



**Town of Clayton, North Carolina  
Request for Proposal**

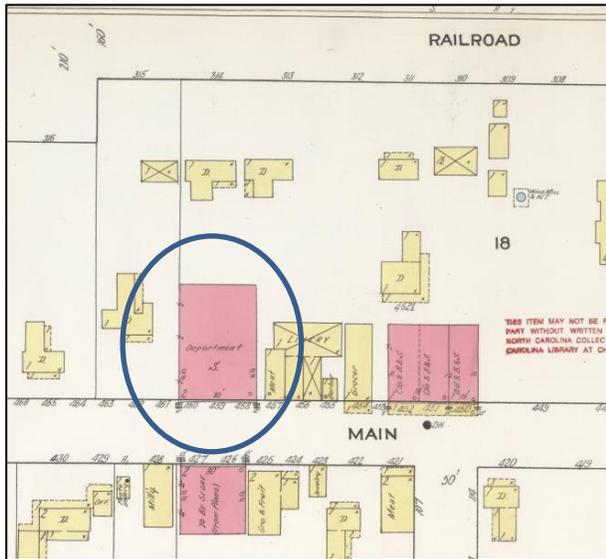


**220 E. Main Street  
Clayton, North Carolina**

## Introduction

The Mayo Building, (218-220 E Main) was constructed circa 1913, by John Mayo and has been a notable commercial space in the heart of historic Downtown Clayton. It located on the north side of Main between Barbour and Church Streets.

Built as one structure with two storefronts the Mayo Building was home to a furniture and clothing store. Sometime between Mayo's death in 1915 and 1918, the store was purchased by Ashley Horne, a prominent Clayton citizen, and a party wall was added to divide the two sides and creating two separate addresses/parcels.



1913 Sanborn Insurance Map



1918 Sanborn Insurance Map



# 220 E MAIN

During the 1930's Tucker Eason purchased 220 E. Main, the East side of the building and operated Tucker Furniture store. During the late 1960's through the 1980's, the building served as a church. During the 1990's the building use transitioned to a professional service company, ABC Plumbing that operated until vacated and subsequently acquired by the Town of Clayton in 2015.



*Gulley's Clothing Interior – 218 Side of Property with view of the pressed tin ceilings and crown molding*

The two-story brick structure remains a commercial building with two storefronts. Architectural features include brick parapets with corbelling and sawtooth brick patterns. Its front façade features three upper level windows with incised granite flat arches and prominent keystones. The lower level storefront, modified ca. 1950, is a three panel metal framed window with a glass door and side-lite entrance located on the left. The original storefront design, reflected in the adjacent property 218 E Main, was recessed with angled display windows and a central door. A heavily denticulated cornice with corbels still exists above where the spandrel glass would have been located.



Front Façade of 218 and 220 E. Main (Town-owned 220 property on right side)

# 220 E MAIN



Rear façade of 220 E. Main Street

## Status of the Building

The 220 E. Main Street property has been under the ownership of the Town of Clayton since 2015. Prior to that time the property was held by First Citizens Bank for 16 months. The Town purchased the building with the intent of renovation and adaptive reuse for \$150,000.

When purchased in 2015, the building lot was approximately 209 feet deep reaching the NCR right-of-way and included a deteriorated back warehouse building. The warehouse building was demolished and the lot was subdivided into two lots, front and back. The 220 E. Main lot currently includes the area of the building footprint plus nine additional feet at the back property line. The back property line adjoins a future Town parking lot property with the 18' closest to the 220 building reserved for vehicular and pedestrian cross access.

No system or structure within the building is warranted as meeting current building code. New construction on the second floor was performed without proper permits or inspections.



Project goals include the following:

- A. Complete exterior structural and aesthetic renovation on all sides of 220 E. Main Street, exercising all reasonable options to maintain and restore the historic integrity and architectural elements of the building.
  - B. Interior renovation of first floor to a fully usable, safe and attractive commercial or institutional use standard, compliant with all codes.
  - C. Fully stabilize and make safe all areas on the second floor.
  - D. Retain/restore rear entrance; original stair case; pressed metal ceilings and moldings, windows on all facades; retain storefront (unless restoring to original design); and prefer to have the historic manual freight lift structure kept as a feature.
  - E. Install all necessary fire separations compliant with modern building code standards.
  - F. All systems (HVAC, electric, plumbing) must be upgraded as necessary to ensure safety adequacy, and reliability.
  - G. Provide construction plans for review and approval by the Town of Clayton within eight months of transfer and sale of the property to the successful proposer.
  - H. Obtain a building permit within 9 months of the transfer and sale of the property.
  - I. Achieve a Certificate of Occupancy and bring the building into productive use within twelve months of building permit issuance.
-



## **RFP Process**

Interested proposers shall submit a statement of qualification, purchase and development proposal, and project schedule in accordance with this document.

A pre-proposal site visit for inspection will be held with interested parties on Friday, January 22, 2016 from 1:00 p.m. until 4:00 p.m.

The best overall proposal will be selected based on all factors including consideration of purchase price, scope and quality of proposed renovation, use plan, and experience of the developer with like projects. The Town reserves the right to reject any or all of the proposals.

## **Project Team and Experience with Like Projects**

Proposers shall submit a resume or other statement of qualifications for performing the project including an illustrative list of similar projects successfully performed.

The Statement of Qualifications shall include a listing and description of qualifications for each principal team member and affiliated subcontractors and consultants.

## **Project Scope**

Proposers shall provide sufficient detail on the scope of work to be performed so that the Town can determine and evaluate completeness and quality of the project. Exterior renovation scope and methods should be described; window and door treatments specified, structural improvements must be considered and specified, particularly floor supports.

If the proposer intends to pursue Federal and/or State historic preservation tax credits then a statement verifying the intention to comply with the Department of Interior Standards and Guidelines and related reviews and approvals shall be provided.

The proposer should assess use and condition of the second floor as an explicit element of the project description.

## **Program or Use Proposal for Site**

The proposer shall describe the intended interior layout and program for use of the renovated property and shall list known or expected tenants or tenant classes.

The Town of Clayton is a perspective tenant of the structure upon completion if another tenant is not identified by the developer. The Town of Clayton is interested in a five year lease for 2,000 square feet on the first floor of the renovated building for the purpose of conducting library and other Town services.

The Town will consider a "renovate to suit" lease agreement in advance of the renovation project or will



evaluate a market based lease amount available at project completion, at the preference of the developer. The Town of Clayton does not, as part of this RFP, stipulate that the site must be reserved for library or other public use, nor does it guarantee lease and use of the site unless a lease is executed. Lease of the site, if mutually desirable, is subject to a separate agreement which is secondary and apart from the RFP process.

### **Town Incentives for Project**

Upon completion of the renovation project and subject to separate agreement, a reimbursement grant of \$50,000 will be provided to the redeveloper as a means to recoup a portion of project costs.

Base building permit fees, but not re-inspection fees, will be reimbursed to the owner upon issuance of a Certificate of Occupancy. (All fees will be charged to applicable contractors and trades but the cost for all Town of Clayton permits will be reimbursed to the owner at Certification of Occupancy.)

Site is eligible, upon receipt and approval of appropriate applications for double façade grants for front and rear façade. (Maximum reimbursement of 50% of project cost or up to \$10,000 total for the two facades.)

Town will reimburse water and sewer tap fees if new taps are necessary and installed for service to the site. Water and sewer acreage fees will be waived. Water and sewer capacity fees and nutrient off-set fees will be applicable for daily capacity exceeding the base amount of 50 gpd. See form.

Town will install underground electric service feed to the site without cost. Cost for receiving structure will be developer's expense but can be counted as an eligible expense under the façade grant program.

Site will be eligible for Clayton Downtown Redevelopment Incentive Grant (CDRIG) on property tax expense post renovation. Click [here](#) for details on process and applicability.

If the project redeveloper performs the project consistent with the Dept. of Interior Standards and Guidelines and is successful in acquiring Federal and State Historic Preservation Tax Credits, the Town will reimburse 50% of documented design and application fees up to a maximum of \$10,000.

### **Historic Preservation Tax Incentives (Federal and State)**

- State credits are 15% on projects up to \$10,000.
- Credits can be taken in year structure is placed in service and can be carried forward 9 years.
- Federal credits are 20% of eligible project cost.
- Proposers should verify eligibility, process, and value of applicable State and Federal income tax credit programs.



### **Submission of Proposals and Additional Information**

Proposals shall be submitted in a sealed envelope to the office of the Town Clerk, 111 E. Second Street, Clayton, North Carolina by Tuesday February 23, 2016 at 3:00. Envelopes must be clearly marked on the outside: 220 E. Main Street Proposal with the name and address of the proposer. Electronic submittals will be allowed and must be sent by the deadline to: [kmoffett@townofclaytonnc.org](mailto:kmoffett@townofclaytonnc.org). Electronic submittals should include "220 E. Main Street Proposal" in the subject line.

Information regarding the RFP document or process may be requested by contacting:

Steve Biggs, Town Manager, Town of Clayton, NC at [sbiggs@townofclaytonnc.org](mailto:sbiggs@townofclaytonnc.org) or by phone at 919-359-9331.

Interested proposers should notify the Town of Clayton of their intent to propose in order to receive any supplements or addenda to the RFP. It is the responsibility of proposers to prepare and submit a complete and responsive proposal.



Proposal Statement

It is acceptable to provide attachments to this sheet with “see attachment” as a means to propose.

1. Describe in detail the scope and project approach to exterior renovation of 220 E. Main Street.
2. Describe in detail the scope and project approach to interior renovation of 220 E. Main Street. In the event the interior renovation will be phased a detailed phasing plan should be provided.
3. Describe the intended or expected use of 220 E. Main at project completion.
4. Provide a list of project team members and qualifications including ownership group, consulting architects and/or engineers, and general contractor, if known.
5. Total Project Budget \$\_\_\_\_\_ (A detailed cost takeoff is preferred and should be attached.)

6. Proposed purchase price for 220 E. Main Street: \$\_\_\_\_\_.

Note: The Town of Clayton may require the successful proposer to provide a financial statement, proof of financing or other means to demonstrate the capacity to carry out the project renovation in the timeframe and within the scope specified.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Printed: \_\_\_\_\_

For: \_\_\_\_\_



As part of its due diligence the Town of Clayton performed certain evaluations.

The results of these evaluations are attached herewith and are offered for information purposes without warranty.



June 12, 2014

Town of Clayton  
111 East Second Street  
Clayton, North Carolina 27520

Attn: Mr. John McCullen

Re: Asbestos Survey and Lead Paint Sampling Report  
Commercial Building  
220 E. Main Street  
Clayton, North Carolina  
Terracon Project No.: 70147043

Dear Mr. Walker:

The purpose of this report is to present the results of the asbestos survey and lead paint sampling performed on June 6, 2014 at the above referenced building located in Clayton, North Carolina. These services were conducted in general accordance with Terracon Proposal No. P70140275 dated June 9, 2014. We understand that these services were requested due to the potential renovation of the building.

**Asbestos was identified** during the course of our survey. Please refer to the attached report for details.

**Lead was identified** in paint chip samples collected during the course of our survey of the subject building. Please refer to the attached report for details.

Terracon appreciates the opportunity to provide this service to Town of Clayton. If you have any questions regarding this report, or if you need assistance with project oversight during abatement/replacement of the building, please contact the undersigned at 919.873.2211.

Sincerely,

**Terracon Consultants Inc.**

Doug Weaver  
Senior Project Manager  
Environmental Services  
NC Inspector No. 12436

Scott D. Rohlf, CIH  
Authorized Project Reviewer



Terracon Consultants, Inc. 2401 Brentwood Road, Suite 107 Raleigh, North Carolina 27604  
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Geotechnical



Environmental



Construction Materials



Facilities

# ASBESTOS SURVEY AND LEAD PAINT SAMPLING REPORT

Commercial Building  
220 E. Main Street  
Clayton, North Carolina  
June 12, 2014  
Terracon Project 70147043



Prepared For:  
Town of Clayton  
Clayton, North Carolina

Prepared By:  
Terracon Consultants, Inc.  
Raleigh, North Carolina

Offices Nationwide  
Employee-Owned

Established in 1965  
[terracon.com](http://terracon.com)

# Terracon

Geotechnical   ■   Environmental   ■   Construction Materials   ■   Facilities

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# **ASBESTOS SURVEY REPORT**

**COMMERCIAL BUILDING  
220 E. MAIN STREET  
CLAYTON, NORTH CAROLINA**

**TERRACON PROJECT NO. 70147043**

## **1.0 INTRODUCTION**

Terracon conducted an asbestos survey and lead paint sampling of the commercial building located at 220 E. Main Street in Clayton, North Carolina. These services were conducted on June 6, 2014 by a State of North Carolina Accredited Asbestos Building Inspector in general accordance with Terracon Proposal No. P70140275 dated June 9, 2014. The building was surveyed and homogeneous areas of suspect asbestos-containing materials (ACM) and lead paint (LP) were visually identified and documented. Although reasonable effort was made to survey accessible suspect materials, additional suspect but un-sampled materials could be located in voids or in other concealed areas. Suspect ACM samples were collected in general accordance with the sampling protocols outlined in EPA regulation 40 CFR 763 (Asbestos Hazard Emergency Response Act, AHERA). Samples were delivered to an accredited laboratory for analysis by Polarized Light Microscopy.

### **1.1 Project Objective**

We understand the asbestos survey and lead paint sampling were requested due to the potential renovation of the building. We understand the purpose of these services is to identify and quantify ACM and LP present prior to potential renovation activities. EPA regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP), prohibits the release of asbestos fibers to the atmosphere during renovation or demolition activities. The asbestos NESHAP requires that potentially regulated asbestos-containing building materials be identified, classified and quantified prior to planned disturbances, renovation or demolition activities. The Occupational Health and Safety Administration (OSHA) has promulgated worker protection standard for the disturbance of lead paints during demolition projects.

## **2.0 BUILDING DESCRIPTION**

The commercial building consists of an approximately 3,735 square-foot, 2-story building constructed in approximately 1935. The building shares a common central wall and roof with 218 E. Main Street. The building consists of a brick structure with wood framed floors on piers. The roof consists of a black rubber roof on a wood roof deck and framing. The exterior of the building is finished with brick and/or concrete. The interior walls of the building are finished with plaster, wood paneling, unfinished brick, wood and drywall. The floors are

finished with carpet, wood flooring, vinyl floor tile and mastic, plywood and vinyl sheet flooring. The ceilings consist of mechanically fastened tin ceiling panels, wood paneling, ceiling tile and drywall with ceiling texture. No pipe insulation was observed at the building. Heating Ventilation and Air Conditioning (HVAC) ducts were insulated with fiberglass. Window glazing and window/door frame caulk were observed.

### **3.0 FIELD ACTIVITIES**

The survey was conducted by State of North Carolina Accredited Asbestos Building Inspector Mr. Doug Weaver (NC Accredited Asbestos Inspector Number 12436). The survey was conducted in general accordance with the sample collection protocols established in EPA regulation 40 CFR 763, the Asbestos Hazard Emergency Response Act (AHERA). A summary of survey activities is provided below.

#### **3.1 Asbestos**

##### **3.1.1 Visual Assessment**

Our survey activities began with visual observation of the building to identify homogeneous areas of suspect ACM. A homogeneous area consists of building materials that appear similar throughout in terms of color, texture and date of application. At the request of the Client, the roof and exterior of the building were sampled during the survey. Building materials identified as concrete, glass, wood, masonry, metal or rubber were not considered suspect. The survey was limited to the readily and safely accessible areas of the building.

##### **3.1.2 Physical Assessment**

A physical assessment of each homogeneous area of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the EPA as a material, which can be crumbled, pulverized or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

##### **3.1.3 Sample Collection**

Based on results of the visual observation, bulk samples of suspect ACM were collected in general accordance with AHERA sampling protocols. Random samples of suspect materials were collected in each homogeneous area. Sample team members collected bulk samples using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

Forty-five (45) bulk samples were collected from fourteen (14) homogeneous areas of suspect ACM. A summary of suspect ACM samples collected during the survey is included as Appendix A.

### 3.1.4 Sample Analysis

Bulk samples were submitted under chain of custody to EMSL Analytical, Inc. (EMSL) of Morrisville, North Carolina for analysis by Polarized Light Microscopy (PLM) with dispersion staining techniques per EPA methodology (40 CFR 763, Subpart F). The percentage of asbestos, where applicable, was determined by microscopic visual estimation. EMSL is accredited under the National Voluntary Laboratory Accreditation Program NVLAP (Accreditation Number 200671-0).

## 3.2 Lead Paint

### 3.2.1 Lead Paint Sample Collection

Seven (7) paint chip samples were collected to meet informational needs to comply with OSHA regulations (29 CFR 1926.62 – Lead Exposure in Construction) for any proposed renovation or demolition activities. The lead paint chip samples were collected in general accordance with the EPA's work practice standards for conducting lead paint activities (40 CFR 745.227).

Paint chip samples were submitted under a chain of custody to EMSL of Kernersville, North Carolina. Paint chip samples were analyzed by Flame Atomic Absorption method SW846-3050B/7000. EMSL is an American Industrial Hygiene Association (AIHA) accredited laboratory (ELPAT, Lab Code 102564), to perform Flame Atomic Absorption analysis. A summary of the paint chip samples collected during the survey is presented in Appendix E.

## 4.0 REGULATORY OVERVIEW

### 4.1 Asbestos

The asbestos NESHAP (40 CFR Part 61, Subpart M) regulates asbestos fiber emissions and asbestos waste disposal practices. It also requires the identification and classification of existing building materials prior to demolition or renovation activities. Under NESHAP, asbestos-containing building materials are classified as either friable, Category I non-friable or Category II non-friable ACM. Friable materials are those that, when dry, may be crumbled, pulverized or reduced to powder by hand pressure. Category I non-friable ACM includes packings, gaskets, resilient floor coverings and asphalt roofing products containing more than 1% asbestos. Category II non-friable ACM are any materials other than Category I materials that contain more than 1% asbestos.

Friable ACM, Category I and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated renovation or demolition activities are considered regulated ACM (RACM).

In the state of North Carolina, asbestos activities are regulated by the North Carolina Department of Health and Human Services, Health Hazards Control Unit (HHCU) under 10A NCAC 41C Section .0600 – Asbestos Hazard Management Program (AHMP). The AHMP requires that any asbestos-related activity conducted in a public building be performed by personnel accredited by the HHCU.

Asbestos abatement must be conducted under the direct supervision of a North Carolina accredited supervisor, except that permitted removals of roofing products may be conducted under the direct supervision of a North Carolina accredited roofing supervisor. An asbestos abatement design must be prepared by a North Carolina accredited abatement designer for each individually permitted removal of more than 3000 square feet (281 square meters), 1500 linear feet (462 meters) or 656 cubic feet (18 cubic meters), of regulated asbestos containing materials conducted in public areas. Third-party air monitoring must be conducted during the abatement activities in accordance with AHMP requirements.

AHMP requires that no person remove more than 35 cubic feet (1 cubic meter), 160 square feet (15 square meters), or 260 linear feet (80 linear meters) of regulated asbestos containing material, without a permit issued by the HHCU. Applications must be postmarked or received by the HHCU at least 10 working days prior to the scheduled removal start date.

The OSHA Asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos. The OSHA standard requires that employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeter of air (0.1 f/cc). The OSHA standard classifies construction and maintenance activities which could disturb ACM, and specifies work practices and precautions which employers must follow when engaging in each class of regulated work. States which administer their own federally-approved state OSHA programs may require additional precautions.

## **4.2 Lead Paint**

The limited lead paint sampling activities were conducted in general accordance with the EPA's work practice standards for conducting lead paint activities (40 CFR 745, and State and local regulations) to meet informational needs to comply with the OSHA Lead in Construction Standard. Lead is regulated by the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA).

The Resource Conservation and Recovery Act (RCRA) gave the USEPA authority to regulate the waste status of demolition or renovation debris, including lead-containing materials. Specific notification and testing requirements must be addressed prior to transporting, treating, storing, or disposing of hazardous wastes. Lead containing wastes are considered hazardous waste under RCRA if Toxicity Characteristic Leaching Procedure (TCLP) results exceed 5 milligrams per liter (mg/L). EPA exempts from most RCRA requirements those generators whose combined hazardous waste generation is less than 100 kilograms (kg) per month.

Detectable lead quantities may constitute a lead dust hazard during renovation/demolition activities. Personnel performing renovation/demolition activities that may disturb painted components with concentrations of lead above the designated analytical detection limit should comply with all current OSHA regulations in order to minimize employee exposure. OSHA defines lead-based paint as a paint, which contains lead, regardless of the concentration. Currently, any proposed renovation/demolition is subject to the OSHA regulations (29 CFR 1926.62 – Lead Exposure in Construction). The OSHA regulation defines specific training requirements, engineering controls and working practices for construction personnel subject to this standard. Occupational exposure to lead occurring in the course of construction work, including maintenance activities, painting, alteration and repairs is subject to the OSHA “Interim” Lead Exposure in Construction standard.

Construction work covered by 29 CFR 1926.62 includes any repair or renovation activities or other activities that disturb in-place lead-containing materials, but does not include routine cleaning and repainting where there is insignificant damage, wear, or corrosion of existing lead-containing coatings or substrates. Employers must assure that no employee will be exposed to lead at concentrations greater than 50 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) averaged over an eight-hour period without adequate protection. The OSHA Standard also establishes an action level of 30  $\mu\text{g}/\text{m}^3$  which if exceeded triggers the requirement for medical monitoring.

The above overview is not intended to be inclusive of all potentially pertinent regulatory information. The relevant EPA and OSHA standards should be consulted prior to undertaking activities involving the demolition, renovation, or maintenance of surfaces coated with lead-based paints.

## **5.0 FINDINGS AND RECOMMENDATIONS**

### **5.1 Asbestos**

Based on the results of laboratory analysis, samples of the following materials were identified to contain asbestos in amounts greater than one percent:

- White Window Frame Caulk – Good Condition
- Tan Vinyl Sheet Flooring – Good Condition

The white window frame caulk and vinyl sheet flooring are considered to be Friable materials in good condition.

A summary of the classification and condition of identified ACM is presented in Appendix B. Laboratory analytical reports are included in Appendix C.

The identified asbestos-containing materials must be removed by a qualified asbestos abatement contractor prior to renovation or demolition activities, which may disturb these materials. Qualified asbestos abatement contractors should be contacted to obtain competitive bids for removal of the materials.

## **5.2 Lead Paint**

Based on the results of the paint chip sampling, the following painted surfaces were determined to contain lead at concentrations above the laboratory detection limit:

- Pink on plaster walls
- Green on plaster walls
- Beige on interior wood window frames
- Beige on wood interior walls
- White on tin ceiling panels
- White on wood window frames

OSHA defines lead-containing paint as a paint, which contains lead, regardless of the concentration. A summary of lead paint sample locations and reported concentrations are included as Appendix C. Copies of the laboratory analytical results are included as Appendix D.

## **6.0 GENERAL COMMENTS**

This asbestos survey was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our survey of the building. The information contained in this report is relevant to the date on which this survey was performed, and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for use by the Town of Clayton for specific application to their project as discussed. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Terracon does not warrant the work of regulatory agencies, laboratories or other third parties supplying information, which may have been used in the preparation of this report. No warranty, expressed or implied is made.

**APPENDIX A**

**ASBESTOS SURVEY SAMPLE SUMMARY**

**Appendix A**

**ASBESTOS SURVEY SAMPLE SUMMARY**

**Commercial Building**

220 E. Main Street  
Clayton, North Carolina

HA	Sample No.	Description	Sample Location	Lab Results
<b>1</b>	<b>01</b>	<b>White Exterior Window Frame Caulk</b>	<b>South Window</b>	<b>2% Chrysotile Asbestos</b>
<b>1</b>	<b>02</b>	<b>White Exterior Window Frame Caulk</b>	<b>South Window</b>	<b>Not Analyzed - Stop First Positive</b>
<b>1</b>	<b>03</b>	<b>White Exterior Window Frame Caulk</b>	<b>South Window</b>	<b>Not Analyzed - Stop First Positive</b>
2	04	White 2'x4' Ceiling Tile	1st Floor Ceilings	None Detected
2	05	White 2'x4' Ceiling Tile	1st Floor Ceilings	None Detected
2	06	White 2'x4' Ceiling Tile	1st Floor Ceilings	None Detected
3	07	Drywall, Tape and Compound	1st Floor Back Hallway	None Detected
3	08	Drywall, Tape and Compound	1st Floor Restroom	None Detected
3	09	Drywall, Tape and Compound	1st Floor Central Room	None Detected
4	10	Yellow Carpet Glue	1st Floor Offices	None Detected
4	11	Yellow Carpet Glue	1st Floor Offices	None Detected
4	12	Yellow Carpet Glue	1st Floor Offices	None Detected
5	13	Beige Sink Mastic	1st Floor Central Room	None Detected
5	14	Beige Sink Mastic	1st Floor Central Room	None Detected
5	15	Beige Sink Mastic	1st Floor Central Room	None Detected
6	16	Plaster	1st Floor Wall	None Detected
6	17	Plaster	1st Floor Wall	None Detected
6	18	Plaster	2nd Floor Wall	None Detected
7	19	Spray Applied Ceiling Texture	1st Floor Rear Hallway	None Detected
7	20	Spray Applied Ceiling Texture	1st Floor Rear Hallway	None Detected
7	21	Spray Applied Ceiling Texture	1st Floor Rear Hallway	None Detected
<b>8</b>	<b>22</b>	<b>Tan Vinyl Sheet Flooring</b>	<b>1st Floor Men's Restroom</b>	<b>20% Chrysotile Asbestos</b>
<b>8</b>	<b>23</b>	<b>Tan Vinyl Sheet Flooring</b>	<b>1st Floor Men's Restroom</b>	<b>Not Analyzed - Stop First Positive</b>
<b>8</b>	<b>24</b>	<b>Tan Vinyl Sheet Flooring Under Floor Tile</b>	<b>1st Floor Women's Restroom</b>	<b>Not Analyzed - Stop First Positive</b>
9	25	White 12"x12" Vinyl Floor Tile	1st Floor Women's Restroom	None Detected
9	26	White 12"x12" Vinyl Floor Tile	1st Floor Women's Restroom	None Detected
9	27	White 12"x12" Vinyl Floor Tile	1st Floor Women's Restroom	None Detected
10	28	White Window Glazing	North Window Behind Plywood	None Detected
10	29	White Window Glazing	North Window Behind Plywood	None Detected
10	30	White Window Glazing	North Window Behind Plywood	None Detected
11	31	White and Green 12"x12" Vinyl Floor Tile	2nd Floor Restroom	None Detected
11	32	White and Green 12"x12" Vinyl Floor Tile	2nd Floor Restroom	None Detected
11	33	White and Green 12"x12" Vinyl Floor Tile	2nd Floor Restroom	None Detected
12	34	White 2'x2' Ceiling Tile	2nd Floor Ceiling	None Detected
12	35	White 2'x2' Ceiling Tile	2nd Floor Ceiling	None Detected
12	36	White 2'x2' Ceiling Tile	2nd Floor Ceiling	None Detected
13	37	Black Roofing Debris	Attic	None Detected
13	38	Black Roofing Debris	Attic	None Detected
13	39	Black Roofing Debris	Attic	None Detected
14	40	Black Waterproofing on Mortar	1st Floor Wall Behind Plaster	None Detected
14	41	Black Waterproofing on Mortar	1st Floor Wall Behind Plaster	None Detected
14	42	Black Waterproofing on Mortar	1st Floor Wall Behind Plaster	None Detected
15	43	White Window Glazing	1st Floor North Hallway	None Detected
15	44	White Window Glazing	1st Floor North Hallway	None Detected
15	45	White Window Glazing	1st Floor North Hallway	None Detected

Results in bold indicated asbestos-containing materials.

**APPENDIX B**

**IDENTIFIED ASBESTOS-CONTAINING MATERIALS**

**Appendix B**

**IDENTIFIED ASBESTOS-CONTAINING MATERIALS**

**Commercial Building**

220 E. Main Street  
Clayton, North Carolina

HA	Sample No.	Description	Material Location	NESHAP Classification	Percent/Type Asbestos	Condition	Estimated Quantity*
1	1	White Exterior Window Frame Caulk	South Window	Friable	2% Chrysotile	Good	24 Linear Feet
8	22	Tan Vinyl Sheet Flooring	1st Floor Men's Restroom 1st Floor Women's Restroom Under Floor Tile	Friable	20% Chrysotile	Good	100 Square Feet

**Note: All quantities should be verified by the asbestos abatement contractor.**

**APPENDIX C**

**ASBESTOS ANALYTICAL LABORATORY REPORT**



# EMSL Analytical, Inc.

2500 Gateway Centre Blvd., Suite 600, Morrisville, NC 27560

Phone/Fax: (919) 465-3900 / (919) 465-3950

<http://www.EMSL.com>

[raleighlab@emsl.com](mailto:raleighlab@emsl.com)

EMSL Order:	291403388
CustomerID:	TITA51
CustomerPO:	
ProjectID:	

Attn: <b>Doug Weaver</b> <b>Terracon Consultants, Inc.</b> <b>2401 Brentwood Road</b> <b>Suite 107</b> <b>Raleigh, NC 27604</b>	Phone: (919) 873-2211 Fax: (919) 873-9555 Received: 06/06/14 2:50 PM Analysis Date: 6/7/2014 Collected: 6/6/2014
Project: 220 E. Main	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
01 291403388-0001	Ext Windows - White Caulk	Gray Fibrous Homogeneous	3% Cellulose	95% Non-fibrous (other)	2% Chrysotile
02 291403388-0002	Ext Windows - White Caulk				Stop Positive (Not Analyzed)
03 291403388-0003	Ext Windows - White Caulk				Stop Positive (Not Analyzed)
04 291403388-0004	1st Floor - White 2x4 Ceiling Tile	White Fibrous Homogeneous	40% Cellulose 35% Min. Wool	20% Perlite 5% Non-fibrous (other)	None Detected
05 291403388-0005	1st Floor - White 2x4 Ceiling Tile	White Fibrous Homogeneous	35% Cellulose 35% Min. Wool	20% Perlite 10% Non-fibrous (other)	None Detected
06 291403388-0006	1st Floor - White 2x4 Ceiling Tile	White Fibrous Homogeneous	30% Cellulose 35% Min. Wool	25% Perlite 10% Non-fibrous (other)	None Detected
07 291403388-0007	Walls - Drywall, Tape & Compound	Gray/White Fibrous Homogeneous	15% Cellulose 8% Glass	77% Non-fibrous (other)	None Detected
This is a composite result of drywall, jt. compound, and tape.					
08 291403388-0008	Walls - Drywall, Tape & Compound	White Fibrous Homogeneous	20% Cellulose 10% Glass	70% Non-fibrous (other)	None Detected
This is a composite result of drywall, jt. compound, and tape.					

Analyst(s) \_\_\_\_\_  
Anupriya Tyagi (44)

  
Essie Spencer, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Morrisville, NC NVLAP Lab Code 200671-0, VA 3333 000278, WVA LT000296

Initial report from 06/09/2014 11:40:54



# EMSL Analytical, Inc.

2500 Gateway Centre Blvd., Suite 600, Morrisville, NC 27560

Phone/Fax: (919) 465-3900 / (919) 465-3950

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[raleighlab@emsl.com](mailto:raleighlab@emsl.com)

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Attn: <b>Doug Weaver</b> <b>Terracon Consultants, Inc.</b> <b>2401 Brentwood Road</b> <b>Suite 107</b> <b>Raleigh, NC 27604</b>	Phone: (919) 873-2211 Fax: (919) 873-9555 Received: 06/06/14 2:50 PM Analysis Date: 6/7/2014 Collected: 6/6/2014
Project: 220 E. Main	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
09 291403388-0009	Walls - Drywall, Tape & Compound	Gray/White Fibrous Homogeneous	15% Cellulose 10% Glass	75% Non-fibrous (other)	None Detected
This is a composite result of drywall, jt. compound, and tape.					
10 291403388-0010	1st Floor - Yellow Carpet Glue	Yellow Fibrous Homogeneous	5% Cellulose 2% Synthetic	93% Non-fibrous (other)	None Detected
11 291403388-0011	1st Floor - Yellow Carpet Glue	Yellow Fibrous Homogeneous	8% Cellulose 3% Synthetic	89% Non-fibrous (other)	None Detected
12 291403388-0012	1st Floor - Yellow Carpet Glue	Yellow Fibrous Homogeneous	5% Cellulose 2% Synthetic	93% Non-fibrous (other)	None Detected
13 291403388-0013	1st Floor - Beige Sink Mastic	Beige Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
14 291403388-0014	1st Floor - Beige Sink Mastic	Beige Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (other)	None Detected
15 291403388-0015	1st Floor - Beige Sink Mastic	Beige Fibrous Homogeneous	35% Cellulose	65% Non-fibrous (other)	None Detected
16-Skim Coat 291403388-0016	1st & 2nd Floor - Plaster	White Non-Fibrous Homogeneous		50% Ca Carbonate 50% Non-fibrous (other)	None Detected

Analyst(s) \_\_\_\_\_  
Anupriya Tyagi (44)

  
Essie Spencer, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Morrisville, NC NVLAP Lab Code 200671-0, VA 3333 000278, WVA LT000296

Initial report from 06/09/2014 11:40:54



# EMSL Analytical, Inc.

2500 Gateway Centre Blvd., Suite 600, Morrisville, NC 27560

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<http://www.EMSL.com>

[raleighlab@emsl.com](mailto:raleighlab@emsl.com)

EMSL Order:	291403388
CustomerID:	TITA51
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ProjectID:	

Attn: <b>Doug Weaver</b> <b>Terracon Consultants, Inc.</b> <b>2401 Brentwood Road</b> <b>Suite 107</b> <b>Raleigh, NC 27604</b>	Phone: (919) 873-2211 Fax: (919) 873-9555 Received: 06/06/14 2:50 PM Analysis Date: 6/7/2014 Collected: 6/6/2014
Project: 220 E. Main	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
16-Base Coat 291403388-0016A	1st & 2nd Floor - Plaster	Gray Fibrous Homogeneous	10% Cellulose 5% Synthetic	85% Non-fibrous (other)	None Detected
17-Skim Coat 291403388-0017	1st & 2nd Floor - Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
17-Base Coat 291403388-0017A	1st & 2nd Floor - Plaster	Gray Fibrous Homogeneous	8% Cellulose 5% Synthetic	87% Non-fibrous (other)	None Detected
18-Skim Coat 291403388-0018	1st & 2nd Floor - Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
18-Base Coat 291403388-0018A	1st & 2nd Floor - Plaster	Gray Fibrous Homogeneous	10% Cellulose 5% Synthetic	85% Non-fibrous (other)	None Detected
19 291403388-0019	1st Floor - Ceiling Texture	White Fibrous Homogeneous	2% Wollastonite	98% Non-fibrous (other)	None Detected
20 291403388-0020	1st Floor - Ceiling Texture	White Fibrous Homogeneous	<1% Wollastonite	100% Non-fibrous (other)	None Detected
21 291403388-0021	1st Floor - Ceiling Texture	White Fibrous Homogeneous	3% Wollastonite	97% Non-fibrous (other)	None Detected

Analyst(s)  
Anupriya Tyagi (44)

  
Essie Spencer, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Morrisville, NC NVLAP Lab Code 200671-0, VA 3333 000278, WVA LT000296

Initial report from 06/09/2014 11:40:54



# EMSL Analytical, Inc.

2500 Gateway Centre Blvd., Suite 600, Morrisville, NC 27560

Phone/Fax: (919) 465-3900 / (919) 465-3950

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EMSL Order:	291403388
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Attn: <b>Doug Weaver</b> <b>Terracon Consultants, Inc.</b> <b>2401 Brentwood Road</b> <b>Suite 107</b> <b>Raleigh, NC 27604</b>	Phone: (919) 873-2211 Fax: (919) 873-9555 Received: 06/06/14 2:50 PM Analysis Date: 6/7/2014 Collected: 6/6/2014
Project: 220 E. Main	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
22 291403388-0022	1st Floor RR's - Tan Vinyl Sheet Flooring	Tan Fibrous Homogeneous	45% Cellulose	30% Non-fibrous (other)	25% Chrysotile
23 291403388-0023	1st Floor RR's - Tan Vinyl Sheet Flooring				Stop Positive (Not Analyzed)
24 291403388-0024	1st Floor RR's - Tan Vinyl Sheet Flooring				Stop Positive (Not Analyzed)
25 291403388-0025	Women's RR - White 12x12 Vinyl Floor Tile	White Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
26 291403388-0026	Women's RR - White 12x12 Vinyl Floor Tile	White Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
27 291403388-0027	Women's RR - White 12x12 Vinyl Floor Tile	White Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
28 291403388-0028	1st Floor - Window Glazing	Tan Fibrous Homogeneous	2% Wollastonite	98% Non-fibrous (other)	None Detected
29 291403388-0029	1st Floor - Window Glazing	Tan Fibrous Homogeneous	3% Wollastonite	97% Non-fibrous (other)	None Detected
30 291403388-0030	1st Floor - Window Glazing	Tan Fibrous Homogeneous	<1% Wollastonite	100% Non-fibrous (other)	None Detected

Analyst(s)  
Anupriya Tyagi (44)

  
Essie Spencer, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Morrisville, NC NVLAP Lab Code 200671-0, VA 3333 000278, WVA LT000296

Initial report from 06/09/2014 11:40:54

**EMSL Analytical, Inc.**

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Phone/Fax: (919) 465-3900 / (919) 465-3950

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EMSL Order: 291403388

CustomerID: TITA51

CustomerPO:

ProjectID:

Attn: **Doug Weaver**  
**Terracon Consultants, Inc.**  
**2401 Brentwood Road**  
**Suite 107**  
**Raleigh, NC 27604**

Phone: (919) 873-2211  
 Fax: (919) 873-9555  
 Received: 06/06/14 2:50 PM  
 Analysis Date: 6/7/2014  
 Collected: 6/6/2014

Project: 220 E. Main

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
31 291403388-0031	White/Green 12x12 VFT	White Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
32 291403388-0032	White/Green 12x12 VFT	White Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
33 291403388-0033	White/Green 12x12 VFT	White Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
34 291403388-0034	White 2x2 Ceiling Tile	White Fibrous Homogeneous	40% Cellulose 35% Min. Wool	20% Perlite 5% Non-fibrous (other)	None Detected
35 291403388-0035	White 2x2 Ceiling Tile	White Fibrous Homogeneous	35% Cellulose 35% Min. Wool	25% Perlite 5% Non-fibrous (other)	None Detected
36 291403388-0036	White 2x2 Ceiling Tile	White Fibrous Homogeneous	40% Cellulose 35% Min. Wool	20% Perlite 5% Non-fibrous (other)	None Detected
37 291403388-0037	Black Roofing Debris	Black Fibrous Homogeneous	2% Synthetic	98% Non-fibrous (other)	None Detected
38 291403388-0038	Black Roofing Debris	Black Fibrous Homogeneous	3% Synthetic	97% Non-fibrous (other)	None Detected

Analyst(s)

Anupriya Tyagi (44)

Essie Spencer, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Morrisville, NC NVLAP Lab Code 200671-0, VA 3333 000278, WVA LT000296

Initial report from 06/09/2014 11:40:54



# EMSL Analytical, Inc.

2500 Gateway Centre Blvd., Suite 600, Morrisville, NC 27560

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[raleighlab@emsl.com](mailto:raleighlab@emsl.com)

EMSL Order:	291403388
CustomerID:	TITA51
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Attn: <b>Doug Weaver</b> <b>Terracon Consultants, Inc.</b> <b>2401 Brentwood Road</b> <b>Suite 107</b> <b>Raleigh, NC 27604</b>	Phone: (919) 873-2211 Fax: (919) 873-9555 Received: 06/06/14 2:50 PM Analysis Date: 6/7/2014 Collected: 6/6/2014
Project: 220 E. Main	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
39 291403388-0039	Black Roofing Debris	Black Fibrous Homogeneous	2% Synthetic	98% Non-fibrous (other)	None Detected
40 291403388-0040	Black Waterproofing on Mortar	Black Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (other)	None Detected
41 291403388-0041	Black Waterproofing on Mortar	Black Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
42 291403388-0042	Black Waterproofing on Mortar	Black Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (other)	None Detected
43 291403388-0043	Window Glazing	Tan Fibrous Homogeneous	3% Cellulose 2% Wollastonite	95% Non-fibrous (other)	None Detected
44 291403388-0044	Window Glazing	Tan Fibrous Homogeneous	5% Cellulose 3% Wollastonite	92% Non-fibrous (other)	None Detected
45 291403388-0045	Window Glazing	Tan Fibrous Homogeneous	3% Cellulose 2% Wollastonite	95% Non-fibrous (other)	None Detected

Analyst(s) \_\_\_\_\_  
Anupriya Tyagi (44)

  
Essie Spencer, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Morrisville, NC NVLAP Lab Code 200671-0, VA 3333 000278, WVA LT000296

Initial report from 06/09/2014 11:40:54

# Asbestos Bulk Building Material

EMSL ANALYTICAL, INC.  
2500 GATEWAY CENTRE  
BLVD, SUITE 600  
MORRISVILLE, NC 27560  
PHONE: (919) 465-3900  
FAX: (919) 465-3950

Terracon Consultants, Inc.  
220 E. Main  
6/6/2014 14:50  
PLM

TAT: 48 Hour  
Bulk

Order ID: 291403388  
No Samples: 45  
Due: 06/09 2:50 PM  
Fax: 919-873-9555

Company: <u>Terracon</u>		EMSL-Bill to: <input type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: <u>2401 Brentwood Rd, Suite 107</u>		Third Party Billing requires written authorization from third party	
City: <u>Raleigh</u>	State/Province: <u>NC</u>	Zip/Postal Code: <u>27604</u>	Country: <u>US</u>
Report To (Name): <u>Doug Weaver</u>		Telephone #:	
Email Address: <u>dweaver@terracon.com</u>		Fax #:	Purchase Order:
Project Name/Number: <u>220 E. Main</u>		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
U.S. State Samples Taken: <u>NC</u>		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

**Turnaround Time (TAT) Options\* - Please Check**

3 Hour   
  6 Hour   
  24 Hour   
  48 Hour   
  72 Hour   
  96 Hour   
  1 Week   
  2 Week

\*For TEM Air 3 hr through 6 hr, please call ahead to schedule. \*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)	TEM - Bulk
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NY ELAP Method 198.1 (friable in NY) <input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY) <input type="checkbox"/> OSHA ID-191 Modified <input type="checkbox"/> Standard Addition Method	<input type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1 <input type="checkbox"/> NY ELAP Method 198.4 (TEM) <input type="checkbox"/> Chatfield Protocol (semi-quantitative) <input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2 <input type="checkbox"/> TEM Qualitative via Filtration Prep Technique <input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique
<b>Other</b>	
<input type="checkbox"/>	

Check For Positive Stop - Clearly Identify Homogenous Group    Date Sampled: 6/6/14

Samplers Name: Doug Weaver    Samplers Signature: D. Weaver

Sample #	HA #	Sample Location	Material Description
01-03	1	ext. windows	White Cement
04-06	2	1st floor	White 2x4 ceiling tile
07-09	3	Prismall, Tape & Compound walls	Walls Prismall, Tape & Compound
10-12	4	Yellow Carpet 1st floor	Yellow Carpet 6lb
13-15	5	1st floor	Beige Sinc Meshz
16-18	6	1st + 2nd floor	Plaster
19-21	7	1st floor	Ceiling Texture
22-24	8	1st floor RR's	Tan Vinyl Sheet flooring
25-27	9	Women's RR	White 12x12 Vinyl floor tile
28-30	10	1st floor	Window Glazys

Client Sample # (s): -01    45    Total # of Samples: 45

Relinquished (Client): D. Weaver    Date: 6/6/14    Time: 12:50

Received (Lab): Bob B...    Date: 6-6-14    Time: 14:50

Comments/Special Instructions:



# Asbestos Chain of Custody

EMSL Order Number

EMSL ANALYTICAL, INC.  
2500 GATEWAY CENTRE BLVD  
STE 600  
MORRISVILLE, NC 27560  
PHONE: (919) 465-3900  
FAX: (919) 465-3950

Terracon Consultants, Inc.  
220 E. Main  
6/6/2014 14:50  
PLM

TAT: 48 Hour  
Bulk

Order ID: 291403388  
No Samples: 45  
Due: 06/09 2:50 PM  
Fax: 919-873-9555

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
31-33	White/Green 12x12 VFT		
34-36	White 2x2 ceiling tile		
37-39	Black leafy debris		
40-42	Black Waterproofing on Mortar		
43-45	Window Glazing		
*Comments/Special Instructions:			

AT  
6/7/14

**APPENDIX D**

**LEAD PAINT SURVEY SAMPLE SUMMARY**

Appendix D

LEAD PAINT SURVEY SAMPLE SUMMARY

Commercial Building  
220 E. Main Street  
Clayton, North Carolina

Sample #	Sample Location/Description	Material Location	Condition	Lead Concentration (% Weight)
L01	Pink on Plaster Walls	1st and 2nd Floor	Poor	0.54
L02	Green on Plaster Walls	1st and 2nd Floor	Poor	0.26
L03	Beige on Interior Wood Window Frame	1st Floor North	Poor	5.5
L04	Beige on Wood Interior Walls	1st Floor Elevator Area	Poor	0.36
L05	White on Tin Ceiling Panels	1st Floor Ceilings	Intact	0.82
L06	White on Wood Ceilings	2nd Floor Above Ceiling Tile	Poor	0.6
L07	White on Wood Window Frame	1st Floor South Windows	Poor	0.19

**Bold Type indicates lead paint.** OSHA defines lead paint as a paint, which contains lead, regardless of the concentration. Currently, any proposed renovation and/or demolition are subject to the OSHA regulations (29 CFR 1926.62 - Lead Exposure in Construction).

**APPENDIX E**

**LEAD PAINT ANALYTICAL LABORATORY DATA**

**EMSL Analytical, Inc.**

706 Gralin Street, Kernersville, NC 27284

Phone/Fax: (336) 992-1025 / (336) 992-4175

<http://www.EMSL.com>[greensborolab@emsl.com](mailto:greensborolab@emsl.com)

EMSL Order: 021403115

CustomerID: TITA51

CustomerPO:

ProjectID:

Attn: **Doug Weaver**  
**Terracon Consultants, Inc.**  
**2401 Brentwood Road**  
**Suite 107**  
**Raleigh, NC 27604**

Phone: (919) 873-2211  
 Fax: (919) 873-9555  
 Received: 06/09/14 10:20 AM  
 Collected:

Project: 220 E. Main

**Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)\***

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Lead Concentration</i>
L01	0001	6/9/2014		0.54 % wt
L02	0002	6/9/2014		0.26 % wt
L03	0003	6/9/2014		5.5 % wt
L04	0004	6/9/2014		0.36 % wt
L05	0005	6/9/2014		0.82 % wt
L06	0006	6/9/2014		0.60 % wt
L07	0007	6/9/2014		0.19 % wt

James Cole, Laboratory Manager  
 or other approved signatory

\*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements established by the AIHA-LAP, unless specifically indicated otherwise.

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC EMSL Lab ID 102564 is accredited by the AIHA Laboratory Accreditation Program (AIHA-LAP), LLC in the Environmental Lead accreditation

Initial report from 06/10/2014 13:51:06



EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

# Lead (Pb) Chain of Custody

EMSL Order ID (Lab Use Only):

021403115

EMSL ANALYTICAL, INC.  
706 GRALIN STREET  
KERNERSVILLE, NC 27284  
PHONE (336) 992-1025  
FAX (336) 992-4175

Company: Terracon

Street: 2401 Brentwood Rd, Suite 107

City: Raleigh State/Province: NC Zip/Postal Code: 27604 Country: US

Report To (Name): Doug Weaver Fax #:

Telephone #: 919-720-1307 Email Address: dweaver@terracon.com

Project Name/Number: 220 E. Main

Please Provide Results:  Fax  Email Purchase Order: U.S. State Samples Taken: NC

Turnaround Time (TAT) Options\* - Please Check

3 Hour  6 Hour  24 Hour  48 Hour  72 Hour  96 Hour  1 Week  2 Week

\*Analysis completed in accordance with EMSL's Terms and Conditions located in the Price Guide

Matrix	Method	Instrument	Reporting Limit	Check
Chips <input checked="" type="checkbox"/> mg/cm <sup>2</sup> <input type="checkbox"/> % by wt.	SW846-7000B/7420 or AOAC 974.02	Flame Atomic Absorption	0.01%	<input checked="" type="checkbox"/>
	Air	NIOSH 7082 Flame Atomic Absorption	4 µg/filter	<input type="checkbox"/>
	NIOSH 7105 Graphite Furnace AA	0.03 µg/filter	<input type="checkbox"/>	
	NIOSH 7300 modified ICP-AES	0.5 µg/filter	<input type="checkbox"/>	
Wipe* <input type="checkbox"/> ASTM <input type="checkbox"/> non ASTM <small>*if no box is checked, non-ASTM Wipe is assumed</small>	SW846-7000B/7420	Flame Atomic Absorption	10 µg/wipe	<input type="checkbox"/>
	SW846-6010B or C	ICP-AES	0.5 µg/wipe	<input type="checkbox"/>
TCLP	SW846-1311/7420/SM 3111B	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	SW846-6010B or C	ICP-AES	0.1 mg/L (ppm)	<input type="checkbox"/>
Soil	SW846-7000B/7420	Flame Atomic Absorption	40 mg/kg (ppm)	<input type="checkbox"/>
	SW846-7421	Graphite Furnace AA	0.3 mg/kg (ppm)	<input type="checkbox"/>
	SW846-6010B or C	ICP-AES	1 mg/kg (ppm)	<input type="checkbox"/>
Wastewater	SM3111B or SW846-7000B/7420	Flame Atomic Absorption	0.4 mg/L (ppm)	<input type="checkbox"/>
	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	<input type="checkbox"/>
	SW846-6010B or C	ICP-AES	1 mg/kg (ppm)	<input type="checkbox"/>
Drinking Water	EPA 200.9	Graphite Furnace AA	0.003 mg/L (ppm)	<input type="checkbox"/>

Other: Preservation Method (Water):

Name of Sampler: Doug Weaver Signature of Sampler: D. Weaver

Sample #	Location	Volume/Area	Date/Time Sampled
L01	Plaster walls		6/6/14
L02	Plaster walls		
L03	Wood Window frame		
L04	Wood wall		
L05	Tin Ceiling Panel		
L06	Wood Ceiling		

Client Sample #'s: L01 - L07 Total # of Samples: 7

Relinquished (Client): D. Weaver Date: 6/6/14 Time: 15:00

Received (Lab): Billy B Date: 6-6-14 Time: 15:00

Comments: KE 6/9 FX 77 7702 2436 1042

10:20





### EMSL Courier Agreement

EMSL Analytical, Inc  
1101 Aviation Parkway, Ste. A  
Morrisville, NC 27560  
Phone: (919) 465-3900  
Fax: (919) 465-3950

Company Name: IIIASI Drop-off Laboratory: EMSL Morrisville, NC  
Analysis Requested: Lead Analyzing Laboratory: EMSL Kernersville, NC

Is this to be a standing agreement for all samples of the analysis type listed above?  YES  NO

If no, Customer Project ID: \_\_\_\_\_

The samples identified above are being submitted to the laboratory listed above as the "Drop-off Laboratory" with the intent that they be transferred to the laboratory identified as the "Analyzing Laboratory" as per contractual agreement. It is not the customer's intent to have the drop-off laboratory act as the analyzing laboratory of record, but rather to act as a courier to transfer the samples to the laboratory which the customer has chosen to analyze the samples as per any special instructions listed below. I understand that by signing below I agree that the drop-off laboratory does not accept the samples for analysis or make any statement regarding the quality of samples at the time they were received. Samples will not be checked against the Chain of Custody by the drop-off laboratory, but will be forwarded directly to the analyzing laboratory. The Turn Around Time checked on the Chain of Custody begins at the time the samples are delivered to the analyzing lab unless documented otherwise. I understand that contract review is the responsibility of the analyzing lab, and that the drop-off lab does not explicitly or implicitly approve the terms of the contract beyond its reasonable responsibilities as courier. I understand that the analytical report covering these samples will be sent directly to the contact on the chain of custody form from the analyzing laboratory, and that the drop-off lab is not responsible for the results reported.

Special Instructions:

Signature of Individual Authorizing Courier Service: Alicia Caley

Date: 7/2/10

Signature of Drop-off Lab Personnel Receiving Samples: [Signature]

Date: 7-2-10



120 St. Mary's Street  
Raleigh, NC 27605  
919.833.0495  
LysaghtAssociates.com

6/20/2014

MRB  
CAL

**PRELIMINARY STRUCTURAL REPORT AND ESTIMATE ON 220 E. MAIN ST.  
220 E. Main St.  
Clayton, NC**

Prepared for: Steve Biggs  
Town Manager  
Town of Clayton, NC

Prepared by: Mark Blankinship  
Reviewed by: Charles Lysaght  
Lysaght & Associates, P.A.  
120 St. Mary's St.  
Raleigh, NC 27605

The purpose of this report is to provide a preliminary structural analysis of the building at 220 E. Main St. and a budget estimate on the cost to make any necessary structural upgrades and prepare the building to be renovated to a shell condition ready for upfit by a future tenant. The Town of Clayton requested this information as part of their due diligence in considering a purchase of the building.

### Building Description

The building was constructed about 1915 and is located at 220 E. Main St. in Clayton, NC. The original building included the adjacent space at 218 E. Main St.. A wall was constructed in the middle of the original building at some time such that 218 and 220 are approximately the same size. This report refers only to 220 E. Main. There is a separate warehouse building in the rear of the property which is not included in this report.

The exterior walls of the building are brick masonry and the building consists of (2) floors. The wall that is shared with 218 E. Main is a wood frame wall. The existing floor joists on the first and second floors are solid sawn lumber and the roof framing is solid sawn wood trusses. The joists and trusses run side to side and bear in the masonry exterior wall and the wood shared wall. There is a masonry foundation wall that runs through the center of the building that supports the first floor joists. Steel beams have been installed at mid-span of the second floor joists in the rear section of the building. The beams do not extend all the way to the front. The roof trusses span the full width of the building.

The width of the building is approximately 30' and the depth is approximately 83'. The total area of the building is approximately 4,980 sf (2,490/floor). Additional detail on the building is provided in this report and on sheets S101, S102, and S103.

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Disclaimers and Qualifications	12
Site Pictures	13,14

DocuSigned by:

Charles Lysaght

D6C8ADE8C2A2471...

6/24/2014



**LA - 10235: 220 E. Main St, Clayton, NC**

**6/20/2014**

**MRB**

**CAL**

## **EXECUTIVE SUMMARY**

The building can be made suitable for future commercial use by performing structural upgrades to the building. The first floor should be removed and replaced with a concrete slab on grade due to the condition of the existing floor joists and floor. The second floor can be reinforced to support office and assembly live load by adding steel beams at mid-span. The existing roof trusses need to be reinforced at the connections to adequately support the roof loads. These structural reinforcements are explained in the structural recommendations section of this report.

We have completed a budget estimate that includes the above structural reinforcements to the building as well as the cost to renovate the building to a shell condition such that the building will be ready for an unfit by a future tenant. The items included in the budget estimate are listed in the Budget Estimate section of this report.

This report is intended to assist the Town of Clayton in their due diligence analysis of the building.

**LA - 10235: 220 E. Main St, Clayton, NC****6/20/2014****MRB  
CAL****Structural Reinforcements**

Below is the structural data on the building and the recommendations for structural reinforcement. The information is presented by floor:

**Foundation and First Floor***Existing data:*

1. The foundation walls are masonry and include a masonry wall at midspan that support the floor joists.
2. The floor joists are 2" x 10" spaced at 16" o.c spanning 14'.
3. The original floor is 1 x 6 wood. In locations, another 3/4" x 3 +/-" floor has been added.
4. There is an existing 4" x 6" heavy timber beam supported by heavy timber columns in the rear of the building at mid-span. This is a dropped beam in the ceiling supporting the 2nd floor.
5. Steel columns and beams have been added in the center of the building at mid-span along the same line as the heavy timber beams in the rear. The steel does not extend to the front of the building.
6. There are numerous non-load bearing wood stud walls and dropped ceilings that have been installed after the original construction.
7. A new stairwell to the second floor has been installed on the right center of the building. The original stairwell is in the right rear corner.
8. There is an old lift/elevator in the rear of the building.
9. The ceiling height to the original tin ceiling attached to the bottom of the second floor joists is 13'+-.

*Condition:*

1. The crawl space is very shallow and not accessible.
2. The floor joists have deteriorated and have insect damage.
3. The floor is sloping badly, particularly in the rear.
4. The exterior walls appear to be in good condition with limited access for inspection.
5. The added non-structural walls and offices are in fair condition, but specific to previous use.

*Recommendations:*

1. Remove the existing floor system, salvage old wood flooring where possible.
2. Pour a new slab on grade floor system on washed stone.
3. Demolish the existing non-structural walls and flooring.
4. Remove drywall/plaster from the existing masonry walls.
5. Remove the existing MEP systems safely. An analysis will need to be made by an MEP engineer to determine available MEP capacity and load/utility needs.
6. Examine the exterior walls (beam pockets, etc.) and the interior load bearing beams and columns for adequacy after demolition of the non load bearing walls.
7. Optional - Add steel columns and beams in the front of the building at mid-span along the line of the existing beams to support the second floor joists if the owner chooses this option to upgrade the second floor to allow for 100 psf loading, See item 5 in second floor recommendations below for explanation.
8. Have an elevator company inspect/test the existing lift. This may be kept as a novelty as it would not meet code to operate as an elevator.

**Second Floor***Existing data:*

1. The existing floor joists are 2 1/4" x 14" at 12" o.c. spanning 28'. Dropped beams have been added in the center of the building and there is an existing timber beam in the rear that provides mid span support.
2. The joists bear in masonry beam pockets on the exterior wall and on top of the 2 x 6 shared wall.
3. The original floor material is 1 x 6 wood. Plywood flooring has been installed over and/or replaced the

original flooring in most locations. There is some tile floor in the rear of the building.

4. The ceiling height to the bottom of the roof trusses is 10'+-.
5. There are numerous non-structural walls, dropped ceilings, and a bathroom that have been added after original construction.
6. The original ceiling is 1 x 4 tongue and groove wood attached directly to the bottom of the roof trusses.

*Condition:*

1. There is no apparent excessive sagging or sloping of the second floor.
2. The floor joists appear to be in good shape pending inspection after demolition.
3. The wood ceiling is in fair to poor condition based on limited inspection.
4. The non-structural walls and ceilings are in fair condition, but are specific to the previous tenant.

*Recommendations*

1. Inspect the joist bearing conditions, particularly the masonry beam pockets, after demolition. If the pockets are not adequate, a steel support angle may need to be installed to support the joists.
2. Demolish and remove the non-structural walls, ceilings, and bathroom.
3. Remove the drywall and plaster from the exterior walls to expose the brick.
4. Expose and repair the existing wood floor. Refinish the floors when patched if possible.
5. The intermediate steel and wood beams supporting the second floor joists at midspan can be removed to open up the first floor and the second floor joists will be acceptable for office loading (50 psf). If the owner chooses to upgrade the loading capability to assembly (100 psf), there are 2 options:
  - 5a. Install steel columns and beams at mid-span continuing the existing steel beam line to the front.  
This option is included in the base budget estimate in this report.
  - 5b. Sister new LVL's to the existing second floor joists. The number of LVL's to add (ie - every other or every third joist) depends on additional structural analysis.
6. The Town of Clayton has indicated that it may want to remove a portion of the second floor at the front of the building for a 2 story space. If this is the case, extra steel will need to be added to provide lateral stability to the front and side walls in the area where the second floor would be removed. The cost of this option is included in Alternate A-2 in the budget estimate section of this report.

**Roof**

*Existing data:*

1. The existing roof trusses are constructed of solid sawn lumber (see S103 for details) that are spaced at 2' on center and span the full width of the space (30' +-).
2. The roof trusses bear on the exterior masonry wall and on top of the 2 x 6 shared wall.
3. There is no attic insulation. There may be insulation in the roof system.
4. The attic space is open to the adjacent attic at 218 E. Main St.
5. The roof slopes from front to back and the slope is achieved by different roof truss profiles (heights). There are masonry parapets on the front and sides and the drainage is to the rear. There is one area of ponding toward the rear of the roof and one conduit opening that needs to be patched. There does not appear to be extensive roof leakage, except for some water infiltration in the rear of the building.
6. The roof decking is 1 x 8 wood material.

*Condition:*

1. The roof trusses appear to be in good condition, but will need structural reinforcement.
2. The bearing of the trusses at the masonry walls will need to be investigated further after demolition.
3. The roof decking appears to be in good condition based on limited inspection.
4. The roof appears to be in fairly good condition.
5. Note - The exterior masonry appears to be in fairly good condition given the age of the building. Further inspection should be made after vegetation has been removed from the rear of the building.

*Recommendations:*

1. Have a roof consultant verify the roof conditions. Recommend Jeff Spady.
2. we will need to do an analysis on the roof trusses, but it is likely that the connections will need to be

reinforced with bolts and additional horizontal bracing will need to be added.

3. Assess the condition of the second floor wood ceiling. If it is going to be removed, remove it prior to roof truss reinforcements.

4. Inspect the roof truss bearing locations and conditions after demolition and reinforce if necessary.

**LA - 10235: 220 E. Main St, Clayton, NC****6/20/2014  
MRB  
CAL****Budget Estimate Clarifications and Assumptions**

*There is a description in each line item cost of the budget estimate, which is included in this report. However, please note the following list of clarifications and assumptions for additional clarity:*

1. The Structural Reinforcement recommendations listed in this report are included in the budget Estimate.
2. A line item allowance is included for permits and fees.
3. Demolition of all non-structural walls and ceilings is included.
4. There is an allowance for electrical distribution to the building
5. There is an allowance for water and sewer distribution to the building. We do not know if the water and sewer currently serving the building is adequate.
6. There is an allowance for exterior masonry tuckpointing.
7. We have included an estimated cost for installing a CMU firewall for a firewall separation at the shared wall. It may be feasible to install a sheetrock firewall instead. This will need to be investigated further by an architect and the building officials.
8. The cost of a fire sprinkler system is not included in the base budget estimate, but is included as alternate.
9. Demolition to expose the exterior brick walls is included.
10. The cost of 2 bathrooms for the first floor are included, but none on the second floor. The requirements for bathrooms would need to be investigated by an architect.
11. The second floor remains in place in the budget estimate as useable space. There is an alternate to remove the front 1/2 of the second floor and add building bracing reinforcement as a result.
12. It is assumed that all of the existing MEP systems will be safely removed.
13. There is an allowance for shell HVAC
14. There is an allowance for Shell electrical which only includes installation of electrical panels and minimal lighting.
15. There is an allowance for upgrading the storefront which assumes that the original opening remains the same.
16. There is an allowance for investigating the existing elevator/lift, but leaving it in place and assuming that it is non-functional for public use.
17. There is a roof repair allowance that assumes the roof will not be replaced, but repaired.
18. The estimate includes removing the existing stairwell in the right center of the building and restoring the stairwell in the right rear of the building.
19. The budget estimate includes construction costs only and only those items specifically listed in the budget estimate. Architect/Engineer and other professional fees are not included in the estimate.
20. The estimate includes an allowance for restoring the tin ceiling in the first floor. This includes painting only, not stripping to original metal.



Updated: 6/20/2014

**220 E. Main St., Clayton, NC**

**CURRENT  
TOTAL: \$597,987**

**BUDGET ESTIMATE SUMMARY - See Budget Estimate Clarifications**

**PROJECT : 220 E. MAIN ST. RENOVATION** **TOTAL AREA: 4,980 SF**  
**LOCATION : CLAYTON, NC**  
**ENGINEER : LYSAGHT & ASSOCIATES**  
**OWNER : TOWN OF CLAYTON**  
**BUILDING TYPE : BRICK MASONRY AND WOOD STRUCTURE**

CODE	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
100	Permit Fees Allowance -	1	LS	5,000.00	5,000
110	General Contractor General Conditions - Supervision, etc.	1	LS	62,500.00	62,500
200	Hazardous Material Removal and testing - None - By owner, if any	1	LS	0.00	0
210	Plumbing demo/cap as needed (2 men at 4 days @ \$45/hr)	1	LS	2,880.00	2,880
215	Electrical demo, safe the building, and temporary power	1	LS	7,500.00	7,500
220	HVAC Investigation, unhook, and demo (3 men at 3 days @ \$45)	1	LS	3,240.00	3,240
230	Demolish all non-structural walls, ceilings, materials down to structure	1	LS	35,000.00	35,000
235	Temporary bracing for exterior walls prior to first floor demo	1	LS	4,750.00	4,750
240	Remove first floor system including mid span foundation wall - salvage floor	1	LS	10,800.00	10,800
245	Demo second floor wood ceiling	1	LS	2,850.00	2,850
250	Temporary Shoring at stairwell to be closed and at rehab of original stairwell.	1	LS	4,150.00	4,150
260	Landscape allowance	1	LS	2,500.00	2,500
300	Install washed stone in the first floor crawl space prior to slab pour	216	TNS	45.00	9,720
305	Install 4" concrete slab on grade for first floor - includes sawcuts. poly, etc.	35	CYDS	565.00	19,775
310	Thickened slabs/piers for columns	6	EA	785.00	4,710
315	Miscellaneous concrete sidewalk repairs/rear pad	450	SF	5.50	2,475
400	Exterior Masonry tuckpointing allowance	1	LS	7,500.00	7,500
405	Interior tuckpointing allowance	1	LS	5,000.00	5,000
410	Allowance to re-work beam pockets and truss bearing at masonry	1	LS	8,500.00	8,500
415	Install an 8" or 4" cmu firewall at the shared wall	2,075	SF	8.50	17,638
500	Remove Stairwell beam and columns	1	LS	1,850.00	1,850

505	Install new tube columns on first floor	2	EA	1,750.00	3,500
510	Install new steel beams at first floor at mid span	1	LS	6,250.00	6,250
515	Allowance for steel angles under 2nd floor joists	1	LS	12,500.00	12,500
520	Allowance to re-work existing connections at beams/columns	1	LS	4,500.00	4,500
600	Carpenters to salvage existing flooring and ceiling material (2 @ 2 wks @ \$40)	1	LS	6,400.00	6,400
605	Replace 2nd floor joists at stair to be closed	1	LS	3,250.00	3,250
610	Rework original stair in the rear	1	LS	4,150.00	4,150
615	Allowance for replacement of 2nd floor joists	1	LS	4,125.00	4,125
620	Replacement/patching of 2nd floor wood	1	LS	6,980.00	6,980
625	Framing for fire-ratings at 2nd floor ceiling and attic separation	1	LS	12,500.00	12,500
630	Allowance to re-work and/or enhance storefront	1	LS	20,000.00	20,000
635	Add 2 x 6 horizontal bracing to trusses -	64	EA	12.50	800
640	Add bolts to existing truss connections	650	EA	8.50	5,525
645	Miscellaneous lumber for truss reinforcement	1	LS	1,250.00	1,250
650	Labor to add truss reinforcement (2 mn at 12 days @ \$40/hr)	1	LS	15,360.00	15,360
655	Trim Allowance - base, entrance	1	LS	5,000.00	5,000
700	Roof Repair only - not replacement (assumes full roof over both spaces)	5,000	SF	3.50	17,500
710	New Attic insulation	2,500	SF	1.50	3,750
720	Insulation at shared wall	2,075	SF	1.25	2,594
730	Insulation at exterior brick walls - NIC	0	LS	0.00	0
740	Fire Caulking allowance	1	LS	3,750.00	3,750
745	Caulking allowance	1	LS	2,000.00	2,000
800	Doors and Frames - Assume 8 new (baths, stairs first floor wall b/w rear front	8	EA	425.00	3,400
810	Finish hardware allowance	8	EA	225.00	1,800
820	Glass and Storefront - See storefront allowance	1	LS	7,500.00	7,500
900	Drywall at 2nd floor ceiling - 2 layers	5,000	SF	2.10	10,500
905	Drywall at bathrooms, stairwells, first floor wall	950	SF	2.10	1,995
910	Allowance for attic firewalls	1	LS	2,500.00	2,500
920	First floor ceiling - None	0	LS	0.00	0
930	Furring for 2nd floor ceiling	2,500	SF	2.50	6,250
940	Paint allowance	1	LS	10,000.00	10,000
942	Refinish tin ceiling	1	ALL	7,500.00	7,500
945	Sealer for exposed brick walls	5,200	SF	1.25	6,500
950	Concrete colored sealer for first floor slab	2,500	SF	3.25	8,125
960	Assume new wood floors for second floor - should cover patch/refinish ex.	2,500	SF	7.50	18,750
1000	Toilet partitions	2	BATHS	2,150.00	4,300
1010	Toilet Accessories	2	BATHS	875.00	1,750
1020	Fire Extinguishers	6	EA	175.00	1,050
1300	Inspect elevator allowance	1	LS	3,250.00	3,250

1500	Allowance for Water/Sewer distribution	1	LS	18,500.00	18,500
1510	Plumbing - 2 new baths - (14 fixtures)	1	LS	15,000.00	15,000
1540	HVAC - One unit Per floor only - shell only.	1	LS	25,000.00	25,000
1600	Electrical Allowance - Power and minimal lighting for shell only	1	LS	25,000.00	25,000
1750	Contingency	1	LS	15,000.00	15,000
=====					=====
	SUB TOTAL				553,691
18000	GC OVERHEAD AND PROFIT - 8%				44,295
=====					=====
	<b>TOTAL</b>				<b>\$597,987</b>
=====					=====

Alternates:

<b>A1</b>	<b>Add Fire Sprinkler System:(5,000sf@\$4.25/sf + \$15,000 fire line distribution) =</b>				<b>\$36,250</b>
<b>A2</b>	<b>Remove approximately 60% of second floor:</b>				
	Temporary bracing for exterior walls and floor at head:			3,750	
	Demolish and remove front 60% of second floor:			5,400	
	Add steel frame across width of building and at walls for lateral bracing			15,750	
	Deduct for refinishing second floor: 1,500 sf @ \$7.50			(11,250)	
	Add support at head of remaining section of floor:			4,500	
	Add handrail at second floor: (30' @ \$120)			3,600	
				=====	
	<b>Total Alternate A2 =</b>				<b>\$21,750</b>

*Note on Alternate A2 - 60% removal of second floor is an assumption for the purpose of providing a budget estimate. More or less of the floor could be removed and the estimate would be adjusted accordingly.*



**Second Floor Joists - Assembly (100 psf)**

**Simple Span Solid Sawn Joist**

**SYP or Douglas Fir**

Actual Width	<b>2.250</b> in	Dead Load	<b>10</b> psf
Actual Depth	<b>14.000</b> in	Live Load	<b>100</b> psf
Area	32 in <sup>2</sup>	LDF	<b>1.00</b>
Section Modulus	74 in <sup>3</sup>	Fv	<b>0.175</b> ksi
Moment of Inertia	515 in <sup>4</sup>	Fb	<b>1.500</b> ksi
Spacing	<b>1.0</b> ft	E	<b>1800</b> ksi
Span	<b>28.0</b> ft	Dry or Wet	<b>Dry</b>
Total Load	0.110 klf	Repetitive Member Factor	<b>1.15</b>
End Reaction	1.5 kips	Size Factor	<b>1.00</b>
Shear	1.4 kips		
Moment	10.8 ft-kips		
Deflection	1.64 in		

W(klf)  


	<u>Actual</u>	<u>Allowable</u>	<u>Status</u>
Shear Stress	0.067	0.175	OK
Bending Stress	1.760	1.725	#VALUE!
Deflection Ratio	205	240	#VALUE!

*Conclusion - The existing floor joists check for office loading (50 psf), but are not adequate for assembly loading (100 psf). Following are (2) options to upgrade the second floor to 100 psf loading:*

- 1. Install steel columns and beams at mid-span continuing the existing steel beam line to the front. This option is included in the base budget estimate in this report.*
- 2. Sister new LVL's to the existing second floor joists. The number of LVL's to add (ie - every other or every third joist) depends on additional structural analysis.*

## Disclaimers and Qualifications

6/20/2014

This evaluation is limited in scope, focusing only on the structural elements in the building. The evaluation is further limited based on observations made from visual evidence available during a field review of reasonably accessible areas. No invasive or destructive testing has been performed. This report is not an exhaustive technical evaluation. It should not be considered a guarantee of condition and no warranty is implied. It is our responsibility to evaluate available evidence relevant to the purpose for our analysis. We are not, however, responsible for conditions that could not be seen, were not brought to our attention, or were not within the scope of our service.

For purposes of this report, assumption shall be defined as " to believe, think or suppose a condition to be true." An assumption cannot be confirmed by the structural engineer because it is beyond his scope of services and/or expertise. If the client requires confirmation of an assumption, then another expert must do the necessary calculations and/or testing.

Whenever existing construction is renovated or repaired there will always be some cosmetic defects due to the age of the building that won't be corrected during the renovation or repairs. This is to be expected by the owner.

Additional observation and analysis can be made after demolition of existing non-structural elements in the building have been performed.

Site Pictures:

6/20/2014



1. Front Elevation



2. Roof looking to rear



3. Roof looking to front



4. Roof termination strip at parapet



5. Typical roof truss at wall



6. Roof trusses



7. Roof truss nailed connection



8. Roof truss at ceiling



9. shared wall at 218 E. Main

### Site Pictures (Cont'd)



10. 2nd floor non-structural walls



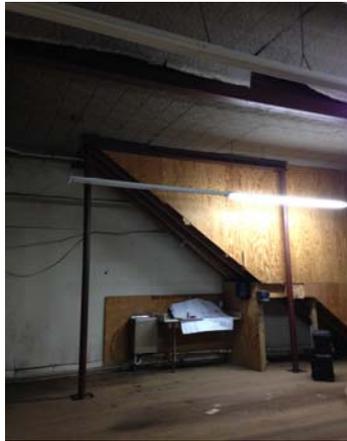
11. Elevator hoist at 2nd floor



12. First floor steel beams/clmns



13. Dropped steel beam at first flr.



14. Steel at stair header



15. 2nd floor joists



16. Joist bearing at 1st floor wall



17. Original 1st flr ceiling



18. Stairwell to 2nd floor

ROOF FRAMING PLAN

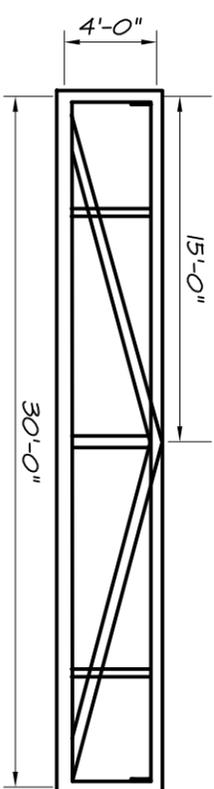
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. FIELD VERIFY ALL DIMENSIONS.
2. ALL DATA OBTAINED IS BASED ON SITE OBSERVATION. ACCESS WAS LIMITED IN SOME AREAS. THIS DRAWING IS FOR GENERAL INFORMATION AND BUDGETING PURPOSES ONLY. NO EXISTING DRAWINGS WERE AVAILABLE.
3. THE EXTERIOR WALLS ARE BRICK MASONRY.
4. THE SHARED WALL BETWEEN 220 AND 218 E. MAIN ST IS A 2 X 6 LOAD BEARING WOOD WALL.
5. THIS DRAWING IS NOT FOR CONSTRUCTION AND IS FOR INFORMATIONAL PURPOSES ONLY.

ROOF FRAMING NOTES:

1. THE ROOF TRUSSES ARE SPACED AT 24" ON CENTER AND SPAN THE WIDTH OF THE BUILDING, 28'-1".
2. THE TRUSSES ARE FLAT AND VARY IN HEIGHT TO ALLOW FOR A FRONT TO BACK SLOPE ON THE ROOF. THE HEIGHT RANGES FROM APPROXIMATELY 2' TO 4'.
3. THE TRUSS WEBS ARE 2 X 6'S, THE TOP CHORD IS A 2 X 6, AND THE BOTTOM CHORD IS A 2 X 8.
4. THE TRUSSES BEAR ON THE EXTERIOR MASONRY WALL AND ON TOP OF THE SHARED 2 X 6 STRUCTURAL WALL.
5. THE TRUSS CONNECTIONS ARE NAILED.
6. THE ROOF DECKING MATERIAL IS 1 X 8 NOMINAL WOOD.
7. THE SECOND FLOOR CEILING IS ATTACHED DIRECTLY TO THE BOTTOM OF THE ROOF TRUSSES. THE CEILING MATERIAL IS 1 X 4 TONGUE AND GROOVE WOOD.
8. THERE IS NO ATTIC INSULATION IN THE 220 SPACE. THERE IS LIKELY INSULATION IN THE ROOFING SYSTEM.
9. THERE IS NO FIRE WALL OR ANY SEPARATION BETWEEN THIS SPACE (220 E. MAIN) AND THE ADJACENT SPACE (218 E. MAIN ST.) THERE IS ATTIC INSULATION IN THE ADJACENT SPACE.

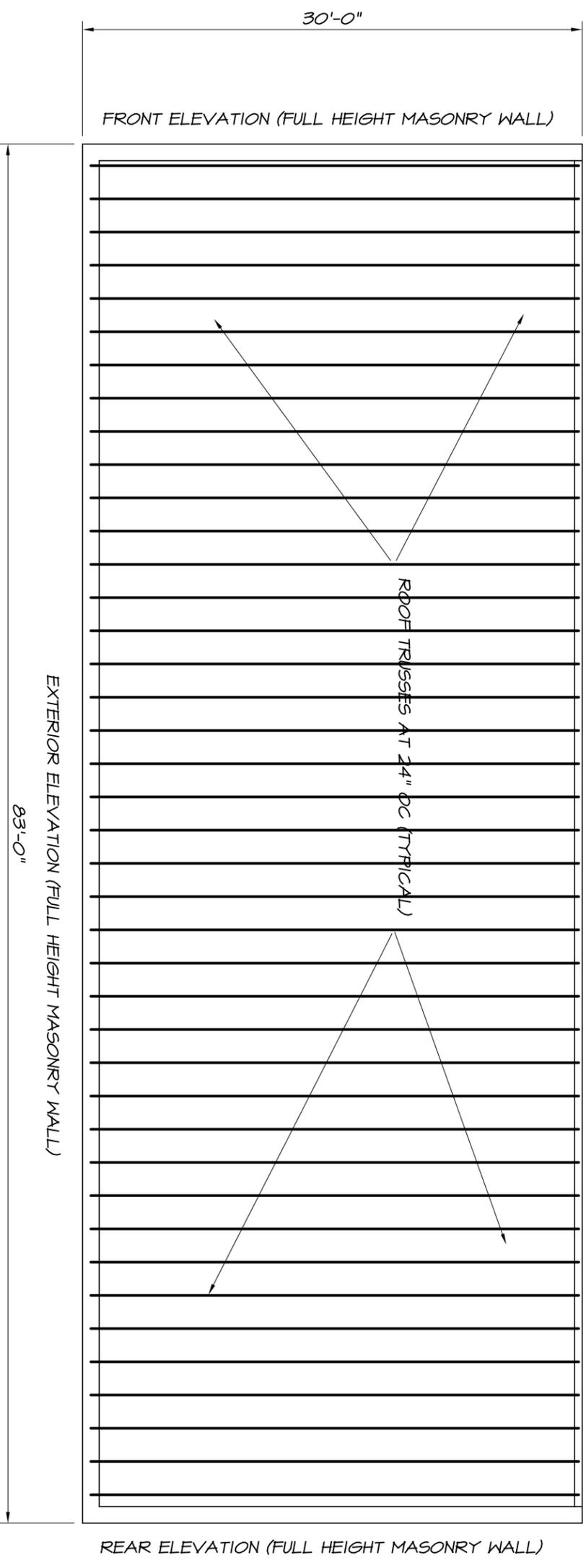


EXISTING TRUSS DATA:

1. TOP CHORD = 2 X 6
2. WEBS = 2 X 6
3. VERTICAL WEB AT 1/2 POINT = 1 X 4
4. BOTTOM CHORD = 2 X 8
5. SPACING = 24" ON CENTER
6. SPAN = 30'
7. PROFILE (HEIGHT) = VARIES: 2' TO 4'
8. CONTINUOUS HORIZONTAL BRIDGING AT ENDS UNDER TOP CHORD = 1 X 10

TRUSS REINFORCEMENTS (PRELIMINARY RECOMMENDATIONS):

1. ADD BOLTS AT THE DIAGONAL WEB TO CHORD JOINTS.
2. ADD 2 X 4 LATERAL BRACING AT THE DIAGONAL WEBS.



**SECOND FLOOR FLOOR FRAMING PLAN**

SCALE: 1/8" = 1'-0"

**GENERAL NOTES:**

1. FIELD VERIFY ALL DIMENSIONS.
2. ALL DATA OBTAINED IS BASED ON SITE OBSERVATION. ACCESS WAS LIMITED IN SOME AREAS. THIS DRAWING IS FOR GENERAL INFORMATION AND BUDGETING PURPOSES ONLY. NO EXISTING DRAWINGS WERE AVAILABLE.
3. THE EXTERIOR WALLS ARE BRICK MASONRY.
4. THE SHARED WALL BETWEEN 220 AND 218 E. MAIN ST IS A 2 X 6 LOAD BEARING WOOD WALL.
5. THIS DRAWING IS NOT FOR CONSTRUCTION AND IS FOR INFORMATIONAL PURPOSES ONLY.

**SECOND FLOOR FRAMING NOTES:**

1. THE FLOOR JOISTS ARE 2 1/2" x 14" SPACED AT 12" OC. BEARING IS IN THE EXTERIOR MASONRY WALL AT THE EXTERIOR WALL AND ON TOP OF THE 2 X 6 STUD WALL ON THE SHARED WALL (JOISTS OVERLAP).
2. THE SHARED WALL IS A 2 X 6 STUD WALL AT 16" OC WITH A DOUBLE PLATE.
3. THE CEILING HEIGHT IS 10'-0" AFF TO THE BOTTOM OF THE JOISTS. AN ACOUSTICAL CEILING HAS BEEN ADDED AFTER ORIGINAL CONSTRUCTION THAT IS 2' BELOW THE BOTTOM OF THE JOISTS.
3. THE FLOOR MATERIAL IS ORIGINAL 1 X 6 NOMINAL FLOORING. PLYWOOD FLOORING HAS BEEN ADDED OVER THE ORIGINAL FLOORING AND THERE IS TILE IN THE REAR PORTION OF THE SECOND FLOOR.
4. IT APPEARS THAT THE ORIGINAL FLOOR JOISTS SPANNED THE FULL 28'. THE STEEL BEAMS AND COLLINGS WERE ADDED UNDER THE MIDSPAN OF THE JOIST AT SOME TIME AFTER ORIGINAL CONSTRUCTION. THE STEEL BEAM DOES NOT EXTEND THE FULL LENGTH OF THE BUILDING IN THE FRONT AND THE JOISTS DO NOT SHOW FULL BEARING ON THE STEEL BEAM WHERE VISIBLE.
5. THERE IS NO APPARENT EXCESSIVE FLOOR DEFLECTION OR SLOPING IN THE SECOND FLOOR AS THERE IS ON THE FIRST FLOOR.

