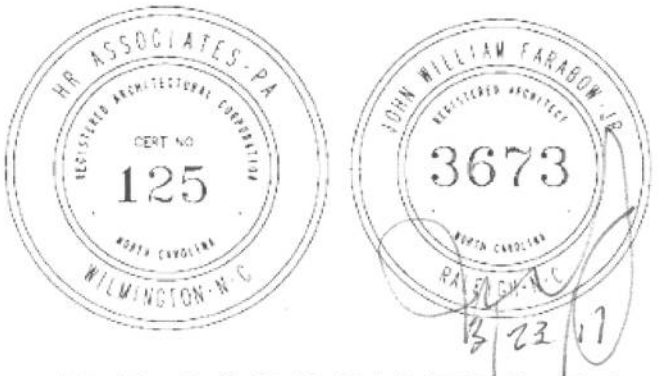
CFPTA - NEUWIRTH BUILDING
DEMOLITION/ABATEMENT
520 N. 3RD STREET
WILMINGTON, NORTH CAROLINA

COMPLETE SPECIFICATION



H R ASSOCIATES PA

ARCHITECTURE - PLANNING - INTERIOR DESIGN
2202 WRIGHTSVILLE AVENUE, SUITE 212
WILMINGTON, NORTH CAROLINA

23 MARCH 2017

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DIVISION 5 – METALS
NOT APPLICABLE

DIVISION 6 - WOOD AND PLASTICS
NOT APPLICABLE

DIVISION 7 - THERMAL AND MOISTURE PROTECTION
NOT APPLICABLE

DIVISION 8 - DOORS AND WINDOWS
NOT APPLICABLE

DIVISION 9 – FINISHES
NOT APPLICABLE

DIVISION 10 – SPECIALTIES
NOT APPLICABLE

DIVISION 11 - EQUIPMENT
NOT APPLICABLE

DIVISION 12 – FURNISHINGS
NOT APPLICABLE

DIVISION 13 - SPECIAL CONSTRUCTION
NOT APPLICABLE

DIVISION 14 - CONVEYING SYSTEMS
NOT APPLICABLE

DIVISION 15 - MECHANICAL
NOT APPLICABLE

DIVISION 16 - ELECTRICAL
NOT APPLICABLE

DIVISION 4 - MASONRY
NOT APPLICABLE

DIVISION 5 – METALS
NOT APPLICABLE

DIVISION 6 - WOOD AND PLASTICS
NOT APPLICABLE

DIVISION 7 - THERMAL AND MOISTURE PROTECTION
NOT APPLICABLE

DIVISION 8 - DOORS AND WINDOWS
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REQUEST FOR QUOTATIONS

DEMOLITION & HAZARDOUS
MATERIALS ABATEMENT

CONTRACT # 17-11

REQUEST FOR QUOTATIONS

DEMOLITION & HAZARDOUS
MATERIALS ABATEMENT

CONTRACT # 17-11

Cape Fear Public Transportation Authority

Request for Quotations
Demolition & Hazardous Materials Abatement
Contract # 17-11

Price quotes are hereby requested by the Cape Fear Public Transportation Authority (Wave Transit or Authority) for Demolition & Hazardous Materials Abatement Contract #17-11

Pursuant to the General Statutes of North Carolina, quotes from Certified Abatement Contractors addressed to Albert Eby, Executive Director, Cape Fear Public Transportation Authority, Post Office Box 12630, 505 Cando Street, Wilmington, NC 28405, and marked:

DEMOLITION & HAZARDOUS MATERIALS ABATEMENT

will be received until 5:00 p.m. EDT, Tuesday, April 18, 2017. Instructions for submitting quotes may be obtained from the Cape Fear Public Transportation Authority, Post Office Box 12630, 505 Cando Street, Wilmington, NC 28405 from 8:00 a.m. to 4:30 p.m., Monday through Friday. The Authority reserves the right to reject any or all quotes.
Proposers should submit one (1) written copy of their quote and one (1) electronic copy of their quote in portable document format (pdf) via email to Albert Eby, aeby@wavetransit.com. The responsibility for submitting quotes (including all documents requested) are solely and strictly that of the proposer(s). The Authority is not responsible for delays in the delivery of the mail or delays caused by any other occurrence. The Cape Fear Public Transportation Authority does not discriminate on the basis of race, gender, ethnicity, age, national origin, religion or disability in its employment opportunities, programs, services, contracting opportunities or activities. It is the Authority's policy to ensure compliance with the Title VI of the Civil Rights Act of 1964 in its contracting opportunities. The Authority's Title VI Program is available at: https://www.wavetransit.com/wp-content/uploads/2016/08/Title_VI_Program.pdf.
A copy of the Demolition & Hazardous Materials Abatement design and engineering documents and specifications is available at the following URL: https://www.wavetransit.com/wp-content/uploads/2016/08/Demo-Abatement-Quote.docx.

Albert Eby
Executive Director
ADVERTISED: 03/24/2017

2.0 RFQ POSTPONEMENT AND AMENDMENT & WITHDRAWAL

The Authority may postpone the deadline for submitting qualifications and the opening of qualifications and may revise or amend this RFQ at any time up to the deadline for submitting qualifications. Such changes, revisions and amendments, if any, will be announced to each prospective proposer by written addenda to this RFQ. Applicants are requested to contact the Authority if, upon review, material errors are found. Errors and/or omissions must be conveyed to the Authority before the deadline for submitting qualifications to allow time for review and subsequent clarifications by the Authority. In any case, the deadline for submitting qualifications will be at least seven (7) calendar days after the last addendum, and any addenda will include an announcement, if applicable, of the new deadline for submitting qualifications.
No contract arising from this solicitation is implied or guaranteed. The Authority reserves the right to reissue an amended RFQ or to take no action regarding any contract solicited by this

advertisement.

3.0 REQUESTS FOR ADDITIONAL INFORMATION

Firms and individuals requiring additional information may contact the Executive Director who will respond to questions and supply required information. Requests for additional information or clarification should be received in writing seven (7) days before the qualification deadline to allow time for response to the request. All contact should be directed to:

Albert Eby, Executive Director
Wave Transit
P.O. Box 12630
Wilmington, NC 28405-0130
(910) 202-2035
(910) 343-8317 (fax)
aeby@wavetransit.com

The Authority will send all requests for information and responses in writing to all known potential consultants so that all parties have the same information. Any spoken communication given is not binding upon the Authority until it is communicated in written form.

IMPORTANT - PLEASE NOTE: The Cape Fear Public Transportation Authority is an independent body politic and corporate as defined by North Carolina General Statute 160A Article 25. All inquiries regarding this request must be directed to the designated contact listed above. Approval of any contract resulting from this RFQ will be made by the Authority. The decision of the Authority will be final. Proposers who fail to follow this directive are subject to disqualification.

4.0 FUNDING AND TERMS

Any contract resulting from this RFQ may be subject to a financial assistance contract/agreement between the Authority and the North Carolina Department of Transportation (NCDOT), and/or between the Authority and the U.S. Department of Transportation, Federal Transit Administration (FTA). The contract will be governed by all applicable local, state and federal regulations.

The Authority will negotiate a contract with the highest qualified firm or individual for Design and Engineering Services as set forth in this solicitation.

5.0 AGENCY BACKGROUND AND DESCRIPTION

The Cape Fear Public Transportation Authority (dba Wave Transit) provides public transportation in Southeastern North Carolina. The current service area of Wave Transit is 199 square miles including all of New Hanover County, portions of Southern Pender County and portions of Northern Brunswick County. Wave Transit has authority to serve an area up to 30 miles outside the limits of New Hanover County (County), as extended from time to time.

In 2004 the City of Wilmington and New Hanover County merged their public transportation systems into the regionally consolidated Cape Fear Public Transportation Authority (Wave Transit). The Authority operates within the guidelines established under North Carolina General Statute 160A Article 25. The Authority is an independent local government.

The Authority is governed by eleven members appointed by the New Hanover County Board of Commissioners and the Wilmington City Council. The Authority provides directly operated Paratransit and contracted fixed route services.

As a public transit agency, the Authority occasionally requires outside assistance in meeting the requirements of funding agencies. These services include professional consultation with contractors which have expertise beyond the capabilities of the Authority and its professional staff.

6.0 PROJECT BACKGROUND & SCOPE

6.1 Background

In the mid-1990's the City of Wilmington and the North Carolina Department of Transportation collectively undertook a study to determine the feasibility of introducing intercity passenger rail services between Wilmington and Raleigh, NC. The project was envisioned to be anchored with multimodal transportation centers at each terminus.

Since introducing the concept, the following studies have been commissioned (click study for URL to document):

- The Wilmington Urban Area Multi-Modal Transportation Center Feasibility Study (2000)
- Wilmington Multi-Modal Transportation Center Site Evaluation Report (2004)
- Transit Needs Study for the Wilmington Multimodal Transportation Center (2009)
- Wilmington, NC Train Station Master Plan and Conceptual Design (2010)
- National Environmental Policy Act (NEPA) Categorical Exclusion (CE) Worksheet and Federal Transit Administration (FTA) Concurrence (2016)

As the project has evolved over the past twenty years, many of the original assumptions and plans have changed. The major modification to the original proposal is the splitting of the rail and transit portions of the project. Since intercity passenger rail is not imminent in the foreseeable future, the transit portion has been targeted for immediate completion.

The Cape Fear Public Transportation Authority will be the responsible party for financing, design, engineering and construction of the WMMTC. The primary function of the project upon completion will be for local bus transit. Ancillary uses could include: intercity bus transit; passenger rail thruway bus service; bicycle sharing; local cab; and other transportation uses. The Authority is in the process of identifying and negotiating non-local transit modes.

Funding for the transit portion of the WMMTC has been secured through the Federal Transit Administration and NCDOT.

6.2 Project Scope

The scope of the project solicited herein includes demolition and abatement of hazardous and non-hazardous materials from the former Neuwirth Building located at 520 N. Third Street, Wilmington, NC 28401, and the former Thomas Grocery Building located at 525 North Fourth Street, Wilmington, NC 28401, in accordance with the demolition/abatement design documents attached.

6.3 Estimated Timeline

RFQ advertised	March 24, 2017	5:00 pm
Pre quote submittal meeting	March 30, 2017	10:00 am
Quote submittals due	April 18, 2017	5:00 pm
Proposed Contract Award	April 27, 2017	12:00 pm
Notice to proceed	April 28, 2017	8:00 am
Project completion	June 30, 2017	

6.4 Pre Submittal Meting

A non-mandatory quote submittal meeting is scheduled for March 30, 2017 at 10:00am at the project site, 520 North Third St., Wilmington, NC 28401.

7.0 GENERAL SPECIFICATIONS & INSTRUCTIONS TO BIDDERS

7.1 Proposer Qualifications

By responding to this solicitation, proposer warrants and assures that the Firm or Individual is qualified to meet the scope outlined herein. Proposer warrants that employees who participate in this project will be compensated in accordance with the law. Applicable insurance is a requirement of this contract for Firms as specified in Section 7.7.10.

7.2 Taxes

The Cape Fear Public Transportation Authority is exempt from and will not pay federal taxes where applicable. An exemption certificate will be furnished upon request. State and local sales tax, where applicable, will be shown as a separate item. Sales tax will not be a consideration in the award.

7.3 Invoicing

Monthly invoicing for work completed through the last day of the billing period should be presented to the Authority for payment. Reimbursement will not be remitted for work that is incomplete. Advance payment is not authorized. Reimbursement beyond the terms of any negotiated contract is not allowed. Terms are net thirty (30) days. Application and Certificate for Payment should be submitted on AIA Document G702 or approved equal. Pay applications shall be notarized and submitted to the project architect for certification of work.

7.4 Change Orders

Change order requests will be submitted on AIA Document G701 or approved equal.

7.5 Certification

Proposers must submit applicable certification from the North Carolina Department of Health and Human Services demonstrating certification to abate lead based paint and asbestos with quotation.

Contractors are required to comply with the following:

1. REQUIREMENTS FOR CONDUCTING ASBESTOS WORK IN NORTH CAROLINA http://epi.publichealth.nc.gov/asbestos/pdf/AsbestosRequirements09-16.pdf
2. REQUIREMENTS FOR CONDUCTING LEAD-BASED PAINT MANAGEMENT ACTIVITIES IN NORTH CAROLINA http://epi.publichealth.nc.gov/lead/pdf/LeadRequirements_03_2015.pdf
3. N.C. General Statute §130A-453.01 through 453.11 - Lead-Based Paint Hazard Management Program http://epi.publichealth.nc.gov/lead/pdf/LHMP%20statute.pdf

7.6 Record submission and reporting

The selected contractor will be required to obtain any and all federal, state, local and any other permits required prior to abatement. The selected contractor will be required to submit any and all reporting forms, manifests, and other documents as required by any and all federal, state, and local oversight agencies including but not limited to the North Carolina Department of Health and Human Services. Additional information is available at http://www.ncdhhs.gov/.

7.7 Required Qualifications Contents and Format

Submitted quotes must include the required items and follow the format outlined below. Instructions for each exhibit are provided. There is no limitation on quotation size. Graphic illustrations may be included in the proposal. Information submitted is to be relevant to this solicitation and project. Brochures and other promotional materials may not be substituted for filling out the requested forms or information. The forms supplied, or the same format, will be used to provide a uniform response to the information requested. Quotes that do not follow the listed format, or fail to include the required material, may be removed from consideration. Each of the following items must be included in each submitted proposal in sufficient detail to enable the Authority to make a determination as to the responsiveness of the proposer. Please make certain that all items are completed and labeled as instructed. Material submitted with qualifications will not be returned.

7.8 Submission Checklist

7.8.1 Legal Status

Provide a brief summary of the legal status of the firm, i.e., sole proprietor, partnership, corporation, etc. If the proposer is a corporation, it must furnish a certificate attesting to its corporate existence and identify officers with the Authority to sign contracts and other documents on behalf of the corporation.

7.8.2 Experience and References

Provide a list of three (3) current and/or former demolition and abatement projects as references. Indicate the dates and length of time of the project and describe the service provided, the size of the operation, and any other relevant factors. Include the name and telephone number of a contact person for each current and former client listed.

7.8.5 Project Team - Include copy of certification and relevant experience if applicable. Lead and asbestos abatement contractors are required by the North Carolina General Statute to be properly licensed.

7.8.6 Proposed project timeline

Based on the proposer's understanding of the project, please propose a timeline for completing the project. The proposed timeline is non-binding and intended only to gauge the firm's ability to undertake the project in a timely manner.

7.8.7 Litigation

List and briefly describe the circumstances and status of any litigation involving the firm from January 1, 2012 to the present, if applicable**.** Include any breach of contractual agreements.

7.8.9 Insurance

Qualification statements are required to provide proof of the following insurance: A Certificate of Insurance (COI) with a liability limit of not less than one million dollars ($1,000,000.00) is required. Proposers are required to have their insurer provide a COI with the Cape Fear Public Transportation Authority listed as the named insured. Completed COI's can be sent via email to aeby@wavetransit.com. Separate COI's for subcontractors are required.

7.8.10 Required Certifications and Affidavits

Qualifications that do not contain all of the completed required forms will be considered non-responsive and will not be eligible for consideration.

7.8.11 Marking of Bid Envelopes

Qualifications must be contained in a sealed envelope or box, plainly marked, showing the RFQ name, date, time for opening bids and the proposer's name.

7.8.12 Late Bids Not Considered

Responses to this RFQ received after the stipulated opening date and time will not be considered.

7.7.13 Award

Award will be made to the firm that is determined by the Authority to be most qualified to undertake this engagement.

7.8.14 Determination of Award

Participation by Disadvantaged Business Enterprises (DBE) is strongly encouraged. Selected firms may be requested to make a presentation to the Authority, its appropriate Board Committee or staff. Costs associated with attendance at any presentation are the responsibility of the proposer.

7.8.20 Responsibility of Compliance with Legal Requirements

The proposer's services and facilities will be in full compliance with any and all applicable state, federal, local, environmental and safety laws, regulations, ordinances

and standards or any standards adopted by nationally recognized accreditation organizations regardless of whether or not they are referred to in this invitation.

7.8.21 Recitations

Awards must be approved by the Executive Director prior to submission to the Authority Board of Directors for final approval. The approval authority must ensure required procurement procedures were followed, funds are available, and that the procurement history file has been properly documented.

ATTACHMENT A

STATE OF NORTH CAROLINA
COUNTY OF _____

AFFIDAVIT OF COMPLIANCE WITH N.C. E-VERIFY STATUTES
(To be submitted with all bids)

I, _____ (hereinafter the "Affiant"), duly authorized by and on behalf of

_____ (hereinafter the "Employer") after being first duly sworn deposes and says as follows:

1. I am the _____ (President, Manager, CEO, etc.) of the Employer and possess the full authority to speak for and on behalf of the Employer identified above.
2. Employer understands that "E-Verify" means the federal E-Verify program operated by the United States Dept. of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law.
3. Employer employs 25 or more employees, and is in compliance with the provisions of N.C. General Statute §64-26. Employer has verified the work authorization of its employees through E-Verify and shall retain the records of verification for a period of at least one year.
   Employer employs fewer than 25 Employees and is therefore not subject to the provisions of N.C. General Statute §64-26.
4. All subcontractors engaged by or to be engaged by Employer have or will have likewise complied with the provisions of N.C. General Statute §64-26.
5. Employer shall keep the State of North Carolina informed of any change in its status pursuant to Article 2 of Chapter 64 of the North Carolina Statutes.

This _____day of _____, 20____.

_____
Signature of Affiant

_____
Printed Name and Title

State of _____

County of _____

Subscribed and sworn to before me this _____day of _____ , 20_____

_____
Notary Public

(SEAL)

_____
My Appointment Expires

ATTACHMENT B

STATE OF NORTH CAROLINA
COUNTY OF _____

IRAN DIVESTMENT ACT CERTIFICATION

In accordance to N.C.G.S. 147-86.59, any contractor attempting to contract with the State of North Carolina, North Carolina local governments, or any other political subdivision of the State of North Carolina shall certify at the time of the bid or renewal that the assignee or contractor is not identified on a list created by the State Treasurer pursuant to N.C.G.S. 147-86.58.
The Iran Divestment Act of 2015, G.S. 147-86.55 et seq.* requires that each contractor, prior to contracting with the State certifies, and the undersigned on behalf of the contractor does hereby certify, to the following:

1. that the Contractor is not identified on the Final Divestment List of entities that the NC State Treasurer has determined engages in investment activities in Iran.
2. that the Contractor shall not utilize on any contract with the State agency any subcontractor that is identified on the Final Divestment List; and
3. that the undersigned is authorized by the contractor to make this certification.

The State Treasurer's Final Divestment List can be found on the State Treasurer's website at the address: https://www.nctreasurer.com/inside-the-department/OpenGovernment/Pages/Iran-Divestment-Act-Resources.aspx
and will be updated every 180 days. For questions about the Department of State Treasurer's Iran Divestment Policy, please contact Meryl Murtagh at Meryl.Murtagh@nctreasurer.com or (919) 814-3852.
* Note: Enacted by Session Law 2015-118 as G.S.143C-55 et seq., but has been renumbered for codification at the direction of the Revisor of Statutes.

_____ _____
Contractor Signature Date

_____ _____
Printed Name Title

State of _____

County of _____

Subscribed and sworn to before me this _____day of _____ , 20_____

_____
Notary Public

(SEAL)

_____
My Appointment Expires

FORM OF AGREEMENT

ARTICLE 1 RELATIONSHIP OF THE PARTIES

1.1 Services

The Contractor shall provide professional services for each task under the scope of work as outlined in the solicitation documents in accordance with the normal degree of care and skill of other reputable consulting professionals performing similar service on similar projects of like size and nature in the vicinity of this project. The Contractor's performance of services shall be an independent contractor to the Authority to carry out the activities of Demolition & Hazardous Materials Abatement Contract # 17-11 based on the scope of work outlined for the project.

ARTICLE 2 COMPENSATION

2.1 Payment

Payment for Basic Services shall be made monthly in proportion to services performed. Payment shall be made monthly upon presentation of the Contractor's pay application, fully supported by invoices and certifications that all subcontractors, when applicable, have been paid amounts rightfully owed, and other documentation as requested by the Authority including progress report(s) detailing progress to date of invoice and third party billing from subcontractors.

ARTICLE 3 PERIOD OF SERVICE

3.1 Project Schedule

Changes to the project timeline must be addressed with and agreed upon by the Authority.

ARTICLE 4 AUTHORITY'S RESPONSIBILITIES

4.1 The AUTHORITY shall provide full information regarding the requirements for the project.

4.2 The AUTHORITY shall examine documents submitted by the Contractor and shall render decisions pertaining thereto promptly, to avoid unreasonable delay in the progress of the Contractor's services.

4.3 The Authority and/or its representatives will meet with the Contractor on an as needed basis through the duration of the project. The Authority will help to facilitate meetings and public outreach efforts, as agreed upon when applicable.

ARTICLE 5 NOTICES

5.1 Any notice required by this Agreement or other communications to either party by the other shall be in writing and deemed given when delivered personally or when deposited in the United States Post Office, first class, postage prepaid, addressed as follows, or to such other address as shall be duly given by notice meeting the requirement of this Article.

To AUTHORITY:

Cape Fear Public Transportation Authority
P. O. Box 12630
Wilmington, NC 28405-0130
Attn: Albert Eby, Project Manager
Telephone: (910) 202-2035

Fax: (910) 343-8317
Email: aeby@wavetransit.com

To CONTRACTOR:

_____
Company

_____

_____
Address

_____
Attn:

_____
Telephone

_____
Fax

_____
Email

Nothing in this agreement shall be construed to restrict the transmission of routine communications between representatives of the Authority and the Contractor.

ARTICLE 6 INSURANCE

6.1 The amount of insurance to be provided for all coverages listed under this section shall be not less than $1,000,000.00, unless otherwise specified, per occurrence for claims arising from bodily injury and/or property damage, or per claim for professional liability including accidental death which may arise directly or indirectly from the Contractor's performance of professional services under this contract. The Contractor shall be responsible for any liability directly or indirectly arising out of professional services negligently performed under this contract by a subcontractor which liability is not covered by the subcontractor's insurance.

6.2 The Contractor shall maintain during the life of this contract WORKERS' COMPENSATION and EMPLOYER'S LIABILITY INSURANCE covering all of the Contractor's employees to be engaged in the work under this contract, providing the required statutory benefits under North Carolina Workers Compensation Law, and Employers Liability Insurance providing limits at least in the amount of $500,000/500,000/500,000 applicable to claims due to bodily injury by accident or disease.

6.3 The Contractor shall require its subcontractors to maintain all types of insurance as mentioned in this Article and shall provide the Authority with the proper certificates of insurance for each subcontractor

6.4 The Contractor shall furnish the schedule of insurance carried under this contract in the form of a Certificate of Insurance attested by the insurance carrier or appointed agent, indicating the type, amount, class of operations covered, effective date and expiration date of all policies. When the contract is signed by the Contractor, a copy thereof shall be inserted in each copy of

the contract documents and upon insertion shall become a part of such documents. The insurance carrier or its agent shall also certify on these documents that it will notify the Authority by registered mail at least twenty (20) days prior to any cancellation or non-renewal of these coverages.

ARTICLE 7 INDEMNIFICATION

7.1 To the fullest extent permitted by law, the Contractor shall release, indemnify, keep and save harmless the Authority, its agents, officials and employees, from any and all responsibility or liability for any and all damage or injury of any kind or nature whatever (including death resulting therefrom) to all persons, whether agents, officials or employees of the Authority or third persons, and to all property to the extent proximately caused by the Contractor's breach of contract or the negligent performance or nonperformance by the Contractor (or by any person acting for the Contractor or for whom the Contractor is responsible). The Contractor expressly understands and agrees that any insurance protection required by this agreement, or otherwise provided by the Contractor, shall in no way limit the Contractor's responsibility to release, indemnify, keep and save harmless and defend the Authority as herein provided. The intention of the parties is to apply and construe broadly in favor of the Authority the foregoing provisions subject to the limitations, if any, set forth in N.C.G.S. 22B-1.

ARTICLE 8 TERMINATION OF AGREEMENT

8.1 In the event that review of the Contractor's performance shows nonconformance to the work required by this contract, the Scope of Services, or other terms or conditions contained herein as a result of the Contractor's acts or failure to act including negligent errors, omissions or acts, the Contractor shall be in breach of this agreement and the Authority may take corrective action as it deems necessary including, but not limited to, termination, withholding or reduction of payment.

8.2 In the event this project is terminated prior to completion of the services by the Contractor, they shall be paid for services performed to the date of termination.

8.3 This agreement may be terminated without cause by the Authority in whole, or from time to time in part, whenever the Authority shall determine that such termination is in the best interest of the Authority. Any such termination shall be effected by delivery to the Contractor of a notice of termination specifying the extent to which performance of work under the contract is terminated, and the date upon which such termination shall become effective which date shall be not less than fifteen (15) days after the date of said notice.

8.4 Should the Authority terminate this agreement as provided for under this Article, upon payment of all amount rightfully owed by Authority to the Contractor hereunder, the Authority will acquire such work, including the ownership and use of all data, maps, documents and materials relating to the project prepared by or in the possession of the Contractor. The Contractor will turn over to the Authority in a timely manner and in good unaltered condition all data, maps, documents, materials, and computer files.

8.5 The payment of any sums by the Authority under this Article 4 shall not constitute a waiver of any claims for damages by the Authority for any breach of the Agreement by the Contractor.

8.6 The Authority grants the Contractor during the term of this agreement and thereafter a non-exclusive license to use the Authority's name and logo in the Contractor's marketing materials such as press releases, case study briefs/project summaries, website or brochures. This license shall be perpetual and irrevocable for such use on all materials distributed and/or printed but

not yet distributed prior to termination and revocation of said license; said license shall remain in effect unless and until the Authority shall terminate and revoke the same by giving the Contractor sixty (60) days advance written notice thereof whereupon at the end of said sixty (60) days the license shall be deemed terminated.

ARTICLE 9 GENERAL TERMS

9.1 Personnel

It is mutually agreed that the Contractor is an independent corporation and not an employee of the Authority, and as such the Contractor shall not be entitled to any Authority employment benefits, such as, but not limited to, vacation, sick leave, insurance, workmen's compensation, or pension and retirement benefits.

9.2 Conflict of Interest

No paid employee or member of the Board of the Authority shall have a personal or financial interest, direct or indirect, as a contracting party or otherwise, in the performance of this agreement.

9.3 Non-Waiver of Rights

It is agreed that the Authority's failure to insist upon the strict performance of any provision of this agreement, or to exercise any right based upon a breach thereof, or the acceptance of any performance during such breach, shall not constitute a waiver of any rights under this agreement.

9.4 Assignment of Agreement

It is mutually agreed by the parties hereto that this agreement is not transferable by either party without the written consent of the other party to this agreement.

9.5 Entire Agreement

This agreement, and all requirements of any and all solicitation documents constitutes the entire understanding of the parties.

9.6 Binding Effect

This agreement shall be binding upon the heirs, successors, assigns, agents, officials, employees, and Contractors of the parties.

9.7 Continuing Obligation

The parties will make and execute all further instruments and documents required to carry out the purposes and intent of the agreement.

9.8 Reference

Use of the masculine includes feminine and neuter, singular includes plural; and captions and headings are inserted for convenience of reference and do not define, describe, extend or limit the scope of intent of the agreement.

9.9 Interpretation

All of the terms and conditions contained herein shall be interpreted in accordance with the laws of the State of North Carolina. In the event of a conflict between the various terms and conditions contained herein or between these terms and other applicable provisions, then the more particular shall prevail over the general and the more stringent or higher standard shall prevail over the less stringent or lower standard.

9.10 Saving Clause

If any section, subsection, paragraph, sentence, clause, phrase or portion of this agreement is for any reason held invalid, unlawful, or unconstitutional by any court of competent jurisdiction, such portion shall be deemed severable and such holding shall not affect the validity of the remaining portions hereof.

9.11 Other Laws and Regulations

The Contractor will comply with any and all applicable federal, state and local standards, regulations, laws, statutes and ordinances regarding toxic, hazardous and solid wastes and any other pollutants; public and private nuisances; health or safety; and zoning, subdivision or other land use controls. The Contractor will take all reasonably necessary proper or required safety, preventive and remedial measures in accordance with any and all relations and directives from the North Carolina Department of Environmental and Natural Resources, the United States Environmental Protection Agency, the North Carolina Division of Environmental Management, Health Departments, and any other federal, state or local agency having jurisdiction, to insure the prompt prevention or cessation (now or in the future) of violations of either the applicable provisions of such standards, regulations, laws, statutes, and ordinances or any permits or conditions issued thereunder.

9.12 Amendments

This agreement shall not be modified or otherwise amended except in writing signed by the parties.

9.13 Non-Discrimination

The Contractor will take affirmative action not to discriminate against any employee or applicant for employment or otherwise illegally deny any person participation in or the benefits of the program which is the subject of this agreement because of race, creed, color, sex, age, disability or national origin. To the extent applicable, the Contractor will comply with all provisions of Executive Order No. 11246 the Civil Rights Act of 1964, (P.L. 88-352) and 1968 (P.L. 90-284), and all applicable federal, state and local laws, ordinances, rules, regulations, orders, instructions, designations and other directives promulgated to prohibit discrimination. Violation of this provision, after notice, shall be a material breach of this agreement and may result, at AUTHORITY'S option, in a termination or suspension of this agreement in whole or in part.

SECTION 10 STATE REQUIREMENTS AND SPECIAL CONDITIONS

10.1 NC E-Verify Requirements

To ensure compliance with the E-Verify requirements of the General Statutes of North Carolina, all contractors, including any subcontractors employed by the contractor(s), by submitting a bid, proposal or any other response, or by providing any material, equipment, supplies, services, etc., attest and affirm that they are aware and in full compliance with Article 2 of Chapter 64, (NCGS64-26(a)) relating to the E-Verify requirements by executing and submitting the E-verify Affidavit included in this Invitation for Bids as Attachment A (Must be completed for all construction contracts and all bids or quotes requiring service or installation.)

10.2 Iran Divestment Act

N.C.G.S. 147-86.59 requires that all bids or contracts or renewals with the State of North Carolina, North Carolina local governments, or any other political subdivision of the State of North Carolina have a certification that the contractor is not on the Final Divestment List as created by the NC State Treasurer pursuant to N.C.G.S. § 147-86.58. In compliance with the requirements of the Iran Divestment Act 2015 and N.C.G.S. § 147-86.55 and 147-86.59, the Contractor shall not utilize the performance of the contract any subcontractor that is identified on the Final Divestment List.

The State Treasurer's Final Divestment List can be found on the State Treasurer's website: www.nctreasurer.com/Iran and will be updated every 180 days.

Effective February 26, 2016. (See Attachment B – Must be completed with all contracts over $1,000)

ATTACHMENT A

STATE OF NORTH CAROLINA
COUNTY OF NEW HANOVER

AFFIDAVIT OF COMPLIANCE WITH N.C. E-VERIFY STATUTES
(To be submitted with all bids)

I, _____ (hereinafter the "Affiant"), duly authorized by and on behalf of _____ (hereinafter the "Employer") after being first duly sworn deposes and says as follows:

1. I am the _____ (President, Manager, CEO, etc.) of the Employer and possess the full authority to speak for and on behalf of the Employer identified above.
2. Employer understands that "E-Verify" means the federal E-Verify program operated by the United States Dept. of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law.
3. Employer employs 25 or more employees, and is in compliance with the provisions of N.C. General Statute §64-26. Employer has verified the work authorization of its employees through E-Verify and shall retain the records of verification for a period of at least one year.
   Employer employs fewer than 25 Employees and is therefore not subject to the provisions of N.C. General Statute §64-26.
4. All subcontractors engaged by or to be engaged by Employer have or will have likewise complied with the provisions of N.C. General Statute §64-26.
5. Employer shall keep the State of North Carolina informed of any change in its status pursuant to Article 2 of Chapter 64 of the North Carolina Statutes.

This _____day of _____, 20____.

_____

Signature of Affiant

_____
Printed Name and Title

State of

County of

Subscribed and sworn to before me this day of , 20 .

Notary Public

(SEAL)

My Appointment Expires

ATTACHMENT B

STATE OF NORTH CAROLINA
COUNTY OF NEW HANOVER

IRAN DIVESTMENT ACT CERTIFICATION

In accordance to N.C.G.S. 147-86.59, any contractor attempting to contract with the State of North Carolina, North Carolina local governments, or any other political subdivision of the State of North Carolina shall certify at the time of the bid or renewal that the assignee or contractor is not identified on a list created by the State Treasurer pursuant to N.C.G.S. 147-86.58.
The Iran Divestment Act of 2015, G.S. 147-86.55 et seq.* requires that each contractor, prior to contracting with the State certifies, and the undersigned on behalf of the contractor does hereby certify, to the following:

1. that the Contractor is not identified on the Final Divestment List of entities that the NC State Treasurer has determined engages in investment activities in Iran.
2. that the Contractor shall not utilize on any contract with the State agency any subcontractor that is identified on the Final Divestment List; and
3. that the undersigned is authorized by the contractor to make this certification.

The agency shall include the certification in the procurement record.

The State Treasurer's Final Divestment List can be found on the State Treasurer's website at the address: https://www.nctreasurer.com/inside-the-department/OpenGovernment/Pages/Iran-Divestment-Act-Resources.aspx
and will be updated every 180 days. For questions about the Department of State Treasurer's Iran Divestment Policy,
please contact Meryl Murtagh at Meryl.Murtagh@nctreasurer.com or (919) 814-3852.
* Note: Enacted by Session Law 2015-118 as G.S.143C-55 et seq., but has been renumbered for codification at the direction of the Revisor of Statutes.

_____ _____
Contractor Signature Date

_____ _____
Printed Name Title

State of

County of

Subscribed and sworn to before me this day of , 20 .

Notary Public

My Appointment Expires

DRAFT

AIA® Document A201™ – 1997

General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address):
CFPTA – Neuwirth Building Demolition/Abatement
520 N. 3rd Street
Wilmington, North Carolina 28401

THE OWNER:
(Name and address):
Cape Fear Public Transportation Authority
505 Cando Street
Wilmington, North Carolina 28405

THE ARCHITECT:
(Name and address):
IH R Associates, P.A.
2202 Wrightsville Avenue, Suite 212
Wilmington, North Carolina 28403

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

This document has been approved and endorsed by The Associated General Contractors of America

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the Agreement between Owner and Contractor (hereinafter the Agreement), Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include other documents such as bidding requirements (advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or portions of Addenda relating to bidding requirements).

§ 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Architect and Contractor, (2) between the Owner and a Subcontractor or Sub-subcontractor, (3) between the Owner and Architect or (4) between any persons or entities other than the Owner and Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner or by separate contractors.

§ 1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

§ 1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 THE PROJECT MANUAL

The Project Manual is a volume assembled for the Work which may include the bidding requirements, sample forms, Conditions of the Contract and Specifications.

§ 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

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§ 1.3 CAPITALIZATION

§ 1.3.1 Terms capitalized in these General Conditions include those which are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 INTERPRETATION

§ 1.4.1 In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 EXECUTION OF CONTRACT DOCUMENTS

§ 1.5.1 The Contract Documents shall be signed by the Owner and Contractor. If either the Owner or Contractor or both do not sign all the Contract Documents, the Architect shall identify such unsigned Documents upon request.

§ 1.5.2 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 1.6 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 1.6.1 The Drawings, Specifications and other documents, including those in electronic form, prepared by the Architect and the Architect's consultants are Instruments of Service through which the Work to be executed by the Contractor is described. The Contractor may retain one record set. Neither the Contractor nor any Subcontractor, Sub-subcontractor or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications and other documents prepared by the Architect or the Architect's consultants, and unless otherwise indicated the Architect and the Architect's consultants shall be deemed the authors of them and will retain all common law, statutory and other reserved rights, in addition to the copyrights. All copies of Instruments of Service, except the Contractor's record set, shall be returned or suitably accounted for to the Architect, on request, upon completion of the Work. The Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants, and copies thereof furnished to the Contractor, are for use solely with respect to this Project. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants. The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants appropriate to and for use in the execution of their Work under the Contract Documents. All copies made under this authorization shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' copyrights or other reserved rights.

ARTICLE 2 OWNER

§ 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 The Owner shall, at the written request of the Contractor, prior to commencement of the Work and thereafter, furnish to the Contractor reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Furnishing of such evidence shall be a condition precedent to commencement or

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continuation of the Work. After such evidence has been furnished, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.2 Except for permits and fees, including those required under Section 3.7.1, which are the responsibility of the Contractor under the Contract Documents, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.4 Information or services required of the Owner by the Contract Documents shall be furnished by the Owner with reasonable promptness. Any other information or services relevant to the Contractor's performance of the Work under the Owner's control shall be furnished by the Owner after receipt from the Contractor of a written request for such information or services.

§ 2.2.5 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, such copies of Drawings and Project Manuals as are reasonably necessary for execution of the Work.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

§ 2.3.1 If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or persistently fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

§ 2.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may after such seven-day period give the Contractor a second written notice to correct such deficiencies within a three-day period. If the Contractor within such three-day period after receipt of such second notice fails to commence and continue to correct any deficiencies, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

ARTICLE 3 CONTRACTOR

§ 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons other than the Contractor.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Since the Contract Documents are complementary, before starting each portion of the Work, the Contractor shall carefully study and compare the various Drawings and other Contract Documents relative to that portion of the

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Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, any errors, inconsistencies or omissions discovered by the Contractor shall be reported promptly to the Architect as a request for information in such form as the Architect may require.

§ 3.2.2 Any design errors or omissions noted by the Contractor during this review shall be reported promptly to the Architect, but it is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents. The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations, but any nonconformity discovered by or made known to the Contractor shall be reported promptly to the Architect.

§ 3.2.3 If the Contractor believes that additional cost or time is involved because of clarifications or instructions issued by the Architect in response to the Contractor's notices or requests for information pursuant to Sections 3.2.1 and 3.2.2, the Contractor shall make Claims as provided in Sections 4.3.6 and 4.3.7. If the Contractor fails to perform the obligations of Sections 3.2.1 and 3.2.2, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. The Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents or for differences between field measurements or conditions and the Contract Documents unless the Contractor recognized such error, inconsistency, omission or difference and knowingly failed to report it to the Architect.

§ 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any resulting loss or damage.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 The Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

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§ 3.5 WARRANTY

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.6 TAXES

§ 3.6.1 The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor which are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 PERMITS, FEES AND NOTICES

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and other permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required when bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 It is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations. However, if the Contractor observes that portions of the Contract Documents are at variance therewith, the Contractor shall promptly notify the Architect and Owner in writing, and necessary changes shall be accomplished by appropriate Modification.

§ 3.7.4 If the Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the Architect and Owner, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents:

.1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;

.2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances;

.3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner in sufficient time to avoid delay in the Work.

§ 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important

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communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare and keep current, for the Architect's approval, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Architect reasonable time to review submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 DOCUMENTS AND SAMPLES AT THE SITE

§ 3.11.1 The Contractor shall maintain at the site for the Owner one record copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record field changes and selections made during construction, and one record copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work.

§ 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect without action.

§ 3.12.6 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

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§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services which constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

§ 3.13 USE OF SITE

§ 3.13.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

§ 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the cost thereof shall be charged to the Contractor.

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§ 3.16 ACCESS TO WORK

§ 3.16.1 The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

§ 3.17.1 The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law and to the extent claims, damages, losses or expenses are not covered by Project Management Protective Liability insurance purchased by the Contractor in accordance with Section 11.3, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

ARTICLE 4 ADMINISTRATION OF THE CONTRACT

§ 4.1 ARCHITECT

§ 4.1.1 The Architect is the person lawfully licensed to practice architecture or an entity lawfully practicing architecture identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Architect" means the Architect or the Architect's authorized representative.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a new Architect against whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the former Architect.

§ 4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents, and will be an Owner's representative (1) during construction, (2) until final payment is due and (3) with the Owner's concurrence, from time to time during the one-year period for correction of Work described in Section 12.2. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

§ 4.2.2 The Architect, as a representative of the Owner, will visit the site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and

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deficiencies in the Work, and (3) to determine in general if the Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will neither have control over or charge of, nor be responsible for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.3 The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications Facilitating Contract Administration. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect will have authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve or take other appropriate action upon the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken with such reasonable promptness as to cause no delay in the Work or in the activities of the Owner, Contractor or separate contractors, while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion, will receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

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§ 4.2.11 The Architect will interpret and decide matters concerning performance under and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If no agreement is made concerning the time within which interpretations required of the Architect shall be furnished in compliance with this Section 4.2, then delay shall not be recognized on account of failure by the Architect to furnish such interpretations until 15 days after written request is made for them.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and initial decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions so rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.3 CLAIMS AND DISPUTES

§ 4.3.1 Definition. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. Claims must be initiated by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 4.3.2 Time Limits on Claims. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. Claims must be initiated by written notice to the Architect and the other party.

§ 4.3.3 Continuing Contract Performance. Pending final resolution of a Claim except as otherwise agreed in writing or as provided in Section 9.7.1 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 4.3.4 Claims for Concealed or Unknown Conditions. If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, then notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall so notify the Owner and Contractor in writing, stating the reasons. Claims by either party in opposition to such determination must be made within 21 days after the Architect has given notice of the decision. If the conditions encountered are materially different, the Contract Sum and Contract Time shall be equitably adjusted, but if the Owner and Contractor cannot agree on an adjustment in the Contract Sum or Contract Time, the adjustment shall be referred to the Architect for initial determination, subject to further proceedings pursuant to Section 4.4.

§ 4.3.5 Claims for Additional Cost. If the Contractor wishes to make Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.6.

§ 4.3.6 If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the Architect, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the Architect, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, Claim shall be filed in accordance with this Section 4.3.

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§ 4.3.7 Claims for Additional Time

§ 4.3.7.1 If the Contractor wishes to make Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary.

§ 4.3.7.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

§ 4.3.8 Injury or Damage to Person or Property. If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 4.3.9 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 4.3.10 Claims for Consequential Damages. The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes:

.1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

.2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 4.3.10 shall be deemed to preclude an award of liquidated direct damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 4.4 RESOLUTION OF CLAIMS AND DISPUTES

§ 4.4.1 Decision of Architect. Claims, including those alleging an error or omission by the Architect but excluding those arising under Sections 10.3 through 10.5, shall be referred initially to the Architect for decision. An initial decision by the Architect shall be required as a condition precedent to mediation, arbitration or litigation of all Claims between the Contractor and Owner arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Architect with no decision having been rendered by the Architect. The Architect will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 4.4.2 The Architect will review Claims and within ten days of the receipt of the Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Architect is unable to resolve the Claim if the Architect lacks sufficient information to evaluate the merits of the Claim or if the Architect concludes that, in the Architect's sole discretion, it would be inappropriate for the Architect to resolve the Claim.

§ 4.4.3 In evaluating Claims, the Architect may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Architect in rendering a decision. The Architect may request the Owner to authorize retention of such persons at the Owner's expense.

§ 4.4.4 If the Architect requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either provide a response on the requested supporting data, advise the Architect when the response or supporting data will be furnished or advise the Architect that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Architect will either reject or approve the Claim in whole or in part.

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§ 4.4.5 The Architect will approve or reject Claims by written decision, which shall state the reasons therefor and which shall notify the parties of any change in the Contract Sum or Contract Time or both. The approval or rejection of a Claim by the Architect shall be final and binding on the parties but subject to mediation and arbitration.

§ 4.4.6 When a written decision of the Architect states that (1) the decision is final but subject to mediation and arbitration and (2) a demand for arbitration of a Claim covered by such decision must be made within 30 days after the date on which the party making the demand receives the final written decision, then failure to demand arbitration within said 30 days' period shall result in the Architect's decision becoming final and binding upon the Owner and Contractor. If the Architect renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence, but shall not supersede arbitration proceedings unless the decision is acceptable to all parties concerned.

§ 4.4.7 Upon receipt of a Claim against the Contractor or at any time thereafter, the Architect or the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Architect or the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 4.4.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines prior to resolution of the Claim by the Architect, by mediation or by arbitration.

§ 4.5 MEDIATION

§ 4.5.1 Any Claim arising out of or related to the Contract, except Claims relating to aesthetic effect and except those waived as provided for in Sections 4.3.10, 9.10.4 and 9.10.5 shall, after initial decision by the Architect or 30 days after submission of the Claim to the Architect, be subject to mediation as a condition precedent to arbitration or the institution of legal or equitable proceedings by either party.

§ 4.5.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect. Request for mediation shall be filed in writing with the other party to the Contract and with the American Arbitration Association. The request may be made concurrently with the filing of a demand for arbitration but, in such event, mediation shall proceed in advance of arbitration or legal or equitable proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order.

§ 4.5.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 4.6 ARBITRATION

§ 4.6.1 Any Claim arising out of or related to the Contract, except Claims relating to aesthetic effect and except those waived as provided for in Sections 4.3.10, 9.10.4 and 9.10.5, shall, after decision by the Architect or 30 days after submission of the Claim to the Architect, be subject to arbitration. Prior to arbitration, the parties shall endeavor to resolve disputes by mediation in accordance with the provisions of Section 4.5.

§ 4.6.2 Claims not resolved by mediation shall be decided by arbitration which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect. The demand for arbitration shall be filed in writing with the other party to the Contract and with the American Arbitration Association, and a copy shall be filed with the Architect.

§ 4.6.3 A demand for arbitration shall be made within the time limits specified in Sections 4.4.6 and 4.6.1 as applicable, and in other cases within a reasonable time after the Claim has arisen, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such Claim would be barred by the applicable statute of limitations as determined pursuant to Section 13.7.

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§ 4.6.4 Limitation on Consolidation or Joinder. No arbitration arising out of or relating to the Contract shall include, by consolidation or joinder or in any other manner, the Architect, the Architect's employees or consultants, except by written consent containing specific reference to the Agreement and signed by the Architect, Owner, Contractor and any other person or entity sought to be joined. No arbitration shall include, by consolidation or joinder or in any other manner, parties other than the Owner, Contractor, a separate contractor as described in Article 6 and other persons substantially involved in a common question of fact or law whose presence is required if complete relief is to be accorded in arbitration. No person or entity other than the Owner, Contractor or a separate contractor as described in Article 6 shall be included as an original third party or additional third party to an arbitration whose interest or responsibility is insubstantial. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a Claim not described therein or with a person or entity not named or described therein. The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 4.6.5 Claims and Timely Assertion of Claims. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 4.6.6 Judgment on Final Award. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect will promptly reply to the Contractor in writing stating whether or not the Owner or the Architect, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Architect to reply promptly shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not change a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitute.

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§ 5.3 SUBCONTRACTUAL RELATIONS

§ 5.3.1 By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement which may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner provided that:

.1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements which the Owner accepts by notifying the Subcontractor and Contractor in writing; and

.2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Section 4.3.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights which apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

§ 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

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§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a separate contractor because of delays, improperly timed activities or defective construction of the Contractor. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of delays, improperly timed activities, damage to the Work or defective construction of a separate contractor.

§ 6.2.4 The Contractor shall promptly remedy damage wrongfully caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 OWNER'S RIGHT TO CLEAN UP

§ 6.3.1 If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect, stating their agreement upon all of the following:

.1 change in the Work;
.2 the amount of the adjustment, if any, in the Contract Sum; and
.3 the extent of the adjustment, if any, in the Contract Time.

§ 7.2.2 Methods used in determining adjustments to the Contract Sum may include those listed in Section 7.3.3.

§ 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

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§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

.1 mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;

.2 unit prices stated in the Contract Documents or subsequently agreed upon;

.3 cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or

.4 as provided in Section 7.3.6.

§ 7.3.4 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.5 A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.6 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall be determined by the Architect on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.6 shall be limited to the following:

.1 costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;

.2 costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;

.3 rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;

.4 costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and

.5 additional costs of supervision and field office personnel directly attributable to the change.

§ 7.3.7 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.8 Pending final determination of the total cost of a Construction Change Directive to the Owner, amounts not in dispute for such changes in the Work shall be included in Applications for Payment accompanied by a Change Order indicating the parties' agreement with part or all of such costs. For any portion of such cost that remains in dispute, the Architect will make an interim determination for purposes of monthly certification for payment for those costs. That determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a claim in accordance with Article 4.

§ 7.3.9 When the Owner and Contractor agree with the determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order.

§ 7.4 MINOR CHANGES IN THE WORK

§ 7.4.1 The Architect will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

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ARTICLE 8 TIME

§ 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance. Unless the date of commencement is established by the Contract Documents or a notice to proceed given by the Owner, the Contractor shall notify the Owner in writing not less than five days or other agreed period before commencing the Work to permit the timely filing of mortgages, mechanic's liens and other security interests.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control, or by delay authorized by the Owner pending mediation and arbitration, or by other causes which the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Section 4.3.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 CONTRACT SUM

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.2 SCHEDULE OF VALUES

§ 9.2.1 Before the first Application for Payment, the Contractor shall submit to the Architect a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment for operations completed in accordance with the schedule of values. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to

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payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and reflecting retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.8, such applications may include requests for payment on account of changes in the Work which have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Such applications may not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

§ 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that the Work has progressed to the point indicated and that, to the best of the Architect's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of:

.1 defective Work not remedied;

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.2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;

.3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;

.4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;

.5 damage to the Owner or another contractor;

.6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or

.7 persistent failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of such Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor except as may otherwise be required by law.

§ 9.6.5 Payment to material suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.7 FAILURE OF PAYMENT

§ 9.7.1 If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by arbitration, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

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§ 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.4.1.5 and authorized by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the

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final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from:

- **.1** liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- **.2** failure of the Work to comply with the requirements of the Contract Documents; or
- **.3** terms of special warranties required by the Contract Documents.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

§ 10.1.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to:

- **.1** employees on the Work and other persons who may be affected thereby;
- **.2** the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- **.3** other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

§ 10.2.2 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

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§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not load or permit any part of the construction or site to be loaded so as to endanger its safety.

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 The Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to verify that it has been rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. The Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up, which adjustments shall be accomplished as provided in Article 7.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) and provided that such damage, loss or expense is not due to the sole negligence of a party seeking indemnity.

§ 10.4 The Owner shall not be responsible under Section 10.3 for materials and substances brought to the site by the Contractor unless such materials or substances were required by the Contract Documents.

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§ 10.5 If, without negligence on the part of the Contractor, the Contractor is held liable for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

§ 10.6 EMERGENCIES

§ 10.6.1 In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Section 4.3 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- **.1** claims under workers' compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed;
- **.2** claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- **.3** claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- **.4** claims for damages insured by usual personal injury liability coverage;
- **.5** claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- **.6** claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- **.7** claims for bodily injury or property damage arising out of completed operations; and
- **.8** claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment as required by Section 9.10.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness in accordance with the Contractor's information and belief.

§ 11.2 OWNER'S LIABILITY INSURANCE

§ 11.2.1 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

§ 11.3 PROJECT MANAGEMENT PROTECTIVE LIABILITY INSURANCE

§ 11.3.1 Optionally, the Owner may require the Contractor to purchase and maintain Project Management Protective Liability insurance from the Contractor's usual sources as primary coverage for the Owner's, Contractor's and Architect's vicarious liability for construction operations under the Contract. Unless otherwise required by the Contract Documents, the Owner shall reimburse the Contractor by increasing the Contract Sum to pay the cost of purchasing and maintaining such optional insurance coverage, and the Contractor shall not be responsible for purchasing any other liability insurance on behalf of the Owner. The minimum limits of liability purchased with such coverage shall be equal to the aggregate of the limits required for Contractor's Liability Insurance under Sections 11.1.1.2 through 11.1.1.5.

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§ 11.3.2 To the extent damages are covered by Project Management Protective Liability insurance, the Owner, Contractor and Architect waive all rights against each other for damages, except such rights as they may have to the proceeds of such insurance. The policy shall provide for such waivers of subrogation by endorsement or otherwise.

§ 11.3.3 The Owner shall not require the Contractor to include the Owner, Architect or other persons or entities as additional insureds on the Contractor's Liability Insurance coverage under Section 11.1.

§ 11.4 PROPERTY INSURANCE

§ 11.4.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.4 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.4.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

§ 11.4.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance which will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.4.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

§ 11.4.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

§ 11.4.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.4.2 Boiler and Machinery Insurance. The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

§ 11.4.3 Loss of Use Insurance. The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

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§ 11.4.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

§ 11.4.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.4.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

§ 11.4.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.4. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

§ 11.4.7 Waivers of Subrogation. The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.4 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 11.4.8 A loss insured under Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.4.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.4.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or in accordance with an arbitration award in which case the procedure shall be as provided in Section 4.6. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.4.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved as provided in Sections 4.5 and 4.6. The Owner as fiduciary shall, in the case of arbitration, make settlement with insurers in accordance with directions of the arbitrators. If distribution of insurance proceeds by arbitration is required, the arbitrators will direct such distribution.

§ 11.5 PERFORMANCE BOND AND PAYMENT BOND

§ 11.5.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

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§ 11.5.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall permit a copy to be made.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered which the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

§ 12.2.1.1 The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work which is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract

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Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 ACCEPTANCE OF NONCONFORMING WORK

§ 12.3.1 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 GOVERNING LAW

§ 13.1.1 The Contract shall be governed by the law of the place where the Project is located.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to an institutional lender providing construction financing for the Project. In such event, the lender shall assume the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

§ 13.3 WRITTEN NOTICE

§ 13.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections or approvals which do not become requirements until after bids are received or negotiations concluded.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

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§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.6 INTEREST

§ 13.6.1 Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

§ 13.7 COMMENCEMENT OF STATUTORY LIMITATION PERIOD

§ 13.7.1 As between the Owner and Contractor:

- **.1** Before Substantial Completion. As to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion;
- **.2** Between Substantial Completion and Final Certificate for Payment. As to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of issuance of the final Certificate for Payment; and
- **.3** After Final Certificate for Payment. As to acts or failures to act occurring after the relevant date of issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act or failure to act by the Contractor pursuant to any Warranty provided under Section 3.5, the date of any correction of the Work or failure to correct the Work by the Contractor under Section 12.2, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or Owner, whichever occurs last.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- **.1** issuance of an order of a court or other public authority having jurisdiction which requires all Work to be stopped;
- **.2** an act of government, such as a declaration of national emergency which requires all Work to be stopped;
- **.3** because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- **.4** the Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work

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by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead, profit and damages.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has persistently failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 TERMINATION BY THE OWNER FOR CAUSE

§ 14.2.1 The Owner may terminate the Contract if the Contractor:

- **.1** persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- **.2** fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- **.3** persistently disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction; or
- **.4** otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification by the Architect that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- **.1** take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- **.2** accept assignment of subcontracts pursuant to Section 5.4; and
- **.3** finish the Work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent:

- **.1** that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- **.2** that an equitable adjustment is made or denied under another provision of the Contract.

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§ 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall:

.1 cease operations as directed by the Owner in the notice;

.2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and

.3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

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SECTION 00350 – FORM OF PROPOSAL GENERAL CONTRACT

BIDDER: _____ DATE: _____

The undersigned, as Bidder, declares that the only person(s) interested in this Proposal as principal(s) is (are) those named herein and that no other person(s) other than herein mentioned has any interest in this Proposal or in the contract to be entered into; that this Proposal is made without connection with any other person, company or parties making a bid; and that it is all respects fair and in good faith without collusion or fraud. The bidder further declares that he has examined the site of the work and the Contract Documents relative thereto, and has read all special provisions furnished prior to the opening of Bids; that he has satisfied himself relative to the work to be performed.

The bidder proposes and agrees if this Proposal is accepted to contract with the Owner in the form of contract specified, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor necessary to complete the construction of the contract in complete accordance with the plans, specifications and other contract documents, to the full and entire satisfaction of the Owner, with a definite understanding that no money will be allowed for extra work except as set forth in the General Condition and Contract Documents, for the sum of:

CFPTA CONTRACT #17-11:

_____ Dollars ($_____)

Neuwirth Building …….…….. ($_____)

Thomas Building …….…….... ($_____)

Total Bid …….. ($_____)

PERFORMANCE AND PAYMENT BOND:

(ADD) _____ Dollars ($_____)

Received and Used in Computing Bids:

	Date Rec'd.	Initial
Addendum No. ___	___/___/___	____
Addendum No. ___	___/___/___	____
Addendum No. ___	___/___/___	____

UNIT PRICES:

(Unit prices are gross, inclusive of all adjustments, overhead and profit. Ref: Section 01026)
Unit prices quoted and accepted shall apply throughput the life of the contract, except as otherwise specifically noted. Unit prices shall be applied, as appropriate, to compute the total value of changes in the scope of the work all in accordance with the contract documents.

Unit Price No.1 Asbestos	cu.ft.	unit price ($_____)
Unit Price No.2 Lead Paint	sq.ft.	unit price ($_____)
Unit Price No. 3 Mold	sq.ft.	unit price ($_____)

The bidder further proposes and agrees hereby to commence work under this contract on a date to be specified in a written order from CFPTA and shall fully complete all work there under by **Forty Five** (45) calendar days from Notice to Proceed issuance.

Respectfully submitted this 18th day of April 2017.

_____
(Name of Firm or Corporation Making Bid)

Witness: _____ By: _____

_____ _____
(Proprietorship or partnership) (Owner, Partner, or Corp. President)

Address: _____

_____

License No.: _____

Federal ID No.: _____

(Corporate Seal)

SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS:**

1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. **WORK COVERED BY CONTRACT DOCUMENTS:**

1.2.1. The Project consists of existing construction of approximately 4,588 sf. one (1) story masonry/wood framed structure.

1.2.1.1. Project Location: 520 N. 3rd Street, Wilmington North Carolina

1.2.1.2. Owner:

Cape Fear Public Transit Authority
505 Cando Street
Wilmington, North Carolina 28405

1.2.2. Contract Drawings and specification dated 23 March 2017 prepared for the project by H R Associates PA.

1.2.3. The Work consists of a one (1) story (Type VB) approximately 4,588 square foot demolition/abatement of existing structure.

1.2.3.1. The Work includes miscellaneous interior/exterior demolition including asbestos, lead paint, and mold abatement.

1.2.4. The Work will be performed under a single contract for both the Neuwirth and Thomas buildings.

1.3. **CONTRACTOR USE OF PREMISES:**

1.3.1. General: During the construction period the Contractor shall have full use of the premises for construction operations, including use of the site.

1.3.2. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01010

SECTION 01026 - UNIT PRICES

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS:**

1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. **SUMMARY:**

1.2.1. This Section includes administrative and procedural requirements for unit prices.

1.2.2. Related Sections: The following Sections contain requirements that relate to this Section:

1.2.2.1. Division 1 Section "Modification Procedures" for procedures for submitting and handling Change Orders.

1.2.2.2. Division 1 Section "Quality Control Services" for general inspection requirements.

1.2.2.3. Division 2 Section "Asbestos Abatement" for procedures, materials and service requirements.

1.2.2.4 Division 2 Section “Lead Abatement” for procedures, materials and service requirements.

1.2.2.5 Division 2 Section “Mold Abatement” for procedures, materials and service requirements.

1.3. **DEFINITIONS:**

1.3.1. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if the estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4. **PROCEDURES:**

1.4.1. Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, profit, and applicable taxes.

1.4.2. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

1.4.3. The Owner reserves the right to reject the Contractor's measurement of work-in-place that involves use of established unit prices, and to have this work measured, at the Owner's expense, by an independent surveyor acceptable to the Contractor.

1.4.4. Schedule: A "Unit Price Schedule" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1. **UNIT PRICE SCHEDULE:**

3.1.1. Unit Price No. 1 - Asbestos:

3.1.1.1 Description: Asbestos Abatement in accordance with Section 028200 "Asbestos Abatement."

3.1.1.2 Unit of Measurement: Cubic foot of material removed.

3.1.2. Unit Price No. 2: Lead Paint:

3.1.2.1 Description: Lead Paint Abatement in accordance with Section 028300 "Lead Abatement".

3.1.2.2 Unit of Measurement: Square foot of material removed.

3.1.3. Unit Price No. 3: Mold:

3.1.3.1 Description: Mold Abatement in accordance with Section 028500 "Mold Abatement".

3.1.3.2 Unit of Measurement: Square foot of material removed.

END OF SECTION 01026

SECTION 01027 - APPLICATIONS FOR PAYMENT:

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS:**

1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. **SUMMARY:**

1.2.1. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.

1.2.2. Related Sections: The following Sections contain requirements that relate to this Section.

1.2.2.1. Schedules: The Contractor's Construction Schedule and Submittal Schedule are specified in Division 1 Section "Submittals."

1.3. **SCHEDULE OF VALUES:**

1.3.1. Coordination: Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.

1.3.1.1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:

1.3.1.1.1. Contractor's Updated Construction Schedule per application.

1.3.1.1.2. Application for Payment forms, including Continuation Sheets.

1.3.1.2. Submit the Schedule of Values to the Architect at the earliest possible date but no later than 7 days before the date scheduled for submittal of the initial Applications for Payment.

1.3.2. Format and Content: Use the Project Manual table of contents as a guide to establish the format for the Schedule of Values. Provide at least one line item for each Specification Section.

1.3.2.1. Identification: Include the following Project identification on the Schedule of Values:

1.3.2.1.1. Project name and location.

1.3.2.1.2. Name of the Architect.

1.3.2.1.3. Project number.

1.3.2.1.4. Contractor's name and address.

1.3.2.1.5. Date of submittal.

1.3.2.2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:

1.3.2.2.1. Related Specification Section or Division.

1.3.2.2.2. Description of Work.

1.3.2.2.3. Name of subcontractor.

1.3.2.2.4. Name of manufacturer or fabricator.

1.3.2.2.5. Name of supplier.

1.3.2.2.6. Change Orders (numbers) that affect value.

1.3.2.2.7. Dollar value. Percentage of Contract Sum to nearest one- hundredth percent, adjusted to total 100 percent.

1.3.2.3. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Break principal subcontract amounts down into several line items.

1.3.2.4. Round amounts to nearest whole dollar; the total shall equal the Contract Sum.

1.3.2.5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed.

1.3.2.5.1. Differentiate between items stored on-site and items stored off-site. Include requirements for insurance and bonded warehousing, if required.

1.3.2.6. Provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

1.3.2.7. Margins of Cost: Show line items for indirect costs and margins on actual costs only when such items are listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete. Include the total cost and proportionate share of general overhead and profit margin for each item.

1.3.2.7.1. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at the Contractor's option.

1.3.2.8. Schedule Updating: Update and resubmit the Schedule of Values prior to the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract sum.

1.4. **APPLICATIONS FOR PAYMENT:**

1.4.1. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid for by the Owner.

1.4.1.1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.

1.4.2. Payment-Application Times: The date for each progress payment is the 15th day of each month. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 15 days prior to the date for each progress payment.

1.4.3. Payment-Application Forms: Use AIA Document G702 and Continuation Sheets G703 as the form for Applications for Payment.

1.4.4. Application Preparation: Complete every entry on the form. Include notarization and execution by a person authorized to sign legal documents on behalf of the Contractor. The Architect will return incomplete applications without action.

1.4.4.1. Entries shall match data on the Schedule of Values and the Contractor's Construction Schedule. Use updated schedules if revisions were made.

1.4.4.2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.

1.4.5. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to the Architect by a method ensuring receipt within 24 hours. One copy shall be complete, including waivers of lien and similar attachments, when required.

1.4.5.1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to the Architect.

1.4.6. Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics liens from subcontractors, sub-subcontractors and suppliers for the construction period covered by the previous application.

1.4.6.1. Submit partial waivers on each item for the amount requested, prior to deduction for retainage, on each item.

1.4.6.2. When an application shows completion of an item, submit final or full waivers.

1.4.6.3. The Owner reserves the right to designate which entities involved in the Work must submit waivers.

1.4.7. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment, include the following:

1.4.7.1. Schedule of Values.

1.4.7.2. Contractor's Construction Schedule (preliminary if not final).

1.4.7.3. Submittal Schedule (preliminary if not final).

1.4.7.4. Copies of building permits.

1.4.7.5. Copies of authorizations and licenses from governing authorities for performance of the Work.

1.4.7.6. Initial progress report.

1.4.7.7. Report of preconstruction meeting.

1.4.7.8. Certificates of insurance and insurance policies.

1.4.8. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment.

1.4.8.1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

1.4.8.2. Administrative actions and submittals that shall precede or coincide with this application include:

1.4.8.2.1. Occupancy permits and similar approvals.

1.4.8.2.2. Final cleaning.

1.4.8.2.3. Application for reduction of retainage and consent of surety.

1.4.8.2.4. Advice on shifting insurance coverages.

1.4.8.2.5. List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion.

1.4.9. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:

1.4.9.1. Completion of Project closeout requirements.

1.4.9.2. Completion of items specified for completion after Substantial Completion.

1.4.9.3. Ensure that unsettled claims will be settled.

1.4.9.4. Ensure that incomplete Work is not accepted and will be completed without undue delay.

1.4.9.5. Transmittal of required Project construction records to the Owner.

1.4.9.6. Proof that taxes, fees, and similar obligations were paid.

1.4.9.7. Removal of temporary facilities and services.

1.4.9.8. Removal of surplus materials, rubbish, and similar elements.

1.4.9.9. Change of door locks to Owner's access.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01027

SECTION 01035 - MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS:**

1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. **SUMMARY:**

1.2.1. This Section specifies administrative and procedural requirements for handling and processing contract modifications.

1.2.2. Related Sections: The following Sections contain requirements that relate to this Section:

1.2.2.1. Division 1 Section "Unit Prices" for administrative requirements governing use of unit prices.

1.2.2.2. Division 1 Section "Submittals" for requirements for the Contractor's Construction Schedule.

1.2.2.3. Division 1 Section "Applications for Payment" for administrative procedures governing Applications for Payment.

1.2.2.4. Division 1 Section "Product Substitutions" for administrative procedures for handling requests for substitutions made after award of the Contract.

1.3. **MINOR CHANGES IN THE WORK:**

1.3.1. The Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or Contract Time, on AIA Form G710, Architect's Supplemental Instructions.

1.4. **CHANGE ORDER PROPOSAL REQUESTS:**

1.4.1. Owner-Initiated Proposal Requests: The Architect will issue a detailed description of proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1.4.1.1. Proposal requests issued by the Architect are for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.

1.4.1.2. Within 20 days of receipt of a proposal request, submit an estimate of cost necessary to execute the change to the Architect for the Owner's review.

1.4.1.2.1. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.

1.4.1.2.2. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

1.4.1.2.3. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.

1.4.2. Contractor-Initiated Proposals: When latent or unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Architect.

1.4.2.1. Include a statement outlining the reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.

1.4.2.2. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.

1.4.2.3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

1.4.2.4. Comply with requirements in Section "Product Substitutions" if the proposed change requires substitution of one product or system for a product or system specified.

1.4.3. Proposal Request Form: Use AIA Document G709 for Change Order Proposal Requests.

1.5. **CONSTRUCTION CHANGE DIRECTIVE:**

1.5.1. Construction Change Directive: When the Owner and the Contractor disagree on the terms of a Proposal Request, the Architect may issue a Construction Change Directive on AIA Form G714. The Construction Change Directive instructs the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1.5.1.1. The Construction Change Directive contains a complete description of the change in the Work. It also designates the method to be followed to determine change in the Contract Sum or Contract Time.

1.5.2. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1.5.2.1. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

1.6. **CHANGE ORDER PROCEDURES:**

1.6.1. Upon the Owner's approval of a Proposal Request, the Architect will issue a Change Order for signatures of the Owner and the Contractor on AIA Form G701.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01035

SECTION 01040 - COORDINATION

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS:**

1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. **SUMMARY:**

1.2.1. This Section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:

1.2.1.1. General project coordination procedures.

1.2.1.2. Administrative and supervisory personnel.

1.2.1.3. Cleaning and protection.

1.2.2. Related Sections: The following Sections contain requirements that relate to this Section:

1.2.2.2. Division 1 Section "Project Meetings" for progress meetings, coordination meetings, and pre-installation conferences.

1.2.2.3. Division 1 Section "Contract Closeout" for coordinating contract closeout.

1.3. **COORDINATION:**

1.3.1. Coordinate construction operations included in various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections that depend on each other for proper installation, connection, and operation.

1.3.1.1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.

1.3.1.2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.

1.3.1.3. Make provisions to accommodate items scheduled for later installation.

1.3.2. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

1.3.2.1. Prepare similar memoranda for the Owner and separate contractors where coordination of their work is required.

1.3.3. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1.3.3.1. Preparation of schedules.

1.3.3.2. Installation and removal of temporary facilities.

1.3.3.3. Progress meetings.

1.3.3.4. Project closeout activities.

1.3.3.5. Salvage materials and equipment involved in performance of, but not actually incorporated in, the Work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1. **GENERAL COORDINATION PROVISIONS:**

3.1.1. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

3.1.2. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

3.2. **CLEANING AND PROTECTION:**

3.2.1. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at Substantial Completion.

3.2.2. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effects.

3.2.3. Limiting Exposures: Supervise construction operations to assure that no part of the construction; completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

3.2.3.1. Excessive static or dynamic loading.

3.2.3.2. Excessive internal or external pressures.

3.2.3.3. Excessively high or low temperatures.

3.2.3.4. Thermal shock.

3.2.3.5. Excessively high or low humidity.

3.2.3.6. Air contamination or pollution.

3.2.3.7. Water or ice.

3.2.3.8. Solvents.

3.2.3.9. Chemicals.

3.2.3.10. Puncture.

3.2.3.11. Abrasion.

3.2.3.12. Heavy traffic.

3.2.3.13. Soiling, staining, and corrosion.

3.2.3.14. Rodent and insect infestation.

3.2.3.15. Combustion.

3.2.3.16. Electrical current.

3.2.3.17. Unusual wear or other misuse.

3.2.3.18. Contact between incompatible materials.

3.2.3.19. Destructive testing.

3.2.3.20. Excessive weathering.

3.2.3.21. Unprotected storage.

3.2.3.22. Improper shipping or handling.

3.2.3.23. Theft.

3.2.3.24. Vandalism.

END OF SECTION 01040

SECTION 01095 - REFERENCE STANDARDS AND DEFINITIONS

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS:**

1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. **DEFINITIONS:**

1.2.1. General: Basic contract definitions are included in the Conditions of the Contract.

1.2.2. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on the Drawings, or other paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the reader locate the reference. Location is not limited.

1.2.3. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the Architect, requested by the Architect, and similar phrases.

1.2.4. "Approved": The term "approved," when used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.

1.2.5. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

1.2.6. "Furnish": The term "furnish" means supply and deliver to the Project Site, ready for unloading, unpacking, assembly, installation, and similar operations.

1.2.7. "Install": The term "install" describes operations at the Project Site including the actual unloading; unpacking, assembly, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

1.2.8. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.

1.2.9. "Installer": An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.

1.2.9.1. The term "experienced," when used with the term "installer," means having a minimum of 5 previous projects similar in size and scope to this Project, being familiar with the special requirements indicated, and having complied with requirements of authorities having jurisdiction.

1.2.9.2. Trades: Using terms such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.

1.2.9.3. Assigning Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in those operations. The specialists must be engaged for those activities, and their assignments are requirements over which the Contractor has no option. However, the ultimate responsibility for fulfilling contract requirements remains with the Contractor.

1.2.9.3.1. This requirement shall not be interpreted to conflict with enforcing building codes and similar regulations governing the Work. It is also not intended to interfere with local trade-union jurisdictional settlements and similar conventions.

1.2.10. "Project Site" is the space available to the Contractor for performing construction activities, either exclusively or in conjunction, with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.

1.2.11. "Testing Agencies": A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.3. **SPECIFICATION FORMAT AND CONTENT EXPLANATION:**

1.3.1. Specification Format: These Specifications are organized into Divisions and Sections based on CSI's 16-Division.

1.3.2. Specification Content: This Specification uses certain conventions regarding the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:

1.3.2.1. Abbreviated Language: Language used in Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated as the sense requires. Singular words will be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.

1.3.2.2. Streamlined Language: The Specifications generally use the imperative mood and streamlined language. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.

1.3.2.2.1. The words "shall be" are implied where a colon (:) is used within a sentence or phrase.

1.4. **INDUSTRY STANDARDS:**

1.4.1. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

1.4.2. Publication Dates: Comply with the standards in effect as of the date of the Contract Documents.

1.4.3. Conflicting Requirements: Where compliance with 2 or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer to the Architect before proceeding; for a decision on requirements that are different but apparently equal, and where it is uncertain which requirement is the most stringent.

1.4.3.1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum acceptable. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding.

1.4.4. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1.4.4.1. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source.

1.5. **SUBMITTALS:**

1.5.1. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END SECTION 01095

SECTION 01095 - REFERENCE STANDARDS AND DEFINITIONS

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS:**

1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. **DEFINITIONS:**

1.2.1. General: Basic contract definitions are included in the Conditions of the Contract.

1.2.2. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on the Drawings, or other paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the reader locate the reference. Location is not limited.

1.2.3. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the Architect, requested by the Architect, and similar phrases.

1.2.4. "Approved": The term "approved," when used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.

1.2.5. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

1.2.6. "Furnish": The term "furnish" means supply and deliver to the Project Site, ready for unloading, unpacking, assembly, installation, and similar operations.

1.2.7. "Install": The term "install" describes operations at the Project Site including the actual unloading; unpacking, assembly, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

1.2.8. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.

1.2.9. "Installer": An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.

1.2.9.1. The term "experienced," when used with the term "installer," means having a minimum of 5 previous projects similar in size and scope to this Project, being familiar with the special requirements indicated, and having complied with requirements of authorities having jurisdiction.

1.2.9.2. Trades: Using terms such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.

1.2.9.3. Assigning Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in those operations. The specialists must be engaged for those activities, and their assignments are requirements over which the Contractor has no option. However, the ultimate responsibility for fulfilling contract requirements remains with the Contractor.

1.2.9.3.1. This requirement shall not be interpreted to conflict with enforcing building codes and similar regulations governing the Work. It is also not intended to interfere with local trade-union jurisdictional settlements and similar conventions.

1.2.10. "Project Site" is the space available to the Contractor for performing construction activities, either exclusively or in conjunction, with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.

1.2.11. "Testing Agencies": A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.3. **SPECIFICATION FORMAT AND CONTENT EXPLANATION:**

1.3.1. Specification Format: These Specifications are organized into Divisions and Sections based on CSI's 16-Division.

1.3.2. Specification Content: This Specification uses certain conventions regarding the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:

1.3.2.1. Abbreviated Language: Language used in Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated as the sense requires. Singular words will be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.

1.3.2.2. Streamlined Language: The Specifications generally use the imperative mood and streamlined language. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.

1.3.2.2.1. The words "shall be" are implied where a colon (:) is used within a sentence or phrase.

1.4. **INDUSTRY STANDARDS:**

1.4.1. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

1.4.2. Publication Dates: Comply with the standards in effect as of the date of the Contract Documents.

1.4.3. Conflicting Requirements: Where compliance with 2 or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer to the Architect before proceeding; for a decision on requirements that are different but apparently equal, and where it is uncertain which requirement is the most stringent.

1.4.3.1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum acceptable. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding.

1.4.4. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1.4.4.1. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source.

1.5. **SUBMITTALS:**

1.5.1. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END SECTION 01095

SECTION 01102 - APPLICABLE DOCUMENTS

PART 1 - GENERAL

1.1 Documents shall be included in the Contract as described herein.

1.2 Proposals shall include provisions of the Documents listed.

PART 2 - DESIGNATION

2.1 Drawings shall consist of the sheets listed in the Index of Drawings on drawing sheet.

2.2 Other Documents: shall consist of the following:

2.2.1 General Documents: All Contracts shall include the Conditions and the General Requirements (Division 0 and Division 1), Proposal Form.

2.2.2 In addition to the General Documents, the Contracts shall include the Specifications listed below:

2.2.2.1 General Construction: Division 0 thru Division 2.

2.2.2.2 Plumbing: Not Applicable.

2.2.2.3 Mechanical: Not Applicable.

2.2.2.4 Electrical: Not Applicable.

2.2.2.5 Divisions listed above shall include all sections listed in the Table of Contents.

END SECTION 01102

SECTION 01200 - PROJECT MEETINGS

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS:**

1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. **SUMMARY:**

1.2.1. This Section specifies administrative and procedural requirements for project meetings, including, but not limited to, the following:

1.2.1.1. Pre-construction conference.

1.2.1.2. Progress meetings.

1.2.2. Related Sections: The following Sections contain requirements that relate to this Section:

1.2.2.1. Division 1 Section "Coordination" for procedures for coordinating project meetings with other construction activities.

1.2.2.2. Division 1 Section "Submittals" for submitting the Contractor's Construction Schedule.

1.3. **PRECONSTRUCTION CONFERENCE:**

1.3.1. Schedule a preconstruction conference before starting construction, at a time convenient to the Owner and the Architect, but no later than 15 days after execution of the Agreement. Hold the conference at the Project Site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.

1.3.2. Attendees: Authorized representatives of the Owner, Architect, and their consultants; the Contractor and its superintendent; major subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.

1.3.3. Agenda: Discuss items of significance that could affect progress, including the following:

1.3.3.1. Tentative construction schedule.

1.3.3.2. Critical work sequencing.

1.3.3.3. Designation of responsible personnel.

1.3.3.4. Procedures for processing field decisions and Change Orders.

1.3.3.5. Procedures for processing Applications for Payment.

1.3.3.6. Distribution of Contract Documents.

1.3.3.7. Submittal of Shop Drawings, Product Data, and Samples.

1.3.3.8. Preparation of record documents.

1.3.3.9. Use of the premises.

1.3.3.10. Parking availability.

1.3.3.11. Office, work, and storage areas.

1.3.3.12. Equipment deliveries and priorities.

1.3.3.13. Safety procedures.

1.3.3.14. First aid.

1.3.3.15. Security.

1.3.3.16. Housekeeping.

1.3.3.17. Working hours.

1.4. **PROGRESS MEETINGS:**

1.4.1. Conduct progress meetings at the project site at two (2) week intervals. Notify the Owner and the Architect of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request.

1.4.2. Attendees: In addition to representatives of the Owner and the Architect, each subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.

1.4.3. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the status of the Project.

1.4.3.1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to insure that current and subsequent activities will be completed within the Contract Time.

1.4.3.2. Review the present and future needs of each entity present, including the following:

1.4.3.2.1. Interface requirements.

1.4.3.2.2. Time.

1.4.3.2.3. Sequences.

1.4.3.2.4. Access.

1.4.3.2.5. Site utilization.

1.4.3.2.6. Temporary facilities and services.

1.4.3.2.7 Hours of work.

1.4.3.2.8. Hazards and risks.

1.4.3.2.9. Housekeeping.

1.4.3.2.10. Quality and work standards.

1.4.3.2.11. Change Orders.

1.4.3.2.12. Documentation of information for payment requests.

1.4.4. Reporting: No later than 3 days after each meeting, distribute minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

1.4.4.1. Schedule Updating: Revise the Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01200

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS:**

1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. **SUMMARY:**

1.2.1. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including the following:

1.2.1.1. Contractor's construction schedule.

1.2.1.2. Daily construction reports.

1.2.1.3. Quality assurance submittals.

1.2.2. Administrative Submittals: Refer to other Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:

1.2.2.1. Permits.

1.2.2.2. Applications for Payment.

1.2.2.3. Performance and payment bonds (if accepted).

1.2.2.4. Insurance certificates.

1.2.2.5. List of subcontractors.

1.2.3. Related Sections: The following Sections contain requirements that relate to this Section:

1.2.3.1. Division 1 Section "Coordination" specifies requirements governing preparation and submittal of required Coordination Drawings.

1.2.3.2. Division 1 Section "Project Meetings" specifies requirements for submittal and distribution of meeting and conference minutes.

1.2.3.3. Division 1 Section "Quality Control" specifies requirements for submittal of inspection and test reports.

1.2.3.4. Division 1 Section "Contract Closeout" specifies requirements for submittal of Project Record Documents and warranties at project closeout.

1.3. **DEFINITIONS:**

1.3.1. Coordination Drawings show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or to function as intended.

1.3.1.1. Preparation of Coordination Drawings is specified in Division 1 Section "Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.

1.3.2. Field samples are full-size physical examples erected on- site to illustrate finishes, coatings, or finish materials. Field samples are used to establish the standard by which the Work will be judged.

1.3.3. Mockups are full-size assemblies for review of construction, coordination, testing, or operation; they are not Samples.

1.4. **CONTRACTOR'S CONSTRUCTION SCHEDULE:**

1.4.1. Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart-type, contractor's construction schedule. Submit within 30 days after the date established for "Commencement of the Work."

1.4.1.1. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values."

1.4.1.2. Within each time bar, indicate estimated completion percentage in 10 percent increments. As Work progresses, place a contrasting mark in each bar to indicate Actual Completion.

1.4.1.3. Prepare the schedule on a sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for the entire construction period.

1.4.1.4. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically the sequences necessary for completion of related portions of the Work.

1.4.1.5. Coordinate the Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittal Schedule, progress reports, payment requests, and other schedules.

1.4.1.6. Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the Architect's procedures necessary for certification of Substantial Completion.

1.4.2. Phasing: On the schedule, show how requirements for phased completion to permit Work by separate Contractors and partial occupancy by the Owner affect the sequence of Work.

1.4.3. Work Stages: Indicate important stages of construction for each major portion of the Work, including submittal review, testing, and installation.

1.4.4. Cost Correlation: At the head of the schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of Work performed as of the dates used for preparation of payment requests.

1.4.5. Distribution: Following response to the initial submittal, print and distribute copies to the Architect, Owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.

1.4.5.1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

1.4.6. Schedule Updating: Revise the schedule after each meeting, event, or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

1.5. **DAILY CONSTRUCTION REPORTS:**

1.5.1. Prepare a daily construction report recording the following information concerning events at the site, and submit duplicate copies to the Architect at weekly intervals:

1.5.1.1. List of subcontractors at the site.

1.5.1.2. Approximate count of personnel at the site.

1.5.1.3. High and low temperatures, general weather conditions.

1.5.1.4. Accidents and unusual events.

1.5.1.5. Meetings and significant decisions.

1.5.1.6. Stoppages, delays, shortages, and losses.

1.5.1.7. Meter readings and similar recordings.

1.5.1.8. Emergency procedures.

1.5.1.9. Orders and requests of governing authorities.

1.5.1.10. Change Orders received, implemented.

1.5.1.11. Services connected, disconnected.

1.5.1.12. Equipment or system tests and startups.

1.5.1.13. Partial Completions, occupancies.

1.5.1.14. Substantial Completions authorized.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01300

SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS:**

1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. **SUMMARY:**

1.2.1. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1.2.1.1. General project coordination procedures.

1.2.1.2. Administrative and supervisory personnel (based on Owner/Contractor Agreement).

1.2.1.3. Project meetings.

1.2.1.4. Requests for Interpretation (RFIs).

1.2.2. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.

1.2.3. Related Sections include the following:

1.2.3.1. Division 1 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.

1.2.3.2. Division 1 Section "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.2.3.3. Division 1 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.3. **DEFINITIONS:**

1.3.1. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.4. **COORDINATION:**

1.4.1. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1.4.1.1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.

1.4.1.2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.

1.4.1.3. Make adequate provisions to accommodate items scheduled for later installation.

1.4.1.4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.

1.4.2. If necessary, Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1.4.2.1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

1.4.3. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1.4.3.1. Preparation of Contractor's Construction Schedule.

1.4.3.2. Preparation of the Schedule of Values.

1.4.3.3. Installation and removal of temporary facilities and controls.

1.4.3.4. Progress meetings.

1.4.3.5. Project closeout activities.

1.4.3.6. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.5. **ADMINISTRATIVE AND SUPERVISORY PERSONNEL:**

1.5.1. General: In addition to part-time project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.

1.5.1.1. Include special personnel required for coordination of operations with other contractors.

1.6. **PROJECT MEETINGS:**

1.6.1. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.

1.6.1.1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.

1.6.1.2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.

1.6.1.3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within two (2) days of the meeting.

1.6.2. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than five (5) days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.

1.6.2.1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

1.6.2.2. Agenda: Discuss items of significance that could affect progress, including the following:

1.6.2.2.1. Tentative construction schedule.

1.6.2.2.2. Critical work sequencing and long-lead items.

1.6.2.2.3. Designation of key personnel and their duties.

1.6.2.2.4. Procedures for processing field decisions and Change Orders.

1.6.2.2.5. Procedures for RFIs.

1.6.2.2.6. Procedures for processing Applications for Payment.

1.6.2.2.7. Use of the premises and existing building.

1.6.2.2.8. Work restrictions.

1.6.2.2.9. Responsibility for temporary facilities and controls.

1.6.2.2.10. Construction waste management and recycling.

1.6.2.2.11. Parking availability.

1.6.2.2.12. Office, work, and storage areas.

1.6.2.2.13. Equipment deliveries and priorities.

1.6.2.2.14. First aid.

1.6.2.2.15. Security.

1.6.2.2.16. Progress cleaning.

1.6.2.2.17. Working hours.

1.6.2.3. Minutes: Record and distribute meeting minutes.

1.6.3. Progress Meetings: Conduct progress meetings at biweekly intervals. Coordinate dates of meetings with preparation of payment requests.

1.6.3.1. Attendees: In addition to representatives of Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

1.6.3.2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.

1.7.3.2.1. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

1.6.3.2.1.1. Review schedule for next period.

1.6.3.2.2. Review present and future needs of each entity present, including the following:

1.6.3.2.2.1. Interface requirements.

1.6.3.2.2.2. Sequence of operations.

1.6.3.2.2.3. Status of submittals.

1.6.3.2.2.4. Access.

1.6.3.2.2.5. Site utilization.

1.6.3.2.2.6. Temporary facilities and controls.

1.6.3.2.2.7. Work hours.

1.6.3.2.2.8. Hazards and risks.

1.6.3.2.2.9. Progress cleaning.

1.6.3.2.2.10. Quality and work standards.

1.6.3.2.2.11. Status of correction of deficient items.

1.6.3.2.2.12. Field observations.

1.6.3.2.2.13. RFIs.

1.6.3.2.2.14. Status of proposal requests.

1.6.3.2.2.15. Pending changes.

1.6.3.2.2.16. Status of Change Orders.

1.6.3.2.2.17. Pending claims and disputes.

1.6.3.2.2.18. Documentation of information for payment requests.

1.6.3.3. Minutes: Record the meeting minutes.

1.6.3.4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.

1.6.3.4.1. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

1.7. **REQUESTS FOR INTERPRETATION (RFI):**

1.7.1. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.

1.7.1.1. RFI shall originate with Contractor. RFI submitted by entity other than Contractor will be returned with no response.

1.7.1.2. Coordinate and submit RFI in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

1.7.2. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:

1.7.2.1. Project name.

1.7.2.2. Date.

1.7.2.3. Name of Contractor.

1.7.2.4. Name of Architect.

1.7.2.5. RFI number, numbered sequentially.

1.7.2.6. Specification Section number and title and related paragraphs, as appropriate.

1.7.2.7. Drawing number and detail references, as appropriate.

1.7.2.8. Field dimensions and conditions, as appropriate.

1.7.2.9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.

1.7.2.10. Contractor's signature.

1.7.2.11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.

1.7.2.11.1. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.

1.7.3. Form of RFIs: Electronic version of **AIA Form G716** shall be used.

1.7.3.1. Attachments shall be electronic files in Adobe Acrobat PDF format.

1.7.4. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow five (5) working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.

1.7.4.1. The following RFIs will be returned without action:

1.7.4.1.1. Requests for approval of submittals.

1.7.4.1.2. Requests for approval of substitutions.

1.7.4.1.3. Requests for coordination information already indicated in the Contract Documents.

1.7.4.1.4. Requests for adjustments in the Contract Time or the Contract Sum.

1.7.4.1.5. Requests for interpretation of Architect's actions on submittals.

1.7.4.1.6. Incomplete RFIs or RFIs with numerous errors.

1.7.4.2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.

1.7.4.3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 1 Section "Contract Modification Procedures."

1.7.4.3.1. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within five (5) days of receipt of the RFI response.

1.7.5. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within five (5) days if Contractor disagrees with response.

1.7.6. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log monthly. Software log with not less than the following:

1.7.6.1. Project name.

1.7.6.2. Name and address of Contractor.

1.7.6.3. Name and address of Architect.

1.7.6.4. RFI number including RFIs that were dropped and not submitted.

1.7.6.5. RFI description.

1.7.6.6. Date the RFI was submitted.

1.7.6.7. Date Architect's response was received.

1.7.6.8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01310

SECTION 01400 - QUALITY CONTROL

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS:**

1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. **SUMMARY:**

1.2.1. This Section includes administrative and procedural requirements for quality-control services.

1.2.2. Quality-control services include inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by Architect.

1.2.3. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.

1.2.4. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.

1.2.4.1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.

1.2.4.2. Specified inspections, tests, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with Contract Document requirements.

1.2.4.3. Requirements for Contractor to provide quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

1.3. **RESPONSIBILITIES:**

1.3.1. Contractor Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, Contractor shall provide inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction. Costs for these services are included in the Contract Sum.

1.3.1.1. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are the Contractor's responsibility, the Contractor shall employ and pay a qualified independent testing agency to perform quality-control services. Costs for these services are included in the Contract Sum.

1.3.1.2. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are the Owner's responsibility, the Owner will engage the services of a qualified independent testing agency to perform those services. Payment for these services will be made from the Inspection and Testing Allowance, as authorized by Change Orders.

1.3.1.2.1. Where the Owner has engaged a testing agency for testing and inspecting part of the Work, and the Contractor is also required to engage an entity for the same or related element, the Contractor shall not employ the entity engaged by the Owner, unless agreed to in writing by the Owner.

1.3.2. Retesting: The Contractor is responsible for retesting where results of inspections, tests, or other quality- control services prove unsatisfactory and indicate noncompliance with Contract Document requirements, regardless of whether the original test was Contractor's responsibility.

1.3.2.1. The cost of retesting construction, revised or replaced by the Contractor, is the Contractor's responsibility where required tests performed on original construction indicated noncompliance with Contract Document requirements.

1.3.3. Associated Services: Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to, the following:

1.3.3.1. Provide access to the Work.

1.3.3.2. Furnish incidental labor and facilities necessary to facilitate inspections and tests.

1.3.3.3. Take adequate quantities of representative samples of materials that require testing or assist the agency in taking samples.

1.3.3.4. Provide facilities for storage and curing of test samples.

1.3.3.5. Deliver samples to testing laboratories.

1.3.3.6. Provide the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.

1.3.3.7. Provide security and protection of samples and test equipment at the Project Site.

1.3.4. Duties of the Testing Agency: The independent agency engaged to perform inspections, sampling, and testing of materials and construction specified in individual Sections shall cooperate with the Architect and the Contractor in performance of the agency's duties. The testing agency shall provide qualified personnel to perform required inspections and tests.

1.3.4.1. The agency shall notify the Architect and the Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.

1.3.4.2. The agency is not authorized to release, revoke, alter, or enlarge requirements of the Contract Documents or approve or accept any portion of the Work.

1.3.4.3. The agency shall not perform any duties of the Contractor.

1.3.5. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

1.3.5.1. The Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities.

1.4. **SUBMITTALS:**

1.4.1. Unless the Contractor is responsible for this service, the independent testing agency shall submit a certified written report, in duplicate, of each inspection, test, or similar service to the Architect. If the Contractor is responsible for the service, submit a certified written report, in duplicate, of each inspection, test, or similar service through the Contractor.

1.4.1.1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.

1.4.1.2. Report Data: Written reports of each inspection, test, or similar service include, but are not limited to, the following:

1.4.1.2.1. Date of issue.

1.4.1.2.2. Project title and number.

1.4.1.2.3. Name, address, and telephone number of testing agency.

1.4.1.2.4. Dates and locations of samples and tests or inspections.

1.4.1.2.5. Names of individuals making the inspection or test.

1.4.1.2.6. Designation of the Work and test method.

1.4.1.2.7. Identification of product and Specification Section.

1.4.1.2.8. Complete inspection or test data.

1.4.1.2.9. Test results and an interpretation of test results.

1.4.1.2.10. Ambient conditions at the time of sample taking and testing.

1.4.1.2.11. Comments or professional opinion on whether inspected or tested Work complies with Contract Document requirements.

1.4.1.2.12. Name and signature of laboratory inspector.

1.4.1.2.13. Recommendations on retesting.

1.5. **QUALITY ASSURANCE:**

1.5.1. Qualifications for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, that are pre-qualified as complying with the American Council of Independent Laboratories' "Recommended Requirements for Independent Laboratory Qualification" and that specialize in the types of inspections and tests to be performed.

1.5.1.1. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the state where the Project is located.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01400

SECTION 01500 - CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS:**

1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. **SUMMARY:**

1.2.1. This Section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.

1.2.2. Temporary utilities include, but are not limited to, the following:

1.2.2.1. Water service and distribution.

1.2.2.2. Temporary electric power and light.

1.2.2.3. Temporary heat.

1.2.2.4. Ventilation.

1.2.2.5. Telephone service.

1.2.2.6. Sanitary facilities, including drinking water.

1.2.2.7. Storm and sanitary sewer.

1.2.3. Support facilities include, but are not limited to, the following:

1.2.3.1. Field offices and storage sheds.

1.2.3.2. Temporary roads and paving.

1.2.3.3. Temporary enclosures.

1.2.3.4. Waste disposal services.

1.2.3.5. Rodent and pest control.

1.2.3.6. Construction aids and miscellaneous services and facilities.

1.2.4. Security and protection facilities include, but are not limited to, the following:

1.2.4.1. Temporary fire protection.

1.2.4.2. Barricades, warning signs, and lights.

1.2.4.3. Environmental protection.

1.3. **SUBMITTALS:**

1.3.1. Temporary Utilities: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.

1.4. **QUALITY ASSURANCE:**

1.4.1. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:

1.4.1.1. Building code requirements.

1.4.1.2. Health and safety regulations.

1.4.1.3. Utility company regulations.

1.4.1.4. Police, fire department, and rescue squad rules.

1.4.1.5. Environmental protection regulations.

1.4.2. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."

1.4.2.1. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code."

1.4.3. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.5. **PROJECT CONDITIONS:**

1.5.1. Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of permanent service.

1.5.2. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

PART 2 - PRODUCTS

2.1. **MATERIALS:**

2.1.1. General: Provide new materials. If acceptable to the Architect, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.

2.1.2. Lumber and Plywood: Comply with requirements in Division 6 Section "Rough Carpentry."

2.1.2.1. For job-built temporary offices, shops, and sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding.

2.1.3. For safety barriers and similar uses, provide minimum 5/8-inch thick exterior plywood.

2.1.4. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.

2.1.5. Water: Provide potable water approved by local health authorities.

2.1.6. Open-Mesh Fencing: Provide 0.120-inch thick, galvanized 2-inch chain link fabric fencing 6 feet high with galvanized barbed-wire top strand and galvanized steel pipe posts, 1-1/2 inches I.D. for line posts and 2-1/2 inches I.D. for corner posts.

2.2. **EQUIPMENT:**

2.2.1. General: Provide new equipment. If acceptable to the Architect, the Contractor may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.

2.2.2. Water Hoses: Provide 3/4-inch, heavy-duty, abrasion-resistant, flexible rubber hoses 100 feet long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.

2.2.3. Electrical Outlets: Provide properly configured, NEMA- polarized outlets to prevent insertion of 110- to 120-Volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.

2.2.4. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.

2.2.5. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture.

2.2.6. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.

2.2.7. Temporary Office: Provide prefabricated or mobile unit or similar job-built construction with lockable entrances, large folding table for meetings, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.

2.2.8. Temporary Toilet Units: Provide self-contained, single- occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.

2.2.9. Fire Extinguishers: Provide hand-carried, portable, UL- rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.

2.2.9.1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1. **INSTALLATION:**

3.1.1. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

3.1.2. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2. **TEMPORARY UTILITY INSTALLATION:**

3.2.1. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.

3.2.1.1. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.

3.2.1.2. Obtain easements to bring temporary utilities to the site where the Owner's easements cannot be used for that purpose.

3.2.1.3. Use Charges: Cost or use charges for temporary facilities are not chargeable to the Owner or Architect. Neither the Owner nor Architect will accept cost or use charges as a basis of claims for Change Orders. Except as noted in the General Conditions.

3.2.2. Water Service: Install water service and distribution piping of sizes and pressures adequate for construction until permanent water service is in use.

3.2.2.1. Sterilization: Sterilize temporary water piping prior to use.

3.2.3. Temporary Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload-protected disconnects, automatic ground-fault interrupters, and main distribution switch gear.

3.2.3.1. Install electric power service underground, except where overhead service must be used.

3.2.3.2. Power Distribution System: Install wiring overhead and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, ac 20 Ampere rating, and lighting circuits may be nonmetallic sheathed cable where overhead and exposed for surveillance.

3.2.4. Temporary Lighting: When overhead floor or roof deck has been installed, provide temporary lighting with local switching.

3.2.4.1. Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.

3.2.5. Temporary Heat: Provide temporary heat required by construction activities for curing or drying of completed installations or for protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.

3.2.6. Heating Facilities: Except where the Owner authorizes use of the permanent system, provide vented, self-contained, LP- gas or fuel-oil heaters with individual space thermostatic control.

3.2.6.1. Use of gasoline-burning space heaters, open flame, or salamander heating units is prohibited.

3.2.7. Temporary Telephones: Provide temporary telephone service throughout the construction period for all personnel engaged in construction activities. Install telephone on a separate line for each temporary office and first-aid station.

3.2.8. Sanitary facilities include temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.

3.2.8.1. Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Provide covered waste containers for used material.

3.2.9. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.

3.2.10. Drinking-Water Fixtures: Provide drinking-water fountains where indicated, including paper cup supply.

3.2.10.1. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45 to 55 deg F.

3.2.11. Sewers and Drainage: If sewers are available, provide temporary connections to remove effluent that can be discharged lawfully. If sewers are not available or cannot be used, provide drainage ditches, dry wells, stabilization ponds, and similar facilities. If neither sewers nor drainage facilities can be lawfully used for discharge of effluent, provide containers to remove and dispose of effluent off-site in a lawful manner.

3.2.11.1. Filter out excessive amounts of soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.

3.2.11.2. Connect temporary sewers to the municipal system, as directed by sewer department officials.

3.2.11.3. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.

3.2.12. Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.

3.3. **SUPPORT FACILITIES INSTALLATION:**

3.3.1. Locate field offices, storage sheds, and other temporary construction and support facilities for easy access.

3.3.1.1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.

3.3.2. Provide incombustible construction for offices, shops, and sheds located within the construction area or within 30 feet of building lines. Comply with requirements of NFPA 241.

3.3.3. Field Office: Provide insulated, weathertight temporary office of sufficient size to accommodate required office personnel at the project site.

3.3.4. Dewatering Facilities and Drains: For temporary drainage and dewatering facilities and operations not directly associated with construction activities included under individual Sections, comply with dewatering requirements of applicable Division 2 Sections. Where feasible, utilize the same facilities. Maintain the site, excavations, and construction free of water.

3.3.5. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.

3.3.5.1. Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.

3.3.5.2. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25 sq. ft. or less with plywood or similar materials.

3.3.5.3. Where temporary wood or plywood enclosure exceeds 100 sq. ft. in area, use UL-labeled, fire- retardant-treated material for framing and main sheathing.

3.3.6. Temporary Lifts and Hoists: Provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.3.7. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.

3.3.8. Rodent and Pest Control: Before deep foundation work has been completed, retain a local exterminator or pest control company to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests. Employ this service to perform extermination and control procedures at regular intervals so the Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.

3.4. **SECURITY AND PROTECTION FACILITIES INSTALLATION:**

3.4.1. Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Architect.

3.4.2. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations."

3.4.2.1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.

3.4.2.2. Store combustible materials in containers in fire-safe locations.

3.4.2.3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.

3.4.2.4. Provide supervision of welding operations, combustion- type temporary heating units, and similar sources of fire ignition.

3.4.3. Permanent Fire Protection: At the earliest feasible date in each area of the Project, complete installation of the permanent fire-protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.

3.4.4. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.

3.4.5. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.

3.4.5.1. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.

3.4.6. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid use of tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.

3.5. **OPERATION, TERMINATION, AND REMOVAL:**

3.5.1. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

3.5.2. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.

3.5.2.1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

3.5.2.2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.

3.5.3. Termination and Removal: Unless the Architect requests that it be maintained longer, remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

3.5.3.1. Materials and facilities that constitute temporary facilities are the Contractor's property.

END OF SECTION 01500

SECTION 01500 - CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS:**

1.1.1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2. **SUMMARY:**

1.2.1. This Section includes requirements for construction facilities and temporary controls, including temporary utilities, support facilities, and security and protection.

1.2.2. Temporary utilities include, but are not limited to, the following:

1.2.2.1. Water service and distribution.

1.2.2.2. Temporary electric power and light.

1.2.2.3. Temporary heat.

1.2.2.4. Ventilation.

1.2.2.5. Telephone service.

1.2.2.6. Sanitary facilities, including drinking water.

1.2.2.7. Storm and sanitary sewer.

1.2.3. Support facilities include, but are not limited to, the following:

1.2.3.1. Field offices and storage sheds.

1.2.3.2. Temporary roads and paving.

1.2.3.3. Temporary enclosures.

1.2.3.4. Waste disposal services.

1.2.3.5. Rodent and pest control.

1.2.3.6. Construction aids and miscellaneous services and facilities.

1.2.4. Security and protection facilities include, but are not limited to, the following:

1.2.4.1. Temporary fire protection.

1.2.4.2. Barricades, warning signs, and lights.

1.2.4.3. Environmental protection.

1.3. **SUBMITTALS:**

1.3.1. Temporary Utilities: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.

1.4. **QUALITY ASSURANCE:**

1.4.1. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction including, but not limited to, the following:

1.4.1.1. Building code requirements.

1.4.1.2. Health and safety regulations.

1.4.1.3. Utility company regulations.

1.4.1.4. Police, fire department, and rescue squad rules.

1.4.1.5. Environmental protection regulations.

1.4.2. Standards: Comply with NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations," ANSI A10 Series standards for "Safety Requirements for Construction and Demolition," and NECA Electrical Design Library "Temporary Electrical Facilities."

1.4.2.1. Electrical Service: Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70 "National Electric Code."

1.4.3. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.5. **PROJECT CONDITIONS:**

1.5.1. Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to the Owner, change over from use of temporary service to use of permanent service.

1.5.2. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary services and facilities as the Work progresses. Do not overload facilities or permit them to interfere with progress. Take necessary fire-prevention measures. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on-site.

PART 2 - PRODUCTS

2.1. **MATERIALS:**

2.1.1. General: Provide new materials. If acceptable to the Architect, the Contractor may use undamaged, previously used materials in serviceable condition. Provide materials suitable for use intended.

2.1.2. Lumber and Plywood: Comply with requirements in Division 6 Section "Rough Carpentry."

2.1.2.1. For job-built temporary offices, shops, and sheds within the construction area, provide UL-labeled, fire-treated lumber and plywood for framing, sheathing, and siding.

2.1.3. For safety barriers and similar uses, provide minimum 5/8-inch thick exterior plywood.

2.1.4. Tarpaulins: Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.

2.1.5. Water: Provide potable water approved by local health authorities.

2.1.6. Open-Mesh Fencing: Provide 0.120-inch thick, galvanized 2-inch chain link fabric fencing 6 feet high with galvanized barbed-wire top strand and galvanized steel pipe posts, 1-1/2 inches I.D. for line posts and 2-1/2 inches I.D. for corner posts.

2.2. **EQUIPMENT:**

2.2.1. General: Provide new equipment. If acceptable to the Architect, the Contractor may use undamaged, previously used equipment in serviceable condition. Provide equipment suitable for use intended.

2.2.2. Water Hoses: Provide 3/4-inch, heavy-duty, abrasion-resistant, flexible rubber hoses 100 feet long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.

2.2.3. Electrical Outlets: Provide properly configured, NEMA- polarized outlets to prevent insertion of 110- to 120-Volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.

2.2.4. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.

2.2.5. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture.

2.2.6. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.

2.2.7. Temporary Office: Provide prefabricated or mobile unit or similar job-built construction with lockable entrances, large folding table for meetings, operable windows, and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.

2.2.8. Temporary Toilet Units: Provide self-contained, single- occupant toilet units of the chemical, aerated recirculation, or combustion type. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.

2.2.9. Fire Extinguishers: Provide hand-carried, portable, UL- rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures.

2.2.9.1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1. **INSTALLATION:**

3.1.1. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

3.1.2. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2. **TEMPORARY UTILITY INSTALLATION:**

3.2.1. General: Engage the appropriate local utility company to install temporary service or connect to existing service. Where company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with company recommendations.

3.2.1.1. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.

3.2.1.2. Obtain easements to bring temporary utilities to the site where the Owner's easements cannot be used for that purpose.

3.2.1.3. Use Charges: Cost or use charges for temporary facilities are not chargeable to the Owner or Architect. Neither the Owner nor Architect will accept cost or use charges as a basis of claims for Change Orders. Except as noted in the General Conditions.

3.2.2. Water Service: Install water service and distribution piping of sizes and pressures adequate for construction until permanent water service is in use.

3.2.2.1. Sterilization: Sterilize temporary water piping prior to use.

3.2.3. Temporary Electric Power Service: Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload-protected disconnects, automatic ground-fault interrupters, and main distribution switch gear.

3.2.3.1. Install electric power service underground, except where overhead service must be used.

3.2.3.2. Power Distribution System: Install wiring overhead and rise vertically where least exposed to damage. Where permitted, wiring circuits not exceeding 125 Volts, ac 20 Ampere rating, and lighting circuits may be nonmetallic sheathed cable where overhead and exposed for surveillance.

3.2.4. Temporary Lighting: When overhead floor or roof deck has been installed, provide temporary lighting with local switching.

3.2.4.1. Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide temporary lighting that will provide adequate illumination for construction operations and traffic conditions.

3.2.5. Temporary Heat: Provide temporary heat required by construction activities for curing or drying of completed installations or for protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.

3.2.6. Heating Facilities: Except where the Owner authorizes use of the permanent system, provide vented, self-contained, LP- gas or fuel-oil heaters with individual space thermostatic control.

3.2.6.1. Use of gasoline-burning space heaters, open flame, or salamander heating units is prohibited.

3.2.7. Temporary Telephones: Provide temporary telephone service throughout the construction period for all personnel engaged in construction activities. Install telephone on a separate line for each temporary office and first-aid station.

3.2.8. Sanitary facilities include temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for the type, number, location, operation, and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.

3.2.8.1. Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Provide covered waste containers for used material.

3.2.9. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.

3.2.10. Drinking-Water Fixtures: Provide drinking-water fountains where indicated, including paper cup supply.

3.2.10.1. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45 to 55 deg F.

3.2.11. Sewers and Drainage: If sewers are available, provide temporary connections to remove effluent that can be discharged lawfully. If sewers are not available or cannot be used, provide drainage ditches, dry wells, stabilization ponds, and similar facilities. If neither sewers nor drainage facilities can be lawfully used for discharge of effluent, provide containers to remove and dispose of effluent off-site in a lawful manner.

3.2.11.1. Filter out excessive amounts of soil, construction debris, chemicals, oils, and similar contaminants that might clog sewers or pollute waterways before discharge.

3.2.11.2. Connect temporary sewers to the municipal system, as directed by sewer department officials.

3.2.11.3. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. Following heavy use, restore normal conditions promptly.

3.2.12. Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of storm water from heavy rains.

3.3. **SUPPORT FACILITIES INSTALLATION:**

3.3.1. Locate field offices, storage sheds, and other temporary construction and support facilities for easy access.

3.3.1.1. Maintain support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.

3.3.2. Provide incombustible construction for offices, shops, and sheds located within the construction area or within 30 feet of building lines. Comply with requirements of NFPA 241.

3.3.3. Field Office: Provide insulated, weathertight temporary office of sufficient size to accommodate required office personnel at the project site.

3.3.4. Dewatering Facilities and Drains: For temporary drainage and dewatering facilities and operations not directly associated with construction activities included under individual Sections, comply with dewatering requirements of applicable Division 2 Sections. Where feasible, utilize the same facilities. Maintain the site, excavations, and construction free of water.

3.3.5. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities.

3.3.5.1. Where heat is needed and the permanent building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.

3.3.5.2. Install tarpaulins securely, with incombustible wood framing and other materials. Close openings of 25 sq. ft. or less with plywood or similar materials.

3.3.5.3. Where temporary wood or plywood enclosure exceeds 100 sq. ft. in area, use UL-labeled, fire- retardant-treated material for framing and main sheathing.

3.3.6. Temporary Lifts and Hoists: Provide facilities for hoisting materials and employees. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

3.3.7. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than 7 days during normal weather or 3 days when the temperature is expected to rise above 80 deg F. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose of material lawfully.

3.3.8. Rodent and Pest Control: Before deep foundation work has been completed, retain a local exterminator or pest control company to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests. Employ this service to perform extermination and control procedures at regular intervals so the Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.

3.4. **SECURITY AND PROTECTION FACILITIES INSTALLATION:**

3.4.1. Except for use of permanent fire protection as soon as available, do not change over from use of temporary security and protection facilities to permanent facilities until Substantial Completion, or longer, as requested by the Architect.

3.4.2. Temporary Fire Protection: Until fire-protection needs are supplied by permanent facilities, install and maintain temporary fire-protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations."

3.4.2.1. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.

3.4.2.2. Store combustible materials in containers in fire-safe locations.

3.4.2.3. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire-exposure areas.

3.4.2.4. Provide supervision of welding operations, combustion- type temporary heating units, and similar sources of fire ignition.

3.4.3. Permanent Fire Protection: At the earliest feasible date in each area of the Project, complete installation of the permanent fire-protection facility, including connected services, and place into operation and use. Instruct key personnel on use of facilities.

3.4.4. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed, provide lighting, including flashing red or amber lights.

3.4.5. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.

3.4.5.1. Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.

3.4.6. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid use of tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site.

3.5. **OPERATION, TERMINATION, AND REMOVAL:**

3.5.1. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.

3.5.2. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.

3.5.2.1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

3.5.2.2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.

3.5.3. Termination and Removal: Unless the Architect requests that it be maintained longer, remove each temporary facility when the need has ended, when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

3.5.3.1. Materials and facilities that constitute temporary facilities are the Contractor's property.

END OF SECTION 01500

SECTION 01700 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS**:

1.1.1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to work of this Section.

1.2. **SUMMARY**:

1.2.1 This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:

1.2.1.1 Inspection procedures.

1.2.1.2 Final cleaning.

1.2.2 Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions 2 through 16.

1.3. **SUBSTANTIAL COMPLETION**:

1.3.1 Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

1.3.1.1 Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.

1.3.1.2 Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.

1.3.1.3 Submit record drawings, maintenance manuals, final project photographs, damage or settlement surveys, property surveys, and similar final record information.

1.3.1.4 Deliver tools, spare parts, extra stock, and similar items.

1.3.1.5 Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.

1.3.1.6 Complete final cleanup requirements, including touchup painting.

1.3.1.7 Touch up and otherwise repair and restore marred, exposed finishes.

1.3.2 Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.

1.3.2.1 The Architect will repeat inspection when requested and assured that the Work is substantially complete.

1.3.2.2 Results of the completed inspection will form the basis of requirements for final acceptance.

1.4. **FINAL ACCEPTANCE**:

1.4.1 Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.

1.4.1.1 Submit a certified copy of the Architect's final inspection list of items to be completed or corrected, endorsed and dated by the Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Architect.

1.4.1.2 Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion or when the Owner took possession of and assumed responsibility for corresponding elements of the Work.

1.4.1.3 Submit consent of surety to final payment.

1.4.1.4 Submit a final liquidated damages settlement statement.

1.4.1.5 Submit evidence of final, continuing insurance coverage complying with insurance requirements.

1.4.2 Reinspection Procedure: The Architect will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Architect.

1.4.2.1 Upon completion of reinspection, the Architect will prepare a certificate of final acceptance. If the Work is incomplete, the Architect will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.

1.4.2.2 If necessary, reinspection will be repeated.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1. **FINAL CLEANING**:

3.1.1 General: The General Conditions require general cleaning during construction. Regular site cleaning is included in Division 1 Section "Construction Facilities and Temporary Controls."

3.1.2 Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

3.1.4 Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.

3.1.5 Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.

END OF SECTION 01700

SECTION 01700 - CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1. **RELATED DOCUMENTS**:

1.1.1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to work of this Section.

1.2. **SUMMARY**:

1.2.1 This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:

1.2.1.1 Inspection procedures.

1.2.1.2 Final cleaning.

1.2.2 Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions 2 through 16.

1.3. **SUBSTANTIAL COMPLETION**:

1.3.1 Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

1.3.1.1 Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.

1.3.1.2 Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.

1.3.1.3 Submit record drawings, maintenance manuals, final project photographs, damage or settlement surveys, property surveys, and similar final record information.

1.3.1.4 Deliver tools, spare parts, extra stock, and similar items.

1.3.1.5 Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.

1.3.1.6 Complete final cleanup requirements, including touchup painting.

1.3.1.7 Touch up and otherwise repair and restore marred, exposed finishes.

1.3.2 Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.

1.3.2.1 The Architect will repeat inspection when requested and assured that the Work is substantially complete.

1.3.2.2 Results of the completed inspection will form the basis of requirements for final acceptance.

1.4. **FINAL ACCEPTANCE**:

1.4.1 Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.

1.4.1.1 Submit a certified copy of the Architect's final inspection list of items to be completed or corrected, endorsed and dated by the Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Architect.

1.4.1.2 Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion or when the Owner took possession of and assumed responsibility for corresponding elements of the Work.

1.4.1.3 Submit consent of surety to final payment.

1.4.1.4 Submit a final liquidated damages settlement statement.

1.4.1.5 Submit evidence of final, continuing insurance coverage complying with insurance requirements.

1.4.2 Reinspection Procedure: The Architect will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Architect.

1.4.2.1 Upon completion of reinspection, the Architect will prepare a certificate of final acceptance. If the Work is incomplete, the Architect will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.

1.4.2.2 If necessary, reinspection will be repeated.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1. **FINAL CLEANING**:

3.1.1 General: The General Conditions require general cleaning during construction. Regular site cleaning is included in Division 1 Section "Construction Facilities and Temporary Controls."

3.1.2 Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

3.1.3 Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.

3.1.4 Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.

END OF SECTION 01700

SECTION 024119 - SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 **RELATED DOCUMENTS:**

1.1.1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 **SUMMARY:**

1.2.1 This Section includes the following:

1.2.1.1 Demolition and removal of selected portions of building or structure.

1.2.1.2 Salvage of existing items to be reused or recycled.

1.2.2 Related Sections include the following:

1.2.2.1 Division 01 Section "Summary" for use of premises.

1.2.2.2 Division 01 Section "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for selective demolition operations.

1.2.2.3 Division 01 Section "Construction Waste Management and Disposal" for disposal of demolished materials.

1.2.2.4 Division 02 Section "Asbestos Abatement" for demolition and disposal of demolished materials.

1.2.2.5 Division 02 Section "Lead Abatement" for demolition and disposal of demolished materials.

1.3 **DEFINITIONS:**

1.3.1 Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged.

1.3.2 Remove and Salvage: Detach items from existing construction and store on site.

1.3.3 Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 **SUBMITTALS:**

1.4.1 Schedule of Selective Demolition Activities: Indicate the following:

1.4.1.1 Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.

1.4.1.2 Interruption of utility services. Indicate how long utility services will be interrupted.

1.4.1.3 Coordination for shutoff, capping, and continuation of utility services.

1.4.2 Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.4.2.1 Comply with submittal requirements in Division 01 Section "Construction Waste Management and Disposal."

1.5 **QUALITY ASSURANCE:**

1.5.1 Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

1.5.2 Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.5.3 Standards: Comply with ANSI A10.6 and NFPA 241.

1.5.4 Predemolition Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.5.4.1 Inspect and discuss condition of construction to be selectively demolished.

1.5.4.2 Review structural load limitations of existing structure.

1.5.4.3 Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.

1.5.4.4 Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.

1.5.4.5 Review areas where existing construction is to remain and requires protection.

1.6 **PROJECT CONDITIONS:**

1.6.1 Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

1.7.4 Hazardous Materials: Hazardous materials are present in construction to be selectively demolished. A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.

1.7.4.1 Hazardous material remediation is specified elsewhere in the Contract Documents.

1.7.4.2 Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.

1.7.5 Storage or sale of removed items or materials on-site is not permitted.

1.7.6 Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 **EXAMINATION:**

3.1.1 Verify that utilities have been disconnected and capped.

3.1.2 Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

3.1.3 Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

3.1.4 When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

3.1.5 Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.

3.2 **UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS:**

3.2.1 Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.

3.2.1.1 Comply with requirements for existing services/systems interruptions specified in Division 01 Section "Summary."

3.2.2 Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

3.2.2.1 Owner will arrange to shut off indicated services/systems when requested by Contractor.

3.2.2.2 Arrange to shut off indicated utilities with utility companies.

3.2.2.3 If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

3.2.2.4 Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

3.2.2.4.1 Where entire wall is to be removed, existing services/systems may be removed with removal of the wall.

3.3 **PREPARATION:**

3.3.1 Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks.

3.3.1.1 Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities and Controls."

3.3.1.2 Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.

3.3.1.3 Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.

3.3.1.4 Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Facilities and Controls."

3.4 **SELECTIVE DEMOLITION, GENERAL:**

3.4.1 General: Demolish and remove existing construction as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

3.4.1.1 Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.

3.4.1.2 Maintain adequate ventilation when using cutting torches.

3.4.1.3 Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.

3.4.1.4 Dispose of demolished items and materials promptly. Comply with requirements in Division 01 Section "Construction Waste Management and Disposal."

3.4.1.5 Building Structure and Shell: 100 percent.

3.4.3 Removed and Salvaged Items:

3.4.3.1 Store items in a secure area until delivery to Owner.

3.5 **DISPOSAL OF DEMOLISHED MATERIALS:**

3.5.1 General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

3.5.1.1 Do not allow demolished materials to accumulate on-site.

3.5.1.2 Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

3.5.1.3 Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

3.5.1.4 Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal."

3.5.2 Burning: Do not burn demolished materials.

3.5.2 Burning: Burning of demolished materials will not be permitted.

3.5.3 Disposal: Transport demolished materials and dispose of at designated spoil areas on Owner's property.

3.5.4 Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.6 CLEANING:

3.6.1 Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 024119 - SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 **RELATED DOCUMENTS:**

1.1.1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 **SUMMARY:**

1.2.1 This Section includes the following:

1.2.1.1 Demolition and removal of selected portions of building or structure.

1.2.1.2 Salvage of existing items to be reused or recycled.

1.2.2 Related Sections include the following:

1.2.2.1 Division 01 Section "Summary" for use of premises.

1.2.2.2 Division 01 Section "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for selective demolition operations.

1.2.2.3 Division 01 Section "Construction Waste Management and Disposal" for disposal of demolished materials.

1.2.2.4 Division 02 Section "Asbestos Abatement" for demolition and disposal of demolished materials.

1.2.2.5 Division 02 Section "Lead Abatement" for demolition and disposal of demolished materials.

1.3 **DEFINITIONS:**

1.3.1 Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged.

1.3.2 Remove and Salvage: Detach items from existing construction and store on site.

1.3.3 Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 **SUBMITTALS:**

1.4.1 Schedule of Selective Demolition Activities: Indicate the following:

1.4.1.1 Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.

1.4.1.2 Interruption of utility services. Indicate how long utility services will be interrupted.

1.4.1.3 Coordination for shutoff, capping, and continuation of utility services.

1.4.2 Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.4.2.1 Comply with submittal requirements in Division 01 Section "Construction Waste Management and Disposal."

1.5 **QUALITY ASSURANCE:**

1.5.1 Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

1.5.2 Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.5.3 Standards: Comply with ANSI A10.6 and NFPA 241.

1.5.4 Predemolition Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.5.4.1 Inspect and discuss condition of construction to be selectively demolished.

1.5.4.2 Review structural load limitations of existing structure.

1.5.4.3 Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.

1.5.4.4 Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.

1.5.4.5 Review areas where existing construction is to remain and requires protection.

1.6 **PROJECT CONDITIONS:**

1.6.1 Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

1.7.4 Hazardous Materials: Hazardous materials are present in construction to be selectively demolished. A report on the presence of hazardous materials is on file for review and use. Examine report to become aware of locations where hazardous materials are present.

1.7.4.1 Hazardous material remediation is specified elsewhere in the Contract Documents.

1.7.4.2 Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.

1.7.5 Storage or sale of removed items or materials on-site is not permitted.

1.7.6 Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 **EXAMINATION:**

3.1.1 Verify that utilities have been disconnected and capped.

3.1.2 Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

3.1.3 Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

3.1.4 When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

3.1.5 Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.

3.2 **UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS:**

3.2.1 Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.

3.2.1.1 Comply with requirements for existing services/systems interruptions specified in Division 01 Section "Summary."

3.2.2 Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

3.2.2.1 Owner will arrange to shut off indicated services/systems when requested by Contractor.

3.2.2.2 Arrange to shut off indicated utilities with utility companies.

3.2.2.3 If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

3.2.2.4 Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

3.2.2.4.1 Where entire wall is to be removed, existing services/systems may be removed with removal of the wall.

3.3 **PREPARATION:**

3.3.1 Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks.

3.3.1.1 Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities and Controls."

3.3.1.2 Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.

3.3.1.3 Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.

3.3.1.4 Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Facilities and Controls."

3.4 **SELECTIVE DEMOLITION, GENERAL:**

3.4.1 General: Demolish and remove existing construction as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

3.4.1.1 Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.

3.4.1.2 Maintain adequate ventilation when using cutting torches.

3.4.1.3 Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.

3.4.1.4 Dispose of demolished items and materials promptly. Comply with requirements in Division 01 Section "Construction Waste Management and Disposal."

3.4.1.5 Building Structure and Shell: 100 percent.

3.4.3 Removed and Salvaged Items:

3.4.3.1 Store items in a secure area until delivery to Owner.

3.5 **DISPOSAL OF DEMOLISHED MATERIALS:**

3.5.1 General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

3.5.1.1 Do not allow demolished materials to accumulate on-site.

3.5.1.2 Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

3.5.1.3 Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

3.5.1.4 Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal."

3.5.2 Burning: Do not burn demolished materials.

3.5.2 Burning: Burning of demolished materials will not be permitted.

3.5.3 Disposal: Transport demolished materials and dispose of at designated spoil areas on Owner's property.

3.5.4 Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.6 CLEANING:

3.6.1 Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 028200 – ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 **SUMMARY:**

1.1.1 Related Documents:

1.1.1.1 Drawings and general provisions of the contract apply to this Section.

1.1.1.2 Review these documents for coordination with additional requirements and information that apply to work under this Section.

1.1.2 Section Includes:

1.1.2.1 Removal, encapsulation, and other abatement of asbestos-containing materials as specified herin and shown on drawings.

1.1.2.2 Compliance with all applicable Federal, State, and local regulations pertaining to work practices.

1.1.2.3 Protection of workers, visitors to the site, and persons occupying areas adjacent to the site.

1.1.2.4 Provide medical examinations and maintain medical records of personnel as required by the applicable Federal, State, and local regulations.

1.1.2.5 The scope of this work does not include the manifesting, transporting, or disposal of hazardous waste. The Contractor will manifest, transport, and dispose of hazardous waste that has been properly packaged, labeled, and stored by the contractor.

1.1.2.6 The Architect/Abatement Consultant review and approval of the asbestos abatement contractor’s Asbestos Compliance Work Plan (Attachment A) describing the means and methods of asbestos related work prior to work commencing.

1.1.3 Related Sections:

1.1.3.1 Division 01 Section "General Requirements."

1.1.3.2 Division 01 Section "Cutting and Patching."

1.1.3.3 Division 02 Section "Selective Demolition."

1.2 **DEFINITIONS:**

1.2.1 Asbestos-In-Construction Supervisor (Competent Person): One who is capable of identifying existing and predicting asbestos hazards in the surroundings or working conditions and who has the authorization to take prompt corrective measures to eliminate them.

1.2.2 Asbestos 30 minute Excursion Limit (EL): 1.0 fiber per cubic centimeter of air (1.0 f/cc).

1.2.3 Asbestos-in-air, 8 hour Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 0.1 fiber per cubic centimeter of air (0.1 f/cc).

1.2.3.1 Refer to Division 01 Section "General Requirements" for the list of applicable regulatory requirements.

1.3 **SUBMITTALS:**

1.3.1 Submit under provisions of Division 01 Section "General Requirements" for review and approval by the Architect/Abatement Consultant.

1.3.2 Product Data: Submit [five (5)] copies of the following:

1.3.2.1 Material Safety Data Sheets (MSDS) sheets for each product containing hazardous materials as defined by OSHA's Hazardous Communication Standard; 29 CFR 1910.1200.

1.3.3 Quality Assurance/Control Submittals: Submit [five (5)] copies of the following:

1.3.3.1 Asbestos Compliance Work Plan: Detailed, job-specific plan of the procedures proposed for use in complying with the requirements of this Specification and 29 CFR 1926.1101.

1.3.3.1.1 As a minimum, provide the information required in Attachment A, the Asbestos Compliance Work Plan Outline. Make note that Architect/Abatement Consultant requires TSI glovebag work be performed inside a HEPA filtered negative pressure enclosure that must be cleared by air sampling prior to removal of the NPE.

1.3.3.1.2 The plan shall be approved by the Architect/Abatement Consultant prior to the mobilization of equipment, supplies, or workers to the site.

1.3.3.2 Worker Certification: Current asbestos worker certifications for personnel to be engaged in the work of this Section. Workers will not be permitted on the project site until the submittal is complete and has been accepted by the Project Manager. Provide the following information for each worker:

1.3.3.2.1 Employee quantitative respirator fit-test records that identify the testing agency, the individual fit test exercise fit factor results, and the overall fit factor result;

1.3.3.2.2 Employee medical approval to wear respirator protection records;

1.3.3.2.3 Current AHERA-certified asbestos contractor supervisor certificate(s) and training for the designated contractor supervisor only;

1.3.3.2.4 Current AHERA-certified asbestos worker certificate(s) and training; and

1.3.3.2.5 Employee picture identification matching names on records. Picture IDs can be photo copies of training cards; however, pictures of employee faces must be viewable vs. dark images from poor quality photo copying.

1.3.3.3 Contractor License: Submit proof of license for asbestos-related contracting from the North Carolina Contractors State License Board.

1.3.3.4 Contractor Registration: Submit proof of registration with the North Carolina Division of Occupational Safety and Health (DOSH) for asbestos-related work as required by Title 8 CCR, Sections 341.6 to 341.9.

1.3.3.5 Respiratory Protection Program: Submit company's Respiratory Protection Program.

1.3.3.6 Written record from negative air machine and HEPA vacuum cleaner challenge aerosol testing on the day of the testing.

1.3.3.7 Per 29 CFR 1926.1101 (f)(5), the contractor shall notify their employees of exposure monitoring results. Architect/Abatement Consultant requires written documentation from the contractor that demonstrates the contractor's employees were notified of their results within 5 days of receiving the results including both excursion and calculated 8 hour TWA results for all results, not just those results above the PEL or excursion limit.

1.3.4 Closeout / Ongoing Project Submittals

1.3.4.1 Personal air sampling results collected by the asbestos abatement contractor for airborne asbestos within 24 hours of sample collection.

1.3.4.2 Pressure differential recorder readings shall be submitted in written form (i.e., circular chart or other form of print out).

1.3.5 All submittals will be provided to Architect/Abatement Consultant three (3) working days prior to mobilization for each individual site job and must be approved prior to work commencing.

1.4 **QUALITY ASSURANCE:**

1.4.1 Qualifications:

1.4.1.1 Qualifications of Contractor:

1.4.1.1.1 Work performed under this Section shall be by a single Contractor.

1.4.1.1.2 The Contractor shall have a minimum of five (5) years experience as an approved asbestos abatement contractor. If requested, the Contractor shall provide the names and locations of 5 projects of similar size and scope that he has completed within the previous five years.

1.4.1.1.3 The Contractor must hold a current and valid asbestos license issued by the North Carolina Contractors State Licensing Board.

1.4.1.1.4 The Contractor must hold a current and valid Certificate of Registration for Asbestos-Related Work issued by the North Carolina Department of Industrial Relations, Division of Occupational Safety and Health (NC/OSHA).

1.4.1.1.5 The Contractor must hold all insurance and bonds as required by other sections of this specification, and maintain as valid and current for the duration of the project.

1.4.1.2 Qualifications of Asbestos Abatement Personnel:

1.4.1.2.1 All work shall be completed utilizing fully qualified persons who are trained, experienced, and knowledgeable in the proper techniques and procedures for asbestos abatement activities covered by this Section.

1.4.1.2.2 Asbestos Workers: All workers performing asbestos related work shall be currently certified as asbestos workers.

1.4.1.2.3 Asbestos in Construction Contractor Supervisor: Currently certified as an Asbestos Contractor Supervisor.

1.4.1.3 Qualifications of Analytical Laboratory:

1.4.1.3.1 The contractor shall submit asbestos air samples to an analytical laboratory that is accredited by the American Industrial Hygiene Association’s (AIHA) Industrial Hygiene Laboratory Accreditation Program (IHLAP). The contractor shall choose another AIHA accredited lab if their current AIHA accredited lab does not maintain accreditation throughout the duration of this project.

1.4.2 Regulatory Requirements: All asbestos removal work shall be performed in accordance with requirements of Federal, state, and local regulations as follows:

1.4.2.1 Federal Regulations:

1.4.2.1.1 U.S. Department of Labor, Occupational Safety and Health Administration (OSHA):

1.4.2.1.1.1 Asbestos Standard: Title 29, Part 1910, Section 1001

1.4.2.1.1.2 Respiratory Protection: Title 29, Part 1910, Section 134

1.4.2.1.1.3 Construction Industry: Title 29, Part 1926, Section 1101

1.4.2.1.1.4 Hazard Communication: Title 29, Part 1910, Section 1200

1.4.2.1.2 U.S. Environmental Protection Agency (EPA):

1.4.2.1.2.1 Resource Conservation and Recovery Act (RCRA):

1.4.2.1.2.1.1 Title 40, Part 260 to 265

1.4.2.1.2.1.2 U.S. Department of Energy 10 CFR 851 Worker Protection Rule

1.4.2.2 U.S. Environmental Protection Agency (EPA):

1.4.2.2.1 Worker Protection Rule
40 CFR Part 763, Subpart G
CPTS 62044, FLR 2843-9
Federal Register, Vol. 50, No. 134, 7/12/85
P28530-28540

1.4.2.2.2 Regulation for General Industry:

1.4.2.2.2.1 Title 40, Part 61, Subpart A of the Code of Federal Regulations

1.4.2.2.3 National Emissions Standard for Hazardous Air Pollutants (Asbestos):

1.4.2.2.3.1 Title 40, Part 61, Subpart M of the Code of Federal Regulations including Asbestos NESHAP Revision; Final Rule, Federal Register; Tuesday, November 20, 1990.

1.4.2.2.4 Asbestos Hazard Emergency Response Act: Final Rule:

1.4.2.2.4.1 Title 40, Part 763, Subpart E of the Code of Federal Regulations.

1.4.2.3 State and Local Regulations: Abide by all State and local regulations which govern asbestos abatement work or storage of asbestos waste materials:

1.4.3 Pre-Construction Meeting: At least one week before work commences, a pre-construction meeting shall be held at a location designated by the Architect/Abatement Consultant. Attendees shall include the Architect, Abatement Consultant, Construction Manager, and Superintendent. The agenda shall include a review of project safety requirements, the contractor's written asbestos compliance work plan, emergency contacts and notification plan, containment and work area design, facility requirements, submittals, and any other issues pertinent to the safe execution of the asbestos abatement work.

1.4.3.1 Work shall not commence until all required submittals and plans have been approved by the Architect/Abatement Consultant.

1.5 **PROJECT CONDITIONS:**

1.5.1 Existing Conditions:

1.5.1.1 Building materials that contain asbestos are known to be present at the Project site. Building materials that have not been previously tested, that may be affected by the project scope, should be assumed to contain asbestos and handled according to this section. [See Attachment B for asbestos testing results].

1.5.1.1.1 If any other materials are found which are suspected of containing asbestos or other hazardous materials, immediately stop work in the affected area and notify the Architect/Abatement Consultant. Handle suspected asbestos containing material according to this section.

1.5.1.2 The abatement contractor is responsible for notifying other contractors in writing regarding asbestos work per OSHA requirements (29 CFR 1926.1101).

PART 2 - GENERAL

2.1 **MATERIALS:**

2.1.1 Plastic Sheeting: Fire retardant polyethylene sheeting conforming to NFPA 701 and ASTM S502-74T for surface flammability and smoke density. A single polyethylene film in the largest sheet size possible to minimize seams, 6 mils thick, clear, frosted or black as indicated.

2.1.2 Duct Tape: Provide duct tape in 2" or 3" widths as indicated, with an adhesive which is formulated to stick aggressively to polyethylene sheeting.

2.1.3 Spray Adhesive: Shall not contain methylene chloride, as listed on the product's label and/or Material Safety Data Sheet (MSDS). Provide spray adhesive in aerosol cans that is specifically formulated to stick aggressively to polyethylene sheeting.

2.1.4 Disposal Bags: 6-mil polyethylene.

2.1.5 Asbestos-Containing Materials Disposal Containers: Leak-tight drums or approved dumpsters.

2.1.6 Detergent: High-phosphate wash containing at least 5% trisodium phosphate (TSP).

2.2 **EQUIPMENT:**

2.2.1 Clothing: Furnish the following for each worker and others as specified.

2.2.1.1 Coveralls:

2.2.1.1.1 Disposable full-body coveralls with attached head and foot covers conforming to requirements of OSHA Standards 29 CFR 1926.1101.

2.2.1.2 Respirators:

2.2.1.2.1 Full facepiece negative pressure respirators with an assigned protection factor of 50X the PEL, or equivalent, for asbestos related work.

2.2.1.2.2 Respirators shall be equipped with HEPA (P-100) Filters.

2.2.1.2.3 Powered Air Purifying Respirators (PAPRs) with protection factors of 50X that have been quantitatively fit tested and equipped with HEPA (P-100) filters shall be acceptable substitutes for the respirator specified in 2.02(A)(2)(a) and must be worn for Class 1 work involving TSI or surfacing materials.

2.2.1.3 Goggles, safety glasses, face shields: Provide eye and face protection as required by OSHA.

2.2.1.4 Gloves:

2.2.1.4.1 Leather work gloves.

2.2.1.4.2 Compatible chemical resistant gloves for asbestos removal/solvent products.

2.2.1.5 Boots: Steel toed foot protective work boots with non-skid soles and steel shanks.

2.2.1.6 Hard Hats: Head protection (hard hats) approved by ANSI.

2.2.1.7 Soap and Towels.

2.2.2 Industrial Grade Vacuum and Negative Air Machines: High Efficiency Particulate Air (HEPA) filtered vacuum and negative air machines with appropriate HEPA filters and prefilters. Household type HEPA vacuum cleaners shall not be acceptable. Provide one spare negative air machine per work area at all times. Spare negative air machines shall be of the same size and capacity as the largest operating units onsite.

2.2.3 Pressure differential recorders shall be in working condition, calibrated and operated continuously during the operation of the negative pressure enclosure and provide a pressure reading at least every 10 minutes, or more frequent, and provide a written documentation of the pressure readings that will be submitted to Architect/Abatement Consultant at the end of the project.

2.2.4 Temporary Shower Facility: A pre-fabricated or site-built temporary shower facility, with hot and cold water to shower head that can be controlled from inside shower, shall be installed and used by all workers.

PART 3 – EXECUTION

3.1 **PROTECTION:**

3.1.1 General:

3.1.1.1 Take appropriate continuous measures as necessary to protect all building occupants from exposure to asbestos fibers. Such measures shall include the procedures and methods described herein, and shall be in accordance with regulations and guidelines of applicable Federal, State, and local agencies.

3.1.1.2 Securing the Work Area: Secure the work area from access by the public, occupants, staff, or users of the building.

3.1.1.2.1 Demarcate the regulated work area, as required by OSHA regulation 29 CFR 1926.1101, by posting warning signs at each locked door and at the entrance to the change room leading to the regulated area as follows:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE
CLOTHING ARE REQUIRED IN THIS AREA

3.1.1.2.2 Provide labels affixed to all asbestos waste containers, as required by OSHA regulation 29 CFR 1926.1101, as follows:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

3.1.1.3 Do not block, or reduce width, of egress to exits.

3.1.1.4 Conduct operations with minimum interference to corridors, exits, and public thoroughfares.

3.1.1.5 Cover and protect windows, doors, and walls that are adjacent to asbestos work areas.

3.1.1.6 Water used during this project shall be collected and prevented from entering storm water drains.

3.1.1.7 Eating, drinking, smoking, chewing tobacco or gum, or applying cosmetics is prohibited in the work area.

3.1.2 Personnel:

3.1.2.1 Asbestos Contractor Supervisor (Competent Person):

3.1.2.1.1 Provide an on-site, full-time Asbestos in Construction Supervisor (or Supervisors) to ensure that the worker protection program and engineering controls are effective.

3.1.2.2 Asbestos Workers: The Contractor shall communicate information concerning asbestos hazards according to the requirements of the Hazard Communication Standard (29 CFR 1910.1200), including but not limited to the requirements concerning warning signs and labels, material safety data sheets (MSDS), and employee information and training.

3.1.2.3 Respiratory Protection Program: Comply with ANSI Z88.2 – 1992 “Practices for Respiratory Protection” and OSHA 29 CFR 1926.62.

3.1.2.3.1 Require that respiratory protection be used at all times when there is any possibility of disturbance of asbestos containing material.

3.1.2.3.2 Down grading respiratory protection to a lower level protection factor is not allowed even with objective data to support the down grade.

3.1.2.4 Protective Clothing:

3.1.2.4.1 The following clothing shall be worn by all asbestos workers in the work area.

3.1.2.4.1.1 Disposable Coveralls with head and shoe covers: Provide a sufficient number for all required changes for all workers in the work area. Dispose of coveralls as clothing waste at the end of each day.

3.1.2.4.1.2 Gloves: Chemical resistant gloves shall be used when using solvents to remove mastic material. Gloves shall be secured to coveralls using duct tape to protect arms and hands. Do not remove gloves from the work area.

3.1.2.4.1.3 Goggles, safety glasses, or face shields: Shall be worn by all workers involved in scraping, spraying, stripping, or any other activity that may potentially cause eye or face injury.

3.1.2.5 Temporary Shower Facilities: Shall be used in accordance with subsection 2.02 (C) and subsection 3.08 (C) of this section.

3.2 **GENERAL PROCEDURES:**

3.2.1 Containment Systems:

3.2.1.1 If at any time during the course of the work visual emissions are detected, the Contractor shall immediately stop work, correct the condition(s) causing the emission, and notify the Architect/Abatement Consultant.

3.3 **WORK AREA PROCEDURES**:

3.3.1 No visitors shall be allowed in work area, except as authorized by the Architect/Abatement Consultant.

3.3.2 Provide workers with sufficient sets of disposable protective full-body clothing. Such clothing shall consist of full-body coveralls, footwear, and head gear as one-piece coveralls. Provide eye protection and hard hats as required by applicable safety regulations. Reusable type protective clothing and footwear intended for reuse shall be left in the Contaminated Equipment Room until the end of the asbestos abatement work at which time such items shall be disposed of as asbestos waste. Disposable clothing shall not be allowed to accumulate and shall be disposed of as contaminated waste.

3.3.3 Do not enter occupied building areas while wearing either new or contaminated disposable coveralls or respirators. Provide a visual barrier between the asbestos related work area and occupied areas.

3.3.4 Provide additional make-up air openings as necessary to effectively move air through the work area and to avoid creating too high a pressure differential that would jeopardize the integrity of the enclosure system. Provide self-closing polyethylene flaps over the openings to prevent backflow of air from the contained area t the outside.

3.3.5 Vent all exhaust units to the outside of the building. Provide flexible or rigid duct as necessary to provide exterior venting and proper location of exhaust units. Ducts shall be completely sealed, in good repair, and protected from possible damage within the work area. “Make-shift” type ducting made from poly and spray glue will not be acceptable. New ducting shall be used for each new containment system.

3.3.6 After asbestos removal has begun, maintain operation of exhaust units continuously to maintain a constant negative pressure until final clearance results are achieved. Do not turn units off at the end of the work shift or when removal operations temporarily stop. Ensure arrangements are made with contractor employees to visit and make repairs to the NPE during after hours or on weekends as necessary.

3.4 **ASBESTOS REMOVAL PROCEDURES:**

3.4.1 Asbestos removal: Remove asbestos containing material as described in the contractor’s asbestos compliance work plan prior to disturbing the substrate. Modifications to this plan shall be reviewed and approved by the Architect/Asbestos Consultant prior to work continuing.

3.4.1.1 Prohibited Asbestos Removal Methods:

3.4.1.1.1 Removing mastic material with methylene chloride based products

3.4.1.1.2 Uncontained abrasive blasting

3.4.1.1.3 Uncontained power washing

3.4.1.1.4 Dry sanding or scraping

3.4.1.1.5 Power sanding without HEPA attachment

3.4.2 Asbestos abatement operations shall include all tasks necessary for the proper and complete abatement of the materials in the scope of work. Tasks include, but are not limited to, the following:

3.4.2.1 Preparation of work areas, including pre-cleaning, establishment of critical barriers and isolation barriers, establishment of negative pressure enclosures as needed, protection of building equipment, life safety systems, and electrical equipment and systems.

3.4.2.2 Providing water and waste services to work areas, including hot and cold water supply for abatement-related work, and proper filtering of wastewater for disposal.

3.4.2.3 Maintaining adequate negative air pressure (minimum of – 0.02”w.g) and at least four air changes per hour as needed.

3.4.2.4 Protecting and maintaining active, as applicable, all life safety systems and building equipment operation.

3.4.2.5 Removing asbestos-containing materials and decontamination of asbestos-contaminated surfaces, equipment, and areas.

3.4.2.6 Encapsulating asbestos-containing materials and/or surfaces possibly contaminated with asbestos fibers, using penetrating and/or bridging encapsulants.

3.4.2.7 Proper storage of asbestos-containing waste, including packaging and labeling. Once a full 55-gal drum of friable asbestos waste is generated, it must be moved into a 90-day Hazardous Waste Accumulation Area (WAA) within three days. .

3.4.2.8 Cleaning work areas and surfaces as necessary to achieve acceptance by final visual inspection and final clearance air monitoring.

3.4.2.9 Upon completion of all work area preparation, and not less than four hours before abatement work is to begin, notify the Architect/Abatement Consultant that the work area is ready for inspection.

3.4.2.10 The contractor shall not begin abatement work until the Architect/Abatement Consultant has inspected the area and deficiencies have been corrected.

3.4.3 Waste Disposal: HEPA vacuum and/or wet wipe to remove all asbestos or contaminated debris generated during the work. Do not allow asbestos material to accumulate. Place all asbestos containing material and contaminated debris in properly labeled plastic disposal bags at the end of each shift.

3.5 **FIELD QUALITY CONTROL:**

3.5.1 Site Tests:

3.5.1.1 Respiratory protective equipment shall be quantitatively fit tested, including PAPR units. Qualitative fit test using irritant smoke tests or other qualitative test methods shall not be acceptable.

3.5.1.2 All HEPA vacuums and negative air machines (including spare negative air machines) shall be challenge tested, by emery oil aerosol or equivalent, and certified as in "passing" condition prior to work commencing. Negative air machines and HEPA vacuums shall be tested every three months, and immediately after changing HEPA filters, and remain onsite during the duration of the project. HEPA vacuums and negative air machines shall not be used after changing HEPA filters until they have been tested by a challenge aerosol.

3.5.2 Inspection (Asbestos Air Monitoring):

3.5.2.1 Personal Exposure Monitoring Results: Contractor shall provide personal air monitoring of its employees, in accordance with requirements of 29 CFR 1926.1101. Per 1.05 (A)(3)(a) of this section, the contractor shall submit air samples to an analytical laboratory accredited by the American Industrial Hygiene Association (AIHA) for analysis by Phase Contrast Microscopy (PCM) per NIOSH method 7400.

3.5.2.1.1 The personal air monitoring data shall include the employee's name, date of monitoring, task(s) performed, employees represented by the monitoring, analytical result, and time-weighted average exposure.

3.5.2.1.2 The analytical lab results shall be submitted to the Architect/Abatement Consultant within 24 hours of sample collection.

3.5.2.2 The Architect/Abatement Consultant may conduct personal asbestos air monitoring on the contractor's employees at any time to verify contractor's compliance with these Specifications and OSHA regulations.

3.5.2.3 Monitoring During Asbestos Removal and Decontamination: The Architect/Abatement Consultant, or its representative, may conduct quality control and area monitoring at any time during potential worker exposure to airborne asbestos. If monitoring outside the control area shows airborne concentrations exceed 0.01 fibers per cubic centimeter air (f/cc), the contractor shall immediately stop all work, correct the condition(s) causing the increase and notify the Architect/Abatement Consultant.

3.6 **CLEANING**

3.6.1 Daily Cleaning: Thoroughly clean the entire area under active asbestos disturbance at the end of each workday.

3.6.1.1 At end of work shift remove any asbestos containing material or debris by using a HEPA vacuum or by spraying with wet wash solution, collect debris with wet paper towels or equivalent, place in disposal bag while still wet, and clean surface of plastic sheets with wet paper towels or equivalent.

3.6.1.2 Exterior Cleanup:

3.6.1.2.1 Examine immediate area to ensure that no asbestos debris has escaped containment. Debris shall be placed in double plastic bags, sealed and stored with other contaminated debris.

3.7 **PROJECT CLEARANCE:**

3.7.1 Upon completion of asbestos removal, placement of removed asbestos material and debris in waste storage containers, vacuuming of surfaces, notify the Architect/Abatement Consultant that the abatement area is ready for post abatement visual inspection. Provide additional removal or cleaning as directed by the Architect/Abatement Consultant to provide acceptable surfaces for construction of new materials with no additional disturbance of ACM.

3.7.2 The work area shall have passed post abatement visual inspection prior to post removal encapsulation. Negative air must continue to run and workers must remain in specified respiratory protection.

3.7.3 An approved encapsulant shall be applied, using airless spraying equipment, to all areas of the project where asbestos-containing materials have been removed. Encapsulants shall be colored for ready visibility.

3.7.4 Upon completion of encapsulation of surfaces from which asbestos has been removed (allowing for at least two hours for encapsulant to dry), the Contractor shall inform the Architect/Abatement Consultant that the area is ready for clearance monitoring.

3.7.5 The Architect/Abatement Consultant will provide aggressive clearance air testing after the final cleanup and visual inspection, but before the removal of the enclosure of the asbestos control area. Samples shall be analyzed by Transmission Electron Microscopy (TEM) and submitted for a turn around time of 24 hours. All airborne TEM sample results shall be less than the AHERA clearance criteria of 70 structures per square millimeter air (70 st/mm2). Should any of the final samples indicate a higher value, the Contractor shall take appropriate actions to reclean the area and the monitoring shall be repeated.

3.7.8 The Owner will be responsible for all costs of the initial clearance testing. The Contractor shall be responsible for additional testing costs if initial clearance testing does not pass.

3.7.9 The Contractor shall not tear down / remove the negative pressure enclosure or negative air machines until verbal notice has been given to the Contractor by the Architect/Abatement Consultant.

3.8 **STORAGE OF WASTE MATERIALS:**

3.8.1 Waste Evaluation: The materials collected from the cleaning operations must be evaluated to determine if the materials are hazardous and require special handling. The Contractor is responsible for segregating waste as it is generated and labeling all waste containers appropriately. Stored waste must be labeled with the accumulation date, type of waste, and area from which it was generated. All materials are to be contained in one of the following:

3.8.1.1 Two properly sealed 6-mil disposal bags labeled with a hazardous waste label in addition to the required OSHA specified asbestos warning label.

3.8.1.2 Two properly sealed 6-mil disposal bags contained in a metal open head drum. Drum must be labeled with a hazardous waste label in addition to the required OSHA specified asbestos warning label.

3.8.1.3 Wrapped in 6-mil polyethylene sheeting and sealed with duct tape. Wrapped waste must be properly labeled with a hazardous waste label in addition to the required OSHA specified asbestos warning label.

3.8.2 If a dumpster is to be located on site for the duration of the project, arrange location of the dumpster with Architect/Abatement Consultant.

3.8.2.1 Do not store containerized materials outside of the work area. Take containers from the work area directly to a temporary storage location arranged Architect/Abatement Consultant. All open dumpsters are prohibited for any construction debris. Take special care in transporting the waste materials from the location of generation to the storage facility. Waste shall be removed from work area at times selected to minimize contacts with tenants.

3.8.3 Treatment and Testing of Project Waste Water: The handling and treatment of project waste water must conform with all State and local regulations. Project waste water includes shower water and waste water from cleaning operations.

3.8.3.1 Waste water containing asbestos, including drainage from decontamination showers, shall be filtered in accordance with the following requirements prior to introduction into the sanitary sewer system.

3.8.3.1.1 Filter water using four in-line filter cartridges with 2" inlets and outlets. The outlet of each filter cartridge shall be connected in series to the inlet of the next cartridge. The first cartridge shall contain 100 µm prefilters and the second and third cartridge shall contain 25 µm filters and the final cartridge shall contain 5 µm filters.

3.8.3.1.2 Spare filters of all three sizes shall be maintained at the site at all times to replace prefilters during cleaning.

3.8.3.1.3 When the prefilters become clogged, replace with spares, store accumulated debris as contaminated waste, and wash out the prefilters in the shower, allowing the drainage from the cleaning operation to go through the filtration system.

3.8.3.1.4 Provide a holding tank for contaminated wastewater as required to prevent backup of water into shower when the amount of water generated exceeds the flow rate of the filters.

END OF SECTION 028200

ATTACHMENT A

ASBESTOS HAZARD ABATEMENT PLAN AND AIR MONITORING PLAN

ATTACHMENT B

ASBESTOS BUILDING SURVEY

ATTACHMENT A

ASBESTOS HAZARD ABATEMENT PLAN
AND
AIR MONITORING PLAN

Air Quality Analytical, Inc.

Indoor Air Quality Consulting and Environmental Services

ASBESTOS HAZARD ABATEMENT PLAN

AND

AIR MONITORING PLAN

for
Class II Asbestos Containing Floor Tile and Mastic

Building:
Neuwirth Building
520 N. Third Street,
Wilmington, NC

PREPARED FOR:
HR Associates P.A.
2202 Wrightsville Ave., Suite 212,
Wilmington, NC 28403

PREPARED BY:

John R. Folger
Air Quality Analytical, Inc.
3411 Marsh Hawk Ct.
WILMINGTON, NC 28409
910-397-0370

Designer # 40470 Signature _____ Date 3/2/17
JOHN R. FOLGER

SAM # 90071 Signature C. Michael Underhill, CIH, CSP Date 3/6/2017
Michael C. Underhill

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PART 1: GENERAL

1.1 DESCRIPTION OF WORK

Asbestos Containing Materials:

Perform regulated or non-regulated removal of approximately 1,560 square feet of asbestos containing floor tile and associated mastic located within the building. A majority of the asbestos containing floor tile is located under carpet and partition walls that will need to be removed prior to abatement. The asbestos contractor will be responsible for demolition and disposal of the partition walls and doors, and cellulose ceiling tiles within the building area.

Engineering Controls:

- Negative Pressure Enclosure for regulated removal, cleanup, and decontamination procedures:
- Wet Methods
- HEPA Vacuuming

Work Practices:

- Remove vinyl asbestos containing flooring utilizing negative pressure differential and NPE control methods, utilizing non-friable removal methods where feasible.
- Remove floor mastic using wet methods (liquid solvent mastic remover)
- Decontaminate work areas following abatement procedures.

Decontamination Area:

- Full attached three-stage personnel decontamination unit for regulated removals
- Attached personnel and waste decontamination units for regulated removals

Air Monitoring:

- PCM areas and personals (personal OSHA samples are the abatement contractors responsibility)
- Area monitoring to meet EPA and NCHHCU Asbestos Branch requirements for air monitoring.
- PCM clearance upon completion regulated work areas

The work includes the handling of asbestos containing materials (ACM) and the incidental

procedures and equipment required to protect workers and other work practices within the building from exposure to airborne asbestos fibers.

The procedures covered by this Asbestos Hazard Abatement Plan (AHAP) include the demolition, removal, and disposal of OSHA Class II ACM (Vinyl Floor Tile and Mastic Adhesives). The work involves the handling of friable or potentially friable ACM/PACM, and it shall be handled so that it does not present a source of asbestos fiber exposure to the removal contractor's employees, or other trades that might be present of may be present during abatement activities or after abatement is complete. In addition, area personnel, materials, and facilities shall be appropriately protected from contamination during removal and disposal.

1.2 REFERENCES

The publications listed below form a part of this AHAP to the extent they are referenced. The publications are referred to in the text by the basis designation only.

1.2.1 Code of Federal Regulations (CFR)

29 CFR 1910.134 1998 Respiratory Protection

29 CFR 1910.145 Specifications for Accident Prevention, Signs and Tags

29 CFR 1910.1200 1988 Hazards Communication

29 CFR 1926.1101 Asbestos Construction Standard
40 CFR 61 National Emission Standards for Hazardous Air Pollutants (NESHAP)

- SUBPART A General Provisions
- SUBPART M National Emission Standard for Asbestos

40 CFR 763 Asbestos Hazard Emergency Response Act

1.2.2 American National Standards Institute (ANSI)

ANSI Z 9.2 1979 Fundamentals Governing the Design and Operation of Local Exhaust Systems

ANSI Z 88.2 1980 Practice for Respiratory Protection

1.2.3 American Society for Testing Materials (ASTM)

ASTM D 13.31 1956 (Rev. 1980) Surface and Interfacial Tension of Solutions of Surface-Active Agents.

ASTM E 84 1989 (Rev. A) Surface Burning Characteristics of Building Materials

ASTM E 119 1988 Fire Tests of Building Construction and Materials

1.2.4 Underwriters Laboratories (UL)

UL 586 1985 High Efficiency, Particulate, Air Filter Units.

1.2.5 Environmental Protection Agency (EPA)

Guidance for Controlling Asbestos-Containing Materials in Buildings,
EPA 560/5085-024, June, 1985.

Asbestos Waste Management Guidance, EPA/530-SW-85-007, May 1985.

Measuring Airborne Asbestos Following an Abatement Action, EPA 600/4-85-049, November 1985.

1.3 REQUIREMENTS

1.3.1 Definitions

Aggressive Methods: Removal or disturbance by sanding, abrading, grinding or other method that breaks, crumbles, or disintegrates intact ACM.

Amended Water: Water containing a wetting agent, or surfactant, designed to allow the water to adequately wet asbestos fibers.

Area Monitoring: Sampling of airborne asbestos fibers inside and outside the Asbestos Regulated Area and which is representative of the airborne concentrations of fibers that may reach the breathing zone of personnel that may be exposed to asbestos.

Asbestos: Fibrous Chrysotile, Amosite, Crocidolite, Tremolite, Anthophylite, and Actinolite; which are naturally occurring minerals.

Asbestos Fibers: Asbestos having a length-to-width ratio of 3:1 or greater and a length of 5 microns or greater.

Authorized Person: An accredited person authorized by the employer and required by work duties to be in the regulated area or a NC State Asbestos Regulator.

Building/Facility Owner: The legal owner, including a lessee, which exercises control over management and record keeping functions relating to a building/facility in which activities covered by 29 CFR 1926.1101 take place.

Class I Work: Activities involving the removal of TSI and surfacing ACM/PACM; "high risk" ACM/PACM.

Class II Work: Activities involving the removal of all other ACM/PACM.

Class III Work: Repair and maintenance activities where Class 1 & 2 ACM/PACM is likely to be disturbed.

Class IV Work: Maintenance and custodial activities during which employees contact ACM/PACM; and activities to clean up waste and debris containing ACM/PACM.

Closely Resemble: The major workplace conditions which have contributed to the levels of historic asbestos exposure are no more protective than conditions of the current activity.

Competent Person: 29 CFR 1926.32(f), plus: GENERAL - one who is capable of identifying existing asbestos hazards, able to select the appropriate control strategy, and who has the authority to take prompt corrective measures to eliminate them; CLASS 1 & 2 WORK -

specifically trained according to 40 CFR 763 as a Project Designer or Supervisor; CLASS 3 & 4 WORK - specifically trained in an O & M course as per 40 CFR 763.92(a)(2).

Critical Barrier: One or more layers of plastic sheeting or equivalent material placed over openings in the work area, and sufficient to prevent airborne asbestos in the work area from migrating to an adjacent area.

Decontamination Area: An enclosed area adjacent to and connected to the Regulated Area, and consisting of an equipment room, shower area, and clean room, which is used to decontaminate workers, materials and equipment.

Disturbance: Contact with ACM/PACM or debris containing ACM/PACM which has the potential to releases fibers; activities disrupting the matrix of ACM/PACM, render it friable, or generate visible debris; cutting away small amounts of ACM/PACM to access building components, the amount not to exceed the quantity that can be contained in one standard disposal bag.

Employee Exposure: The concentration of airborne asbestos to which abatement personnel would be exposed if the employee were not wearing respiratory protection equipment.

Friable Asbestos Containing Material: Material containing one percent or more of asbestos; and, which can be crumbled, pulverized, or reduced to a powder by hand pressure when dry.

Glovebag: A not more than 60” x 60” impervious plastic bag-like enclosure affixed around an asbestos containing material, with glove-like appendages through which material and tools may be handled.

HEPA Filters: High Efficiency Particulate Air; Filters capable of removing particles of 0.3 um with a minimum efficiency of 99.97 percent.

Homogeneous Area: An area of TSI or surfacing material that is uniform in color and texture.

Intact: ACM that has not been crumbled, pulverized, or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix.

Local Exhaust System: A system consisting of HEPA-filtered air moving devices used to maintain a static pressure in an enclosed work area that is lower than that of the environment outside the work area.

Modification: A changed or altered procedure, material, or component of a control system that replaces a procedure, material, or component of a required system.

Negative Initial Exposure Assessment: A demonstration by the employer that employee exposure during an activity is expected to be consistently below the PEL and Excursion Limit.

Negative Pressure Enclosure (NPE): A temporary structure made of single or double layer of 6-mil plastic sheeting that encloses the work area, has a restricted entry way, and which is sufficiently sealed to allow depressurization using a local exhaust system.

Non-friable Asbestos Material: Material that contains more than one percent by weight of asbestos, and in which the asbestos fibers are locked-in and not subject to release in excess of the Permissible Exposure Limit during appropriate use or handling.

Permissible Exposure Limit (PEL): The highest level of employee exposure, as measured by an 8-hour Time Weighted Average, allowed by law. The PEL for asbestos fibers is 0.1 fibers per cubic centimeter of air (0.1 f/cc).

Personal Monitoring: Sampling of airborne asbestos fiber concentrations within the breathing zone of an employee to determine the 8-hour Time Weighted Average. The samples shall be representative of the employee's work tasks; and shall be obtained within 12 inches of the employee's nose or mouth.

PACM: Presumed Asbestos Containing Material; TSI and surfacing material, or miscellaneous materials found in buildings constructed before 1981.

Regulated Area: An area surrounding an asbestos abatement project that is isolated by physical barriers and identified by posted signs, to prevent unauthorized entry of personnel, and to prevent the spread of asbestos dust, fibers, or debris.

Standard Disposal Bag: An asbestos disposal bag or glove bag not exceeding 60 inches in length and width.

Surfacing Material: Material that is sprayed-on, troweled-on, or otherwise applied to surfaces (acoustical plaster, fireproofing, etc.).

Surfactant (Wetting Agent): A chemical agent that is added to water to improve the penetration (wetting) of asbestos, which shall be understood to mean a chemical with a surface tension of 29 dynes/cm as tested in accordance with ASTM D 1331. The surfactant shall be a 50/50 mixture of polyoxyethylene ether and polyoxyethylene ester, or equivalent, mixed in a proportion of one fluid ounce to 5 gallons of water, or as specified by the manufacturer.

TSI: Thermal System Insulation; ACM applied to pipes, fittings, boilers, breaching, tanks, ducts, or other components to prevent heat loss/gain.

TWA: Time weighted average of employee exposure received during an 8-hour work shift.

1.3.2 Title of Materials

All materials resulting from demolition work, except as otherwise specified, shall become the property of the Abatement Contractor and shall be disposed of according to this Plan.

1.3.3 Protection of Existing Work to Remain

The Abatement Contractor shall perform demolition, removal and disposal work without damage or contamination of adjacent work. Where such work is damaged or contaminated, it shall be restored to its original condition or better.

1.3.4 Medical Requirements

1.3.4.1 Medical Examinations

Before abatement personnel are allowed to work in contaminated areas, they shall have an appropriate medical examination in accordance with 29 CFR 1910.134 and 1926.1101; and, in accordance with State, and local regulations. Such examinations shall be given on an annual basis to employees engaged in asbestos-related work, and within 30 days after termination of employment in such an occupation.

1.3.4.2 Medical Records

The employee's medical records shall be appropriately identified to the consulting Physician with the word "ASBESTOS" on the cover. The results of medical examinations shall be retained by the Abatement Contractor for a period of 30 years after the termination of employment. These records shall be available for inspection and copying by the Assistant Secretary of Labor for the Occupational Safety and Health Administration, the Director of the National Institutes of Health, authorized representatives of either agency, and by the employee's Physician upon the written request of the employee or former employee.

1.3.5 Training

The Health Hazards Control Unit (HHCU) shall accredit all personnel employed by the Abatement Contractor who are involved in asbestos abatement work. Training shall be in accordance with 29 CFR 1926 and North Carolina state regulations, include a minimum of 32 hours of EPA-accredited instruction, including : (1) all pertinent regulations, (2) health effects of asbestos, (3) proper safety and work procedures, (4) respiratory protection equipment, and (5) decontamination.

Certificates documenting completion of EPA-accredited training for all asbestos workers and supervisors assigned to this project shall be included in the Submittal.

All supervisors on the project shall have a minimum of two years experience in the administration and supervision of asbestos abatement projects including work practices measures for building personnel, disposal, procedures, etc.

A minimum of one supervisor per work shift shall have attended a 24-hour respiratory protection course.

1.3.6 Permits, Licenses, and Notifications

1.3.6.1 Permits

The Abatement Contractor shall choose the asbestos disposal site. A copy of the landfill permit shall be included in the submittal.

1.3.6.2 State Licenses

The Abatement Contractor shall maintain a current general contractor's license, as well as personal licenses for asbestos supervisors (competent person) and asbestos workers, in accordance with North Carolina Law.

1.3.6.3 Notifications

The Abatement Contractor shall (1) notify the Owner's Representative verbally, three days prior to the start of work, and (2) submit written notifications, as required, prior to the start of work to the appropriate local, state, regional and federal agencies.

Written notifications shall include the following information: (1) Contract number; (2) Name, address, and license number of the Abatement Contractor and personnel; (3) The starting date, proposed work hours, and planned completion date; (4) Project description, including name and location of the building; description of the building - including size, age, and prior use; approximate amount of ACM to be removed; (5) A description of the abatement methods to be employed; and (6) The procedures to be used to comply with 40 CFR 61, Subparts A, B, and M; (7) The Asbestos Removal Permit.

1.3.6.4 OSHA Notification (Not applicable)

The Abatement Contractor shall notify OSHA, in advance of performing Class 1 Work, if any intended changes to the use of recognized engineering control systems.

1.3.6.5 Equipment Rental Notification

If rental equipment is to be used during asbestos abatement, handling, or disposal, written notification concerning the intended use of the equipment shall be furnished to the rental

agency, with a copy to the Owner's Representative.

1.3.7 Safety and Health Compliance

In addition to the procedures included in this AHAP, the Abatement Contractor shall comply with (1) all laws, ordinances, rules, and regulations of federal, state, regional, and local authorities regarding the handling, storage, transportation, and disposal of asbestos-containing materials, (2) 29 CFR 1910.134 and 1926.1101, and 40 CFR 61 - A, B & M, and (3) 29 CFR 1926.59, including copies of all Safety Data Sheets.

The Contractor shall submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. The most stringent requirements shall apply should a conflict arise.

The Contractor shall:

1. Comply with OSHA lockout/tagout rules; shall disconnect electrical service when wet removal is performed; and shall use only GFI circuits.

2. Comply with OSHA and confined space entry rules.

3. Comply with OSHA Bloodborne Pathogen rules.

4. Comply with ACGIH cold and heat stress guidelines

5. Prepare fire, accident, and medical emergency response plans. Comply with the applicable recommendations of NFPA Standard 10-Standard for Portable Fire Extinguishers. Locate fire extinguishers where they are most convenient and effective for their intended purpose, but provide not less than one extinguisher in each work area equipment room and one in the clean room of the personnel decontamination unit.

6. Prepare contingency plans for electrical power failure and the failure of negative air machines.

7. Supply a minimum of one first aid kit located in the clean room. Additional first aid kits as the contractor feels is adequate or is required by law shall be located throughout the work area.

Abatement personnel shall be informed of the contents of the required compliance plans prior to beginning work.

1.3.8 Hazard Communication

The Abatement Contractor shall comply with the Hazards Communication requirements (1910.1200 and 1926.59). The Owner's Representative shall be supplied with a copy of the Safety Data Sheets (SDS) for all chemicals or substances brought to the job site, including mastic removers.

1.3.8.1 Facility Owner

The building owner shall communicate his knowledge of the presence and location of ACM based on "available" (actual knowledge or the exercise of due diligence) information; and the presence and location of ACM/ PACM unless the facility was built/renovated after 1979:

1. Air monitoring results and locations of remaining ACM/PACM (in the scope of work) shall be submitted to the building/facility owner by the Abatement Contractor within 10 days following completion of abatement work;

2. The Abatement Contractor shall inform the building/facility owner of the location and quantity of any previously unknown ACM/PACM within 24 hours.

It shall be the responsibility of the Abatement Contractor, and all other employers with employees potentially exposed to asbestos in the event of a breach in a Negative Pressure Enclosure (NPE), to ascertain on a daily basis the integrity of the enclosure and the effectiveness of the control methods.

1.3.8.2 Multi-employer Worksites

An Abatement Contractor performing work requiring the establishment of a regulated area shall inform other employers on the site of the involvement of the work with ACM/PACM; of the existence of and requirements pertaining to regulated areas; and the measures being taken to ensure that employees of other employers are not exposed to asbestos.

Employers of employees who are subject to potential exposure to asbestos on a multi-employer work site shall take measures to protect their employees; including removing the employees from an area until conditions are corrected and a clearance is obtained; or, performing an initial exposure assessment.

1.3.8.3 General Contractor

The General Contractor on a construction site covered by 29 CFR 1926.1101 shall be deemed to exercise general supervisory authority over the abatement work. The General Contractor shall ascertain whether the Abatement Contractor is in compliance with the OSHA Standard, and shall require the Abatement Contractor to come into compliance with the Standard when

necessary.

The General Contractor shall be aware that the CIH/SAM and the air-monitoring laboratory are subcontractors to the Owner; and, the abatement workers are the employees of the Abatement Contractor. It shall be the responsibility of the CIH and/or the air monitoring laboratory to: (1) document work practices that are not in compliance with the OSHA Standard, (2) verbally inform the Competent Person of the non-compliance activity, and (3) inform the Owner of the non-compliance activity. The Owner shall have the authority to issue a stop-work order to employees of the abatement Contractor.

1.3.9 Respiratory Protection Program

The Abatement Contractor shall begin work using a level of respiratory protection consistent with the Initial Exposure Assessment. The minimum initial level of respiratory protection required for this project during *gross removal* of regulated material is Powered Air Purifying Respirators with P-100 filter cartridges.

If supplied air respirators are used, the contractor shall provide a minimum of Grade D breathing air as set forth in the Compressed Gas Association's Commodity Specifications for Air, G-7.1. The contractor shall test for Grade D breathing air initially and daily thereafter. Daily testing is not needed if the contractor has an air purification system that has CO and organic purging capabilities as well as a continuous CO monitor and alarm calibrated at 10 ppm. The system must be calibrated at least once a week or when it is moved.

Provide emergency backup air supply, egress SCBA or egress HEPA filters for each worker in work area at all times when Type-C (supplied air) respirators are required. Breathing air system shall provide one hour of reserve air, calculated for maximum crew size for emergency evacuation.

Where Type C respirators are utilized, the contractor is required to have an employee in the vicinity of the source of air. The contractor shall take into account the location of the fresh air intake to ensure no pollutant source is in the vicinity. The audible alarm shall be located where the employees inside and outside containment can hear the alarm.

The Abatement Contractor shall have an established Respiratory Protection Program that complies with 29 CFR 1910.134, 29 CFR 1926.1101, and ANSI Z88.2.

The Contractor shall only use respiratory protective equipment certified by NIOSH. Respirator fit testing shall conform to this program.

The type of respirator chosen by the Abatement Contractor shall be in accordance with the minimum respirator selection criteria prescribed in 29 CFR 1926.1101. However, the criteria in Table 1 are recommended for use by the Abatement Contractor after the initial exposure

assessment. Respirators and protective clothing shall no longer be required after the Asbestos Control Area has passed both the final visual inspection and the clearance air sampling.

TABLE 1

RESPIRATOR SELECTION CRITERIA

Airborne Concentration of Asbestos	Required Respirator
Not in excess of: 0.1 fibers/cc	*Half Face Negative Pressure Respirator, with P-100 Filter Cartridges
Not in excess of: 0.5 fibers/cc	Powered air purifying Respirator, with P-100 Filter Cartridges
In excess of: 0.5 fibers/cc	Full face, positive pressure, supplied air, operated in the pressure-demand mode, with HEPA filtered backup source

*Minimum respiratory protection during gross removal of TSI and Surfacing material shall be Powered Air Purifying Respirators with P-100 Filter Cartridges.

1.3.10 Masking and Sealing

Establish critical barriers by sealing openings in areas where the release of airborne asbestos fibers is expected. This includes HVAC components, vents, doors, windows, light fixtures, and penetrations. Critical barriers shall consist of two layers of 6-mil fire retardant, re-enforced poly securely fastened to the opening using tape and/or adhesive.

1.3.11 Air Monitoring Laboratory

The Owner's representative shall be responsible for the coordination and contracting of an industrial hygiene firm.

Air monitoring activities shall be performed under the supervision of a licensed Supervising Air Monitor (SAM).

The SAM shall be accredited per the Asbestos Health Hazards Control Unit Program rules.

The Air monitor shall be accredited as per the Asbestos Health Hazards Control Unit program rules and work under the direct supervision of a SAM.

If specific project activities are assigned to an air monitor, the SAM is expected to be in direct control and responsible for industrial hygiene work completed on the project.

The industrial hygiene firm shall offer expertise to the owner's rep. and abatement contractor, but is not directly responsible for the performance of the job.

At the job site, the industrial hygiene firm is expected to observe, be aware, and comment on general work site conditions and activities as they relate to the specifications and profession of industrial hygiene, and make recommendations in writing to the owner's rep. and contractor.

The industrial hygiene firm is responsible for overseeing the protection of the environment from contamination, protection of persons in adjacent areas, and assurance that the areas are acceptable for occupancy.

The industrial hygiene firm has the authority to direct the abatement contractor relative to environmental safety concerns. This includes stopping the work if necessary. All directions and comments made by the industrial hygiene firm to the contractor shall be written with a copy to the owner's rep.

The industrial hygiene firm shall furnish the contractor a copy of his field report within 24 hours of the visit. Copies of field notes and reports of observations shall be kept in project logbook.

The SAM shall approve any change in contractor's respiratory protection. This includes a review of the historical data.

The industrial hygiene firm is to conform to the contractor's schedule and shall respond to necessary changes, provided adequate notice is given.

The industrial hygiene firm's project monitor shall furnish owner's rep. and contractor with mobile phone number where he can be reached quickly at all times.

The industrial hygiene firm shall notify the owner's representative and contractor, in writing, of any failed clearance visits.

Persons performing phase contrast microscopy analysis at the asbestos removal location shall be proficient in the American Industrial Hygiene Association's Asbestos Analyst Registry (AAR), or Proficiency Analytical Testing (PAT) Programs.

If TWA samples are being collected by the contractor for the purpose of reducing respiratory protection requirements, the industrial hygiene firm shall directly observe the conditions and

work practices represented by each sample and make appropriate notes on site. The SAM shall review all TWA air-sampling results that are used for reducing respiratory protection requirements before accepting the results.

1.3.12 Landfill Approval

An approved landfill shall be selected for the disposal of asbestos waste.

Evidence that the landfill is approved by all applicable regulatory agencies shall be included in the submittal. Detailed delivery tickets shall be submitted within three (3) days after delivery, or as soon as possible thereafter. The tickets shall be prepared, signed, and dated by an agent of the landfill, and certify the amount of ACM delivered.

1.3.13 Pressure Differential in the Negative Pressure Enclosure (NPE)

A negative pressure differential of at least -0.02 inches of water column, via magnahelic or manometer, shall be maintained between the NPE and adjacent areas.

The pressure differential between the NPE and adjacent areas shall be monitored at least once every two hours during the work shift; and recorded on the field sheet for review by the CIH.

The pressure differential between the NPE and adjacent areas shall be monitored continuously using a differential pressure monitor supplied by the Abatement Contractor. The air-monitoring technician shall record the pressure reading on the field sheet at least once every two hours during the work shift.

1.3.14 Site Inspection

The Abatement Contractor shall be subject to on-site inspections by the Certified Industrial Hygienist, the Owner's Representative, or other safety and health personnel. If any inspection finds the abatement work to be in violation of the specifications in the AHAP, the owner may issue a stop-work order immediately; to be in effect until the status of the violation is resolved. The resulting standby time and expenses required to resolve the violation shall be at the expense of the Abatement Contractor.

1.3.15 Materials

Deliver materials to the job site in original, packages and containers. A Safety Data Sheet shall accompany all relevant materials. Materials and supplies shall conform to the test requirements mandated by the Specifications prepared by the Owner. The Contractor shall provide a penetrating encapsulant that meets or exceeds the following criteria: (1) Rated "acceptable" for friable ACM, (2) Rated as "acceptable" when field tested in accordance with ASTM P-189, (3) A flame spread index of less than 25 when tested in accordance with ASTM E-84, and (4)

Compatibility with the substrate to which it is applied.

PART 2: METHODS OF COMPLIANCE

2.1 GENERAL REQUIREMENTS

The Abatement Contractor shall designate a competent person to be the supervisor at the asbestos control area. The supervisor shall be responsible for performing the following duties:

1. Set up the asbestos control area.
2. Control entry to and exit from the work area.
3. Supervise employee exposure monitoring.
4. Ensure that employees wear personnel protective equipment.
5. Ensure that employees are adequately trained and licensed.
6. Ensure that employees use proper hygiene practices.
7. Ensure that adequate engineering controls are used.

Asbestos abatement work shall be performed in accordance with 29 CFR 1926.1101, and as specified in the AHAP, as follows: use wet removal procedures; personnel shall wear protective clothing, as specified; eating, drinking, or smoking shall not be permitted in the asbestos control area or decontamination unit; shut down, lock-out, and isolate HVAC systems (AHU, intakes, vents, ducts) that supply, exhaust, or pass through the Asbestos Control Area; disconnect electrical service during wet removals and provide electrical service protected by a ground fault interrupter circuit.

Wet asbestos containing material with a fine spray of amended water, other approved wetting agent, or a removal encapsulant during removal, cutting, or other handling to reduce fiber emissions. Immediately place removed asbestos containing material in approved, labeled plastic bags.

Promptly collect asbestos containing waste, scrap, debris, bags, containers, equipment, and contaminated clothing, and seal them in approved, labeled plastic bags. The sealed disposal bags shall be stored and removed from the site in approved and labeled asbestos drums or other approved, enclosed containers.

HEPA vacuum all surfaces, and clean all surfaces in the work area using cloth.

A visual inspection shall be performed by the air-monitoring laboratory to ensure that all visible dust and debris has been removed.

2.1.3 Prohibited Methods

High-speed abrasive disc saws not equipped with HEPA filters; Use of compressed air on

ACM/PACM material, waste or debris; Dry sweeping of waste and debris; Employee rotation to reduce employee exposure.

2.1.4 Negative Pressure Enclosure

A minimum of 4 air changes per hour; A minimum of -0.02 inches of water column, measured; Negative pressure maintained throughout its use; Air movement directed away from employees; Use of HEPA-filtered collection devices; Inspected, smoke tested, and repaired before each work shift; Electrical circuits deactivated or equipped with GFI circuits.

A negative pressure enclosure (NPE) shall be established prior to the start of work, as required, using plastic curtains, partitions, or other enclosures in order to prevent (1) contamination of surfaces within the work area, and (2) the escape of asbestos fibers from the contaminated work area.

Openings in the enclosed asbestos work area shall be allowed for worker egress, through the attached decontamination unit, and for the local exhaust system.

2.2 WORK CLASSIFICATION SCHEME

2.2.2 Class 2 Work (Floor tile/mastic adhesives)

For all Class 2 Work (a) without a negative exposure assessment, (b) where conditions change during the activity, or (c) the ACM/PACM is not removed in a substantially intact state, the Abatement Contractor shall use one of the following methods:

1. Critical barriers over all openings in the work area; or

2. An additional barrier or isolation method, the effectiveness of which is verified by perimeter or clearance monitoring; impermeable drop cloths on surfaces below all removal activities.

2.2.1.1 Flooring/Floor Tile & Mastic

Aggressive techniques such as "shot blasting" shall not be used unless an evaluation shows less aggressive techniques are not feasible. Aggressive methods require critical barriers and a NPE or equivalent.

The Competent Person shall perform a re-assessment if more aggressive techniques are resorted to after a project begins.

Flooring or its backing shall not be sanded.

Dry brushing or sweeping shall not be used. A metal floor tool and HEPA-vacuum shall be used

to clean the floor.

Floor tiles, and mastic shall be removed using wet methods. All scraping of adhesives and mastics shall be done using wet methods.

Wetting may be omitted when tiles are heated and removed intact. The Abatement Contractor shall determine whether a "hot work" permit is required.

Tiles shall be removed intact, unless it is demonstrated to be unfeasible.

A NPE shall not generally be required when the Abatement Contractor uses non-aggressive removal methods for flooring. However, if the ACM becomes friable at anytime during abatement, it shall be removed in a NPE.

Openings and penetrations in the work area shall be sealed by critical barriers. Before the asbestos removal begins, all objects that cannot be removed from the work area shall be covered with two layers of polyethylene sheeting that is securely taped with duct tape to achieve an airtight seal around the object, and a local exhaust system shall be installed.

Prior to removal, the HVAC systems that supply, exhaust, or pass through the asbestos work areas shall be shut down and isolated. The intake and exhaust vents and seams of HVAC components in the asbestos work area shall be sealed.

The ACM shall be soaked with amended water and carefully removed with non-mechanical hand tools and wet methods, or using mechanical scrapers and wet methods, or heat guns or head machine (with required Hot Work Permit). Care shall be taken to remove the tiles in one piece to the extent possible.

Mastic and/or adhesive shall be removed using a solvent approved for interior use. The solvent shall be applied, allowed to dissolve the mastic, and the gross waste removed and containerized. The residue shall be collected using an absorbent, followed by wet cleaning.

The solvent used to remove floor tile mastic shall be nonflammable, and shall not create a significant inhalation hazard as measured by ACGIH TLV's or OSHA PEL's. Air monitoring using colorimetric tubes may be used to monitor vapor levels within containment. A local exhaust system must be installed and vented outdoors if solvents are used, and the vent shall terminate at least 20 feet from an occupied building.

Using wet methods and/or HEPA vacuuming, clean the entire work area, which shall be visibly clean prior to final clearance sampling. After plastic sheeting is wet-wiped upon completion of asbestos removal, and all areas within the work area are visually clean, the Contractor may apply a lock-down encapsulant. The work area shall be completely dry before clearance testing may begin.

Air sampling shall yield fiber concentrations of 0.01 f/cc or less before the critical barriers may be removed.

PART 3 EQUIPMENT

3.1 PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment (PPE) shall be worn by workers and other authorized persons when they are in an asbestos regulated area. All authorized personnel shall wear PPE when:

(1) in contact with friable ACM during area preparation,
(2) friable ACM may be disturbed,
(3) within the asbestos regulated area.

The Abatement Contractor shall furnish the Owner's Representative with two complete sets of PPE daily, as required, for entry into and inspection of the asbestos regulated area. This equipment shall include respirators, disposable protective whole body coverings, head coverings, gloves, foot coverings, eye protection, and use of the Contractor's change room. The personal protective equipment shall remain the property of the Abatement Contractor.

The Abatement Contractor shall furnish personnel exposed to airborne concentrations of asbestos fibers greater than or equal to the PEL with disposable protective whole body clothing, head coverings, gloves, foot coverings, and respirators. Tape shall be used to secure sleeves at the wrists and to secure foot coverings at the ankles. Cloth work clothes may not be worn under the disposable protective coveralls.

The Abatement Contractor shall furnish disposable plastic or rubber gloves to protect hands. Cloth gloves may be worn inside the plastic or rubber gloves for comfort, but shall not be used alone.

The Abatement Contractor shall furnish goggles for project personnel engaged in asbestos removal operations when the use of a full-face respirator is not required.

3.2 DECONTAMINATION UNIT

The Abatement Contractor shall provide separate personnel and waste load out Decontamination Units designed as per the specifications contained in 29 CFR 1926.1101. The decontamination units shall be adjacent to and connected to each NPE.

A decontamination unit shall have the following parts: (1) air locks between rooms, (2) dirty room, (3) shower room, (4) clean room, (5) hot and cold running water. The Contractor shall

supply dispensable soap and disposable towels.

Shower waste water shall be handled and disposed of as asbestos containing material; or, shall be filtered through a final filter that has the capability of collecting 0.5 micron or larger particles before disposal into the sanitary sewer system. The final filters shall be handled and disposed of as asbestos containing material.

Backflow prevention shall be provided when connecting the shower to a potable water supply. The pre-filter and final filter for the shower water shall be located inside the shower room; or, in a location where the wastewater can be contained while changing filters.

3.3 LOCAL EXHAUST SYSTEM

The Abatement Contractor shall provide a local exhaust system in the NPE in accordance with ANSI Z9.2, and as specified in the AHAP.

Filters on vacuums and exhaust equipment shall be absolute HEPA filters and UL 586 labeled or equivalent. Filters shall be replaced as required to maintain the efficiency of the system, and used filters shall be treated as asbestos containing material. Exhaust systems shall be equipped with new HEPA filters for each project and shall comply with ANSI Z9.2-79 and used according to manufacturer's recommendations. Air shall be exhausted outside the building. Any variations must be approved by the HHCB. Prior to abatement, demonstrate the system is working properly using visual inspection and smoke tubes.

No portion of the building heating, ventilating, and air conditioning system shall be used as part of the local exhaust system. Care shall be taken to ensure that the exhausted air is released either into an asbestos-free area, or in such a way so as not to disturb any ACM.

The NPE shall be exhausted using approved negative air machines. The number of machines functioning in the asbestos control area shall be sufficient to (1) provide a minimum of one complete air change every 15 minutes, and (2) maintain a minimum pressure differential of negative 0.02 inches of water column relative to the adjacent un-contained areas. The local exhaust system shall be operated continuously, 24 hours a day, until the NPE is removed.

Vacuums and exhaust equipment shall be leak-proof to the filter, which shall be absolute HEPA filters. Filters shall be replaced as required to maintain the efficiency of the system, and used filters shall be treated as ACM. Pre-filters shall be changed when the indicated pressure drop on a negative air machine exceeds 2 inches, or manufacturer's specifications.

3.3.1 Differential Pressures

The Abatement Contractor shall provide a manometer-type or magnehelic type pressure differential monitor with scale divisions of 0.02 inches of water and an accuracy within plus or minus one percent. Pressure differential readings shall be obtained within the NPE at the furthest point possible from the local exhaust equipment. Laboratory personnel shall record pressure differential readings at the beginning of each workday, and every two hours thereafter. It is recommended that a recording manometer be used to continuously record pressures.

3.4 CAUTION SIGNS AND LABELS

3.4.1 Caution Signs

The Abatement Contractor shall provide caution signs, printed in English, at approaches to the asbestos control area. A caution sign shall be visible from all points of entry to the building. Signs shall be located at a sufficient distance from the building so that personnel may take the necessary precautions before entering the area.

Caution signs shall be composed as per the specifications contained in 29 CFR 1926.1101, paragraph (k)(6), and shall contain the following language in the format shown:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA

3.4.2 Caution Labels

The Abatement Contractor shall provide caution labels printed in English. The labels shall be affixed to asbestos materials, scrap, waste, debris, sealed impermeable bags, asbestos waste drums, and other asbestos contaminated products. The labels shall be printed with bold print on a contrasting background, displaying the following legend:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

BREATHING ASBESTOS DUST MAY
CAUSE SERIOUS BODILY HARM

HAZARD SUBSTANCE Transporter: Name & Telephone
CLASS 9 Generating Facility: Name & Address
NA2212, III Date: Loaded
RQ (ASBESTOS)

3.5 EXPOSURE ASSESSMENT AND MONITORING

3.5.1 Assessment

A Competent Person shall conduct an exposure assessment immediately before or at the initiation of the abatement activity to ascertain expected exposures during the activity. The assessment shall provide information necessary to assure that all control systems are appropriate for that activity and will work properly.

The initial exposure assessment shall be based on:

(1) The condition of the ACM/PACM;
(2) Type and amount of asbestos in the ACM;
(3) Location of the ACM (type of substrate or matrix);
(4) Furnishings and equipment to remain in the work area;
(5) Adjacent areas that may be occupied during the activity;
(6) The presence of HVAC components or other critical components;
(7) The abatement method and work practices;
(8) The experience and/or historical data of the work crew.

A Negative Initial Exposure Assessment shall be based on:

(1) objective data demonstrating the material or abatement activity cannot release fibers in excess of the PEL and Excursion Limit under those conditions having the greatest potential for releasing asbestos;

(2) previous monitoring data obtained within the last 12 months during activities which "Closely Resemble" the current activity and that indicate with a high degree of certainty that employee exposures will not exceed the PEL and Excursion Limit; and

(3) initial personal exposure monitoring data on the current activity covering operations most likely to result in exposures over the PEL and Excursion Limit.

The Abatement Contractor, at the discretion of the Owner's Representative, may terminate personal air monitoring if initial employee exposures obtained during the current activity

indicate, by statistically reliable measurement, that employee exposures are below the PEL and Excursion Limit.

However, the employer shall re-instate personal monitoring whenever there has been a change in process, control equipment, personnel, or work practices; independent of a previous Negative Exposure Assessment. Therefore, the Abatement Contractor shall inform the Owner's Representative in writing of any such changes.

Personal samples shall be obtained on at least 25 percent of the abatement workers inside the asbestos control area. An excursion sample, consisting of a 30-minute personal sample obtained during the heaviest portion of the abatement work, shall be obtained during each 4-hour period of the work shift, or as required to monitor potentially excessive exposures.

3.5.2 Air Monitoring Plan

The performance of Class II Work shall require daily personal and environmental air monitoring unless the Abatement Contractor has made a negative exposure assessment for the entire activity.

The Abatement Contractor is responsible for personal air monitoring.The Building Owner's representative is responsible for environmental air monitoring.

An air-monitoring laboratory shall collect environmental air samples. Air samples shall be collected in accordance with the recommendations and procedures described in 29 CFR 1926.1101, the NIOSH 7400 Method (5-15-89), the OSHA Reference Method (ORM), and as specified in the AHAP. The concentration of total airborne fibers for personal & environmental samples shall be determined by Phase Contrast Microscopy (PCM) in accordance with the NIOSH 7400 Method (5-15-89) and/or the OSHA Reference Method (ORM).

The laboratory shall perform air monitoring during the work (1) outside the entrance of the NPE, (2) at the discharge of the local exhaust system, and (3) at the perimeter of the asbestos regulated area; or as directed by the SAM.

If air monitoring outside the asbestos regulated area shows airborne fiber concentrations have reached 0.01 f/cc, or are above the background levels, the Abatement Contractor shall cease all abatement activities, evacuate personnel from adjacent areas, and attempt to correct the situation. The Owner's representative shall be notified immediately. Work shall not begin again until written approval is obtained from the Owners Representative.

Once it is determined that there are no detectable levels of asbestos fibers emanating or at the discharge of the local exhaust system. Area monitoring may be terminated by direction of the SAM.

The laboratory shall perform clearance monitoring after all surfaces inside the asbestos work area have been cleaned, thoroughly dried, and have passed a final visual inspection. The maximum flow rate shall be 10 liters per minute, with a minimum sample size of 1200 liters for each sample. The establishment of an air concentration of less than 0.01 f/cc for each sample within a work area.

If the air concentration for each sample is greater than or equal 0.01 f/cc, the Abatement Contractor shall re-clean the area and have the testing laboratory repeat the final clearance monitoring. The cost to repeat clearance monitoring as well as sample analysis shall be absorbed by the Abatement Contractor.

3.5.2.1 Air Monitoring Results

Ambient air samples shall be analyzed and the results shall be made available to the Abatement Contractor and Owner's Representative by the start of the following workday, and shall include the following:

(1) Project Description
(2) Sample Number
(3) Name of Area or Employee/SSN
(4) Location and Task Sampled
(5) TWA Results (f/cc)
(6) Start & Stop Times
(7) Analytical Method
(8) Collection/Analysis Dates
(9) Type of Respirator
(10) Signature of Technician
(11) Signature of Analyst

The Supervising Air Monitor shall sign off on all phases of the air-monitoring program.

3.6 CLEANUP AND DISPOSAL

3.6.1 Cleanup

The Abatement Contractor shall: (1) Keep surfaces in the asbestos control area free of accumulations of asbestos containing materials and debris. (2) Keep waste from being distributed over the general area, restricting the spread of dust and debris. Dry sweeping or blowing with compressed air shall not be used on asbestos containing materials.

The Abatement Contractor shall not remove (1) the asbestos control area containment, (2) roped-off perimeter, or (3) caution signs prior to the air monitoring laboratory performing a visual inspection to verify there are no visible accumulations of dust and debris and clearance air sampling establishing an airborne asbestos concentration of less than 0.01 f/cc.

The Owner's Representative and/or the air monitoring laboratory may visually inspect the affected surfaces for residual asbestos containing material and accumulated dust before and after the containment in the asbestos control area is removed. The Abatement Contractor shall re-clean those areas failing inspection.

The Abatement Contractor shall notify the Owner's Representative before unrestricted entry is permitted.

3.6.2 Removal of Asbestos Waste

The Abatement Contractor shall store asbestos containing wastes in a secure area designated by the Owner's Representative.

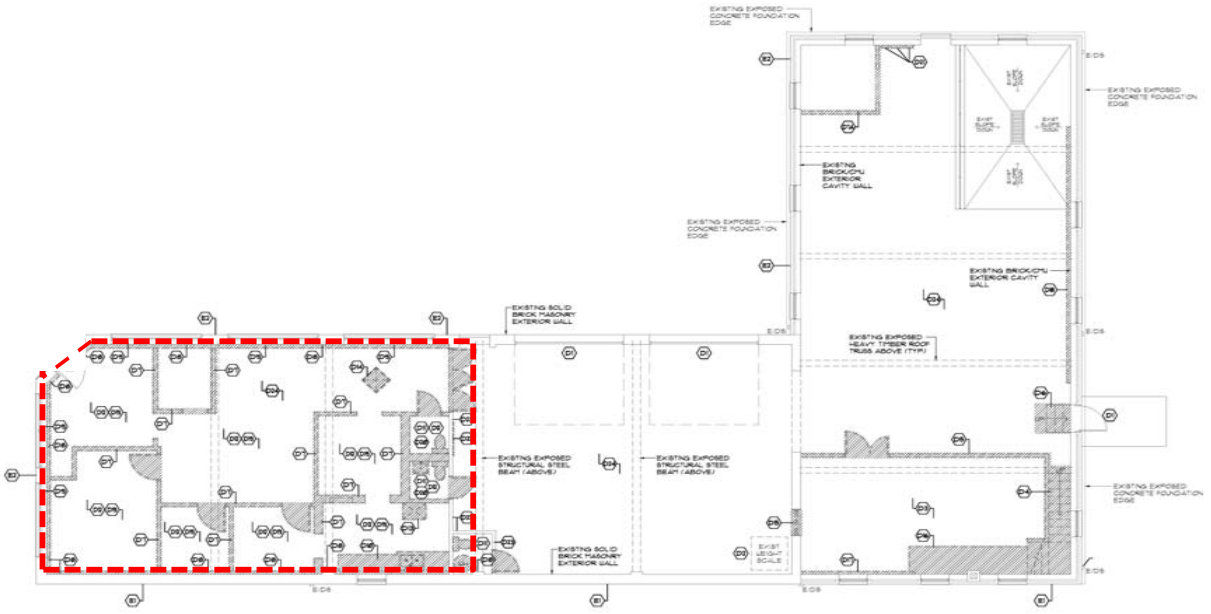
Asbestos containing wastes shall be placed in plastic bags, as specified, and removed from the asbestos control area through the decontamination unit.

The single-bagged wastes shall be washed in the shower and then double-bagged and goose-necked. This process shall require two abatement personnel, one in the dirty room and one in the clean room. A TWA for airborne fibers shall be established during the bagging-out process.

3.6.3 Disposal of Asbestos

The Abatement Contractor shall dispose of asbestos containing waste materials at an approved asbestos landfill. The procedures for hauling and disposal shall comply with all applicable local, state, and regional regulations.

Documentation indicating the proper disposal of the asbestos containing wastes at the approved landfill shall be provided to the Owner's Representative within three working days after delivery. The documentation shall include detailed delivery tickets, which have been prepared, signed and dated by an agent of the approved landfill, and certifying the amount of asbestos containing materials delivered to the landfill.



1 A1.1D NEUWIRTH BUILDING FLOOR PLAN - EXISTING/DEMOLITION

NOTE:
THE EXISTING BUILDING CONTAINS HAZARDOUS MATERIALS PER THE SURVEY REPORTS INCLUDED IN THE SPECIFICATION. REMOVAL/ABATEMENT IS PART OF THE OVERALL PROJECT DEMOLITION SCOPE AND WILL REQUIRE COORDINATION WITH THE OVERALL PROJECT SCHEDULE.

LEGEND

- DENOTES 'EXTERIOR DEMOLITION GENERAL NOTES' ON THIS DRAWING.
- DENOTES 'INTERIOR DEMOLITION GENERAL NOTES' ON THIS DRAWING.
- DENOTES EXISTING CONSTRUCTION/PARTITION TO REMAIN. DENOTES EXISTING FRAME, DOOR AND HARDWARE TO BE REMAIN
- DENOTES EXISTING FRAME, DOOR AND HARDWARE TO BE REMOVED
- DENOTES EXISTING CONSTRUCTION/PARTITION TO BE REMOVED
- Asbestos abatement work area

EXTERIOR DEMOLITION GENERAL NOTES

- (E1) DENOTES EXISTING EXTERIOR BRICK WALL PAINT (LEAD) TO BE REMOVED AS PART OF THE ABATEMENT PROCESS - SEE ELEVATION DRAWINGS 1/A3.1D & 4/A3.2D.
  NOTE:
  REMOVAL PROCESS TO SHALL BE "CHEMICAL STRIPPER" TO PREVENT DAMAGE TO EXISTING BRICK AND MORTAR
- (E2) DENOTES EXISTING EXTERIOR BRICK WALL (MIDDLE BAND) PAINT (LEAD) TO BE REMOVED AS PART OF THE ABATEMENT PROCESS- SEE ELEVATION DRAWINGS A3.1D & A3.2D FOR AREA OF REMOVAL
  NOTE:
  REMOVAL PROCESS TO SHALL BE "CHEMICAL STRIPPER" TO PREVENT DAMAGE TO EXISTING BRICK AND MORTAR

INTERIOR DEMOLITION GENERAL NOTES

- (D1) DENOTES ALL OPENINGS/ENTRY/ACCESS POINTS TO BE PROTECTED FROM WEATHER AND UNLAWFUL ENTRY DURING DEMOLITION/ABATEMENT (TYPICAL)
- (D2) DENOTES ALL SALVAGEABLE HISTORIC DOORS AND EXISTING WEIGHT SCALE ARE TO BE SAVED AND STORED IN A SAFE AREA DURING DEMOLITION/ABATEMENT
- (D3) DENOTES EXISTING WOOD MEZZANINE (ABOVE) TO BE REMOVED IN ITS ENTIRETY INCLUDING WALL MOUNTED WOOD SUPPORT
- (D4) DENOTES EXISTING WOOD MEZZANINE STAIR TO BE REMOVED IN ITS ENTIRETY INCLUDING WALL MOUNTED WOOD SUPPORT
- (D5) DENOTES EXISTING WOOD MEZZANINE SUPPORT WALLS INCLUDING DOORS TO BE REMOVED
- (D6) DENOTES EXISTING WOOD STEPS TO BE REMOVED IN ITS ENTIRETY
- (D7) DENOTES EXISTING INTERIOR PARTITION TO BE REMOVED IN ITS ENTIRETY INCLUDING FRAME/DOOR
- (D7a) DENOTES EXISTING INTERIOR MASONRY PARTITION TO BE REMOVED IN ITS ENTIRETY INCLUDING FRAME/DOOR
- (D8) DENOTES EXISTING EXTERIOR WALL/INTERIOR WOOD PANELING VENEER TO BE REMOVED IN ITS ENTIRETY INCLUDING WALL MOUNTED 2x WOOD FURRING STRIPS
- (D9) DENOTES EXISTING WOOD FRAMED INTERIOR PLASTER/WOOD PANELING VENEER WINDOW STOOL TO BE REMOVED IN ITS ENTIRETY INCLUDING WALL MOUNTED WOOD FURRING STRIPS
- (D10) DENOTES EXISTING MILLWORK INCLUDING PLUMBING TO BE REMOVED IN ITS ENTIRETY
- (D11) DENOTES EXISTING PLUMBING FIXTURES TO BE REMOVED INCLUDING ALL CONCEALED PIPING IN WALLS
- (D12) DENOTES EXISTING FLOOR FINISH (CARPET OVER TILE) TO BE REMOVED ALONG WITH EXISTING TILE AND ADHESIVE
- (D13) DENOTES EXISTING MECHANICAL UNIT AND ASSOCIATED DUCTWORK/HARDWARE TO BE REMOVED
- (D14) DENOTES EXISTING OVERHEAD GAS HEATER UNIT AND ASSOCIATED GAS PIPING TO BE REMOVED
- (D15) DENOTES EXISTING ABANDONED WINDOW WINDOW TO BE REMOVED
- (D16) DENOTES EXISTING LOW-HEIGHT WOOD SHELVING/WORK SURFACE TO BE REMOVED
- (D17) DENOTES EXISTING WOOD FRAMED FURRING WALL/PANELING TO BE REMOVED IN ITS ENTIRETY
- (D18) DENOTES EXISTING WOOD FRAMED LOW-HEIGH WALL TO BE REMOVED IN ITS ENTIRETY
- (D19) DENOTES EXISTING CEILING ABOVE TO BE REMOVED AS FOLLOUS:
  1. REMOVE EXISTING SUSPENDED CEILING GRID AND ACOUSTICAL TILES IN ITS ENTIRETY
  2. REMOVE REMAINING EXISTING ADHERED ACOUSTICAL CEILING TILES AND WOOD FURRING IN ITS ENTIRETY.
  3. LEAVE EXISTING ROOF JOISTS EXPOSED
- (D19a) DENOTES EXISTING GYPSUM BOARD CEILING ABOVE TO BE REMOVED IN ITS ENTIRETY
- (D20) DENOTES EXISTING ELECTRICAL PANELS AND WALL MOUNTED PLYWOOD PANEL BOARD TO BE REMOVED IN ITS ENTIRETY
- (D21) DENOTES EXISTING TELEPHONE/DATA EQUIPMENT AND WALL MOUNTED PLYWOOD PANEL BOARD TO BE REMOVED IN ITS ENTIRETY
- (D22) DENOTES EXISTING INTERIOR BRICK WALL PAINT (LEAD) TO BE REMOVED AS PART OF THE ABATEMENT PROCESS.
  NOTE:
  REMOVAL PROCESS TO SHALL BE "CHEMICAL STRIPPER" TO PREVENT DAMAGE TO EXISTING BRICK AND MORTAR
- (D23) DENOTES AT THE END OF DEMOLITION/ABATEMENT ALL DEBRIS, LITTER AND DEMOLITION/CONSTRUCTION MATERIALS SHALL BE REMOVED AND ALL INTERIOR AREAS LEFT BROOM CLEAN BY THE DEMOLITION/ABATEMENT CONTRACTOR (TYPICAL)
  NOTE:
  ALL SALVAGED HISTORIC DOORS AND EXISTING WEIGHT SCALE ARE TO REMAIN STORED IN A SAFE AREA.

FP&E DEMOLITION NOTES

1. ALL EXISTING PLUMBING FIXTURES/EQUIPMENT/PIPING ABOVE SLAB (WITH UNDERSLAB PIPING CAPPED AT FLOOR LINE) TO BE REMOVED IN ITS ENTIRETY.
2. ALL EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PIPING AND WIRING TO BE REMOVED IN ITS ENTIRETY.
3. ALL ELECTRICAL PANELBOARDS, CONDUIT, DEVICES (OUTLETS/SWITCHES) AND WIRING TO BE REMOVED IN ITS ENTIRETY

NEUWIRTH BUILDING DEMOLITION/ABATEMENT - 520 N. 3RD STREET - WILMINGTON, NORTH CAROLINA

hra
H R ASSOCIATES PA
ARCHITECTURE
PLANNING
INTERIOR DESIGN
2202 WRIGHTSVILLE AVENUE
SUITE 212
WILMINGTON, NC 28403
T. 910.343.6008
F. 910.343.8781

125
PRELIMINARY NOT FOR CONSTRUCTION
3673

PROJECT ARCHITECT
JOHN W. FARABOW, JR. AIA
PROJECT MANAGER
GEORGE GALLOP
CHECKED BY
JOHN W. FARABOW, JR. AIA
DRAWN BY
GEORGE GALLOP
ISSUE DATE
PRELIMINARY DRAWING REVIEW
REVISIONS
PROJECT NUMBER
186716.01
DRAWING NUMBER
FLOOR PLAN EXIST/DEMOLITION
A1.1D
10 MARCH 2017
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ATTACHMENT B

ASBESTOS BUILDING SURVEY

Air Quality Analytical, Inc.

Indoor Air Quality Consulting and Environmental Services

March 6, 2017

Mr. John Farabow Architect
H R Associates P A
2202 Wrightsville Ave, Suite 212
Wilmington, NC 28403

RE: AQA Job # 17-025-0208: Asbestos Building Visual Re-inspection, 520 N 3rd St., Wilmington, NC.

Related Documents:
Air Quality Analytical survey conducted February 28, 2017.

Mr. Farabow,

On February 28, 2017, Air Quality Analytical (AQA) conducted an Re-inspection of the subject building that was inspected originally by AQA on April 14, 2008. The most recent inspection was conducted to assure that the asbestos containing building materials identified in the original survey were still present and in the same condition as observed originally. The intent of the recent inspection is to update the inspection to current conditions, as the building is scheduled for renovation and asbestos abatement will be a necessity.

Background: The original inspection was conducted by John R. Folger, N.C Accredited Asbestos Building Inspector No. 11095. Materials found to contain asbestos content were as follows:

HM-01: 9" Red vinyl floor tile, 10% Chrysotile, and Black mastic adhesive, 2%. Approx. 1,560 sq. ft. of flooring and mastic was present.

HM-09: Original flat built-up roof, No samples were collected of this material. These materials were assumed to be asbestos containing. These materials were estimated to cover approx. 1,560 sq. ft. of the roof area. It should be noted that the additional suspect asbestos containing sealant is applied to the roof parapet. The square footage was not determined.

Conclusions: All previously identified asbestos containing building materials were still intact and in the same condition as originally found.

Thank you for considering Air Quality Analytical for our asbestos consulting services. If you have any additional questions or concerns, please contact me at your convenience.

Sincerely,

John R. Folger, CIEC,
NC Asbestos Inspector Accreditation 11095

Air Quality Analytical, Inc.

Indoor Air Quality Consulting and Environmental Services

March 6, 2017

Mr. John Farabow Architect
H R Associates P A
2202 Wrightsville Ave, Suite 212
Wilmington, NC 28403

RE: AQA Job # 17-025-0208: Asbestos Building Visual Re-inspection, 525 N 4th St., Wilmington, NC.

Related Documents:
Air Quality Analytical survey conducted February 28, 2017.

Mr. Farabow,

On February 28, 2017, Air Quality Analytical (AQA) conducted an Re-inspection of the subject building that was inspected originally by AQA on April 14, 2008. The most recent inspection was conducted to assure that the asbestos containing building materials identified in the original survey were still present and in the same condition as observed originally. The intent of the recent inspection is to update the inspection to current conditions, as the building is scheduled for renovation and asbestos abatement will be a necessity.

Background: The original inspection was conducted by John R. Folger, N.C Accredited Asbestos Building Inspector No. 11095. Materials found to contain asbestos content were as follows:

HM-01: Linoleum strips, No samples were collected of these materials. These materials were assume to be asbestos containing. These materials were estimated to cover approx. 10 sq. ft. of floor area.

HM-06: Original flat built-up roof, No samples were collected of this material. These materials were assumed to be asbestos containing. These materials were estimated to cover approx. 4,500 sq. ft. of the roof area.

Conclusions: All previously identified asbestos containing building materials were still intact and in the same condition as originally found.

Thank you for considering Air Quality Analytical for our asbestos consulting services. If you have any additional questions or concerns, please contact me at your convenience.

Sincerely,

John R. Folger, CIEC,
NC Asbestos Inspector Accreditation 11095

Air Quality Analytical, Inc.

Indoor Air Quality Consulting and Environmental Services

NESHAP Asbestos Building Survey

Property:
520 N 3rd Street
Wilmington, NC

Generated for:
Mr. Dan Broadhead
Eastern Environmental, Inc.
25224 Hwy 17 N
Hampstead, NC 28443

AQA Project No.: 08-078-0414

Survey Date: April 14, 2008

Report Date: May 5, 2008

Report by: John R. Folger, CIE, CIEC
CIEC# 0607095, CIE# 00536
NC Asbestos Building Inspector License #11095

Air Quality Analytical, Inc.

Indoor Air Quality Consulting and Environmental Services

May 5, 2008

Mr. Dan Broadhead
Eastern Environmental, Inc.
25224 Hwy 17 N
Hampstead, NC 28443

RE: AQA Job # 08-078-0414: Asbestos Specific Building Survey, 520 N. 3rd Street, Wilmington NC.

Related Documents:
Air Quality Analytical survey conducted April 14, 2008. All related documentation.
EMSL Analytical laboratory reports dated April 21, 2008.

Dear Mr. Broadhead,

On April 14, 2008 Air Quality Analytical (AQA) conducted an asbestos-specific survey at the above referenced property, per your request. The purpose of this survey was to sample and identify visible and physically accessible building materials suspected of containing asbestos prior to demolition of the structure.

Visual and physical assessment was conducted in order to identify each separate Homogeneous Material/Area (HM). These Homogeneous Materials are denoted by their color, texture, and function at the facility; sample amounts were determined per EPA criteria. Sampling locations were determined by reasonable assumption that suspect materials may contain asbestos or these materials by their function have been found to contain asbestos. Upon completion six (6) separate HM were identified. Two of the six HM's were not sampled and were assumed to be positive due to access restrictions.

The completion of this survey included the collection of eight (8) samples. The analysis of these samples was performed by Polarized Light Microscopy (PLM) utilizing dispersion staining techniques. Positive stop instructions were issued for all homogeneous samples of materials that previously tested positive for asbestos content. Upon completion of analysis a total of eight (8) samples were analyzed.

Building Materials Assessment (requirement of EPA 40 CFR 763.85):

There are three attached buildings. The *front building* is wood framed with plaster walls and brick facade. The roof is pitched bituminous layering and is assumed to be positive. Flooring is concrete with carpet over 9" floor tile in the front office areas and break room. 2 x 2 drop ceiling tiles are applied over 12" cellulose ceiling tiles in the office areas and break room. Construction Circa 1930's.

The *second structure* attached to the backside of the front structure is also wood framed with brick facade and plaster walls and uncovered concrete floors. There were no suspect materials identified inside the building. The roof is a flat bituminous layered roof and is assumed to be asbestos containing. Construction Circa 1930's.

The *third building* attached to the backside of the second building is a metal framed building with fiberglass insulation. The building was likely constructed Circa 1990's or later. There were no suspect asbestos containing materials identified.

Findings: The following materials were found to contain asbestos:

HM-01: Ref. sample 085-01, ***9" Red Vinyl Floor Tile (10% Chrysotile) w/ Black mastic (2% Chrysotile)***. There was also a 9" black floor tile with black mastic. Due to positive findings in the first sample the other 9" floor tile and black mastic was assumed to be positive. These materials are applied in all room areas of both buildings. These materials are covered by carpet in most areas but were applied throughout the first building. These materials are in good condition however will become friable during abatement. Removal of these materials is required prior to demolition of the structure. ***There was approximately 1,560 square feet of flooring present.***

HM-09: No samples collected material assumed positive; ***Original Flat Built-up Bituminous Roof***, These materials comprise the original roof of the structure. These materials are non-friable and are in good condition. There is ***approximately 1,560 square feet of materials present***. Removal of these materials is required prior to demolition of the structure.

Recommendations: The State of North Carolina Division of Health and Human Section (NCDHHS) Health Hazards Control Unit regulates removal and abatement of asbestos materials whereby all National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulatory requirements apply.

A licensed asbestos abatement contractor should perform all friable asbestos abatement activities. The State requires that a permit be filed on all friable abatement projects in public areas in excess of 160 SF whereby a ten (10) working day notification period is required.

Upon completion of the project the abatement contractor should provide material waste manifests to the building owner representative. A final inspection, by a third party competent person, must be performed subsequent to abatement activities to satisfy HHCU requirements and confirm completion of the removal of identified asbestos materials.

Disclaimer: The following building areas were excluded from the survey:

1. The interior of all mechanical equipment
2. The interior of all electrical equipment and conduit
3. Hidden (not visible and/or not physically accessible) areas and/or materials (I.e.- under hard floor surfaces, in the ground, under debris, etc.)

If additional suspect materials are encountered in areas one through three of the above, it is strongly advisable that said materials be analyzed for asbestos content prior to their disturbance. AQA shall not be held responsible for hidden and/or physically inaccessible materials that may be uncovered during demolition activities of the said structure.

Material amounts were estimated the contractor should make their own assessment of material amounts prior to providing an estimate for abatement. Sample Data Reports and Photographic Log are appended. If you have any questions regarding the information provided, or if I may be of further assistance, please do not hesitate call.

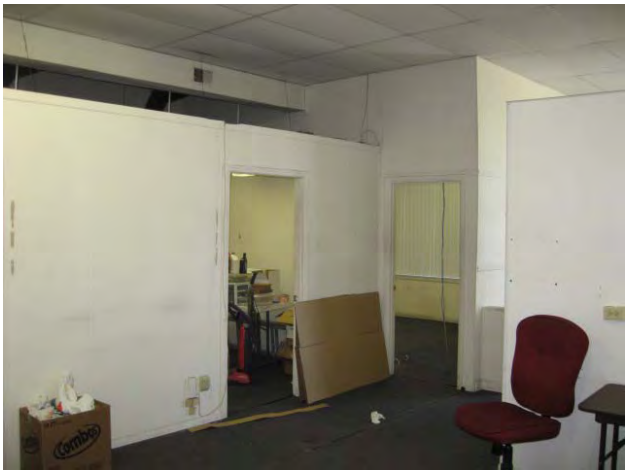
Sincerely,

Electronically Signed by:
John R. Folger
NC Asbestos Inspector #11095
May 4, 2008

John Folger
NC Asbestos Inspector Accreditation #11095

Photo Documentation:

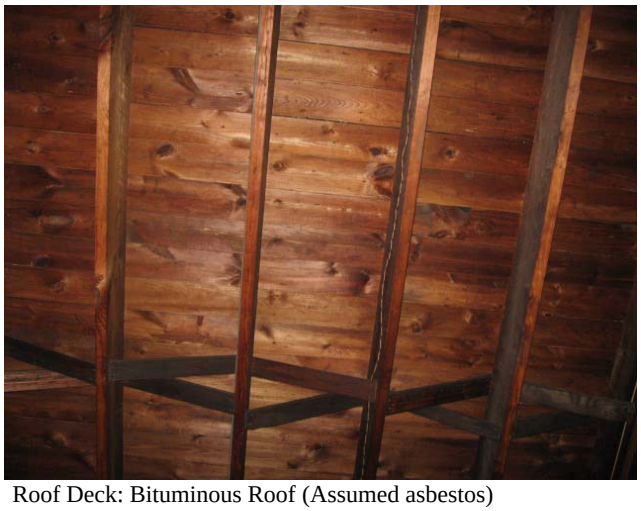
HM-01: Asbestos Floor Tile and Mastic Adhesive

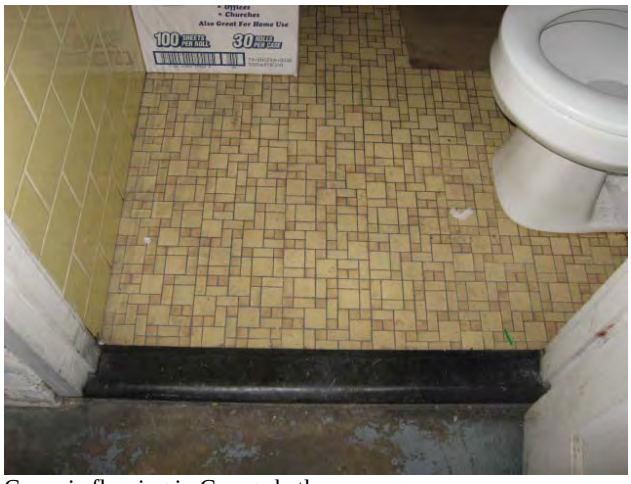

Front Office Area: Asbestos Floor Tile under Carpet

HM-03: 2 x 2 Ceiling Tile (Non-asbestos)

12” Ceiling Tile: Cellulose (Non-asbestos)

Backside of Front Building


Roof Deck: Bituminous Roof (Assumed asbestos)

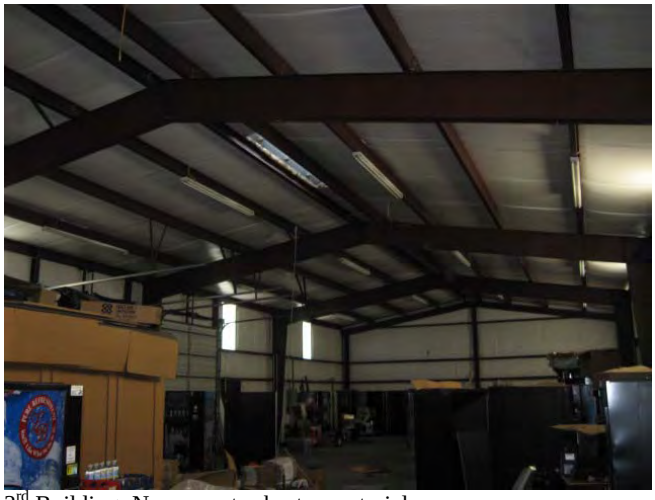


Ceramic flooring in Garage bathroom

HM-04: Plaster (Non-asbestos)

2nd Building: Roof Deck, Bituminous Roof (Assumed asbestos)

Old refrigerator area


3rd Building: No suspect asbestos materials

Air Quality Analytical, Inc.
Indoor Air Quality Consulting and Environmental Services

3411 Marsh Hawk Court, Wilmington, NC 28409
Tel: (910) 392-3511 Fax: (910) 392-3557

LABORATORY TEST REQUEST

ACCOUNT NAME: Eastern Environmental, inc.
ADDRESS: 25224 US Hwy. 17 N., Hampstead, NC 28443
C/o-Dan Broadhead
Client Phone/Fax/E-mail: (910) 329-1129 db92461@aol.com
AQS JOB NO.: 08-078-0414 (520)

CONTACT: John Folger	Telephone: (910) 431-1019	jfolger@ec.rr.com	DATE SHIPPED: 4/17/2008
WO/PO #: 08-078-0414 (520)	CLIENT'S JOB NAME/#: **520 N. 3rd Street, Wilmington, NC**		

SAMPLE TYPE:	NUMBER OF SAMPLES:	TURN AROUND TIME SPECIFIED:
Asbestos (PLM)	8	____Immediate ____ 6hr __X__4hr ____ 48 ____3-5 day ____ Regular

SPECIAL INSTRUCTIONS: Please stop at first posisive for each HM.

Sample Number	Sample Area	Sample Description	Sample Date	Homogeneous Material	Lab Analysis Requested
520-01	Front Bldg., Front Room @ Entrance	9" Red Floor Tile/Mastic	4/14/2008	HM-01	PLM
520-02	Front Bldg., Back Hallway	9" Red Floor Tile/Mastic	4/14/2008	HM-01	PLM
	Stop if HM-01 Tile/Mastic are Positive				
520-03	Front Bldg., Back Office	9" Brown Floor Tile/Mastic	4/14/2008	HM-02	PLM
	Stop if HM-01 Tile/Mastic are Positive				
520-04	Front Bldg., Back Office	9" Brown Floor Tile/Mastic	4/14/2008	HM-02	PLM
520-05	Front Bldg. Hallway	2x2 Ceiling Tile (Bird Dot)	4/14/2008	HM-03	PLM
520-06	Front Bldg., Back Office	2x2 Ceiling Tile (Bird Dot)	4/14/2008	HM-03	PLM
520-07	Center Bldg.	Plaster	4/14/2008	HM-04	PLM
520-08	Center Bldg.	Plaster	4/14/2008	HM-04	PLM

Air Quality Analytical
08-078-0414 (520)
4/21/2008
PLM

TAT: 24 Hour
Bulk

Order ID: 290802073
No Samples: 8
Due: 04/22 10:00 AM
Fax: (910) 392-3557

DATE/TIME	CONDITION OF SAMPLE	SAMPLES RECEIVED BY	SAMPLES RELEASED BY
4/17/2008	sealed	SIGNATURE	SIGNATURE 4/17/2008

04-21-08 09:58 RCVD

EMSL Analytical, Inc.
1101-A Aviation Parkway, Morrisville, NC 27560
Phone: (919) 465-3900 Fax: (919) 465-3900 Email: raleighlab@emsl.com

Attn: **John Folger**
Air Quality Analytical
3411 Marsh Hawk Court
Wilmington, NC 28409

Fax: (910) 392-3557 Phone: (910) 431-1019
Project: **08-078-0414 (520)**

Customer ID: AIRQ66
Customer PO:
Received: 04/21/08 10:00 AM
EMSL Order: 290802073

EMSL Proj:
Analysis Date: 4/21/2008
Report Date: 4/21/2008

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

			Non-Asbestos				Asbestos
Sample	**Location**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
520-01 *290802073-0001*	Front Bldg, Front Rm At Entrance, 9" Red FT/Mastic	Red Fibrous Homogeneous Tile	10%	Cellulose	80%	Non-fibrous (other)	**10% Chrysotile**
520-01 *290802073-0001A*	Front Bldg, Front Rm At Entrance, 9" Red FT/Mastic	Black Fibrous Homogeneous Mastic	8%	Cellulose	90%	Non-fibrous (other)	**2% Chrysotile**
520-02 *290802073-0002*	Front Bldg, Back Hall, 9" Red FT/Mastic						**Stop Positive (Not Analyzed)**
520-03 *290802073-0003*	Front Bldg, Back Office, 9" Brown FT/Mastic						**Stop Positive (Not Analyzed)**
520-04 *290802073-0004*	Front Bldg, Back Office, 9" Brown FT/Mastic						**Stop Positive (Not Analyzed)**
520-05 *290802073-0005*	Front Bldg, Hall, 2x2 Ceiling Tile (Bird Dot)	Tan/White Fibrous Heterogeneous	40% 20%	Cellulose Min. Wool	20% 20%	Non-fibrous (other) Perlite	**None Detected**
520-06 *290802073-0006*	Front Bldg, Bk Office, 2x2 Ceiling Tile (Bird Dot)	Tan/White Fibrous Heterogeneous	40% 20%	Cellulose Min. Wool	20% 20%	Non-fibrous (other) Perlite	**None Detected**
520-07 *290802073-0007*	Center Bldg, Plaster	White Fibrous Homogeneous Skimcoat	3% 2%	Cellulose Wollastonite	95%	Non-fibrous (other)	**None Detected**

Analyst(s)

Essie Spencer (11)

Essie Spencer, Laboratory Manager
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

Accreditations; NVLAP Lab Code 200671-0, CA ELAP 2657, VA 3333 000278, WVA LT000296

EMSL Analytical, Inc.
1101-A Aviation Parkway, Morrisville, NC 27560
Phone: (919) 465-3900 Fax: (919) 465-3900 Email: raleighlab@emsl.com

Attn: **John Folger**
Air Quality Analytical
3411 Marsh Hawk Court
Wilmington, NC 28409

Fax: (910) 392-3557 Phone: (910) 431-1019
Project: **08-078-0414 (520)**

Customer ID: AIRQ66
Customer PO:
Received: 04/21/08 10:00 AM
EMSL Order: 290802073

EMSL Proj:
Analysis Date: 4/21/2008
Report Date: 4/21/2008

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

			Non-Asbestos				Asbestos
Sample	**Location**	**Appearance**	**%**	**Fibrous**	**%**	**Non-Fibrous**	**% Type**
520-07 *290802073-0007A*	Center Bldg, Plaster	Tan Fibrous Homogeneous	5% 3% Basecoat	Cellulose Synthetic	92%	Non-fibrous (other)	**None Detected**
520-08 *290802073-0008*	Center Bldg, Plaster	White Fibrous Homogeneous	3% 2% Skimcoat	Cellulose Wollastonite	95%	Non-fibrous (other)	**None Detected**
520-08 *290802073-0008A*	Center Bldg, Plaster	Tan Fibrous Homogeneous	5% 3% Basecoat	Cellulose Synthetic	92%	Non-fibrous (other)	**None Detected**

Analyst(s)

Essie Spencer (11)

Essie Spencer, Laboratory Manager
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

Accreditations; NVLAP Lab Code 200671-0, CA ELAP 2657, VA 3333 000278, WVA LT000296

Air Quality Analytical, Inc.

Indoor Air Quality Consulting and Environmental Services

NESHAP Asbestos Building Survey

Property:
525 N 4th Street
(Units A & B)
Wilmington, NC

Generated for:
Mr. Dan Broadhead
Eastern Environmental, Inc.
25224 Hwy 17 N
Hampstead, NC 28443

AQA Project No.: 08-205-0904

Survey Date: September 4, 2008

Report Date: September 26, 2008

Report by: John R. Folger, CIE, CIEC
CIEC# 0607095, CIE# 00536
NC Asbestos Building Inspector License #11095

Air Quality Analytical, Inc.
Indoor Air Quality Consulting and Environmental Services

September 26, 2008

Mr. Dan Broadhead
Eastern Environmental, Inc.
25224 Hwy 17 N
Hampstead, NC 28443

RE: AQA Job # 08-205-0904: Asbestos Specific Building Survey, 525 N. 4th Street, Wilmington NC.

Related Documents:
Air Quality Analytical survey conducted September 4, 2008. All related documentation.
EMSL Analytical laboratory reports dated September 26, 2008.

Dear Mr. Broadhead,

On September 4, 2008 Air Quality Analytical (AQA) conducted an asbestos-specific survey at the above referenced property per your request. The purpose of this survey was to sample and identify visible and physically accessible building materials suspected of containing asbestos prior to demolition of the structure.

Visual and physical assessment was conducted in order to identify each separate Homogeneous Material/Area (HM). These Homogeneous Materials are denoted by their color, texture, and function at the facility; sample amounts were determined per EPA criteria. Sampling locations were determined by reasonable assumption that suspect materials may contain asbestos or these materials by their function have been found to contain asbestos. Upon completion eight (8) separate HM were identified. Two of the HM were assumed to be positive and were not sampled.

The completion of this survey included the collection of eight (8) samples. The analysis of these samples was performed via Polarized Light Microscopy (PLM) utilizing EPA 600/R-93/116 method. Positive stop instructions were issued for all homogeneous samples of materials that previously tested positive for asbestos content. Upon completion of analysis a total of fourteen (14) samples were analyzed.

Building Materials Assessment (requirement of EPA 40 CFR 763.85):

Construction of the building is circa 1930s. The building has two separate units utilized most recently as storefronts. The storefronts have drywall wallboard materials and vinyl flooring applied over hardwood floor surfaces. Carpet is applied in Unit 525B over flooring materials. Similar vinyl flooring is applied in both units. The 2nd floor is an open warehouse. The warehouse structure is treated wooden beams with plaster applied over a wood lattice. There are two small strips of tar-backed linoleum laying on the floor surface yet there are no flooring materials directly applied to the floor.

The roof was not accessed at the time of the survey. Roofing materials are bituminous asphalt. Roofing materials should be assumed to be asbestos containing based on the age of the facility, the type of roofing materials utilized, and positive sample results obtained in earlier surveys on buildings within the area with similar roofing materials.

Findings: The following materials were found to contain asbestos:

HM-06: No samples collected. ***Bituminous asphalt roof.*** These materials were assumed to be positive. These materials are non-friable but must be removed prior to demolition of the structure, or renovation that would directly affect the said materials. The roof area is approximately 4,500 sq. ft. in area.

MM-01: No samples collected. ***Linoleum strips (gray).*** These materials were assumed to be positive. These materials are lying on the floor in the center of the 2nd story floor area. These materials are non-friable and there is less than 10 sq. ft. of materials present.

Recommendations: The State of North Carolina Division of Health and Human Section (NCDHHS) Health Hazards Control Unit regulates removal and abatement of asbestos materials whereby all National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulatory requirements apply.

A licensed asbestos abatement contractor should perform all friable asbestos abatement activities. The State requires that a permit be filed on all friable abatement projects in public areas in excess of 160 SF whereby a ten (10) working day notification period is required.

Upon completion of the project the abatement contractor should provide material waste manifests to the building owner representative. A final inspection, by a third party competent person, must be performed subsequent to abatement activities to satisfy HHCU requirements and confirm completion of the removal of identified asbestos materials.

Disclaimer: The following building areas were excluded from the survey:

1. The interior of all mechanical equipment
2. The interior of all electrical equipment and conduit
3. Hidden (not visible and/or not physically accessible) areas and/or materials (I.e.- under hard floor surfaces, in the ground, under debris, etc.)

If additional suspect materials are encountered in areas one through three of the above, it is strongly advisable that said materials be analyzed for asbestos content prior to their disturbance. AQA shall not be held responsible for hidden and/or physically inaccessible materials that may be uncovered during demolition activities of the said structure.

Material amounts were estimated the contractor should make their own assessment of material amounts prior to providing an estimate for abatement. Sample Data Reports and Photographic Log are appended. If you have any questions regarding the information provided, or if I may be of further assistance, please do not hesitate call.

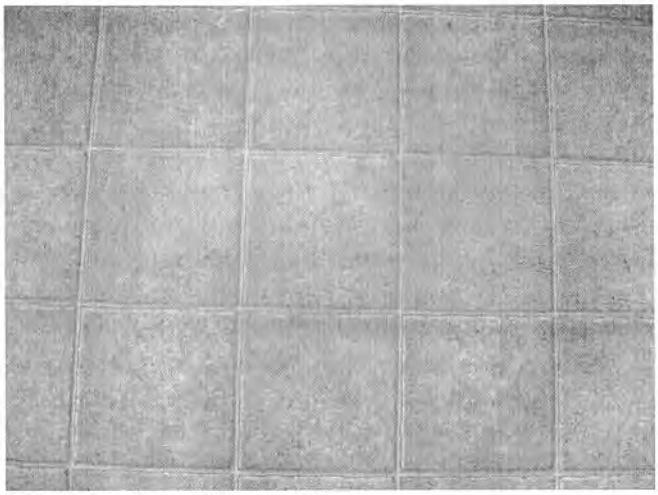
Sincerely,

Electronically Signed by:
John R. Folger
NC Asbestos Inspector #11095
September 26, 2008

John Folger
NC Asbestos Inspector Accreditation #11095

Photo Documentation:

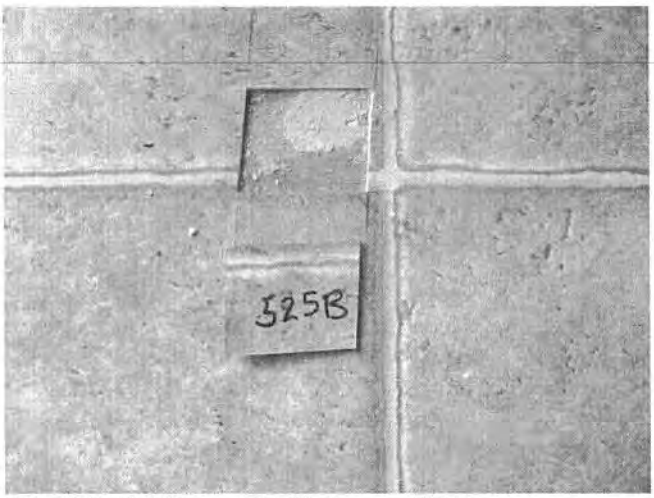
Unit 525A: Store Front



HM-01: Linoleum 9" Square Pattern

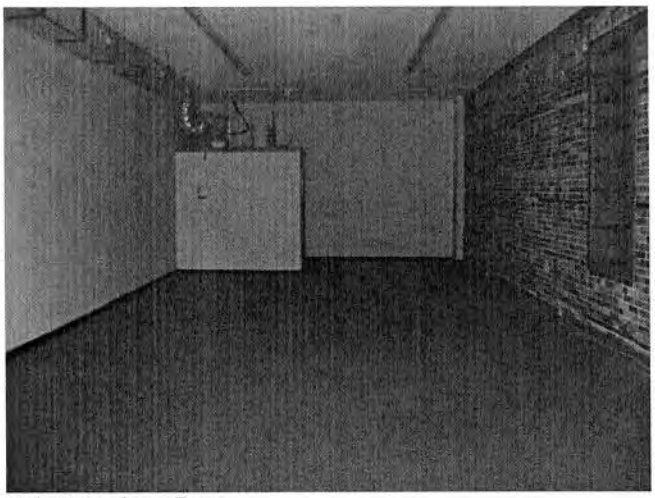
HM-02: 12" Vinyl Floor Tile under linoleum

Unit 525A: Bathroom

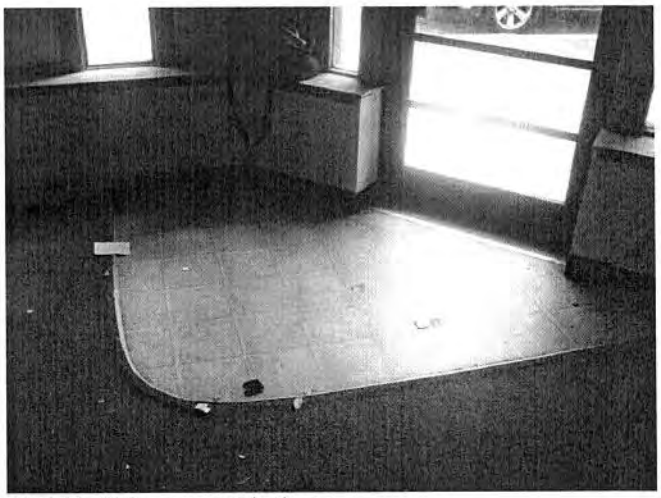


Unit 525B: HM-01 over HM-02 (Same as 525A)

Carpet over HM-02 (Same as 525A)

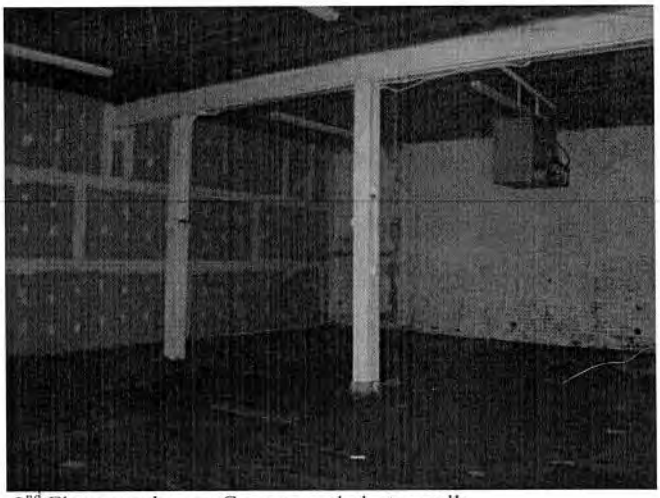


Unit 525B: Store Front



HM-01: 9" Sq. pattern Linoleum

Bathroom: 12" Black vinyl floor tile/yellow floor glue



2nd Floor warehouse: Gypsum and plaster walls

2nd Floor warehouse: wooden flooring

HM-07: Linoleum strips on floor: assumed positive for asbestos

HM-06: Roof: No photos : assumed positive

290804664

Air Quality Analytical, Inc.

Indoor Air Quality Consulting and Environmental Services

3411 Marsh Hawk Court, Wilmington, NC 28409
Tel: (910) 392-3511 Fax: (910) 392-3557

ACCOUNT NAME: Eastern Environmental, Inc
ADDRESS: 25224 Hwy 17 N., Hampstead, NC
Dan Broadhead
Client Phone/Fax/E-mail: (910) 329-1129
AQS JOB NO.: 08-205-0904

CONTACT: John Folger	Telephone: (910) 431-1019	jfolger@ec.rr.com	DATE SHIPPED: 8/5/2008
WO/PO #: 08-205-0904	CLIENT'S JOB NAME/#: **525 N. 4th Street, Wilmington, NC**		

SAMPLE TYPE:	NUMBER OF SAMPLES:	TURN AROUND TIME SPECIFIED:
Asbestos Buk (PLM)	8	____Immediate ____ 6hr __X__24hr ____ 48 ____3-5 day ____ Regular

SPECIAL INSTRUCTIONS: Stop at first positive for each HM.

Sample Number	Sample Area / Sample Description	Sample Date	Homogeneous Material	Lab Analysis Requested
205-01	525A: 9" Square Pattern Brown Linoleum Flooring / 12" White Floor Tile	8/8/2008	HM-01/HM-02	PLM
205-02	525A: 9" Square Pattern Brown Linoleum Flooring / 12" White Floor Tile	8/8/2008	HM-01/HM-02	PLM
205-03	525A: Drywall/Joint Compound (Composite)	8/8/2008	HM-03	PLM
205-04	525A: Drywall/Joint Compound (Composite)	8/8/2008	HM-03	PLM
205-05	525B: 12" Black Vinyl Floor Tile	8/8/2008	HM-04	PLM
205-06	525B: 12" Black Vinyl Floor Tile	8/8/2008	HM-04	PLM
205-07	2nd Floor: Plaster	8/8/2008	HM-05	PLM
205-08	2nd Floor: Plaster	8/8/2008	HM-05	PLM

Air Quality Analytical
08-205-0904, 525 N. 4th Street, Wilmington, NC
9/10/2008
PLM
TAT: 24 Hour
Bulk

Order ID: 290804664
No Samples: 8
Due: 09/11 10:00 AM
Fax: (910) 392-3557

09-10-08 07:47 RCVD

DATE/TIME	CONDITION OF SAMPLE	SAMPLES RECEIVED BY	SAMPLES RELEASED BY
8/5/2008	sealed	SIGNATURE	SIGNATURE

EMSL Analytical, Inc.
1101-A Aviation Parkway, Morrisville, NC 27560
Phone: (919) 465-3900 Fax: (919) 465-3900 Email: raleighlab@emsl.com

Attn: **John Folger**
Air Quality Analytical
3411 Marsh Hawk Court
Wilmington, NC 28409

Fax: (910) 392-3557 Phone: (910) 431-1019
Project: **08-205-0904, 525 N. 4th Street, Wilmington, NC**

Customer ID: AIRQ66
Customer PO:
Received: 09/10/08 10:00 AM
EMSL Order: 290804664

EMSL Proj:
Analysis Date: 9/11/2008
Report Date: 9/11/2008

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

			Non-Asbestos			Asbestos
Sample	Location	Appearance	%	Fibrous	% Non-Fibrous	% Type
205-01 *290804664-0001*	525A, 9" Sq. Patt Brn Linoleum Fl, 12" White FT	Beige/Tan Fibrous Homogeneous	65%	Cellulose	35% Non-fibrous (other)	None Detected
		Flooring				
205-01 *290804664-0001A*	525A, 9" Sq. Patt Brn Linoleum Fl, 12" White FT	Tan Fibrous Homogeneous	2%	Cellulose	98% Non-fibrous (other)	None Detected
		Tile				
205-01 *290804664-0001B*	525A, 9" Sq. Patt Brn Linoleum Fl, 12" White FT	Yellow Fibrous Homogeneous	10%	Cellulose	90% Non-fibrous (other)	None Detected
		Mastic				
205-02 *290804664-0002*	525A, 9" Sq. Patt Brn Linoleum Fl, 12" White FT	Beige/Tan Fibrous Homogeneous	70%	Cellulose	30% Non-fibrous (other)	None Detected
		Flooring				
205-02 *290804664-0002A*	525A, 9" Sq. Patt Brn Linoleum Fl, 12" White FT	Tan Fibrous Homogeneous	3%	Cellulose	97% Non-fibrous (other)	None Detected
		Tile				
205-02 *290804664-0002B*	525A, 9" Sq. Patt Brn Linoleum Fl, 12" White FT	Yellow Fibrous Homogeneous	10%	Cellulose	90% Non-fibrous (other)	None Detected
		Mastic				
205-03 *290804664-0003*	525A, Drywall/JC (Composite)	White/Brown Fibrous Heterogeneous	20% 5% 2%	Cellulose Synthetic Wollastonite	73% Non-fibrous (other)	None Detected
		Composite				

Analyst(s)

Essie Spencer (14)

Essie Spencer, Laboratory Manager
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

Accreditations: NVLAP Lab Code 200676-0, CA ELAP 2657, VA 3333 000278, WVA LT000296

EMSL Analytical, Inc.
1101 A Aviation Parkway, Morrisville, NC 27560
Phone: (919) 465-3900 Fax: (919) 465-3900 Email: raleighlab@emsl.com

Attn: **John Folger**
Air Quality Analytical
3411 Marsh Hawk Court
Wilmington, NC 28409

Fax: (910) 392-3557 Phone: (910) 431-1019
Project: **08-205-0904, 525 N. 4th Street, Wilmington, NC**

Customer ID: AIRQ66
Customer PO:
Received: 09/10/08 10:00 AM
EMSL Order: 290804664

EMSL Proj:
Analysis Date: 9/11/2008
Report Date: 9/11/2008

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

			Non-Asbestos			Asbestos
Sample	Location	Appearance	%	Fibrous	% Non-Fibrous	% Type
205-04 *290804664-0004*	525A, Drywall/JC (Composite)	White/Brown Fibrous Heterogeneous	25% 5% 2% Composite	Cellulose Synthetic Wollastonite	68% Non-fibrous (other)	None Detected
205-05 *290804664-0005*	525B, 12" Black Vinyl Floor Tile	Black Fibrous Homogeneous	3% 7%	Cellulose Synthetic	90% Non-fibrous (other)	None Detected
205-06 *290804664-0006*	525B, 12" Black Vinyl Floor Tile	Black Fibrous Homogeneous	3% 7%	Cellulose Synthetic	90% Non-fibrous (other)	None Detected
205-07 *290804664-0007*	2nd Fl, Plaster	White/Tan Fibrous Homogeneous	3% 2% Skimcoat	Cellulose Wollastonite	95% Non-fibrous (other)	None Detected
205-07 *290804664-0007A*	2nd Fl, Plaster	Tan Fibrous Homogeneous	5% 2% Basecoat	Cellulose Synthetic	93% Non-fibrous (other)	None Detected
205-08 *290804664-0008*	2nd Fl, Plaster	White/Tan Fibrous Homogeneous	3% 2% Skimcoat	Cellulose Wollastonite	95% Non-fibrous (other)	None Detected
205-08 *290804664-0008A*	2nd Fl, Plaster	Tan Fibrous Homogeneous	5% 4% Basecoat	Cellulose Synthetic	91% Non-fibrous (other)	None Detected

Analyst(s)

Essie Spencer (14)

Essie Spencer, Laboratory Manager
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. The limit of detection as stated in the method is 1%. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.

Accreditations: NVLAP Lab Code 200676-0; CA ELAP 2657; VA 3333 000278; WVA LT000295

SECTION 028300 – LEAD ABATEMENT

PART 1 - GENERAL

1.1 **SUMMARY:**

1.1.1 Related Documents:

1.1.1.1 Drawings and general provisions of the Subcontract apply to this Section.

1.1.1.2 Review these documents for coordination with additional requirements and information that apply to work under this Section.

1.1.2 Section Includes:

1.1.2.1 Lead paint removal/disposal where lead paint has been as indicated in Drawings and Specifications.

1.1.2.2 Compliance with all applicable Federal, State, and local regulations pertaining to work practices.

1.1.2.3 Protection of workers, visitors to the site, and persons occupying areas adjacent to the site.

1.1.2.4 Provide medical examinations and maintain medical records of personnel as required by the applicable Federal, State, and local regulations.

1.1.2.5 The scope of this work does not include the manifesting, transporting, or disposal of hazardous waste. The University will manifest, transport, and dispose of hazardous waste that has been properly packaged, labeled, and stored by the contractor.

1.1.2.6 The Architect/Abatement Consultant review and approval of the lead abatement contractor’s Lead Compliance Work Plan (Attachment A) describing the means and methods of lead related work prior to work commencing.

1.1.3 Related Sections:

1.1.3.1 Division 01 Section "General Requirements."

1.1.3.2 Division 01 Section "Selective Demolition."

1.2 **DEFINITIONS:**

1.2.1 Lead in paint: The Consumer Product Safety Commission (CPSC) considers any paint or other surface coating as containing lead at concentrations greater than or equal to 600 parts per million (ppm), 0.06% by weight; however, OSHA regulations apply to any detectable amount of lead in construction.

1.2.2 Lead-In-Construction Supervisor: One who is capable of identifying existing and predictable lead hazards in the surroundings or working conditions and who has the authorization to take prompt corrective measures to eliminate them.

1.2.3 Lead-in-air Action Level (AL): 30 µg/m3.

1.2.4 Lead-in-air Permissible Exposure Limit (PEL): 50 µg/m3.

1.3 **SUBMITTALS:**

1.3.1 Submit under provisions of Division 01 Section "General Requirements" for review and approval by the Abatement Consultant.

1.3.2 Product Data: Submit [five (5)] copies of the following:

1.3.2.1 Material Safety Data Sheets (MSDS) sheets for each product containing hazardous materials as defined by OSHA's Hazardous Communication Standard; 29 CFR 1910.1200.

1.3.3 Quality Assurance/Control Submittals: Submit [five (5)] copies of the following:

1.3.3.1 Lead Compliance Work Plan: Detailed, job-specific plan of the procedures proposed for use in complying with the requirements of this Specification and 29 CFR 1926.62.

1.3.3.1.1 As a minimum, provide the information required in Attachment A, the Lead Compliance Work Plan Outline.

1.3.3.1.2 The plan shall be approved by the Architect/Abatement consultant prior to the mobilization of equipment, supplies, or workers to the site.

1.3.3.2 Worker Certification: Current lead worker certifications for personnel to be engaged in the work of this Section. Workers will not be permitted on the project site until the submittal is complete and has been accepted by the Project Manager. Provide legible copies of the following information for each worker:

1.3.3.2.1 Employee quantitative respirator fit-test records that identify the testing agency, the individual fit test exercise fit factor results, and the overall fit factor result;

1.3.3.2.2 Employee medical approval to wear respirator protection records;

1.3.3.2.3 Photo copy of current certified lead supervisor picture-identification card for the designated lead supervisor only;

1.3.3.2.4 Photo copy of current certified lead worker picture-identification card for all workers;

1.3.3.2.5 Blood lead measurements collected no more than three workdays prior to work commencing;

1.3.3.2.6 Employee picture identification matching names on records. Picture IDs can be photo copies of training cards; however, pictures of employee faces must be viewable vs. dark images from poor quality photo copying; and

1.3.3.3 Training Program: Proof that training of all personnel engaged in work under this Section is current and in accordance with the provisions of OSHA.

1.3.3.4 Respiratory Protection Program: Submit company's Respiratory Protection Program for review and approval by the Architect/Abatement Consultant.

1.3.3.5 All submittals will be provided to Architect/Abatement Consultant at least three (3) working days prior to mobilization and must be approved prior to work commencing.

1.3.4 Closeout / Ongoing Project Submittals:

1.3.4.1 Personal air sampling results collected by the abatement contractor for airborne lead within 24 hours of sample collection.

1.3.4.2 Blood lead measurements collected within three workdays following the completion of lead related work and per 29 CFR 1926.62.

1.3.4.3 Per 29 CFR 1926.62, the contractor shall notify their employees of exposure monitoring results. Architect/Abatement Consultant requires written documentation from the contractor that demonstrates the contractor's employees were notified of their results within 5 days of receiving the results including both excursion and calculated 8 hour TWA results for all results, not just those results above the PEL or excursion limit.

1.3.5 Submittals will be provided to Abatement Contractor 3 working days prior to mobilization and must be approved prior to work commencing.

1.4 **QUALITY ASSURANCE:**

1.4.1 Qualifications:

1.4.1.1 Qualifications of Abatement Contractor:

1.4.1.1.1 Work performed under this Section shall be by a single Contractor.

1.4.1.1.2 The Contractor shall have a minimum of five (5) years experience as an approved lead abatement contractor. If requested, the Contractor shall provide the names and locations of 5 projects of similar size and scope that he has completed within the previous five years.

1.4.1.2 Qualifications of Lead Abatement Personnel:

1.4.1.2.1 All work shall be completed utilizing fully qualified persons who are trained, experienced, and knowledgeable in the proper techniques and procedures for lead abatement [welding] activities covered by this Section.

1.4.1.2.2 Lead Workers: All workers performing lead-based paint removal shall be currently certified as DHS Lead Workers.

1.4.1.2.3 Lead-in-Construction Supervisor: Currently certified as a DHS Lead Supervisor.

1.4.1.3 Qualifications of Analytical Laboratory:

1.4.1.3.1 The contractor shall submit lead samples to an analytical laboratory that is accredited by the American Industrial Hygiene Association's (AIHA) Industrial Hygiene Laboratory Accreditation Program (IHLAP) and Environmental Lead Laboratory Accreditation Program (ELLAP) and maintains current accreditation throughout the duration of this project.

1.4.2 Regulatory Requirements: All lead paint [settled leaded dust] [welding / hot cutting] removal work shall be performed in accordance with requirements of Federal, state and local, including but not limited to the following:

1.4.2.1 Federal Regulations:

1.4.2.1.1 U.S. Department of Labor, Occupational Safety and Health Administration (OSHA):

1.4.2.1.1.1 Lead Standard: Title 29, Part 1926, Section 62

1.4.2.1.1.2 Respiratory Protection: Title 29, Part 1910, Section 134

1.4.2.1.1.3 Construction Industry: Title 29, Part 1910, Section 2

1.4.2.1.1.4 Hazard Communication: Title 29, Part 1910, Section 1200

1.4.2.1.2 U.S. Environmental Protection Agency (EPA):

1.4.2.1.2.1 Resource Conservation and Recovery Act (RCRA):

1.4.2.1.2.1.1 Title 40, Part 260 to 265

1.4.2.1.3 U.S. Department of Transportation (DOT):

1.4.2.1.3.1 Hazardous Substances: Title 49, Part 171 and 172

1.4.2.1.3.1.1 U.S. Department of Energy (DOE)

1.4.2.2 Worker Protection Rule: Title 10, Part 851

1.4.2.3 State Regulations:

1.4.2.3.1 North Carolina Department of Industrial Relations, Division of Occupational Safety and Health (NC/OSHA):

1.4.2.3.2 Contractors State License Board (CSLB):

1.4.2.3.3 North Carolina Environmental Protection Agency (NC/EPA).

1.4.2.3.4 North Carolina Department of Health Services (DHS):

1.4.3 Pre-Construction Meeting: At least one week before work commences, a pre-construction meeting shall be held at a location designated by the Architect/Abatement Consultant. Attendees shall include the Architect/Abatement Consultant, Superintendent, Safety Inspector, Building Inspector, and Industrial Hygienist; the Contractor's Project Superintendent and Abatement Superintendent; and others as necessary. The agenda shall include a review of project safety requirements, the Contractor's written lead compliance work plan, emergency contacts and notification plan, containment and work area design, facility requirements, submittals, and any other issues pertinent to the safe execution of the lead paint removal [settled leaded dust] [welding / hot cutting] work.

1.4.3.1 Work shall not commence until all required submittals and plans have been approved by the Architect/Abatement Consultant.

1.5 **PROJECT/SITE CONDITIONS:**

1.5.1 Existing Conditions:

1.5.1.1 Paint that contains lead [and / or settled leaded dust] is known to be present on surfaces at the Project site. Surfaces which have not been previously tested, that may be affected by the project scope, should be assumed to contain lead and handled according to this section. [See Attachment B for lead testing results].

1.5.1.1.1 If any other materials are found which are suspected of containing lead or other hazardous materials, immediately stop work in the affected area and notify the Architect/Abatement Consultant. Handle suspected lead containing material according to this section.

PART 2 - PRODUCTS

2.1 **MATERIALS:**

2.1.1 Plastic Sheeting: Fire retardant polyethylene sheeting conforming to NFPA 701 and ASTM S502-74T for surface flammability and smoke density. A single polyethylene film in the largest sheet size possible to minimize seams, 6 mils thick, clear, frosted or black as indicated.

2.1.2 Duct Tape: Provide duct tape in 2" or 3" widths as indicated, with an adhesive which is formulated to stick aggressively to polyethylene sheeting.

2.1.3 Spray Adhesive: Shall not contain methylene chloride, as listed on the product's label and/or Material Safety Data Sheet (MSDS). Provide spray adhesive in aerosol cans that is specifically formulated to stick aggressively to polyethylene sheeting.

2.1.4 Disposal Bags: 6-mil polyethylene.

2.1.5 Lead-Containing Materials Disposal Containers: Leak-tight drums or approved dumpsters.

2.1.6 Detergent: High-phosphate wash containing at least 5% trisodium phosphate (TSP).

2.2 **EQUIPMENT:**

2.2.1 Clothing: Furnish the following for each worker and others as specified.

2.2.1.1 Coveralls:

2.2.1.1.1 Disposable full-body coveralls with attached head and foot covers conforming to requirements of OSHA Standards 29 CFR 1926.62.

2.2.1.2 Respirators:

2.2.1.3 Full facepiece negative pressure respirators with an assigned protection factor of 50X the PEL, or equivalent, for the removal of lead paint.

2.2.1.4 Respirators shall be equipped with HEPA (P-100) Filters.

2.2.1.5 Powered Air Purifying Respirators (PAPRs) that have been quantitatively fit tested and equipped with HEPA (P-100) filters shall be acceptable substitutes for the respirators specified in 2.02(A)(2)(a).

2.2.1.6 Goggles, safety glasses, face shields: Provide eye and face protection as required by OSHA.

2.2.1.7 Gloves:

2.2.1.7.1 Compatible chemical resistant gloves for paint removal products.

2.2.1.8 Boots: Steel toed foot protective work boots with non-skid soles and steel shanks.

2.2.1.9 Hard Hats: Head protection (hard hats) approved by ANSI.

2.2.1.10 Soap and Towels.

2.2.2 Industrial Grade Vacuum and Exhaust Equipment: High Efficiency Particulate Air (HEPA) filtered vacuum and exhaust equipment with appropriate HEPA filters for lead contaminated dust / fume aerosols. Household HEPA vacuum cleaners shall not be acceptable.

2.2.3 Temporary Shower Facility: A pre-fabricated or site-built temporary shower facility, with hot and cold water to shower head that can be controlled from inside shower, shall be installed and used by all workers when airborne lead levels exceed or are predicted to exceed the PEL without regard to respiratory protection.

2.2.4 Temporary Washing Facilities: A sink with hot and cold water supply and soap for washing hands and face prior to breaks, lunch, and leaving the worksite at the end of the shift shall be used by all workers regardless of the airborne lead results.

2.2.5 Pressure differential recorders shall be in working condition, calibrated and operated continuously during the operation of the negative pressure enclosure and provide a pressure reading at least every 10 minutes, or more frequent, and provide a written documentation of the pressure readings that will be submitted to Architect/Abatement Consultant at the end of the project.

PART 3 - EXECUTION

3.1 **PROTECTION:**

3.1.1 General:

3.1.1.1 Take appropriate continuous measures as necessary to protect all building occupants from exposure to lead dust and fumes. Such measures shall include the procedures and methods described herein, and shall be in accordance with regulations and guidelines of applicable Federal, State, and local agencies.

3.1.1.2 Securing the Work Area: Secure the work area from access by the public, occupants, staff, or users of the building.

3.1.1.2.1 Demarcate the work by posting warning signs at each locked door and at the entrance to the change room leading to the controlled area as follows:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

3.1.1.3 Protect all existing materials, appurtenances and equipment that are not to be abated. Existing materials, appurtenances and equipment, building exterior and interior, and landscaping altered or damaged during lead related work shall be repaired or replaced by the Contractor to match existing undisturbed conditions at no additional cost to the Owner.

3.1.1.4 Utility shutdowns shall be in accordance with Division 01 Section "Special Procedures".

3.1.1.5 Maintain access and egress to building and all rooms at all times.

3.1.1.6 Do not block or reduce width of egress to exits.

3.1.1.7 Conduct operations with minimum interference to corridors, exits, and public thoroughfares.

3.1.1.8 Use periodic light water mist, temporary enclosures, and other suitable methods to limit the release of airborne lead dust and fumes. Comply with applicable regulations pertaining to environmental protection. Use water outside the work area only if approved by the Project Manager.

3.1.1.9 Path of travel for debris removal shall be maintained dust free and clean at all times.

3.1.1.10 Cover and protect windows, doors, and walls that are adjacent to lead work areas.

3.1.1.11 Water used during this project to remove or wet lead paint or lead dust shall be collected and prevented from entering storm water drains.

3.1.1.12 Eating, drinking, smoking, chewing tobacco or gum, or applying cosmetics is prohibited in the work area.

3.1.2 Personnel:

3.1.2.1 Lead-in-Construction Supervisor:

3.1.2.1.1 Provide an on-site, full-time Lead-in-Construction Supervisor to ensure that the worker protection program is effective.

3.1.2.1.2 The Lead-in-Construction Supervisor shall have the authority to shut down the project in accordance with 29 CFR 1926.62.

3.1.2.2 Lead Workers: The Contractor shall communicate information concerning lead hazards according to the requirements of the Hazard Communication Standard (29 CFR 1910.1200), including but not limited to the requirements concerning warning signs and labels, material safety data sheets (MSDS), and employee information and training.

3.1.2.3 Training Program: The Contractor shall assure that each worker and supervisor holds current training records meeting OSHA requirements. The training shall include the following:

3.1.2.3.1 The content of the OSHA Lead in Construction Standard (29 CFR 1926.62);

3.1.2.3.2 The specific nature of the operations that could result in exposure to lead above the action level;

3.1.2.3.3 The purpose, proper selection, fitting, use, and limitations or respirators;

3.1.2.3.4 The purpose and a description of the medical surveillance program, and the medical removal protection program, including information concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females and hazards to the fetus and additional precautions for workers who are pregnant);

3.1.2.3.5 The engineering controls and work practices associated with the worker's job assignment including training of workers to follow relevant good work practices described in 29 CFR 1926.62;

3.1.2.3.6 The contents of any compliance plan and the location of regulated area in effect;

3.1.2.3.7 Instructions to workers that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician, and;

3.1.2.3.8 The worker's right of access to medical records.

3.1.2.3.9 In addition to items 3.1.2.3.1 – 3.1.2.3.8 of this section, workers who perform lead removal work must also be lead trained workers.

3.1.2.4 Medical Surveillance:

3.1.2.4.1 Provide medical examinations for all workers performing the removal of lead paint, removal of settled leaded dust, or welding / hot cutting steel where lead paint was removed per 29 CFR 1926.62.

3.1.2.4.2 Blood testing (blood lead and zinc protoporphyrin) shall be performed for all workers performing the removal of lead paint, removal of settled leaded dust, or welding / hot cutting steel where lead paint was removed, no more than three work days prior to work commencing and within three work days following the completion of lead related work and in accordance with 29 CFR 1926.62.

3.1.2.5 Respiratory Protection Program: Comply with ANSI Z88.2 - 1992 "Practices for Respiratory Protection" and OSHA 29 CFR 1926.62.

3.1.2.5.1 Require that respiratory protection be used at all times when there is any possibility of disturbance of lead paint, settled leaded dust, or welding / hot cutting on steel where lead paint was removed.

3.1.2.5.2 Full facepiece negative pressure respirators shall be worn by workers performing lead paint removal. Welders whom will be welding or cutting steel where lead paint was removed shall wear Powered Air Purifying Respirators (PAPRs), equipped with HEPA (P-100) filters, that are quantitatively fit tested.

3.1.2.6 Protective Clothing:

3.1.2.6.1 The following clothing shall be worn by all lead workers in the work area.

3.1.2.6.1.1 Disposable Coveralls with head and shoe covers (except for welders): Provide a sufficient number for all required changes for all workers in the work area. Dispose of coveralls as clothing waste at the end of each day.

3.1.2.6.1.2 Gloves: Chemical resistant gloves shall be used when using chemical strippers to remove lead paint. Gloves shall be secured to coveralls using duct tape to protect arms and hands. Do not remove gloves from the work area.

3.1.2.6.1.3 Goggles, safety glasses, or face shields: Shall be worn by all workers involved in scraping, spraying, stripping, or any other activity that may potentially cause eye or face injury.

3.1.2.7 Temporary Shower Facilities: Shall be used in accordance with subsection 2.02 (C) of this section.

3.1.2.8 Washing Facilities: Shall be used in accordance with subsection 2.02 (D) of this section.

3.2 **GENERAL PROCEDURES:**

3.2.1 Containment Systems:

3.2.1.1 Regardless of the lead content of paints, dust, or coatings being disturbed, Negative Pressure Enclosure (NPE) containment is not required unless operations such as sanding, abrasive blasting, or any other removal method is used that creates an uncontrolable release of airborne lead aerosols in excess of the Action Level of 30 ug/m3.

3.2.1.2 If measured lead levels from either personal or area air samples exceed the Action Level at any time during the course of the work, or visual emissions are detected, the Contractor shall immediately stop work, correct the condition(s) causing the increase, and notify the Architect/Abatement Consultant. If the contractor's existing engineering and administrative controls do not reduce concentrations below the Action Level, the Contractor shall immediately stop work, notify the Architect/Abatement Consultant, and implement additional controls such as the construction of a Negative Pressure Enclosure (NPE) equipped with HEPA filtered Negative Air Machines (NAMs) that have been tested as specified in subsection 3.05 (A)(2). The enclosure shall maintain a negative pressure relative to the surrounding area to adequately prevent the release of unfiltered lead aerosols. NAM exhaust ducting shall be routed to the exterior of buildings.

3.2.1.3 Demarcate the Lead Control Area by providing a roped-off and labeled perimeter area at least 20 feet wide around the work area where lead related work is to be performed. Provide signage per subsection 3.01 (A)(2)(b).

3.2.2 In case of inclement weather, such as high winds or rain, which may cause paint chips, dust, or fumes to migrate out of the work area, immediately secure the work area and stop work until weather conditions improve.

3.3 **WORK AREA PROCEDURES:**

3.3.1 Entering the Work Area: Each time a work area is entered put on new disposable coverall or (re-use previous coverall if not overly contaminated or torn), new head cover, and a clean respirator with cartridges appropriate for the lead work to be performed. Reinforce coverall seams and secure gloves to coveralls with duct tape.

3.3.2 Wearing disposable coveralls: Do not enter occupied building areas while wearing either new or contaminated disposable coveralls or respirators. Provide a visual barrier between lead related work and occupied areas.

3.4 **LEAD REMOVAL PROCEDURES:**

3.4.1 Lead removal: Remove lead paint or dust as described in the contractor's lead work plan prior to disturbing the substrate [or welding and hot cutting the substrate].

3.4.1.1 Prohibited Lead Paint / Dust Removal Methods:

3.4.1.1.1 Open flame burning

3.4.1.1.2 Chemical stripping with methylene chloride based paint strippers

3.4.1.1.3 Uncontained abrasive blasting

3.4.1.1.4 Uncontained power washing

3.4.1.1.5 Dry sanding or scraping

3.4.1.1.6 Power sanding without HEPA attachment

3.4.1.2 Waste Disposal: HEPA vacuum and/or wet wipe to remove all paint chips, dust, and debris generated during the work. Do not allow paint chips, dust, or debris to accumulate. Place all paint chips, dust, and debris in properly labeled plastic disposal bags at the end of each shift.

3.5 **FIELD QUALITY CONTROL:**

3.5.1 Site Tests:

3.5.1.1 Respiratory protective equipment shall be quantitatively fit tested, including PAPR units. Qualitative fit test using irritant smoke tests or other qualitative test methods shall not be acceptable.

3.5.1.2 All HEPA vacuums and negative air machines shall be challenge tested, by emery oil aerosol or equivalent, and certified as in "passing" condition prior to work commencing. Negative air machines and HEPA vacuums shall be tested every three months, and immediately after changing HEPA filters, and remain onsite during the duration of the project. HEPA vacuums and negative air machines shall not be used after changing HEPA filters until they have been tested by a challenge aerosol.

3.5.2 Inspection (Lead Air Monitoring):

3.5.2.1 Personal Exposure Monitoring Results: Contractor shall provide personal air monitoring of its employees, in accordance with requirements of 29 CFR 1926.62.

3.5.2.1.1 The personal air monitoring data shall include the employee's name, date of monitoring, task(s) performed, employees represented by the monitoring, analytical result, and time-weighted average exposure reported in unis of ug/m3.

3.5.2.1.2 The analytical lab results shall be submitted to the Architect/Abatement Consultant within 24 hours of sample collection.

3.5.2.1.3 The contractor shall submit air samples to an AIHA accredited laboratory per 1.06(A)(3) of this section. The subcontractor shall request NIOSH method 7082 as the analytical method.

3.5.2.2 The Architect/Abatement Consultant may conduct personal lead air monitoring on the contractor's employees at any time to verify Contractor's compliance with these Specifications, EPA and OSHA regulations, and applicable State and local government regulations.

3.5.2.3 Monitoring During Lead Decontamination: The Architect/Abatement Consultant, or its representative, may conduct quality control and area monitoring at any time during potential worker exposure to airborne lead. If monitoring outside the control area shows airborne concentrations exceed the OSHA Action Level of 30 ug/m3, the Contractor shall immediately stop all work, correct the condition(s) causing the increase and notify the Project Manager.

3.5.2.4 If monitoring indicates that lead contamination is occurring outside of controlled areas (i.e., equal to or greater than 30 ug/m3) the Contractor shall immediately cease lead disturbance activities. Do not resume work until authorized by the Architect/Abatement Consultant.

3.6 **CLEANING:**

3.6.1 Daily Cleaning: Thoroughly clean the entire area under active lead disturbance at the end of each workday.

3.6.1.1 At end of work shift remove any paint chips, dust, and debris by using a HEPA vacuum or by spraying with wet wash solution, collect debris with wet paper towels, place in disposal bag while still wet, and clean surface of plastic sheets with wet paper towels.

3.6.1.2 Exterior Cleanup:

3.6.1.2.1 Undisturbed areas potentially affected by exterior lead disturbance shall be protected by using a drop poly containment system.

3.6.1.2.2 Because weather can adversely affect the efficacy of exterior drop poly containment, remove surface plastic of the containment system at the end of each workday.

3.6.1.2.3 Examine immediate area to ensure that no lead debris has escaped containment. Debris shall be placed in double plastic bags, sealed and stored with other contaminated debris.

3.7 **PROJECT CLEARANCE:**

3.7.1 Contractor Release Criteria: The lead disturbance work area is cleared when the work area is visually clean and wipe samples show lead concentrations have been reduced to the level specified below.

3.7.2 Wipe Sampling: Wipe sampling will be used to evaluate the level of lead remaining in the work area. A commercial wipe moistened with a non-alcohol wetting agent will be used. Surface dust sampling will take place no sooner than 24 hours after completion of post-disturbance cleanup activities. This will allow any airborne dust to settle onto the surfaces to be tested.

3.7.3 Clearance Criteria:

3.7.3.1 If any of the wipe samples exceed the clearance criteria, the work area must be cleaned again and retested until the criteria are met.

Floors	40 ug/ft2
Interior Horizontal Window Surfaces	250 ug/ft2
Exterior Wall Windows	800 ug/ft2
Floor Surfaces	800/ft2

3.7.3.2 If all wipe sample results for the work area meet the clearance criteria, the work area is cleared for re-occupancy.

3.7.4 The Owner will be responsible for all costs of the initial clearance testing. The Contractor shall be responsible for additional testing costs if initial clearance test does not pass.

3.7.5 After final cleanup and removal of all Contractor equipment, materials, and critical barriers are complete, a final post teardown inspection will be conducted. The Architect/Abatement Consultant will conduct the final inspection with the Contractor.

3.8 **STORAGE OF WASTE MATERIALS:**

3.8.1 Waste Evaluation: The materials collected from the cleaning operations must be evaluated to determine if the materials are hazardous and require special handling. The Contractor is responsible for segregating waste as it is generated and labeling all waste containers appropriately. Stored waste must be labeled with the accumulation date, type of waste, and area from which it was generated. The waste will be stored in designated areas selected by the Project Manager. Load all lead-containing waste material in disposal bags or leak-tight drums. All materials are to be contained in one of the following:

3.8.1.1 Two 6-mil disposal bags.

3.8.1.2 Two 6-mil disposal bags and a drum.

3.8.1.3 Wrapped in 6-mil polyethylene sheeting and sealed with duct tape.

3.8.2 If a dumpster is to be located on site for the duration of the project, arrange location of the dumpster with the Architect/Abatement Consultant.

3.8.2.1 Do not store containerized materials outside of the work area. Take containers from the work area directly to a temporary storage location arranged by the Architect/Abatement Consultant. All open dumpsters are prohibited for any construction debris. Take special care in transporting the waste materials from the location of generation to the storage facility. Waste shall be removed from work area at times selected to minimize contacts with tenants. The path from the work area to the storage locations shall be selected to be the shortest possible distance.

3.8.3 The waste shall be separated into a minimum of categories as follows:

3.8.3.1 Low lead waste (e.g., filtered wash water, HEPA vacuumed disposable coveralls and plastic sheeting, etc.).

3.8.3.2 Concentrated lead waste (e.g., sludge from paint stripping, paint chips and dust, HEPA vacuum debris and filter, mop heads, rags used for removing caustic stripper or during wet wiping, unfiltered wash water, respirator filters, etc.).

3.8.4 Treatment and Testing of Project Waste Water: The handling and treatment of project waste water must conform with all State and local regulations. Project waste water includes shower water and waste water from cleaning operations.

3.8.4.1 The Contractor shall not discharge waste water containing lead into a community sanitary sewer as per the requirements of the San Francisco Bay Basin Water Quality Control Plan. All waste water shall be discharged into a sanitary filter. Do not discharge any waste water on ground or soil. Filter water as necessary to meet local requirements.

END OF SECTION 028300

ATTACHMENT A

LEAD REMOVAL GUIDELINE

ATTACHMENT B

LEAD PAINT SURVEY

SECTION 028500 – MOLD ABATEMENT

PART 1 - GENERAL

1.1 **SUMMARY:**

1.1.1 Related Documents:

1.1.1.1 Drawings and general provisions of the Subcontract apply to this Section.

1.1.1.2 Review these documents for coordination with additional requirements and information that apply to work under this Section.

1.1.2 Section Includes:

1.1.2.1 Mold removal/disposal where mold has been as indicated in Drawings and Specifications.

1.1.2.2 Compliance with all applicable Federal, State, and local regulations pertaining to work practices.

1.1.2.3 Protection of workers, visitors to the site, and persons occupying areas adjacent to the site.

1.1.2.4 Provide medical examinations and maintain medical records of personnel as required by the applicable Federal, State, and local regulations.

1.1.2.5 The scope of this work does not include the manifesting, transporting, or disposal of hazardous waste. The Contractor will manifest, transport, and dispose of hazardous waste that has been properly packaged, labeled, and stored by the contractor.

1.1.2.6 The Architect/Abatement Consultant review and approval of the mold abatement contractor's Mold Compliance Work Plan describing the means and methods of mold related work prior to work commencing.

1.1.3 Related Sections:

1.1.3.1 Division 01 Section "General Requirements."

1.1.3.2 Division 01 Section "Selective Demolition."

1.2 **DEFINITIONS:**

1.2.1 Mold: The Consumer Product Safety Commission (CPSC) considers any paint or other surface coating as containing mold at concentrations greater than or equal to 600 parts per million (ppm), 0.06% by weight; however, OSHA regulations apply to any detectable amount of mold in construction.

1.2.2 Mold-In-Construction Supervisor: One who is capable of identifying existing and predictable mold hazards in the surroundings or working conditions and who has the authorization to take prompt corrective measures to eliminate them.

1.2.3 Mold-in-air Action Level (AL): 30 µg/m3.

1.2.4 Mold-in-air Permissible Exposure Limit (PEL): 50 µg/m3.

1.3 **SUBMITTALS:**

1.3.1 Submit under provisions of Division 01 Section "General Requirements" for review and approval by the Abatement Consultant.

1.3.2 Product Data: Submit [five (5)] copies of the following:

1.3.2.1 Material Safety Data Sheets (MSDS) sheets for each product containing hazardous materials as defined by OSHA's Hazardous Communication Standard; 29 CFR 1910.1200.

1.3.3 Quality Assurance/Control Submittals: Submit [five (5)] copies of the following:

1.3.3.1 Mold Compliance Work Plan: Detailed, job-specific plan of the procedures proposed for use in complying with the requirements of this Specification and 29 CFR 1926.62.

1.3.3.1.1 The plan shall be approved by the Architect/Abatement Consultant prior to the mobilization of equipment, supplies, or workers to the site.

1.3.3.2 Worker Certification: Current mold worker certifications for personnel to be engaged in the work of this Section. Workers will not be permitted on the project site until the submittal is complete and has been accepted by the Project Manager. Provide legible copies of the following information for each worker:

1.3.3.2.1 Employee quantitative respirator fit-test records that identify the testing agency, the individual fit test exercise fit factor results, and the overall fit factor result;

1.3.3.2.2 Employee medical approval to wear respirator protection records;

1.3.3.2.3 Photo copy of current certified mold supervisor picture-identification card for the designated mold supervisor only;

1.3.3.2.4 Photo copy of current certified mold worker picture-identification card for all workers;

1.3.3.2.5 Blood mold measurements collected no more than three workdays prior to work commencing;

1.3.3.2.6 Employee picture identification matching names on records. Picture IDs can be photo copies of training cards; however, pictures of employee faces must be viewable vs. dark images from poor quality photo copying; and

1.3.3.3 Training Program: Proof that training of all personnel engaged in work under this Section is current and in accordance with the provisions of OSHA.

1.3.3.4 Respiratory Protection Program: Submit company's Respiratory Protection Program for review and approval by the Architect/Abatement Consultant.

1.3.3.5 All submittals will be provided to Architect/Abatement Consultant at least three (3) working days prior to mobilization and must be approved prior to work commencing.

1.3.4 Closeout / Ongoing Project Submittals:

1.3.4.1 Personal air sampling results collected by the abatement contractor for airborne mold within 24 hours of sample collection.

1.3.4.2 Blood mold measurements collected within three workdays following the completion of mold related work and per 29 CFR 1926.62.

1.3.4.3 Per 29 CFR 1926.62, the contractor shall notify their employees of exposure monitoring results. Architect/Abatement Consultant requires written documentation from the contractor that demonstrates the contractor's employees were notified of their results within 5 days of receiving the results including both excursion and calculated 8 hour TWA results for all results, not just those results above the PEL or excursion limit.

1.3.5 Submittals will be provided to Architect/Abatement Consultant 3 working days prior to mobilization and must be approved prior to work commencing.]

1.4 **QUALITY ASSURANCE:**

1.4.1 Qualifications:

1.4.1.1 Qualifications of Abatement Contractor:

1.4.1.1.1 Work performed under this Section shall be by a single Contractor.

1.4.1.1.2 The Contractor shall have a minimum of five (5) years experience as an approved mold abatement contractor. If requested, the Contractor shall provide the names and locations of 5 projects of similar size and scope that he has completed within the previous five years.

1.4.1.2 Qualifications of Mold Abatement Personnel:

1.4.1.2.1 All work shall be completed utilizing fully qualified persons who are trained, experienced, and knowledgeable in the proper techniques and procedures for mold abatement activities covered by this Section.

1.4.1.2.2 Mold Workers: All workers performing mold-based removal shall be currently certified as DHS Mold Workers.

1.4.1.2.3 Mold-in-Construction Supervisor: Currently certified as a DHS Mold Supervisor.

1.4.1.3 Qualifications of Analytical Laboratory:

1.4.1.3.1 The contractor shall submit mold samples to an analytical laboratory that is accredited by the American Industrial Hygiene Association's (AIHA) Industrial Hygiene Laboratory Accreditation Program (IHLAP) and Environmental Mold Laboratory Accreditation Program (ELLAP) and maintains current accreditation throughout the duration of this project.

1.4.2 Regulatory Requirements: All mold removal work shall be performed in accordance with requirements of Federal, state and local, including but not limited to the following:

1.4.2.1 Federal Regulations:

1.4.2.1.1 U.S. Department of Labor, Occupational Safety and Health Administration (OSHA):

1.4.2.1.1.1 Mold Standard: Title 29, Part 1926, Section 62

1.4.2.1.1.2 Respiratory Protection: Title 29, Part 1910, Section 134

1.4.2.1.1.3 Construction Industry: Title 29, Part 1910, Section 2

1.4.2.1.1.4 Hazard Communication: Title 29, Part 1910, Section 1200

1.4.2.1.2 U.S. Environmental Protection Agency (EPA):

1.4.2.1.2.1 Resource Conservation and Recovery Act (RCRA):

1.4.2.1.2.1.1 Title 40, Part 260 to 265

1.4.2.1.3 U.S. Department of Transportation (DOT):

1.4.2.1.3.1 Hazardous Substances: Title 49, Part 171 and 172

1.4.2.1.3.1.1 U.S. Department of Energy (DOE)

1.4.2.2 Worker Protection Rule: Title 10, Part 851

1.4.2.3 State Regulations:

1.4.2.3.1 North Carolina Department of Industrial Relations, Division of Occupational Safety and Health (NC/OSHA):

1.4.2.3.2 Contractors State License Board (CSLB):

1.4.2.3.3 North Carolina Environmental Protection Agency (NC/EPA).

1.4.2.3.4 North Carolina Department of Health Services (DHS):

1.4.3 Pre-Construction Meeting: At least one week before work commences, a pre-construction meeting shall be held at a location designated by the Architect/Abatement Consultant. Attendees shall include the Architect/Abatement Consultant, Superintendent, Safety Inspector, and Industrial Hygienist; the Contractor's Project Superintendent and Abatement Superintendent; and others as necessary. The agenda shall include a review of project safety requirements, the Contractor's written mold compliance work plan, emergency contacts and notification plan, containment and work area design, facility requirements, submittals, and any other issues pertinent to the safe execution of the mold removal work.

1.4.3.1 Work shall not commence until all required submittals and plans have been approved by the Architect/Abatement Consultant.

1.5 **PROJECT/SITE CONDITIONS:**

1.5.1 Existing Conditions:

1.5.1.1 Paint that contains mold is known to be present on surfaces at the Project site. Surfaces which have not been previously tested, that may be affected by the project scope, should be assumed to contain mold and handled according to this section.

1.5.1.1.1 If any other materials are found which are suspected of containing mold or other hazardous materials, immediately stop work in the affected area and notify the Architect/Abatement Consultant. Handle suspected mold containing material according to this section

PART 2 - PRODUCTS

2.1 **MATERIALS:**

2.1.1 Plastic Sheeting: Fire retardant polyethylene sheeting conforming to NFPA 701 and ASTM S502-74T for surface flammability and smoke density. A single polyethylene film in the largest sheet size possible to minimize seams, 6 mils thick, clear, frosted or black as indicated.

2.1.2 Duct Tape: Provide duct tape in 2" or 3" widths as indicated, with an adhesive which is formulated to stick aggressively to polyethylene sheeting.

2.1.3 Spray Adhesive: Shall not contain methylene chloride, as listed on the product's label and/or Material Safety Data Sheet (MSDS). Provide spray adhesive in aerosol cans that is specifically formulated to stick aggressively to polyethylene sheeting.

2.1.4 Disposal Bags: 6-mil polyethylene.

2.1.5 Mold-Containing Materials Disposal Containers: Leak-tight drums or approved dumpsters.

2.1.6 Detergent: High-phosphate wash containing at least 5% trisodium phosphate (TSP).

2.2 **EQUIPMENT:**

2.2.1 Clothing: Furnish the following for each worker and others as specified.

2.2.1.1 Coveralls:

2.2.1.1.1 Disposable full-body coveralls with attached head and foot covers conforming to requirements of OSHA Standards 29 CFR 1926.62.

2.2.1.2 Respirators:

2.2.1.3 Full facepiece negative pressure respirators with an assigned protection factor of 50X the PEL, or equivalent, for the removal of mold paint.

2.2.1.4 Respirators shall be equipped with HEPA (P-100) Filters.

2.2.1.5 Powered Air Purifying Respirators (PAPRs) that have been quantitatively fit tested and equipped with HEPA (P-100) filters shall be acceptable substitutes for the respirators specified in 2.02(A)(2)(a).

2.2.1.6 Goggles, safety glasses, face shields: Provide eye and face protection as required by OSHA.

2.2.1.7 Gloves:

2.2.1.7.1 Compatible chemical resistant gloves for paint removal products.

2.2.1.8 Boots: Steel toed foot protective work boots with non-skid soles and steel shanks.

2.2.1.9 Hard Hats: Head protection (hard hats) approved by ANSI.

2.2.1.10 Soap and Towels.

2.2.2 Industrial Grade Vacuum and Exhaust Equipment: High Efficiency Particulate Air (HEPA) filtered vacuum and exhaust equipment with appropriate HEPA filters for mold contaminated dust / fume aerosols. Household HEPA vacuum cleaners shall not be acceptable.

2.2.3 Temporary Shower Facility: A pre-fabricated or site-built temporary shower facility, with hot and cold water to shower head that can be controlled from inside shower, shall be installed and used by all workers when airborne mold levels exceed or are predicted to exceed the PEL without regard to respiratory protection.

2.2.4 Temporary Washing Facilities: A sink with hot and cold water supply and soap for washing hands and face prior to breaks, lunch, and leaving the worksite at the end of the shift shall be used by all workers regardless of the airborne mold results.

2.2.5 Pressure differential recorders shall be in working condition, calibrated and operated continuously during the operation of the negative pressure enclosure and provide a pressure reading at least every 10 minutes, or more frequent, and provide a written documentation of the pressure readings that will be submitted to Architect/Abatement Consultant at the end of the project.

PART 3 - EXECUTION

3.1 **PROTECTION:**

3.1.1 General:

3.1.1.1 Take appropriate continuous measures as necessary to protect all building occupants from exposure to mold dust and fumes. Such measures shall include the procedures and methods described herein, and shall be in accordance with regulations and guidelines of applicable Federal, State, and local agencies.

3.1.1.2 Securing the Work Area: Secure the work area from access by the public, occupants, staff, or users of the building.

3.1.1.2.1 Demarcate the work by posting warning signs at each locked door and at the entrance to the change room leading to the controlled area as follows:

WARNING
MOLD WORK AREA
POISON
NO SMOKING OR EATING

3.1.1.3 Protect all existing materials, appurtenances and equipment that are not to be abated. Existing materials, appurtenances and equipment, building exterior and interior, and landscaping altered or damaged during mold related work shall be repaired or replaced by the Contractor to match existing undisturbed conditions at no additional cost to the Owner.

3.1.1.4 Utility shutdowns shall be in accordance with Division 01 Section "Special Procedures".

3.1.1.5 Maintain access and egress to building and all rooms at all times.

3.1.1.6 Do not block or reduce width of egress to exits.

3.1.1.7 Conduct operations with minimum interference to corridors, exits, and public thoroughfares.

3.1.1.8 Use periodic light water mist, temporary enclosures, and other suitable methods to limit the release of airborne mold dust and fumes. Comply with applicable regulations pertaining to environmental protection. Use water outside the work area only if approved by the Project Manager.

3.1.1.9 Path of travel for debris removal shall be maintained dust free and clean at all times.

3.1.1.10 Cover and protect windows, doors, and walls that are adjacent to mold work areas.

3.1.1.11 Water used during this project to remove or wet mold paint or mold dust shall be collected and prevented from entering storm water drains.

3.1.1.12 Eating, drinking, smoking, chewing tobacco or gum, or applying cosmetics is prohibited in the work area.

3.1.2 Personnel:

3.1.2.1 Mold-in-Construction Supervisor:

3.1.2.1.1 Provide an on-site, full-time Mold-in-Construction Supervisor to ensure that the worker protection program is effective.

3.1.2.1.2 The Mold-in-Construction Supervisor shall have the authority to shut down the project in accordance with 29 CFR 1926.62.

3.1.2.2 Mold Workers: The Contractor shall communicate information concerning mold hazards according to the requirements of the Hazard Communication Standard (29 CFR 1910.1200), including but not limited to the requirements concerning warning signs and labels, material safety data sheets (MSDS), and employee information and training.

3.1.2.3 Training Program: The Contractor shall assure that each worker and supervisor holds current training records meeting OSHA requirements. The training shall include the following:

3.1.2.3.1 The content of the OSHA Mold in Construction Standard (29 CFR 1926.62);

3.1.2.3.2 The specific nature of the operations that could result in exposure to mold above the action level;

3.1.2.3.3 The purpose, proper selection, fitting, use, and limitations or respirators;

3.1.2.3.4 The purpose and a description of the medical surveillance program, and the medical removal protection program, including information concerning the adverse health effects associated with excessive exposure to mold (with particular attention to the adverse reproductive effects on both males and females and hazards to the fetus and additional precautions for workers who are pregnant);

3.1.2.3.5 The engineering controls and work practices associated with the worker's job assignment including training of workers to follow relevant good work practices described in 29 CFR 1926.62;

3.1.2.3.6 The contents of any compliance plan and the location of regulated area in effect;

3.1.2.3.7 Instructions to workers that chelating agents should not routinely be used to remove mold from their bodies and should not be used at all except under the direction of a licensed physician, and;

3.1.2.3.8 The worker's right of access to medical records.

3.1.2.3.9 In addition to items 3.1.2.3.1 – 3.1.2.3.8 of this section, workers who perform mold removal work must also be mold trained workers.

3.1.2.4 Medical Surveillance:

3.1.2.4.1 Provide medical examinations for all workers performing the removal of mold paint, removal of settled mold dust, or welding / hot cutting steel where mold was removed per 29 CFR 1926.62.

3.1.2.4.2 Blood testing (blood mold and zinc protoporphyrin) shall be performed for all workers performing the removal of mold, removal of settled molded dust, or welding / hot cutting steel where mold was removed, no more than three work days prior to work commencing and within three work days following the completion of mold related work and in accordance with 29 CFR 1926.62.

3.1.2.5 Respiratory Protection Program: Comply with ANSI Z88.2 - 1992 "Practices for Respiratory Protection" and OSHA 29 CFR 1926.62.

3.1.2.5.1 Require that respiratory protection be used at all times when there is any possibility of disturbance of mold, settled mold dust, or welding / hot cutting on steel where mold was removed.

3.1.2.5.2 Full facepiece negative pressure respirators shall be worn by workers performing mold removal. Welders whom will be welding or cutting steel where mold was removed shall wear Powered Air Purifying Respirators (PAPRs), equipped with HEPA (P-100) filters, that are quantitatively fit tested.

3.1.2.6 Protective Clothing:

3.1.2.6.1 The following clothing shall be worn by all mold workers in the work area.

3.1.2.6.1.1 Disposable Coveralls with head and shoe covers (except for welders): Provide a sufficient number for all required changes for all workers in the work area. Dispose of coveralls as clothing waste at the end of each day.

3.1.2.6.1.2 Gloves: Chemical resistant gloves shall be used when using chemical strippers to remove mold. Gloves shall be secured to coveralls using duct tape to protect arms and hands. Do not remove gloves from the work area.

3.1.2.6.1.3 Goggles, safety glasses, or face shields: Shall be worn by all workers involved in scraping, spraying, stripping, or any other activity that may potentially cause eye or face injury.

3.1.2.7 Temporary Shower Facilities: Shall be used in accordance with subsection 2.02 (C) of this section.

3.1.2.8 Washing Facilities: Shall be used in accordance with subsection 2.02 (D) of this section.

3.2 **GENERAL PROCEDURES:**

3.2.1 Containment Systems:

3.2.1.1 Regardless of the mold content of paints, dust, or coatings being disturbed, Negative Pressure Enclosure (NPE) containment is not required unless operations such as sanding, abrasive blasting, or any other removal method is used that creates an uncontrollable release of airborne mold aerosols in excess of the Action Level of 30 ug/m3.

3.2.1.2 If measured mold levels from either personal or area air samples exceed the Action Level at any time during the course of the work, or visual emissions are detected, the Contractor shall immediately stop work, correct the condition(s) causing the increase, and notify the Architect/Abatement Consultant. If the contractor's existing engineering and administrative controls do not reduce concentrations below the Action Level, the Contractor shall immediately stop work, notify the Architect/Abatement Consultant, and implement additional controls such as the construction of a Negative Pressure Enclosure (NPE) equipped with HEPA filtered Negative Air Machines (NAMs) that have been tested as specified in subsection 3.05 (A)(2). The enclosure shall maintain a negative pressure relative to the surrounding area to adequately prevent the release of unfiltered mold aerosols. NAM exhaust ducting shall be routed to the exterior of buildings.

3.2.1.3 Demarcate the Mold Control Area by providing a roped-off and labeled perimeter area at least 20 feet wide around the work area where mold related work is to be performed. Provide signage per subsection 3.01 (A)(2)(b).

3.2.2 In case of inclement weather, such as high winds or rain, which may cause paint chips, dust, or fumes to migrate out of the work area, immediately secure the work area and stop work until weather conditions improve.

3.3 **WORK AREA PROCEDURES:**

3.3.1 Entering the Work Area: Each time a work area is entered put on new disposable coverall or (re-use previous coverall if not overly contaminated or torn), new head cover, and a clean respirator with cartridges appropriate for the mold work to be performed. Reinforce coverall seams and secure gloves to coveralls with duct tape.

3.3.2 Wearing disposable coveralls: Do not enter occupied building areas while wearing either new or contaminated disposable coveralls or respirators. Provide a visual barrier between mold related work and occupied areas.

3.4 **MOLD REMOVAL PROCEDURES:**

3.4.1 Mold removal: Remove molded paint or dust as described in the contractor's mold work plan prior to disturbing the substrate.

3.4.1.1 Prohibited Molded Paint / Dust Removal Methods:

3.4.1.1.1 Open flame burning

3.4.1.1.2 Chemical stripping with methylene chloride based paint strippers

3.4.1.1.3 Uncontained abrasive blasting

3.4.1.1.4 Uncontained power washing

3.4.1.1.5 Dry sanding or scraping

3.4.1.1.6 Power sanding without HEPA attachment

3.4.1.2 Waste Disposal: HEPA vacuum and/or wet wipe to remove all paint chips, dust, and debris generated during the work. Do not allow paint chips, dust, or debris to accumulate. Place all paint chips, dust, and debris in properly labeled plastic disposal bags at the end of each shift.

3.5 **FIELD QUALITY CONTROL:**

3.5.1 Site Tests:

3.5.1.1 Respiratory protective equipment shall be quantitatively fit tested, including PAPR units. Qualitative fit test using irritant smoke tests or other qualitative test methods shall not be acceptable.

3.5.1.2 All HEPA vacuums and negative air machines shall be challenge tested, by emery oil aerosol or equivalent, and certified as in "passing" condition prior to work commencing. Negative air machines and HEPA vacuums shall be tested every three months, and immediately after changing HEPA filters, and remain onsite during the duration of the project. HEPA vacuums and negative air machines shall not be used after changing HEPA filters until they have been tested by a challenge aerosol.

3.5.2 Inspection (Mold Air Monitoring):

3.5.2.1 Personal Exposure Monitoring Results: Contractor shall provide personal air monitoring of its employees, in accordance with requirements of 29 CFR 1926.62.

3.5.2.1.1 The personal air monitoring data shall include the employee's name, date of monitoring, task(s) performed, employees represented by the monitoring, analytical result, and time-weighted average exposure reported in unis of ug/m3.

3.5.2.1.2 The analytical lab results shall be submitted to the Architect/Abatement Consultant within 24 hours of sample collection.

3.5.2.1.3 The contractor shall submit air samples to an AIHA accredited laboratory per 1.06(A)(3) of this section. The contractor shall request NIOSH method 7082 as the analytical method.

3.5.2.2 The Architect/Abatement Consultant may conduct personal mold air monitoring on the contractor's employees at any time to verify Contractor's compliance with these Specifications, EPA and OSHA regulations, and applicable State and local government regulations.

3.5.2.3 Monitoring During Mold Decontamination: The Architect/Abatement Consultant, or its representative, may conduct quality control and area monitoring at any time during potential worker exposure to airborne mold. If monitoring outside the control area shows airborne concentrations exceed the OSHA Action Level of 30 ug/m3, the Contractor shall immediately stop all work, correct the condition(s) causing the increase and notify the Project Manager.

3.5.2.4 If monitoring indicates that mold contamination is occurring outside of controlled areas (i.e., equal to or greater than 30 ug/m3) the Contractor shall immediately cease mold disturbance activities. Do not resume work until authorized by the Architect/Abatement Consultant.

3.6 **CLEANING:**

3.6.1 Daily Cleaning: Thoroughly clean the entire area under active mold disturbance at the end of each workday.

3.6.1.1 At end of work shift remove any paint chips, dust, and debris by using a HEPA vacuum or by spraying with wet wash solution, collect debris with wet paper towels, place in disposal bag while still wet, and clean surface of plastic sheets with wet paper towels.

3.6.1.2 Exterior Cleanup:

3.6.1.2.1 Undisturbed areas potentially affected by exterior mold disturbance shall be protected by using a drop poly containment system.

3.6.1.2.2 Because weather can adversely affect the efficacy of exterior drop poly containment, remove surface plastic of the containment system at the end of each workday.

3.6.1.2.3 Examine immediate area to ensure that no mold debris has escaped containment. Debris shall be placed in double plastic bags, sealed and stored with other contaminated debris.

3.7 **PROJECT CLEARANCE:**

3.7.1 Contractor Release Criteria: The mold disturbance work area is cleared when the work area is visually clean and wipe samples show mold concentrations have been reduced to the level specified below.

3.7.2 Wipe Sampling: Wipe sampling will be used to evaluate the level of mold remaining in the work area. A commercial wipe moistened with a non-alcohol wetting agent will be used. Surface dust sampling will take place no sooner than 24 hours after completion of post-disturbance cleanup activities. This will allow any airborne dust to settle onto the surfaces to be tested.

3.7.3 Clearance Criteria:

3.7.3.1 If any of the wipe samples exceed the clearance criteria, the work area must be cleaned again and retested until the criteria are met.

Floors	40 ug/ft2
Interior Horizontal Window Surfaces	250 ug/ft2
Exterior Wall Windows	800 ug/ft2
Floor Surfaces	800/ft2

3.7.3.2 If all wipe sample results for the work area meet the clearance criteria, the work area is cleared for re-occupancy.

3.7.4 The Owner will be responsible for all costs of the initial clearance testing. The Contractor shall be responsible for additional testing costs if initial clearance test does not pass.

3.7.5 After final cleanup and removal of all Contractor equipment, materials, and critical barriers are complete, a final post teardown inspection will be conducted. The Architect/Abatement Consultant will conduct the final inspection with the Contractor.

3.8 **STORAGE OF WASTE MATERIALS:**

3.8.1 Waste Evaluation: The materials collected from the cleaning operations must be evaluated to determine if the materials are hazardous and require special handling. The Contractor is responsible for segregating waste as it is generated and labeling all waste containers appropriately. Stored waste must be labeled with the accumulation date, type of waste, and area from which it was generated. The waste will be stored in designated areas selected by the Project Manager. Load all mold-containing waste material in disposal bags or leak-tight drums. All materials are to be contained in one of the following:

3.8.1.1 Two 6-mil disposal bags.

3.8.1.2 Two 6-mil disposal bags and a drum.

3.8.1.3 Wrapped in 6-mil polyethylene sheeting and sealed with duct tape.

3.8.2 If a dumpster is to be located on site for the duration of the project, arrange location of the dumpster with the Architect/Abatement Consultant.

3.8.2.1 Do not store containerized materials outside of the work area. Take containers from the work area directly to a temporary storage location arranged by the Architect/Abatement Consultant. All open dumpsters are prohibited for any construction debris. Take special care in transporting the waste materials from the location of generation to the storage facility. Waste shall be removed from work area at times selected to minimize contacts with tenants. The path from the work area to the storage locations shall be selected to be the shortest possible distance.

3.8.3 The waste shall be separated into a minimum of categories as follows:

3.8.3.1 Low mold waste (e.g., filtered wash water, HEPA vacuumed disposable coveralls and plastic sheeting, etc.).

3.8.3.2 Concentrated mold waste (e.g., sludge from paint stripping, paint chips and dust, HEPA vacuum debris and filter, mop heads, rags used for removing caustic stripper or during wet wiping, unfiltered wash water, respirator filters, etc.).

3.8.4 Treatment and Testing of Project Waste Water: The handling and treatment of project waste water must conform with all State and local regulations. Project waste water includes shower water and waste water from cleaning operations.

3.8.4.1 The Contractor shall not discharge waste water containing mold into a community sanitary sewer. All waste water shall be discharged into a sanitary filter. Do not discharge any waste water on ground or soil. Filter water as necessary to meet local requirements.

END OF SECTION 028300

ATTACHMENT A

LEAD REMOVAL GUIDELINE

Lead Removal Guideline

For: 520 N. 3rd St.
Wilmington, NC 28401

Prepared for: Air Quality Analytical
PO Box 3452
Wilmington, NC 28406

PEI Project No.: 5125-17-0001-1L

Date: March 15, 2017

Prepared by:

PRECISION ENVIRONMENTAL INC.
3802 Cherry Ave.
Wilmington, NC 28403
Tel: (910) 763-3445
Fax: (910-763-3415

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PART 1 GENERAL

1.1 SUMMARY

Location of Project:
520 N. 3rd St.
Wilmington, NC 28401

Client:
Air Quality Analytical
PO Box 3452
Wilmington, NC 28406

Abatement contractor:
To be determined

1.2 REFERENCES

The publications listed below form a part of this Plan to the extent they are referenced. The publications are referred to within the text by the basic designation only.

1.2.1 CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1926.55	Gases, Vapors, Fumes, Dusts, and Mists
29 CFR 1926.57	Ventilation
29 CFR 1926.59	Hazard Communication Standard for Construction
29 CFR 1926.62	Lead Standard for the Construction Industry
29 CFR 1910.134	Respiratory Protection Standard
40 CFR 61	National Emissions Standards for Hazardous Air Pollutants (NESHAPs)
40 CFR 136	Clean Water Act
40 CFR 258	Disposal of Hazardous Materials
40 CFR 260	Hazardous Waste Management System
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Generators
40 CFR 263	Transporters of Hazardous Waste
40 CFR 264	Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities
40 CFR 268	Disposal of Hazardous Materials

1.2.2 AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z9.2	1979 Fundamentals Governing the Design and Operation of Local Exhaust Systems
ANSI Z88.2	1992 Practice for Respiratory Protection

1.2.3 UNDERWRITERS LABORATORIES, INC. (UL)

UL 586 1990 High Efficiency Particulate Air Filter Units

1.3 REQUIREMENTS

1.3.1 Description of Work

The work to be conducted is located at:
520 N. 3rd St.
Wilmington, NC 28401

Lead Based Paint Abatement:

This lead abatement project will consists of furnishing all labor, material, equipment, licenses and permits required to conduct interior and exterior lead paint removal/scraping at 520 N. 3rd St. Wilmington, NC:

The following components were found to contain lead based paint per written documentation supplied to Precision Environmental, Inc.:

- Interior brick walls (at garage separation)
- Wood door at intermediate office area
- Window sills at rear offices
- Exterior brick walls
- Exterior bands on sidewalls

All work involving lead painted components shall take place utilizing lead safe work practices as described in OSHA 29 CFR 1926.62.

All work shall take place within lead control areas.

- For exterior removal procedures, the entire structure shall be designated as the lead control area and appropriate barricade tape and warning signs shall be erected at areas of removal.
- For interior removal procedures, areas of removal shall be designated as lead control areas and appropriate barricade tape and warning signs shall be erected a minimum of ten (10) feet from each work area. Alternately, the entire interior of the structure may be incorporated into a single work area consisting of barricade tape, warning signs and critical barriers at all penetrations leading out of the work area.

The work described in this plan describes the abatement/removal of surfaces coated with lead based paint. The surfaces to be abated are referenced above. The waste paint shall be handled so that it does no present a hazard to abatement personnel, maintenance personnel, building inhabitants, any future visitors to the building, nor the environment. Area personnel, facilities, and materials shall be protected from contamination during the abatement process.

The plan describes the procedures and equipment required to protect abatement personnel, facilities, and the environment from contamination. Work shall be performed in accordance with 29 CFR 1926.62, and the other references listed in Section 1.2 of this Plan.

1.3.2 Definitions

Action Level – Employee exposure, without regard to use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air averaged over an 8-hour period. As used in this section, "30 Micrograms per cubic meter of air" refers to the action level.

Area Monitoring- Sampling of lead concentrations, within the lead control area and regulated area that is representative of the airborne lead concentrations which may reach the breathing zone of personnel potentially exposed to lead.

Certified Industrial Hygienist- An industrial hygienist certified by the American Board if Industrial Hygiene in comprehensive practice.

Decontamination Unit- Rooms within the lead control area equipped with separate storage facilities for clean protective work clothing and equipment, shower, and dirty room.

Employee Exposure- The concentration of airborne lead to which an employee would be exposed if the employee were not wearing respiratory protection equipment.

HEPA filter- A High Efficiency Particulate Air filter capable of removing particulate having a mass median diameter of 0.3 micron with a minimum efficiency of 99.7 percent.

Time Weighted Average (TWA)-The average employee exposure during an 8-hour work shift.

Lead- Metallic lead, inorganic lead compounds, and organic lead soaps.

Lead Contaminant-An enclosed area or structure to prevent the spread of lead dust, paint chips, or debris of lead containing paint removal operations. The lead containing area is isolated by physical boundaries to prevent unauthorized entry of personnel.

Lead Control Area- Area physically roped or partitioned off around an enclosed lead containment to limit unauthorized entry of personnel.

Permissible Exposure Limit (PEL)-The highest level of employee exposure allowed by law as measured by an 8-hour time-weighted average. The PEL for lead is 50 micrograms per cubic meter (50ug/m3) of air; but shall not exceed 400 micrograms per workday.

Personal Monitoring- Sampling of lead concentrations within the breathing zone of an employee to determine the 8-hour time weighted average concentration in accordance with 29CFR 1926.62. Samples shall be representative of the employee's work tasks. The breathing zone shall be considered an area within 12 inches of the nose or mouth of an employee.

1.3.3 Title of Materials

All materials resulting from the abatement/repair work described in the Plan except as otherwise specified, shall become the property of the Abatement Contractor, and shall be disposed of according to the References and guidelines contained in this Plan.

1.3.4 Protection of Existing Work to Remain

The Abatement Contractor shall perform removal and abatement work without damage or contamination to the facility property. Where such work is damaged or contaminated, it shall be restored to its original condition or equivalent.

1.3.5. Medical Requirements

Medical Examinations: Before abatement personnel area allowed to work in contaminated areas, there shall be an appropriate medical examination in accordance with 29 CFR 1926.62 and in accordance with State and Local regulations. Such examinations shall be given at least every six (6) months to employees engaged in lead-related work who are exposed above the Action Level for 30 days or more per year. The employer shall provide medical examinations at least every two (2) months for each employee whose last blood lead level was at or above 40 ug/100g of blood. The continued exposure and/or medical surveillance of employees with elevated blood lead levels shall be in accordance with 29 CFR 1926.62.

Medical Records: The Abatement Contractor for shall retain the employee exposure and air monitoring records for at least 40 years, or for the duration of employment plus 30 years, whichever is longer. The Abatement Contractor shall assure that the employee's medical surveillance records are retained for the same period. These records shall be available for inspection and copying by the employee, the Assistant Secretary of Labor or the Occupational Safety and Health Administration, authorized representatives of the employee, and by the employee's physician upon the written request of the employee or former employee.

1.3.6 Training

All personnel employed by the Abatement Contractor who are involved in lead abatement work shall be adequately trained by technically qualified personnel. Training shall include: (1) pertinent regulations (29 CFR 1926.62), (2) medical surveillance, (3) health effects of lead and associated metals, (4) worker safety, hygiene, and decontamination (5) work procedures, as described in 29 CFR1926.62, and (6) personnel and respiratory protection equipment. The training program shall be repeated at least annually for each employee.

1.3.7. Permits and Notifications

Disposal Permit: The disposal site chosen for this project shall be approved to receive lead-containing wastes by the State of North Carolina. A copy of the landfill permit shall be part of the Lead-Paint Abatement Plan (LPAP). Uniform Hazardous Waste Manifest forms, or equivalent forms, shall be completed by the Abatement Contractor and shall become part of the LPAP.

1.3.8 Rental Equipment Notification

If rental equipment is to be used during the removal, handling, transportation or disposal of lead-based paint, the Abatement Contractor shall notify the rental agency in writing concerning the intended use of the equipment. The Owner shall be furnished a copy of the written notification.

1.3.9 Hazardous Waste Management Plan

The Abatement Contractor shall submit a Hazardous Waste Management Plan (HWMP) that shall comply with applicable federal, state, and local hazardous waste regulations. The HWMP shall include:

1. A listing of on-site hazardous wastes (HW)
2. Estimated quantities of HW to be generated

3. Names, qualifications, and contacts for HW contractors
4. Copies of all HW permits and EPA ID numbers
5. Contingency plans for spill prevention, containment and cleanup
6. Names and qualifications of on-site HW personnel

1.3.10 Health and Safety Compliance

In addition to the procedures included in this Plan, the Abatement Contractor shall comply with (1) all laws, ordinances, rules, and regulations of federal, state, regional, and local authorities regarding the handling, storage, transportation, and disposal of lead-containing materials, (2) 29 CFR 1910.134, (3) 29 CFR 1926.55, and (4) 29 CFR 1926.62. The Abatement Contractor shall submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. The most stringent requirements shall apply should a conflict arise.

The Abatement Contractor shall:

* Comply with OSHA rules, and shall disconnect electrical service when wet removal is performed, and use GFCI's in all circuits
* Comply with OSHA confined space entry requirements
* Comply with OSHA Blood Borne Pathogen rules
* Comply with the OSHA Hazards Communication Program requirements for the construction, including supplying the Owner with copies of all MSDS's
* Prepare both fire and medical emergency plans.

Abatement personnel shall be informed of the contents of the required compliance plans, and given the required training, prior to beginning work.

1.3.11 Respiratory Protection Program

The abatement Contractor shall have an established Respiratory Protection Program that complies with 29 CFR 1910.l34, and ANSI Z88.2; and, shall only use respiratory protective equipment certified by NIOSH.

1.3.12 Air Monitoring Laboratory

If required, area air samples shall be obtained by a trained air-sampling technician or Industrial Hygienist

1.3.13 Sample Analysis Laboratory

Analytical protocols for airborne lead shall be in accordance with the latest published NIOSH Methods of Analysis.

1.3.14 Air Monitoring Results

The analytical results for air samples for the presence of lead shall be reviewed by an air-sampling technician or Industrial Hygienist. The Air Sampling Technician or Industrial Hygienist shall notify the Owner and the Abatement Contractor immediately of any air sampling results over 30 micrograms per cubic meter. Copies of the analytical results shall be provided to the Owner within three (3) days of their availability.

1.3.15 Landfill

The Abatement Contractor shall submit written, detailed delivery tickets to the Owner within three (3) working days after delivery of the lead-containing waste, or as soon as possible. The delivery tickets shall be prepared, signed and dated by the agent of the landfill and/or transporting company, and shall certify the amount of lead-containing material delivered to the landfill.

1.3.16 Multi-employer Work Sites

An Abatement Contractor performing work requiring the establishment of a regulated area shall inform other employers on the site of the involvement of the work with lead-based paint; of the existence of and requirements pertaining to regulated areas; and the measures being taken to ensure that employees of other employers are not exposed to lead.

Employers of employees who are subject to potential exposure to lead on a multi-employer work site shall take measures to protect their employees; including removing the employees from an area until conditions are corrected and a clearance is obtained; or, performing an initial exposure assessment.

PART 2 EXECUTION

2.1 EQUIPMENT

The term Equipment refers to the personal protective equipment to be worn by abatement workers and other project-related personnel when they are in the Lead Control Area.

The Abatement Contractor shall provide the Owner's Representative with two complete sets of personal protective equipment per workday, as defined by this Plan, for entry into the Lead Control Area to make inspections. Protective clothing, respirators, and other protective equipment shall be worn by all personnel for the following activities or when entering the following locations: (1) when in contact with lead-paint that is in poor condition (chalky or peeling) during work area preparations; (2) when lead-containing materials are to be disturbed; (3) when making modifications to contaminated areas; (4) when in lead-paint abatement or contaminated areas.

2.1.1 RESPIRATORS

Approval: The Abatement Contractor shall only supply abatement workers and other project-related personnel with respirators approved by NIOSH.

Respirator Use: The type of respirator chosen by the Abatement Contractor shall be in accordance with the respirator selection criteria prescribed in 29 CFR 1926.62. Respirators shall be cleaned and disinfected after each use, and stored in a clean and sanitary location.

Respirators and protective clothing shall no longer be required after the Lead Control Area has passed both the final visual inspection and the clearance sampling, and has been accepted as clean by a North Carolina Accredited Lead Inspector and/or Risk Assessor.

TABLE 1
RESPIRATOR SELECTION CRITERIA
(29 CFR l926.62)

AIRBORNE LEAD CONCENTRATION	REQUIRED RESPIRATOR
500 ug/m³ or less	Half-mask, negative air, air purifying, with HEPA filters
2,500 ug/m³ or less	Full-face, negative air, air purifying, with HEPA filters
5,000 ug/m³ or less	Powered air purifying respirator (PAPR) with HEPA filters
100,000 ug/m³ or less	Full-face, supplied air, positive pressure, operated in the pressure-demand mode

2.1.2 Special Clothing

Employees shall be provided with, and required to wear, whole-body fire retardant disposable clothing, head-cover, gloves, and foot coverings during the entire course of the abatement and cleanup. Disposable plastic or rubber gloves shall be provided, and worn, to protect the employee's hands. Cloth gloves may be worn inside the protective gloves for comfort, but shall not be used alone. Tape shall be used to secure sleeves at the wrists and to secure foot coverings at the ankles. Disposable work clothing may be provided to be worn under the disposable coveralls and foot coverings.

2.1.3 Other Protective Equipment

If corrosive chemical strippers are used in the abatement procedure in a manner where they can fall onto or splash onto the body, employees shall be supplied with protective clothing that provides adequate protection against these chemicals for the duration of the exposure (protective clothing shall have a minimum break-through time of 480 minutes). In addition, a shower shall be provided as part of the decontamination unit.

2.1.4. Eye Protection

The Abatement Contractor shall provide goggles to employees and project-related personnel engaged in lead-paint abatement when the use of full-face respirators is not required.

An eyewash station shall be available at the perimeter of the Lead Control Area and readily accessible to the abatement workers. If corrosive chemicals are used in the abatement procedures, the quantity of water available at the eyewash station shall be OSHA-approved. The water in the eyewash station shall contain an approved disinfectant to prevent the growth of harmful bacteria.

2.1.5 Decontamination Area

The Abatement Contractor shall establish an eye/hand-wash station for workers performing lead based paint removal procedures. In addition the Abatement Contractor shall establish a designated change-out area for workers to change and dispose contaminated coveralls. The change-out area shall consist of a minimum on 1 layer of 6-mil poly covering the floor area and shall be of sufficient size to accommodate all workers who shall utilize the area during change-

out/decontamination procedures.

Street Clothing and shoes shall be kept in the change-out area. Workers while still wearing respirators, shall vacuum and then remove lead-contaminated disposable protective clothing at the boundary of the Lead Control Area, and seal these in impermeable, labeled bags or containers for disposal. Disposable protective clothing shall not be removed in the change-out area. Workers shall not wear lead-contaminated work clothing between work and home. When feasible, the eye/hand-wash station shall be located between the work area and the change-out area

Employee procedures for entering the Lead Control Area, and decontamination procedures, shall be as prescribed in 29 CFR 2916.62

21.6 HVAC Systems

The Abatement Contractor shall shut down, lockout, and isolate, as applicable, HVAC systems and components that supply, exhaust, or pass through the Lead Control Area. All respirable-air intakes, vents, and seams in such systems that are reasonably subject to contamination shall be sealed with two layers of 6-mil polyethylene or equivalent prior to beginning abatement. This may not apply on areas where whole component removal is required.

2.1.7 Caution Signs and Labels

Approved lead hazard warning signs shall be erected at all approaches to the Lead Control Area as prescribed in 29 CFR 1926.62:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING

Signs shall be posted at such a distance from the restricted area that employees may read the signs and take the necessary protective steps before entering the area. The Abatement Contractor shall provide lead hazard warning labels and affix them to all lead-containing materials, scrap, waste, and other products contaminated with lead, including the dumpster. These labels shall include the Abatement Contractor's name, the contract title, and the contract number.

PART 3 PROCEDURES

3.1 WORK PROCEDURES

3.1.1 Lead Control Area

The Abatement Contractor shall provide a designated lead control area around the abatement operations. The lead control area shall have a minimum radius beyond the lead regulated area of 10 feet.

3.1.2 Containment of Lead-Based Paint

Exterior Abatement of loose and peeling paint (Exterior brick walls and exterior bands on sidewalls): 6-mil poly placed on the ground shall be attached to each work surface and extend out from the work areas five (5) feet for each eight (8) feet of the structural height. The minimum extension shall be five (5) feet and the maximum extension shall be ten (10) feet, with reasonable allowances for obstructions, roads and/or structures.

Exterior abatement of loose and peeling paint on exterior brick walls shall take place utilizing a commercially available chemical paint stripper such as "Peel Away 1" or equivalent applied per manufacturers specifications. Only loose and peeling paint is required to be abated. Following completion of removal procedures, the abated areas shall be stabilized with a minimum of one coating of non-lead containing paint.

Exterior abatement of loose and peeling paint on exterior bands on sidewalls shall take place utilizing a commercially available chemical paint stripper such as "Peel Away 1" or equivalent applied per manufacturers specifications. Only loose and peeling paint is required to be abated. Following completion of removal procedures, the abated areas shall be stabilized with a minimum of one coating of non-lead containing paint. Alternately, the exterior bands may be completely removed, wrapped and disposed.

Waste generated by the removal of loose and peeling paint shall be collected and placed into approved containers and held for TCLP testing and analysis prior to disposal.

If the constant wind speed is over 10 miles per hour at the work site, exterior abatement procedures producing dry waste shall not be performed without the use of containment or other effective windscreen. The objective shall be to conform to the NESHAP requirements of No Visible Emissions. Abatements using wet removal techniques may proceed as long as emissions, as evidenced by air and/or wipe samples, are confined to the Lead Control Area

The abatement Contractor shall employ engineering controls, good work practices, and state-of-the-art procedures to the extent necessary to ensure that neither personnel nor the environment are exposed to unacceptable levels of lead or other heavy metals.

A containment shall not be required for the exterior portion of the project since the abatement is an open-air removal. Precautions shall be taken to prevent visible emissions. Such precautions shall include the use of engineering controls such as wet removal methods and wind screens where applicable.

Interior Abatement (Interior brick walls, wood door and window sills): 6-mil poly placed on the floors shall be attached to the walls and extend out from the work areas five (5) feet for each eight (8) feet of the structural height. The minimum extension shall be five (5) feet and the maximum extension shall be ten (10) feet, with reasonable allowances for obstructions.

Critical barriers consisting of 6-mil poly sheeting shall be placed over all opening leading out of the lead control area.

The abatement Contractor shall employ engineering controls, good work practices, and state-of-the-art procedures to the extent necessary to ensure that neither personnel nor the environment are exposed to unacceptable levels of lead or other heavy metals.

Interior abatement of loose and peeling paint on interior brick walls shall take place utilizing a commercially available chemical paint stripper such as "Peel Away 1" or equivalent applied per manufacturers specifications. Only loose and peeling paint is required to be abated. Following completion of removal procedures, the abated areas shall be stabilized with a minimum of one coating of non-lead containing paint.

Interior abatement of the wood door shall take place utilizing whole component removal procedures. Removed components shall be wrapped and disposed.

Interior abatement of wood window systems shall take place utilizing whole component removal procedures. In addition to poly floor covering within the structure, poly ground coverings must be applied at the exterior of the structure at areas of window component removal. Removed components shall be wrapped and disposed.

3.1.3 Removal Techniques for Lead-based Paint

The Abatement Contractor shall NOT use the following techniques to remove lead-based paint: (1) dry sanding without the use of a HEPA equipped sander, (2) burning with an open flame torch, (3) open abrasive blasting, (4) uncontained hydro blasting, (5) chemical stripping in interior spaces with strippers containing methylene chloride.

The Abatement Contractor may use any of the following methods of abatement: (1) Wet hand-tool scraping, (2) power tools with a HEPA filtered vacuum as an integral part of the tool, (3) Chemical stripping, or (4) whole component removal.

Following abatement, all abated surfaces shall be HEPA-vacuumed and wet-wiped with a dilute solution of trisodium phosphate or a solution of soapy water.

For procedures where only loose and peeling paint is removed in order to facilitate re-coating of the surfaces, the remaining abated surfaces shall be stabilized with a coating of non-lead containing coatings.

3.1.4 Site Inspection

While performing lead-paint abatement, the Abatement Contractor shall be subject to on-site inspections by the Air Monitoring Technician, Industrial Hygienist or North Carolina Accredited Lead Inspector / Risk Assessor. If any inspection finds the abatement work to be in violation of the specifications in this Plan, the Owner may issue a stop-work order immediately, to be in effect until the status of the violation is resolved. The resulting standby time and expenses required to resolve the violation shall be at the expense of the Abatement Contractor.

3.2 AIR MONITORING PROCEDURES

3.2.1 Responsibilities

Monitoring of airborne concentrations of lead shall be performed in accordance with NIOSH Methods of Analysis and the requirements of this Plan

3.2.2 Air Monitoring Strategy

During Abatement: The Permissible Exposure Limit (PEL) for employee exposure shall be 50 micrograms per cubic meter of air, calculated as an 8-hour TWA. However, the maximum employee exposure shall be 400 micrograms per work shift. That is, the PEL is 400 ug divided by the number of hours worked in that shift. The PEL shall allow for the Protection Factor provided by the type of respiratory protection in use.

Personal monitoring during the initial employee exposure to airborne lead shall be conducted to establish the Reference TWA.

The air monitoring during abatement shall consist of at least one personal sample collected on each of two workers during each 8-hour work shift.

At the client's request, area air samples shall be collected at areas immediately adjacent to the lead control areas. For outdoor work, at least one sample per shift shall be taken on the downwind side of the lead control area.

If airborne lead concentrations outside the Lead Control Area reach or exceed the Action Level (30 ug/m3) at any time during the abatement activity, the Abatement Contractor shall cease all abatement activities, evacuate personnel from

adjacent areas, and attempt to correct the situation.

After final Cleanup: Clearance monitoring shall be performed after the Lead Control Area has been cleaned and has passed a final visual inspection.

The clearance criteria shall be the following:

1. Visual inspection verifying that no paint chips of any type are visible adjacent to interior and exterior work areas.

2. If required, surface wipe samples obtained on Floors shall indicate a residual lead concentration of less than 40 µg per square foot.

3. If required, surface wipe samples obtained within Window Sills shall indicate a residual lead concentration of less than 250 µg per square foot.

4. If required, surface wipe samples obtained within Window Wells shall indicate a residual lead concentration of less than 400 µg per square foot.

5. If required, soil samples at the perimeter drip line shall indicate lead concentrations of less than 1,200 ppm

6. If required, soil samples of bare soil shall indicate lead concentrations of less than 400 ppm

Visible lead paint chips shall be unacceptable. Lead concentrations exceeding these levels shall be unacceptable. If lead concentrations are unacceptable, the Abatement Contractor shall repeat the final clean-up process and visual inspection, and shall be financially responsible for the collection new clearance samples. The barriers or boundaries surrounding the Lead Control Area may be removed after satisfactory completion of the clearance sampling and approval from the North Carolina Accredited Lead Inspector and/or Risk Assessor.

3.2.3 Air Sample Analysis

The concentration of total airborne lead shall be determined by Atomic Absorption Spectrometry in accordance with the latest published NIOSH Methods of Analysis, and in accordance with the analytical precision requirements of 29 CFR 1926.62.

3.2.4 Reporting of Results

Air samples shall be analyzed and the results reviewed in a timely manner that avoids the potential for unknown over-exposures. Copies of all sampling reports shall be submitted to the Abatement Contractor within three (3) working days of their receipt, and shall include the following information:

(1) Project Description
(2) Sample Number
(3) Name of Employee/SSN
(4) Location/Task Sampled
(5) TWA Results (ug/m3)
(6) Analytical Method
(7) Collection/Analysis Dates
(8) Name of Air Monitoring Technician
(9) Pump Start and Stop Times
(10) Type of Respirator
(11) Signature of Analyst

3.3 CLEANUP AND DISPOSAL PROCEDURES

3.3.1 Cleanup Procedures

The Abatement Contractor shall keep surfaces in the Lead Control Area free of accumulations of lead-paint dust. Special attention shall be given to restricting the spread of dust and debris; and contained wastes shall be restricted to an assigned holding area, as designated by the Owner. When the lead-paint abatement is complete, all remaining lead-containing debris shall be removed from the work-site and final cleanup shall be initiated. The Abatement Contractor shall clean all surfaces in the work area with a HEPA vacuum and then wash the surfaces with a dilute aqueous solution of tri-sodium phosphate. The use of compressed air shall not be permitted for cleaning purposes.

Abated surfaces shall be considered clean, and the Lead Control Area acceptable for unrestricted entry, if lead dust levels within containment within levels listed in section 3.2.2 (Air Monitoring Strategy – After Final Cleanup). The work area must be clean and dry prior to clearance sampling. If the work area has to be re-cleaned, it shall be dry before again performing clearance sampling.

The Lead Control Area shall be maintained around the work area until clearance sampling has been completed and the area has been certified by the North Carolina Accredited Lead Inspector and/or Risk Assessor as clean and acceptable for entry.

3.3.2 Disposal Procedures

Representative samples of all waste, scrap, and debris shall be collected and analyzed by the EPA's Toxicity Characteristic Leaching Potential procedure (TCLP). Those materials failing the TCLP criteria shall be disposed of as hazardous wastes.

Following completion of the abatement work, the Abatement Contractor shall collect lead-containing waste, scrap, debris, bags, containers, equipment, lead-contaminated clothing and all other items that may release airborne lead particulate, and place such items in double-bags of 6-mil plastic. These bags shall then be placed in approved waste drums for temporary storage.

All bags or containers of lead-containing waste and miscellaneous debris shall be properly sealed and a lead hazard-warning label affixed to each bag or container. The labels must include the Abatement Contractor's name, the contract title, and the contract number.

The Abatement Contractor shall arrange for the hauling and the disposal of lead-containing waste. Lead-containing waste must be transported in an enclosed dumpster or truck, which must have proper hazard warning labels attached. These labels shall include the Abatement Contractor's name, the contract title, and the contract number. Employees shall wear half-face, negative air, air-purifying respirators, as a minimum, and protective clothing when handling bags or drums of lead-containing waste.

The lead-containing waste shall be taken to the designated landfill and disposal shall be in accordance with 40 CFR 61 and 136, 49 CFR 261-268, and all federal, regional, state, and local regulations. Sealed drums shall be removed from the truck or dumpster and placed in drums and the entire drum buried. Uncontaminated containers may be cleaned and reused.

All debris, paint chips, and dust may be considered a hazardous waste unless proven otherwise by TCLP testing. If TCLP analysis reveals concentrations equal or greater than 5ppm, the materials shall be disposed off base in an approved hazardous waste facility.

3.3.3 Waste Water Monitoring

All contaminated water produced during the abatement, including shower water, shall be filtered using a high efficiency filter having a maximum effective pore size of 5 microns to remove the lead-paint particles. After filtering, all contaminated water shall be contained and tested for heavy metal contaminants prior to discharge into the sanitary sewer system. Disposal of all contaminated water shall be in accordance with EPA regulations and the requirements of the local water sanitation district.

ATTACHMENT B

LEAD PAINT SURVEY

SanAir Technologies Laboratory

Analysis Report

prepared for

Quality Environmental

Report Date: 7/15/2015
Project Name: Wilmington, NC
Project #: NCDOT
SanAir ID#: 15020508

804.897.1177 www.sanair.com

SanAir Technologies Laboratory, Inc.
1651 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax 804.897.0070
Web: http://www.sanair.com E-mail: laq@sanair.com

Quality Environmental
PO Box 480507
Charlotte, NC 28269

July 15, 2015

SanAir ID #: 15020508
Project Name: Wilmington, NC
Project Number: NCDOT

Dear Collins Ibeto,

We at SanAir would like to thank you for the work you recently submitted. The 12 sample(s) were received on Tuesday, July 14, 2015 via FedEx. The final report(s) is enclosed for the following sample(s): PC01, PC03, PC04, PC05, PC06, PC07, PC08, PC10, PC11, PC12. The following sample(s) were unusable and were not tested: PC02, PC09.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

SanAir Technologies Laboratory

Final Report Includes:
- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

sample conditions:
10 sample(s) in Good condition 2 sample(s) in QNS condition

SanAir SanAir Technologies Laboratory, Inc.
1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: http://www.sanair.com E-mail: lab@sanair.com

SanAir ID Number:
15020508
FINAL REPORT

Name: Quality Environmental
Address: PO Box 480507
Charlotte, NC 28269

Project Number: NCDOT
P.O. Number:
Project Name: Wilmington, NC

Collected Date: 7/10/2015
Received Date: 7/14/2015 9:00:00 PM
Report Date: 7/15/2015 9:25:54 PM
Analyst: Lane, Jennifer

Lead Paint Analysis

Test Method: SW846/3050B/7000B
NOTE: µg/g=ppm

Sample	Description	µg Pb in Sample	Sample Size (grams)	Calculated RL	Sample Result	Sample Result
15020508-001	PC01 / Off White On Brick - Newfirth Interior Walls	16	0.1066	93.8	147.6 µg/g (ppm)	0.0148 % By Weight

Test Method: SW846/3050B/7000B
NOTE: µg/g=ppm

Sample	Description	µg Pb in Sample	Sample Size (grams)	Calculated RL	Sample Result	Sample Result
15020508-003	PC03 / Off White On Wooden Door/Interior - Intermediate Office Area	698	0.1032	96.9	6764.4 µg/g (ppm)	0.6764 % By Weight

Test Method: SW846/3050B/7000B
NOTE: µg/g=ppm

Sample	Description	µg Pb in Sample	Sample Size (grams)	Calculated RL	Sample Result	Sample Result
15020508-004	PC04 / Off White Paint On Wood Panel Partition Walls	<1	0.1084	92.3	<92.3 µg/g (ppm)	<0.0092 % By Weight

Test Method: SW846/3050B/7000B
NOTE: µg/g=ppm

Sample	Description	µg Pb in Sample	Sample Size (grams)	Calculated RL	Sample Result	Sample Result
15020508-005	PC05 / Off White On Window Sill/Rear Offices	14	0.1031	97	136.8 µg/g (ppm)	0.0137 % By Weight

Test Method: SW846/3050B/7000B
NOTE: µg/g=ppm

Sample	Description	µg Pb in Sample	Sample Size (grams)	Calculated RL	Sample Result	Sample Result
15020508-006	PC06 / Off White Paint On Brick/Exterior Wall	1789	0.1173	85.3	15250.5 µg/g (ppm)	1.5251 % By Weight

Certification

Signature: Jennifer Lane
Date: 7/15/2015

Reviewed: Andrew P. Elk
Date: 7/15/2015

SanAir Technologies Laboratory, Inc.

1551 Oakbridge Drive, Suite B, Powhatan, VA 23139
804.897.1177 Toll Free: 888.895.1177 Fax: 804.897.0070
Web: http://www.sanair.com E-mail: laq@sanair.com

SanAir ID Number
15020508
FINAL REPORT

Name: Quality Environmental
Address: PO Box 480507
Charlotte, NC 28269

Project Number: NCDOT
P.O. Number:
Project Name: Wilmington, NC

Collected Date: 7/10/2015
Received Date: 7/14/2015 3:00:00 PM
Report Date: 7/15/2015 3:25:54 PM

ORGANISM DESCRIPTIONS

The descriptions of the organisms presented are derived from various reference materials. The laboratory report is based on the data derived from the samples submitted and no interpretation of the data, as to potential, or actual, health effects resulting from exposure to the numbers of organisms found, can be made by laboratory personnel. Any interpretation of the potential health effects of the presence of this organism must be made by qualified professional personnel with first hand knowledge of the sample site, and the problems associated with that site.

ENVIRONMENTAL MONITORING SAMPLING LOG
Industrial Hygiene Consulting

Employee/Sample Location	Sample No.	Pump No.	Flow Rate L/min	Time On	Time Off	Time Min	Volume, liters	Contaminant	Results
Off-white on Brick - Newsworthy Bldg	PC01							Lead	
Interior Walls									
Curing on Wood Door / Exterior	PC02							"	
Door - Newsworthy Bldg									
Off White on Wooden Door	PC03							"	
Interior - Intermediate Floor									
Area - Newsworthy Bldg								"	
Off White Paint on	PC04								
Wood Panel Partition									
Walls / Same Area as PC-03									
Off White on Windows	PC05							"	
Sill / Law Offices								"	
Off white Paint on Brick	PC06							"	
Exterior Wall									

CLIENT / LOCATION: NCDOT | Wilmington NC. | SAMPLED BY: Collins Beatty

DATE: 7/10/2015

WORK ACTIVITY DESCRIPTION: Lead Based Paint Inspection

EXPOSURE LIMITS:

COMMENTS (Controls, PPE):

15020508

ENVIRONMENTAL MONITORING SAMPLING LOG
Industrial Hygiene Consulting

Employee/Sample Location	Sample No.	Pump No.	Flow Rate L/min	Time On	Time Off	Time Min	Volume, liters	Contaminant	Results
Gray on Support Column/	PC07							Lead	
Exterior - Front Z Columns								"	
Gray on Stucco/Exterior Wall	PC08							"	
Gray on Door/	PC09							"	
Off White on Brick/	PC10							"	
Interior									
Gray on Window Frame -	PC11								
Exterior - 4th St. Side									
Off White On Brick -	PC12								
Exterior									

CLIENT / LOCATION: NC DOT / Wilmington NC Thomas Bldg | SAMPLED BY: Collins Ibeto

DATE: 7/10/2015

WORK ACTIVITY DESCRIPTION: Lead Based Paint Inspection

EXPOSURE LIMITS:

COMMENTS (Controls, PPE):

1502050

Jordan L. Ridgeway

From: Collins Ibeto <collinsbt52@gmail.com>
Sent: Tuesday, July 14, 2015 2:59 PM
To: Jordan L. Ridgeway
Subject: Re: NCDOT/Wilmington, NC-Verify Turn-Around Time

Please analyze paint chips for 3 days TAT. Thanks

Collins

On Jul 14, 2015 12:25 PM, "Jordan L. Ridgeway" <jridgeway@sanair.com> wrote:

Collins,

Good afternoon. In regards to the job above, can you please verify what turn-around time you would like the lead samples to be analyzed for? Thanks in advance.

Jordan Ridgeway

Account Executive

SanAir Technologies Laboratory, Inc

1551 Oakbridge Drive, Suite B

Powhatan, Va 23139

Phone: 804.897.1177

Phone: 888.897.1177

Fax 804.897.1178

SanAir Technologies Laboratory

www.sanair.com

"The Identification Specialists"

7-14-15

SECTION 028500 – MOLD ABATEMENT

PART 1 - GENERAL

1.1 **SUMMARY:**

1.1.1 Related Documents:

1.1.1.1 Drawings and general provisions of the Subcontract apply to this Section.

1.1.1.2 Review these documents for coordination with additional requirements and information that apply to work under this Section.

1.1.2 Section Includes:

1.1.2.1 Mold removal/disposal where mold has been as indicated in Drawings and Specifications.

1.1.2.2 Compliance with all applicable Federal, State, and local regulations pertaining to work practices.

1.1.2.3 Protection of workers, visitors to the site, and persons occupying areas adjacent to the site.

1.1.2.4 Provide medical examinations and maintain medical records of personnel as required by the applicable Federal, State, and local regulations.

1.1.2.5 The scope of this work does not include the manifesting, transporting, or disposal of hazardous waste. The Contractor will manifest, transport, and dispose of hazardous waste that has been properly packaged, labeled, and stored by the contractor.

1.1.2.6 The Architect/Abatement Consultant review and approval of the mold abatement contractor's Mold Compliance Work Plan describing the means and methods of mold related work prior to work commencing.

1.1.3 Related Sections:

1.1.3.1 Division 01 Section "General Requirements."

1.1.3.2 Division 01 Section "Selective Demolition."

1.2 **DEFINITIONS:**

1.2.1 Mold: The Consumer Product Safety Commission (CPSC) considers any paint or other surface coating as containing mold at concentrations greater than or equal to 600 parts per million (ppm), 0.06% by weight; however, OSHA regulations apply to any detectable amount of mold in construction.

1.2.2 Mold-In-Construction Supervisor: One who is capable of identifying existing and predictable mold hazards in the surroundings or working conditions and who has the authorization to take prompt corrective measures to eliminate them.

1.2.3 Mold-in-air Action Level (AL): 30 µg/m3.

1.2.4 Mold-in-air Permissible Exposure Limit (PEL): 50 µg/m3.

1.3 **SUBMITTALS:**

1.3.1 Submit under provisions of Division 01 Section "General Requirements" for review and approval by the Abatement Consultant.

1.3.2 Product Data: Submit [five (5)] copies of the following:

1.3.2.1 Material Safety Data Sheets (MSDS) sheets for each product containing hazardous materials as defined by OSHA's Hazardous Communication Standard; 29 CFR 1910.1200.

1.3.3 Quality Assurance/Control Submittals: Submit [five (5)] copies of the following:

1.3.3.1 Mold Compliance Work Plan: Detailed, job-specific plan of the procedures proposed for use in complying with the requirements of this Specification and 29 CFR 1926.62.

1.3.3.1.1 The plan shall be approved by the Architect/Abatement Consultant prior to the mobilization of equipment, supplies, or workers to the site.

1.3.3.2 Worker Certification: Current mold worker certifications for personnel to be engaged in the work of this Section. Workers will not be permitted on the project site until the submittal is complete and has been accepted by the Project Manager. Provide legible copies of the following information for each worker:

1.3.3.2.1 Employee quantitative respirator fit-test records that identify the testing agency, the individual fit test exercise fit factor results, and the overall fit factor result;

1.3.3.2.2 Employee medical approval to wear respirator protection records;

1.3.3.2.3 Photo copy of current certified mold supervisor picture-identification card for the designated mold supervisor only;

1.3.3.2.4 Photo copy of current certified mold worker picture-identification card for all workers;

1.3.3.2.5 Blood mold measurements collected no more than three workdays prior to work commencing;

1.3.3.2.6 Employee picture identification matching names on records. Picture IDs can be photo copies of training cards; however, pictures of employee faces must be viewable vs. dark images from poor quality photo copying; and

1.3.3.3 Training Program: Proof that training of all personnel engaged in work under this Section is current and in accordance with the provisions of OSHA.

1.3.3.4 Respiratory Protection Program: Submit company's Respiratory Protection Program for review and approval by the Architect/Abatement Consultant.

1.3.3.5 All submittals will be provided to Architect/Abatement Consultant at least three (3) working days prior to mobilization and must be approved prior to work commencing.

1.3.4 Closeout / Ongoing Project Submittals:

1.3.4.1 Personal air sampling results collected by the abatement contractor for airborne mold within 24 hours of sample collection.

1.3.4.2 Blood mold measurements collected within three workdays following the completion of mold related work and per 29 CFR 1926.62.

1.3.4.3 Per 29 CFR 1926.62, the contractor shall notify their employees of exposure monitoring results. Architect/Abatement Consultant requires written documentation from the contractor that demonstrates the contractor's employees were notified of their results within 5 days of receiving the results including both excursion and calculated 8 hour TWA results for all results, not just those results above the PEL or excursion limit.

1.3.5 Submittals will be provided to Architect/Abatement Consultant 3 working days prior to mobilization and must be approved prior to work commencing.]

1.4 **QUALITY ASSURANCE:**

1.4.1 Qualifications:

1.4.1.1 Qualifications of Abatement Contractor:

1.4.1.1.1 Work performed under this Section shall be by a single Contractor.

1.4.1.1.2 The Contractor shall have a minimum of five (5) years experience as an approved mold abatement contractor. If requested, the Contractor shall provide the names and locations of 5 projects of similar size and scope that he has completed within the previous five years.

1.4.1.2 Qualifications of Mold Abatement Personnel:

1.4.1.2.1 All work shall be completed utilizing fully qualified persons who are trained, experienced, and knowledgeable in the proper techniques and procedures for mold abatement activities covered by this Section.

1.4.1.2.2 Mold Workers: All workers performing mold-based removal shall be currently certified as DHS Mold Workers.

1.4.1.2.3 Mold-in-Construction Supervisor: Currently certified as a DHS Mold Supervisor.

1.4.1.3 Qualifications of Analytical Laboratory:

1.4.1.3.1 The contractor shall submit mold samples to an analytical laboratory that is accredited by the American Industrial Hygiene Association's (AIHA) Industrial Hygiene Laboratory Accreditation Program (IHLAP) and Environmental Mold Laboratory Accreditation Program (ELLAP) and maintains current accreditation throughout the duration of this project.

1.4.2 Regulatory Requirements: All mold removal work shall be performed in accordance with requirements of Federal, state and local, including but not limited to the following:

1.4.2.1 Federal Regulations:

1.4.2.1.1 U.S. Department of Labor, Occupational Safety and Health Administration (OSHA):

1.4.2.1.1.1 Mold Standard: Title 29, Part 1926, Section 62

1.4.2.1.1.2 Respiratory Protection: Title 29, Part 1910, Section 134

1.4.2.1.1.3 Construction Industry: Title 29, Part 1910, Section 2

1.4.2.1.1.4 Hazard Communication: Title 29, Part 1910, Section 1200

1.4.2.1.2 U.S. Environmental Protection Agency (EPA):

1.4.2.1.2.1 Resource Conservation and Recovery Act (RCRA):

1.4.2.1.2.1.1 Title 40, Part 260 to 265

1.4.2.1.3 U.S. Department of Transportation (DOT):

1.4.2.1.3.1 Hazardous Substances: Title 49, Part 171 and 172

1.4.2.1.3.1.1 U.S. Department of Energy (DOE)

1.4.2.2 Worker Protection Rule: Title 10, Part 851

1.4.2.3 State Regulations:

1.4.2.3.1 North Carolina Department of Industrial Relations, Division of Occupational Safety and Health (NC/OSHA):

1.4.2.3.2 Contractors State License Board (CSLB):

1.4.2.3.3 North Carolina Environmental Protection Agency (NC/EPA).

1.4.2.3.4 North Carolina Department of Health Services (DHS):

1.4.3 Pre-Construction Meeting: At least one week before work commences, a pre-construction meeting shall be held at a location designated by the Architect/Abatement Consultant. Attendees shall include the Architect/Abatement Consultant, Superintendent, Safety Inspector, and Industrial Hygienist; the Contractor's Project Superintendent and Abatement Superintendent; and others as necessary. The agenda shall include a review of project safety requirements, the Contractor's written mold compliance work plan, emergency contacts and notification plan, containment and work area design, facility requirements, submittals, and any other issues pertinent to the safe execution of the mold removal work.

1.4.3.1 Work shall not commence until all required submittals and plans have been approved by the Architect/Abatement Consultant.

1.5 **PROJECT/SITE CONDITIONS:**

1.5.1 Existing Conditions:

1.5.1.1 Paint that contains mold is known to be present on surfaces at the Project site. Surfaces which have not been previously tested, that may be affected by the project scope, should be assumed to contain mold and handled according to this section.

1.5.1.1.1 If any other materials are found which are suspected of containing mold or other hazardous materials, immediately stop work in the affected area and notify the Architect/Abatement Consultant. Handle suspected mold containing material according to this section.

PART 2 - PRODUCTS

2.1 **MATERIALS:**

2.1.1 Plastic Sheeting: Fire retardant polyethylene sheeting conforming to NFPA 701 and ASTM S502-74T for surface flammability and smoke density. A single polyethylene film in the largest sheet size possible to minimize seams, 6 mils thick, clear, frosted or black as indicated.

2.1.2 Duct Tape: Provide duct tape in 2" or 3" widths as indicated, with an adhesive which is formulated to stick aggressively to polyethylene sheeting.

2.1.3 Spray Adhesive: Shall not contain methylene chloride, as listed on the product's label and/or Material Safety Data Sheet (MSDS). Provide spray adhesive in aerosol cans that is specifically formulated to stick aggressively to polyethylene sheeting.

2.1.4 Disposal Bags: 6-mil polyethylene.

2.1.5 Mold-Containing Materials Disposal Containers: Leak-tight drums or approved dumpsters.

2.1.6 Detergent: High-phosphate wash containing at least 5% trisodium phosphate (TSP).

2.2 **EQUIPMENT:**

2.2.1 Clothing: Furnish the following for each worker and others as specified.

2.2.1.1 Coveralls:

2.2.1.1.1 Disposable full-body coveralls with attached head and foot covers conforming to requirements of OSHA Standards 29 CFR 1926.62.

2.2.1.2 Respirators:

2.2.1.3 Full facepiece negative pressure respirators with an assigned protection factor of 50X the PEL, or equivalent, for the removal of mold paint.

2.2.1.4 Respirators shall be equipped with HEPA (P-100) Filters.

2.2.1.5 Powered Air Purifying Respirators (PAPRs) that have been quantitatively fit tested and equipped with HEPA (P-100) filters shall be acceptable substitutes for the respirators specified in 2.02(A)(2)(a).

2.2.1.6 Goggles, safety glasses, face shields: Provide eye and face protection as required by OSHA.

2.2.1.7 Gloves:

2.2.1.7.1 Compatible chemical resistant gloves for paint removal products.

2.2.1.8 Boots: Steel toed foot protective work boots with non-skid soles and steel shanks.

2.2.1.9 Hard Hats: Head protection (hard hats) approved by ANSI.

2.2.1.10 Soap and Towels.

2.2.2 Industrial Grade Vacuum and Exhaust Equipment: High Efficiency Particulate Air (HEPA) filtered vacuum and exhaust equipment with appropriate HEPA filters for mold contaminated dust / fume aerosols. Household HEPA vacuum cleaners shall not be acceptable.

2.2.3 Temporary Shower Facility: A pre-fabricated or site-built temporary shower facility, with hot and cold water to shower head that can be controlled from inside shower, shall be installed and used by all workers when airborne mold levels exceed or are predicted to exceed the PEL without regard to respiratory protection.

2.2.4 Temporary Washing Facilities: A sink with hot and cold water supply and soap for washing hands and face prior to breaks, lunch, and leaving the worksite at the end of the shift shall be used by all workers regardless of the airborne mold results.

2.2.5 Pressure differential recorders shall be in working condition, calibrated and operated continuously during the operation of the negative pressure enclosure and provide a pressure reading at least every 10 minutes, or more frequent, and provide a written documentation of the pressure readings that will be submitted to Architect/Abatement Consultant at the end of the project.

PART 3 - EXECUTION

3.1 **PROTECTION:**

3.1.1 General:

3.1.1.1 Take appropriate continuous measures as necessary to protect all building occupants from exposure to mold dust and fumes. Such measures shall include the procedures and methods described herein, and shall be in accordance with regulations and guidelines of applicable Federal, State, and local agencies.

3.1.1.2 Securing the Work Area: Secure the work area from access by the public, occupants, staff, or users of the building.

3.1.1.2.1 Demarcate the work by posting warning signs at each locked door and at the entrance to the change room leading to the controlled area as follows:

WARNING
MOLD WORK AREA
POISON
NO SMOKING OR EATING

3.1.1.3 Protect all existing materials, appurtenances and equipment that are not to be abated. Existing materials, appurtenances and equipment, building exterior and interior, and landscaping altered or damaged during mold related work shall be repaired or replaced by the Contractor to match existing undisturbed conditions at no additional cost to the Owner.

3.1.1.4 Utility shutdowns shall be in accordance with Division 01 Section "Special Procedures".

3.1.1.5 Maintain access and egress to building and all rooms at all times.

3.1.1.6 Do not block or reduce width of egress to exits.

3.1.1.7 Conduct operations with minimum interference to corridors, exits, and public thoroughfares.

3.1.1.8 Use periodic light water mist, temporary enclosures, and other suitable methods to limit the release of airborne mold dust and fumes. Comply with applicable regulations pertaining to environmental protection. Use water outside the work area only if approved by the Project Manager.

3.1.1.9 Path of travel for debris removal shall be maintained dust free and clean at all times.

3.1.1.10 Cover and protect windows, doors, and walls that are adjacent to mold work areas.

3.1.1.11 Water used during this project to remove or wet mold paint or mold dust shall be collected and prevented from entering storm water drains.

3.1.1.12 Eating, drinking, smoking, chewing tobacco or gum, or applying cosmetics is prohibited in the work area.

3.1.2 Personnel:

3.1.2.1 Mold-in-Construction Supervisor:

3.1.2.1.1 Provide an on-site, full-time Mold-in-Construction Supervisor to ensure that the worker protection program is effective.

3.1.2.1.2 The Mold-in-Construction Supervisor shall have the authority to shut down the project in accordance with 29 CFR 1926.62.

3.1.2.2 Mold Workers: The Contractor shall communicate information concerning mold hazards according to the requirements of the Hazard Communication Standard (29 CFR 1910.1200), including but not limited to the requirements concerning warning signs and labels, material safety data sheets (MSDS), and employee information and training.

3.1.2.3 Training Program: The Contractor shall assure that each worker and supervisor holds current training records meeting OSHA requirements. The training shall include the following:

3.1.2.3.1 The content of the OSHA Mold in Construction Standard (29 CFR 1926.62);

3.1.2.3.2 The specific nature of the operations that could result in exposure to mold above the action level;

3.1.2.3.3 The purpose, proper selection, fitting, use, and limitations or respirators;

3.1.2.3.4 The purpose and a description of the medical surveillance program, and the medical removal protection program, including information concerning the adverse health effects associated with excessive exposure to mold (with particular attention to the adverse reproductive effects on both males and females and hazards to the fetus and additional precautions for workers who are pregnant);

3.1.2.3.5 The engineering controls and work practices associated with the worker's job assignment including training of workers to follow relevant good work practices described in 29 CFR 1926.62;

3.1.2.3.6 The contents of any compliance plan and the location of regulated area in effect;

3.1.2.3.7 Instructions to workers that chelating agents should not routinely be used to remove mold from their bodies and should not be used at all except under the direction of a licensed physician, and;

3.1.2.3.8 The worker's right of access to medical records.

3.1.2.3.9 In addition to items 3.1.2.3.1 – 3.1.2.3.8 of this section, workers who perform mold removal work must also be mold trained workers.

3.1.2.4 Medical Surveillance:

3.1.2.4.1 Provide medical examinations for all workers performing the removal of mold paint, removal of settled mold dust, or welding / hot cutting steel where mold was removed per 29 CFR 1926.62.

3.1.2.4.2 Blood testing (blood mold and zinc protoporphyrin) shall be performed for all workers performing the removal of mold, removal of settled molded dust, or welding / hot cutting steel where mold was removed, no more than three work days prior to work commencing and within three work days following the completion of mold related work and in accordance with 29 CFR 1926.62.

3.1.2.5 Respiratory Protection Program: Comply with ANSI Z88.2 - 1992 "Practices for Respiratory Protection" and OSHA 29 CFR 1926.62.

3.1.2.5.1 Require that respiratory protection be used at all times when there is any possibility of disturbance of mold, settled mold dust, or welding / hot cutting on steel where mold was removed.

3.1.2.5.2 Full facepiece negative pressure respirators shall be worn by workers performing mold removal. Welders whom will be welding or cutting steel where mold was removed shall wear Powered Air Purifying Respirators (PAPRs), equipped with HEPA (P-100) filters, that are quantitatively fit tested.

3.1.2.6 Protective Clothing:

3.1.2.6.1 The following clothing shall be worn by all mold workers in the work area.

3.1.2.6.1.1 Disposable Coveralls with head and shoe covers (except for welders): Provide a sufficient number for all required changes for all workers in the work area. Dispose of coveralls as clothing waste at the end of each day.

3.1.2.6.1.2 Gloves: Chemical resistant gloves shall be used when using chemical strippers to remove mold. Gloves shall be secured to coveralls using duct tape to protect arms and hands. Do not remove gloves from the work area.

3.1.2.6.1.3 Goggles, safety glasses, or face shields: Shall be worn by all workers involved in scraping, spraying, stripping, or any other activity that may potentially cause eye or face injury.

3.1.2.7 Temporary Shower Facilities: Shall be used in accordance with subsection 2.02 (C) of this section.

3.1.2.8 Washing Facilities: Shall be used in accordance with subsection 2.02 (D) of this section.

3.2 **GENERAL PROCEDURES:**

3.2.1 Containment Systems:

3.2.1.1 Regardless of the mold content of paints, dust, or coatings being disturbed, Negative Pressure Enclosure (NPE) containment is not required unless operations such as sanding, abrasive blasting, or any other removal method is used that creates an uncontrollable release of airborne mold aerosols in excess of the Action Level of 30 ug/m3.

3.2.1.2 If measured mold levels from either personal or area air samples exceed the Action Level at any time during the course of the work, or visual emissions are detected, the Contractor shall immediately stop work, correct the condition(s) causing the increase, and notify the Architect/Abatement Consultant. If the contractor's existing engineering and administrative controls do not reduce concentrations below the Action Level, the Contractor shall immediately stop work, notify the Architect/Abatement Consultant, and implement additional controls such as the construction of a Negative Pressure Enclosure (NPE) equipped with HEPA filtered Negative Air Machines (NAMs) that have been tested as specified in subsection 3.05 (A)(2). The enclosure shall maintain a negative pressure relative to the surrounding area to adequately prevent the release of unfiltered mold aerosols. NAM exhaust ducting shall be routed to the exterior of buildings.

3.2.1.3 Demarcate the Mold Control Area by providing a roped-off and labeled perimeter area at least 20 feet wide around the work area where mold related work is to be performed. Provide signage per subsection 3.01 (A)(2)(b).

3.2.2 In case of inclement weather, such as high winds or rain, which may cause paint chips, dust, or fumes to migrate out of the work area, immediately secure the work area and stop work until weather conditions improve.

3.3 **WORK AREA PROCEDURES:**

3.3.1 Entering the Work Area: Each time a work area is entered put on new disposable coverall or (re-use previous coverall if not overly contaminated or torn), new head cover, and a clean respirator with cartridges appropriate for the mold work to be performed. Reinforce coverall seams and secure gloves to coveralls with duct tape.

3.3.2 Wearing disposable coveralls: Do not enter occupied building areas while wearing either new or contaminated disposable coveralls or respirators. Provide a visual barrier between mold related work and occupied areas.

3.4 **MOLD REMOVAL PROCEDURES:**

3.4.1 Mold removal: Remove molded paint or dust as described in the contractor's mold work plan prior to disturbing the substrate.

3.4.1.1 Prohibited Molded Paint / Dust Removal Methods:

3.4.1.1.1 Open flame burning

3.4.1.1.2 Chemical stripping with methylene chloride based paint strippers

3.4.1.1.3 Uncontained abrasive blasting

3.4.1.1.4 Uncontained power washing

3.4.1.1.5 Dry sanding or scraping

3.4.1.1.6 Power sanding without HEPA attachment

3.4.1.2 Waste Disposal: HEPA vacuum and/or wet wipe to remove all paint chips, dust, and debris generated during the work. Do not allow paint chips, dust, or debris to accumulate. Place all paint chips, dust, and debris in properly labeled plastic disposal bags at the end of each shift.

3.5 **FIELD QUALITY CONTROL:**

3.5.1 Site Tests:

3.5.1.1 Respiratory protective equipment shall be quantitatively fit tested, including PAPR units. Qualitative fit test using irritant smoke tests or other qualitative test methods shall not be acceptable.

3.5.1.2 All HEPA vacuums and negative air machines shall be challenge tested, by emery oil aerosol or equivalent, and certified as in "passing" condition prior to work commencing. Negative air machines and HEPA vacuums shall be tested every three months, and immediately after changing HEPA filters, and remain onsite during the duration of the project. HEPA vacuums and negative air machines shall not be used after changing HEPA filters until they have been tested by a challenge aerosol.

3.5.2 Inspection (Mold Air Monitoring):

3.5.2.1 Personal Exposure Monitoring Results: Contractor shall provide personal air monitoring of its employees, in accordance with requirements of 29 CFR 1926.62.

3.5.2.1.1 The personal air monitoring data shall include the employee's name, date of monitoring, task(s) performed, employees represented by the monitoring, analytical result, and time-weighted average exposure reported in unis of ug/m3.

3.5.2.1.2 The analytical lab results shall be submitted to the Architect/Abatement Consultant within 24 hours of sample collection.

3.5.2.1.3 The contractor shall submit air samples to an AIHA accredited laboratory per 1.06(A)(3) of this section. The contractor shall request NIOSH method 7082 as the analytical method.

3.5.2.2 The Architect/Abatement Consultant may conduct personal mold air monitoring on the contractor's employees at any time to verify Contractor's compliance with these Specifications, EPA and OSHA regulations, and applicable State and local government regulations.

3.5.2.3 Monitoring During Mold Decontamination: The Architect/Abatement Consultant, or its representative, may conduct quality control and area monitoring at any time during potential worker exposure to airborne mold. If monitoring outside the control area shows airborne concentrations exceed the OSHA Action Level of 30 ug/m3, the Contractor shall immediately stop all work, correct the condition(s) causing the increase and notify the Project Manager.

3.5.2.4 If monitoring indicates that mold contamination is occurring outside of controlled areas (i.e., equal to or greater than 30 ug/m3) the Contractor shall immediately cease mold disturbance activities. Do not resume work until authorized by the Architect/Abatement Consultant.

3.6 **CLEANING:**

3.6.1 Daily Cleaning: Thoroughly clean the entire area under active mold disturbance at the end of each workday.

3.6.1.1 At end of work shift remove any paint chips, dust, and debris by using a HEPA vacuum or by spraying with wet wash solution, collect debris with wet paper towels, place in disposal bag while still wet, and clean surface of plastic sheets with wet paper towels.

3.6.1.2 Exterior Cleanup:

3.6.1.2.1 Undisturbed areas potentially affected by exterior mold disturbance shall be protected by using a drop poly containment system.

3.6.1.2.2 Because weather can adversely affect the efficacy of exterior drop poly containment, remove surface plastic of the containment system at the end of each workday.

3.6.1.2.3 Examine immediate area to ensure that no mold debris has escaped containment. Debris shall be placed in double plastic bags, sealed and stored with other contaminated debris.

3.7 **PROJECT CLEARANCE:**

3.7.1 Contractor Release Criteria: The mold disturbance work area is cleared when the work area is visually clean and wipe samples show mold concentrations have been reduced to the level specified below.

3.7.2 Wipe Sampling: Wipe sampling will be used to evaluate the level of mold remaining in the work area. A commercial wipe moistened with a non-alcohol wetting agent will be used. Surface dust sampling will take place no sooner than 24 hours after completion of post-disturbance cleanup activities. This will allow any airborne dust to settle onto the surfaces to be tested.

3.7.3 Clearance Criteria:

3.7.3.1 If any of the wipe samples exceed the clearance criteria, the work area must be cleaned again and retested until the criteria are met.

Floors	40 ug/ft2
Interior Horizontal Window Surfaces	250 ug/ft2
Exterior Wall Windows	800 ug/ft2
Floor Surfaces	800/ft2

3.7.3.2 If all wipe sample results for the work area meet the clearance criteria, the work area is cleared for re-occupancy.

3.7.4 The Owner will be responsible for all costs of the initial clearance testing. The Contractor shall be responsible for additional testing costs if initial clearance test does not pass.

3.7.5 After final cleanup and removal of all Contractor equipment, materials, and critical barriers are complete, a final post teardown inspection will be conducted. The Architect/Abatement Consultant will conduct the final inspection with the Contractor.

3.8 **STORAGE OF WASTE MATERIALS:**

3.8.1 Waste Evaluation: The materials collected from the cleaning operations must be evaluated to determine if the materials are hazardous and require special handling. The Contractor is responsible for segregating waste as it is generated and labeling all waste containers appropriately. Stored waste must be labeled with the accumulation date, type of waste, and area from which it was generated. The waste will be stored in designated areas selected by the Project Manager. Load all mold-containing waste material in disposal bags or leak-tight drums. All materials are to be contained in one of the following:

3.8.1.1 Two 6-mil disposal bags.

3.8.1.2 Two 6-mil disposal bags and a drum.

3.8.1.3 Wrapped in 6-mil polyethylene sheeting and sealed with duct tape.

3.8.2 If a dumpster is to be located on site for the duration of the project, arrange location of the dumpster with the Architect/Abatement Consultant.

3.8.2.1 Do not store containerized materials outside of the work area. Take containers from the work area directly to a temporary storage location arranged by the Architect/Abatement Consultant. All open dumpsters are prohibited for any construction debris. Take special care in transporting the waste materials from the location of generation to the storage facility. Waste shall be removed from work area at times selected to minimize contacts with tenants. The path from the work area to the storage locations shall be selected to be the shortest possible distance.

3.8.3 The waste shall be separated into a minimum of categories as follows:

3.8.3.1 Low mold waste (e.g., filtered wash water, HEPA vacuumed disposable coveralls and plastic sheeting, etc.).

3.8.3.2 Concentrated mold waste (e.g., sludge from paint stripping, paint chips and dust, HEPA vacuum debris and filter, mop heads, rags used for removing caustic stripper or during wet wiping, unfiltered wash water, respirator filters, etc.).

3.8.4 Treatment and Testing of Project Waste Water: The handling and treatment of project waste water must conform with all State and local regulations. Project waste water includes shower water and waste water from cleaning operations.

3.8.4.1 The Contractor shall not discharge waste water containing mold into a community sanitary sewer. All waste water shall be discharged into a sanitary filter. Do not discharge any waste water on ground or soil. Filter water as necessary to meet local requirements.

END OF SECTION 028300

PROJECT

NEUWIRTH BUILDING DEMOLITION/ABATEMENT

520 N. 3RD STREET
WILMINGTON, NORTH CAROLINA 28401

OWNER

CAPE FEAR PUBLIC TRANSIT AUTHORITY

505 CANDO STREET
WILMINGTON, NORTH CAROLINA 28405

ARCHITECT

H R ASSOCIATES PA

ARCHITECTURE PLANNING INTERIOR DESIGN
2202 WRIGHTSVILLE AVENUE, SUITE 212
WILMINGTON, NORTH CAROLINA 28403
T. 910.343.6008

RALEIGH
T. 919.838.8304

CONSULTANTS

AIR QUALITY ANALYTICAL, INC

ABATEMENT CONSULTANT
3411 MARSH HAWK COURT
WILMINGTON, NORTH CAROLINA 28406
T. 910.431.1019

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G1 CODE DATA SHEET - NEUWIRTH BUILDING

ARCHITECTURAL

A1.1D NEUWIRTH BUILDING FLOOR PLAN - EXISTING DEMOLITION/ABATEMENT
A3.1D NEUWIRTH BUILDING EXTERIOR ELEVATIONS - EXISTING DEMOLITION/ABATEMENT
A3.2D NEUWIRTH BUILDING EXTERIOR ELEVATIONS - EXISTING DEMOLITION/ABATEMENT

PRELIMINARY DRAWING REVIEW
10 MARCH 2017
PERMIT/CONSTRUCTION SET
23 MARCH 2017

PROJECT NUMBER
186716.01

DRAWING TITLE/NUMBER

COVER

23 MARCH 2017

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PROJECT

THOMAS BUILDING DEMOLITION/ABATEMENT

525 N. 4TH STREET
WILMINGTON, NORTH CAROLINA 28401

OWNER

CAPE FEAR PUBLIC TRANSIT AUTHORITY

505 CANDO STREET
WILMINGTON, NORTH CAROLINA 28405

ARCHITECT

H R ASSOCIATES PA

ARCHITECTURE PLANNING INTERIOR DESIGN
2202 WRIGHTSVILLE AVENUE, SUITE 212
WILMINGTON, NORTH CAROLINA 28403
WILMINGTON
T. 910.343.6003
RALEIGH
T. 919.838.8304

CONSULTANTS

AIR QUALITY ANALYTICAL, INC

ABATEMENT CONSULTANT
3411 MARSH HAWK COURT
WILMINGTON, NORTH CAROLINA 28406
T. 910.431.1019

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A1.1D THOMAS BUILDING FIRST FLOOR PLAN - EXISTING DEMOLITION/ABATEMENT
A1.2D THOMAS BUILDING SECOND FLOOR PLAN - EXISTING DEMOLITION/ABATEMENT

H R ASSOCIATES-PA REGISTERED ARCHITECTURAL CORPORATION CERT NO 125 NORTH CAROLINA WILMINGTON-N.C.

JOHN WILLIAM FARMER JR REGISTERED ARCHITECT 3673 NORTH CAROLINA RALEIGH-N.C.

8/23/17

PROJECT NUMBER
186716.02

DRAWING TITLE/NUMBER

COVER

23 MARCH 2017

PRELIMINARY DRAWING REVIEW
10 MARCH 2017
PERMIT/CONSTRUCTION SET
23 MARCH 2017

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NOTE:
THIS IS AN EXISTING BUILDING DEMOLITION/ABATEMENT PROJECT. NO CERTIFICATE OF OCCUPANCY WILL BE APPLIED FOR AT THE COMPLETION OF THE DEMOLITION/ABATEMENT WORK.

2012 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES) (2012 NC Administrative Code and Policies)

Name of Project: NEUWIRTH BUILDING DEMOLITION/ABATEMENT
Address: 520 N. 3RD STREET WILMINGTON, NORTH CAROLINA 28401
Proposed Use: N/A
Owner/Authorized Agent: JOHN W. FARABOW, JR. AIA Phone# 910-343-6008 ext. 23 E-Mail: farabow@hrassociates.com
Owned By: ☒ City/County ☐ Private ☐ State
Code Enforcement Jurisdiction: ☐ City ☒ County NEW HANOVER ☐ State

LEAD DESIGN PROFESSIONAL: JOHN W. FARABOW, JR. AIA

DESIGNER	FIRM	NAME	LICENSE#	TELEPHONE#	EMAIL
Architectural	H R ASSOCIATES, PA	JOHN W. FARABOW, JR. AIA	3673	910-343-6008 ext. 23	farabow@hrassociates.com
Civil	-	-	-	-	-
Electrical	-	-	-	-	-
Fire Alarm	-	-	-	-	-
Plumbing	-	-	-	-	-
Mechanical	-	-	-	-	-
Sprinkler-Standpipe	-	-	-	-	-
Structural	-	-	-	-	-
Retaining Walls 5' ℄ High	-	-	-	-	-
Other (ABATEMENT)	AIR QUALITY ANALYTICAL, INC	JOHN FOLGER	11295	(910) 431-1019	jfolger@ecrr.com
Other	-	-	-	-	-

2012 EDITION OF NC CODE FOR: ☐ New Construction ☐ Addition ☐ Upfit N/A
EXISTING: ☐ Reconstruction ☐ Alteration ☐ Repair ☐ Renovation
CONSTRUCTED: 1928 ORIGINAL USE(S) (Ch. 3): AUTOMOTIVE DEALERSHIP
RENOVATED: 1980 CURRENT USE(S) (Ch. 3): VACANT
PROPOSED USE(S) (Ch. 3): N/A

BASIC BUILDING DATA
Construction Type: ☐ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A
(check all that apply) ☐ I-B ☐ II-B ☐ III-B ☒ V-B
Sprinklers: ☒ No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ☒ No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Fire District: ☐ No ☒ Yes (Primary) Flood Hazard Area ☐ No ☐ Yes
Building Height: (Feet): 11

Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
5th Floor	-	-	-
4th Floor	-	-	-
3rd Floor	-	-	-
2nd Floor	-	-	-
Mezzanine	-	-	-
1st Floor	4588	-	4588
Basement	-	-	-
		TOTAL:	4588

ALLOWABLE AREA N/A
Occupancy:
Assembly: ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business: ☐
Educational: ☐
Factory: ☐ F-1 Moderate ☐ F-2 Low
Hazardous: ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional: ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Mercantile: ☐
Residential: ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage: ☐ S-1 Moderate ☐ S-2 Low ☐ High Piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous: ☐

Accessory Occupancies: N/A
Assembly: ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business: ☐
Educational: ☐
Factory: ☐ F-1 Moderate ☐ F-2 Low
Hazardous: ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional: ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Mercantile: ☐
Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage: ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous: ☐

Incidental Uses (Table 509.2): N/A
☐ Furnace room where any piece of equipment is over 400,000 Btu per hour input
☐ Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower
☐ Refrigerant machine room
☐ Hydrogen cutoff rooms, not classified as Group H
☐ Incinerator rooms
☐ Paint shops, not classified as Group H, located on occupancies other than Group F
☐ Laboratories and vocational shops, not classified as Group H, located in Group E or I-2 occupancy
☐ Laundry rooms over 100 square feet
☐ Group I-3 cells equipped with padded surfaces
☐ Group I-2 waste and linen collection rooms
☐ Waste and linen collection rooms over 100 square feet
☐ Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1000 pounds used for facility standby power, emergency power or uninterrupted power supplies
☐ Rooms containing fire pumps
☐ Group I-2 storage rooms over 100 square feet
☐ Group I-2 commercial kitchens
☐ Group I-2 laundries equal to or less than 100 square feet
☐ Group I-2 rooms or spaces that contain fuel-fired heating equipment

Special Uses: ☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412 ☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421 ☐ 422 ☐ 423 ☐ 424 ☐ 425 ☐ 426 ☐ 427 N/A

Special Provisions: ☐ 509.2 ☐ 509.3 ☐ 509.4 ☐ 509.5 ☐ 509.6 ☐ 509.7 ☐ 509.8 ☐ 509.9 N/A

Mixed Occupancy: ☐ No ☐ Yes Separation: N/A Hr. Exception: -
☐ Incidental Use Separation (509.2.5)
This Separation is not exempt as a Non-Seperated Use (see exceptions)
☐ Non-Separated Use (509.3)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
☐ Separated Use (509.4) - See below for area calculations
For each story, the area of the occupancy shall be that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

Actual Area of Occupancy A / Allowable Area of Occupancy A + Actual Area of Occupancy B / Allowable Area of Occupancy B + ... ≤ 1.00
- / - + - / - + ... ≤ 100

STORY No.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503 AREA	(C) AREA FOR FRONTAGE INCREASE	(D) AREA FOR SPRINKLER INCREASE	(E) ALLOWABLE AREA OR * UNLIMITED	(F) MAXIMUM BUILDING AREA
1	N/A	4588	9000	6,750	NA	15,750	-
-	(BUSINESS OCCUPANCY	-	-	-	-	-	-
-	USED FOR THIS CALCULATION)	-	-	-	-	-	-
-		-	-	-	-	-	31500

[1] Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = 359 (F)
b. Total Building Perimeter = 359 (P)
c. Ratio (F/P) = 1.0 (F/P)
d. W = Minimum width of public way = 30 (W)
e. Percent of frontage increase I_f = 100 (F/P - 0.25) x W/30 = .75 (%)
[2] The sprinkler increase per Section 506.3 is as follows:
a. Multi-story building I_s = 200 percent
b. Single story building I_s = 300 percent
[3] Unlimited area applicable under conditions of Sections 507.
[4] Maximum Building Area = total number of stories in the building x E (506.4).
[5] The maximum area of open parking garages must comply with 406.3.5. The maximum area of air traffic control towers must comply with table 412.1.2.

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type VB		Type VB	Table 601
Building Height in Feet	Feet 40	Feet = H + 20' = N/A	Feet 11	Table 503
Building Height in Stories	Stories 2	Stories + 1 = N/A	Stories 1	Table 503

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D*	RATING PROVIDED (W/-, REDUCTION)	DETAIL # AND SHEET #	DESIGN * FOR RATED ASSEMBLY	DESIGN * FOR RATED PENETRATIONS	DESIGN * FOR RATED JOINTS
Structural frame, including columns, girders, trusses	>30	0	N/A	-	-	-	-
Bearing walls							
Exterior							
North	>30	N/A	N/A	-	-	-	-
East	>30	N/A	N/A	-	-	-	-
West	>30	N/A	N/A	-	-	-	-
South	>30	N/A	N/A	-	-	-	-
Interior	N/A	N/A	N/A	-	-	-	-
Non-bearing walls and partitions							
Exterior Walls							
North	NONE	N/A	N/A	-	-	-	-
East	NONE	N/A	N/A	-	-	-	-
West	NONE	N/A	N/A	-	-	-	-
South	NONE	N/A	N/A	-	-	-	-
Interior walls and partitions	N/A	N/A	N/A	-	-	-	-
Floor Construction including supporting beams and joists	NONE	N/A	N/A	-	-	-	-
Roof Construction including supporting beams and joists	>30	N/A	N/A	-	-	-	-
Shaft Enclosures - Exits	N/A	N/A	N/A	-	-	-	-
Shaft Enclosures - Others	N/A	N/A	N/A	-	-	-	-
Corridor Separation	N/A	N/A	N/A	-	-	-	-
Occupancy Separation	N/A	N/A	N/A	-	-	-	-
Party/Fire Wall Separation	N/A	N/A	N/A	-	-	-	-
Smoke Barrier Separation	N/A	N/A	N/A	-	-	-	-
Tenant Separation	N/A	N/A	N/A	-	-	-	-
Incidental Use Separation	N/A	N/A	N/A	-	-	-	-
Through Penetrations	N/A	N/A	N/A	-	-		

* Indicate section number permitting reduction

LIFE SAFETY REQUIREMENTS N/A
Emergency Lighting: ☐ No ☐ Yes
Exit Signs: ☐ No ☐ Yes
Fire Alarm: ☐ No ☐ Yes
Smoke Detection Systems: ☐ No ☐ Yes ☐ Partial
Panic Hardware: ☐ No ☐ Yes

LIFE SAFETY PLAN REQUIREMENTS N/A
Life Safety Plan Sheet #: N/A
☐ Fire and/or smoke rated wall locations (Chapter 7)
☐ Assumed and real property line locations
☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
☐ Existing structures within 30' of the proposed building
☐ Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.1)
☐ Occupant loads for each area
☐ Exit access travel distances (1016)
☐ Common path of travel distances (1014.3 & 1028.8)
☐ Dead end lengths (1018.4)
☐ Clear exit widths at each exit door
☐ Maximum calculated occupant load capacity each exit door can accomodate based on egress width (1005.1)
☐ Actual occupant load for each exit door
☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
☐ Location of doors with panic hardware (1008.1.10)
☐ Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
☐ Location of doors with electromagnetic egress locks (1008.1.9.8)
☐ Location of doors with equipped with hold-open devices
☐ Location of emergency escape windows (1029)
☐ The square footage of each fire area (902)
☐ The square footage of each smoke compartment. (407.4)
☐ Note any exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS (SECTION 1107) N/A

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
-	-	-	-	-	-	-	-

ACCESSIBLE PARKING (SECTION 1106) N/A

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
-	-	-	-	-	-	-
-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-

STRUCTURAL DESIGN N/A
DESIGN LOADS:
Importance Factors: Wind (Iw) -
Snow (Is) -
Seismic (Ie) -
Live Loads: Roof - psf
Mezzanine - psf
Floor - psf
Ground Snow Load: - psf
Wind Load: Basic Wind Speed - mph (ASCE-7)
Exposure Category -
Wind Base Shears (for MWFRS) Vx = - Vy = -
SEISMIC DESIGN CATEGORY ☐ A ☐ B ☐ C ☐ D
Provide the following Seismic Design Parameters:
Occupancy category (Table 1604.5) ☐ I ☐ II ☐ III ☐ IV
Spectral Response Accelerations S_s = %g S_1 = %g
Site Classification (Table 1613.5.2) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
Data Source: ☐ Field Test ☐ Presumptive ☐ Historical Data
Basic Structural System (check one)
☐ Bearing Wall ☐ Dual w/ Special Moment Frame
☐ Building Frame ☐ Dual w/ Intermediate R/C or Special Steel
☐ Moment Frame ☐ Inverted Pendulum
Seismic Base Shear: Vx = - Vy = -
Analysis Procedure: ☐ Simplified ☐ Equivalent Lateral Force ☐ Dynamic
Architectural, Mechanical, Components anchored: ☐ Yes ☐ No
LATERAL DESIGN CONTROL: ☐ Earthquake ☐ Wind
SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) psf
Presumptive Bearing Capacity - psf
Pile size, type, and capacity -
SPECIAL INSPECTIONS REQUIRED: ☐ Yes ☐ No N/A

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1) N/A

USE		WATER CLOSETS MALE	WATER CLOSETS FEMALE	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	SHOWERS / TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
-	EXISTING	-	-	-	-	-	-	-	-
-	NEW	-	-	-	-	-	-	-	-
-	REQUIRED	-	-	-	-	-	-	-	-

SPECIAL APPROVALS N/A
Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)
-
-

ENERGY SUMMARY N/A
ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attributs required to meet the energy code shall also be provided. Each designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost vs. annual energy cost for the proposed design.
Climate Zone ☐ 3 ☐ 4 ☐ 5
Method of Compliance
☐ Prescriptive (Energy Code)
☐ Performance (Energy Code)
☐ Prescriptive (ASHRAE 90.1)
☐ Performance (ASHRAE 90.1)
THERMAL ENVELOPE
Roof/Ceiling Assembly (each Assembly)
Description of assembly -
U-Value of total assembly -
R-Value of Insulation -
Skylights in each assembly -
U-value of Skylight -
Total square footage of skylights in each assembly -
Exterior Walls (each Assembly)
Description of assembly -
U-Value of total assembly -
R-Value of Insulation -
Openings (windows or doors with glazing) -
U-value of assembly -
Solar Heat gain coefficient -
Projection Factor -
Door R-Values -
Walls below grade (each assembly)
Description of assembly -
U-Value of total assembly -
R-Value of Insulation -
Floors over unconditioned spaces (each assembly)
Description of assembly -
U-Value of total assembly -
R-Value of Insulation -
Floors slab on grade (each assembly)
Description of assembly -
U-Value of total assembly -
R-Value of Insulation -
Horizontal/Vertical requirement -
Slab Heated -

MECHANICAL SUMMARY N/A
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
Thermal Zone
winter dry bulb: -
summer dry bulb: -
Interior design conditions
winter dry bulb: -
summer dry bulb: -
relative humidity: -
Building heating load: -
Building cooling load: -
Mechanical Spacing Conditioning System
Unitary
description of unit: -
heating efficiency: -
cooling efficiency: -
size category of unit: -
Boiler
size category. If oversized, state reason:
-
-
Chiller
size category. If oversized, state reason:
-
-
List equipment efficiencies: -
-

ELECTRICAL SUMMARY N/A
ELECTRICAL SYSTEM AND EQUIPMENT
Method of Compliance
Energy Code: ☐ Prescriptive ☐ Performance
ASHRAE 90.1: ☐ Prescriptive ☐ Performance
Lighting Schedule
lamp type required in fixture -
number of lamps in fixture -
ballast type in fixture -
number of ballasts in fixture -
total wattage per fixture -
total interior wattage specified vs. allowed:
(whole building or space by space) -
total exterior wattage specified vs. allowed
Additional Prescriptive Compliance
☐ 506.2.1 More Efficient Mechanical Equipment
☐ 506.2.2 Reduced Lighting Power Density
☐ 506.2.3 Energy Recovery Ventilation Systems
☐ 506.2.4 Higher Efficiency Service Water Heating
☐ 506.2.5 On-Site Supply of Renewable Energy
☐ 506.2.6 Automatic Daylighting Control Systems

H R ASSOCIATES PA
ARCHITECTURE
PLANNING
INTERIOR DESIGN
2202 WRIGHTSVILLE AVENUE
SUITE 212
WILMINGTON, NC 28403
T. 910.343.6008
F. 910.343.8761

CFPTA NEUWIRTH BUILDING DEMOLITION/ABATEMENT - 520 N. 3RD STREET - WILMINGTON, NORTH CAROLINA

PROJECT ARCHITECT
JOHN W. FARABOW, JR. AIA
PROJECT MANAGER
GEORGE GALLOP
CHECKED BY
JOHN W. FARABOW, JR. AIA
DRAWN BY
GEORGE GALLOP

ISSUE DATE
3/10/2017 PRELIMINARY DRAWING REVIEW
3/23/2017 PERMIT/CONSTRUCTION SET

REVISIONS

PROJECT NUMBER
186716.01
DRAWING NUMBER
CODE DATA SHEET
G1

23 MARCH 2017
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NOTE:
THIS IS AN EXISTING BUILDING DEMOLITION/ABATEMENT PROJECT.
NO CERTIFICATE OF OCCUPANCY WILL BE APPLIED FOR AT THE COMPLETION OF THE DEMOLITION/ABATEMENT WORK.

2012 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES) (2012 NC Administrative Code and Policies)

Name of Project: THOMAS BUILDING DEMOLITION/ABATEMENT
Address: 525 N. 4TH STREET WILMINGTON, NORTH CAROLINA 28401
Proposed Use: N/A
Owner/Authorized Agent: JOHN W. FARABOW, JR, AIA Phone# (910) 343-6008 ext. 23 E-Mail: farabow@hrassociates.com
Owned By: ☒City/County ☐Private ☐State
Code Enforcement Jurisdiction: ☐City ☒County NEW HANOVER ☐State

LEAD DESIGN PROFESSIONAL: JOHN W. FARABOW, JR, AIA

DESIGNER	FIRM	NAME	LICENSE#	TELEPHONE#	EMAIL
Architectural	H R ASSOCIATES, PA	JOHN W. FARABOW, JR AIA	3673	(910) 343-6008 ext. 23	farabow@hrassociates.com
Civil	-	-	-	-	-
Electrical					
Fire Alarm	-	-	-	-	-
Plumbing	-	-	-	-	-
Mechanical	-	-	-	-	-
Sprinkler-Standpipe	-	-	-	-	-
Structural	-	-	-	-	-
Retaining Walls 5' ≥ High	-	-	-	-	-
Other	AIR QUALITY ANALYTICAL, INC	JOHN FOLGER	11095	(910) 431-1019	jfolger@ecrr.com
Other	-	-	-	-	-

2012 EDITION OF NC CODE FOR: ☐New Construction ☐Addition ☐Upfit N/A
EXISTING: ☐Reconstruction ☐Alteration ☐Repair ☐Renovation
CONSTRUCTED: 1894 ORIGINAL USE(S) (Ch. 3): GROCERY STORE
RENOVATED: 2000 CURRENT USE(S) (Ch. 3): VACANT
PROPOSED USE(S) (Ch. 3): N/A

BASIC BUILDING DATA
Construction Type: ☐I-A ☐II-A ☐III-A ☐IV ☐V-A
(check all that apply) ☐I-B ☐II-B ☐III-B ☒V-B
Sprinklers: ☒No ☐Partial ☐Yes ☐NFPA 13 ☐NFPA 13R ☐NFPA 13D
Standpipes: ☒No ☐Yes Class ☐I ☐II ☐III ☐Wet ☐Dry
Fire District: ☐No ☒Yes (Primary) Flood Hazard Area: ☐No ☐Yes
Building Height: (Feet): 31
Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
5th Floor	-	-	-
4th Floor	-	-	-
3rd Floor	-	-	-
2nd Floor	3,634	-	3,634
Mezzanine	N/A	-	-
1st Floor	3,564	-	3,564
Basement	-	-	-
		TOTAL:	7,198

ALLOWABLE AREA N/A
Occupancy:
Assembly: ☐A-1 ☐A-2 ☐A-3 ☐A-4 ☐A-5
Business: ☐
Educational: ☐
Factory: ☐F-1 Moderate ☐F-2 Low
Hazardous: ☐H-1 Detonate ☐H-2 Deflagrate ☐H-3 Combust ☐H-4 Health ☐H-5 HPM
Institutional: ☐I-1 ☐I-2 ☐I-3 ☐I-4
I-3 Condition ☐1 ☐2 ☐3 ☐4 ☐5
Mercantile: ☐
Residential: ☐R-1 ☐R-2 ☐R-3 ☐R-4
Storage: ☐S-1 Moderate ☐S-2 Low ☐High Piled
☐Parking Garage ☐Open ☐Enclosed ☐Repair Garage
Utility and Miscellaneous: ☐

Accessory Occupancies: N/A
Assembly: ☐A-1 ☐A-2 ☐A-3 ☐A-4 ☐A-5
Business: ☐
Educational: ☐
Factory: ☐F-1 Moderate ☐F-2 Low
Hazardous: ☐H-1 Detonate ☐H-2 Deflagrate ☐H-3 Combust ☐H-4 Health ☐H-5 HPM
Institutional: ☐I-1 ☐I-2 ☐I-3 ☐I-4
I-3 Condition ☐1 ☐2 ☐3 ☐4 ☐5
Mercantile: ☐
Residential ☐R-1 ☐R-2 ☐R-3 ☐R-4
Storage: ☐S-1 Moderate ☐S-2 Low ☐High-piled
☐Parking Garage ☐Open ☐Enclosed ☐Repair Garage
Utility and Miscellaneous: ☐

Incidental Uses (Table 508.2.5): N/A
☐Furnace room where any piece of equipment is over 400,000 Btu per hour input
☐Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower
☐Refrigerant machine room
☐Hydrogen cutoff rooms, not classified as Group H
☐Incinerator rooms
☐Paint shops, not classified as Group H, located on occupancies other than Group F
☐Laboratories and vocational shops, not classified as Group H. located in Group E or I-2 occupancy
☐Laundry rooms over 100 square feet
☐Group I-3 cells equipped with padded surfaces
☐Group I-2 waste and linen collection rooms
☐Waste and linen collection rooms over 100 square feet
☐Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power or uninterrupted power supplies
☐Rooms containing fire pumps
☐Group I-2 storage rooms over 100 square feet
☐Group I-2 commercial kitchens
☐Group I-2 laundries equal to or less than 100 square feet
☐Group I-2 rooms or spaces that contain fuel-fired heating equipment

Special Uses: ☐402 ☐403 ☐404 ☐405 ☐406 ☐407 ☐408 ☐409 ☐410 ☐411 ☐412 ☐413 ☐414 ☐415 ☐416 ☐417 ☐418 ☐419 ☐420 ☐421 ☐422 ☐423 ☐424 ☐425 ☐426 ☐427 N/A
Special Provisions: ☐509.2 ☐509.3 ☐509.4 ☐509.5 ☐509.6 ☐509.7 ☐509.8 ☐509.9 N/A
Mixed Occupancy: ☐No ☐Yes Separation: N/A Hr. Exception: -
☐Incidental Use Separation (508.2.5)
This Separation is not exempt as a Non-Seperated Use (see exceptions)
☐Non-Seperated Use (508.3)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.
☐Separated Use (508.4) - See below for area calculations
For each story, the area of the occupancy shall be that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

- + - + ... ≤ 1.00

N/A

STORY No.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503[5] AREA	(C) AREA FOR FRONTAGE INCREASE[1]	(D) AREA FOR SPRINKLER INCREASE[2]	(E) ALLOWABLE AREA OR UNLIMITED[3]	(F) MAXIMUM BUILDING AREA[4]
1	N/A	3,574	9,000	6,750	NA	15,750	-
2	(BUSINESS OCCUPANCY USED FOR THIS CALCULATION)	3,634	9,000	6,750	-	15,750	-
-		-	-	-	-	-	-
-		-	-	-	-	-	31,500

[1]Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = 263 (F)
b. Total Building Perimeter = 263 (P)
c. Ratio (F/P) = 1.0 (F/P)
d. W = Minimum width of public way = 30 (W)
e. Percent of frontage increase I_f = 100 (F/P - 0.25) x W/30 = .75 (%)
[2]The sprinkler increase per Section 506.3 is as follows:
a. Multi-story building I_s = 200 percent
b. Single story building I_s = 300 percent
[3]Unlimited area applicable under conditions of Sections 507.
[4]Maximum Building Area = total number of stories in the building x E (506.4).
[5]The maximum area of open parking garages must comply with 406.3.5. The maximum area of air traffic control towers must comply with table 412.1.2.

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type VB		Type VB	Table 601
Building Height in Feet	Feet 40	Feet = H + 20' = N/A	Feet 31	Table 503
Building Height in Stories	Stories 2	Stories + 1 = N/A	Stories 2	Table 503

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D*	RATING PROVIDED (W/ _ * REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATIONS	DESIGN # FOR RATED JOINTS
Structural frame, including columns, girders, trusses	>30	0	N/A	-	-	-	-
Bearing walls							
Exterior							
North	>30	N/A	N/A	-	-	-	-
East	>30	N/A	N/A	-	-	-	-
West	>30	N/A	N/A	-	-	-	-
South	>30	N/A	N/A	-	-	-	-
Interior	N/A	N/A	N/A	-	-	-	-
Non-bearing walls and partitions Exterior Walls							
North	NONE	N/A	N/A	-	-	-	-
East	NONE	N/A	N/A	-	-	-	-
West	NONE	N/A	N/A	-	-	-	-
South	NONE	N/A	N/A	-	-	-	-
Interior walls and partitions	N/A	N/A	N/A	-	-	-	-
Floor Construction Including supporting beams and joists	NONE	N/A	N/A	-	-	-	-
Roof Construction Including supporting beams and joists	>30	N/A	N/A	-	-	-	-
Shaft Enclosures - Exits	N/A	N/A	N/A	-	-	-	-
Shaft Enclosures - Others	N/A	N/A	N/A	-	-	-	-
Corridor Separation	N/A	N/A	N/A	-	-	-	-
Occupancy Separation	N/A	N/A	N/A	-	-	-	-
Party/Fire Wall Separation	N/A	N/A	N/A	-	-	-	-
Smoke Barrier Separation	N/A	N/A	N/A	-	-	-	-
Tenant Separation	N/A	N/A	N/A	-	-	-	-
Incidental Use Separation	N/A	N/A	N/A	-	-	-	-
Through Penetrations	N/A	N/A	N/A	-	-		

* Indicate section number permitting reduction

LIFE SAFETY REQUIREMENTS N/A
Emergency Lighting: ☐No ☐Yes
Exit Signs: ☐No ☐Yes
Fire Alarm: ☐No ☐Yes
Smoke Detection Systems: ☐No ☐Yes ☐Partial
Panic Hardware: ☐No ☐Yes

LIFE SAFETY PLAN REQUIREMENTS N/A
Life Safety Plan Sheet #: N/A
☐Fire and/or smoke rated wall locations (Chapter 7)
☐Assumed and real property line locations
☐Exterior wall opening area with respect to distance to assumed property lines (705.8)
☐Existing structures within 30' of the proposed building
☐Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.1)
☐Occupant loads for each area
☐Exit access travel distances (1016)
☐Common path of travel distances (1014.3 & 1028.8)
☐Dead end lengths (1018.4)
☐Clear exit widths at each exit door
☐Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.1)
☐Actual occupant load for each exit door
☐A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
☐Location of doors with panic hardware (1008.1.10)
☐Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
☐Location of doors with electromagnetic egress locks (1008.1.9.8)
☐Location of doors with equipped with hold-open devices
☐Location of emergency escape windows (1029)
☐The square footage of each fire area (902)
☐The square footage of each smoke compartment (407.4)
☐Note any exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS (SECTION 1107) N/A

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
-	-	-	-	-	-	-	-

ACCESSIBLE PARKING (SECTION 1106) N/A

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED: REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	TOTAL # ACCESSIBLE PROVIDED
-	-	-	-	-	-	-
-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-

STRUCTURAL DESIGN N/A
DESIGN LOADS:
Importance Factors: Wind (I_W) -
Snow (I_S) -
Seismic (I_E) -
Live Loads: Roof - psf
Mezzanine - psf
Floor - psf
Ground Snow Load: - psf
Wind Load: Basic Wind Speed - mph (ASCE-7)
Exposure Category -
Wind Base Shears (for MWFRS) Vx = - Vy = -
SEISMIC DESIGN CATEGORY ☐A ☐B ☐C ☐D
Provide the following Seismic Design Parameters:
Occupancy category (Table 1604.5) ☐I ☐II ☐III ☐IV
Spectral Response Acceleration S_s - %g S_1 - %g
Site Classification (Table 1613.5.2) ☐A ☐B ☐C ☐D ☐E ☐F
Data Source: ☐Field Test ☐Presumptive ☐Historical Data
Basic Structural System (check one)
☐Bearing Wall ☐Dual w/ Special Moment Frame
☐Building Frame ☐Dual w/ Intermediate R/C or Special Steel
☐Moment Frame ☐Inverted Pendulum
Seismic Base Shear: Vx = - Vy = -
Analysis Procedure: ☐Simplified ☐Equivalent Lateral Force ☐Dynamic
Architectural, Mechanical, Components anchored? ☐Yes ☐No
LATERAL DESIGN CONTROL: ☐Earthquake ☐Wind
SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) - psf
Presumptive Bearing Capacity - psf
Pile size, type, and capacity -
SPECIAL INSPECTIONS REQUIRED: ☐Yes ☐No N/A

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1) N/A

USE		WATER CLOSETS MALE	WATER CLOSETS FEMALE	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	SHOWERS / TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE
-	EXISTING	-	-	-	-	-	-	-	-
-	NEW	-	-	-	-	-	-	-	-
-	REQUIRED	-	-	-	-	-	-	-	-

SPECIAL APPROVALS N/A
Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)
-
-

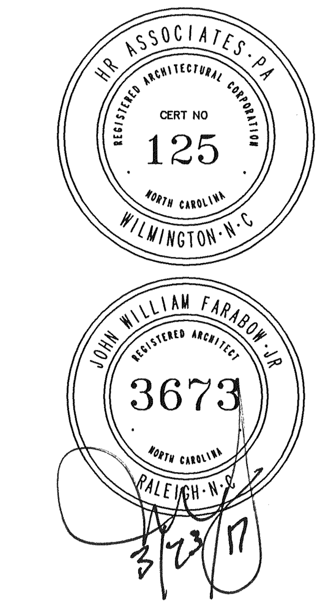
ENERGY SUMMARY N/A
ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost vs. annual energy cost for the proposed design.
Climate Zone ☐3 ☐4 ☐5
Method of Compliance
☐Prescriptive (Energy Code)
☐Performance (Energy Code)
☐Prescriptive (ASHRAE 90.1)
☐Performance (ASHRAE 90.1)
THERMAL ENVELOPE
Roof/Ceiling Assembly (each Assembly)
Description of assembly -
U-Value of total assembly -
R-Value of insulation -
Skylights in each assembly -
U-value of Skylight -
Total square footage of skylights in each assembly -
Exterior Walls (each Assembly)
Description of assembly -
U-Value of total assembly -
R-Value of insulation -
Openings (windows or doors with glazing) -
U-value of assembly -
Solar Heat gain coefficient -
Projection Factor -
Door R-Values -
Walls below grade (each assembly)
Description of assembly -
U-Value of total assembly -
R-Value of insulation -
Floors over unconditioned space (each assembly)
Description of assembly -
U-Value of total assembly -
R-Value of insulation -
Floors slab on grade (each assembly)
Description of assembly -
U-Value of total assembly -
R-Value of insulation -
Horizontal/Vertical requirement -
Slab Heated -

MECHANICAL SUMMARY N/A
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
Thermal Zone
winter dry bulb: -
summer dry bulb: -
Interior design conditions
winter dry bulb: -
summer dry bulb: -
relative humidity: -
Building heating load: -
Building cooling load: -
Mechanical Spacing Conditioning System
Unitary
description of unit: -
heating efficiency: -
cooling efficiency: -
size category of unit: -
Boiler
size category. If oversized, state reason:
-
-
Chiller
size category. If oversized, state reason:
-
-
List equipment efficiencies: -
-

ELECTRICAL SUMMARY N/A
ELECTRICAL SYSTEM AND EQUIPMENT
Method of Compliance
Energy Code: ☐Prescriptive ☐Performance
ASHRAE 90.1: ☐Prescriptive ☐Performance
Lighting Schedule
lamp type required in fixture -
number of lamps in fixture -
ballast type in fixture -
number of ballasts in fixture -
total wattage per fixture -
total interior wattage specified vs. allowed:
(whole building or space by space) -
total exterior wattage specified vs. allowed
Additional Prescriptive Compliance
☐506.2.1 More Efficient Mechanical Equipment
☐506.2.2 Reduced Lighting Power Density
☐506.2.3 Energy Recovery Ventilation Systems
☐506.2.4 Higher Efficiency Service Water Heating
☐506.2.5 On-Site Supply of Renewable Energy
☐506.2.6 Automatic Daylighting Control Systems

CFPTA THOMAS BUILDING DEMOLITION/ABATEMENT - 525 N. 4TH STREET - WILMINGTON, NORTH CAROLINA

hra
H R ASSOCIATES PA
ARCHITECTURE
PLANNING
INTERIOR DESIGN
2202 WRIGHTSVILLE AVENUE
SUITE 212
WILMINGTON, NC 28403
T. 910.343.6008
F. 910.343.8761



PROJECT ARCHITECT
JOHN W. FARABOW, JR. AIA
PROJECT MANAGER
GEORGE GALLOP
CHECKED BY
JOHN W. FARABOW, JR. AIA
DRAWN BY
GEORGE GALLOP

ISSUE DATE

3/10/2017	PRELIMINARY DRAWING REVIEW
3/23/2017	PERMIT/CONSTRUCTION SET

REVISIONS

wave

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186716.02
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CODE DATA SHEET

G1

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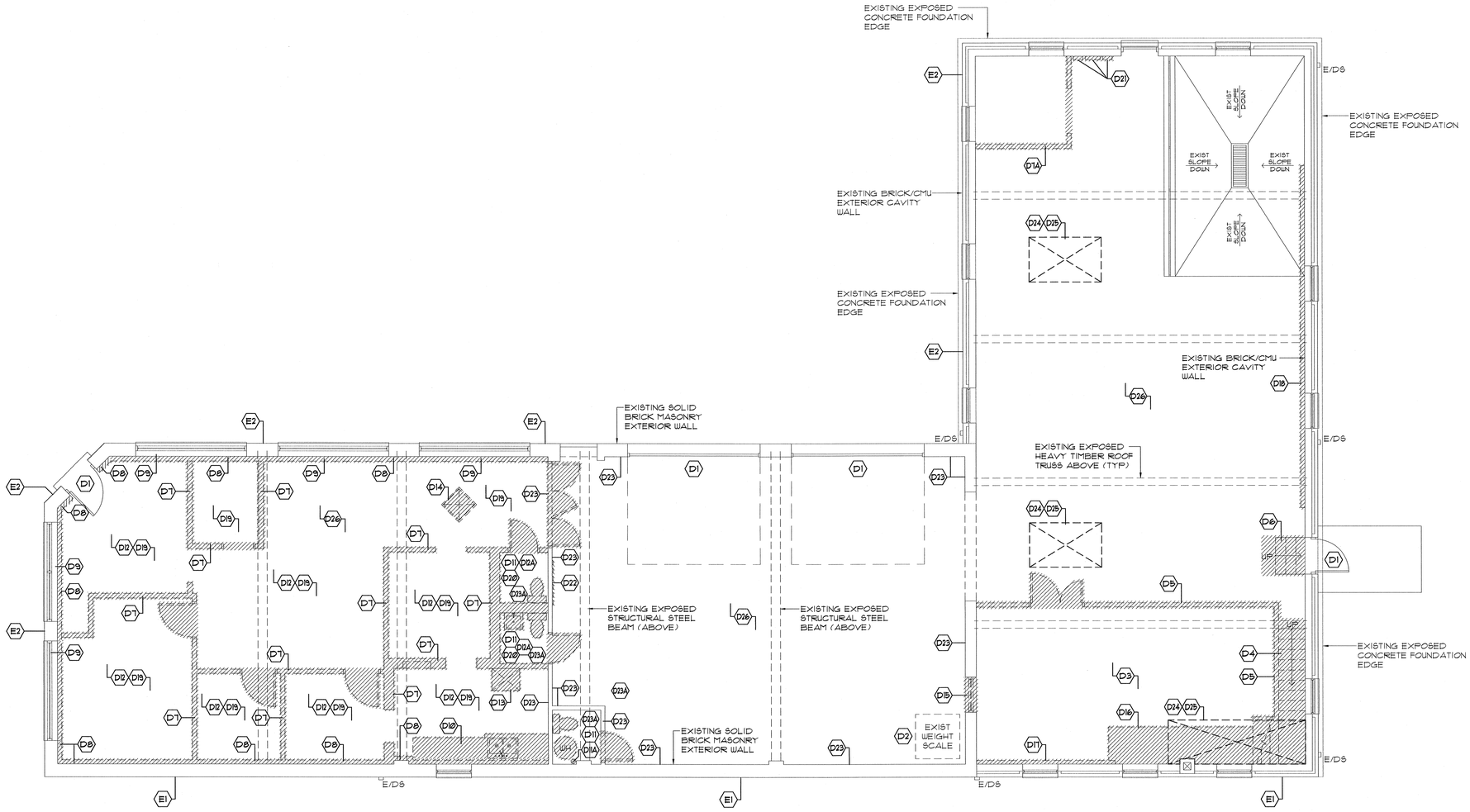

N

1 / A1.1D NEUWIRTH BUILDING FLOOR PLAN - EXISTING DEMOLITION/ABATEMENT

3/16" = 1'-0"

2 0 2 4 6 8 10 12 14

scale feet

NOTE:
THE EXISTING BUILDING CONTAINS HAZARDOUS MATERIALS (ASBESTOS/LEAD PAINT/MOLD) PER THE SURVEY REPORTS INCLUDED IN THE SPECIFICATION. REMOVAL/ABATEMENT IS PART OF THE OVERALL PROJECT DEMOLITION SCOPE AND WILL REQUIRE COORDINATION WITH THE OVERALL PROJECT SCOPE/SCHEDULE.

PM&E DEMOLITION NOTES

1. ALL EXISTING PLUMBING FIXTURES/EQUIPMENT/PIPING ABOVE SLAB (WITH UNDER SLAB PIPING CAPPED AT FLOOR LINE) TO BE REMOVED IN IT'S ENTIRETY
2. ALL EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PIPING AND WIRING TO BE REMOVED IN ITS ENTIRETY
3. ALL ELECTRICAL PANEL BOARDS, CONDUIT, DEVICES (OUTLETS/SWITCHES) AND WIRING TO BE REMOVED IN ITS ENTIRETY

LEGEND

- (E#) DENOTES 'EXTERIOR DEMOLITION GENERAL NOTES' ON THIS DRAWING.
- (D#) DENOTES 'INTERIOR DEMOLITION GENERAL NOTES' ON THIS DRAWING.
- DENOTES EXISTING CONSTRUCTION/PARTITION TO REMAIN.
- DENOTES EXISTING FRAME, DOOR AND HARDWARE TO BE REMAIN
- DENOTES EXISTING FRAME, DOOR AND HARDWARE TO BE REMOVED
- DENOTES EXISTING CONSTRUCTION/PARTITION TO BE REMOVED

EXTERIOR DEMOLITION GENERAL NOTES

(E1) DENOTES EXISTING EXTERIOR PAINTED (LEAD PAINT) BRICK WALL PAINT TO BE REMOVED AS PART OF THE ABATEMENT (LEAD PAINT) SCOPE - SEE ELEVATION DRAWINGS #A3.1D & #A3.2D.
NOTE: REMOVAL PROCESS SHALL BE APPROVED "CHEMICAL STRIPPER" TO PREVENT DAMAGE TO EXISTING BRICK AND MORTAR

(E2) DENOTES EXISTING EXTERIOR PAINTED (LEAD PAINT) BRICK WALL (MIDDLE BAND) PAINT TO BE REMOVED AS PART OF THE ABATEMENT (LEAD PAINT) SCOPE - SEE ELEVATION DRAWINGS #A3.1D & #A3.2D.
NOTE: REMOVAL PROCESS SHALL BE APPROVED "CHEMICAL STRIPPER" TO PREVENT DAMAGE TO EXISTING BRICK AND MORTAR

INTERIOR DEMOLITION GENERAL NOTES

(D1) DENOTES ALL OPENINGS/ENTRY/ACCESS POINTS TO BE PROTECTED FROM WEATHER AND UNLAWFUL ENTRY DURING DEMOLITION/ABATEMENT (TYPICAL)

(D2) DENOTES ALL SALVAGEABLE HISTORIC DOORS AND EXISTING WEIGHT SCALE ARE TO BE SAVED AND STORED IN A SAFE AREA DURING DEMOLITION/ABATEMENT

(D3) DENOTES EXISTING WOOD MEZZANINE (ABOVE) TO BE REMOVED IN ITS ENTIRETY INCLUDING WALL MOUNTED WOOD SUPPORT

(D4) DENOTES EXISTING WOOD MEZZANINE STAIR TO BE REMOVED IN ITS ENTIRETY INCLUDING WALL MOUNTED WOOD SUPPORT

(D5) DENOTES EXISTING WOOD MEZZANINE SUPPORT WALLS INCLUDING DOORS TO BE REMOVED

(D6) DENOTES EXISTING WOOD STEPS TO BE REMOVED IN ITS ENTIRETY

(D7) DENOTES EXISTING INTERIOR PARTITION TO BE REMOVED IN ITS ENTIRETY INCLUDING FRAME/DOOR

(D7A) DENOTES EXISTING INTERIOR MASONRY PARTITION TO BE REMOVED IN ITS ENTIRETY INCLUDING FRAME/DOOR

(D8) DENOTES EXISTING EXTERIOR WALL/INTERIOR WOOD PANELING VENEER TO BE REMOVED IN ITS ENTIRETY INCLUDING WALL MOUNTED 2x WOOD FURRING STRIPS

(D9) DENOTES EXISTING WOOD FRAMED INTERIOR WOOD PANELING VENEER WINDOW STOOL TO BE REMOVED IN ITS ENTIRETY INCLUDING WALL MOUNTED WOOD FURRING STRIPS

(D10) DENOTES EXISTING MILLWORK INCLUDING PLUMBING TO BE REMOVED IN ITS ENTIRETY

(D11) DENOTES EXISTING PLUMBING FIXTURES TO BE REMOVED INCLUDING ALL CONCEALED PIPING IN WALLS

(D11A) DENOTES EXISTING PLUMBING VENT PIPE TO BE REMOVED FROM EXISTING CONCRETE FLOOR SLAB TROUGH ROOF (ABOVE) IN ITS ENTIRETY
NOTE: AREA OF EXISTING ROOF DEMOLITION (ABOVE) TO BE TEMPORARILY PATCHED/COVERED BY ABATEMENT CONTRACTOR - AREA OF DEMOLITION (ABOVE) TO BE COVERED BY SELF-ADHERING (ATLAS WEATHER MASTER TU ULTRA SE) ROOF MEMBRANE MATERIAL

(D12) DENOTES EXISTING FLOOR FINISH (CARPET OVER TILE) TO BE REMOVED IN ITS ENTIRETY ALONG WITH EXISTING TILE AND ADHESIVE

(D12A) DENOTES EXISTING FLOOR FINISH (CERAMIC TILE) TO BE REMOVED IN ITS ENTIRETY TO EXISTING CONCRETE FLOOR SLAB

(D13) DENOTES EXISTING MECHANICAL UNIT AND ASSOCIATED DUCTWORK/HARDWARE TO BE REMOVED IN ITS ENTIRETY

(D14) DENOTES EXISTING OVERHEAD GAS HEATER UNIT AND ASSOCIATED GAS PIPING TO BE REMOVED IN ITS ENTIRETY

(D15) DENOTES EXISTING ABANDONED WINDOW UNIT TO BE REMOVED IN ITS ENTIRETY

(D16) DENOTES EXISTING LOW-HEIGHT WOOD SHELVING/WORK SURFACE TO BE REMOVED IN ITS ENTIRETY

(D17) DENOTES EXISTING WOOD FRAMED FURRING WALL/PANELING TO BE REMOVED IN ITS ENTIRETY

(D18) DENOTES EXISTING WOOD FRAMED LOW-HEIGH WALL TO BE REMOVED IN ITS ENTIRETY

(D19) DENOTES EXISTING CEILING ABOVE TO BE REMOVED AS FOLLOWS:
1. REMOVE EXISTING SUSPENDED CEILING GRID AND ACOUSTICAL TILES IN ITS ENTIRETY
2. REMOVE REMAINING EXISTING ADHERED ACOUSTICAL CEILING TILES AND WOOD FURRING IN ITS ENTIRETY.
3. LEAVE EXISTING ROOF JOISTS EXPOSED

(D20) DENOTES EXISTING WOOD LATHE/PLASTER CEILING (ABOVE) TO BE REMOVED IN ITS ENTIRETY

(D21) DENOTES EXISTING ELECTRICAL PANELS, ELECTRICAL WIRING AND WALL MOUNTED PLYWOOD PANEL BOARD TO BE REMOVED IN ITS ENTIRETY

(D22) DENOTES EXISTING TELEPHONE/DATA EQUIPMENT, TELEPHONE/DATA WIRING AND WALL MOUNTED PLYWOOD PANEL BOARD TO BE REMOVED IN ITS ENTIRETY

(D23) DENOTES EXISTING INTERIOR PAINTED (LEAD PAINT) BRICK WALL PAINT TO BE REMOVED AS PART OF THE ABATEMENT (LEAD PAINT) SCOPE.
NOTE: REMOVAL PROCESS SHALL BE APPROVED "CHEMICAL STRIPPER" TO PREVENT DAMAGE TO EXISTING BRICK AND MORTAR

(D23A) DENOTES EXISTING INTERIOR PAINTED (LEAD PAINT) BRICK WALL PAINT TO BE REMOVED INCLUDING CERAMIC TILE/PLASTER TO EXISTING BRICK WALL FACE/SURFACE AS PART OF THE ABATEMENT (LEAD PAINT) SCOPE.
NOTE: PAINT REMOVAL PROCESS SHALL BE APPROVED "CHEMICAL STRIPPER" TO PREVENT DAMAGE TO EXISTING BRICK AND MORTAR

(D24) DENOTES AREA OF EXISTING ROOF DAMAGE (ABOVE) TO BE TEMPORARILY PATCHED/COVERED BY ABATEMENT CONTRACTOR - AREA OF DAMAGE TO BE COVERED BY SELF-ADHERING (ATLAS WEATHER MASTER TU ULTRA SE) ROOF MEMBRANE MATERIAL OR TARP
NOTE: THE INTENT OF THIS TEMPORARY REPAIR IS TO PROTECT THE BUILDING INTERIOR DURING THE ABATEMENT PROCESS

(D25) DENOTES AREA OF EXISTING MOLD ON ROOF (ABOVE) TO BE ABATED.

(D26) DENOTES AT THE END OF DEMOLITION/ABATEMENT ALL DEBRIS, LITTER AND DEMOLITION/CONSTRUCTION MATERIALS SHALL BE REMOVED AND ALL INTERIOR AREAS LEFT BROOM CLEAN BY THE DEMOLITION/ABATEMENT CONTRACTOR (TYPICAL)
NOTE:
ALL SALVAGED HISTORIC DOORS AND EXISTING WEIGHT SCALE ARE TO REMAIN STORED IN A SAFE AREA.

CFPTA NEUWIRTH BUILDING DEMOLITION/ABATEMENT - 520 N. 3RD STREET - WILMINGTON, NORTH CAROLINA

hra
H R ASSOCIATES PA
ARCHITECTURE
PLANNING
INTERIOR DESIGN
2202 WRIGHTSVILLE AVENUE
SUITE 212
WILMINGTON, NC 28403
T. 910.343.6008
F. 910.343.8761

H.R. ASSOCIATES, P.A. ARCHITECTURAL CORPORATION CERT NO 125 NORTH CAROLINA WILMINGTON, N.C.

JOHN WILLIAM FARABOW, JR. REGISTERED ARCHITECT 3673 NORTH CAROLINA RALEIGH, N.C.

PROJECT ARCHITECT
JOHN W. FARABOW, JR. AIA

PROJECT MANAGER
GEORGE GALLOP

CHECKED BY
JOHN W. FARABOW, JR. AIA

DRAWN BY
GEORGE GALLOP

ISSUE DATE

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DRAWING NUMBER
FLOOR PLAN EXIST/DEMOLITION/ ABATEMENT

A1.1D

23 MARCH 2017

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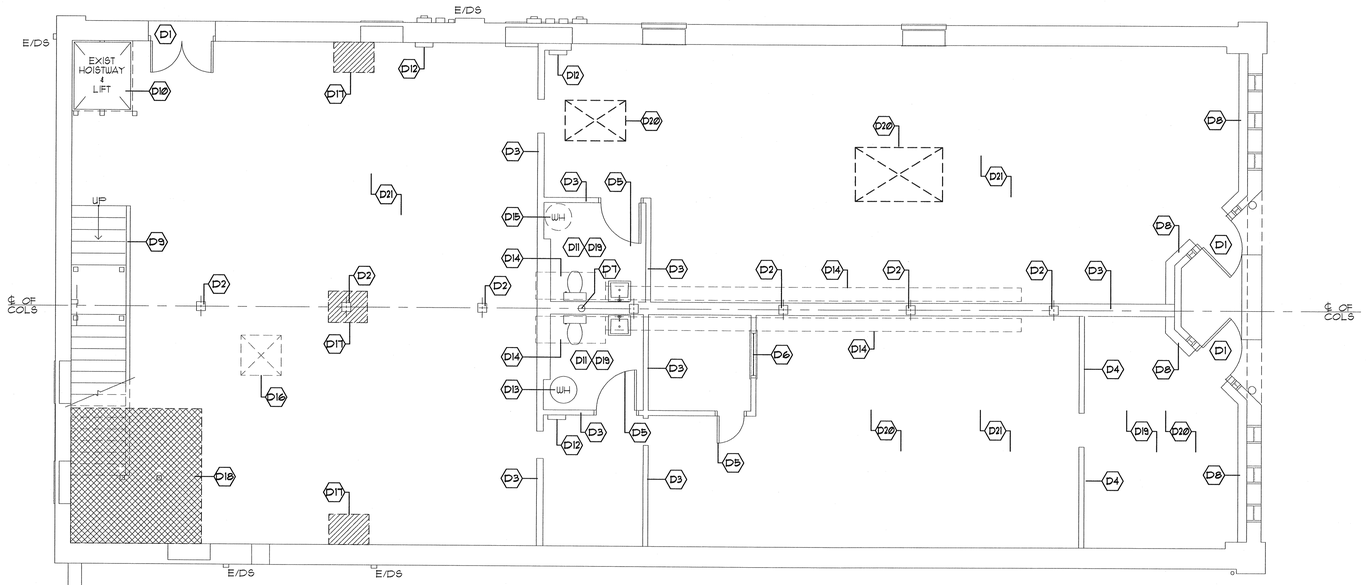

1 / A1.1D

THOMAS BUILDING FIRST FLOOR PLAN - EXISTING DEMOLITION/ABATEMENT

3/16" = 1'-0"

2 0 2 4 6 8 10 12 14
scale feet

NOTE:
THE EXISTING BUILDING CONTAINS HAZARDOUS MATERIALS (ASBESTOS/MOLD) PER THE SURVEY REPORTS INCLUDED IN THE SPECIFICATION. REMOVAL/ABATEMENT IS PART OF THE OVERALL PROJECT DEMOLITION SCOPE AND WILL REQUIRE COORDINATION WITH THE OVERALL PROJECT SCOPE/SCHEDULE.

LEGEND

D# — DENOTES 'INTERIOR DEMOLITION/ABATEMENT GENERAL NOTES' ON THIS DRAWING.

DENOTES EXISTING CONSTRUCTION/PARTITION TO REMAIN.

DENOTES EXISTING FRAME, DOOR AND HARDWARE TO BE REMAIN

INTERIOR DEMOLITION/ABATEMENT GENERAL NOTES

D1 DENOTES ALL OPENINGS/ENTRY/ACCESS POINTS TO BE PROTECTED FROM WEATHER AND UNLAWFUL ENTRY DURING DEMOLITION/ABATEMENT (TYPICAL)

D2 DENOTES EXISTING HEAVY TIMBER WOOD COLUMN TO REMAIN

D3 DENOTES EXISTING INTERIOR PARTITION TO REMAIN

D4 DENOTES EXISTING INTERIOR LOW-HEIGHT PARTITION TO REMAIN

D5 DENOTES EXISTING INTERIOR FRAME/DOOR/HARDWARE TO REAMING

D6 DENOTES EXISTING INTERIOR VIEW/PASS-THRU WINDOW TO REMAIN

D7 DENOTES EXISTING PVC VENT PIPE TO REMAIN

D8 DENOTES EXISTING LOW-HEIGHT WALL/WINDOW STOOL TO REMAIN

D9 DENOTES EXISTING STAIR/HANDRAIL TO REMAIN

D10 DENOTES EXISTING HOIST WAY/LIFT TO REMAIN

D11 DENOTES EXISTING PLUMBING FIXTURES TO REMAIN

D12 DENOTES EXISTING ELECTRICAL PANEL TO REMAIN

D13 DENOTES EXISTING WATER HEATER TO REMAIN

D14 DENOTES EXISTING MECHANICAL UNIT (AT BATHROOM LOFT ABOVE) AND ASSOCIATED CEILING/WALL MOUNTED DUCTWORK/HARDWARE TO REMAIN

D15 DENOTES EXISTING WATER HEATER (AT BATHROOM LOFT ABOVE) TO REMAIN

D16 DENOTES EXISTING OVERHEAD GAS HEATER UNIT AND ASSOCIATED GAS PIPING TO REMAIN

D17 DENOTES AREA OF EXISTING OPENING IN EXISTING FLOOR - PROVIDE NEW TEMPORARY PLYWOOD COVERAGE FOR PROTECTION DURING DEMOLITION/ABATEMENT PROCESS

D18 DENOTES AREA OF EXTENSIVE DAMAGE IN EXISTING FLOOR - CORDON OFF/ISOLATE AREA FROM ACCESS DURING DEMOLITION/ABATEMENT PROCESS

D19 DENOTES EXISTING FLOOR ABATEMENT - SEE SURVEY INFORMATION IN SPECIFICATIONS

D20 DENOTES AREA OF EXISTING VISIBLE MOLD ON CEILING (ABOVE) TO BE ABATED.

D21 DENOTES AT THE END OF DEMOLITION/ABATEMENT ALL DEBRIS, LITTER AND DEMOLITION/ABATEMENT MATERIALS SHALL BE REMOVED AND ALL INTERIOR AREAS LEFT BROOM CLEAN BY THE DEMOLITION/ABATEMENT CONTRACTOR (TYPICAL)

CFPTA THOMAS BUILDING DEMOLITION/ABATEMENT - 525 N. 4TH STREET - WILMINGTON, NORTH CAROLINA

hra
H R ASSOCIATES PA
ARCHITECTURE
PLANNING
INTERIOR DESIGN
2202 WRIGHTSVILLE AVENUE
SUITE 212
WILMINGTON, NC 28403
T. 910.343.6008
F. 910.343.8761

H R ASSOCIATES, PA REGISTERED ARCHITECTURAL ASSOCIATES CERT NO 125 NORTH CAROLINA WILMINGTON, N.C.

JOHN WILLIAM FARABOW, JR REGISTERED ARCHITECT 3673 NORTH CAROLINA RALEIGH, N.C.

3/23/17

PROJECT ARCHITECT
JOHN W. FARABOW, JR. AIA

PROJECT MANAGER
GEORGE GALLOP

CHECKED BY
JOHN W. FARABOW, JR. AIA

DRAWN BY
GEORGE GALLOP

ISSUE DATE

3/10/2017	PRELIMINARY DRAWING REVIEW
3/23/2017	PERMIT/CONSTRUCTION SET

REVISIONS

PROJECT NUMBER
186716.02

DRAWING NUMBER
FIRST FLR. PLAN EXIST DEMOLITION/ ABATEMENT

A1.1D

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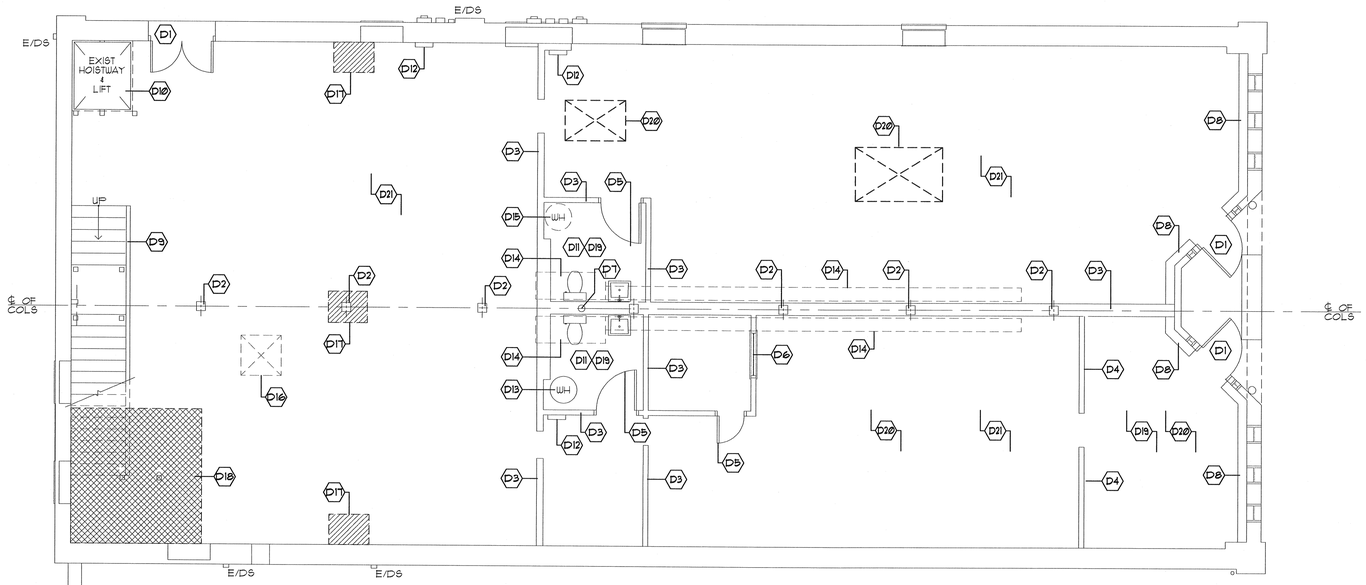

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THOMAS BUILDING FIRST FLOOR PLAN - EXISTING DEMOLITION/ABATEMENT

3/16" = 1'-0"

2 0 2 4 6 8 10 12 14
scale feet

NOTE:
THE EXISTING BUILDING CONTAINS HAZARDOUS MATERIALS (ASBESTOS/MOLD) PER THE SURVEY REPORTS INCLUDED IN THE SPECIFICATION. REMOVAL/ABATEMENT IS PART OF THE OVERALL PROJECT DEMOLITION SCOPE AND WILL REQUIRE COORDINATION WITH THE OVERALL PROJECT SCOPE/SCHEDULE.

LEGEND

D# — DENOTES 'INTERIOR DEMOLITION/ABATEMENT GENERAL NOTES' ON THIS DRAWING.

DENOTES EXISTING CONSTRUCTION/PARTITION TO REMAIN.

DENOTES EXISTING FRAME, DOOR AND HARDWARE TO BE REMAIN

INTERIOR DEMOLITION/ABATEMENT GENERAL NOTES

D1 DENOTES ALL OPENINGS/ENTRY/ACCESS POINTS TO BE PROTECTED FROM WEATHER AND UNLAWFUL ENTRY DURING DEMOLITION/ABATEMENT (TYPICAL)

D2 DENOTES EXISTING HEAVY TIMBER WOOD COLUMN TO REMAIN

D3 DENOTES EXISTING INTERIOR PARTITION TO REMAIN

D4 DENOTES EXISTING INTERIOR LOW-HEIGHT PARTITION TO REMAIN

D5 DENOTES EXISTING INTERIOR FRAME/DOOR/HARDWARE TO REAMING

D6 DENOTES EXISTING INTERIOR VIEW/PASS-THRU WINDOW TO REMAIN

D7 DENOTES EXISTING PVC VENT PIPE TO REMAIN

D8 DENOTES EXISTING LOW-HEIGHT WALL/WINDOW STOOL TO REMAIN

D9 DENOTES EXISTING STAIR/HANDRAIL TO REMAIN

D10 DENOTES EXISTING HOIST WAY/LIFT TO REMAIN

D11 DENOTES EXISTING PLUMBING FIXTURES TO REMAIN

D12 DENOTES EXISTING ELECTRICAL PANEL TO REMAIN

D13 DENOTES EXISTING WATER HEATER TO REMAIN

D14 DENOTES EXISTING MECHANICAL UNIT (AT BATHROOM LOFT ABOVE) AND ASSOCIATED CEILING/WALL MOUNTED DUCTWORK/HARDWARE TO REMAIN

D15 DENOTES EXISTING WATER HEATER (AT BATHROOM LOFT ABOVE) TO REMAIN

D16 DENOTES EXISTING OVERHEAD GAS HEATER UNIT AND ASSOCIATED GAS PIPING TO REMAIN

D17 DENOTES AREA OF EXISTING OPENING IN EXISTING FLOOR - PROVIDE NEW TEMPORARY PLYWOOD COVERAGE FOR PROTECTION DURING DEMOLITION/ABATEMENT PROCESS

D18 DENOTES AREA OF EXTENSIVE DAMAGE IN EXISTING FLOOR - CORDON OFF/ISOLATE AREA FROM ACCESS DURING DEMOLITION/ABATEMENT PROCESS

D19 DENOTES EXISTING FLOOR ABATEMENT - SEE SURVEY INFORMATION IN SPECIFICATIONS

D20 DENOTES AREA OF EXISTING VISIBLE MOLD ON CEILING (ABOVE) TO BE ABATED.

D21 DENOTES AT THE END OF DEMOLITION/ABATEMENT ALL DEBRIS, LITTER AND DEMOLITION/ABATEMENT MATERIALS SHALL BE REMOVED AND ALL INTERIOR AREAS LEFT BROOM CLEAN BY THE DEMOLITION/ABATEMENT CONTRACTOR (TYPICAL)

CFPTA THOMAS BUILDING DEMOLITION/ABATEMENT - 525 N. 4TH STREET - WILMINGTON, NORTH CAROLINA

hra
H R ASSOCIATES PA
ARCHITECTURE
PLANNING
INTERIOR DESIGN
2202 WRIGHTSVILLE AVENUE
SUITE 212
WILMINGTON, NC 28403
T. 910.343.6008
F. 910.343.8761

H R ASSOCIATES, PA REGISTERED ARCHITECTURAL ASSOCIATES CERT NO 125 NORTH CAROLINA WILMINGTON, N.C.

JOHN WILLIAM FARABOW, JR REGISTERED ARCHITECT 3673 NORTH CAROLINA RALEIGH, N.C.

3/23/17

PROJECT ARCHITECT
JOHN W. FARABOW, JR. AIA

PROJECT MANAGER
GEORGE GALLOP

CHECKED BY
JOHN W. FARABOW, JR. AIA

DRAWN BY
GEORGE GALLOP

ISSUE DATE

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REVISIONS

PROJECT NUMBER
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DRAWING NUMBER
FIRST FLR. PLAN EXIST DEMOLITION/ ABATEMENT

A1.1D

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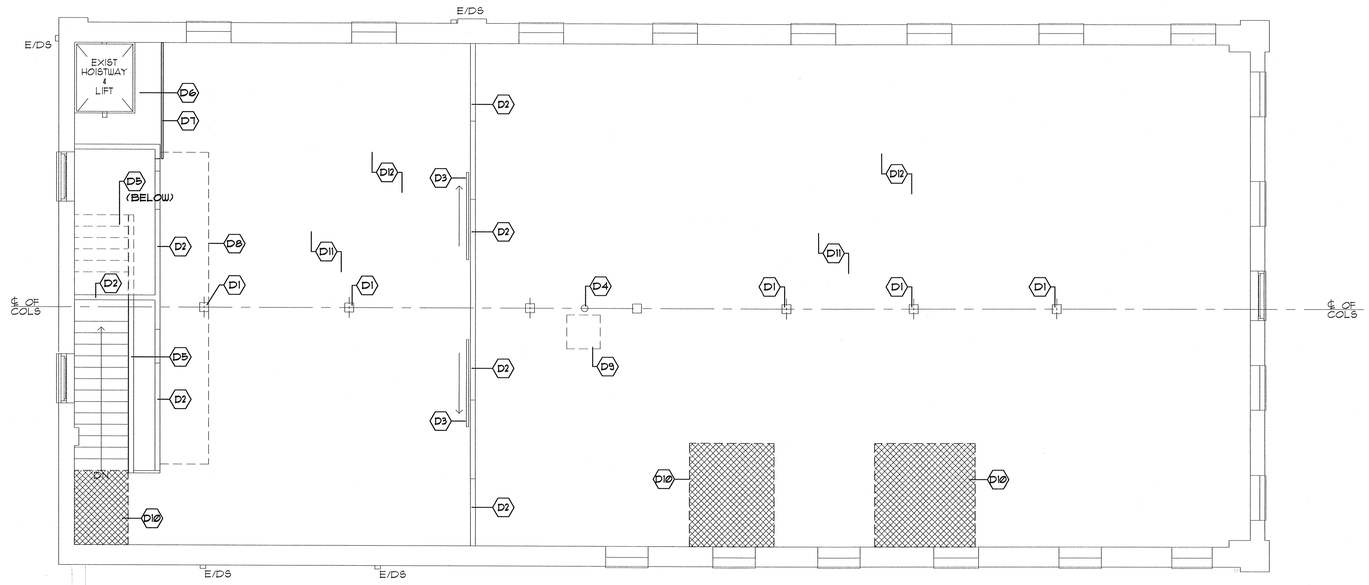

N

1 / A1.2D

THOMAS BUILDING SECOND FLOOR PLAN - EXISTING DEMOLITION/ABATEMENT

3/16" = 1'-0"

scale: 2 0 2 4 6 8 10 12 14 feet

NOTE:
THE EXISTING BUILDING CONTAINS HAZARDOUS MATERIALS (ASBESTOS/MOLD) PER THE SURVEY REPORTS INCLUDED IN THE SPECIFICATION. REMOVAL/ABATEMENT IS PART OF THE OVERALL PROJECT DEMOLITION SCOPE AND WILL REQUIRE COORDINATION WITH THE OVERALL PROJECT SCOPE/SCHEDULE.

LEGEND

D# — DENOTES 'INTERIOR DEMOLITION/ABATEMENT GENERAL NOTES' ON THIS DRAWING.

DENOTES EXISTING CONSTRUCTION/PARTITION TO REMAIN.

DENOTES EXISTING FRAME, DOOR AND HARDWARE TO BE REMAIN

INTERIOR DEMOLITION GENERAL NOTES

D1 — DENOTES EXISTING HEAVY TIMBER WOOD COLUMN TO REMAIN

D2 — DENOTES EXISTING INTERIOR PARTITION TO REMAIN

D3 — DENOTES EXISTING INTERIOR SLIDING FRAME/DOOR/HARDWARE TO REMAIN

D4 — DENOTES EXISTING PVC VENT PIPE TO REMAIN

D5 — DENOTES EXISTING STAIR/HANDRAIL TO REMAIN

D6 — DENOTES EXISTING FLOOR OPENING/HOIST WAY/LIFT TO REMAIN

D7 — DENOTES EXISTING HOIST WAY RAILING TO REMAIN

D8 — DENOTES EXISTING STORAGE PLATFORM (ABOVE) TO REMAIN

D9 — DENOTES EXISTING ROOF HATCH (ABOVE) TO REMAIN

D10 — DENOTES AREA OF EXISTING DAMAGE IN EXISTING FLOOR - PROVIDE NEW TEMPORARY PLYWOOD COVERAGE FOR PROTECTION DURING DEMOLITION/ABATEMENT PROCESS

D11 — DENOTES EXISTING FLOOR ABATEMENT - SEE SURVEY INFORMATION IN SPECIFICATIONS

D12 — DENOTES AT THE END OF DEMOLITION/ABATEMENT ALL DEBRIS, LITTER AND DEMOLITION/ABATEMENT MATERIALS SHALL BE REMOVED AND ALL INTERIOR AREAS LEFT BROOM CLEAN BY THE DEMOLITION/ABATEMENT CONTRACTOR (TYPICAL)

hra
H R ASSOCIATES PA
ARCHITECTURE
PLANNING
INTERIOR DESIGN
2202 WRIGHTSVILLE AVENUE
SUITE 212
WILMINGTON, NC 28403
T. 910.343.6008
F. 910.343.8761

H R ASSOCIATES, P.A. — CERT NO 125 — NORTH CAROLINA — WILMINGTON, N.C.

JOHN WILLIAM FARABOW, JR. — REGISTERED ARCHITECT — 3673 — NORTH CAROLINA — RALEIGH, N.C. — 3/23/17

PROJECT ARCHITECT
JOHN W. FARABOW, JR. AIA

PROJECT MANAGER
GEORGE GALLOP

CHECKED BY
JOHN W. FARABOW, JR. AIA

DRAWN BY
GEORGE GALLOP

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CFPTA THOMAS BUILDING DEMOLITION/ABATEMENT - 525 N. 4TH STREET - WILMINGTON, NORTH CAROLINA

PROJECT NUMBER
186716.02

DRAWING NUMBER
SECOND FLR. PLAN EXIST DEMOLITION/ ABATEMENT

A1.2D

23 MARCH 2017

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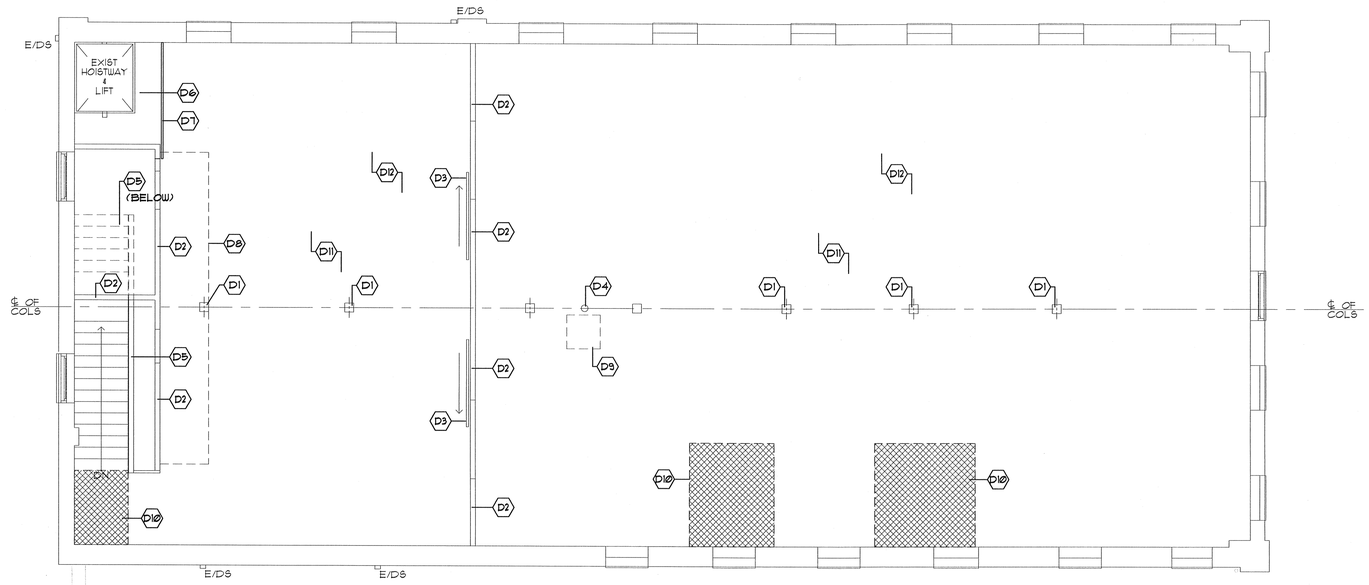

N

1 / A1.2D

THOMAS BUILDING SECOND FLOOR PLAN - EXISTING DEMOLITION/ABATEMENT

3/16" = 1'-0"

scale: 2 0 2 4 6 8 10 12 14 feet

NOTE:
THE EXISTING BUILDING CONTAINS HAZARDOUS MATERIALS (ASBESTOS/MOLD) PER THE SURVEY REPORTS INCLUDED IN THE SPECIFICATION. REMOVAL/ABATEMENT IS PART OF THE OVERALL PROJECT DEMOLITION SCOPE AND WILL REQUIRE COORDINATION WITH THE OVERALL PROJECT SCOPE/SCHEDULE.

LEGEND

D# — DENOTES 'INTERIOR DEMOLITION/ABATEMENT GENERAL NOTES' ON THIS DRAWING.

DENOTES EXISTING CONSTRUCTION/PARTITION TO REMAIN.

DENOTES EXISTING FRAME, DOOR AND HARDWARE TO BE REMAIN

INTERIOR DEMOLITION GENERAL NOTES

D1 — DENOTES EXISTING HEAVY TIMBER WOOD COLUMN TO REMAIN

D2 — DENOTES EXISTING INTERIOR PARTITION TO REMAIN

D3 — DENOTES EXISTING INTERIOR SLIDING FRAME/DOOR/HARDWARE TO REMAIN

D4 — DENOTES EXISTING PVC VENT PIPE TO REMAIN

D5 — DENOTES EXISTING STAIR/HANDRAIL TO REMAIN

D6 — DENOTES EXISTING FLOOR OPENING/HOIST WAY/LIFT TO REMAIN

D7 — DENOTES EXISTING HOIST WAY RAILING TO REMAIN

D8 — DENOTES EXISTING STORAGE PLATFORM (ABOVE) TO REMAIN

D9 — DENOTES EXISTING ROOF HATCH (ABOVE) TO REMAIN

D10 — DENOTES AREA OF EXISTING DAMAGE IN EXISTING FLOOR - PROVIDE NEW TEMPORARY PLYWOOD COVERAGE FOR PROTECTION DURING DEMOLITION/ABATEMENT PROCESS

D11 — DENOTES EXISTING FLOOR ABATEMENT - SEE SURVEY INFORMATION IN SPECIFICATIONS

D12 — DENOTES AT THE END OF DEMOLITION/ABATEMENT ALL DEBRIS, LITTER AND DEMOLITION/ABATEMENT MATERIALS SHALL BE REMOVED AND ALL INTERIOR AREAS LEFT BROOM CLEAN BY THE DEMOLITION/ABATEMENT CONTRACTOR (TYPICAL)

hra
H R ASSOCIATES PA
ARCHITECTURE
PLANNING
INTERIOR DESIGN
2202 WRIGHTSVILLE AVENUE
SUITE 212
WILMINGTON, NC 28403
T. 910.343.6008
F. 910.343.8761

H R ASSOCIATES, P.A. — CERT NO 125 — NORTH CAROLINA — WILMINGTON, N.C.

JOHN WILLIAM FARABOW, JR. — REGISTERED ARCHITECT — 3673 — NORTH CAROLINA — RALEIGH, N.C. — 3/23/17

PROJECT ARCHITECT
JOHN W. FARABOW, JR. AIA

PROJECT MANAGER
GEORGE GALLOP

CHECKED BY
JOHN W. FARABOW, JR. AIA

DRAWN BY
GEORGE GALLOP

ISSUE DATE

3/10/2017	PRELIMINARY DRAWING REVIEW
3/23/2017	PERMIT/CONSTRUCTION SET

REVISIONS

CFPTA THOMAS BUILDING DEMOLITION/ABATEMENT - 525 N. 4TH STREET - WILMINGTON, NORTH CAROLINA

PROJECT NUMBER
186716.02

DRAWING NUMBER
SECOND FLR. PLAN EXIST DEMOLITION/ ABATEMENT

A1.2D

23 MARCH 2017

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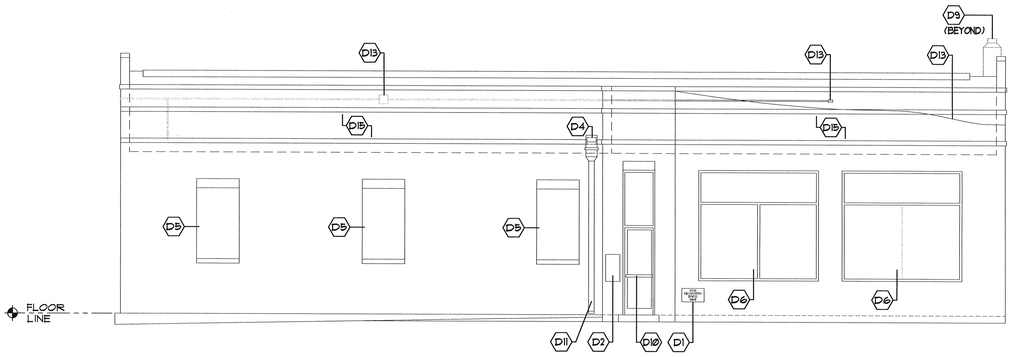
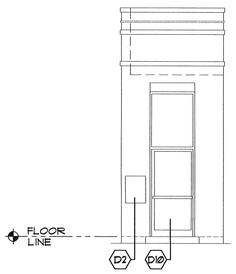


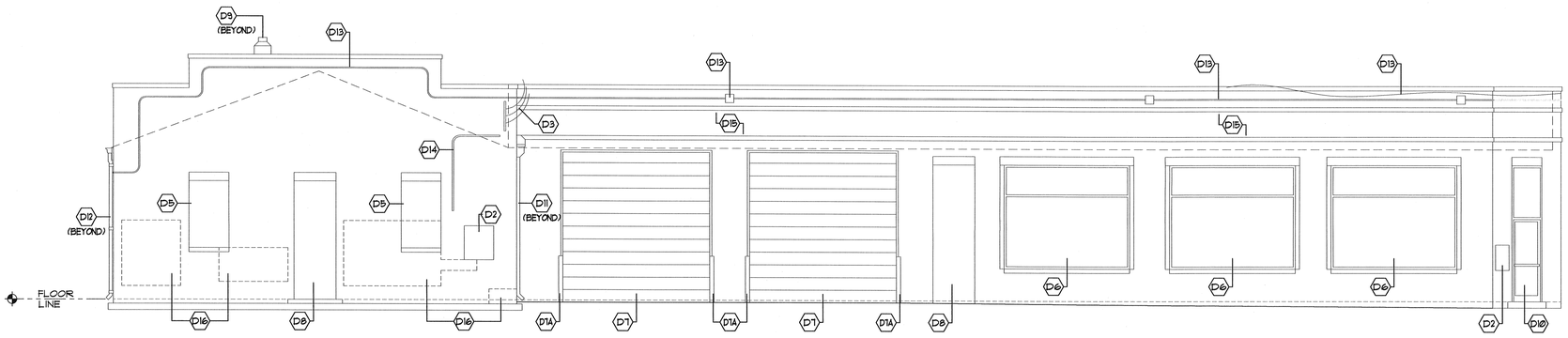
1 A3.1D — NEUWIRTH BUILDING FRONT (WEST) ELEVATION - EXISTING DEMOLITION/ABATEMENT

3/16" = 1'-0" scale: 2 0 2 4 6 8 10 12 14 feet



2 A3.1D — NEUWIRTH BUILDING ENTRY (NORTHWEST CORNER) ELEVATION - EXISTING/DEMOLITION

3/16" = 1'-0" scale: 2 0 2 4 6 8 10 12 14 feet



3 A3.1D — NEUWIRTH BUILDING LEFT (NORTH) ELEVATION - EXISTING DEMOLITION/ABATEMENT

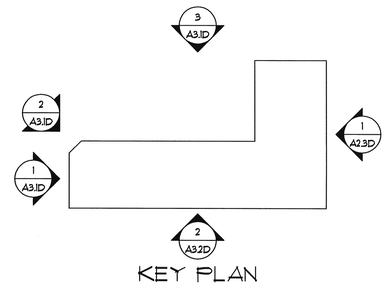
3/16" = 1'-0" scale: 2 0 2 4 6 8 10 12 14 feet

LEGEND

- D# — DENOTES 'EXTERIOR DEMOLITION GENERAL NOTES' ON THIS DRAWING.
- DENOTES EXISTING CONSTRUCTION/PARTITION TO REMAIN.
- DENOTES EXISTING CONSTRUCTION TO BE REMOVED

EXTERIOR DEMOLITION GENERAL NOTES

- D1 DENOTES EXISTING BUILDING CORNER STONE TO REMAIN
- D2 DENOTES EXISTING SIGN TO REMAIN
- D3 DENOTES EXISTING ELECTRICAL SERVICE LINES TO REMAIN
- D4 DENOTES EXISTING EXTERIOR WALL ROOF SCUPPER OPENING TO REMAIN
- D5 DENOTES EXISTING EXTERIOR BRICK CLOSURE/WINDOW UNIT TO REMAIN
- D6 DENOTES EXISTING EXTERIOR WINDOW UNIT AND ASSOCIATED WOOD PROTECTION PANELS/BRACING TO REMAIN
- D7 DENOTES EXISTING EXTERIOR OVERHEAD DOOR TO REMAIN
- D1A DENOTES EXISTING (METAL) EXTERIOR WALL CORNER GUARDS (EXTERIOR AND INTERIOR SIDES OF EXTERIOR WALL) TO REMAIN
- D8 DENOTES EXISTING EXTERIOR MASONRY DOOR CLOSURE TO BE REMAIN
- D9 DENOTES EXISTING BRICK MASONRY CHIMNEY TO REMAIN
- D10 DENOTES EXISTING EXTERIOR PREFINISHED METAL (ALUMINUM) STOREFRONT FRAME/DOOR/HARDWARE TO REMAIN
- D11 DENOTES EXISTING METAL ROOF SCUPPER/DOWNSPOUT TO REMAIN
- D12 DENOTES EXISTING METAL ROOF GUTTER/DOWNSPOUT TO REMAIN
- D13 DENOTES EXISTING ABANDONED LIGHT FIXTURES, CONDUIT AND WIRING TO REMAIN
- D14 DENOTES EXISTING ELECTRICAL WIRE/CONDUITS TO REMAIN
- D15 DENOTES EXISTING EXTERIOR PAINTED (LEAD PAINT) BRICK WALL (MIDDLE BAND) PAINT TO BE REMOVED AS PART OF THE ABATEMENT (LEAD PAINT) SCOPE
  NOTE:
  REMOVAL PROCESS SHALL BE APPROVED "CHEMICAL STRIPPER" TO PREVENT DAMAGE TO EXISTING BRICK AND MORTAR
- D16 DENOTES AREA OF EXISTING EXTERIOR BRICK WALL GRAFFITI/OVERPAINT TO BE REMOVED
  NOTE:
  REMOVAL PROCESS SHALL BE APPROVED "CHEMICAL STRIPPER" TO PREVENT DAMAGE TO EXISTING BRICK AND MORTAR



KEY PLAN

hra
H R ASSOCIATES PA
ARCHITECTURE
PLANNING
INTERIOR DESIGN
2202 WRIGHTSVILLE AVENUE
SUITE 212
WILMINGTON, NC 28403
T. 910.343.6008
F. 910.343.8761

H.R. ASSOCIATES, P.A. CERT NO 125 WILMINGTON, N.C.

JOHN WILLIAM FARABOW, JR. 3673 NORTH CAROLINA REGISTERED ARCHITECT 5/23/17

CFPTA NEUWIRTH BUILDING DEMOLITION/ABATEMENT - 520 N. 3RD STREET - WILMINGTON, NORTH CAROLINA

PROJECT ARCHITECT
JOHN W. FARABOW, JR. AIA

PROJECT MANAGER
GEORGE GALLOP

CHECKED BY
JOHN W. FARABOW, JR. AIA

DRAWN BY
GEORGE GALLOP

ISSUE DATE

3/10/2017	PRELIMINARY DRAWING REVIEW
3/23/2017	PERMIT/CONSTRUCTION SET

REVISIONS

PROJECT NUMBER
186716.01

DRAWING NUMBER
EXTERIOR ELEVS. EXIST/DEMOLITION/ ABATEMENT

A3.1D

23 MARCH 2017

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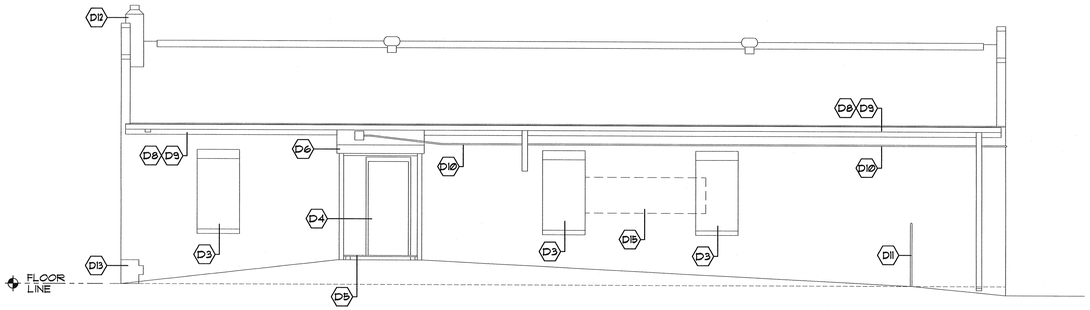


1 / A3.2D — NEUWIRTH BUILDING REAR (EAST) ELEVATION-EXISTING/DEMOLITION

3/16" = 1'-0" 2 0 2 4 6 8 10 12 14 scale feet

LEGEND

D# — DENOTES 'EXTERIOR DEMOLITION GENERAL NOTES' ON THIS DRAWING.

DENOTES EXISTING CONSTRUCTION/PARTITION TO REMAIN.

DENOTES EXISTING CONSTRUCTION TO BE REMOVED

EXTERIOR DEMOLITION GENERAL NOTES

D1 DENOTES EXISTING NATURAL GAS/PROPANE SUPPLY LINE TO REMAIN

D2 DENOTES EXISTING EXTERIOR WALL ROOF SCUPPER OPENING TO REMAIN

D3 DENOTES EXISTING EXTERIOR BRICK CLOSURE/WINDOW UNIT REMAIN

D4 DENOTES EXISTING HOLLOW METAL FRAME/DOOR/HARDWARE REMAIN

D5 DENOTES EXISTING EXTERIOR WOOD FRAMED ENTRY PATIO TO REMAIN

D6 DENOTES EXISTING EXTERIOR WOOD FRAMED METAL SHED ROOF/WOOD FRAMING TO REMAIN

D7 DENOTES EXISTING METAL ROOF SCUPPER/DOWNSPOUT REMAIN

D8 DENOTES EXISTING METAL ROOF GUTTER/DOWNSPOUT TO REMAIN

D9 DENOTES EXISTING WOOD FASCIA BOARD TO REMAIN

D10 DENOTES EXISTING ABANDONED LIGHT FIXTURES, CONDUIT AND WIRING TO REMAIN

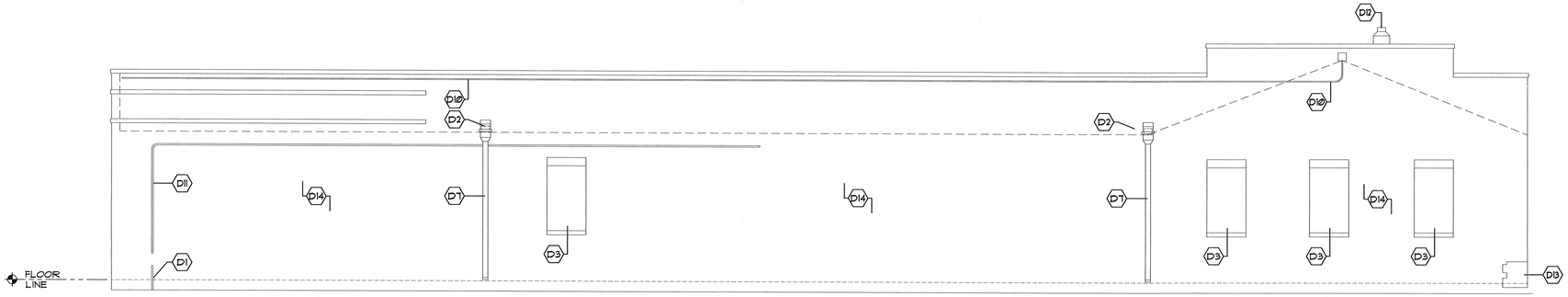
D11 DENOTES EXISTING ABANDONED NATURAL GAS/PROPANE SUPPLY LINE TO REMAIN.

D12 DENOTES EXISTING BRICK MASONRY CHIMNEY TO REMAIN

D13 DENOTES AREA OF EXISTING EXTERIOR BRICK MASONRY DAMAGE TO REMAIN

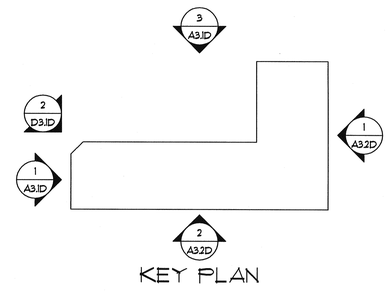
D14 DENOTES EXISTING EXTERIOR PAINTED (LEAD PAINT) BRICK WALL PAINT TO BE REMOVED AS PART OF THE ABATEMENT (LEAD PAINT) SCOPE
NOTE: REMOVAL PROCESS SHALL BE APPROVED "CHEMICAL STRIPPER" TO PREVENT DAMAGE TO EXISTING BRICK AND MORTAR

D15 DENOTES AREA OF EXISTING EXTERIOR BRICK WALL GRAFFITI/OVERPAINT TO BE REMOVED
NOTE:
REMOVAL PROCESS SHALL BE APPROVED "CHEMICAL STRIPPER" TO PREVENT DAMAGE TO EXISTING BRICK AND MORTAR



2 / A3.2D — NEUWIRTH BUILDING RIGHT (SOUTH) ELEVATION - EXISTING DEMOLITION/ABATEMENT

3/16" = 1'-0" 2 0 2 4 6 8 10 12 14 scale feet



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hra
H R ASSOCIATES PA
ARCHITECTURE
PLANNING
INTERIOR DESIGN
2202 WRIGHTSVILLE AVENUE
SUITE 212
WILMINGTON, NC 28403
T. 910.343.6008
F. 910.343.8761

H R ASSOCIATES, PA · CERT NO 125 · WILMINGTON, N.C.

JOHN WILLIAM FARABOW, JR. · 3673 · FARABOW, N.C. · 3/23/17

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PROJECT ARCHITECT
JOHN W. FARABOW, JR. AIA

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