SAFETY ENVIRONMENTAL
CO. OF N.Y. INC.

(718) 390-0914
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33 Clinton Avenue
Staten Island, NY 10301

A LIMITED ASBESTOS INSPECTION

Conducted for:

CB&I-Shaw Environmental & Infrastructure, Inc.
150 Royall Street
Canton, MA, 02021

Conducted at:

APPLICANT NO.: RRE0014020

Name: Nichelle Tate
Address: 205 6th Avenue Apt 2
Long Branch, NJ, 07740

Submitted by:

Safety Environmental Co. of NY Inc.
33 Clinton Avenue
Staten Island, NY, 10301

Inspection Date: July 18th, 2014
Report Date: July 25th, 2014
Report No.: 14-7-425

Prepared By:

Dr. Francis Owoh
Safety Director/Engineer

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July 25th, 2014

CB&I-Shaw Environmental & Infrastructure, Inc.
150 Royall Street
Canton, MA, 02021
Attn: Daniel Paetzold

RE: ASBESTOS INSPECTION, BULK SAMPLING AND LABORATORY ANALYTICAL TESTING SERVICES A205 6TH AVENUE, APT 2, UNIT #2, LONG BRANCH, NJ.

1.0 INTRODUCTION:

This hazardous materials report presents the results of a field investigation and laboratory analysis regarding any potential asbestos containing material (ACM). In response to your request, Safety Environmental Co. of NY Inc. has conducted an Asbestos Inspection and Bulk Sample Analysis at the above mentioned location by Jimmy Rivera, U.S. EPA Asbestos Inspectors License #08-10517.

The purpose of this investigation was to inspect and quantify, if any, the presence of asbestos containing materials following the EPA AHERA guidelines (asbestos containing materials in Building, CFR 40.763).

SITE: 205 6th Avenue, Apt 2, Unit #2, Long Branch NJ, 07740
APPLICANT #: RRE0014020
CLIENT: CB&I-Shaw Environmental & Infrastructure Inc.
CONTACT PERSON: Mr. Daniel Paetzold
CONTACT EMAIL: daniel.paetzold@cbi.com
PROJECT #: 14-7-425

Date of site investigation and report preparation:

Site Visit: July 18th, 2014
Report Date: July 25th, 2014

This investigation was performed according to the following Federal, State and Local regulations:

- 40 CFR 61, Natural Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart M-Natural Emissions Standard for Asbestos, EPA 600/R-93/116 and in accordance with NTAC 8060 and 12.20.
- 40 CFR 763, Asbestos Hazard Emergency Response Act (AHERA), Subpart E-Asbestos-Containing Materials in Schools.
- DOC# 560/5-85-024

These regulations call for a visual inspection of the house and associated structures for suspect asbestos-containing materials (ACM) and the analysis of the representative samples of such materials.

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Accessible areas were inspected for three basic types of asbestos-containing building materials:

- **Surfacing Material** that is sprayed-on, troweled on or otherwise applied to surfaces, such as acoustical plaster on ceilings, fireproofing materials on structural members, or other materials for acoustical, fireproofing or decorative purposes.
- **Thermal System Insulation** (TSI) applied to pipes, fittings, boilers, breaching, tanks, ducts or other structural components to prevent heat loss or gain water condensation.
- **Miscellaneous Materials** on structural components, structural members or fixtures, such as floor and ceiling tile, laboratory bench tops, transite panels, transite pipe, roofing shingles, roof flashing, tar and other materials that are not classified as TSI or surfacing materials.

2.0 BRIEF STRUCTURE DESCRIPTION:

This house is a two story apartment detached house located at 205 6th Avenue, Apt 2, Long Branch NJ 07740. It comprises of three bedrooms, two bathrooms, kitchen, living room, and attached garage. It is built upon a concrete block foundation and features exterior vinyl siding and wood underneath. Ceramic tiles installed on all floors. The roof covering is made with asphalt shingles.

3.0 The Scope of Work Entails:

- Conduct a visual assessment/inspection of the house to identify the potential asbestos containing materials (ACM) that would be impacted by the planning house renovation/alteration.
- Take bulk samples of suspect asbestos containing material assessing factor such as accessibility, vibration and air movement and their impact on potential for damage.
- Submit the suspect ACM bulk samples to an accredited laboratory for Polarized Lite Microscopy (PLM) and/or Transmission Electron Microscopy (TEM).
- Prepare inspection report, summarizing field data collected techniques, analysis procedures, location, condition and quantity of asbestos containing materials (greater than 1% by weight in accordance with NJ.A.L.860 and 12:120.
- Suspect ACM inspected and identified during the inspection included the following: roof shingle and sheetrock.

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4.0 PROCEDURES/ANALYTICAL METHODS:

Samples of bulk material were collected by penetrating the total depth of the material with a sample container providing a core sample of all material present. Samples were placed into leak-tight plastic sample containers, uniquely numbered and transported to laboratory with a chain of custody indicating location of the material sampled and analysis requested.

A strategy for sampling suspect asbestos containing materials was developed employing the delineation and grouping of homogeneous suspect materials. The delineation of homogeneous areas at the site was based on criteria including material type and location. When suspected ACMs were found during the inspection assessment process, representative bulk samples from the homogeneous material group & material which is uniform by color, texture, construction application date and general appearance were taken. AHERA 3/5/1 rule was utilized for the sampling of surfacing materials.

Asbestos Containing Material (ACM) are classified as friable and non-friable materials. Friable materials are materials that can be crushed by hand pressure and release airborne fibers, such as thermal system insulation (pipe/boiler insulation) and sprayed-on fireproofing. Non-friable materials are materials that need mechanical equipment to be crushed such as floor coverings, roofing materials and transite materials and do not release airborne fibers unless these materials are sanded, scrapped or sand blasted, which increase the potential for fiber release.

Building products that contain more than 1% asbestos by weight are considered asbestos containing materials (ACM). Products that contain less than 1% asbestos are considered non-asbestos.

Collected bulk samples of suspect ACM were analyzed by International Asbestos Testing Laboratories (IATL) via polarized light microscopy (PLM) with dispersion staining as described in 40 CFR Part 763.

5.0 METHODS FOR ASBESTOS CONTROL

In view of the findings of asbestos surveys of US EPA work sites, recommendations have been made concerning corrective measures. There are recommendations that have been made concerning corrective measures. There are four possible abatement measures that could be applied to deal with various degrees of damaged conditions or asbestos identified. These abatement measures include: removal, enclosure, encapsulation, and as an adjunct, when required, the implementation of an operations and maintenance (O&M) program.

Removal is a process where the total elimination of asbestos containing materials from underlying surfaces is performed. This could include removal from structural member ("I" beams), acoustical plaster surface

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treatments and thermal insulation from heat pipes and equipment. Materials removed are collected, placed in containers and delivered to approved waste disposal sites for burial. All removal projects require compliance with Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA) regulations. To reduce the liberation of asbestos fibers during stripping, the material is wetted using water amended with a wetting agent (surfactant). Most asbestos abatement experts agree that removal, when properly done, offers a permanent solution to correcting an asbestos hazard situation.

Although removal is permanent solution, it is also the most elaborate and expensive corrective action option, and poses the realist potential hazard to workers and other occupants, if not executed properly. Therefore, all work must be performed safely and in strict compliance with all applicable regulations.

Enclosure is an alternative to total removal, building owners may use enclosure as an abatement method. Enclosure involves the construction of an airtight physical barrier to prevent the release of asbestos fibers into the work environment. Depending on the extent of construction required and the presence of physical obstructions, enclosure is usually not as expensive as removal projects. Enclosure if often performed using gypsum wallboard or a similar sheet material, utilizing dry wall construction techniques. Such projects should be performed in accordance with all applicable asbestos removal regulations. Enclosure can also be considered the cheapest method of abatement.

Encapsulation is a technique which even in the recent past has been accepted only with reservations in some areas. The procedure is to apply a solution to the Asbestos Containing Materials (ACM) which (1) thoroughly penetrates the matrix or (2) provides a tough "bridging" coat.

Typical problems have been:

1. Failure to achieve full penetration
2. Addition of weight of the encapsulant causing failure of adhesion between ACM and substrate
3. Inadequate protection against water damage, permitting breakdown of both adhesive insulative characteristics

State-of-the-art improvements in the properties and behavior of high quality encapsulants appear to have overcome the drawbacks shown above. Since encapsulation is usually the fastest method and lowest in cost, it is being regarded in more promising light, especially considering that the fireproofing ACM does not then require replacement.

When applying an encapsulant to thermal system insulation (i.e. pipe boiler, breeching materials) a lagging cloth is used to wrap around the insulation materials. This cloth provides a new layer of material and encloses all opened and damaged pieces of insulation materials. It creates a layer of protection against the asbestos fibers from being disturbed and released into the air.

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Operations & Management (O&M) Program when appropriate, is an adjunct to the aforementioned abatement measures which entails periodic re-inspections of all sites continuing asbestos which have been determined to be in good condition, and not requiring immediate abatement action. This is a very aggressive program to reduce the possibility of exposure to asbestos, not just a re-inspection program. The re-inspection of sites is used as a comparison to previous inspections in order to determine whether physical damage to the materials has occurred. This program also includes safety training for personnel involved in repairs and renovation projects involving asbestos containing materials.

CORRECTIVE ACTION ALTERNATIVE

Regardless of the amount and condition of the ACM present, the following measure should be taken, at a minimum to avoid disturbing the ACM which will result in the release of asbestos fibers into the air:

- Do not drill holes in ACM
- Do not sand asbestos floor tiles or backing materials
- Do not damage ACM while performing routine building maintenance
- Do not allow ACM to be chafed
- Use only a special High Efficiency Particulate Air (HEPA) vacuum to clean up asbestos debris
- When performing routine tasks around ACM, it is important to wear a HEPA respirator that can trap asbestos fibers
- In order to maintain adequate health safety levels, it is recommended that outside vendors engaged in servicing the facility be advised of the presence and location of the ACM and cautioned to employ adequate safeguards to ensure that the existing asbestos fibers not become airborne
- When changing filters in the air systems be sure to wet mist the filters first. Never shake filters to clean them

The ultimate solution to limit the likelihood of asbestos fibers being released into the air is to remove all ACM throughout the house if detected.

Four (4) samples were collected of roof shingle and sheetrock. Samples were analyzed by International Asbestos Testing Laboratories (IATL).

Safety Environmental Co. of NY Inc. certifies that the information contained herein is based on the physical and visual inspections conducted by Jimmy Rivera and data collected during the inspection survey and laboratory test results.

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6.0 EXECUTIVE SUMMARY

This inspection and report complies with requirements of the scope of an asbestos hazard emergency response act (AHERA) inspection.

Bulk samples of suspect materials that may be impacted during renovation/alteration were collected for laboratory analysis to determine asbestos content, based on asbestos investigation observations, visual assessment, sampling and laboratory test results of the bulk samples taken. The following asbestos containing materials must be removed prior to renovation/demolition activities.

Sample #	LOCATION	AFFECTED ASBESTOS/ CONTAINING MATERIALS	APPROXIMATE QUANTITY	SF/LF	CONDITION
-	-	No Asbestos Detected	-	-	-

This asbestos inspection was performed to determine if the asbestos containing materials would be impacted during the renovation activities. In accordance with 40 CFR 61.1145, Subpart M (U.S. Environmental Protection Agency), and asbestos inspection is required prior to renovation/alteration activities.

LABORATORY ANALYSIS

7.0 A SUMMARY OF FINDING IS INDICATED IN THE BELOW TABLE:

LABORATORY TEST RESULTS:

FIELD SAMPLE #	LOCATION	MATERIAL	FRIABLE	NOB PLM /TEM	Estimated Quantity
01	Front of the House	Roof Shingles	N/A	Non ACM	3,500 SF
02	Rear of the House	Roof Shingles	N/A	Non ACM	3,500 SF
03	Kitchen East	Sheetrock	Non ACM	N/A	320 SF
04	Kitchen West	Sheetrock	Non ACM	N/A	320 SF

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8.0 RECOMMENDATIONS AND CONCLUSIONS

Please be advised that asbestos-containing materials may be present in areas rendered inaccessible. These areas include, but are not limited to material enclosed behind ceiling, walls, and column spaces, Access to these areas would require probes, local renovation, we recommend the reaction of probes prior to renovation activities to locate the potentially enclosed asbestos-containing materials. Otherwise materials may be inadvertently disturbed. Asbestos-containing materials must be removed prior to renovation activities. The removal procedures must be conducted by a licensed asbestos abatement contractor in accordance with the NJ Dept. of Health, DCA and all other applicable federal, state and local laws.

All ACM listed in the report that will be impacted by the planned renovation work must be removed by a NJ licensed asbestos abatement contractor. The owner and the contractor must conform to the requirements of all federal, state and local laws governing asbestos abatement, which includes retaining the services of an independent company to provide on-site third party air monitoring which must be conducted by an independent company not affiliated with and separate from the abatement contractor. The air monitor will collect air samples before, during and after the abatement project to ensure that the airborne fiber concentration is within the regulatory levels as well as to oversee the contractors' compliance with all current federal, state and local laws governing asbestos abatement procedures.

Notes:

1. Please be aware that there may be ACM behind, in and/or above finished surfaces. In the event that ACM is discovered during renovation/demolition projects behind finished surfaces that were not visible or accessible at the time of this inspection, work in that area must cease and be closed off to all personnel, Safety Environmental Co. of NY Inc. must be notified immediately. The contractor must coordinate with the inspector to identify the potential asbestos hazard and recommend the appropriate actions to be taken.
2. The asbestos inspection conducted at the subject project site consisted of a visual assessment and bulk sampling of building materials to locate and identify any visible asbestos containing materials in only those specific project areas. No core drilling, probe penetrations or exploratory demolition was conducted to expose any non-specific ACM encapsulated by or otherwise encodes within constructed building materials.

The locations and approximations of square footage are given for information purposes only and that they are not to be relied on exclusively by any bidding entity submitting a proposal for this project. Each qualified contractor interested in performing the work warrants that its bid price is based on its own physical inspection and assessment of the specified areas and its appurtenant systems and the cost and extent of the work necessary to complete the project whether specified in this document or not.

The asbestos survey report is true to the best of our knowledge. If you have any questions or should you require additional assistance, please contact us at 718-390-0914.

Sincerely,

Dr. Francis Owoh, Ph.D, RPIH, CES, CSC
US EPA Asbestos Inspector

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9.0 ASBESTOS SAMPLE LABORATORY/ANALYTICAL RESULTS

SAFETY ENVIRONMENTAL CO. OF N.Y. INC.

ASBESTOS BULK SAMPLE CHAIN OF CUSTODY

FILE #:

33 CLINTON AVE
STATEN ISLAND, N.Y., 10301
Tel: (718) 390-0914 Fax: (718) 390-0915

CLIENT NAME: CB&I -Shaw
RRE: 00 14020
PROJECT NO:
METHOD OF SHIPMENT: FEDEX

SITE: 205 6th Ave apt#2 unit#2 Long Beach NY
DATE: 7-18-14
INSPECTOR: Jimmy Rivera
NUMBER OF SAMPLES: 4

TURNAROUND TIME: PLM [ ]48 HRS [ ]24 HRS [ ]6 HRS / TEM [ ]48HRS [ ]24 HRS [ ]6 HRS

SAMPLE ID #	SAMPLE DESCRIPTION	SAMPLE LOCATION	FIELD COMMENTS	LAB COMMENTS A/R
01	Roof Shingle	Front of the House		5377741
02	↓	Rear of the House	↓	5377742
03	Sheet Rock white	Kitchen east		5377743
04	↓	↓ west	↓	5377744

E-MAILED 7-22

dbc 7-22-14

RECEIVED JUL 22 2014 IATL - By

TRANSMITTAL OF RESULTS
[ ]TELEPHONE RESULTS [ ]TELEPHONE #718-390-0914 [X]EMAIL: franowoh@gmail.com
[ ]FAX RESULTS TO [ ]TELEPHONE #718-390-0915

CHAIN OF CUSTODY RECORD

RELINQUISHED BY:	DATE: 7-18-14	TIME: 7/22/14
RECEIVED BY:	DATE:	TIME:

IATL International Asbestos Testing Laboratories

9000 Commerce Parkway Suite B Mt. Laurel, NJ 08054
Telephone: 856-231-9449 Fax: 856-231-9818

CERTIFICATE OF ANALYSIS

Client: Safety Environmental Co. Of NY
33 Clinton Ave.
Staten Island NY 10301

Report Date: 7/22/2014
Report No.: 340474
Project: CB&I; 205 6th Ave Apt #2 Unit 2
Project No.: RRE0014020

BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 5377741 **Description / Location:** Sample Not Analyzed
Client No.: 01

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Sample Not Analyzed		Sample Not Analyzed		

Note: Insufficient material provided for analysis.

Lab No.: 5377742 **Description / Location:** Sample Not Analyzed
Client No.: 02

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
Sample Not Analyzed		Sample Not Analyzed		

Note: Insufficient material provided for analysis.

Lab No.: 5377743 **Description / Location:** Off-White Sheetrock
Client No.: 03 Kitchen East

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	Trace	Cellulose	100
		Trace	Fibrous Glass	

Lab No.: 5377744 **Description / Location:** Off-White Sheetrock
Client No.: 04 Kitchen West

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	Trace	Cellulose	100
		Trace	Fibrous Glass	

Accreditations: **NIST-NVLAP No. 101165-0** **NY-DOH No. 11021** **AIHA-LAP, LLC No. 100188**

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government
This report shall not be reproduced except in full, without written approval of the laboratory.

Analytical Method: US EPA 600/R-93/116 by Polarized Light Microscopy, (ELAP 198.1 where applicable)

Comments: Quantification at <0.25% by volume is possible with this method. (PC) Indicates Stratified Point Count Method performed. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed (ex. analyze until positive instructions). Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, PLM is not consistently reliable in detecting asbestos in non-friable organically bound (NOB) materials. Quantitative transmission electron microscopy (TEM) is currently the only method that can pronounce materials as non-asbestos containing.

Analysis Performed By: R. Kennedy

Approved By: Frank E. Ehrenfeld, III

Date: 7/22/2014

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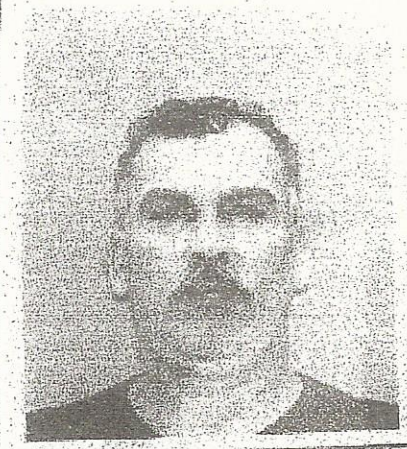
10.0 PERSONNEL LICENSES

STATE OF NEW YORK - DEPARTMENT OF LABOR

ASBESTOS CERTIFICATE



JIMMY RIVERA

CLASS(EXPIRES)

C ATEC(04/15) D INSP(04/15)

H PM (04/15)

CERT# 08-10517

DMV# 565206547

MUST BE CARRIED ON ASBESTOS PROJECTS

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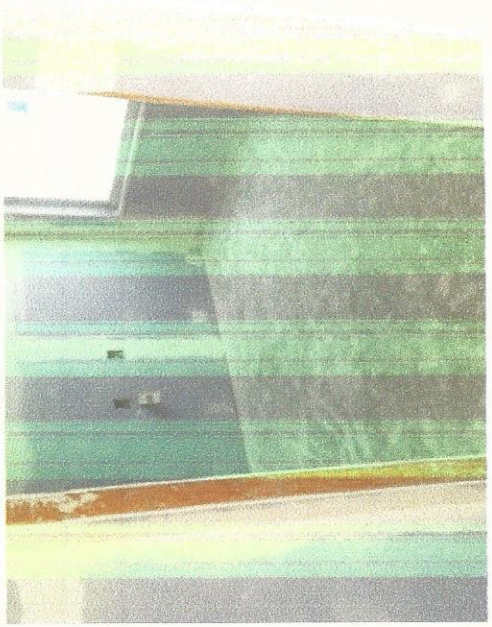
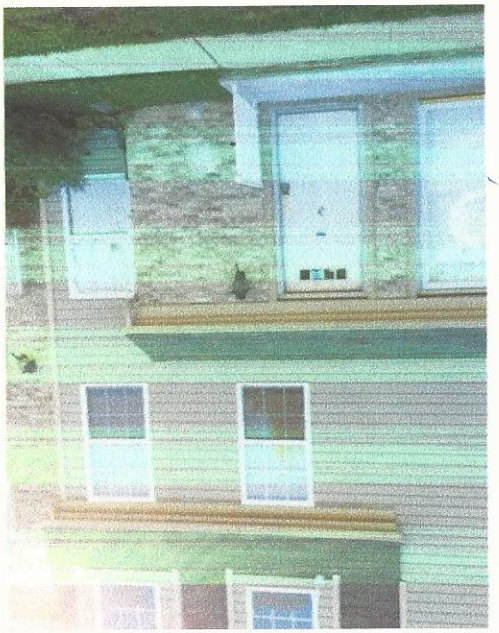
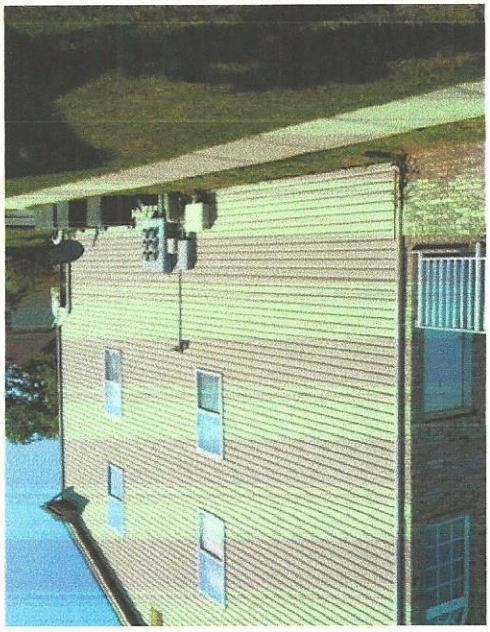
11.0 PHOTOS/ FLOOR PLAN







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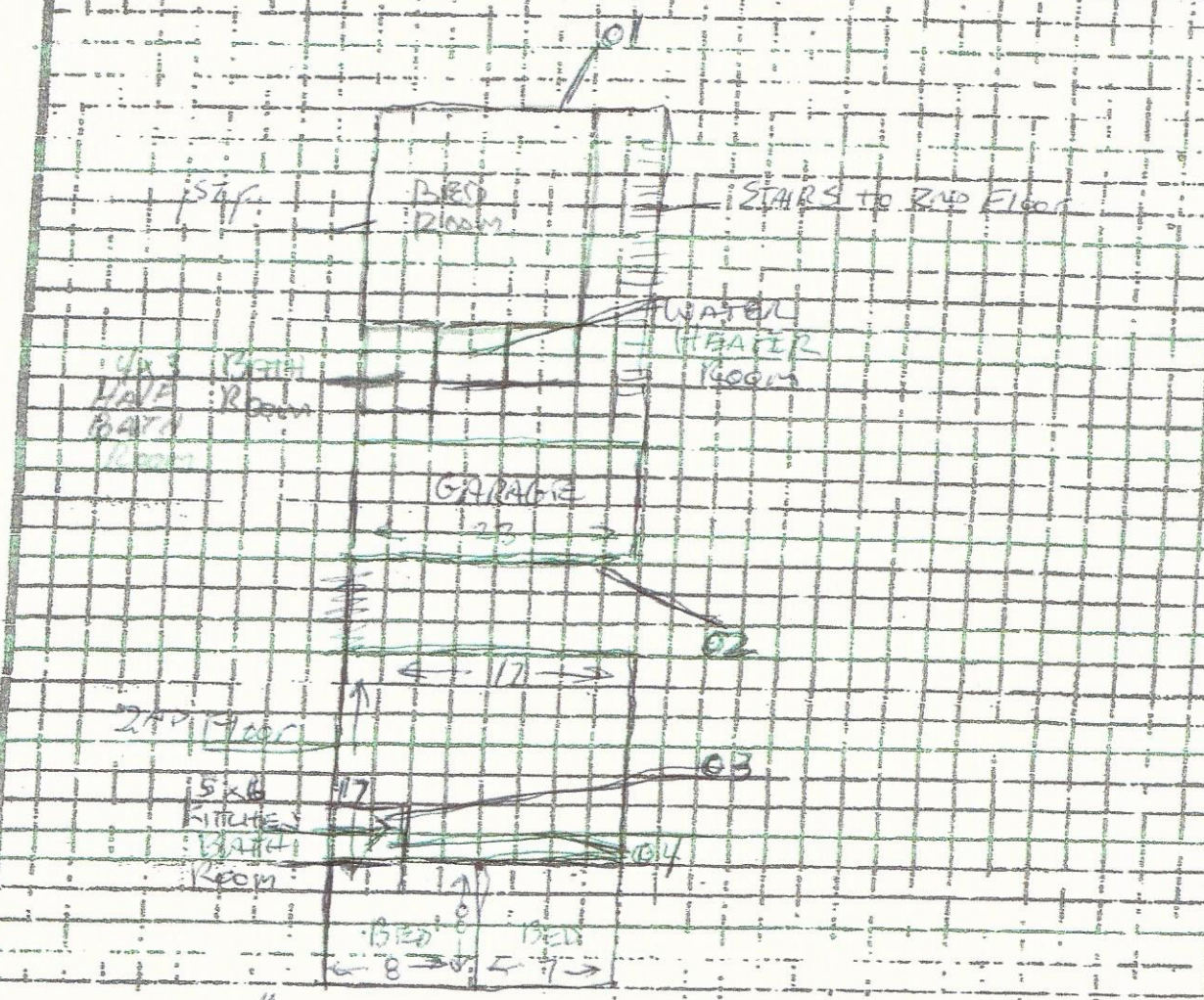
Staten Island, NY 10301

CLIENT: C.B.I Shaw
SITE: 205 6th Ave apt #2
SITE ADDRESS: Unit #2 Cody Avenue NY
WORK AREA:
RBE0014020

DATE: 2-18-14
MATERIAL:
PROJ MANAGER: Jimmy Rivera
OF SAMPLES: 4

PAGE 1 OF 1



APT #2
EXTERIOR SIDING VINYL ONLY WOOD UNDERNEATH
CERAMIC TILES ON FLOOR WOOD UNDERNEATH
NO CRAWL SPACE.

LEGEND:

COMMENTS: