

PROJECT MANUAL

DEMOLITION TO

NEW RIVER VALLEY COMMUNITY SERVICES MONTGOMERY CENTER

510 ROANOKE ST | CHRISTIANSBURG, VA 24073

MOUNTAIN EMPIRE SERVICES OF THE SOUTHWEST

SPECTRUM PROJECT NUMBER:
20075



PROJECT PHASE:
DEMOLITION DRAWINGS

DATE:
04.07.2022

TABLE OF CONTENTS

DIVISION 0 – BIDDING AND CONTRACT REQUIREMENTS:

001050	INVITATION FOR BID
001200	INSTRUCTIONS TO BIDDERS - AIA
002010	SUPPLEMENTARY INSTRUCTIONS TO BIDDERS
003000	INFORMATION AVAILABLE TO BIDDERS
003126	EXISTING HAZARDOUS MATERIAL INFORMATION
004000	STANDARD FORMS
004110	BID FORM – STIPULATED SUM
005010	AGREEMENT - AIA
007010	GENERAL CONDITIONS - AIA

DIVISION 1 - PROJECT REQUIREMENTS:

011000	SUMMARY OF PROJECT
012500	CONTRACT MODIFICATION PROCEDURES
012900	PAYMENT PROCEDURES
013100	PROJECT MANAGEMENT AND COORDINATION
013100	CONSTRUCTION PROGRESS DOCUMENTATION
013300	SUBMITTAL PROCEDURES
014000	QUALITY REQUIREMENTS
015000	CONSTRUCTION FACILITIES
015100	TEMPORARY UTILITIES
015600	TEMPORARY CONTROLS
015700	TRAFFIC REGULATION
017419	CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
017700	CLOSE-OUT PROCEDURES

DIVISION 2 – EXISTING CONDITIONS:

024119	SELECTIVE DEMOLITION
028213	ASBESTOS ABATEMENT

APPENDIX:

ASBESTOS SURVEY, LEAD PAINT CHIP AND LEAD TCLP SAMPLING REPORT



END OF TABLE OF CONTENTS

DOCUMENT 00 10 50
INVITATION FOR BID

Mountain Empire Services of the Southwest will receive sealed Bids for the following New River Valley Community Services Montgomery Center Demolition located at 510 Roanoke Street, Christiansburg, VA 24073.

DESCRIPTION OF WORK:

Approximately 33,256 sf of partial demolition of the existing Wades Grocery Store. Demolition phase will prepare structure for future new construction and additions.

Bids shall be prepared on a single-prime, lump sum basis. Bids will be received until **2:00 PM local time on Tuesday, May 5, 2022 at the New River Valley Services- Montgomery Center, 700 University City Blvd., Blacksburg, Va.** Bids will be opened and read aloud.

Bidding Documents (Drawings and Project Manual) may be examined at the NRVCS Radford Center (401 West Main Street, Radford, VA 24141) and Valley Construction News (Roanoke).

Bidding Documents may be purchased at TRASCO – 128 West Kirk Avenue, Roanoke VA (540-345-1533) <http://www.trascoplanroom.com> (no partial sets will be issued), bidder is responsible for purchase, no refunds.

BID SECURITY: Each Contractor must submit, with the Bid Documents, a bid security in the amount of five (5) percent of the bid as described in the Instructions of Bidders. The successful Contractors will be required to furnish and pay for performance and payment bonds from a bonding company licensed in the Commonwealth of Virginia as described in the Instructions to Bidders.

The attention of each Bidder is directed to Title 54.1 of Chapter 11, Code of Virginia, pertaining to registration.

All Bids shall remain valid for a period of sixty (60) days after the scheduled bid due date. Withdrawal of bids due to error shall be in accordance with Section 2.2-4330, Code of Virginia.

PRE-BID CONFERENCE: A pre-bid conference will be conducted on **Thursday, April 14th at 3:30 pm** at the project site, 510 Roanoke St., Christiansburg, VA. Due to the nature of work on this project, attendance of the pre-bid conference by bidding contractors is mandatory.

The Owner reserves the right to reject any or all Bids, to waive informalities or irregularities in the bids received, to accept the Bid deemed to be in the best interest of the Owner, and to negotiate with the apparent low bidder should the lowest responsive and responsible bid exceed the funds available for the project.

For additional information contact:

Owner Representative

Mr. Rocky Burton
New River Valley Community Services
401 W Main Street
Radford, VA 24141

Phone: (540) 357-0924
Email: rburton@nrvc.org

Architect

Ms. Lenore Weiss
Project Manager
Spectrum Design, PC
10 Church Ave., SE
Plaza Suite 1
Roanoke, VA 24011-2104

Phone: (540) 342-6001
Email: lweiss@spectrumpc.com

END OF INVITATION FOR BID

DOCUMENT 00 12 00
INSTRUCTIONS TO BIDDERS – AIA

1.1 SUMMARY

- A. Document Includes:
 - 1. Instructions to Bidders A701-1997.
- B. Related Documents:
 - 1. Document 00 70 10 – General Conditions – AIA.
 - 2. Document 00 81 10 – Supplementary General Conditions.

1.2 INSTRUCTIONS TO BIDDERS

- A. AIA Document A701-1997, Instructions to Bidders shall be used in submitting bids on this project.

1.3 SUPPLEMENTARY CONDITIONS

- A. Refer to Document 00 20 10 for Supplementary Instructions to Bidders.

END OF INSTRUCTIONS TO BIDDERS - AIA

DOCUMENT 00 20 10
SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1.1 SUMMARY

- A. Document Includes:
 - 1. Instructions to Bidders.
 - 2. Examination.
 - 3. Prebid conference.
- B. Related Documents:
 - 1. Document 00 10 50 – Invitation For Bid.
 - 2. Document 00 30 00 – Information Available To Bidders.
 - 3. Document 00 41 10 – Bid Form – Stipulated Price.
 - 4. Document 00 70 10 – General Conditions.
 - 5. Document 00 81 10 – Supplementary General Conditions.

1.2 INSTRUCTIONS TO BIDDERS

- A. These Instructions to Bidders amend or supplement AIA Document A701-1997 - Instructions to Bidders and other provisions of Bidding Documents and Contract Documents. Where any Article of the Instructions is modified or a Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplementary Instructions, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

ARTICLE 1 – BIDDERS REPRESENTATIONS

Add Paragraph:

- 2.1.5 Data in the bidding documents pertaining to existing conditions is for convenience only and does not supplant obtaining first hand information at the site.

ARTICLE 3 – BIDDING DOCUMENTS

Add Paragraph:

- 3.1.5 Bidders shall thoroughly examine and be familiar with the Contract Documents. The failure or omission of any bidder to receive or examine any form, instrument, bulletin, addendum, or other documents, or to visit the site and acquaint himself with conditions there existing shall in no way relieve any bidder from any obligation with respect to his Bid or to the Contract. The submission of a Bid shall be taken as prima facie evidence of compliance with this section.
- 3.2.4 The Work of this project shall be performed in accordance with the Contract Documents; however, the plans and specifications are intended to complement and supplement each other and any work required by either and not by the other shall be performed as if denoted in both. Should a bidder find discrepancies in, or omissions from the plans or the specifications, or be in doubt as to their

meaning, he shall at once notify the Architect. Failure to request such interpretations shall in no way relieve the Contractor of his responsibility for executing the project properly and completely. Unless otherwise clarified by the Architect, bidders shall base their bids on the highest quality of material or techniques required by any part of the Contract Documents.

ARTICLE 4 – BIDDING PROCEDURES

Add Paragraph:

- 4.1.8 Original and one copy of each shall be submitted. Both copies shall have original signatures.
- 4.1.9 Particular attention is called to Article 4.3.7 of the General Conditions (including information in Section 00 81 10 SUPPLEMENTARY CONDITIONS – AIA) regarding requirements of the contractor to account for reasonable weather conditions.

Modify Paragraph:

- 4.2.1 Add the following text: “If the amount of bid guarantee exceeds the difference between its related bid and the next lowest bid resulting in a contract, the Owner shall retain only an amount equal to the difference between these two bids plus expenses by Owner’s Architect related to negotiating contract with other bidder.”

Add Paragraph:

- 4.2.4 Each Bid must be accompanied by a Bid Guarantee of five percent (5%) of the largest amount for which proposal is being made, and at the option of the bidder, may be cash, a certified check or bid bond made payable to the party listed in the Invitation for Bids. All bonds shall be written by sureties or insurance companies licensed to do business in the Commonwealth of Virginia. Other bid bond forms will be acceptable if they are the same in both form as well as substance as AIA Document A310, Bid Bond.

Modify Paragraph:

- 4.3.1 Add the following text: “Sealed envelope shall also be clearly marked with date and time of bid opening so as to guard against premature opening of any bid. No responsibility shall be attached to the Architect and the Owner for premature opening of bids not properly addressed or identified.

Add Paragraphs:

- 4.3.5 The attention of the Bidder is directed to Title 54.1, Chapter 11, Code of Virginia, as amended, which requires evidence of a Class A certificate of registration before a Bid may be received and considered (1) on a general or subcontract of \$120,000 or more; or (2) if the total value of all contracts undertaken by the bidder during any 12-month period is \$750,000 or more.

- 4.3.6 In compliance with the above requirements, each bidder shall place on the outside of the envelope containing his bid and over his signature one of the following notations:

"Registered Class A Virginia Contractor, No. _____."

or

"Class A Registration not required."

- 4.3.7 It shall be the Bidder's responsibility to check all sub-bids carefully to determine whether or not any exceptions, omissions, or alterations to the Drawings and Specifications have been noted therein; bidder is solely responsible for a complete job in strict accordance with Bidding Documents.

- 4.4.5 The withdrawal of Bids shall be in accordance with Section 2.2-4330, Code of Virginia, 1950, as amended.

ARTICLE 5 – CONSIDERATION OF BIDS

Modify Paragraph:

- 5.1 Change last sentence to read: "An abstract of the Bids may be made available to Bidders, except in the event that the public body decides not to accept any of the Bids and to rebid the Contract. If the Contract is rebid, Bid records shall be open to public inspection only after award of the Contract."

Add Paragraphs:

- 5.1.1. The officer or agent of the Owner, whose duty it is to open the Bids, will decide when the specified time for receipt of bids has arrived and no bids received thereafter will be considered. No responsibility will be attached to any officer, agent or representative for the premature opening of a Bid not properly addressed and identified. It is the responsibility of the bidder to assure that his Bid is delivered to the designated place for opening prior to the time set for opening Bids.
1. Only one Bid package may be submitted by any one Bidder. If more than one Bid is offered by one Bidder, all such Bids will be rejected. A Sub-bidder who has quoted prices to a Bidder is not thereby disqualified from quoting prices to other Bidders or from submitting a Bid on his own behalf.
 2. The Owner will evaluate the quality, timeliness, and reliability of any contract work performed by the Bidder for the Owner within the previous five (5) years. This evaluation shall be a prime determinant in judging the ability of the Bidder to perform the prescribed work.
- 5.1.2 At the opening of Bids, should questions arise regarding the validity of any Bid because of errors, omissions, waiver of informalities or other points or provisions in submitted proposals, no comment or decision will be made until a ruling has been obtained from the Owner's legal representative.

Delete Paragraph 5.3.1 and replace with the following:

- 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. In determining the lowest responsive Bidder, the Owner may consider, among other factors, the Bidder's performance on other contracts and information provided by the Bidder on AIA Document A305, Contractor's Qualification Statement, in the event such Statement is required. The Owner shall have the right to waive informalities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.

Add Paragraphs:

- 5.3.3 In case of a tie Bid, preference shall be given to goods, services, and construction produced in or around the locality of the project site, or provided by persons, firms or corporations having principal places of business near the project site, if such a choice is available; otherwise the tie shall be decided by lot. The business closer to the project site shall be given preference over a business farther away from the project site, in the event of a tie Bid, if such a choice is available.
- 5.3.4 If all Bids received exceed the available funding for the Work, the Owner may meet with the lowest responsive and responsible Bidder to discuss a reduction in the scope of Work and negotiate a Contract price within the available funding for the Work. If an agreement is reached between the parties on the reduction in the scope of Work for the project Bid, an Addendum will be issued to the Bid listing the agreed upon reduction in the scope of Work, the lowest responsive and responsible Bidder will amend its Bid based upon the proposed reduction in the scope of the Work and the Owner will award a Contract within the funds available for the Work based upon the amended Bid. If the Owner and the lowest responsive and responsible bidder cannot negotiate a Contract within available funds, all Bids shall be rejected.

ARTICLE 6 - POST-BID INFORMATION

Modify Paragraphs:

- 6.2 Owner's Financial Capability: Delete paragraph 6.2 in its entirety.
- 6.3.3 Delete this paragraph in its entirety.

ARTICLE 7 - PERFORMANCE BOND AND PAYMENT BOND

Delete subparagraphs 7.2.1, 7.2.2 and 7.2.3 and replace with the following:

- 7.2.1 The successful Bidder shall deliver the required bonds to the Owner in accordance with Subparagraph 11.4.1 of the Supplementary General Conditions.

END OF SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

DOCUMENT 00 30 00
INFORMATION AVAILABLE TO BIDDERS

1.1 SUMMARY

- A. Document Includes:
 - 1. Plat of survey of tax parcels.
- B. Related Documents:
 - 1. Document 00 20 10 - Instructions to Bidders - AIA: Examination.

1.2 BOUNDARY SURVEY

- A. The plat of survey of tax parcels of the project site has been included as part of the demolition drawings in the Contract documents. Its title, source, and date are referenced on the Drawings.
- B. This survey, which identifies existing property lines, was prepared primarily for the use of the Contractor for reference of property boundaries.

END OF INFORMATION AVAILABLE TO BIDDERS

DOCUMENT 003126

EXISTING HAZARDOUS MATERIAL INFORMATION

1.1 EXISTING HAZARDOUS MATERIAL INFORMATION

- A. This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information, but are not a warranty of existing conditions.
- B. An existing asbestos survey, lead paint chip and lead TCLP report for Project, prepared by ECS Mid-Atlantic, LLC , dated April 30, 2021, is available for viewing as appended to this Document.
- C. Related Requirements:
 - 1. Document 002113 "Instructions to Bidders" for the Bidder's responsibilities for examination of Project site and existing conditions.
 - 2. Document 003119 "Existing Condition Information" for information about existing conditions that is made available to bidders.
 - 3. Section 024119 "Selective Structure Demolition" for notification requirements if materials suspected of containing hazardous materials are encountered.

END OF DOCUMENT 003126

DOCUMENT 00 40 00
STANDARD FORMS

GENERAL - COPIES

- a. Sample copies of the A.I.A. forms are available at the Architect's office. Required number of copies may be obtained from the American Institute of Architects, The Octagon, 1735 New York Avenue, N.W., Washington, DC 20006.
- b. Any of the forms listed below may be substituted with another method of documentation if agreed upon between the Owner, Architect and Contractor. The Architect shall have the sole discretion of enforcement of the requirements below.

01 - BID FORM

- a. Document 00 41 10 – BID FORM – STIPULATED SUM as contained herein will be the form used.

02 - AGREEMENT

- a. "The Standard Form of Agreement between the Owner and Contractor, Where the Basis of Payment is a Stipulated Sum", A.I.A. Document No. A-101, edition dated 2007, will be the form used as a contract for this work.

03 - PERFORMANCE AND PAYMENT BOND

- a. Performance Bond/Labor and Material Payment Bond (two parts) A.I.A. Document A-312, latest edition, will be the form used as a performance and payment bond for this work.

04 - CERTIFICATE OF INSURANCE

- a. ACORD Certificate of Insurance will be the form used as a part of the contract for this work.

05 - CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS

- a. Contractor's Affidavit of Release of Liens, A.I.A. Document G-706A, latest edition, will be the form used as a part of the contract for this work.

06 - LIST OF SUBCONTRACTORS

- a. List of Subcontractors, A.I.A. Document G-705, 2001 edition is to be used for this work.

07 - TRANSMITTAL LETTER FOR SUBMITTAL OF SHOP DRAWING/PRODUCT
DATA/SAMPLE

With Contractor's Approval Statement
of submittal of same item
AIA Form G810 or equivalent

08 - APPLICATION AND CERTIFICATE OF PAYMENT

- a. Application and Certificate for Payment, AIA Document G702, 1992 edition, and Continuation Sheet, AIA Document G703, 1992 edition, will be the forms used for this project.
- b. Independent Testing Laboratory Certificates of Testing, Inspection, or Approval

09 - PROPOSAL REQUEST

- a. AIA Document G709.

10 - ORDER FOR MINOR CHANGE

- a. Architect's Supplemental Instructions (01 25 00 – CONTRACT MODIFICATION PROCEDURES)

11 - CHANGE ORDER

- a. Change Order, AIA Document G701, 2001 Edition standard form is to be used for this work.

12 – SUPPLEMENTAL DRAWING

- a. Supplemental Drawing, number X#-#-##, Spectrum Design standard form is to be used for clarification and/or attachments to field orders or change orders on this project.

13 - CERTIFICATE OF SUBSTANTIAL COMPLETION

- a. Architect's Certificate of Substantial Completion (AIA Form G704)

14 - CONTRACTOR'S WRITTEN NOTICE THAT WORK IS READY FOR FINAL INSPECTION

- a. To be furnished by A/E.

15 - CONSENT OF SURETY

- a. Consent of Surety Company to Final Payment, A.I.A. Document G-707, 1994 edition, and consent of Surety to Reduction in or Partial Release of Retainage, A.I.A. Document G-707A, 1994 edition, will be the forms used for this work.

END OF STANDARD FORMS

SECTION 00 41 10
BID FORM

Job Title

**New River Valley Community Services Montgomery Center - Demolition
Christiansburg, Virginia**

**TO: Ms. Patricia Cox, Finance Director
700 University City Blvd.
Blacksburg, VA 24060**

1. BASE BID:

The undersigned, as bidder, hereby declares that the only person or persons interested in this proposal as Principal or Principals is/are named herein and that no other person 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 or proposal; and that it is, in 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 informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined the plans and specifications for the work and the contractual documents relative thereto; and has read all special provisions furnished prior to the opening of the bids; that he has satisfied himself relative to the work to be performed within the established time.

He proposes and agrees, if this proposal is accepted, to contract with **Mountain Empire Services of the Southwest**, in the form of contract specified to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor, and pay all State and local sales taxes necessary to complete the project listed above, in full and complete accordance with the shown, noted, described and reasonably intended requirements of the plans, specifications, and Contract Documents with a definite understanding that no money will be allowed for extra work except as set forth in the attached General Conditions and Contract Documents, for the following amount:

TOTAL BASE BID AMOUNT :

Lump sum price for the Project in full, complete in accordance with the Plans and Specifications:

_____ Dollars (\$_____)

in lawful money of the United States of America.

We have included the Bid Security as required by the Instruction to Bidders.

All applicable federal, state and local taxes are included in the Bid Sum.

2. TIME OF COMPLETION:

- a. Work at the site shall commence as indicated within the Notice to Proceed.
- b. The undersigned agrees, if awarded contract and given formal Notice to Proceed, that work under this contract shall be substantially completed and accepted by the Owner in accordance with the following schedule:
 1. The Work shall begin after May 5, 2022.
 2. The Work shall be substantially completed by July 5, 2022.

3. CONTRACT PROVISIONS:

In submitting the Bid, the Undersigned agrees:

- a. to comply with all requirements indicated in the Invitation for Bids;
 - b. to accept the provisions of the Bidding Documents;
 - c. to accomplish the Work in accordance with the Bidding Documents in the time stipulated in Article 2 of this Bid.
4. **CONTRACT SECURITY:** The undersigned agrees, if awarded contract, to furnish and deliver to the Owner an executed performance and payment bond in accordance with the requirements of the contract documents.
5. **BID GUARANTEE:** The undersigned agrees to requirements of the contract documents relative to "Bid Guarantee". This bid may be rejected if not accompanied by a guarantee in the specified amount. Any certified checks may be uncollected at the risk of bidders submitting them. Bids shall be valid for thirty (30) days following receipt.
6. **PROPOSAL ACCEPTANCE:** If undersigned is notified of proposal acceptance within thirty (30) days following opening of bids, he agrees to execute a contract for work for compensation stated in the bid form, in form of agreement attached to the specifications within ten (10) days after date of notice of acceptance.

7. ADDENDUM/BULLETIN RECEIPT: The undersigned acknowledges receipt of addenda numbered _____, _____, _____, _____.

Signed: _____

Name: _____

Title: _____

For: _____
(firm, company or corporation)

Date: _____
_____ (business address)

If a bidder is a corporation, write State of incorporation under signature, and if a partnership, give full names of all parties below.

Do not include in the envelope any bids for other work. Registered as a Class A contractor under Title 54.1, Chapter 11, Code of Virginia, as amended, Certificate No. _____, Year _____,

or

Registration not required under Chapter 11, Title 54.1, Code of Virginia.

END OF BID FORM

DOCUMENT 00 50 10
AGREEMENT - AIA

1.1 SUMMARY

- A. Document Includes:
 - 1. Agreement.
- B. Related Documents:
 - 1. Document 00 70 10 – General Conditions – AIA.
 - 2. Document 00 81 10 – Supplementary General Conditions.

1.2 AGREEMENT

- A. AIA Document A101-2017, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment is a Stipulated Sum, forms the basis of Agreement between the Owner and Contractor.

END OF AGREEMENT - AIA

DOCUMENT 00 70 10
GENERAL CONDITIONS - AIA

1.1 SUMMARY

- A. Document Includes:
 - 1. General Conditions – AIA.
- B. Related Documents:
 - 1. Document 00 50 10 – Agreement – AIA.
 - 2. Document 00 81 10 – Supplementary General Conditions.

1.2 GENERAL CONDITIONS

- A. AIA Document A201-2017, General Conditions of the Contract for Construction is the General Conditions of the Contract. Refer to Document 00 50 10 for the Agreement.

1.3 SUPPLEMENTARY CONDITIONS

- A. Refer to Document 00 81 10 for modifications to these General Conditions.

END OF GENERAL CONDITIONS - AIA

SECTION 01 10 00
SUMMARY OF PROJECT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Contract Description
- B. Work By Others
- C. Contractor's Use of Premises
- D. Codes & Regulations
- E. Specification Conventions

1.2 RELATED SECTIONS

- A. Document 00 50 10 - Agreement – AIA
- B. Document 00 70 10 - General Conditions – AIA
- C. Document 00 81 10 - Supplementary Conditions – AIA
- D. Section 01 23 00 - Alternates: Owner accepted items expanding/modifying the scope of work of the project.

1.3 CONTRACT DESCRIPTION

- A. The Work shall be as indicated in the Contract Documents, prepared for this project, and as described in the Invitation For Bid, which includes:
 - 1. Selective demolition of the existing Wades Grocery Store and other Work indicated in the Contract Documents.
- B. Contract Type: As described in Document 00 50 10 – Agreement – AIA.
- C. All work shown on Drawings and/or called for in these Specifications shall be performed under the General Contract, unless specifically noted to the contrary in the Contract Documents.
- D. Coordinate the work of all trades. Coordinate all submittals and deliveries for GC's own work as well as for all subcontractors so as to avoid delays in the progress of the Work.
- E. Coordinate construction operations included under various sections that depend on each other for proper demolition. Schedule demolition operations in sequence required to obtain best results where demolition of one part of work depends on demolition of other components before or after its own demolition.

F. Do not permit work to proceed until unsatisfactory conditions have been corrected in an acceptable manner. It is the responsibility of the Contractor to schedule the Work in order to provide an acceptable substrate condition.

G. Work NOT included in this Contract:

1. Items noted as "N.I.C." (Not in Contract) in the documents

1.4 WORK BY OWNER (Separate Contracts)

A. Cooperate with other contractors and allow access to the site for field measurements and storage of materials. Matters of coordination shall be processed through the Architect.

1.5 CONTRACTOR'S USE OF SITE AND PREMISES

- A. No signage displaying the names of firms or products will be allowed on the project site unless specifically permitted by the Owner in writing.
- B. Assume full responsibility for the protection and safekeeping of products under this Contract stored at the site.
- C. Coordinate the use of premises with the Owner.

1.6 CODES AND REGULATIONS

- A. Nothing contained within the Contract Documents shall be construed as permitting work that is contrary to applicable rules, regulations and codes. In addition to all federal codes and regulations, comply with the requirements of:
1. Virginia Department of Health, Sewage Collection and Treatment (SCAT) Regulations (latest edition).
 2. Virginia Department of Health, Waterworks Regulations (latest edition).
 3. The Uniform Statewide Building Code adopted by the Commonwealth of Virginia (VUSBC), and all ordinances of the Commonwealth of Virginia and those of the local authorities having jurisdiction.
 4. The National Fire Protection Association Codes and Standards, as they apply to this project.
 5. Uniform Federal Accessibility Standards; Americans with Disabilities Act.
 6. Section 504, Rehabilitation Act 1973, Handicapped Standards.
 7. Other applicable codes and standards.
- B. Where a conflict exists between the Contract Documents and the codes and regulations, or among the codes and regulations, contact the Architect immediately for a decision.

1.7 SPECIFICATION CONVENTIONS

- A. These specifications are written in imperative mood and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

- B. Specifications are intended to be more precise than Drawings, often clarifying or adding definition to what is shown generally on Drawings. Should the contractor have confusion over what is intended in the Drawings and Specifications, seek interpretation from the Architect, but as a convention what is stated in the Specification shall supercede what is indicated on the Drawings (even specifications or notes on drawings).

1.8 WORK RESTRICTIONS

- A. Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work to between 7 a.m. to 6 p.m., Monday through Friday, unless otherwise indicated. Work hours may be modified to meet Project requirements if approved by Owner and authorities having jurisdiction.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SUMMARY

SECTION 01 25 00
CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. 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

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections include the following:
 - 1. Division 1 Section "Unit Prices" for administrative requirements for using unit prices.
 - 2. Division 1 Section "Construction Progress Documentation" for procedures for requests for modification of Contract Time.

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions" or other mutually acceptable documentation.

1.4 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within time specified in Proposal Request, or 20 days, whichever is sooner, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

- b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - e. Clearly indicate all mark-ups for each party on each part of the change.
 - B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Architect.
 - 1. Include a statement outlining 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 the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor and supervision directly attributable to the change.
 - 5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 6. Clearly indicate all mark-ups for each party on each part of the change.
 - C. Proposal Request Form: Use AIA Document G709 for Proposal Requests, or other mutually acceptable documentation.
- 1.5 BUILDING OFFICIAL COMMENTS: When a change in the Scope of the Work appears necessary due to a comment made by a Building Official, Inspector or other local authority, the Contractor shall request written comment from such official citing the Code section for which a violation is noted. The Contractor shall forward this written comment to the Architect for review. If the Architect, in consultation with the official, deems that a change to the Work is necessary, this change will be acted upon in the form of a Proposal Request as described above.
- 1.6 COSTS AND FEES RELATED TO CHANGES IN THE WORK: Refer to Section 7.3.10 of the General Conditions for specific direction regarding pricing of changes in the Work.
- 1.7 ITEMIZATION OF COSTS: In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of all costs including labor, materials, and subcontracts. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are subcontracts, they shall be itemized also. In no case will a change involving over \$100.00 be approved without such itemization.

- A. When requested, prepare explanations and documentation to substantiate the margins as claimed.
- B. The Owner reserves the right to establish the actual quantity of work-in-place by an independent quantity survey, measure, or count.

1.8 CORRELATION OF CONTRACTOR SUBMITTALS:

- A. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum.
- B. Promptly revise progress schedules to reflect change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- C. Promptly enter changes in Project Record Documents.

1.9 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.10 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. Construction Change Directive contains a complete description of change in the Work, designates the method to be followed to determine change in the Contract Sum or the Contract Time, and a guaranteed maximum price or "cost not to exceed."
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

1.11 MODIFICATIONS TO CONTRACT TIME

- A. Refer to Section 1 "Construction Progress Documentation" for required submittals to support requests for modifications to the Contract Time or when a Contract Modification will have no impact on the project duration.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 25 00

SECTION 01 29 00
PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. 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

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Sections include the following:
 - 1. Division 1 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
 - 2. Division 1 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule and Submittals Schedule.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Submittals Schedule.
 - c. Contractor's Construction Schedule.
 - 2. Submit the Schedule of Values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Application for Payment.

- B. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Architect.
 - c. Contractor's name and address.
 - d. Date of submittal.
 2. Submit draft of AIA Document G703 Continuation Sheets.
 3. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of the Work.
 - c. Name of subcontractor.
 - d. Dollar value.
 - 1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
 4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
 5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 6. 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. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance or bonded warehousing.
 7. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. 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 Contractor's option.
 9. Schedule Updating: Update and resubmit the Schedule of Values before the next Application for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 - 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.
- C. Payment Application Forms: Use AIA Document G702 and AIA Document G703 Continuation Sheets as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
 - 1. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal of Draft: Submit one draft copy of the proposed Application For Payment in PDF format by email to the Architect and Owner's Project Inspector at least 24 hours prior to the last scheduled site meeting of each month.
- F. Transmittal of Final: Following Architect's verbal approval of draft application, submit 3 signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
 - 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers.
 - 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 - 4. Submit final Application for Payment with or preceded by final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
 - 5. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.

- H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of Values.
 3. Contractor's Construction Schedule (preliminary if not final).
 4. Copies of permits.
 5. Certificates of insurance and insurance policies.
 6. Performance and payment bonds.
- I. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- J. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA Document G706A, "Contractor's Affidavit of Release of Liens."

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

SECTION 01 31 00
PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. 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

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Project meetings.
 - 2. Requests for Interpretation (RFIs).
- B. Related Sections include the following:
 - 1. Division 1 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
 - 2. Division 1 Section "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

- A. RFI: Request For Information – Document from Contractor seeking interpretation or clarification of the Contract Documents.

1.4 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work.
 - 1. Schedule demolition operations in sequence required to obtain the best results where demolition of one part of the Work depends on demolition of other components.
 - 2. Make adequate provisions to accommodate items scheduled for later installation.
- B. 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. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. 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. Preparation of Contractor's Construction Schedule.
2. Preparation of the Schedule of Values.
3. Delivery and processing of submittals.
4. Progress meetings.
5. Pre-demolition conferences.
6. Project closeout activities.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

1. 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 PROJECT MEETINGS

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

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.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.

B. Predemolition Conference: Schedule a predemolition conference before starting demolition, at a time convenient to Owner and Architect. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.

1. Attendees: Authorized representatives of Owner, Architect and their consultants; Contractor and its superintendent; major subcontractors; suppliers; Building Official, Fire Marshal, 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.
2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Critical work sequencing and long-lead items.
 - c. Procedures for processing field decisions and Change Orders.
 - d. Procedures for RFI's.
 - e. Procedures for testing and inspecting.
 - f. Procedures for processing Applications for Payment.
 - g. Submittal procedures.
 - h. Use of the premises.
 - i. Work restrictions.
 - j. Owner's occupancy requirements.
 - k. Responsibility for temporary facilities and controls.

- l. Parking availability.
 - m. Office, work, and storage areas.
 - n. Equipment deliveries and priorities.
 - o. Security.
 - p. Progress cleaning.
 - q. Working hours.
 - 3. Minutes: Record and distribute meeting minutes.
- C. Progress Meetings: Conduct progress meetings at biweekly intervals, or as acceptable to Owner and Architect. Coordinate dates of meetings with preparation of payment requests.
- 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.
 - 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.
 - a. 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) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Status of submittals.
 - 2) Deliveries.
 - 3) Access.
 - 4) Work hours.
 - 5) Progress cleaning.
 - 6) Quality and work standards.
 - 7) Field observations.
 - 8) RFI's.
 - 9) Status of proposal requests.
 - 10) Status of change orders.
 - 3. Minutes: Record the meeting minutes.
 - 4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
 - a. 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.

1.6 REQUESTS FOR INFORMATION (RFI's)

- A. 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. RFI's shall originate with Contractor. RFI's submitted by entities other than Contractor will be returned with no response.
 - 2. Coordinate and submit RFI's in a prompt manner to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
 - 1. Project name.
 - 2. Date.
 - 3. Name of Contractor.
 - 4. Name of Architect.
 - 5. RFI number, numbered sequentially.
 - 6. Specification Section number and title and related paragraphs, as appropriate.
 - 7. Drawing number and detail references, as appropriate.
 - 8. Field dimensions and conditions, as appropriate.
 - 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.
 - 10. Contractor's signature.
 - 11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
 - a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. Hard-Copy RFI's: Form acceptable to Owner and Architect.
 - 1. Identify each page of attachments with the RFI number and sequential page number.
- D. Software-Generated RFI's: Software-generated form with substantially the same content as indicated above.
 - 1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- E. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow seven working days from date of receipt by Architect for Architect's response for each RFI. RFI's received after 1:00 p.m. will be considered as received the following working day.
 - 1. The following RFI's will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Architect's actions on submittals.
 - f. Incomplete RFI's or RFI's with numerous errors.

2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
 3. Architect's action on RFI's 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."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
- F. 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 seven days if Contractor disagrees with response.
- G. RFI Log: Prepare, maintain, and submit a tabular log of RFI's organized by the RFI number. Submit log monthly. Include the following:
1. Project name.
 2. Name and address of Contractor.
 3. Name and address of Architect.
 4. RFI number including RFI's that were dropped and not submitted.
 5. RFI description.
 6. Date the RFI was submitted.
 7. Date Architect's response was received.
 8. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
 9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 00

SECTION 01 32 00
CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.
- B. The principles and definitions of the terms used herein shall be as set forth in the 2nd edition of Construction Planning and Scheduling Manual, published by The Associated General Contractors of America

1.2 SUMMARY

- A. This Section includes but is not limited to:
 - 1. Administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - a. Contractor's CPM Construction Schedule, herein referred to as the Construction Schedule.
 - b. Two-Week Look Ahead Schedules.
 - c. Change Impact Schedules
 - d. Schedule Recovery Plans
- B. Related Sections include the following:
 - 1. Division 1 Section "Payment Procedures" for submitting the Schedule of Values.
 - 2. Division 1 Section "Contract Modification Procedures" for submitting Contract modifications.
 - 3. Division 1 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
 - 4. Division 1 Section "Submittal Procedures" for submitting schedules and reports.
 - 5. Division 1 Section "Quality Requirements" for submitting a schedule of tests and inspections.
- C. The purpose of the Construction Schedule shall be to:
 - 1. Assure adequate planning, scheduling, and reporting during execution of the construction and related activities so they may be prosecuted in an orderly and expeditious manner, within the Contract Time and any milestones that may be stipulated by the Contract.
 - 2. Assure coordination of the work with the Contractor and the various subcontractors and suppliers at all tiers.
 - 3. Assist in the evaluation of the Contractor's monthly progress payments.
 - 4. Assist in monitoring the progress of the work and evaluating proposed changes to the Contract and the Construction Schedule.

5. Assist in detecting problems for the purpose of taking corrective action and to provide a mechanism or tool for determining and monitoring such corrective actions.

1.3 SUBMITTALS

- A. Submittals Schedule: Arrange the following information in a tabular format, in printed and electronic format:
 1. Scheduled date for first submittal.
 2. Specification Section number and title.
 3. Submittal category (action or informational).
 4. Name of subcontractor.
 5. Description of the Work covered.
 6. Scheduled date for Contractor's submittal and Architect's final release or approval.
- B. Contractor's Construction Schedule:
 1. General requirements:
 - a. Contractor shall prepare, submit to the Owner for acceptance, and maintain a Critical Path Method (CPM) Construction Schedule (Construction Schedule) for the Work. The Construction Schedule shall consist of a computerized network diagram together with a mathematical analysis of that network. Display accepted schedule in time-scaled logic diagram format at site construction office at all times and review with subcontractors each week.
 - b. Contractor shall utilize the Construction Schedule for planning, organizing and directing the Work, for reporting progress, and for requesting payment for work completed. The Construction Schedule shall be reviewed at each progress meeting.
 - c. The Construction Schedule shall clearly show sequential interdependencies, with activity duration and float clearly represented. Sequence(s) of activities with on the longest path shall be clearly identified as Critical Path(s).
 - d. The approved scheduling software system shall be capable of baseline comparison analysis. Store (save) an original version of the approved Construction Schedule as the baseline schedule for comparative analysis. As work progresses, provide graphics displaying actual progress bars versus baseline or target bars.
 2. Submittal Requirements:
 - a. Provide the number of submittals of each version of the Construction Schedule as indicated in Division 1 "Supplementary General Conditions."
 - b. Submit the Construction Schedule in electronic format on a compact disc. Acceptable electronic format of the Construction Schedule required will be in the software format used to develop the Construction Schedule for each schedule submission.
 - c. Submit hard copies of each schedule submission.
 - d. Each submission of the Construction Schedule shall include three (3) sets of the Schedule Narrative (see below).
 - e. Contractor's Superintendent and major subcontractors shall review the Construction Schedule prior to submittal. Provide written certification of

acceptance of the Baseline Construction Schedule by the major subcontractors concurrently with submittal.

- f. Preliminary Construction Schedule: Contractor shall submit to the Owner for review and acceptance, a Preliminary Contractor's Construction Schedule before the submission of the first application for payment. The Preliminary Contractor's Construction Schedule will detail all work planned prior to commencement of work.
- g. Baseline Construction Schedule: the Baseline Construction Schedule will be the Contractor's original plan for completing the Work and will not include progress or actual dates to the submission date.
 - 1) The Baseline Construction Schedule shall be submitted within the first thirty (30) calendar days after Notice to Proceed for review and acceptance by the Owner.
 - 2) The Contractor may submit the Baseline Construction Schedule to the Owner for review and acceptance in lieu of the Preliminary Construction Schedule prior to the submission of the first application for payment.
- h. Construction Schedule Updates (Schedule Updates):
 - 1) Schedule Updates shall be submitted biweekly with or prior to the Application for Payment for review and acceptance by the Owner.
 - 2) The Contractor shall assess the status of the project and update the status of all started, progressed and completed activities.
 - 3) The schedule update does not include changes to the logical plan of operations or the schedule logic.
- i. Schedule Revisions: Include changes to: the work plan, the sequence of the work, changes in the anticipated duration of activities, changes in the logic and relationships between activities, constraints, and other similar revisions. Updating the Construction Schedule to reflect actual progress shall not be considered a schedule modification to the Construction Schedule. Schedule Revisions will be provided to the Owner for review and acceptance when:
 - 1) The Contractor will make revisions to the Construction Schedule in the event the Contractor's planning of the work is revised or if the Construction Schedule no longer represents the actual prosecution and progress of the Work. The Contractor shall submit the proposed changes along with a written narrative of the proposed changes. Such revisions to the Construction Schedule shall not alter any of the Substantial Completion dates and shall be made at no additional cost to the Owner.
 - 2) Activity ID's and original durations shall not be changed for any activity once accepted by the Owner. Contractor may propose new activities and/or substitute activities for proposed schedule modifications. Contractor may also propose changes of schedule logic for activities previously accepted by the Owner.
- j. Recovery Schedule:
 - 1) If a Schedule Update indicates that the scheduled Substantial Completion date will be more than fourteen (14) calendar days after the contractual Substantial Completion date, a Recovery Schedule for regaining the time that the Project is behind schedule shall be submitted to the Owner for review and acceptance within five (5) working days of the update submission.

- 2) The Recovery Schedule Narrative shall indicate the:
 - a) Amount of time the activity is late,
 - b) Reason for the lateness, and
 - c) The proposed method for recovering the time and achieving all required project Substantial Completion deadlines.
 - d) The recovery plan should clearly indicate the present and additional manpower loading, if applicable.
 - 3) The Recovery Schedule shall be submitted and accepted prior to processing and making payment on the pay application for the immediately following month.
- k. Two-Week Look Ahead Schedule
- 1) The Contractor shall prepare a Two-Week Look Ahead Schedule for each progress meeting showing the items work the previous week and those scheduled to be in progress during the next three weeks. The activities shall be taken from the most recent, accepted Construction Schedule.

1.4 COORDINATION

- A. Contractor shall coordinate and cooperate with the Owner in scheduling and performing the Contractor's work to avoid conflict, delay in or interference with the work of other contractors or the construction or operations of the Owner's own forces, testing and inspection agencies.
- B. The Contractor shall be responsible for assuring that the subcontractor's work at all tiers, as well as the Contractor's own work, and Owner furnished materials, deliveries, and work are included in the schedule.

1.5 REVIEW AND ACCEPTANCE

- A. The Construction Schedule shall be acceptable to the Owner but such acceptance shall neither impose on the Owner responsibility for the progress or scheduling of the Work nor relieve the Contractor from full responsibility therefore.
- B. The Owner shall provide the Contractor with the results of the schedule review based on the following schedule:
 1. Review of the Baseline Construction Schedule within fourteen (14) calendar days after receipt by the Owner.
 2. Review of the Schedule Update(s) within seven (7) calendar days after receipt by the Owner.
 3. Review of Schedule Revision(s) and Recovery Schedule(s) within fourteen (14) calendar days after receipt by the Owner.
- C. The Contractor shall revise as necessary and resubmit to the Owner, the Construction Schedule within seven (7) calendar days after receipt of the Owner's review. If the Owner questions the Contractor's proposed activities, logic, durations, or other schedule components, the Contractor shall provide a satisfactory revision of, or adequate justification for, these activities, logic, durations, or other schedule components to the satisfaction of the Owner.

- D. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates, regardless of Owner's acceptance of the schedule. In the event the Contractor fails to define any element of work, activity or logic and the Owner's review does not detect this omission or error, such omission or error, when discovered by the Contractor or Owner, shall be corrected by the Contractor at the next monthly Schedule Update.
- E. Progress Payments will be held based on the following:
 - 1. No progress payments shall be processed or paid until the Contractor's Preliminary Construction Schedule has been properly prepared and submitted by the Contractor and accepted by the Owner.
 - 2. No progress payments after the first thirty (30) calendar days will be processed or paid until the Baseline Construction Schedule has been properly prepared and submitted by the Contractor and accepted by the Owner.
 - 3. No progress payments after acceptance of the Baseline Construction Schedule will be processed or paid until the Schedule Update, Schedule Revision or Recovery Schedule for the month has been submitted by the Contractor and accepted by the Owner.

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and the Construction Schedule.
 - 2. Final Submittal: Submit concurrently with the first submittal of the Construction Schedule.

2.2 CONSTRUCTION SCHEDULE, TECHNICAL REQUIREMENTS

- A. The Construction Schedule shall be prepared using one of the following approved scheduling software projects:
 - 1. From Primavera Systems, Inc., or
 - 2. From Microsoft Corporation – Microsoft Project.
- B. Time Frame: Extend schedule from date established for commencement of the Work to date of Final Completion.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
 - 2. If the schedule indicates earlier completion time(s) than that set forth in the Contract Documents, the difference between the Schedule and the Contract Document dates shall be considered to be part of the total float available.
- C. Activities: A sufficient number of activities shall be utilized to accurately depict reviews and approvals, fabrication and delivery, construction sequence, dependencies and progress. Unless approved by the Owner, comply with the following:

1. Activity Description: Activity descriptions shall be clear, concise and describe the scope of work. Activities having similar description or that describe the same scope of work over multiple areas shall include additional information in the description to indicate the specific phases or areas covered by that activity.
2. Activity ID: Each activity shall be assigned a unique Activity ID number that shall not be changed once assigned.
3. Activity Duration: Define activities so no activity is longer than 20 work days, unless specifically allowed by Owner. Assigned durations shall be the Contractor's best estimate of time required to complete the activity considering the scope and resources planned for the activity. If the scope of work would normally be greater than 20 work days, divide the operation into manageable parts so that the duration is less than 20 work days.
4. With the exception of Notice to Proceed and Final Completion, each activity shall have a predecessor relationship controlling the start of the activity and a successor relationship based on the finish of the activity.
5. Responsibility for each activity shall be identified with a single performing organization, typically the Subcontractor name. Activities shall have only one responsible party.
6. Activity Coding Structure: Each activity shall be associated with a set of codes to be used for sorting, selecting, organizing, and providing additional information about the activity. Each activity shall have activity codes indentifying the following:
 - a. Phase or Work Stage (Recommended phases: Milestones; Administrative; Submittal Development, Review and Approval; Procurement; Site Preparation; Foundations and Structure; Roof and Skin; Building Systems Installation; Finish Items; Tests, Inspections, and Startup; Site Finishes; and Project Closeout)
 - b. Area (e.g. Site, Building Area)
 - c. Responsibility (Owner, Architect, Contractor, or each of the subcontractors)
 - d. Division (01 through 16)
 - e. Schedule of Values Reference Number
7. In addition to the activities defined by the Contractor to accomplish the scope of work, the Contractor shall include estimated time frames for the following:
 - a. Mobilization and demobilization.
 - b. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days or that may be anticipated to impact the schedule, as separate activities in schedule. Procurement cycle activities include, but are not limited to, development of submittals, approvals, purchasing, fabrication, and delivery.
 - c. Submittal Review Time: Include review times indicated in Division 1 Section "Submittal Procedures" in schedule. No extension of Contract Time will be authorized because of failure to transmit submittals to Architect sufficiently before work is to be performed to allow processing and resubmittal(s) as may be necessary.
 - d. Owners separate contract work.
 - e. Substantial Completion: Indicate Substantial Completion on the Contract date or in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.

- D. Constraints and Schedule Logic: Include constraints and work restrictions indicated in the Contract Documents and as follows, in the Construction Schedule, and show how the sequence of the Work is affected.
1. Except for Contract Award, Notice-to-Proceed, required Substantial Completion, and Final Completion dates activities shall not be constrained by any means other than logic ties to predecessor and successor activities. Relationships with start or finish lags may be used provided the lags are less than 7 working days, reasonable and can be logically explained.
 2. Contractor shall develop logic that accounts for the resources planned to perform the Work, the fundamental building blocks of the project, safety, quality, and the flow of operations from project start to completion.
- E. Critical Path: The critical path is the longest connected route through the CPM network. Critical activities are activities on the critical path that will delay completion of the project if the activity is delayed.
- F. Milestones:
1. Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- G. Calendars:
1. Custom calendars will be developed by the Contractor to identify the differing calendars on which specific activities will be performed. Corresponding calendars should be associated with each activity during schedule preparation.
 2. Holidays, seasonal considerations for planting, paving or as may be technically required should be clearly identified in the unique calendars.
 3. The Contractor shall anticipate potential loss of workdays for each calendar month due to adverse weather, shall incorporate this lost time into the appropriate schedule's calendars, and shall schedule the work accordingly. Refer to Division 1, Supplementary General Conditions, for anticipated adverse weather.
- H. Float:
1. Float is not for the exclusive use or benefit of either the Contractor or the Owner. Float time will be apportioned according to the needs of the project.
 2. Float may not be used as a basis of claim by the Contractor for additional compensation for actual project completion if the Contractor submits a schedule indicating an earlier completion dates than the Substantial Completion or Final Completion dates.
 3. Pursuant to the float sharing requirements set forth herein, the use of float suppression techniques such as unsupported activity durations, constrained dates, unsupported logic restraints, or the use of float constraints shall be cause for rejection of the Construction Schedule and any revisions or updates.
- I. Data Date: The data date is the starting calendar date for the CPM calculation, where all dates prior to the data date are actual dates, and any date including the data date through completion are planned dates and shall not have any actual dates indicated.
1. The Data Date for the Preliminary and Baseline Construction Schedules shall be the Notice to Proceed date and shall be clearly identified on the printed submission and in the Schedule Narrative.

2. The Data Date for each Schedule Update shall be clearly identified on the printed submission and in the Schedule Narrative. The Data Date shall be coordinated with the status date of the Payment Application.
- J. Schedule Format: Prepare initial network diagram from a list of straight "early start-total float" sort and organize the schedule by phase and then area if developed in a Primavera Systems, Inc. product or as mutually agreed to by the Owner and Contractor if developed in a Microsoft Corporation product. Identify critical path activities and the data date. The printed Construction Schedule should be formatted with the following items listed in tabular format on the left of the page with the time-scaled logic diagram shown on the right.
 1. Activity ID.
 2. Activity description.
 3. Original activity duration in workdays.
 4. Percent complete.
 5. Remaining activity duration in workdays.
 6. Early start and finish dates.
 7. Late start and finish dates.
 8. Total float.
 9. Free float.
 10. Responsible party (Contractor, individual subcontractors, Owner, Architect, Commissioning Agent, or other testing and inspection entities)

2.3 SCHEDULE NARRATIVE

- A. The purpose of the Schedule Narrative is to support the understanding of the Construction Schedule and for the Contractor to communicate to the Owner its plan. The Schedule Narrative shall not be considered as providing written notice as may be required in this contract.
- B. For the Preliminary Construction Schedule and the Baseline Construction Schedule, the Schedule Narrative shall include:
 1. Generally, describe the sequence of construction, proposed means and methods and crew utilization. Provide details for the critical path and near critical operations including crew utilization and production rates.
 2. Identify activities which are planned to be expedited by use of overtime or double shifts, including work on Saturdays, Sundays and holidays.
 3. List the project milestones and other key dates.
 4. Describe the critical path and any near critical paths having less than fifteen (15) days of float.
 5. Describe the calendars used, provide a listing of holidays, weather days and other non-work periods.
 6. Discuss procurement of long lead items.
 7. List the known conditions with potential schedule impact.
 8. Explain the activity codes utilized.
 9. Explain any abbreviations used in the CPM schedules.
- C. For each of the Schedule Updates, the Schedule Narrative shall include:
 1. Include the data date.

2. Discuss the updated critical path and any near critical paths having less than 15 days of float.
3. Describe problem areas, current and anticipated, delaying factors and their impact, and an explanation of corrective actions taken or proposed.
4. List the progress of the project. List the activities planned for and progressed since the prior update and the activities scheduled for the succeeding month.
5. List the Architect, Owner, and other consultants or third party responsibilities and key dates over the period to the next schedule submission.
6. Discuss any changes to the logic, duration or added and deleted activities.

PART 3 - EXECUTION

3.1 CHANGE IMPACT SCHEDULE

- A. Each Contract Modification where modification to the Contract Time is needed shall include a separate Change Impact Schedule indicating the effect of this change on the most recent and accepted version of the Construction Schedule.
 1. If the Contract Modification will have no impact on the duration, start or finish dates of any schedule activity, the Contractor may submit a written certification of this fact in lieu of a Change Impact Schedule.
- B. Requests for extensions of time will receive consideration only for delays to the critical path. Requests for extensions of time shall include detailed written documentation that is sufficient to show that:
 1. The delay has negatively impacted the work on the critical path and the projected date of Substantial Completion for the Project has been impacted by the delay, or
 2. The delay has negatively impacted non-critical path work beyond the total float available to that path causing the previously non-critical path to overtake the critical path and the projected date of Substantial Completion for the Project has been impacted by the delay.
- C. The Contractor shall submit a narrative description of the schedule change and a supporting computer generated comparison of the current and revised schedule.
- D. Provide a detailed and quantified analysis of crews, production rates, materials and equipment to support the Change Impact Schedule.
- E. Modification of the Contract Time or other modifications may be considered based on the accepted impact of Change Modifications on the project Critical Path with due consideration for concurrent critical delay due to unusually severe weather, Contractor delays, or other delays beyond the Owner's direct control.
- F. The Change Impact Schedule shall be acceptable to the Owner. The Contractor shall revise as necessary and resubmit to the Owner if:
 1. The Owner questions the methodology,
 2. The methodology and process utilized is unclear,
 3. Changes to the schedule has been made and not satisfactorily justified,
 4. The Contractor fails to recognize all impacts to the project during the period of analysis, or

5. As warranted and supported by the Owner's analysis.

END OF SECTION 01 32 00

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. 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

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections include the following:
 - 1. Division 1 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
 - 2. Division 1 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
 - 3. Division 1 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
 - 4. Division 1 Section "Quality Requirements" for submitting test and inspection reports.
 - 5. Division 1 Section "Closeout Procedures" for submitting warranties.
 - 6. Divisions 2 for specific requirements for submittals in those Sections.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Architect's responsive action.
- B. Informational Submittals: Written information that does not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

1.4 SUBMITTAL PROCEDURES

- A. General: Electronic copies of CAD Drawings of the Contract Drawings may be provided by Architect for Contractor's use in preparing submittals, upon specific request and payment of handling fees.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Submittals Schedule: Comply with requirements in Division 1 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- D. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 - 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 - 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
- E. Identification: Place a permanent label or title block on each submittal for identification.
 - 1. Indicate name of firm or entity that prepared each submittal on label or title block.
 - 2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 - 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.

- h. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 06100.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 06100.01.A).
 - i. Number and title of appropriate Specification Section.
 - j. Other necessary identification.
- F. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.
- G. Number of Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
 - 1. Submit three (3) copies of all submittals to Architect for review.
- H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will discard submittals received from sources other than Contractor.
 - 1. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:).
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Specification Section number and title.
 - g. Transmittal number, numbered consecutively.
 - h. Remarks.
 - i. Signature of transmitter.
 - 2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.
- I. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
 - 1. Note date and content of previous submittal.
 - 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 - 3. Resubmit submittals until they are marked "No Exceptions Taken" or "Approved as Noted."
- J. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

- K. Use for Construction: Use only final submittals with mark indicating "No Exceptions Taken" or "Approved as Noted" by Architect.

1.5 CONTRACTOR'S USE OF ARCHITECT'S CAD FILES

- A. General: At Contractor's written request, copies of Architect's CAD/BIM files will be provided to Contractor for Contractor's use in connection with Project, subject to the following conditions:
 - 1. User assumes all responsibility for inaccuracies and field verification in using CAD/BIM files.
 - 2. User agrees to payment of any handling fees imposed by Architect in preparation of CAD/BIM files for Contractor's use.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Manufacturer's catalog cuts.
 - e. Wiring diagrams showing factory-installed wiring.
 - f. Printed performance curves.
 - g. Testing by recognized testing agency.
 - 4. Submit Product Data before or concurrent with Samples.
 - 5. Number of Copies: Refer to this section for number of copies submitted. Architect will return a maximum of six copies. Mark up and retain specified number of returned copies as Project Record Documents.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal of Architect's CAD Drawings are otherwise permitted.
 - 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:

- a. Dimensions.
 - b. Identification of products.
 - c. Roughing-in and setting diagrams.
 - d. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - e. Schedules.
 - f. Compliance with specified standards.
 - g. Notation of dimensions established by field measurement.
 - h. Relationship to adjoining construction clearly indicated.
 - i. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
- 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches.
 - 3. Number of Copies: Refer to this section for number of copies submitted. Architect will return a maximum of six copies. Mark up and retain specified number of returned copies as Project Record Documents.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
- 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 - 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 - 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 - 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit two full sets of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.

- E. Submittals Schedule: Comply with requirements specified in Division 1 Section "Construction Progress Documentation."
- F. Application for Payment: Comply with requirements specified in Division 1 Section "Payment Procedures."
- G. Schedule of Values: Comply with requirements specified in Division 1 Section "Payment Procedures."

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 - 1. Refer to this section for number of copies submitted. Architect will return a maximum of six copies. Mark up and retain specified number of returned copies as Project Record Documents.
- B. Contractor's Construction Schedule: Comply with requirements specified in Division 1 Section "Construction Progress Documentation."
- C. Material Safety Data Sheets (MSDS's): Submit information directly to Owner; do not submit to Architect.
 - 1. Architect will not review submittals that include MSDS's and will return the entire submittal for resubmittal.

2.3 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.
 - 2. Allow for additional time in project schedule for Architect's review of all Delegated Design Submittals.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S/ ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. No Exceptions Taken: Fabrication may proceed based upon submittal.
 - 2. Approved As Noted: Fabrication may proceed based on corrections indicated, if any.
 - 3. Submit as Specified: The product submitted is rejected – resubmittal is required.
 - 4. Revise and Resubmit: Fabrication may not proceed, drawings must be revised and resubmitted.
 - 5. Where submittal is returned with notation for special processing or other activity, Contractor shall comply with notations indicated.
- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01 33 00

SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. 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

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and 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.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
 - 1. Division 1 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
 - 2. Divisions 2 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.

- C. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- D. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- E. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- F. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- G. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Using a term 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 tradespeople of the corresponding generic name.
- H. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. General: If compliance with two 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 uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. 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 requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

- B. Reports: Prepare and submit certified written reports that include the following:
1. Date of issue.
 2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Names of individuals making tests and inspections.
 5. Description of the Work and test and inspection method.
 6. Identification of product and Specification Section.
 7. Complete test or inspection data.
 8. Test and inspection results and an interpretation of test results.
 9. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
- C. Permits, Licenses, and Certificates: For 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 for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- C. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

1.7 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.

2. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
- B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- E. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.

4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- F. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.
 2. Any and all work found to be non-compliant with quality requirements shall be corrected at Contractor's expense, regardless of time of discovery.

1.8 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:
1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 6. Retesting and re-inspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.

4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

END OF SECTION 01 40 00

SECTION 01 50 00
CONSTRUCTION FACILITIES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Security.
- B. Access.
- C. Parking.
- D. Dumpsters and Refuse Removal.
- E. Removal of Facilities.

1.2 RELATED SECTIONS

- A. Division 1 – Temporary Utilities.
- B. Division 1 - Temporary Controls: Barriers / fences.
- C. Division 1 - Traffic Regulation.

1.3 SECURITY

- A. Provide security and facilities to protect Work from unauthorized entry, vandalism, or theft.

1.4 ACCESS

- A. Maintain public thoroughfares to serve construction area.
- B. Provide detours necessary for unimpeded traffic flow, or as directed by Owner.
- C. Provide and maintain access to all in-service fire hydrants, free of obstructions.

1.5 PARKING

- A. Parking shall be allowed on existing pavement.

- 1.6 DUMPSTERS AND REFUSE REMOVAL: Provide necessary dumpsters or trash facilities within Contractor's staging area for periodic removal (at least weekly) of construction debris and refuse. Contractor shall comply with all requirements of local authority regarding dumpster type, covering, and protection from vandalism and vermin. Periodic removal of construction debris from site shall be scheduled with ongoing work so as to not create an unsightly or nuisance condition.

1.7 REMOVAL OF FACILITIES

- A. Remove temporary structures, contents and services at a time they are no longer needed and as approved by the Architect. Remove debris and return the site to final design conditions.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION 01 50 00

SECTION 01 51 00
TEMPORARY UTILITIES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Description.
- B. Conditions of Use.
- C. General.
- D. Temporary Illumination and Power Distribution.
- E. Temporary Telephone / Internet Service.
- F. Temporary Water.
- G. Temporary Sanitary Facilities.
- H. Temporary Fire Protection.
- I. Removal.

1.2 RELATED SECTIONS:

- A. Division 1 - Temporary Controls: Barriers.
- B. Division 22, 26 and 33: Utility Services.
- C. Division 21: Fire Suppression.

1.3 DESCRIPTION

- A. Furnish and install temporary utilities at locations required to avoid delay in performance of work. Maintain, modify, and expand as required temporary utilities as needed throughout the progress of the Work. Do not remove until services are no longer needed, or are replaced by the authorized use of completed permanent facilities.

1.4 REQUIREMENTS OF REGULATORY AGENCIES

- A. Comply with Federal, State and local codes and regulations and with utility company requirements.

1.5 CONDITIONS OF USE

- A. Operate temporary utilities in a safe, efficient manner. Do not overload temporary utilities. Do not allow unsanitary conditions, public nuisances or hazardous conditions to develop or persist on the site.

1.6 GENERAL

- A. Materials may be new or used, shall be adequate in capacity for the required usage, shall not create unsafe conditions, and shall not violate requirements of applicable codes and standards.

1.7 TEMPORARY ILLUMINATION AND POWER DISTRIBUTION

- A. Provide and pay for all temporary poles, service drops, meters, fuses, panels, circuit breakers, wiring, switches, lights, power outlets, and other electrical materials necessary for proper execution of the work. Arrange distribution boxes so that individual trades will not need extension cords longer than 100 feet. Arrange with utility company to provide temporary services required for power and lighting, and to pay all costs for services and for power used.
- B. Install weatherproof, grounded circuit and branch wiring, with area distribution boxes located so that power and lighting is available throughout the construction by the use of construction-type power cords. Provide ground-fault protection for all receptacle outlets.
- C. Provide artificial lighting for all areas of Work and for areas when natural light is not adequate. Lighting shall be of an adequate level for safety, to perform all construction operations and for the Architect to perform inspections.
- D. As soon as the permanent system may be used, Contractor shall dismantle the temporary system and shall, at his own expense (including the cost of power), operate the permanent system, assuming all responsibility and risk thereof.

1.8 TEMPORARY WATER

- A. The Contractor shall provide adequate temporary potable water for the project, if required. No washing of construction vehicles on site is permitted.

1.9 TEMPORARY SANITARY FACILITIES

- A. Sanitary Facilities: Provide toilet facilities for workers at locations approved by the Architect and Owner; comply with all sanitary regulations for installation, use and removal. Service, clean, and maintain facilities and enclosures.

1.10 TEMPORARY FIRE PROTECTION

- A. Install and maintain temporary fire protection facilities of the types needed to adequately protect against predictable and controllable fire losses. 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.

1.11 REMOVAL

- A. Completely remove temporary materials and equipment when their use is no longer required.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION 01 51 00

SECTION 01 56 00
TEMPORARY CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. General.
- B. Requirements and Regulatory Agencies.
- C. Barriers (including Fencing).
- D. Water Control / Dewatering.
- E. Exterior Enclosures.
- F. Protection of Installed Work.
- G. Dust Control.
- H. Erosion and Sediment Control.
- I. Noise Control.
- J. Pollution Control.
- K. Special Protection.

1.2 RELATED SECTIONS

- A. DIVISION 1 - Summary of Project: Contractor use of premises.
- B. DIVISION 1 – Coordination and Project Conditions.

1.3 DESCRIPTION

- A. Temporary Controls: Barriers, enclosures, protection of the Work, water control, dust control, noise control, pest control, pollution control, and rodent control.

1.4 REQUIREMENTS AND REGULATORY AGENCIES: Comply with federal, state and local codes and regulations.

1.5 BARRIERS (Including Fencing)

- A. GENERAL: Provide and maintain suitable fences, barricades, screens, and partitions as required to prevent public entry to hazardous areas, to provide for public safety, to protect the Work, and to protect existing facilities, trees, plants, and adjacent properties, rights-of-way, and uses from construction operations. Provide barriers of a neat and reasonably uniform appearance, structurally adequate for the required purposes. Erect temporary barriers of type and in location as required by federal, state and local regulations. Provide warning signs to inform personnel at the site and the public of the hazard.
- B. MATERIALS:
 - 1. Material may be new or used, suitable for the intended purpose, at Contractor's option, as appropriate to serve the required purpose, but must not violate requirements of applicable codes and standards. Barriers shall have a neat and reasonably uniform appearance, and be structurally adequate for the required purposes.
 - 2. Provide commercial grade, 6 foot (1.8 m) high, chain link fence around construction site; equip with vehicular gates with locks.
- C. MAINTENANCE: Maintain barriers during entire construction period. Relocate barriers as required by progress of construction.
- D. REMOVAL: Completely remove barriers, including foundations, when construction has progressed to the point that they are no longer needed, and when approved by Architect/Engineer. Clean and repair damage caused by installation, fill and grade the areas of the site to required elevations and slopes, and clean the area.

1.6 WATER CONTROL / DEWATERING

- A. Grade site to drain. Maintain positive drainage away from buildings. Protect site from puddling and running water. Dewatering shall be performed on a daily and rainfall event basis.
- B. Perform grading and excavation in a manner to prevent surface water and subsurface or ground water from flowing into excavations, and to prevent water from flooding the project site and surrounding areas.

- C. Do not allow water to accumulate in excavations. (This includes depressed areas inside building.) Remove water using dewatering methods which will prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of subgrades and foundations. Provide and maintain sump pumps, and suction and discharge lines, and other dewatering system components necessary to convey water away from excavations to acceptable sediment control structure.
- D. Provide means of conveyance for runoff and water removed from excavations to collecting areas. Comply with Division 2 - Erosion & Sediment Control pertaining to sediment-laden discharges. Provide and maintain temporary drainage ditches and other diversions outside excavation limits of structures. Do not use trench excavations as temporary drainage ditches.
- E. Additional work required due to improper drainage or lack of control of drainage will be at the Contractor's expense.

1.7 PROTECTION OF INSTALLED WORK

- A. Site Related:
 - 1. Preserve survey control points & benchmarks. Pay for replacement if disturbed.
 - 2. Protect approved subgrade from damage by standing water, runoff and traffic.

1.8 DUST CONTROL

- A. Execute Work by methods to minimize raising dust from construction operations.
- B. Provide positive means to prevent air-borne dust from dispersing into atmosphere.
- C. The Contractor shall make every effort possible to prevent dust from becoming airborne and settling on adjacent buildings, autos, and mechanical equipment. Should dust or debris from this project cause harm to individuals or property on this site or in the surrounding community, the Contractor will bear the cost of clean-up and/or remediation.

1.9 NOISE CONTROL

- A. Provide methods, means, and facilities to minimize noise from construction equipment and noise produced by construction operations.

1.10 POLLUTION CONTROL

- A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

1.11 SPECIAL PROTECTION

- A. Demolition, general construction, and exterior cleaning operations may generate airborne dust or otherwise noxious matter that is, or could be considered to be, dangerous to persons or property. It is essential that dust be controlled and that no debris of any kind be permitted to leave the site or staging area uncontrolled.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION 01 56 00

SECTION 01 57 00
TRAFFIC REGULATION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. General.
- B. Reference Standards.
- C. Barricade and Warning Signs.

1.2 GENERAL

- A. General Conditions, Supplementary General Conditions and other sections in Division 1 govern work hereunder.
- B. Furnish labor, materials and equipment necessary to maintaining a safe flow of traffic at all times during construction on or adjacent to public right-of-way.

1.3 REFERENCE STANDARDS

- A. Traffic control procedures and equipment shall conform to the standards and regulations of the Virginia Department of Transportation, "Road and Bridge Specifications". Section numbers designated herein refer to section in these Road and Bridge Specifications unless specified otherwise.

PART 2 PRODUCTS

2.1 BARRICADE AND WARNING SIGNS

- A. All warning signs, cones, barricades, flags, lights or other traffic control devices shall conform to the requirements of the "Manual of Uniform Traffic Control Devices for Streets and Highways."
- B. All orange construction signs shall be fabricated using encapsulated lens type reflective sheeting in accordance with VDOT Standards.
- C. Comply with VDOT standards for all channelizing devices (traffic control).

PART 3 EXECUTION (Not Used)

END OF SECTION 01 57 00

SECTION 017419

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS.

- A. 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

- A. Section includes administrative and procedural requirements for the following:
 - 1. Recycling nonhazardous demolition waste.
 - 2. Disposing of nonhazardous demolition waste.

1.3 DEFINITIONS

- A. Demolition Waste: Building, structure, and site improvement materials resulting from demolition operations.
- B. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction.
- C. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

MATERIALS OWNERSHIP

- D. Unless otherwise indicated, demolition and construction waste becomes property of Contractor.
- E. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.4 ACTION SUBMITTALS

- A. Waste Management Plan: Submit plan within **7** days of date established for the Notice to Proceed.

1.5 INFORMATIONAL SUBMITTALS

- A. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- B. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- C. Qualification Data: For refrigerant recovery technician.
- D. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.
- E. Refrigerant Recovery: Comply with requirements in Section 024119 "Selective Demolition" for refrigerant recovery submittals.

1.6 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Comply with requirements in 024119 "Selective Demolition."

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General: Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials.

1. Demolition Waste:

- a. Asphalt paving.
- b. Concrete.
- c. Concrete reinforcing steel.
- d. Brick.
- e. Concrete masonry units.
- f. Wood studs.
- g. Wood joists.
- h. Plywood and oriented strand board.
- i. Wood paneling.
- j. Wood trim.
- k. Structural and miscellaneous steel.
- l. Rough hardware.
- m. Roofing.

- n. Insulation.
- o. Doors and frames.
- p. Door hardware.
- q. Windows.
- r. Glazing.
- s. Metal studs.
- t. Gypsum board.
- u. Acoustical tile and panels.
- v. Carpet.
- w. Carpet pad.
- x. Demountable partitions.
- y. Equipment.
- z. Cabinets.
- aa. Plumbing fixtures.
- bb. Piping.
- cc. Supports and hangers.
- dd. Valves.
- ee. Sprinklers.
- ff. Mechanical equipment.
- gg. Refrigerants.
- hh. Electrical conduit.
- ii. Copper wiring.
- jj. Lighting fixtures.
- kk. Lamps.
- ll. Ballasts.
- mm. Electrical devices.
- nn. Switchgear and panelboards.
- oo. Transformers.

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
 - 1. Comply with operation, termination, and removal requirements in Section 015000 "Temporary Facilities and Controls."
- B. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged and recycled.
 - 2. Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 RECYCLING DEMOLITION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.
- C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.
- D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.
 - 1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 - 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 - 4. Remove recyclable waste from Owner's property and transport to recycling receiver or processor as often as required to prevent overfilling bins.

3.3 RECYCLING DEMOLITION WASTE

- A. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
- B. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
- C. Metals: Separate metals by type.
 - 1. Structural Steel: Stack members according to size, type of member, and length.
 - 2. Remove and dispose of bolts, nuts, washers, and other rough hardware.
- D. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.
- E. Metal Suspension System: Separate metal members, including trim and other metals from acoustical panels and tile, and sort with other metals.
- F. Conduit: Reduce conduit to straight lengths and store by material and size.

3.4 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged or recycled, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.

END OF SECTION 017419

SECTION 01 77 00
CLOSE-OUT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Instructions to Owner.
- B. Substantial Completion.
- C. Final Inspection and Re-inspection Fees.
- D. Contractor's Closeout Submittals to the Architect.
- E. Final Adjustment of Accounts.
- F. Final Application for Payment.
- G. Final Cleaning.

1.2 RELATED REQUIREMENTS

- A. Fiscal provisions, legal submittals, and additional administrative requirements: Conditions of the Contract.
- B. Comply with requirements stated in Conditions of the Contract and in Specifications for administrative procedures in closing out the Work.

1.4 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities.
 - 3. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
- B. When Contractor considers the Work, or a designated portion thereof, substantially complete in accordance with the General Conditions:
 - 1. Make contract closeout submittals as identified herein, including a detailed punch list of all items yet to be completed.
 - 2. Complete final cleaning per Division 1 requirements and other requirements of the Project Manual.
 - 3. Request Substantial Completion Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request,

Architect will either proceed with inspection or notify Contractor of unfulfilled requirements.

- C. Should Architect determine that the Work is not substantially complete:
 - 1. Architect will not inspect the Work for substantial completion and will promptly notify the Contractor in writing, giving the reasons therefore. Architect will not complete the substantial completion punch list for the Contractor.
 - 2. Contractor shall remedy the deficiencies in the Work, and again send a written notice of substantial completion to the Architect, complete with a list of deficiencies.
 - 3. Architect will then inspect the Work. Refer to Article 1.6 of this section for related fees.
- D. When Architect concurs that the Work is substantially complete, he will:
 - 1. Prepare a Certificate of Substantial Completion (AIA Form G704 or equivalent), accompanied by Contractor's list of items to be completed or corrected, as verified and amended by the Architect.
 - 2. Submit the Certificate to Owner and Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.

1.6 FINAL INSPECTION

- A. When Contractor considers the Work complete, he shall submit written certification that:
 - 1. Contract Documents have been reviewed.
 - 2. Work has been inspected for compliance with Contract Documents.
 - 3. Work has been completed in accordance with Contract Documents and is ready for final inspection.
 - 5. All items on the "Substantial Completion Inspection List" have been corrected.
 - 6. All specified close-out submittals have been made.
- B. Architect will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.
- C. Should Architect consider that the Work is incomplete or defective:
 - 1. Architect will promptly notify the Contractor in writing, listing the incomplete or defective work.
 - 2. Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to Architect that the Work is complete.
 - 3. Architect will then re-inspect the Work. Refer to Article 1.6 of this section for related fees.
- D. When the Architect finds that the Work is acceptable under the Contract Documents, he shall request the Contractor to make closeout submittals.

1.7 RE-INSPECTION FEES

- A. The Architect reserves the right to assess fees for re-inspection of incomplete work at contractual hourly rates, or at prevailing hourly rates if no such limits are stated in the Architect's contract with the Owner. Additional fees shall be charged to the Owner and shall be back-charged to the Contractor as applicable.

1.8 CONTRACTOR'S CLOSEOUT SUBMITTALS TO ARCHITECT

- A. Evidence of compliance with requirements of governing authorities, AHERA certifications (stating that no ACM's are in the Project).
- F. Evidence of Payment and Release of Liens: Refer to requirements of Conditions of the Contract.

1.9 FINAL ADJUSTMENTS OF ACCOUNTS

- A. Submit a final statement of accounting to Architect.
- B. Statement shall reflect all adjustment to the Contract Sum:
 - 1. The original Contract Sum.
 - 2. Additions and deductions resulting from previous Change Orders, Deductions for uncorrected Work, Deductions for re-inspection payments, Other adjustments.
 - 3. Final statement of accounting of all allowances.
 - 4. Total Contract Sum, as adjusted.
 - 5. Sum remaining due.
- C. Architect will prepare a final Change Order, reflecting approved adjustments, which were not previously made by Change Orders.

1.10 FINAL APPLICATION FOR PAYMENT

- A. Contractor shall submit the final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

- a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances.
 - g. Sweep concrete floors broom clean.
- B. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.

B. Related Requirements:

1. Section 011000 "Summary" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

1.3 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.4 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project Site.
 - 1. Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review areas where existing construction is to remain and requires protection.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For refrigerant recovery technician.
- B. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Coordination for shutoff, capping, and continuation of utility services.
- C. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.6 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.

1.7 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

1.8 FIELD CONDITIONS

- A. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- B. Hazardous Materials: Present in buildings and structures 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. Hazardous material remediation is specified elsewhere in the Contract Documents.
- C. Storage or sale of removed items or materials on-site is not permitted.
- D. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSP A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
 - 1. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 PREPARATION

- A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Arrange to shut off utilities with utility companies.
 - 2. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.

- a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
- b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
- c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
- d. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
- e. Do not start demolition work until utility disconnecting and sealing have been completed and verified in writing

3.4 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of selective demolition.
- C. Remove temporary barricades and protections where hazards no longer exist.

3.5 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 - 2. 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 portable fire-suppression devices during flame-cutting operations.
 - 3. Maintain adequate ventilation when using cutting torches.
 - 4. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - 5. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 6. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations. Do not use water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
 - 7. Explosives: Use of explosives is not permitted.

8. Dispose of demolished items and materials promptly. Comply with requirements in Section 017419 "Construction Waste Management and Disposal.

- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, and sidewalks.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition.

3.6 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, and then break up and remove.
- B. Roofing:
 - 1. Remove existing roof membrane, flashings, copings, and roof accessories.
 - 2. Remove existing roofing system down to metal decking.

3.7 SITE RESTORATION

- A. Site Grading: Uniformly rough grade area of demolished construction to a smooth surface, free from irregular surface changes. Provide a smooth transition between adjacent existing grades and new grades.

3.8 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and recycle or dispose of them according to Section 017419 "Construction Waste Management and Disposal."
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- B. Burning: Do not burn demolished materials.

3.9 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations.

3.10 SELECTIVE DEMOLITION SCHEDULE

- A. Remove and Salvage: Existing "Wades" boxed letters on front façade of building.

END OF SECTION 024119

DOCUMENT 02 82 13
ASBESTOS ABATEMENT

1.1 SUMMARY

- A. Description of Work:
 - 1. Asbestos Removal Project at existing Wades Grocery Store.
 - 2. This scope of work is to be included in the Base Bid amount.
- B. Document Includes:
 - 1. Asbestos Removal Project report prepared by ECS Mid-Atlantic, LLC , dated April 30, 2021, is available for viewing as appended to this Document.

END OF ASBESTOS ABATEMENT

ASBESTOS SURVEY, LEAD PAINT CHIP AND LEAD TCLP SAMPLING



FORMER WADES GROCERY

510 ROANOKE STREET
CHRISTIANSBURG, VIRGINIA 24073

ECS PROJECT NO. 47:12005

FOR: SHAH DEVELOPMENT, LLC

APRIL 30, 2021





"Setting the Standard for Service"

Geotechnical • Construction Materials • Environmental • Facilities

April 30, 2021

Mr. Neeble Neeble
Shah Development, LLC
PO Box 1499
Christiansburg, Virginia 24068

ECS Project No. 47:12005

Reference: Asbestos Survey, Lead Paint Chip and Lead TCLP Sampling, Former Wades Grocery, 510 Roanoke Street, Christiansburg, Virginia

Dear Mr. Neeble:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide Shah Development, LLC with the results of the above referenced Asbestos Survey, Lead Paint Chip and Lead TCLP Sampling event performed at the Former Wades Grocery store located at 510 Roanoke Street in Christiansburg, Virginia. This report summarizes our observations, analytical results, findings, and recommendations related to the work performed. The work described in this report was performed by ECS in general accordance with the Scope of Services described in ECS Proposal Number 47:18292-EP and the terms and conditions of the agreement authorizing those services.

ECS appreciates this opportunity to provide Shah Development, LLC with our services. If we can be of further assistance to you, please do not hesitate to contact us.

Sincerely,

ECS Mid-Atlantic, LLC

A handwritten signature in black ink that reads 'Kathryn R. Ordel'.

Kathryn Ordel
Project Manager
kordel@ecslimited.com
434-973-3232

A handwritten signature in black ink that reads 'Chris Chapman'.

Christopher J. Chapman, CIH
Director of Industrial Hygiene
cchapman@ecslimited.com
804-353-6333

EXECUTIVE SUMMARY

The subject property is improved with a 30,856 square foot, former Wades grocery store reportedly originally constructed in 1960. At the time of our survey the subject building was vacant and is currently scheduled to undergo renovation and partial demolition activities.

The purpose of the survey was to determine if asbestos-containing materials (ACMs) are present on the subject property. The survey was performed within interior and exterior areas of the subject building as well as the roof of the building.

Based on the laboratory analysis of the bulk samples collected during the survey, the following materials were reported to contain asbestos:

- Floor tiles
- Black floor mastic
- Exterior white sealant
- Vermiculite within CMU block walls
- Silver metal roof paint
- Black roof tar

ECS also collected one Lead TCLP sample to characterize the waste prior to leaving the site, with regards to lead. Based on the laboratory analysis of the TCLP samples, the building materials sampled were below the US EPA RCRA threshold of 5.0 mg/L for lead.

Paint chip samples were also collected from the structure and analyzed for lead-based paint (LBP). The paint chip samples collected were reported to contain detectable concentrations of lead.

The executive summary is an integral portion of this report, however, ECS recommends the report be read in its entirety.

TABLE OF CONTENTS		PAGE
1.0	SITE DESCRIPTION	1
2.0	PURPOSE	1
3.0	METHODOLOGY	1
3.1	Asbestos-Containing Materials	1
3.2	Lead in Paint Chip Sampling	2
3.3	Lead Toxicity Characteristic Leaching Procedure Testing (TCLP)	2
4.0	RESULTS	2
4.1	Asbestos-Containing Materials	2
4.2	Suspect or Assumed Asbestos-Containing Materials	5
4.3	Lead Paint Chip Sampling	5
5.0	RECOMMENDATIONS AND REGULATORY REQUIREMENTS	6
5.1	Asbestos-Containing Materials	6
5.2	Lead in Paint and Surface Coatings	7
6.0	LIMITATIONS	8

TABLE OF APPENDICES

Appendix I: Site Photographs

Appendix II: Asbestos Bulk Sample Results

Appendix III: Lead Laboratory Analytical Results

Appendix IV: Certifications/Licenses

1.0 SITE DESCRIPTION

The subject property is improved with a one-story former Wades grocery store located at 510 Roanoke Street in Christiansburg, Virginia. The structure contained an office area, storage areas, coolers, an open area where grocery aisles were previously located, bakery area, meat department, restrooms and an attached storage building. The exterior consisted of stone façade and concrete masonry unit (CMU) block and metal siding; The roof was a metal roof that had been previously sprayed with a foam insulation layer. In general building materials consisted of drywall wallboards, wood wallboards, CMU walls, floor tiles, sheet vinyl and concrete floors. The structure is currently unoccupied and the building is proposed to undergo both renovation activities and select demolition.

2.0 PURPOSE

The purpose of the Asbestos Survey, Lead Paint Chip and Lead TCLP Sampling was to identify asbestos-containing materials (ACMs), and lead-based paints (LBP) are associated with the building. Further, ECS collected a Lead TCLP sample to characterize the waste prior to leaving the site, with regards to lead.

3.0 METHODOLOGY

ECS performed the authorized Scope of Services in general accordance with our proposal, standard industry practice(s) and methods specified by regulation(s) for the identification of ACMs and LBP.

3.1 Asbestos-Containing Materials

The non-invasive/non-destructive asbestos survey was performed by asbestos inspectors who have received EPA accredited training and are licensed by the Commonwealth of Virginia. Samples of suspect ACMs were collected utilizing hand tools and placed into individual, labeled plastic bags. Unique bulk suspect ACM samples were submitted to Environmental Hazards Services (EHS) and in Richmond, Virginia for analysis via Polarized Light Microscopy (PLM) in accordance with current EPA-600 methodology. Materials consisting of additional layers were analyzed separately. EHS is listed as an accredited laboratory by the National Voluntary Laboratory Accreditation Plan (NVLAP) managed by the National Institute of Standards and Technology (NIST) for bulk sample analysis by currently approved EPA methodology by PLM.

A sample of CMU block insulation (vermiculite) was submitted to SanAir Technologies Laboratory, Inc. (SanAir) in Powhatan, Virginia for analysis via Polarized Light Microscopy (PLM) 400 Point Count.

During the survey, ECS attempted to identify suspect ACMs in readily accessible areas. However, due to the destructive means required to identify some materials, certain areas were deemed inaccessible (i.e. behind walls or sub grade materials) and were not surveyed for suspect ACMs. Unidentified suspect ACMs may be located in these and/or other inaccessible areas.

Samples were collected in general accordance with EPA Standard 40 CFR 763 Subpart E, Asbestos Hazard Emergency Response Act (AHERA) and OSHA Standard 29 CFR 1926.1101 Inspection Protocol. Multiple samples of each unique material were submitted. Samples were analyzed using "Positive Stop" methodology. If one sample of a homogeneous material is reported to contain asbestos, the

remaining samples of that material are not analyzed. EPA regulations stipulate that if one sample contains asbestos the entire quantity of that material contains asbestos, regardless of additional analysis.

3.2 Lead in Paint Chip Sampling

The purpose of this sampling was to collect representative paint chip samples from suspect painted areas within the structure that are proposed to remain or undergo renovation activities in order to determine lead content. Paint chip samples were collected utilizing hand tools and placed into a individual labeled plastic bag. The survey was generally conducting using the methodology recommends by the U.S Department of Housing and Urban Development (HUD)/US Environmental Protection Agency (EPA). It is important to note that this survey was not a comprehensive, surface-by-surface evaluation, but rather a screening survey of a major painted component which may contain LBP.

The scope of this survey was not intended to be a surface-by-surface investigation for each specific concentration of lead-based paint in each testing combination (color, substrate, building component). The paint chip samples were sent to EHS, a NVLAP and National Lead Laboratory Accreditation Program (NLLAP) certified for laboratory analysis. The analysis was performed via Atomic Absorption EPA Method 7000B.

3.3 Lead Toxicity Characteristic Leaching Procedure Testing (TCLP)

Composite TCLP sampling for lead was performed in general accordance with US EPA RCRA regulations. The sample was collected from representative painted components from the existing structure to mirror the waste stream leaving the site. The sample was collected by ECS personnel and transported to the laboratory for analysis. EHS conducted the analysis in accordance with EPA Method SW846 1311/3010A/7000B.

The sample result below reported that the levels of lead reported in the TCLP sample was below US EPA RCRA threshold of 5.0 mg/L.

Lead TCLP Analysis

Sample ID	Sample Description	Sample Weight (g)	Concentration (mg/L)	Regulatory Limit (mg/L)
12005TCLP-1	Building Debris / Paint	100	<0.50 mg/L	5.0 mg/L

4.0 RESULTS

The following is a summary of laboratory results, findings and observations.

4.1 Asbestos-Containing Materials

An Asbestos-Containing Material (ACM) is defined as any material containing more than one percent (>1%) asbestos as determined using the method specified in Appendix E, Subpart E, 40 CFR Part 763, Section 1, PLM. Materials are categorized by the U.S. EPA in the following categories:

- Friable ACMs are defined as any ACM that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. Non-friable ACMs are defined as any ACM that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.
- Category I non-friable ACM are listed as following: packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than one percent (>1%) asbestos.
- Category II non-friable ACM are listed as any material, excluding Category I non-friable ACM, containing more than one percent (>1%) asbestos.

Regulated Asbestos Containing Materials (RACM) are friable ACM or non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading or has crumbled, been pulverized, or reduced to powder in the course of renovation and/or demolition operations.

EHS submitted a signed final laboratory report to ECS on April 28, 2021. Nine of the bulk samples submitted for analysis were reported to contain asbestos in detectable concentrations. SanAir submitted a final laboratory report to ECS on April 28, 2021 for the analysis of one vermiculite sample, trace asbestos was detected (<0.25% tremolite). These materials are summarized below. A complete list of the sampled materials submitted for analysis and sample locations are located in the Appendix of this report. Additional details regarding the overall locations of the materials identified as asbestos-containing are provided further in the report. Photographs of collected samples reported as asbestos-containing are also located in the Appendix of this report.

A trace amount of asbestos ($\leq 1\%$) was detected in the bulk sample(s) of vermiculite analyzed SanAir. Although material that contain trace amounts of asbestos are not subject to U.S. EPA or Virginia regulations for the handling and disposal of asbestos, OSHA still regulates any work which will disturb materials identified with trace amounts of asbestos (reference the November 24, 2003 OSHA Interpretation document - Compliance Requirements For Renovation Work Involving Materials Containing Less Than 1% Asbestos). Therefore, any Contractors disturbing these materials will need to comply with components of 29 CFR 1926.1101, as detailed in the 2003 OSHA Interpretation document.

In total, 64 bulk samples were submitted to EHS laboratory of which 85 layers were analyzed. One sample was submitted to and analyzed by SanAir.

Summary of Asbestos-Containing Materials Identified

Location	Material Description	Analytical Result	Category
Throughout	Tan 9X9 Floor Tile	2% Chrysotile	Category I Non-Friable
Throughout	Black Floor Mastic	6% Chrysotile	Category I Non-Friable
Throughout	Brown 9x9 Floor Tile	2% Chrysotile	Category I Non-Friable

Location	Material Description	Analytical Result	Category
Throughout	Brown/Orange 9x9 Floor Tile	2% Chrysotile	Category I Non-Friable
Throughout	Cream 9x9 Floor Tile	2% Chrysotile	Category I Non-Friable
Exterior Seams- Along Stone Walls	White (Hard) Sealant	4% Chrysotile	Category II Non-Friable
Roof	Silver Paint	3% Chrysotile	Category II Non-Friable
Roof	Roof Tar	3% Chrysotile	Category I Non-Friable
EHS 600 PLM Analysis: CMU Block Walls	Vermiculite Insulation	Tremolite/Actinolite Series Asbestos Detected	N/A
SanAir 400 PLM Analysis: CMU Block Walls	Vermiculite Insulation	<0.25 Tremolite Trace Asbestos (<1%)	N/A

Asbestos (2-6% Chrysotile) was detected in several representative samples of the 9 inch by 9 inch floor tiles and associated black mastic located throughout the structure. The floor tile and associated mastic were in fair condition in the areas observed and are classified as a Category I non-friable ACMs. All 9 inch by 9 inch floor tile and all black floor mastic located throughout the structure should be assumed to contain asbestos and be properly abated prior to renovations or demolition activities that are proposed to impact the material(s).

Asbestos (4% Chrysotile) was detected in a representative sample of the white seam sealant located on the exterior of the structure. The sealant was in fair condition in the areas observed and is classified as a Category II non-friable ACM. All white sealant should be assumed to contain asbestos and be properly abated prior to renovations or demolition activities that are proposed to impact the material.

Asbestos (3% Chrysotile) was detected in a representative sample of the silver paint located on the metal roof of the commercial structure. The silver roofing paint was in fair condition in the areas observed and is classified as a Category II non-friable ACM. All silver paint should be assumed to contain asbestos and be properly abated prior to renovations or demolition activities that are proposed to impact the material. **Note: ECS recommends that all of the metal roofing system be assumed to contain asbestos.**

Asbestos (3% Chrysotile) was detected in a representative sample of the black tar located on the roof of the structure. The tar appeared to be in good condition in the areas observed and are classified as a Category I non-friable ACM. All tar should be assumed to contain asbestos and be properly abated prior to renovations or demolition activities that are proposed to impact the material. Note: Some tar may have contaminated some of the roof shingles / metal roofing system. Areas where the tar has dripped or been applied will also need to be removed and disposed of as asbestos contaminated waste.

Trace Asbestos - <0.25% Tremolite, was detected in a representative sample of the vermiculite insulation collected from the facility (within the CMU block walls). Although less than 1% asbestos, OSHA still regulates materials that contain trace levels of asbestos as discussed in the November 24, 2003 OSHA guidance document (Compliance Requirements For Renovation Work Involving Materials Containing Less Than 1% Asbestos); **which includes but is not limited to removing these materials using wet methods, proper personal protective equipment (PPE), proper training, and the placement of the material(s) in leak tight containers prior to disposal.**

4.2 Suspect or Assumed Asbestos-Containing Materials

Due to the inaccessibility or the destructive means that asbestos sampling requires, additional suspect ACMs may remain within the building hidden behind inaccessible areas that include, but are not limited to, sub-grade walls, structural members, topping slabs, sub-grade sealants, flooring located below underlayments, areas behind exterior walls, pipe trenches, and subsurface utilities, etc. These areas were deemed inaccessible and were not assessed.

If these materials are discovered during construction activities, they should be presumed to contain asbestos and be treated as ACMs or be sampled immediately upon discovery and prior to disturbance for asbestos content by a certified asbestos inspector in accordance with 29 CFR 1926.1101.

Based upon our past experience in the identification of ACMs in similarly constructed buildings, the following additional suspect ACMs may also be located in inaccessible areas of the structure:

- Vapor barrier/water proofing located below grade foundation walls and within exterior wall cavities (if present)
- Pipe insulation/hard joints located above ceiling and behind walls (if present)
- Walk-in cooler mastics including vapor barriers and water proofing

4.3 Lead Paint Chip Sampling

In total, five paint chip samples were submitted to the laboratory for analysis. The samples submitted to EHS were reported to contain detectable concentrations of lead.

Lead-based paint is defined by the U.S. EPA and Virginia as any paint or other surface coatings that contain lead equal to or in excess of 1.0 mg/cm² or 0.5% by weight.

Lead Based Paint, as defined by US EPA, was not identified at the site; however lead containing paint was identified during this survey.

Lead Paint Chip Results

Location	Color	Substrate	Lead Concentration (% WT)
Exterior - Wall	Tan	CMU	<0.0045
Interior - Wall	Tan	CMU	0.025
Interior - Meat Cooler	White	Metal	0.0087
Interior - Structural Framing (Left Side)	Cream	Steel	0.014
Interior - Structure Framing (Right Side)	Cream	Steel	0.013

5.0 RECOMMENDATIONS AND REGULATORY REQUIREMENTS

Based on our understanding of the purpose of the Asbestos Survey, Lead Paint Chip and Lead TCLP Sampling, the results of laboratory analysis, and our findings and observations, ECS presents the following recommendations.

5.1 Asbestos-Containing Materials

ECS recommends where a material type has been identified as asbestos containing that other materials with similar color, texture, age and size throughout the building's interior and exterior be assumed to contain asbestos. Please refer to Section 4.1 for a complete list of building materials that were reported positive for asbestos and to Section 4.2 for materials that were assumed to contain asbestos.

If the identified ACMs are to be removed/disturbed, it is recommended that the removal/disturbance is performed by a Virginia licensed asbestos abatement contractor.

A 10-day notification to the U.S. EPA and/or a 20-day notification to the Virginia Department of Labor and Industry is required prior to demolition of the structure. This is a responsibility of the demolition contractor to submit for these permits.

If ACMs are to be removed, it is recommended that an industrial hygienist monitor the project, as required under the State regulations. ECS can provide these services for an additional fee.

Suspect ACMs not observed due to inaccessibility or not sampled due to the destructive means that sampling would require may also be encountered during construction activities. At the time of the survey, only limited destructive means were used to locate or sample suspect ACMs; therefore, additional suspect ACMs may remain within inaccessible areas that include, but are not limited to, sub-grade walls, structural members, topping slabs, exterior areas, sub-grade sealants, flooring located below underlayments, vapor barriers, pipe trenches and other subsurface utilities, etc. If additional suspect ACMs are uncovered which were not accessible during this survey, it is

recommended that these materials either be assumed to contain asbestos or be sampled prior to disturbance upon discovery for asbestos content by an asbestos inspector in accordance with 29 CFR 1926.1101.

A trace amount of asbestos ($\leq 1\%$) was detected in the bulk sample(s) of vermiculite analyzed by the laboratory. Although materials that contain trace amounts of asbestos are not subject to U.S. EPA or Virginia regulations for the handling and disposal of asbestos, OSHA still regulates any work which will disturb materials identified with trace amounts of asbestos (reference the November 24, 2003 OSHA Interpretation document - Compliance Requirements For Renovation Work Involving Materials Containing Less Than 1% Asbestos). Therefore, any Contractors disturbing these materials will need to comply with components of 29 CFR 1926.1101, as detailed in the 2003 OSHA Interpretation document.

Due to conditions previously described, ECS was unable to perform destructive testing. ECS recommends conducting a selective exploratory demolition survey to evaluate the presence and condition of any identified or assumed ACMs within inaccessible areas in order to better define the presence and/or extent of these suspect materials prior to renovation/demolition.

Should any identified ACM remain in place, ECS recommends the development and implementation of a site-specific Asbestos Operations and Maintenance Plan detailing routine maintenance and repair operations, contractor notification procedures, and all other requirements under OSHA – reference 29 CFR 1926.1101.

ECS recommends that a project specification be prepared to delineate and quantify known and suspect hazardous and regulated materials in the buildings and to outline proper procedures for the abatement. This will help protect the owner's liability in better defining the scope of work and contractors' roles and responsibilities in the abatement process and holding the contractor accountable for the performance of the project. The specification typically defines the Contractor's scope of work and outline requirements and procedures that must be followed for the project. The intent of the specification is to give performance requirements for the Contractor so that the project can be completed safely and in compliance with applicable federal and state regulations. Typically, the specification document serves as part of the site owner's contract with the contractor.

5.2 Lead in Paint and Surface Coatings

Lead TCLP Sampling:

- ECS recommends that representative samples of the demolition/renovation waste stream be collected and analyzed using the EPA Toxicity Characteristic Leaching Procedure (TCLP) analysis prior to disposal of waste stream debris from the site. The purpose of the laboratory testing is to document that the waste stream contains lead concentrations of less than five (5) parts per million (ppm) and therefore is not regulated hazardous waste as it relates to lead.

Lead Paint Chip Sampling:

- Based on the findings of the lead survey, detectable concentrations of lead were identified on some paints and surface coatings.

- The presence of lead is a concern primarily when conditions exist where it may inhaled or ingested. Regardless of the analytical results of a material, all painted and/or glazed surfaces may still contain concentrations of lead in the paint, which when disturbed, may generate lead dust greater than the Permissible Exposure Limit (PEL) of 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) as an 8-hour Time Weighted Average (TWA) established by the OSHA "Lead Exposure in Construction Rule (29 CFR 1926.62)."
- The OSHA standard gives no guidance on acceptable levels of lead in paint at which no exposure to airborne lead (above the action level) would be expected. Rather, OSHA defines airborne concentrations, and references specific types of work practices and operations from which a lead hazard may be generated (reference 29 CFR 1926.62, section d). Environmental and personnel monitoring should be conducted during any removal/demolition process (as appropriate) to verify that actual personal exposures are below the Permissible Exposure Limit (PEL) of 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) as an 8-hour Time Weighted Average (TWA). Under OSHA requirements, the contractor performing renovation work will be required to conduct this monitoring and follow applicable requirements under 29 CFR 1926.62 if disturbing lead-containing paint.

6.0 LIMITATIONS

The conclusions and recommendations presented within this report are based upon a reasonable level of assessment within normal bounds and standards of professional practice for a site in this particular geographic setting. ECS is not responsible or liable for the discovery and elimination of hazards that may potentially cause damage, accidents, or injuries.

During this study, samples were submitted for analysis at an accredited laboratory via polarized light microscopy. As with any similar survey of this nature, actual conditions exist only at the precise locations from which samples were collected. Certain inferences are based on the results of this sampling and related testing to form a professional opinion of conditions in areas beyond those from which the samples were collected. No warranty, expressed or implied, is made.

The observations, conclusions, and recommendations pertaining to environmental conditions at the subject site are necessarily limited to conditions observed, and/or materials reviewed at the time this study was undertaken. No warranty, expressed or implied, is made with regard to the conclusions and recommendations presented within this report. This report is provided for the exclusive use of the client. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties without the written consent of ECS and the client.

Our recommendations are in part based on federal, state, and local regulations and guidelines. ECS does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies, any conditions at the site that may present a potential danger to public health, safety, or the environment. Under this scope of services, ECS assumes no responsibility regarding any response actions initiated as a result of these findings. General compliance with regulations and response actions are the sole responsibility of the Client and should be conducted in accordance with local, state, and/or federal requirements.

Appendix I: Site Photographs



1 - Asbestos containing 9x9 inch floor tile and associated black mastic



2 - 9x9 floor tile located below 12x12 floor tile throughout the store with positive black mastic



3 - Asbestos containing white (hard) sealant along exterior walls



4 - Roof - silver paint located on metal roof below foam



5 - Flaking cream paint in cooler



6 - Cream paint on structural components

Appendix II: Asbestos Bulk Sample Results



Environmental Hazards Services, L.L.C.

7469 Whitepine Rd

Richmond, VA 23237

Telephone: 800.347.4010

Asbestos Bulk Analysis Report

Report Number: 21-04-04242

Client: ECS Mid-Atlantic - Charlottesville
4004 Hunterstand Court
Suite 102
Charlottesville, VA 22911

Received Date: 04/23/2021

Analyzed Date: 04/26/2021

Reported Date: 04/28/2021

Project/Test Address: Wades Grocery Store - Roanoke Street; Christiansburg, VA

Client Number:

201022

Fax Number:

Laboratory Results

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
21-04-04242-001	12005-1		Yellow Pliable; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-002	12005-2		Yellow Pliable; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-003A	12005-3	Tile	Tan Vinyl; Homogeneous	2% Chrysotile	98% Non-Fibrous
Total Asbestos: 2%					
21-04-04242-003B	12005-3	Mastic	Black Adhesive; Homogeneous	6% Chrysotile	94% Non-Fibrous
Total Asbestos: 6%					
21-04-04242-004A	12005-4	Tile		Did Not Analyze (Positive Stop)	
21-04-04242-004B	12005-4	Mastic		Did Not Analyze (Positive Stop)	

Environmental Hazards Services, L.L.C

Client Number: 201022

Report Number: 21-04-04242

Project/Test Address: Wades Grocery Store - Roanoke Street;
Christiansburg, VA

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
21-04-04242-005A	12005-5	Tile	Brown Vinyl; Homogeneous	2% Chrysotile	98% Non-Fibrous
Total Asbestos: 2%					
21-04-04242-005B	12005-5	Mastic		Did Not Analyze (Positive Stop)	
21-04-04242-006A	12005-6	Tile		Did Not Analyze (Positive Stop)	
21-04-04242-006B	12005-6	Mastic		Did Not Analyze (Positive Stop)	
21-04-04242-007A	12005-7	Tile	Brown/Orange Vinyl; Homogeneous	2% Chrysotile	98% Non-Fibrous
Total Asbestos: 2%					
21-04-04242-007B	12005-7	Mastic		Did Not Analyze (Positive Stop)	
21-04-04242-008A	12005-8	Tile		Did Not Analyze (Positive Stop)	
21-04-04242-008B	12005-8	Mastic		Did Not Analyze (Positive Stop)	
21-04-04242-009A	12005-9	Tile	Cream Vinyl; Homogeneous	2% Chrysotile	98% Non-Fibrous
Total Asbestos: 2%					

Environmental Hazards Services, L.L.C

Client Number: 201022

Report Number: 21-04-04242

Project/Test Address: Wades Grocery Store - Roanoke Street;
Christiansburg, VA

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
21-04-04242-009B	12005-9	Mastic		Did Not Analyze (Positive Stop)	
21-04-04242-010A	12005-10	Tile		Did Not Analyze (Positive Stop)	
21-04-04242-010B	12005-10	Mastic		Did Not Analyze (Positive Stop)	
21-04-04242-011A	12005-11	Tile	White Vinyl; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-011B	12005-11	Mastic	Orange Adhesive; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-012A	12005-12	Tile	Beige Vinyl; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-012B	12005-12	Mastic		Did Not Analyze (Positive Stop)	
21-04-04242-013A	12005-13	Tile	Orange Vinyl; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-013B	12005-13	Mastic		Did Not Analyze (Positive Stop)	

Environmental Hazards Services, L.L.C

Client Number: 201022

Report Number: 21-04-04242

Project/Test Address: Wades Grocery Store - Roanoke Street;
Christiansburg, VA

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
21-04-04242-014A	12005-14	Tile	Orange Vinyl; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-014B	12005-14	Mastic		Did Not Analyze (Positive Stop)	
21-04-04242-015A	12005-15	Tile	Yellow Vinyl; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-015B	12005-15	Mastic		Did Not Analyze (Positive Stop)	
21-04-04242-016A	12005-16	Tile	Yellow Vinyl; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-016B	12005-16	Mastic		Did Not Analyze (Positive Stop)	
21-04-04242-017A	12005-17	Tile	Brown Vinyl; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-017B	12005-17	Mastic	Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-018A	12005-18	Tile	Brown Vinyl; Homogeneous	NAD	100% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 201022

Report Number: 21-04-04242

Project/Test Address: Wades Grocery Store - Roanoke Street;
Christiansburg, VA

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
21-04-04242-018B	12005-18	Mastic	Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-019A	12005-19	Tile	Beige/Blue Vinyl; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-019B	12005-19	Mastic	Beige Adhesive; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-020	12005-20		Beige/Blue Vinyl; Homogeneous	NAD	100% Non-Fibrous
No mastic present					
21-04-04242-021A	12005-21	Drywall	White Powdery; Brown Fibrous; Inhomogeneous	NAD	55% Cellulose 45% Non-Fibrous
21-04-04242-021B	12005-21	Joint Comp.	White Chalky; White Paint-Like; Inhomogeneous	NAD	100% Non-Fibrous
21-04-04242-022A	12005-22	Drywall	White Powdery; Brown Fibrous; Inhomogeneous	NAD	100% Non-Fibrous
21-04-04242-022B	12005-22	Joint Comp.	White Chalky; White Paint-Like; Inhomogeneous	NAD	100% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 201022

Report Number: 21-04-04242

Project/Test Address: Wades Grocery Store - Roanoke Street;
Christiansburg, VA

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
21-04-04242-023A	12005-23	Other *	White Granular Fibrous; Homogeneous	NAD	3% Fibrous Glass 97% Non-Fibrous
*Granular Material					
21-04-04242-023B	12005-23	Joint Comp.	White Chalky; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-024A	12005-24	Other *	White Granular Fibrous; Homogeneous	NAD	3% Fibrous Glass 97% Non-Fibrous
*Granular Material					
21-04-04242-024B	12005-24	Joint Comp.	White Chalky; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-025A	12005-25	Drywall	White Powdery; Brown Fibrous; Inhomogeneous	NAD	35% Cellulose 65% Non-Fibrous
21-04-04242-025B	12005-25	Joint Comp.	White Chalky; White Paint- Like; Inhomogeneous	NAD	100% Non-Fibrous
21-04-04242-026A	12005-26	Drywall	White Powdery; Brown Fibrous; Inhomogeneous	NAD	25% Cellulose 75% Non-Fibrous
21-04-04242-026B	12005-26	Joint Comp.	White Chalky; Beige Paint- Like; Inhomogeneous	NAD	100% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 201022

Report Number: 21-04-04242

Project/Test Address: Wades Grocery Store - Roanoke Street;
Christiansburg, VA

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
21-04-04242-027A	12005-27	Drywall	White Powdery; Brown Fibrous; Inhomogeneous	NAD	35% Cellulose 65% Non-Fibrous
21-04-04242-027B	12005-27	Joint Comp.	White Chalky; Beige Paint-Like; Inhomogeneous	NAD	1% Cellulose 99% Non-Fibrous
21-04-04242-028	12005-28		White Chalky; White Paint-Like; Inhomogeneous	NAD	100% Non-Fibrous
21-04-04242-029	12005-29		White Chalky; White Paint-Like; Inhomogeneous	NAD	100% Non-Fibrous
21-04-04242-030	12005-30		White Chalky; White Paint-Like; Inhomogeneous	NAD	100% Non-Fibrous
21-04-04242-031A	12005-31	FRP	White Brittle Fibrous; Homogeneous	NAD	30% Fibrous Glass 70% Non-Fibrous
21-04-04242-031B	12005-31	Mastic	Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-032A	12005-32	FRP	White Brittle Fibrous; Homogeneous	NAD	30% Fibrous Glass 70% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 201022

Report Number: 21-04-04242

Project/Test Address: Wades Grocery Store - Roanoke Street;
Christiansburg, VA

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
21-04-04242-032B	12005-32	Mastic	Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-033	12005-33		White Paint-Like; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-034	12005-34		White Paint-Like; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-035A	12005-35	Cove Base	Black Vinyl; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-035B	12005-35	Mastic	Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-036A	12005-36	Cove Base	Black Vinyl; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-036B	12005-36	Mastic	Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-037A	12005-37	Cove Base	Brown Vinyl; Homogeneous	NAD	100% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 201022

Report Number: 21-04-04242

Project/Test Address: Wades Grocery Store - Roanoke Street;
Christiansburg, VA

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
21-04-04242-037B	12005-37	Mastic	Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-038A	12005-38	Cove Base	Brown Vinyl; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-038B	12005-38	Mastic	Yellow Adhesive; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-039	12005-39		Black Tar-Like; Homogeneous	NAD	15% Cellulose 85% Non-Fibrous
21-04-04242-040	12005-40		White/Tan Granular; Inhomogeneous	4% Chrysotile	96% Non-Fibrous
Total Asbestos: 4%					
Chrysotile present throughout sample					
21-04-04242-041	12005-41			Did Not Analyze (Positive Stop)	
21-04-04242-042	12005-42		White Pliable; White Paint- Like; Inhomogeneous	NAD	100% Non-Fibrous
21-04-04242-043	12005-43		White Pliable; White Paint- Like; Inhomogeneous	NAD	100% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 201022

Report Number: 21-04-04242

Project/Test Address: Wades Grocery Store - Roanoke Street;
Christiansburg, VA

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
21-04-04242-044	12005-44		White Granular; White Paint-Like; Inhomogeneous	NAD	100% Non-Fibrous
21-04-04242-045	12005-45		White Granular; White Paint-Like; Inhomogeneous	NAD	100% Non-Fibrous
21-04-04242-046	12005-46		Black Tar-Like; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-047	12005-47		Black Tar-Like; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-048A	12005-48	Foam	White Foam; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-048B	12005-48	Other *	Silver Pliable; Homogeneous	NAD	100% Non-Fibrous
*Pliable Material					
21-04-04242-049A	12005-49	Foam	White Foam; Homogeneous	NAD	100% Non-Fibrous
21-04-04242-049B	12005-49	Other *	Silver Pliable; Homogeneous	NAD	100% Non-Fibrous
*Pliable Material					

Environmental Hazards Services, L.L.C

Client Number: 201022

Report Number: 21-04-04242

Project/Test Address: Wades Grocery Store - Roanoke Street;
Christiansburg, VA

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
21-04-04242-049C	12005-49	Silver Paint	Silver Paint-Like; Homogeneous	3% Chrysotile	97% Non-Fibrous
Total Asbestos: 3%					
21-04-04242-050	12005-50		Black Tar-Like; Silver Paint-Like; Inhomogeneous	3% Chrysotile	97% Non-Fibrous
Total Asbestos: 3%					
Unable to cleanly separate materials					
21-04-04242-051	12005-51			Did Not Analyze (Positive Stop)	
21-04-04242-052A	12005-52	Shingle	Black Tar-Like; White Aggregate; Inhomogeneous	NAD	15% Fibrous Glass 85% Non-Fibrous
21-04-04242-052B	12005-52	Felt	Black Tar-Like Fibrous; Homogeneous	NAD	85% Cellulose 5% Synthetic 10% Non-Fibrous
21-04-04242-053A	12005-53	Shingle I	Black Tar-Like; White Aggregate; Inhomogeneous	NAD	15% Fibrous Glass 85% Non-Fibrous
21-04-04242-053B	12005-53	Shingle II	Black Tar-Like; Gray Aggregate; Inhomogeneous	NAD	15% Fibrous Glass 85% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 201022

Report Number: 21-04-04242

Project/Test Address: Wades Grocery Store - Roanoke Street;
Christiansburg, VA

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
21-04-04242-054A	12005-54	Shingle I	Black Tar-Like; White Aggregate; Inhomogeneous	NAD	55% Cellulose 5% Synthetic 40% Non-Fibrous
21-04-04242-054B	12005-54	Shingle II	Black Tar-Like; Green/Tan Aggregate; Inhomogeneous	NAD	35% Cellulose 5% Synthetic 60% Non-Fibrous
21-04-04242-055A	12005-55	Shingle I	Black Tar-Like; White Aggregate; Inhomogeneous	NAD	55% Cellulose 5% Synthetic 40% Non-Fibrous
21-04-04242-055B	12005-55	Shingle II	Black Tar-Like; Green/Tan Aggregate; Inhomogeneous	NAD	25% Cellulose 5% Synthetic 70% Non-Fibrous
21-04-04242-056A	12005-56	Shingle	Black Tar-Like; Brown Aggregate; Inhomogeneous	NAD	15% Fibrous Glass 85% Non-Fibrous
21-04-04242-056B	12005-56	Felt	Black Tar-Like Fibrous; Homogeneous	NAD	85% Cellulose 5% Synthetic 10% Non-Fibrous
21-04-04242-057A	12005-57	Shingle	Black Tar-Like; Brown Aggregate; Inhomogeneous	NAD	15% Fibrous Glass 85% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 201022

Report Number: 21-04-04242

Project/Test Address: Wades Grocery Store - Roanoke Street;
Christiansburg, VA

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
21-04-04242-057B	12005-57	Felt	Black Tar-Like Fibrous; Homogeneous	NAD	85% Cellulose 5% Synthetic 10% Non-Fibrous
21-04-04242-058	12005-58		Black Tar-Like; Homogeneous	NAD	15% Cellulose 85% Non-Fibrous
21-04-04242-059	12005-59		Black Tar-Like; Homogeneous	NAD	15% Cellulose 85% Non-Fibrous
21-04-04242-060	12005-60		Black Tar-Like Fibrous; Homogeneous	NAD	35% Cellulose 10% Synthetic 55% Non-Fibrous
21-04-04242-061	12005-61		Black Tar-Like Fibrous; Homogeneous	NAD	35% Cellulose 10% Synthetic 55% Non-Fibrous

Environmental Hazards Services, L.L.C

Client Number: 201022

Report Number: 21-04-04242

Project/Test Address: Wades Grocery Store - Roanoke Street;
Christiansburg, VA

Lab Sample Number	Client Sample Number	Layer Type	Lab Gross Description	Asbestos	Other Materials
-------------------	----------------------	------------	-----------------------	----------	-----------------

QC Sample: 47-M22018-1

QC Blank: SRM 1866 Fiberglass

Reporting Limit: 1% Asbestos

Method: EPA Method 600/R-93/116, EPA Method 600/M4-82-020

Analyst: Kathy Fletcher

Reviewed By Authorized Signatory:



Tasha Eaddy
QA/QC Clerk

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Each distinct component in an inhomogeneous sample was analyzed separately and reported as a composite. Results represent the analysis of samples submitted by the client. Sample location, description, area, volume, etc., was provided by the client. This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without the written consent of the Environmental Hazards Service, L.L.C. California Certification #2319 NY ELAP #11714 NVLAP #101882-0 VELAP 460172. All information concerning sampling location, date, and time can be found on Chain-of-Custody. Environmental Hazards Services, L.L.C. does not perform any sample collection.

Environmental Hazards Services, L.L.C. recommends reanalysis by point count (for more accurate quantification) or Transmission Electron Microscopy (TEM), (for enhanced detection capabilities) for materials regulated by EPA NESHAP (National Emission Standards for Hazardous Air Pollutants) and found to contain less than ten percent (<10%) asbestos by polarized light microscopy (PLM). Both services are available for an additional fee.

400 Point Count Analysis, where noted, performed per EPA Method 600/R-93/116 with a Reporting Limit of 0.25%.

* All California samples analyzed by Polarized Light Microscopy, EPA Method 600/M4-82-020, Dec. 1982.

LEGEND: NAD = no asbestos detected



Asbestos Chain-of-Custody

Environmental Hazards Services, LLC

7469 Whitepine Rd, Richmond, VA 23237

(800) 347-4010

www.leadlab.com

Company Name: ECS Mid-Atlantic, LLC Address: 40004 Hunterstand Court #102 City/State/Zip: Charlottesville, VA 22911
Phone: 434-973-3232 e-Mail: kordel@ecslimited.com Acct No. _____
Project Name: Wades Grocery Store - Roanoke Street City/State: Christiansburg, VA
Collected By: Kathryn Ordell & Steven Hay PO# 47:12005
Positive Stop Analysis: ☒ Yes *Black mastic* Date Collected: 4/22/2021

Turn Around Time: If no TAT is specified, samples will be processed as 3-Day TAT

1- Day

2- Day

☒ X

3- Day

Same Day

Analysis: PLM

No.	Client Sample ID	Sample Location
12005-1	Yellow sheet vinyl	below office area and under floor tile outside meet department
12005-2	Yellow sheet vinyl	below office area and under floor tile outside meet department
12005-3	Tan 9X9 Floor Tile	Throughout
12005-4	Tan 9X9 Floor Tile	Throughout
12005-5	Brown 9x9 Floor Tile	Throughout
12005-6	Brown 9x9 Floor Tile	Throughout
12005-7	Brown/Organge 9x9 Floor Tile	Throughout
12005-8	Brown/Organge 9x9 Floor Tile	Throughout
12005-9	Cream 9x9 Floor Tile	Throughout
12005-10	Cream 9x9 Floor Tile	Throughout
12005-11	12x12 Floor tile - cream/off white	Throughout - main floor tile
12005-12	12x12 Floor tile - cream/off white	Throughout - main floor tile
12005-13	orange floor tile - 12x12	Throughout - front office area / pattern throughout
12005-14	orange floor tile - 12x12	Throughout - front office area / pattern throughout
12005-15	yellow floor tile 12x12	Throughout - patterned
12005-16	yellow floor tile 12x12	Throughout - patterned
12005-17	Brown/tan pattern floor tile 12x12	Bathroom Area (right side)
12005-18	Brown/tan pattern floor tile 12x12	Bathroom Area (right side)
12005-19	white with blue streaks floor tile 12x12	Bathroom Area (right side)
12005-20	white with blue streaks floor tile 12x12	Bathroom Area (right side)
12005-21	drywall / joint compound - wall	Wall - Sink Room (back right/central)
12005-22	joint compound wall	wall - throughout back/side walls
12005-23	joint compound wall	wall - throughout back/side walls
12005-24	joint compound wall	wall - throughout back/side walls
12005-25	joint compound wall	wall - throughout back/side walls
12005-26	drywall / joint compound - ceiling	ceiling - sink room (back right/central)
12005-27	drywall / joint compound - ceiling	ceiling - sink room (back right/central)
12005-28	joint compound - ceiling	ceiling - connector / add-on space
12005-29	joint compound - ceiling	ceiling - connector / add-on space
12005-30	joint compound - ceiling	ceiling - bathroom area right side
12005-31	plastic clad walls	kitchen/bakery areas
12005-32	plastic clad walls	kitchen/bakery areas
12005-33	CMU wall paint	exterior walls along interior (front right)
12005-34	CMU wall paint	exterior walls along interior (back left)
12005-35	black covebase and mastic	Bathroom Area (right side)
12005-36	black covebase and mastic	Bathroom Area (right side)
12005-37	brown covebase and mastic	walk-in coolers
12005-38	brown covebase and mastic	walk-in coolers
12005-39	black tar/mastic pipe insulation	Upstairs office - green heater with pipe
12005-40	white sealant	exterior - side rock wall seams hard sealant
12005-41	white sealant	exterior - side rock wall seams hard sealant
12005-42	Door caulk	exterior doors
12005-43	Door caulk	exterior doors
12005-44	window caulk	exterior windows
12005-45	window caulk	exterior windows
12005-46	black vapor barrier	exterior - back side CMU walls
12005-47	black vapor barrier	exterior - back side CMU walls
12005-48	Roof - silver/gray paint and foam	Main Roof - spray applied foam over metal
12005-49	Roof - silver/gray paint and foam	Main Roof - spray applied foam over metal

21-04-04242



Due Date:
04/28/2021
(Wednesday)

E

12F

61pm

Tah 4/23/21 1p

Positive stop
black mastic

12005-50	Roof tar	main roof - penetrations / pipes
12005-51	Roof tar	main roof - penetrations / pipes
12005-52	shingle	connected building - right side
12005-53	shingle	connected building - right side
12005-54	shingle	wooden detached shed
12005-55	shingle	wooden detached shed
12005-56	brown single and felt	left side - metal overhang
12005-57	brown single and felt	left side - metal overhang
12005-58	gray/black tar	Roof - overhang and on CMU walols
12005-59	gray/black tar	Roof - overhang and on CMU walols
12005-60	black tar	Roof - flat roof left side mechanical room
12005-61	black tar	Roof - flat roof left side mechanical room
12005-62	vermiculite	cmu wall insulation
12005-63	↓	↓
12005-64		
Released By:	Kathryn Ordel	Signature: Kathryn Ordel
Received By:	Tasha	Signature: 7/23/21 lp



Environmental Hazards Services, L.L.C.
7469 Whitepine Rd
Richmond, VA 23237
Telephone: 800.347.4010

Asbestos Qualitative Analysis Report

Client: ECS Mid-Atlantic - Charlottesville
4004 Hunterstand Court
Suite 102
Charlottesville, VA 22911

Report Number: 21-04-04241

Received Date: 04/23/2021

Analyzed Date: 04/26/2021

Reported Date: 04/28/2021

Project/Test Address: Wades Grocery Store - Roanoke Street; Christiansburg, VA

Client Number:

201022

Fax Number:

Laboratory Results

Lab Sample Number	Client Sample	Sample Description	Asbestos Detected	Narrative ID
21-04-04241-001	12005-62	Gold Platelets	Trem/Actin* Detected	A15
21-04-04241-002	12005-63	Gold Platelets	Trem/Actin* Detected	A15
21-04-04241-003	12005-64	Gold Platelets	Trem/Actin* Detected	A15

Sample Narratives:

A15: *Tremolite/Actinolite Series Asbestos

Method: EPA Method 600/R-93/116, EPA Method 600/M4-82-020

Analyst: Keleigh King

Reviewed By Authorized Signatory:

Tasha Eaddy
QA/QC Clerk

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Results represent the analysis of samples submitted by the client. Sample location, description, area, volume, etc., was provided by the client. This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without the written consent of the Environmental Hazards Service, L.L.C. California Certification #2319 NY ELAP #11714 NVLAP #101882-0 VELAP 460172.

LEGEND NAD = No Asbestos Detected



Asbestos Chain-of-Custody

Environmental Hazards Services, LLC

7469 Whitepine Rd, Richmond, VA 23237

(800) 347-4010

www.leadlab.com

Company Name: ECS Mid-Atlantic, LLC Address: 40004 Hunterstand Court #102 City/State/Zip: Charlottesville, VA 22911
Phone: 434-973-3232 e-Mail: kordel@ecslimited.com Acct No.
Project Name: Wades Grocery Store - Roanoke Street City/State: Christiansburg, VA
Collected By: Kathryn Ordell & Steven Hay PO# 47:12005
Positive Stop Analysis: ☒ Yes ☐ No *Black mastic* Date Collected: 4/22/2021

Turn Around Time: If no TAT is specified, samples will be processed as 3-Day TAT

1-Day 2-Day ☒ 3-Day Same Day

Analysis: PLM

No.	Client Sample ID	Sample Location
12005-1	Yellow sheet vinyl	below office area and under floor tile outside meet department
12005-2	Yellow sheet vinyl	below office area and under floor tile outside meet department
12005-3	Tan 9x9 Floor Tile	Throughout
12005-4	Tan 9x9 Floor Tile	Throughout
12005-5	Brown 9x9 Floor Tile	Throughout
12005-6	Brown 9x9 Floor Tile	Throughout
12005-7	Brown/Organge 9x9 Floor Tile	Throughout
12005-8	Brown/Organge 9x9 Floor Tile	Throughout
12005-9	Cream 9x9 Floor Tile	Throughout
12005-10	Cream 9x9 Floor Tile	Throughout
12005-11	12x12 Floor tile - cream/off white	Throughout - main floor tile
12005-12	12x12 Floor tile - cream/off white	Throughout - main floor tile
12005-13	orange floor tile - 12x12	Throughout - front office area / pattern throughout
12005-14	orange floor tile - 12x12	Throughout - front office area / pattern throughout
12005-15	yellow floor tile 12x12	Throughout - patterned
12005-16	yellow floor tile 12x12	Throughout - patterned
12005-17	Brown/tan pattern floor tile 12x12	Bathroom Area (right side)
12005-18	Brown/tan pattern floor tile 12x12	Bathroom Area (right side)
12005-19	white with blue streaks floor tile 12x12	Bathroom Area (right side)
12005-20	white with blue streaks floor tile 12x12	Bathroom Area (right side)
12005-21	drywall / joint compound - wall	Wall - Sink Room (back right/central)
12005-22	joint compound wall	wall - throughout back/side walls
12005-23	joint compound wall	wall - throughout back/side walls
12005-24	joint compound wall	wall - throughout back/side walls
12005-25	joint compound wall	wall - throughout back/side walls
12005-26	drywall / joint compound - ceiling	ceiling - sink room (back right/central)
12005-27	drywall / joint compound - ceiling	ceiling - sink room (back right/central)
12005-28	joint compound - ceiling	ceiling - connector / add-on space
12005-29	joint compound - ceiling	ceiling - connector / add-on space
12005-30	joint compound - ceiling	ceiling - bathroom area right side
12005-31	plastic clad walls	kitchen/bakery areas
12005-32	plastic clad walls	kitchen/bakery areas
12005-33	CMU wall paint	exterior walls along interior (front right)
12005-34	CMU wall paint	exterior walls along interior (back left)
12005-35	black covebase and mastic	Bathroom Area (right side)
12005-36	black covebase and mastic	Bathroom Area (right side)
12005-37	brown covebase and mastic	walk-in coolers
12005-38	brown covebase and mastic	walk-in coolers
12005-39	black tar/mastic pipe insulation	Upstairs office - green heater with pipe
12005-40	white sealant	exterior - side rock wall seams hard sealant
12005-41	white sealant	exterior - side rock wall seams hard sealant
12005-42	Door caulk	exterior doors
12005-43	Door caulk	exterior doors
12005-44	window caulk	exterior windows
12005-45	window caulk	exterior windows
12005-46	black vapor barrier	exterior - back side CMU walls
12005-47	black vapor barrier	exterior - back side CMU walls
12005-48	Roof - silver/gray paint and foam	Main Roof - spray applied foam over metal
12005-49	Roof - silver/gray paint and foam	Main Roof - spray applied foam over metal

Positive stop
black mastic

21-04-04241



Due Date:
04/28/2021
(Wednesday)
E

3 PLM anal.

Tash 4/23/21 1p

12005-50	Roof tar	
12005-51	Roof tar	main roof - penetrations / pipes
12005-52	shingle	main roof - penetrations / pipes
12005-53	shingle	connected building - right side
12005-54	shingle	connected building - right side
12005-55	shingle	wooden detached shed
12005-56	brown single and felt	wooden detached shed
12005-57	brown single and felt	left side - metal overhang
12005-58	gray/black tar	left side - metal overhang
12005-59	gray/black tar	Roof - overhang and on CMU walols
12005-60	black tar	Roof - overhang and on CMU walols
12005-61	black tar	Roof - flat roof left side mechanical room
12005-62	vermiculite	
12005-63	*	cmu wall insulation
12005-64	* ↓	↓
Released By:	Kathryn Ordel	
		Signature: Kathryn Ordel
Received By:	Tasha	Signature: 7/23/21 /p

* Did not recv. Sample labeled 12005-64
 - Recv'd 2 samples labeled 12005-63
 KTK 4/26/21



The Identification Specialists

Analysis Report
prepared for
ECS Mid Atlantic/Richmond

Report Date: 4/28/2021

Project Name: Wades Grocery

Project #: 47:12005

SanAir ID#: 21019537



NVLAP LAB CODE 200870-0

1551 Oakbridge Dr. Suite B | Powhatan, Virginia 23139-8061
888.895.1177 | 804.897.1177 | fax: 804.897.0070 | IAQ@SanAir.com | SanAir.com



SanAir ID Number
21019537
FINAL REPORT
4/28/2021 3:03:42 PM

Name: ECS Mid Atlantic/Richmond
Address: 2119-D North Hamilton Street
Richmond, VA 23230
Phone: (804) 353-6333

Project Number: 47:12005
P.O. Number: 47:12005
Project Name: Wades Grocery
Collected Date: 4/21/2021
Received Date: 4/23/2021 9:45:00 AM

Dear Kathryn Ordel,

We at SanAir would like to thank you for the work you recently submitted. The 1 sample(s) were received on Friday, April 23, 2021 via FedEx. The final report(s) is enclosed for the following sample(s): 12005KO-1.

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,

A handwritten signature in black ink that reads "Sandra Sobrino". The signature is fluid and cursive.

Sandra Sobrino
Asbestos & Materials Laboratory Manager
SanAir Technologies Laboratory

Final Report Includes:

- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

Sample conditions:

- 1 samples in Good condition.



SanAir ID Number

21019537

FINAL REPORT

4/28/2021 3:03:42 PM

Name: ECS Mid Atlantic/Richmond

Address: 2119-D North Hamilton Street

Richmond, VA 23230

Phone: (804) 353-6333

Project Number: 47:12005

P.O. Number: 47:12005

Project Name: Wades Grocery

Collected Date: 4/21/2021

Received Date: 4/23/2021 9:45:00 AM

Analyst: Moore, Brandi

Asbestos Bulk EPA PLM 400 Point Count

SanAir ID / Description	Stereoscopic	Components		Asbestos Fibers
	Appearance	% Fibrous	% Non-fibrous	
12005KO-1 / 21019537-001 Vermiculite - CMU Walls	Brown Non-Fibrous Heterogeneous		100% Other	< 0.25% Tremolite

Processed by EPA 600/R-93/116, Section 2.4.5.2.2.: Milling. Sample was cryo-milled prior to analysis.

Analyst: *Brandi Moore*

Approved Signatory: *Johnathan Wilson*

Analysis Date: 4/28/2021

Date: 4/28/2021

Disclaimer

The final report cannot be reproduced, except in full, without written authorization from SanAir. Fibers smaller than 5 microns cannot be seen with this method due to scope limitations. The accuracy of the results is dependent upon the client's sampling procedure and information provided to the laboratory by the client. SanAir assumes no responsibility for the sampling procedure and will provide evaluation reports based solely on the sample and information provided by the client. This report may not be used by the client to claim product endorsement by NVLAP, AIHA or any other agency of the U.S. government; *and may not be certified by every local, state and federal regulatory agencies.*

www.sanair.com

SanAir ID Number

21019537

Page 5 of 5

Appendix III: Lead Laboratory Analytical Results



Environmental Hazards Services, L.L.C.
7469 Whitepine Rd
Richmond, VA 23237
Telephone: 800.347.4010

Lead TCLP Analysis Report

Report Number: 21-04-04264

Client: ECS Mid-Atlantic - Charlottesville
4004 Hunterstand Court
Suite 102
Charlottesville, VA 22911

Received Date: 04/23/2021
Analyzed Date: 04/28/2021
Reported Date: 04/28/2021

Project/Test Address: Wades Grocery; Roanoke St; Christiansburg, VA

Client Number:
201022

Fax Number:

Laboratory Results

Lab Sample Number	Client Sample Number	Sample Description	Sample Weight (g)	Concentration ppm (mg/L)	Narrative ID
21-04-04264-001	12005TCLP-1	Bldg. Debris; Paint	100	<0.50	

Regulatory Limit: 5.0 mg/L

Reporting Limit: 0.50 mg/L

Method: EPA SW846 1311/3010A/7000B

Analyst: Elaine King

Reviewed By Authorized Signatory:

Tasha Eaddy
QA/QC Clerk

Method EPA SW846 1311 recommends 100g for analysis.

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. All internal quality control requirements associated with the batch were met, unless otherwise noted. Results represent the analysis of samples submitted by the client. Sample location, description, area, volume, etc., was provided by the client. This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without the written consent of the Environmental Hazards Service, L.L.C. California Certification #2319 NY ELAP #11714.

Legend	g = gram	ppm = parts per million	mg/L = milligrams per liter
--------	----------	-------------------------	-----------------------------

ENVIRONMENTAL HAZARDS SERVICES, LLC

Metals Chain of Custody Form

Pg _____ of _____

Company Name		ECS Mid Atlantic, LLC				Account #					
Company Address		4004 Hunterstand Court #102				City/State/Zip		Charlottesville, VA 22911			
Phone		434-973-3232				Email		kordel@ecslimited.com			
Project Name / Testing Address		Wades Grocery - Roanoke St, Christiansburg, VA									
PO Number		47:12005				Collected By		Kathryn Ordel			
Turn-Around Time		<input type="radio"/> 3 DAY <input type="radio"/> 2 DAY <input type="radio"/> 1 DAY <input type="radio"/> SAME DAY OR WEEKEND - Must Call Ahead									

LAB NUMBER	Client Sample ID	Collection Date & Time	METALS							Other Metals	PARTICULATES				AIR			WIPES	
			Pb TCLP	TCLP RCRA 8	RCRA 8 Total	Toxic Metal Profile	Welding Fume Profile	TX 11 TCLP	CA 17 Total		Total Nuisance Dust	Respirable Dust	TSP Gravimetric	TSP Pb	PM-10	Total Time	Flow Rate	Vol.	AREA <small>Circle The Unit of Measurement Used</small> cm or in
																Mins.	L/min.	Total Liters	
1	12005TCLP-1	4/21/21 & 1300 - Demo Debris	X																X
2																		X	
3																		X	
4																		X	
5																		X	
6																		X	
7																		X	
8																		X	
9																		X	
10																		X	
11																		X	
12																		X	
13																		X	
14																		X	
15																		X	

Released By:		Kathryn Ordel				Date:		4/22/21		Time:		1500	
Signature:													

LAB USE ONLY – BELOW THIS LINE

Received By: Amy Vignar

Signature:

Date: 4/23/21 Time: 1:26 ☐ AM ☒ PM

☐ Portal Contact Added

7469 WHITEPINE RD, RICHMOND, VA 23237 (800)-347-4010

RESULTS VIA CLIENT PORTAL AVAILABLE @ www.leadlab.com

21-04-04264

Due Date:
04/28/2021
(Wednesday)

E

201

1 PbTCLP



Environmental Hazards Services, L.L.C.
7469 Whitepine Rd
Richmond, VA 23237
Telephone: 800.347.4010

Lead Paint Chip Analysis Report

Report Number: 21-04-04269

Client: ECS Mid-Atlantic - Charlottesville
4004 Hunterstand Court
Suite 102
Charlottesville, VA 22911

Received Date: 04/23/2021
Analyzed Date: 04/28/2021
Reported Date: 04/28/2021

Project/Test Address: Wades Grocery; Roanoke Street; Christiansburg, VA
Collection Date: 04/22/2021

Client Number:
201022

Fax Number:

Laboratory Results

Lab Sample Number	Client Sample Number	Collection Location	Pb (ug/g) ppm	% Pb by Wt.	Narrative ID
21-04-04269-001	12005PC-1	EXTERIOR CMU PAINT TAN	<45	<0.0045	
21-04-04269-002	12005PC-2	INTERIOR CMU PAINT TAN	250	0.025	
21-04-04269-003	12005PC-3	MEAT COOLER PAINT WHITE	87	0.0087	
21-04-04269-004	12005PC-4	STRUCTURAL FRAMING CREAM	140	0.014	
21-04-04269-005	12005PC-5	STRUCTURAL FRAMING CREAM RIGHT	130	0.013	

Environmental Hazards Services, L.L.C

Client Number: 201022

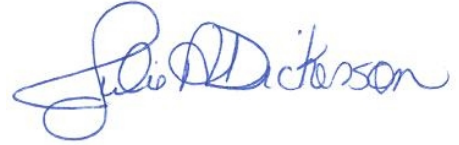
Report Number: 21-04-04269

Project/Test Address: Wades Grocery; Roanoke Street; Christiansburg, VA

Lab Sample Number	Client Sample Number	Collection Location	Pb (ug/g) ppm	% Pb by Wt.	Narrative ID
-------------------	----------------------	---------------------	------------------	-------------	--------------

Preparation Method: ASTM E-1979-17

Analysis Method: EPA SW846 7000B



Reviewed By Authorized Signatory:

Julie Dickerson
Laboratory Administrator

The HUD lead guidelines for lead paint chips are 0.50% by Weight, 5000 ppm, or 1.0 mg/cm². The Reporting Limit (RL) for samples prepared by ASTM E-1979-17 is 10.0 ug Total Pb. The RL for samples prepared by EPA SW846 3050B is 25.0 ug Total Pb. Paint chip area and results are calculated based on area measurements determined by the client. All internal quality control requirements associated with this batch were met, unless otherwise noted.

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Results represent the analysis of samples submitted by the client. Sample location, description, area, etc., was provided by the client. Results reported above in mg/cm³ are calculated based on area supplied by client. This report shall not be reproduced except in full, without the written consent of the Environmental Hazards Service, L.L.C.

ELLAP Accreditation through AIHA-LAP, LLC (100420), NY ELAP #11714.

LEGEND	Pb= lead	ug = microgram	ppm = parts per million
	ug/g = micrograms per gram	Wt. = weight	

ENVIRONMENTAL HAZARDS SERVICES, LLC

Lead Chain of Custody Form

Pg 1 of 1

Company Name		ECS Mid Atlantic, LLC				Account #											
Company Address		4004 Hunterstand Court #102				City/State/Zip		Charlottesville, VA 22911									
Phone		434-973-3232				Email		kordel@ecslimited.com									
Project Name / Testing Address		Wades Grocery - Roanoke Street Christiansburg, VA															
PO Number		47:12005				Collected By		Kathryn Ordel									
Turn-Around Time		<input checked="" type="radio"/> 3 DAY <input type="radio"/> 2 DAY <input type="radio"/> 1 DAY <input type="radio"/> SAME DAY OR WEEKEND - Must Call Ahead															
Do Submitted Dust Wipe Samples Meet ASTM E1792 Requirements? <input type="checkbox"/> Yes <input type="checkbox"/> No																	
SAMPLE TYPES				SAMPLE LOCATION ABBREVIATIONS								SURFACE TYPE FOR DUST WIPES					
Dust Wipe	DW	Air	A	Family Room	FR	Front	F	1st FL	1	Bath	BA	Bedroom	BR	Floor	FL	Window Well	WW
Paint Chip	PC	Soil	S	Living Room	LR	Rear	R	2nd FL	2	Dining	DR	Basement	O	Carpet	CP	Window Sill	SL
Composite Soil	CS	Composite Wipe	CW	Den	DN	Left	LT	Right	RT	Kitchen	KT						

LAB NUMBER	Client Sample ID	Collection Date	Sample Type	Collection Location [LR, KT, BA,]	Surface Type	Area		Paint Chip		Air	
						Length X Width In Inches [Provide paint chip area only if results are needed in mg/cm²]		mg/cm²	% by weight	Total Time [minutes]	Flow Rate [L/min]
1	12005PC-1	4/22/21	PC	Exterior CMU Paint - Tan		X					
2	12005PC-2	↓	↓	Interior CMU Paint - Tan		X					
3	12005PC-3			Meat Cooler Paint - White		X					
4	12005PC-4			Structural Framing - Cream Right Side		X					
5	12005PC-5			Structural Framing - Cream Left Side		X					
6						X					
7						X					
8						X					
9						X					
10						X					
11						X					
12						X					
13						X					
14						X					

Released By:	Kathryn Ordel		Date:	4-22-21		Time:	1400	
Signature:								

LAB USE ONLY - BELOW THIS LINE

Received By: Amy Vignar

Signature:

Date: 4/23/21 Time: 1:37 ☐ AM ☒ PM

☐ Portal Contact Added

7469 WHITEPINE RD, RICHMOND, VA 23237 (800)-347-4010

RESULTS VIA CLIENT PORTAL AVAILABLE @ www.leadlab.com

21-04-04269



Due Date:
04/28/2021
(Wednesday)
E

20+

Kay

Appendix IV: Certifications/ Licenses

DPOR License Lookup License Number 3303004060

License Details

Name	WEBB ORDEL, KATHRYN ROSE
License Number	3303004060
License Description	Asbestos Inspector License
Rank	Asbestos Inspector
Address	BARBOURSVILLE, VA 22923
Initial Certification Date	2015-05-20
Expiration Date	2021-05-31

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform DPOR so that appropriate action may be taken.

DPOR License Lookup build 1,472 (built 2021-02-15 10:16:48).

DPOR License Lookup License Number 3303004484

License Details

Name	HAY, STEVEN S
License Number	3303004484
License Description	Asbestos Inspector License
Rank	Asbestos Inspector
Address	NEW CASTLE, VA 24127
Initial Certification Date	2018-12-19
Expiration Date	2020-12-31

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform DPOR so that appropriate action may be taken.

DPOR License Lookup build 1,377 (built 2020-05-13 05:28:12).