation Code:** 05E1NE00-2015-SLI-0199

**Event Code:** 05E1NE00-2015-E-00331

**Project Type:** \*\* Other \*\*

**Project Name:** 2112 Shapiro

**Project Description:** House to be raised to above 500 Yr flood elevation.

**Please Note:** The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior  
Fish and Wildlife Service

Project name: 2112 Shapiro

### Project Location Map:



**Project Coordinates:** MULTIPOLYGON (((-73.0630153 41.2050574, -73.0629215 41.2050272, -73.0630986 41.204775, -73.063225 41.2048436, -73.0630153 41.2050574)))

**Project Counties:** New Haven, CT



United States Department of Interior  
Fish and Wildlife Service

Project name: 2112 Shapiro

## Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	Status	Has Critical Habitat	Condition(s)
Red Knot ( <i>Calidris canutus rufa</i> )	Threatened		



United States Department of Interior  
Fish and Wildlife Service

Project name: 2112 Shapiro

## **Critical habitats that lie within your project area**

There are no critical habitats within your project area.

# ChemScope INDUSTRIAL HYGIENE • ENVIRONMENTAL CHEMISTRY

15 Moulthrop Street, North Haven, CT 06473-3686 • Phone (203) 865-5605 • Fax (203) 498-1610

Scott Feulner  
Diversified Technology Consultants (DTC)  
2321 Whitney Avenue, Suite 301  
Hamden, CT 06518

10/13/2014

**SITE 024 (SHAPIRO) – 13 BLAIR STREET, MILFORD CT  
APPLICATION #2112  
CS#186-16, 9/30/2014 AND 10/2/2014**

**PROJECT SUMMARY**

Demolition or Renovation	Renovate and Raise
Scope of Inspection	Renovation
CS#	CS#186-16
Date(s) of Inspection	9/30/2014 and 10/2/2014
Reports Dated	10/10/2014 and 10/13/2014
Occupied	Yes
Child <6 yrs residing	No
Heat on	Yes
Water on	Yes
Electricity on	Yes
Asbestos Inspected /Present	Yes / Yes
Lead Inspected /Present	No (Paint not scheduled to be disturbed by the work) / -
Lead Risk Assessment Done	No
Mold Inspected /Present	Yes / Yes
Radon Tested /Detected $\geq 4.0$ pCi/L	Yes / No

Please call me if there are any questions about this report or if you need further assistance.

Thank you for calling on us.



Dan Sullivan  
Vice President, Operations

**Report Distribution:**

Scott Feulner, DTC [Scott.Feulner@teamdtc.com](mailto:Scott.Feulner@teamdtc.com)  
Curtis Graham, DTC [graham.curtis@teamdtc.com](mailto:graham.curtis@teamdtc.com)  
Michael Casey, DTC [michael.casey@teamdtc.com](mailto:michael.casey@teamdtc.com)

**File Location:**

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Scott Feulner  
Diversified Technology Consultants (DTC)  
2321 Whitney Avenue, Suite 301  
Hamden, CT 06518

10/10/2014

**ASBESTOS PRE-RENOVATION INSPECTION  
SITE 024 (SHAPIRO) – 13 BLAIR STREET, MILFORD CT  
APPLICATION #2112  
CS#186-16, 9/30/2014, PAGE 1 OF 4**

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Limitations of the Inspection	4
Recommendations	4

**Attachments:**

- ACM Location Drawing – 1 page(s)
- PLM Certificate of Analysis report with chain of custody - 6 page(s)
- Sample location drawing(s) - 1 page(s)

**Report Distribution:**

Scott Feulner, DTC [Scott.Feulner@teamdtc.com](mailto:Scott.Feulner@teamdtc.com)  
Curtis Graham, DTC [graham.curtis@teamdtc.com](mailto:graham.curtis@teamdtc.com)  
Michael Casey, DTC [michael.casey@teamdtc.com](mailto:michael.casey@teamdtc.com)

**File Location:**

NAS AAUM-Reports\Asblnsp\SP-PRERENO\_2014.doc

**ASBESTOS PRE-RENOVATION INSPECTION  
SITE 024 (SHAPIRO) – 13 BLAIR STREET, MILFORD CT  
APPLICATION #2112  
CS#186-16, 9/30/2014, PAGE 2 OF 4**

**INTRODUCTION**

**EXECUTIVE SUMMARY:** Asbestos containing materials (ACM) were detected within the scope of this inspection and will need to be properly removed and disposed of prior to renovation that would disturb these materials. Abatement work must be done by a licensed asbestos abatement contractor using proper procedures and practices with licensed and trained individuals.

**BUILDING DESCRIPTION:** The subject building is a single-family, two-story, conventional-style house totaling approximately 1250 SF, which was built in 1920 of wood-frame construction. Heat is supplied from a boiler on the first floor. The boiler was replaced after hurricane Sandy and had no suspect accessible components. At the time of our inspection the heat, electricity and water were all in service and the house was occupied.

**BACKGROUND:** We understand the subject house suffered damage as a result of hurricane Sandy on October 29-30, 2012. The house is scheduled to be renovated and raised. We understand the water from the storm reached 36" above the first floor level. We understand the scope of the renovations to be as follows: raising the dwelling and electrical services above the base flood elevation, including a new slab foundation and all the associated mechanical, electrical, and plumbing renovations to be re-connected to those services properly above the flood plain.

**SCOPE OF INSPECTION:** Asbestos Pre-Renovation Inspection of the crawlspace in its entirety at the subject house, as directed by our client.

Our work included the following:

- > Collection and analysis of building materials within the scope of renovation for asbestos, as required by the regulations
- > A list with quantity, type and location of asbestos containing materials (ACM) in the scope. Report of the findings including ACM location drawings.

This investigation and information provided in this report depends partly on background information provided by the client. This report is intended for the use of the client. The scope of services performed may not be appropriate for other users and any use of this report by third parties is at their sole risk. This report is intended to be used in its entirety. No excerpts may be taken to be representative of this report.

**TEST PARAMETERS:** This is an Asbestos Pre-Renovation Inspection intended to identify the presence, location, and quantity of any asbestos containing building materials which are part of the Renovation for compliance with OSHA 1926.1101 (k)(2)(i) and CT DPH 19a-332a-1 through 16.

For sampling, EPA Wet Methods are used to prevent fiber release. Building materials sampled are analyzed at our laboratory by EPA method 600/R-93/116. This is currently the approved EPA Test method, which uses Polarized Light Microscopy with Dispersion Staining. The laboratory is accredited by NIST/NVLAP and AIHA, and is a Connecticut Approved Environmental Laboratory for Asbestos Analysis.

**ASBESTOS PRE-RENOVATION INSPECTION  
SITE 024 (SHAPIRO) – 13 BLAIR STREET, MILFORD CT  
APPLICATION #2112  
CS#186-16, 9/30/2014, PAGE 3 OF 4**

INSPECTION REPORT SYNOPSIS

**LOCATION NAME AND ADDRESS:** Site 024  
13 Blair Street, Milford, CT  
Application #2112

**INSPECTION DATE(S):** 9/30/2014

**QUALIFICATIONS:** The Inspection was conducted by:

Scott Philbrick:

- EPA and State of Connecticut Accredited Asbestos Inspector, Project Monitor.
- State of Connecticut Licensed Asbestos Inspector/management planner (#000299)
- State of Connecticut Licensed Asbestos Project Monitor (#000687)

For information about Chem Scope, Inc., log onto <http://www.chem-scope.com>.

**SITE OBSERVATIONS:** (See attached drawing) We met our client at the site. He showed us the work areas and provided some background information. The following observations were made:

- The crawlspace walls were concrete block with some bricks as support.
- The brick mortar was indistinguishable from the mortar of the foundation.
- The dirt floor under the 3'-4' crawlspace was littered with broken floor tile and other debris.
- The space was very moist and some mold was in evidence.

**FINDINGS:** The following asbestos containing materials (ACM) were detected in the Scope of the Inspection:

<u>MATERIAL</u>	<u>LOCATION</u>	<u>~FOOTAGE</u>
	<b>Crawlspace:</b>	
<b>Gray hard and brittle ACM transite shingle debris</b> (loose in dirt floor)	loose in dirt floor	<b>&lt; 3 SF</b>
<b>Gray brittle ACM tile debris</b> with black mastic (loose in dirt floor)	loose in dirt floor	<b>&gt; 3 SF</b>

INSPECTION REPORT SYNOPSIS

**The following is a summary table of the materials that tested as non-Asbestos Containing Material (ACM) (<1%) within the Scope of Work:**

<b>Material</b>	<b>Location</b>	<b>Sample #'s</b>	<b>Findings</b>
Reddish hard brick with light gray hard mortar (from supports)	Crawlspace	186-16-5,6	No Asbestos Detected
Dark gray hard concrete block (with light gray hard mortar)	Throughout Crawlspace	186-16-1,2,3,4	No Asbestos Detected
Light gray hard cement patch material with beige coating (on foundation wall)	Crawlspace at side A-B	186-16-7,8	No Asbestos Detected
Dark gray hard cement patch( on foundation wall at windows)	Crawlspace at sides B&D	186-16-9	No Asbestos Detected
Black fibrous paper backer with brown paper from yellow and pink fiberglass insulation batting (from between joists)	Crawlspace Throughout	186-16-10,11,12,13	No Asbestos Detected
Gray powdery and fibrous debris (between joints in concrete block foundation)	Crawlspace Side A	186-16-14	No Asbestos Detected

**ASBESTOS PRE-RENOVATION INSPECTION**  
**SITE 024 (SHAPIRO) – 13 BLAIR STREET, MILFORD CT**  
**APPLICATION #2112**  
**CS#186-16, 9/30/2014, PAGE 4 OF 4**

**LIMITATIONS OF INSPECTION**

It is important to note that every effort is made to detect asbestos (ACM) in the path of the renovation by our inspectors. It is not practical or prudent to demolish the entire work area during an inspection. The owner should be aware of this in case suspect materials or concealed suspect materials are uncovered during the actual renovation.

If suspect materials that were previously not accessible or not sampled during this inspection are discovered during the renovation, or if the scope of the renovation changes to include disturbance of new materials not inspected, then renovation must stop and the materials must be sampled by a CT DPH licensed asbestos inspector prior to disturbance of these materials.

**RECOMMENDATIONS**

Persons entering this crawlspace with the ACM debris should have at a minimum proper respirator protection and proper personal protective equipment (PPE), as well as asbestos awareness training and confined-space training.

Based on the findings above an Alternate Work Practice (AWP) application must be written to be consistent with CT Department of Public Health (DPH) regulations for the proper abatement and cleanup of the ACM debris residue in the subject crawlspace. The AWP must be written by a CT DPH Licensed Asbestos Project Designer and would contain more detailed instructions for the work.

DPH regulations 19a-332a-1 through 16 require notification to the DPH before demolition of any structure. Notification to the DPH is required for asbestos abatement involving greater than 10 linear feet or 25 square feet of ACM when renovation or demolition activities are performed.

Asbestos removal is regulated by federal and state agencies. The abatement work must be done by a licensed asbestos abatement contractor using proper procedures and practices, including containment, decontamination facilities and negative air units. Final re-occupancy testing is also required (if the building is going to be reoccupied after the asbestos removal) for removal of greater than three (3) SF or LF of ACM.

Disposal of all ACM is regulated by EPA and the Connecticut DEP; an EPA approved landfill must be used.

OSHA regulations 1926.1101 requires that before asbestos removal or repair work (class I, II or III work) is initiated, building owners/facility owners must notify their own employees and employers who are bidding on such work, of the quantity and location of ACM or PACM (presumed asbestos containing material) present in such areas. Also for inadvertently discovered ACM or PACM there is a 24-hour notification requirement to the owner and all employers at the site.

If you have any questions or need more information please call me.

Sincerely,



Scott Philbrick  
Asbestos Inspector



## Certificate Of Analysis

*Diversified Technology Consultants (DTC) - Scott Feulner  
2321 Whitney Avenue  
Suite 301  
Hamden CT 06518*

*10/07/2014  
CS#: 186-16  
Page 1 of 4*

*Bulk sample(s) from Site #024 (Shapiro) - Application #2112, 13 Blair Street, Milford, CT collected by Scott Philbrick on 09/30/2014*

*Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116*

### **Sample Identification**

*186-16-1 Dark gray hard concrete block (with light gray hard mortar (15))/Crawl space - at foundation side B*

### **Findings (Analyzed 10/07/2014)**

*No Asbestos Detected  
89% Non- Fibrous Particles  
11% Volatile on Ignition*

*186-16-2 Dark gray hard concrete block (with light gray hard mortar (17))/Crawl space - at foundation side D*

*No Asbestos Detected  
92% Non- Fibrous Particles  
8% Volatile on Ignition*

*186-16-3 Light gray hard mortar (from sample # 1 (15))/Crawl space - at foundation side B*

*No Asbestos Detected  
95% Non- Fibrous Particles  
5% Volatile on Ignition*

*186-16-4 Lght gray hard mortar (from sample #2 (17))/Crawl space - at foundation side D*

*No Asbestos Detected  
95% Non- Fibrous Particles  
5% Volatile on Ignition*

*186-16-5 Reddish hard brick (with light gray hard mortar (7))/Crawl space - at center column*

*No Asbestos Detected  
95% Non- Fibrous Particles  
5% Volatile on Ignition*

Bulk sample(s) from Site #024 (Shapiro) - Application #2112, 13 Blair Street, Milford, CT collected by Scott Philbrick on 09/30/2014

Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116

**Sample Identification**

**Findings (Analyzed 10/07/2014)**

186-16-6 Reddish hard brick (with light gray hard mortar (6))/Crawl space - at center column

No Asbestos Detected  
97% Non- Fibrous Particles  
3% Volatile on Ignition

186-16-7 Light gray hard concrete patch material with beige coating (on foundation (2))/Crawl space - at foundation corner A/B

No Asbestos Detected  
94% Non- Fibrous Particles  
6% Volatile on Ignition

186-16-8 Light gray hard concrete patch material with beige coating (on foundation (1))/Crawl space - at foundation corner A/B

No Asbestos Detected  
93% Non- Fibrous Particles  
7% Volatile on Ignition

186-16-9 Dark gray hard concrete patch material (on foundation (8))/Crawl space - at window - side D

No Asbestos Detected  
95% Non- Fibrous Particles  
5% Volatile on Ignition

186-16-10 Black fibrous paper backer with brown paper (from yellow fiberglass insulation batting, (9))/Crawl space - between joists - side D

No Asbestos Detected  
<1% Non- Fibrous Particles  
13% Fiberglass  
87% Volatile on Ignition

186-16-11 Black fibrous paper backer with brown paper (from yellow fiberglass insulation batting (12))/Crawl space - between joists - side B

No Asbestos Detected  
<1% Non- Fibrous Particles  
10% Fiberglass  
90% Volatile on Ignition

186-16-12 Black fibrous paper backer with brown paper (from pink fiberglass insulation batting (10))/Crawl space - between joists - side D

No Asbestos Detected  
<1% Non- Fibrous Particles  
22% Fiberglass  
78% Volatile on Ignition

*Bulk sample(s) from Site #024 (Shapiro) - Application #2112, 13 Blair Street, Milford, CT collected by Scott Philbrick on 09/30/2014*

*Asbestos Identification in the samples. Examination made by Polarized Light Microscopy (PLM) per EPA Test Method 600/R-93/116*

**Sample Identification**

*186-16-13 Black fibrous paper backer with brown paper (from pink fiberglass insulation batting (16))/Crawl space - between joists - side B*

**Findings (Analyzed 10/07/2014)**

*No Asbestos Detected  
<1% Non- Fibrous Particles  
9% Fiberglass  
91% Volatile on Ignition*

*186-16-14 Gray powdery and fibrous debris (from wall joints (5))/Crawl space - between joints in concrete block foundation - side A*

*No Asbestos Detected  
31% Non- Fibrous Particles  
47% Mineral Wool  
22% Volatile on Ignition*

*186-16-15 Gray hard and brittle transite shingle debris (from dirt floor (11))/Crawl space*

*20% Chrysotile Asbestos  
80% Non- Fibrous Particles*

*186-16-16 Gray brittle tile debris (with black mastic, from dirt floor (13))/Crawl space*

*5% Chrysotile Asbestos  
74% Non- Fibrous Particles  
21% Volatile on Ignition*

*186-16-17 Black mastic (from sample # 16 (13))/Crawl space*

*No Asbestos Detected  
46% Non- Fibrous Particles  
8% Mineral Wool  
46% Volatile on Ignition*

**PARAMETERS  
ASBESTOS PLM ANALYSIS  
(Revised 3/22/13)**

1. *Materials which contain >1% asbestos (greater than 1%) by PLM (polarizing light microscopy) analysis are considered to be asbestos containing materials under EPA and the State of Connecticut Regulations. OSHA still regulates material with <1%. (Contact laboratory for information.) (Note: A more sensitive method is available called TEM (transmission electron microscopy). TEM may detect asbestos fibers that PLM cannot see, but the above agencies' enforcement is based on PLM analysis. Rules may differ for states other than Connecticut. It is best to check with the individual state. For example, New York State requires TEM confirmation of negative PLM results on floor tile).*
2. *If no asbestos is detected in a sample, or if the asbestos content is less than 1% by PLM, additional samples of the same material should be submitted for confirmation. Please check with the laboratory for guidance on the number of samples needed. Sample collection in Connecticut must be by a DPH Licensed Asbestos Inspector. Many other states also require licensing.*
3. *Floor Tile Mastic: Mastic under floor tile should be separately sampled by scraping some of the mastic from the floor to avoid contamination from the floor tile.*
4. *Although Chem Scope, Inc. takes great effort to insure accuracy in the estimation of asbestos in the materials analyzed, no quantitation method is without some uncertainty. Based on independent calibration studies and comparison of Chem Scope's quantitative results with NVLAP and AIHA round robin programs we estimate our uncertainty in quantitation to be relatively small. The average relative uncertainty of the estimate is calculated to be 35% for samples that contain less than 10% asbestos. This means a estimate of 10% asbestos in a sample has a probable range of 6.5% to 13.5% while an estimate of 1% has a range of 0.65% to 1.35%.*
5. *The presence of non-asbestos components, which are recognized by the PLM analyst, is reported with the estimated amounts. This is not an exhaustive analysis for the non-asbestos materials since the primary purpose is to determine if asbestos is present and, if so, how much is present of each type of asbestos.*
6. *Results reported apply only to the sample(s) analyzed.*
7. *Special treatment of samples: Chem Scope, Inc. routinely uses gravimetric sample reduction techniques such as low temperature ashing or acid dissolution on samples like floor tile, roofing materials, glue dots, or high cellulose content samples prior to PLM analysis. These methods are used to aid in the PLM analysis and to provide better quantitative data. Layered samples, if possible, are analyzed separately as individual layers. However, in accordance with the method, if any layer contains >1% asbestos (greater than 1%) it is to be considered an asbestos containing material. All results are reported to the original sample basis.*
8. *Sample results are not corrected for blanks. Analytical blanks are run daily and if contamination is suspected the samples are rerun.*
9. *Chem Scope, Inc. performs "400 point" point counting when the asbestos content is visually estimated to be less than 10%. There is no additional charge for this analysis.*

*The Scope of Accreditation referenced in this report applies to bulk asbestos fiber analysis by PLM (Polarized Light Microscopy). Accreditation does not imply endorsement by NVLAP, NIST or any Federal or State Agency.  
This report pertains only to the samples tested and may not be reproduced in part.  
Condition of the samples at the time of receipt was acceptable unless otherwise noted on the Certificate of Analysis.  
See test parameters above and attached chain of custody form.  
We would love to hear from you. Comments? Questions? Please call or email us at chem.scope@snet.net*

**ChemScope, Inc. is accredited by AIHA LAP, LLC LAB #100134  
NVLAB Lab Code 101061-0.**

**Connecticut Department of Public Health (DPH) Approval Environmental Lab PH 0581**

<i>[Signature]</i> Signature Analyst	<i>[Signature]</i> Signature (if applicable) Inspector	<i>[Signature]</i> Authorized Signature or Suzanne Cristante Laboratory Director	<i>[Signature]</i> Authorized Signature or Izabela Kremens Quality Manager	<i>[Signature]</i> Authorized Signature Ronald D. Arena President
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Dear Laboratory Customer or Potential Customer,

COC-1 revised 11/1/13  
(Issued By SC)

New laboratory accreditation standards require us to provide our clients information about our services to make sure that your requirements for testing are adequately defined, documented and understood. The following is for your information. Please call us if you have any questions or comments.

**Type of Samples:**

- / / PCM cassettes are routinely run by NIOSH Method 7400.
- / / Bulk materials are run by EPA Method: #600/R-93/116.

**Air Samples:** NIOSH 7400 Method counts all fibers. This method may be used for personal air samples and for finals. Two field blanks must be submitted for each set of samples. In the unlikely event that there is to be any deviation from the standard test, you will be consulted by phone before the work begins. Those clients who have not had NIOSH 582 or AHERA asbestos training courses (either supervisor or project monitor) should consult with the lab director for more information. The test parameters are further explained in the analytical report.

**Bulk materials:** sampled are analyzed by the latest EPA Method: (#600/R-93/116) which uses polarized light microscopy (PLM). When asbestos is detected and the amount is estimated to be <10%, we automatically point count the samples. When there are interfering substances present, we may use ashing, acid washing or other procedures described in the method to handle the interference. Those clients who have not had AHERA asbestos training courses (either inspector, supervisor or project designer) should consult with the lab director for more information. The test parameters are further explained in the analytical report.

**All Samples** must be clearly labeled with source name and identification number or sufficient information from the client to make this sample uniquely identified. (We will then add our notebook #, page # (batch) and unique number within the batch.) Samples must be in a clean, air tight package such as a zip loc bag. Appropriate completed paperwork must accompany the sample. Bulk and air samples may not be submitted in the same package.

As soon as available bench top results will be faxed to you and reports will then be mailed. We will retain air samples for at least three months and bulk samples for 6 months unless you advise us otherwise.

You are welcome to visit the laboratory at any time to discuss the work, monitor the work or verify our testing services. We appreciate your business and encourage any feedback regarding improving our services or our quality system. Please take a minute to complete the following survey and mail/fax it to ChemScope, Inc.

**Customer Service Survey**

To help us improve our services give your opinions to the following:

- 1- The printed laboratory report was complete and easy to understand.  YES  NO  
If no, please explain \_\_\_\_\_.
- 2- The turn around time for results met your expectations/needs.  YES  NO  
If no, please explain \_\_\_\_\_.
- 3- How likely are you to recommend ChemScope Inc. to someone?  
 Excellent  Very Good  Good  Fair  Poor
- 4- How likely are you to return to ChemScope in the future if the need arises?  
 Excellent  Very Good  Good  Fair  Poor
5. On a scale of 1 to 5 where 1 represents "Satisfied" and 5 represents "Dissatisfied", how would you rate your level of overall satisfaction.  
 1  2  3  4  5
- 6- Please add any additional comments or suggestions that would be helpful when you use our services:

Name \_\_\_\_\_ Company \_\_\_\_\_  
Address \_\_\_\_\_ Telephone/e-mail \_\_\_\_\_

Can we contact you regarding this survey?  YES  NO



# ChemScope

INDUSTRIAL HYGIENE • ENVIRONMENTAL CHEMISTRY

15 Moulthrop Street, North Haven, CT 06473-3686 • Phone (203) 865-5605 • Fax (203) 498-1610 • chem-scope.com

Scott Feulner  
Diversified Technology Consultants (DTC)  
2321 Whitney Avenue, Suite 301  
Hamden, CT 06518

10/13/2014

**RADON AIR SAMPLING  
SITE 024 (SHAPIRO) – 13 BLAIR STREET, MILFORD CT  
APPLICATION #2112  
CS#186-16, 9/30/2014 AND 10/2/2014, PAGE 1 OF 4**

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**Attachments:**

- Radon Analysis report, 1 page(s)
- Chain of Custody Document(s), 2 page(s)
- Sample Location Drawing(s), 1 page(s)
- Radon Occupant Notification Forms, 2 page(s)
- Radon Training Qualification, 1 page(s)

**Report Distribution:**

Scott Feulner, DTC [Scott.Feulner@teamdtc.com](mailto:Scott.Feulner@teamdtc.com)  
Curtis Graham, DTC [graham.curtis@teamdtc.com](mailto:graham.curtis@teamdtc.com)  
Michael Casey, DTC [michael.casey@teamdtc.com](mailto:michael.casey@teamdtc.com)

**File Location:**

NAS D(dan):\myfilesds\mydocuments\DS\_Radon\_2014.doc

**RADON AIR SAMPLING  
SITE 024 (SHAPIRO) – 13 BLAIR STREET, MILFORD CT  
APPLICATION #2112  
CS#186-16, 9/30/2014 AND 10/2/2014, PAGE 2 OF 4**

**INTRODUCTION**

**EXECUTIVE SUMMARY:** Radon activity detected was below 4.0 pCi/L. Since the initial results are less than 4.0 pCi/L follow-up testing is probably not needed. The EPA recommends re-testing a home every two years.

**PURPOSE:** To determine if Radon is present in the in the subject home and at what levels.

**BUILDING DESCRIPTION:** The subject building is a single-family, two-story, conventional-style house totaling approximately 1250 SF, which was built in 1920 of wood-frame construction. Heat is supplied from a boiler on the first floor. The boiler was replaced after hurricane Sandy and had no suspect accessible components. At the time of our inspection the heat, electricity and water were all in service and the house was occupied.

**BACKGROUND:** We understand the subject house suffered damage as a result of hurricane Sandy on October 29-30, 2012. The house is scheduled to be renovated and raised. We understand the water from the storm reached 36" above the first floor level. We understand the scope of the renovations to be as follows: raising the dwelling and electrical services above the base flood elevation, including a new slab foundation and all the associated mechanical, electrical, and plumbing renovations to be re-connected to those services properly above the flood plain.

**SCOPE OF INSPECTION:** We conducted short-term simultaneous radon testing at the subject home.

This investigation and information provided in this report depends partly on background information provided by the client. This report is intended for the use of the client. The scope of services performed may not be appropriate for other users and any use of this report by third parties is at their sole risk. This report is intended to be used in its entirety. No excerpts may be taken to be representative of this report.

**METHOD OF TESTING:** For sampling we followed protocols outlined in "Protocols for Radon and Radon Decay Product Measurements in Homes" (EPA, May 1993). EPA recommends that testing take place in the lowest level of the home, which is currently suitable for occupancy. This means the lowest level that is currently lived in. Measurements should be made in a room, which is used regularly. The crawlspace in this case is unfinished, so samples were run in the living room. Measurements were taken in an area at least 20" above the floor and at least 3' from any door, window or exterior wall. Measurements were not taken near HVAC vents, fans or in an area of frequent drafts.

Samples were collected by ChemScope and analyzed at EMSL (Cinnaminson, NJ). EMSL is a DPH approved Environmental Lab and a NEHA certified Analytical Laboratory. (See analytical reports enclosed). Samples were analyzed using liquid scintillation radon detectors and counted on a liquid scintillation counter using approved EPA testing protocols for Radon in Air testing. For more information on this method go to:  
[http://www.epa.gov/radon/pdfs/homes\\_protocols.pdf](http://www.epa.gov/radon/pdfs/homes_protocols.pdf)

**RADON AIR SAMPLING  
 SITE 024 (SHAPIRO) – 13 BLAIR STREET, MILFORD CT  
 APPLICATION #2112  
 CS#186-16, 9/30/2014 AND 10/2/2014, PAGE 3 OF 4**

INSPECTION REPORT SYNOPSIS

**LOCATION NAME AND ADDRESS:** Site 024 (Shapiro)  
 13 Blair Street, Milford, CT  
 Application #2112

**INSPECTION DATE(S):** 9/30/2014 and 10/2/2014.

**QUALIFICATIONS:** The survey team consisted of inspector, Dan Sullivan. Dan is a NRPP (National Radon Proficiency Program) trained technician and his certification number is 107005RT.

For information about Chem Scope, Inc., log onto <http://www.chem-scope.com>.

**FINDINGS:** The following chart is a summary of the results of our Radon sampling:

Sample Location	Canister #	Sample #'s	Radon Activity (pCi/L)
Living Room	169045	186-16-1R	0.2
Living Room	178803	186-16-2R	0.2

Note: None of the samples collected were equal to or greater than 4.0 pCi/L. The EPA recommends a follow-up test (either short-term or long-term) if the average of the two short-term simultaneous tests is greater than or equal to 4.0 pCi/L and less than 10 pCi/L. If the average of the follow-up and initial tests is equal to or greater than 4.0 pCi/L then remedial action is required.

**Temperature & Humidity Results**

Location	%RH 9/30/14 9:30am	Air Temp (°F) 9/30/14	Pressure (mm Hg) 9/30/14	%RH 10/2/14 9:30 am	Air Temp (°F) 10/2/14	Pressure (mm Hg) 10/2/14
Living Room	90	67	762	70	66	765
Exterior	90	62	762	83	60	765

The sling psychrometer is the classical method for measuring humidity. Two ASTM thermometers are secured to a device that is spun through the air. One of the thermometers has a wick on the end soaked in water (WB or wet bulb reading). The other thermometer has no wick (DB or dry bulb reading = room temperature). The principle is that for a given temperature, the difference in WB and DB readings is a direct measure of the amount of water in the air. If air were very dry, it would evaporate much more water from the DB and the evaporation causes cooling. Results can be converted to %RH and dew point (DP). The dew point is a measure of the absolute amount of water in the air and is more useful in comparisons than the relative humidity, which is also affected by temperature.

**RADON AIR SAMPLING**  
**SITE 024 (SHAPIRO) – 13 BLAIR STREET, MILFORD CT**  
**APPLICATION #2112**  
**CS#186-16, 9/30/2014 AND 10/2/2014, PAGE 4 OF 4**

**GENERAL INFORMATION ABOUT RADON**

From "Protocols for Radon and Radon Decay Product Measurements in Homes" (EPA, May 1993): "The average year-round residential indoor radon level is estimated to be about 1.3 pCi/L, and about 0.4 pCi/L of radon is normally found in outside air. The U.S. Congress has set a long-term goal that indoor radon levels be no more than outdoor levels. There is some risk from radon levels below 4 pCi/L, and EPA recommends that the homeowner consider reducing the radon level if the average of the first and second short-term measurements or if a long-term follow-up measurement is between 2 and 4 pCi/L (0.01 and 0.02 WL). While it is not yet technologically achievable for all homes to have their radon levels reduced to outdoor levels, the radon levels in some homes today can be reduced to 2 pCi/L or below."

**LIMITATIONS OF SAMPLING**

The radon test run was a short-duration test (2-90 days). The test is designed to be run under Closed- building conditions. The occupants were given notice of the testing by our client prior to our testing and given instructions on maintaining Closed-building conditions during the test. ChemScope is not responsible for maintaining Closed-building conditions; that is the responsibility of the occupants. The building conditions appeared to meet Closed-building conditions when we arrived to set-up the test and again when we arrived to pick-up the canister at the conclusion of the test. The occupants have signed our form indicating that Closed-building conditions were kept during the duration of the test (48 hrs). See attached notification forms.

**RECOMMENDATIONS**

Radon activity detected was below 4.0 pCi/L. Since the initial results are less than 4.0 pCi/L follow-up testing is probably not needed. The EPA recommends retesting a home every two years or if the basement becomes more frequently used.

Please call me if there are any questions about this report or if you need further assistance.

Thank you for calling on us.



Dan Sullivan  
Vice President, Operations



# EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077  
Phone/Fax: (800) 220-3675 / (856) 786-0327  
<http://www.EMSL.com> [cinnaminsonradonlab@emsl.com](mailto:cinnaminsonradonlab@emsl.com)

EMSL Order: 381405726  
CustomerID: CHEM51  
CustomerPO: 1350  
ProjectID:

Attn: **Dan Sullivan**  
**ChemScope, Inc.**  
**15 Moulthrop Street**  
**North Haven, CT 06473**

Phone: (203) 865-5605  
Fax: (203) 498-1610  
Received: 10/07/14 8:55 AM  
Analysis Date: 10/7/2014  
Collected: 9/30/2014

Project: **Shapiro 13 Blair Street (CS#186-16)**

Test Site: **Shapiro**  
**13 Blair Street**  
**Milford, CT 06460**

## Test Report: Radon in Air Test Results

### Samples for EMSL Kit 100460

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
169045 381405726-0001	Living Room 186-16-1R	0.2	9/30/2014 9:25:00 AM	10/2/2014 9:30:00 AM	67	70	Customer

Sample Notes:

### Samples for EMSL Kit 106486

Liquid Scintillation ID	Location	Radon Activity pCi/L	Start	Stop	Temperature F	Humidity %	Sample Type
178803 381405726-0002	Living Room 186-16-2R	0.2	9/30/2014 9:25:00 AM	10/2/2014 9:30:00 AM	67	70	Customer

Sample Notes:

The radon test was performed using a liquid scintillation radon detector/s and counted on a liquid scintillation counter using approved EPA testing protocols for Radon in Air testing. The EPA recommends fixing your home if the average of two short-term tests taken in the lowest lived-in level of the home show radon levels that are equal to or greater than 4.0pCi/L. The EPA recommends retesting your home every two years.

Please contact EMSL Analytical, Inc. or your State Health Department for further information. All procedures used for generating this report are in complete accordance with the current EPA protocols for the analysis of Radon in Air.

### Report Note

Analyst(s)  
Tiffanie Cosgrove (2)

  
Garrett A. Ray, Laboratory Manager  
Certified Radon Measurement Specialist NRSB 5SS0093  
NJ MES12264, FL R2001, NE 116, PA 2572

In no event shall EMSL be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages, arising out of or in connection with EMSL's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. In no event shall EMSL be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereunder. The test results meets all NELAC requirements unless otherwise specified. Accreditations: NRSB ARL6006, NJ DEP 03036, MEB 92525, PA 2573, IN 00455, IA L00032, RI RAS-024, ME 20200C, NE RMB-1083, NY ELAP 10872, NM 885-10L, FL RB2034, OH RL-39, NRPP #106178AL, KS-LB-0005  
Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ

Initial report from 10/09/2014 13:49:33

Please visit [www.radontestinglab.com](http://www.radontestinglab.com)

381405726



EMSL Analytical, Inc.  
200 Route 130 North  
Cinnaminson, NJ 08077  
Tel: 800-220-3675 • Fax: 856-786-0327  
www.radontestinglab.com

CS# 186-16  
PO# 1350

DOM: 8/15/14  
EXP: 8/15/15

2014 OCT -7 A 8:55

186-16-1R

Chem 57  
5 day

# Radon In Air Data Sheet

## Send Written Report To:

Name Dan Sullivan - Chem Scope, Inc.  
Address 15 Maulthrop Street  
City Norfolk Haven State CT Zip 06473  
Phone 203-865-5605 Fax 203-498-1611  
Email sullivan.chemscope@snet.net  
Technician Name Dan Sullivan  
Technician Certification # 107005 RT  
Technician Signature Dan Sullivan

1ST RED VIAL # 169045

### LOCATION

- Basement  First Floor  Bedroom  Den
- Living Room  Other 186-16-1R
- Location in Room \_\_\_\_\_

2ND RED VIAL # \_\_\_\_\_

(If Purchased)

The device has been scientifically tested to provide reliable indoor radon measurements when exposed to temperatures between 60 and 80 degrees F; temperatures outside this range will invalidate the test results.

Kit # 100460 (Outside of Box)

The test device must remain open for 48 to 96 hours • Return this section with the test device to the laboratory

## Property Tested:

Name Shapiro  
Address 13 Blair Street  
City Milford  
Municipality \_\_\_\_\_ County New Haven  
State CT Zip 06460

Check here if this is a Post Mitigation test.

Technician Name \_\_\_\_\_  
Technician Certification # \_\_\_\_\_  
Technician Signature \_\_\_\_\_

### INDOOR CONDITIONS

Temperature 67 / 66 °F Humidity 90 / 70 %  
80 10-2 9-30 10-2

### EXPOSURE PERIOD

Beginning Date: 09 / 30 / 2014

Time: 9:25 (AM) / PM (Circle)

Ending Date: 10 / 02 / 2014

Time: 9:30 (AM) / PM (Circle)

Tear Here

381405726

CS# 186-16

DOM: 5/9/14

EXP: 5/9/15

PO# 1350

Chem 57  
sday



**EMSL Analytical, Inc.**  
200 Route 130 North  
Cinnaminson, NJ 08077  
Tel: 800-220-3675 • Fax: 856-786-0327  
www.radontestinglab.com

2014 OCT -7 A 8:55

186-16-2R

# Radon In Air Data Sheet

## Send Written Report To:

Name Dan Sullivan - Chem Scope, Inc.  
Address 15 Moulthrop Street  
City North Haven State CT Zip 06473  
Phone 203-865-5605 Fax 203-498-1610  
Email sullivan.chemscope@snet.net  
Technician Name Dan Sullivan  
Technician Certification # 107005 RT  
Technician Signature Dan Sullivan

1ST RED VIAL # 178803

### LOCATION

- Basement  First Floor  Bedroom  Den  
 Living Room  Other 186-16-2R  
 Location in Room \_\_\_\_\_

2ND RED VIAL # \_\_\_\_\_

(If Purchased)

The device has been scientifically tested to provide reliable indoor radon measurements when exposed to temperatures between 60 and 80 degrees F; temperatures outside this range will invalidate the test results.

Kit # 106486 (Outside of Box)

The test device must remain open for 48 to 96 hours • Return this section with the test device to the laboratory

## Property Tested:

Name Shapiro  
Address 13 Blair Street  
City Milford  
Municipality \_\_\_\_\_ County New Haven  
State CT Zip 06460

Check here if this is a Post Mitigation test.

Technician Name \_\_\_\_\_  
Technician Certification # \_\_\_\_\_  
Technician Signature \_\_\_\_\_

### INDOOR CONDITIONS

Temperature 67/66 °F Humidity 90/70 %  
9-30 10-2

### EXPOSURE PERIOD

Beginning Date: 09 / 30 / 2014

Time: 9:25 (AM) / PM (Circle)

Ending Date: 10 / 02 / 2014

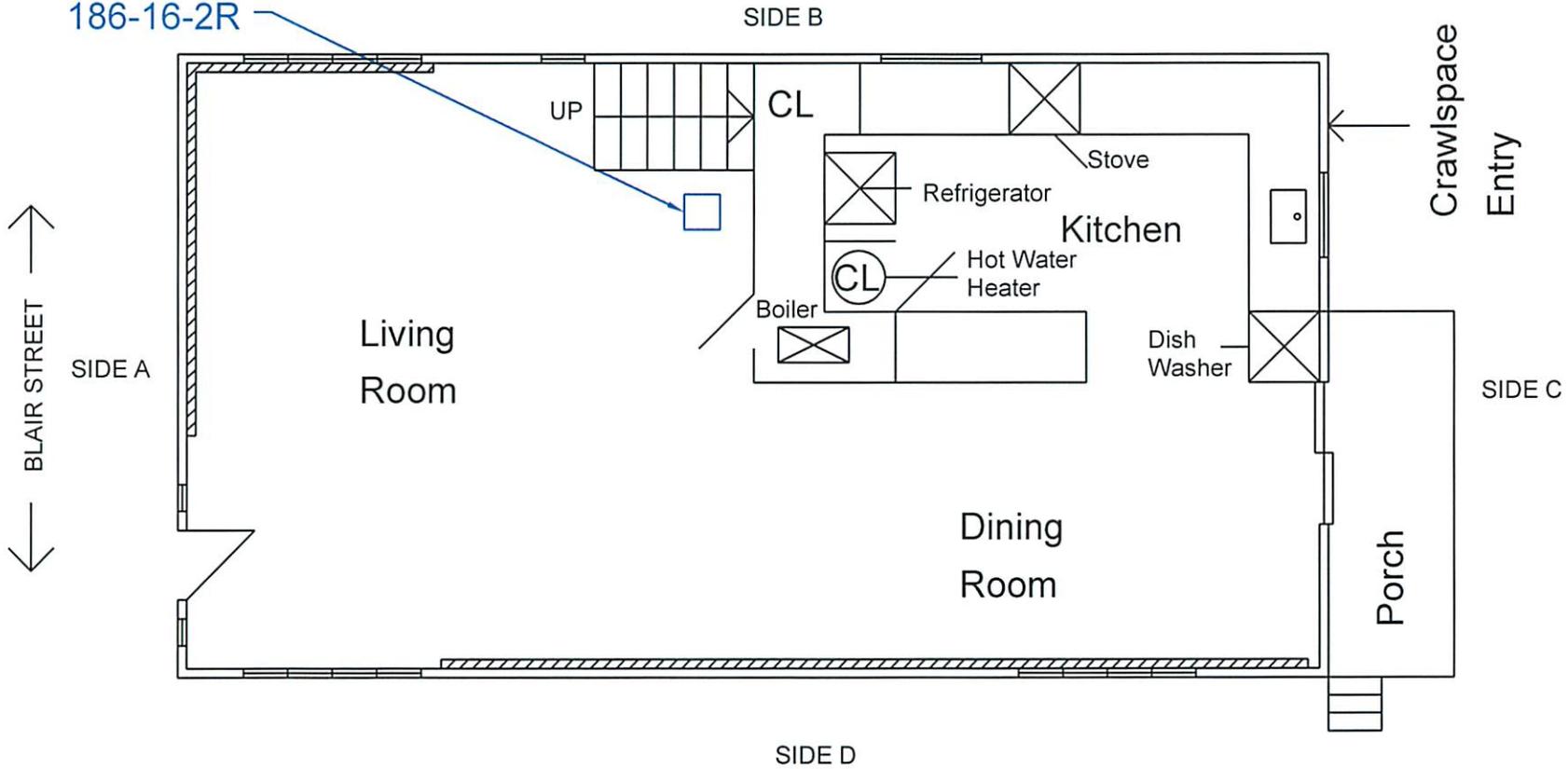
Time: 9:30 (AM) / PM (Circle)

Tear Here

**ChemScope Inc.**  
 Site #024 (Shapiro) - Application #2112  
 13 Blair Street, Milford, CT  
 First Floor  
 CS# 186-16, 9/30/14

RADON AIR SAMPLE LOCATION DRAWING

186-16-1R  
 186-16-2R



LEGEND OF SYMBOLS

#R Radon Air Sample Location

NOTATIONS

 = Elevated Radiator

DRAWN BY  
 LEIGH HONOROF

**ChemScope Inc.**

SHEET TITLE

ASBESTOS, LEAD, MOLD  
 & RADON ASSESSMENT

13 BLAIR ST  
 MILFORD CT

FIRST FLOOR

CHEMSCOPE NUMBER  
 CS# 186-16

DRAWING NUMBER

SCALE  
 NOT TO SCALE

**1 R**

DATE  
 9/30/14

# ChemScope INDUSTRIAL HYGIENE • ENVIRONMENTAL CHEMISTRY

15 Moulthrop Street, North Haven, CT 06473-3686 • Phone (203) 865-5605 • Fax (203) 498-1610

## COMPLIANCE AGREEMENT – Page 1 of 2

Dear occupant of 13 Blair Street, Milford, CT,

Radon gas is the second leading cause of lung cancer and the leading cause of lung cancer in non-smokers. Radon is a naturally occurring radioactive gas that can be present in some homes at concentrations that are dangerous to you, your family and pets.

An important step is being taken to lower your risk of lung cancer. A radon test is being scheduled for the property.

Radon test devices will be placed in your home for several days to take a reading.

It is important that we can gain access to place test devices and that required test conditions are maintained.

### Required Closed-building conditions

- Closed-building conditions must be maintained for 12 hours prior to the initiation of the test and during the test.
- All windows on all levels and external doors must be kept closed (except for momentary events such as normal entry and exit) before and during the test period.
- Heating and cooling systems must be set to normal occupied operating temperatures and their fan/blower controls must be set to normal intermittent activity unless continuous activity is a permanent setting.
- Window air conditioning units must only be operated in a recirculating mode. Equipment that supplies fresh air to the dwelling must be deactivated except for make-up air to combustion appliances.
- Whole house fans must not be operated. Window fans should be removed or sealed shut. Wood burning fireplaces must not be operated unless they are the primary sources of heat for the dwelling. Avoid excessive operation of clothes dryers, range hoods, bathroom fans and other mechanical systems that draw air out of the building.

Tentative device placement 9/30/14 Date 9:25am Time Tuesday  
We will request your signature and any comments on a form left with the test device.  
Tentative device pick-up THURS Date 10/2/14 Time 9:30am

Test devices are not dangerous in any way and a sample test device is available at our office for you to examine if you wish. Copies of EPA's A Citizen's Guide to Radon are available upon request or you can contact your State Radon Office or EPA regional office for additional information on radon.

For any questions, concerns or if you have independently performed radon testing in your home, please contact: Dan Sullivan, ChemScope, Inc. 203-865-5605.

We thank you for your cooperation in helping to ensure safe and healthy homes.

Sincerely,

  
Daniel P. Sullivan  
Vice President, Operations  
Office 203-865-5605  
Cell 203-996-3621

# ChemScope INDUSTRIAL HYGIENE • ENVIRONMENTAL CHEMISTRY

15 Moulthrop Street, North Haven, CT 06473-3686 • Phone (203) 865-5605 • Fax (203) 498-1610

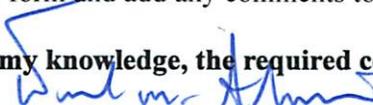
## COMPLIANCE AGREEMENT – Page 2 of 2

Dear occupant of 13 Blair Street, Milford, CT.

An important step is being taken to help ensure healthy conditions in your home. It is important that required test conditions be maintained.

Please sign this form and add any comments to help ensure accurate tests:

**To the best of my knowledge, the required conditions were kept during the test.**

Occupant X  Date \_\_\_\_\_

Comments if any: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Device Pick-up Day Thurs. Date 10/2/2014 Time 9:30am

### Required Closed-building conditions:

- Closed-building conditions must be maintained for 12 hours prior to the initiation of measurements lasting less than four days and throughout the test period.
- All windows on all levels must be kept closed and external doors must be kept closed (except for momentary entry and exit).
- Heating and cooling systems must be set to normal, occupied operating temperatures; fan/blower controls must be set to intermittent activity unless continuous activity is a permanent setting.
- Whole house fans must not be operated.
- Occupants should avoid excessive operation of clothes dryers, range hoods, bathroom fans and other mechanical systems that draw air out of the building.
- Wood burning fireplaces must not be operated unless they are the primary sources of heat for the dwelling.

We thank you for your cooperation in helping to ensure safe and healthy homes.

Sincerely,



Daniel P. Sullivan  
Vice President, Operations  
Office 203-865-5605  
Cell 203-996-3621

National Radon Proficiency Program



February 20, 2013

Daniel Sullivan  
Chem Scope, Inc.  
15 Moulthrop Street  
North Haven, CT 06473

Residential Measurement Provider

NRPP Certification Number: 107005 RT

NRPP Expiration Date: 2/28/2015

*Your NRPP identification card is enclosed. Your certification will expire on the date indicated above. Information regarding the National Radon Program may be obtained by visiting our web site located at [nrpp.info](http://nrpp.info).*

*Comments:*

Best regards,

A handwritten signature in cursive script that reads 'Angel Anderson Price'.

Angel Anderson Price, Executive Director, NRPP

Non-Photo ID

# ChemScope INDUSTRIAL HYGIENE • ENVIRONMENTAL CHEMISTRY

15 Moulthrop Street, North Haven, CT 06473-3686 • Phone (203) 865-5605 • Fax (203) 498-1610

Scott Feulner  
Diversified Technology Consultants (DTC)  
2321 Whitney Avenue, Suite 301  
Hamden, CT 06518

10/13/2014

**PRELIMINARY MOLD ASSESSMENT  
SITE 024 (SHAPIRO) – 13 BLAIR STREET, MILFORD CT  
APPLICATION #2112  
CS#186-16, 9/30/2014, PAGE 1 OF 4**

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Table of Contents	1
Introduction	2
Assessment Report Synopsis	2-3
Recommendations	4
Limitations of Assessment	4

**Attachments:**

- Site Drawings – 1 page(s)

**Report Distribution:**

Scott Feulner, DTC [Scott.Feulner@teamdte.com](mailto:Scott.Feulner@teamdte.com)  
Curtis Graham, DTC [graham.curtis@teamdte.com](mailto:graham.curtis@teamdte.com)  
Michael Casey, DTC [michael.casey@teamdte.com](mailto:michael.casey@teamdte.com)

**File Location:**

D(dan):\myfilesds\mydocuments\Mold\indoorfo\_2014.doc

*This investigation and information provided in this report depends partly on background information provided by the client. This report is intended for the use of the client. The scope of services performed may not be appropriate for other users and any use of this report by third parties is at their sole risk. This report is intended to be used in its entirety. No excerpts may be taken to be representative of this report.*

*It is possible that hidden mold may be growing inside the building cavities. Some floor, wall or ceiling demolition would be needed to find hidden mold.*

**PRELIMINARY MOLD ASSESSMENT  
SITE 024 (SHAPIRO) – 13 BLAIR STREET, MILFORD CT  
APPLICATION #2112  
CS#186-16, 9/30/2014, PAGE 2 OF 4**

**INTRODUCTION**

**EXECUTIVE SUMMARY:** No mold growth was detected on the building structure within the scope of our assessment. There was some visible mold in the soil and on debris in the soil located in the crawlspace.

**BUILDING DESCRIPTION:** The subject building is a single-family, two-story, conventional-style house totaling approximately 1250 SF, which was built in 1920 of wood-frame construction. Heat is supplied from a boiler on the first floor. The boiler was replaced after hurricane Sandy and had no suspect accessible components. At the time of our inspection the heat, electricity and water were all in service and the house was occupied.

**BACKGROUND:** We understand the subject house suffered damage as a result of hurricane Sandy on October 29-30, 2012. The house is scheduled to be renovated and raised. We understand the water from the storm reached 36" above the first floor level. We understand the scope of the renovations to be as follows: raising the dwelling and electrical services above the base flood elevation, including a new slab foundation and all the associated mechanical, electrical, and plumbing renovations to be re-connected to those services properly above the flood plain.

**INSPECTION AND TESTING:** Dan Sullivan of Chem Scope, Inc. was at the site on 9/30/2014 to conduct the subject tests. All of the doors and windows were closed at the time of our inspection. Our work included:

- Visual inspection
- Temperature/Humidity and Moisture in building materials

**SCOPE OF WORK:** Our client has hired us to do a preliminary mold assessment of the crawlspace only, where there was past water damage.

**MOLD ASSESSMENT REPORT SYNOPSIS**

**Observations from Visual Inspection/temperature and humidity testing:** We arrived on site at around 9:00 AM. It was overcast at the time of our assessment. The temperature at the time of our assessment was about 60 deg F. We were let into the house by our client and the homeowner. There was no visible mold growth on the first floor level and there were no unusual smells or odors. There was no visible mold growth on the building structure in the subject crawlspace, but there was suspect mold growth on the soil and on debris found in the soil. There was a musty odor in this space, which is typical of a crawlspace with a damp soil floor. The soil is a naturally occurring place where mold is certain to be present and now wet we have to assume there is mold growth.

The crawlspace has a soil floor and a bare wood ceiling. The walls of the crawlspace were cinderblock. There are no stored materials in the crawlspace other than some miscellaneous debris. There were signs that some of the subfloors above had been replaced with newer plywood. The newer wood ceilings and beams tested as <20% moisture. Some of the old wood tested as 20-40% moisture.

**PRELIMINARY MOLD ASSESSMENT  
SITE 024 (SHAPIRO) – 13 BLAIR STREET, MILFORD CT  
APPLICATION #2112  
CS#186-16, 9/30/2014, PAGE 3 OF 4**

**MOLD ASSESSMENT REPORT SYNOPSIS (cont)**

Temperature and humidity determined were normal for the season. The temperature and humidity, inside vs outside was determined using a sling psychrometer. Normal dew point levels are generally considered between 10 and 21 °C (50 and 69 °F). In areas with dew points under 10 °C (50 °F), the air is considered too dry. In areas with dew points above 21 °C (69 °F), the air is considered too humid. Normal relative humidity for a house is 30-50% depending on the outdoor climate. The humidity in the crawlspace and the house was elevated as expected given the conditions of the day and a damp soil crawlspace floor.

**Table 1 - Temperature & Humidity Results (9/30/2014)**

<b>Location</b>	<b>Dry Bulb (°F) (Room / Air Temperature)</b>	<b>Wet Bulb (°F)</b>	<b>%RH</b>	<b>Dew Point (°F)</b>
1 <sup>st</sup> Flr Kitchen	70	69	95	69
1 <sup>st</sup> Flr Living Rm	67	65	90	64
2 <sup>nd</sup> Flr Master Bedroom	68	64	81	62
Crawlspace	64.5	63	92	62
Exterior	66	64	90	63

Normal amounts of moisture were detected in the building materials tested on this first floor; some materials tested in the crawlspace had elevated moisture levels. A Protimeter Moisture Measurement System (Marlow England) was used to measure the amount of moisture in various surfaces and materials in terms of wood moisture equivalents (WME). This device has two pin-point probes, which are inserted in the surface and the conductivity is used to measure moisture in the material as % H<sub>2</sub>O. Moisture is important to detect potential biological growth. The normal amount of moisture in each material varies with humidity. Materials which have >30% H<sub>2</sub>O are relatively damp and may be wet enough to permit mold growth. A material with 70% H<sub>2</sub>O is very wet and likely to have mold growth. This instrument does not measure below 7% moisture, which is considered bone dry. This device was also used to test for room temperature, % relative humidity and dew point. The dew point is a measure of the absolute amount of water in the air and is more useful in comparisons than the relative humidity, which is also affected by temperature. A Summary of the moisture readings and visual inspection is listed in Table below:

**Table 2 – Visible Mold and % Moisture in Building materials (4/29/2014)**

<b>Room / Material</b>	<b>% Moisture (WME)</b>	<b>Notes</b>
<b>Crawlspace/ Soil Floor</b>	<b>60-80%</b>	<b>Visible mold growth on soil and materials in soil</b>
Crawlspace/ "New" Wood ceiling and beams	< 20 %	No visible mold growth
Crawlspace/ Older Wood ceiling and beams	20-40%	No visible mold growth

**General Information about Mold:** EPA does not call for routinely air testing for mold in assessment. Mold is always present indoors and outdoors and is a natural and necessary part of the environment. There are no Connecticut or federal health based standards for molds. EPA and other agencies report that molds have the potential to cause health effects. The main concerns are people with allergies, asthma and compromised immune systems. There are thousands of mold species, and many are not yet identified. There is much more to learn and new information is becoming available regularly. In mold assessment, we strive to detect moisture problems that cause excessive biological growth and when appropriate, recommend a plan of corrective action. When moisture problems occur, mold growth is likely if organic materials are not promptly dried up. Hidden mold may exist which cannot be seen without demolition.

**PRELIMINARY MOLD ASSESSMENT  
SITE 024 (SHAPIRO) – 13 BLAIR STREET, MILFORD CT  
APPLICATION #2112  
CS#186-16, 9/30/2014, PAGE 4 OF 4**

**RECOMMENDATIONS**

In general, correction of water damage requires first eliminating the source of the water. With the house being raised there should be a great increase in the ventilation below the house, which should address the excess humidity in the crawlspace. Raising the structure and installing a concrete foundation will also address the potential for mold in the soil of the crawlspace.

No immediate work is required as a result of our assessment. If during the renovation work hidden mold is discovered, work should be stopped and the areas should be re-assessed.

**Limitations of Mold Removal:** It is well known in the industry that mold can never completely be removed from a site because of the constant presence of mold spores in the outdoor environment and the ability of molds to remain dormant within a building. If moisture problems recur, mold growth is likely.

For guidance on mold, log onto EPA.gov and search mold remediation or the state DPH web site.

***See our separate Asbestos Pre-Renovation Inspection Report and Radon Report for details regarding asbestos and radon present in these areas.***

Please call me if there are any questions about this report or if you need further assistance.

Thank you for calling on us.



Dan Sullivan  
Vice President, Operations

**ChemScope Inc.**  
 Site #024 (Shapiro) - Application #2112  
 13 Blair Street, Milford, CT  
 Crawlspace  
 CS# 186-16, 9/30/14



**LEGEND OF SYMBOLS**


**NOTATIONS**


DRAWN BY **Scott Philbrick**

**ChemScope Inc.**

SHEET TITLE  
**ASBESTOS, MOLD  
 PRE-RENO INSPECTION**  
 13 BLAIR ST  
 MILFORD CT

**CRAWLSPACE**

CHEMSCOPE NUMBER CS# 186-16	DRAWING NUMBER B M
SCALE NOT TO SCALE	
DATE 10/09/14	

 Location of visible suspect mold growth in crawlspace soil floor, in scope of assessment

**SIDE B**

**Crawlspace Entry**

**SIDE C**

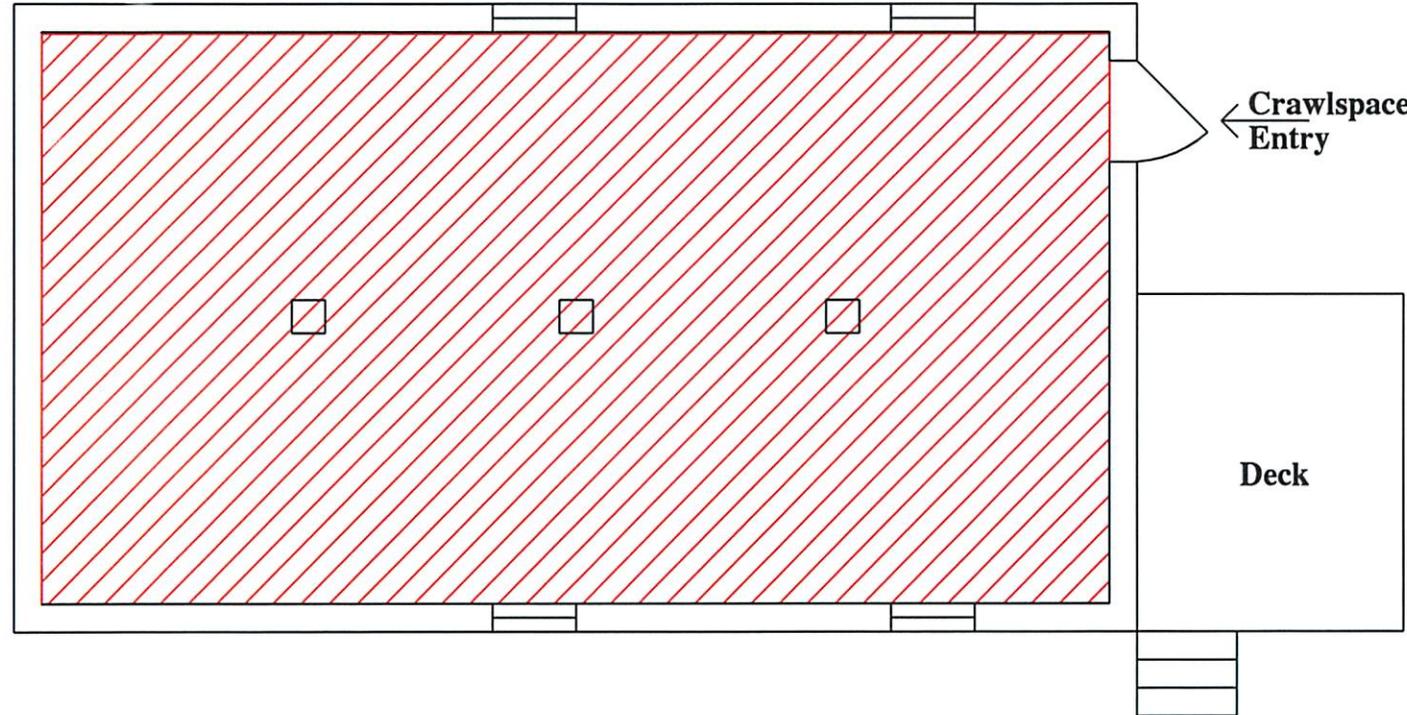
**Deck**

**SIDE D**

**Driveway**

**SIDE A**

← **BLAIR STREET** →



**Appendix B**

**DECD/SHPO/DOH Professional Certification Form**

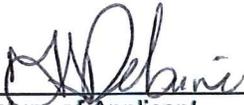
For all General Permit Applications submitted as part of the Flood Management Certification for Disaster Recovery Activities, the following certification must be signed and sealed by a professional engineer licensed to practice in Connecticut.

Property: 13 Blair Street Milford, CT 06460

Application Number: 2112

"I certify that in my professional judgment, the above referenced project has been designed consistent with the Flood Management Certification for Disaster Recovery Activities as approved by DEEP and that the information is true, accurate and complete to the best of my knowledge and belief.

I understand that a false statement made in the submitted information may, pursuant to Section 22a-6 of the General Statutes, be punishable as a criminal offense under Section 53a-157b of the General Statutes, and may also be punishable under Section 22a-438 of the General Statutes."



1/13/2015

Signature of Applicant

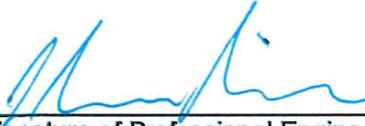
Date

Hermia Delaire

CDRG-DR Program Manager

Name of Applicant (print or type)

Title



1/13/2015

Signature of Professional Engineer

Date

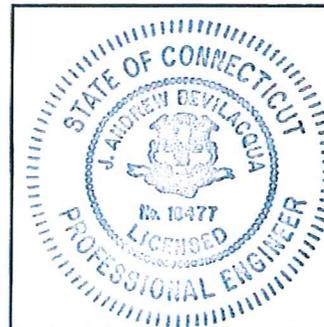
J. Andrew Belivacqua

18477

Name of Professional Engineer (print or type)

P.E. Number

Affix P.E. Stamp Here







Department of Economic and  
Community Development

Connecticut  
still revolutionary

212  
MG

**ATTACHMENT 15**

August 11, 2014

Ms. Hermia M. Delaire  
Program Manager  
CDBG - Sandy Disaster Recovery Program  
Department of Housing  
505 Hudson Street  
Hartford, CT 06106

**received**  
8-21-14

Subject: 13 Blair Street  
Milford, CT

Dear Ms. Delaire:

The State Historic Preservation Office has reviewed the information submitted for the above-named property pursuant to the provisions of Section 106 of the National Historic Preservation Act of 1966.

The property located at 13 Blair Street appears to be eligible for listing on the National Register of Historic Places as a contributing resource to a potential historic district.

In order to complete our review, additional information is needed. Please submit to our office a set of schematic drawings and specifications for the undertaking as well as a preliminary elevation survey. Be advised that the elevation of historic resources may result in an adverse effect.

The State Historic Preservation Office appreciates the opportunity to review and comment upon this project. These comments are provided in accordance with the Connecticut Environmental Policy Act and Section 106 of the National Historic Preservation Act. For further information please contact Todd Levine, Environmental Reviewer, at (860) 256-2759 or [todd.levine@ct.gov](mailto:todd.levine@ct.gov).

Sincerely,

Mary B. Dunne  
Deputy State Historic Preservation Officer

State Historic Preservation Office

One Constitution Plaza | Hartford, CT 06103 | P: 860.256.2800 | [Cultureandtourism.org](http://Cultureandtourism.org)

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