

Harriman

Dorothea Dix Psychiatric
Center
Pooler Pavilion Demolition
Bangor, Maine

Project No. 23134

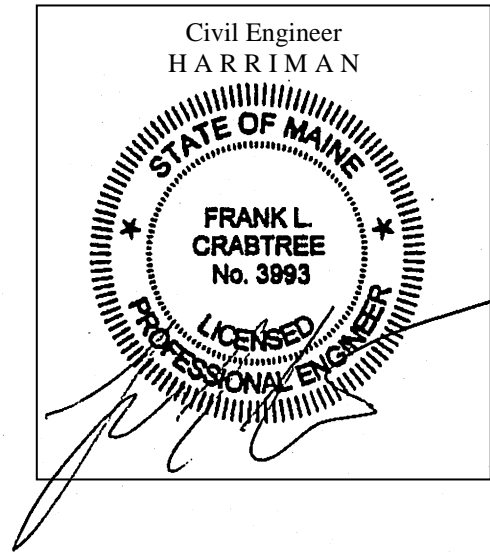
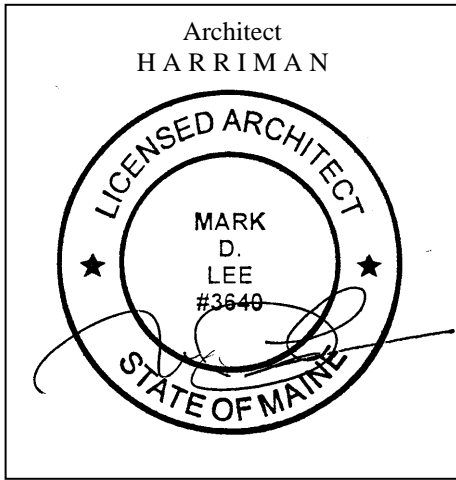
BGS No. 3667

February 21, 2024

Demolition Documents

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PROFESSIONAL SEAL PAGE



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DOROTHEA DIX PSYCHIATRIC CAMPUS
POOLER PAVILION DEMOLITION
BANGOR, MAINE
TABLE OF CONTENTS

SECTION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

001113	Notice to Contractors
002000	Information Available to Bidders
002113	Instructions to Bidders
004113	Contractor Bid Form
004313	Contractor Bid Bond Sample
005213	Contractor Agreement Sample
006113.13	Contractor Performance Bond Sample
006113.16	Contractor Payment Bond Sample
007100	Definitions
007213	General Conditions
007346	Wage Determination Schedule 2024 Fair Minimum Wage Rates Building 2 Penobscot County

DIVISION 01 - GENERAL REQUIREMENTS

011000	Summary
012600	Contract Modification Procedures
012900	Payment Procedures
013100	Project Management and Coordination
013200	Construction Progress Documentation
013300	Submittal Procedures Electronic Document Release Form
014000	Quality Requirements
014200	References
015000	Temporary Facilities and Controls
017300	Execution Requirements
017419	Construction Waste Management and Disposal
017700	Closeout Procedures

DIVISION 02 - EXISTING CONDITIONS

024116	Structure Demolition
028200	Asbestos Remediation
028213	Asbestos Abatement and Related Work Table 1 - Summary of ACM to be Removed

DIVISION 31 – EARTHWORK

311000	Site Clearing
312000	Earth Moving

APPENDIX

- 1 2009 Electrical Service Study Excerpt and Images
- 2 1959 Underground Steamline Plan Clip
- 3 1979 Steam Main Plan Clip
- 4 Dorothea Dix Psychiatric Center Hazardous Building Materials Survey Report
Dated October 19, 2024

LIST OF DRAWINGS

G00-1 COVER SHEET

ARCHITECTURAL DRAWINGS

A00-1 ABBREVIATIONS AND LEGENDS
A01-1 SITE CONTEXT DIAGRAM & REFERENCE PHOTOS
A05-0 DEMOLITION GROUND FLOOR PLAN
A05-1 DEMOLITION FIRST FLOOR PLAN
A05-2 DEMOLITION SECOND FLOOR PLAN
A05-3 DEMOLITION ROOF PENTHOUSE PLAN
A05-4 ROOF DEMOLITION PLAN

END OF TABLE OF CONTENTS

00 11 13
Notice to Contractors

DDPC - Pooler Pavillion Demolition

BGS Project #3667

The Pooler Pavilion demolition scope pertains to a 1949 three-story building with a mirrored 1961 three-story addition. It is located to the northwest section of the Dorothea Dix Psychiatric Center campus in Bangor, Maine. Combined, the building totals approximately 78,000 GSF (gross square feet). It has been closed and unoccupied for approximately 10 years. The scope of work is the complete demolition of the Pooler Pavilion.

NOTE: The anticipated start date is June 17, 2024, pending final completion and certification of ongoing building abatement. Anticipated substantial completion November 15, 2024 with the final punch list items, including but not limited to: loam & seed to be scheduled with BGS approval for seasonal appropriateness.

The cost of the work is approximately \$ 2,800,000. The contract shall designate the Substantial Completion Date on or before *November 15, 2024*, and the Contract Final Completion Date on or before *December 20, 2024*.

1. Submit bids on a completed Contractor Bid Form, plus bid security when required, all scanned and included as an attachment to an email with the subject line marked "**Bid for Pooler Pavilion Demolition**" and addressed to the Bid Administrator at: BGS.architect@maine.gov, so as to be received no later than **2:00** on **March 19, 2024**.

Bid submissions will be opened and read aloud at the time and date noted above at the virtual meeting hosted by BGS, accessible as a video conference call. Those who wish to participate in the call must submit a request for access to BGS.Architect@maine.gov.

Any bid received after the noted time will not be considered a valid bid and will remain unopened. Any bid submitted by any other means will not be considered a valid bid. The Bid Administrator may require the Bidder to surrender a valid paper copy of the bid form or the bid security document in certain circumstances.

Questions on the bid opening process shall be addressed to the Bid Administrator: BGS.Architect@maine.gov, and must be received by 2:00pm on March 12, 2024. Final Addendum if required, will be issued March 14, 2024.

2. The bid shall be submitted on the Contractor Bid Form (section 00 41 13) provided in the Bid Documents. The Owner reserves the right to accept or reject any or all bids as may best serve the interest of the Owner.
3. Bid security *is required* on this project.
If noted above as required, the Bidder shall include a satisfactory Bid Bond (section 00 43 13) or a certified or cashier's check for 5% of the bid amount with the completed bid form submitted to the Owner. The Bid Bond form is available on the BGS website.
4. Performance and Payment Bonds *are required* on this project.
If noted above as required, or if any combination of Base Bid and Alternate Bids amounts selected in the award of the contract exceeds \$125,000.00, the selected Contractor shall furnish a 100% contract Performance Bond (section 00 61 13.13) and a 100% contract Payment Bond (section 00 61 13.16) in

00 11 13
Notice to Contractors

the contract amount to cover the execution of the Work. Bond forms are available on the BGS website.

5. Filed Sub-bids *are not required* on this project.
6. There *are no* Pre-qualified General Contractors on this project.
If Pre-qualified General Contractors are identified for this project, the name of each company, with their city and state, are listed below.
7. An on-site pre-bid conference *will be conducted* for this project.
If a pre-bid conference is scheduled, it is *mandatory* for General Contractors and optional for Subcontractors and suppliers. Contractors who arrive late or leave early for a mandatory meeting may be prohibited from participating in this meeting and bidding. *The date of the walk through is March 8, 2024 at 9:00am. The group will meet at the Dorothea Dix Psychiatric Campus main entrance parking lot located at 656 State Street, Bangor, then proceed to the Pooler Pavilion site.*
8. Bid Documents - full sets only - will be available on or about *Febuary 22, 2024* and may be obtained *as a downloadable PDF at no cost on the BGS website. Website link from:*
<https://www.maine.gov/dafs/bgs/business-opportunities>
Invitation for Bids
9. Bid Documents may be examined at:

<i>AGC Maine</i> <i>188 Whitten Road</i> <i>Augusta, ME 04330</i> <i>Phone 207-622-4741</i> <i>Fax 207-622-1625</i>	<i>Construction Summary</i> <i>734 Chestnut Street</i> <i>Manchester, NH 03104</i> <i>Phone 603-627-8856</i> <i>Fax 603-627-4524</i>
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Dodge Data & Analytics
Phone 413-376-7032

SECTION 002000 - INFORMATION AVAILABLE TO BIDDERS

PART 1 GENERAL

1.1 INFORMATION FOR BIDDERS

A. Demolition Drawings

1. A digital copy of the building demolition drawings furnished by the Owner are to be provided for reference.

B. Appendix Documents

1. 2009 Electrical Service Study Excerpt and Images
2. 1959 Underground Steamline Plan Clip
3. 1979 Steam Main Plan Clip
4. Dorothea Dix Psychiatric Center (DDPC) Building Survey Findings

END OF SECTION 000200

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00 21 13
Instructions to Bidders

1. Bidder Requirements

- 1.1 A bidder is a Contractor which is evidently qualified, or has been specifically pre-qualified by the Bureau of General Services, to bid on the proposed project described in the Bid Documents.
- 1.2 Contractors and Subcontractors bidding on projects that utilize Filed Sub-bids shall follow the requirements outlined in these Bid Documents for such projects. See Section 00 22 13 for additional information.
- 1.3 Contractors and Subcontractors are not eligible to bid on the project when their access to project design documents prior to the bid period distribution of documents creates an unfair bidding advantage. Prohibited access includes consultation with the Owner or with design professionals engaged by the Owner regarding cost estimating, constructability review, or project scheduling. This prohibition to bid applies to open, competitive bidding or pre-qualified contractor bidding or Filed Sub-bidding. The Bureau may require additional information to determine if the activities of a Contractor constitute an unfair bidding advantage.
- 1.4 Each bidder is responsible for becoming thoroughly familiar with the Bid Documents prior to submitting a bid. The failure of a bidder to review evident site conditions, to attend available pre-bid conferences, or to receive, examine, or act on addenda to the Bid Documents shall not relieve that bidder from any obligation with respect to their bid or the execution of the work as a Contractor.
- 1.5 Prior to the award of the contract, General Contractor bidders or Filed Sub-bidders may be required to provide documented evidence to the Owner or the Bureau showing compliance with the provisions of this section, their business experience, financial capability, or performance on previous projects.
- 1.6 The selected General Contractor bidder will be required to provide proof of insurance before a contract can be executed.
- 1.7 Contracts developed from this bid shall not be assigned, sublet or transferred without the written consent of the Owner.
- 1.8 By submitting a bid the Contractor attests that it has not been declared ineligible to bid on State of Maine projects. The Director of the Bureau of General Services may disallow award of this contract to any Contractor if there is evidence that the Contractor or any of its Subcontractors, through their own fault, have been terminated, suspended for cause, debarred from bidding, agreed to refrain from bidding as part of a settlement, have defaulted on a contract, or had a contract completed by another party.
- 1.9 The Contractor attests that it is not presently indicted for or otherwise criminally or civilly charged by a Federal, State or local government entity with commission of any of the following offenses and has not within a three-year period preceding this bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction, or contract under a public transaction, violation of Federal or State anti-trust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

00 21 13
Instructions to Bidders

- 1.10 The Contractor shall not make any award or permit any award (subgrant or contract) at any tier to any party which is debarred or suspended or is otherwise excluded from or ineligible for participation in Federal assistance programs or State of Maine projects.

2. Authority of Owner
 - 2.1 The Owner reserves the right to accept or reject any or all bids as may best serve the interest of the Owner.

 - 2.2 Subject to the Owner's stated right to accept or reject any or all bids, the Contractor shall be selected on the basis of the lowest dollar value of an acceptable Base Bid, or any combination of Base Bid plus Alternate Bids, as well as other limited cost modifications the Owner determines may best serve the interests of the Owner. An acceptable bid is a duly submitted bid from a responsive and responsible bidder.

 - 2.3 The Owner reserves the right to require Bid Bonds or Performance and Payment Bonds for any project of any contract value.

3. Submitting Bids and Bid Requirements
 - 3.1 Each bid shall be submitted on the forms provided in the Bid Documents.

 - 3.2 Each bid shall be valid for a period of thirty calendar days following the Project bid closing date and time. The bid expiration date may be extended in unusual circumstances by mutual consent of the Bidder and the Owner. The bid amount shall not be modified due to the bid expiration date extension.

 - 3.3 Any provision contained in a bid which shows cost escalation, or any modification of schedule or other requirements shall not be accepted. Such a provision causes the bid to be invalid, or, at the discretion of the Owner and BGS, that element of the bid submission may be disregarded for the purpose of awarding the contract without that provision.

 - 3.4 Bidders shall include a Bid Bond or other approved bid security with the bid form submitted to the Owner when the bid form indicates such bid security is required. The bond value shall be 5% of the bid amount. The form of bond is shown in section 00 43 13.

 - 3.5 Bidders recognize that inclusion of contract bonds and the cost of those bonds is dependent on the awarded contract dollar value. Therefore, a Base Bid, or any combination of Base Bid plus Alternate Bids, as well as other limited cost modifications, resulting in a contract award shall include the cost of Performance and Payment Bonds in the submitted bid amount when the construction contract value is over \$125,000.00. Similarly, the cost of Performance and Payment Bonds is excluded in the submitted bid amount when the construction contract value is \$125,000.00 or less unless bonds are specifically required by the Bid Documents. When required for the project, the selected Contractor shall provide these bonds before a contract can be executed, pursuant to 14 M.R.S.A., Section 871, Public Works Contractors' Surety Bond Law of 1971, subsection 3. The form of bonds is shown in section 00 61 13.13 and 00 61 13.16.

00 21 13
Instructions to Bidders

- 3.6 Bidders may modify bids in writing, by the same means as the original bid submission, prior to the bid closing time. Such written amendments shall not disclose the amount of the initial bid. If so disclosed, the entire bid is considered invalid.
- 3.7 Bidders implicitly acknowledge all Addenda issued when they submit the bid form. By usual practice the Consultant shall not issue Addenda less than 72 hours prior to the bid closing time, to allow ample time for bidders to incorporate the information. However, some information, such as extending the bid due date and time, may be issued with shorter notice. Addenda shall be issued to all companies who are registered holders of Bid Documents.
- 3.8 A bid may be withdrawn without penalty if a written request by the bidder is presented to the Owner prior to the bid closing time. Such written withdrawal requests are subject to verification as required by the Bureau.
- A bid may be withdrawn without penalty after the bid closing time if, in the determination of the Bureau, evidence provided by the Contractor shows an apparent unintended error such as a miscalculation, or an erroneous number on estimating documents, was the cause of an inaccurate bid. The Bureau may allow withdrawal in consideration of the bid bond or, without utilizing a bid bond, if the Bureau considers documented evidence provided by the Contractor shows factual errors had been made on the bid form.
- 3.9 In the event State of Maine Offices unexpectedly close on the published date of a public bid opening in the location of that bid opening, prior to the time of the scheduled deadline, the new deadline for the public bid opening will be the following business day at the originally scheduled hour of the day, at the original location. Official closings are posted on the State of Maine government website.
- 3.10 The Owner may require, in a Notice of Intent to Award letter to the apparent low bidder, a Schedule of Values, Project Schedule, and List of Subcontractors and Suppliers as both a demonstration of capability of the Bidder and as a condition of award.
- 3.11 Projects which require a State of Maine wage determination will include that schedule as part of the Bid Documents. See section 00 73 46, if such rates are required.
- 3.12 Projects which require compliance with the Davis-Bacon Act are subject to the regulations contained the Code for Federal Regulations and the federal wage determination which is made a part of the Bid Documents. See section 00 73 46, if such rates are required.
- 3.13 The Owner is exempt from the payment of Maine State sales and use taxes as provided in 36 M.R.S. §1760 (1). The Contractor and Subcontractors shall not include taxes on exempt items in the construction contract.

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**00 41 13
Contractor Bid Form**

DDPC - Pooler Pavilion Demolition

BGS Project #3667

Bid Form submitted by: *email only to email address below*

Bid Administrator:

BGS.architect@maine.gov
Maine Bureau of General Services
77 State House Station
Augusta, ME 04332
207-624-7314

Bidder:

Signature: _____

Printed name and title: _____

Company name: _____

Mailing address: _____

City, state, zip code: _____

Phone number: _____

Email address: _____

State of incorporation, if a corporation: _____

List of all partners, if a partnership: _____

The Bidder agrees, if the Owner offers to award the contract, to provide any and all bonds and certificates of insurance, as well as Schedule of Values, Project Schedule, and List of Subcontractors and Suppliers if required by the Owner, and to sign the designated Construction Contract within twelve calendar days after the date of notification of such acceptance, except if the twelfth day falls on a State of Maine government holiday or other closure day, or a Saturday, or a Sunday, in which case the aforementioned documents must be received before 12:00 noon on the first available business day following the holiday, other closure day, Saturday, or Sunday.

As a guarantee thereof, the Bidder submits, together with this bid, a bid bond or other acceptable instrument as and if required by the Bid Documents.

00 41 13
Contractor Bid Form

- 1. The Bidder, having carefully examined the *DDPC - Pooler Pavilion Demolition* Project Manual dated *February 21, 2024*, prepared by *Harriman*, as well as Specifications, Drawings, and any Addenda, the form of contract, and the premises and conditions relating to the work, proposes to furnish all labor, equipment and materials necessary for and reasonably incidental to the construction and completion of this project for the **Base Bid** amount of:

\$ _____ .00

- 2. Allowances *are not included* on this project.

No Allowances

e

\$ 0.00

- 3. Alternate Bids *are not included* on this project.

No Alternate Bids

Any dollar amount line below that is left blank by the Bidder shall be read as a bid of **\$0.00**.

1 Not Used

\$ _____ .00

2 Not Used

\$ _____ .00

3 Not Used

\$ _____ .00

4 Not Used

\$ _____ .00

- 4. Bid security *is required* on this project.

If noted above as required, or if the Base Bid amount exceeds \$125,000.00, the Bidder shall include with this bid form a satisfactory Bid Bond (section 00 43 13) or a certified or cashier's check for 5% of the bid amount with this completed bid form submitted to the Owner.

- 5. Filed Sub-bids *are not required* on this project.

If noted above as required, the Bidder shall include with this bid form a list of each Filed Sub-bidder selected by the Bidder on the form provided (section 00 41 13F).

**00 43 13
Contractor Bid Bond**

Bond No.: insert bond number

We, the undersigned, insert company name of Contractor, select type of entity of insert name of municipality in the State of insert name of state as principal, and insert name of surety as Surety, are hereby held and firmly bound unto select title of obligee in the penal sum of five percent of the bid amount, for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns, signed this insert date, i.e.: 8th day of select month, select year, which is the same date as that of the first specified bid due date, or subsequent bid due date revised by addendum.

The condition of the above obligation is such that whereas the principal has submitted to the Owner, or State of Maine, to a certain bid, attached hereto and hereby made a part hereof, to enter into a contract in writing, for the construction of insert name of project as designated in the contract documents

Now therefore:

If said bid shall be rejected, or, in the alternate,

If said bid shall be accepted and the principal shall execute and deliver a contract in the form of contract attached hereto, properly completed in accordance with said bid, and shall furnish a bond for the faithful performance of said contract, and for the payment of all persons performing labor or furnishing material in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be void.

Otherwise, the same shall remain in force and effect- it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received hereby stipulates and agrees that the obligation of said Surety and its bonds shall be in no way impaired or affected by any extension of the time within which the Obligee may accept such bid and said Surety does hereby waive notice of any such extension.

**00 43 13
Contractor Bid Bond**

In witness whereof, the principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set above.

Signed and sealed this insert date, i.e.: 8th day of select month, select year, which is the first specified bid due date, or subsequent bid due date revised by addendum.

Contractor

(Signature)

insert name and title

insert company name

*insert address
insert city state zip code*

Surety

(Signature)

insert name and title

insert company name

*insert address
insert city state zip code*

If Contractor is a partnership, all partners shall execute the bond. A power of attorney document indicating that it still is in full force and effect shall be provided by the person executing this bond.

**State of Maine
CONSTRUCTION CONTRACT**

Large Construction Project

*This form is used when the Contract value is \$50,000 or greater.
The Project Manual, Specifications and Drawings, and any Addenda are considered part of this Contract.*

Agreement entered into by and between the contracting entity name hereinafter called the **Owner** and Contractor company name hereinafter called the **Contractor**.

BGS Project No.: number assigned by BGS Other Project No.: _____

For the following Project: title of project as shown on bid documents at facility or campus name, municipality, Maine.

The Specifications and the Drawings have been prepared by Consultant firm name, acting as Professional-of-Record and named in the documents as the Consultant Architect or Engineer.

The *Owner* and *Contractor* agree as follows:

ARTICLE 1 COMPENSATION AND PAYMENTS

1.1 The Owner shall pay the Contractor to furnish all labor, equipment, materials and incidentals necessary for the construction of the Work described in the Specifications and shown on the Drawings the Contract Amount as shown below.

Base Bid	\$0.00
<u>Alternate Bid number and name or "no Alternates"</u>	\$0.00
<u>Alternate Bid number and name or "no Alternates"</u>	\$0.00
<u>Alternate Bid number and name or "no Alternates"</u>	\$0.00
<u>Alternate Bid number and name or "no Alternates"</u>	\$0.00
<u>Alternate Bid number and name or "no Alternates"</u>	\$0.00
Total Contract Amount	\$0.00

1.2 The Contractor’s requisition shall contain sufficient detail and supporting information for the Owner to evaluate and support the payment requested.

1.2.1 Payments are due and payable twenty-five working days from the date of receipt of a Contractor requisition which is approved by the Owner.

1.2.2 Provisions for late payments are governed by 5 M.R.S. Chapter 144, *Payment of Invoices Received from Business Concerns*, and interest shall be calculated at 1% per month.

ARTICLE 2 COMMENCEMENT AND COMPLETION DATES

2.1 The Work of this Contract shall commence no sooner than the date this document is executed by the approval authority, or a subsequent date designated in the contract documents.

2.2 The Substantial Completion Date shall be _____.

2.3 The Work of this Contract shall be completed on or before the Contract Final Completion Date of _____.

2.4 The Contract Expiration Date shall be _____. (This date is the Owner's deadline for internal management of contract accounts. The Contract Expiration Date does not directly relate to any contract obligation of the Contractor.)

ARTICLE 3 INELIGIBLE BIDDER

3.1 By signing this contract the Contractor attests that it has not been declared ineligible to bid on State of Maine projects. The Bureau of General Services may disallow award of this contract to any Contractor if there is evidence that the Contractor or any of its Subcontractors, through their own fault, have been terminated, suspended for cause, debarred from bidding, agreed to refrain from bidding as part of a settlement, have defaulted on a contract, or had a contract completed by another party.

3.2 By signing this contract the Contractor attests that it is not presently indicted for or otherwise criminally or civilly charged by a Federal, State or local government entity with commission of any of the following offenses and has not within a three-year period preceding this bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction, or contract under a public transaction, violation of Federal or State anti-trust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

3.3 The Contractor shall not make any award or permit any award (subgrant or contract) at any tier to any party which is debarred or suspended or is otherwise excluded from or ineligible for participation in Federal assistance programs or State of Maine projects.

ARTICLE 4 CONTRACTOR'S RESPONSIBILITIES

4.1 On this project, the Contractor shall furnish the Owner the appropriate contract bonds in the amount of 100% of the Contract Sum. Contract bonds are mandated if the Contract Sum exceeds \$125,000, or if bonds are specifically required by the Contract Documents.

4.2 The Contractor shall comply with all laws, codes and regulations applicable to the Work.

4.3 The Contractor shall acquire all permits and third-party approvals applicable to the Work not specifically identified as provided by the Owner. Costs for Contractor-provided permits and third-party approvals shall be included in the Contract Sum identified in Section 1.1 above.

4.4 The Contractor shall remain an independent agent for the duration of this Contract, shall not become an employee of the State of Maine, and shall assure that no State employee will be compensated by, or otherwise benefit from, this Contract.

4.5 The Contractor shall be responsible for any design cost, construction cost, or other cost incurred on the Project to the extent caused by the negligent acts, errors or omissions of the Contractor or their Subcontractors in the performance of Work under this Contract.

ARTICLE 5 OWNER'S RESPONSIBILITIES

5.1 The Owner shall provide full information about the objectives, schedule, constraints and existing conditions of the project. The Owner has established a budget with reasonable contingencies that meets the project requirements.

5.2 By signing this contract, the Owner attests that all State of Maine procurement requirements for this contract have been met, including the solicitation of competitive bids.

ARTICLE 6 INSTRUMENTS OF SERVICE

6.1 The Contractor's use of the drawings, specifications and other documents known as the Consultant's Instruments of Service is limited to the execution of the Contractor's scope of work of this project unless the Contractor receives the written consent of the Owner and Consultant for use elsewhere.

ARTICLE 7 MISCELLANEOUS PROVISIONS

7.1 This Contract shall be governed by the laws of the State of Maine.

7.2 The Owner and Contractor, respectively, bind themselves, their partners, successors, assigns and legal representatives to this Contract. Neither party to this Contract shall assign the Contract as a whole without written consent of the other party, which consent the Owner may withhold without cause.

7.3 Notwithstanding any other provision of this Agreement, if the Owner does not receive sufficient funds to fund this Agreement or funds are de-appropriated, or if the Owner does not receive legal authority from the Maine State Legislature or Maine Courts to expend funds intended for this Agreement, then the Owner is not obligated to make payment under this Agreement; provided, however, the Owner shall be obligated to pay for services satisfactorily performed prior to any such non-appropriation in accordance with the termination provisions of this Agreement. The Owner shall timely notify the Contractor of any non-appropriation and the effective date of the non-appropriation.

ARTICLE 8 CONTRACT DOCUMENTS

8.1 The Project Manual, Specifications and Drawings, and any Addenda, together with this agreement, form the contract. Each element is as fully a part of the Contract as if hereto attached or herein repeated.

8.2 Specifications: **indicate date of issuance of project manual**

8.3 Drawings: **note here or attach each sheet number and title**

8.4 Addenda: **note each addenda number and date, or "none"**

BGS Project No.: _____

The Contract is effective as of the date executed by the approval authority.

OWNER

CONTRACTOR

Signature *Date*
name and title

Signature *Date*
name and title

name of contracting entity
address

name of contractor company
address

telephone
email address

telephone
email address
Vendor Number

Indicate the names of the review and approval individuals appropriate to the approval authority.

<i>select proper approval authority</i>	
Reviewed by:	Approved by:
_____ <i>Signature</i> <i>Date</i> <i>insert name</i>	_____ <i>Signature</i> <i>Date</i> <i>Joseph H. Ostwald</i>
<i>Project Manager/ Contract Administrator</i>	<i>Director, Planning, Design & Construction</i>

00 61 13.13
Contractor Performance Bond

Bond No.: insert bond number

We, the undersigned, insert company name of Contractor, select type of entity of insert name of municipality in the State of insert name of state as principal, and insert name of surety as Surety, are hereby held and firmly bound unto select title of obligee in the penal sum of the Contract Price \$ insert the Contract Price in numbers for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of the above obligation is such that if the principal shall promptly and faithfully perform the contract entered into this insert date, i.e.: 8th day of select month, select year, which is the same date as that of the notice of intent to award letter, or in the absence of such a letter, not later than the date the Owner signs the construction contract, for the construction of insert name of project as designated in the contract documents, then this obligation shall be null and void.

Otherwise, the same shall remain in force and effect- it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received hereby stipulates and agrees that the obligation of said Surety and its bonds shall be in no way impaired or affected by any extension of the time which the Obligee may accept during the performance of the contract and said Surety does hereby waive notice of any such extension.

00 61 13.13
Contractor Performance Bond

In witness whereof, the principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set above.

Signed and sealed this *insert date, i.e.: 8th* day of *select month, select year*, which is the same date as that of the notice of intent to award letter, or in the absence of such a letter, not later than the date the Owner signs the construction contract.

Contractor

(Signature)

insert name and title

insert company name

insert address

insert city state zip code

Surety

(Signature)

insert name and title

insert company name

insert address

insert city state zip code

If Contractor is a partnership, all partners shall execute the bond. A power of attorney document indicating that it still is in full force and effect shall be provided by the person executing this bond.

00 61 13.16
Contractor Payment Bond

Bond No.: insert bond number

We, the undersigned, insert company name of Contractor, select type of entity of insert name of municipality in the State of insert name of state as principal, and insert name of surety as Surety, are hereby held and firmly bound unto select title of obligee in the penal sum of the Contract Price \$ insert the Contract Price in numbers for the use and benefit of claimants, defined as an entity having a contract with the principal or with a subcontractor of the principal for labor, materials, or both labor and materials, used or reasonably required for use in the performance of the contract, for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of the above obligation is such that if the principal shall promptly satisfy all claims and demands incurred for all labor and materials, used or required by the principal in connection with the work described in the contract entered into this insert date, i.e.: 8th day of select month, select year, which is the same date as that of the notice of intent to award letter, or in the absence of such a letter, not later than the date the Owner signs the construction contract, for the construction of insert name of project as designated in the contract documents, and shall fully reimburse the obligee for all outlay and expense with said obligee may incur in making good any default of said principal, then this obligation shall be null and void.

Otherwise, the same shall remain in force and effect- it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received hereby stipulates and agrees that the obligation of said Surety and its bonds shall be in no way impaired or affected by any extension of the time which the Obligee may accept during the performance of the contract and said Surety does hereby waive notice of any such extension.

**00 61 13.16
Contractor Payment Bond**

In witness whereof, the principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set above.

Signed and sealed this *insert date, i.e.: 8th* day of *select month, select year*, which is the same date as that of the notice of intent to award letter, or in the absence of such a letter, not later than the date the Owner signs the construction contract.

Contractor

(Signature)

insert name and title

insert company name

insert address

insert city state zip code

Surety

(Signature)

insert name and title

insert company name

insert address

insert city state zip code

If Contractor is a partnership, all partners shall execute the bond. A power of attorney document indicating that it still is in full force and effect shall be provided by the person executing this bond.

00 71 00
Definitions

1. Definitions
 - 1.1 *Addendum*: A document issued by the Consultant that amends the Bid Documents. Addenda shall not be issued less than seventy-two hours prior to the specified bid opening time.
 - 1.2 *Allowance*: A specified dollar amount for a particular scope of work or service included in the Work that is identified in the Bid Documents and included in each Bidder's Bid. The Contractor shall document expenditures for an Allowance during the Project. Any unused balance shall be credited to the Owner. The Contractor is responsible for notifying the Owner of anticipated expenses greater than the specified amount and the Owner is responsible for those additional expenses.
 - 1.3 *Alternate Bid*: The Contractor's written offer of a specified dollar amount, submitted on the Bid Form, for the performance of a particular scope of work described in the Bid Documents. The Owner determines the low bidder based on the sum of the base Bid and any combination of Alternate Bids that the Owner selects.
 - 1.4 *Architect*: A Consultant acting as, or supporting, the Professional-of-Record who is responsible for the design of the Project. Equivalent to "Consultant" in State of Maine contract forms.
 - 1.5 *Architectural Supplemental Instruction (ASI)*: A written instruction from the Architect for the purpose of clarification of the Contract Documents. An ASI does not alter the Contract Price or Contract Time. ASIs may be responses to RFIs and shall be issued by the Architect in a timely manner to avoid any negative impact on the Schedule of the Work.
 - 1.6 *Bid*: The Contractor's written offer of a specified dollar amount or amounts, submitted on a form included in the Bid Documents, for the performance of the Work. A Bid may include bonds or other requirements. A base Bid is separate and distinct from Alternate Bids, being the only cost component necessary for the award of the contract, and representing the minimum amount of Work that is essential for the functioning of the Project.
 - 1.7 *Bid Bond*: The security designated in the Bid Documents, furnished by Bidders as a guaranty of good faith to enter into a contract with the Owner, should a contract be awarded to that Bidder.
 - 1.8 *Bidder*: Any business entity, individual or corporation that submits a bid for the performance of the work described in the Bid Documents, acting directly or through a duly authorized representative. See also *Responsive and Responsible Bidder*.
 - 1.9 *Bid Documents*: The drawings, procurement and contracting requirements, general requirements, and the written specifications -including all addenda, that a bidder is required to reference in the submission of a bid.
 - 1.10 *Bureau*: The State of Maine Bureau of General Services, or BGS, in the Department of Administrative and Financial Services.
 - 1.11 *Calendar days*: Consecutive days, as occurring on a calendar, taking into account each day of the week, month, year, and any religious, national or local holidays. Calendar days are used for changes in Contract Time.

00 71 00
Definitions

- 1.12 *Certificate of Substantial Completion*: A document developed by the Consultant that describes the final status of the Work and establishes the date that the Owner may use the facility for its intended purpose. The Certificate of Substantial Completion may also include a provisional list of items - a "punch list" - remaining to be completed by the Contractor. The Certificate of Substantial Completion identifies the date from which the project warranty period commences.
- 1.13 *Certificate of Occupancy*: A document developed by a local jurisdiction such as the Code Enforcement Officer that grants permission to the Owner to occupy a building.
- 1.14 *Change Order (CO)*: A document that modifies the contract and establishes the basis of a specific adjustment to the Contract Price or the Contract Time, or both. Change Orders may address correction of omissions, errors, and document discrepancies, or additional requirements. Change Orders should include all labor, materials and incidentals required to complete the work described. A Change Order is not valid until signed by the Contractor, Owner and Consultant and approved by the Bureau.
- 1.15 *Change Order Proposal (COP) (see also Proposal)*: Contract change proposed by the Contractor regarding the contract amount, requirements, or time. The Contractor implements the work of a COP after it is accepted by all parties. Accepted COPs are incorporated into the contract by Change Order.
- 1.16 *Clerk of the Works*: The authorized representative of the Consultant on the job site. Clerk of the Works is sometimes called the Architect's representative.
- 1.17 *Construction Change Directive (CCD)*: A written order prepared by the Consultant and signed by the Owner and Consultant, directing a change in the Work prior to final agreement with the Contractor on adjustment, if any, in the Contract Price or Contract Time, or both.
- 1.18 *Contract*: A written agreement between the Owner and the successful bidder which obligates the Contractor to perform the work specified in the Contract Documents and obligates the Owner to compensate the Contractor at the mutually accepted sum, rates or prices.
- 1.19 *Contract Bonds (also known as Payment and Performance Bonds)*: The approved forms of security, furnished by the Contractor and their surety, which guarantee the faithful performance of all the terms of the contract and the payment of all bills for labor, materials and equipment by the Contractor.
- 1.20 *Contract Documents*: The drawings and written specifications (including all addenda), Standard General Conditions, and the contract (including all Change Orders subsequently incorporated in the documents).
- 1.21 *Contract Expiration Date*: Date determined by the Owner as a deadline for internal management of contract accounts. This allows time after the Contract Final Completion Date for processing the final Requisition for Payment. The Contract Expiration Date does not directly relate to any contract obligation of the Contractor.
- 1.22 *Contract Final Completion Date*: Point of time when the Work is fully completed in compliance with the Contract Documents, as certified by the Consultant. Final payment to the Contractor is due upon Final Completion of the Project.
- 1.23 *Contract Price*: The dollar amount of the construction contract, also called *Contract Sum*.

00 71 00
Definitions

- 1.24 *Contract Time*: The designated duration of time to execute the Work of the contract, with a specific date for completion.
- 1.25 *Contractor*: Also called the "General Contractor" or "GC" the individual or entity undertaking the execution of the general contract work under the terms of the contract with the Owner, acting directly or through a duly authorized representative. The Contractor is responsible for the means, methods and materials utilized in the execution and completion of the Work.
- 1.26 *Consultant*: The Architect or Engineer acting as Professional-of-Record for the Project. The Consultant is responsible for the design of the Project.
- 1.27 *Drawings*: The graphic and pictorial portion of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.
- 1.28 *Engineer*: A Consultant acting as, or supporting, the Professional-of-Record who is responsible for the design of the Project. Equivalent to "Consultant" in State of Maine contract forms.
- 1.29 *Filed Sub-bid*: The designated major Subcontractor's (or, in some cases, Contractor's) written offer of a specified dollar amount or amounts, submitted on a form included in the Bid Documents, for the performance of a particular portion of the Work. A Filed Sub-bid may include bonds or other requirements.
- 1.30 *General Requirements*: The on-site overhead expense items the Contractor provides for the Project, typically including, but not limited to, building permits, construction supervision, Contract Bonds, insurance, field office, temporary utilities, rubbish removal, and site fencing. Overhead expenses of the Contractor's general operation are not included. Sometimes referred to as the Contractor's General Conditions.
- 1.31 *Owner*: The State agency which is represented by duly authorized individuals. The Owner is responsible for defining the scope of the Project and compensation to the Consultant and Contractor.
- 1.32 *Owner's Representative*: The individual or entity contracted by the Owner to be an advisor and information conduit regarding the Project.
- 1.33 *Overhead*: General and administrative expenses of the Contractor's principal and branch offices, including payroll costs and other compensation of Contractor employees, deductibles paid on any insurance policy, charges against the Contractor for delinquent payments, and costs related to the correction of defective work, and the Contractor's capital expenses, including interest on capital used for the work.
- 1.34 *Performance and Payment Bonds (also known as Contract Bonds)*: The approved forms of security, furnished by the Contractor and their surety, which guarantee the faithful performance of all the terms of the contract and the payment of all bills for labor, materials and equipment by the Contractor.
- 1.35 *Post-Bid Addendum*: Document issued by the Consultant that defines a potential Change Order prior to signing of the construction contract. The Post-Bid Addendum allows the Owner to negotiate

00 71 00
Definitions

contract changes with the Bidder submitting the lowest valid bid, only if the negotiated changes to the Bid Documents result in no change or no increase in the bid price.

A Post-Bid Addendum may also be issued after a competitive construction Bid opening to those Bidders who submitted a Bid initially, for the purpose of rebidding the Project work without re-advertising.

- 1.36 *Project*: The construction project proposed by the Owner to be constructed according to the Contract Documents. The Project, a public improvement, may be tied logistically to other public improvements and other activities conducted by the Owner or other contractors.
- 1.37 *Proposal (see also Change Order Proposal)*: The Contractor's written offer submitted to the Owner for consideration containing a specified dollar amount or rate, for a specific scope of work, and including a schedule impact, if any. A proposal shall include all costs for overhead and profit. The Contractor implements the work of a Proposal after it is accepted by all parties. Accepted Proposals are incorporated into the contract by Change Order.
- 1.38 *Proposal Request (PR)*: An Owner's written request to the Contractor for a Change Order Proposal.
- 1.39 *Punch List*: A document that identifies the items of work remaining to be done by the Contractor at the Close Out of a Project. The Punch List is created as a result of a final inspection of the work only after the Contractor attests that all of the Work is in its complete and permanent status.
- 1.40 *Request For Information (RFI)*: A Contractor's written request to the Consultant for clarification, definition or description of the Work. RFIs shall be presented by the Contractor in a timely manner to avoid any negative impact on the Schedule of the Work.
- 1.41 *Request For Proposal (RFP)*: An Owner's written request to the Contractor for a Change Order Proposal.
- 1.42 *Requisition for Payment*: The document in which the Contractor certifies that the Work described is, to the best of the Contractor's knowledge, information and belief, complete and that all previous payments have been paid by the Contractor to Subcontractors and suppliers, and that the current requested payment is now due. See *Schedule of Values*.
- 1.43 *Responsive and Responsible Bidder*: A bidder who complies, when submitting a bid on a given project, with the following *responsive* standards, as required by the Bid Documents:
- submits specific qualifications to bid the project, if required;
 - attends mandatory pre-bid conferences, if required;
 - submits a bid prior to the close of the bid period;
 - submits a complete bid form;
 - submits a bid without indications of intent contrary to the stated requirements;
 - submits other materials and information, such as bid security, as required;
- and, meets the following minimums regarding these *responsible* standards:
- sustains a satisfactory record of project performance;
 - maintains a permanent place of business in a known physical location;
 - possesses the financial means for short- and long-term operations;
 - possesses the appropriate technical experience and capabilities;
 - employs adequate personnel and subcontractor resources;

00 71 00
Definitions

maintains the equipment needed to perform the work;
complies with the proposed implementation schedule;
complies with the insurance and bonding requirements;
provides post-construction warranty coverage;
and other criteria which can be considered relevant to the contract.

- 1.44 *Retainage*: The amount, calculated at five percent (5%) of the contract value or a scheduled value, that the Owner shall withhold from the Contractor until the work or portion of work is declared substantially complete or otherwise accepted by the Owner. The Owner may, if requested, reduce the amount withheld if the Owner deems it desirable and prudent to do so. (See Title 5 M.R.S.A., Section 1746.)
- 1.45 *Sample*: A physical example provided by the Contractor which illustrates materials, equipment or workmanship and establishes standards by which the Work will be judged.
- 1.46 *Schedule of the Work*: The document prepared by the Contractor and approved by the Owner that specifies the dates on which the Contractor plans to begin and complete various parts of the Work, including dates on which information and approvals are required from the Owner.
- 1.47 *Schedule of Values*: The document prepared by the Contractor and approved by the Owner before the commencement of the Work that specifies the dollar values of discrete portions of the Work equal in sum to the contract amount. The Schedule of Values is used to document progress payments of the Work in regular (usually monthly) requisitions for payment. See *Requisition for Payment*.
- 1.48 *Shop Drawings*: The drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
- 1.49 *Specifications*: The portion of the Contract Documents consisting of the written requirements of the Work for materials, equipment, systems, standards, workmanship, and performance of related services.
- 1.50 *Subcontractor*: An individual or entity undertaking the execution of any part of the Work by virtue of a written agreement with the Contractor or any other Subcontractor. Also, an individual or entity retained by the Contractor or any other Subcontractor as an independent contractor to provide the labor, materials, equipment or services necessary to complete a specific portion of the Work.
- 1.51 *Substantial Completion Date*: Point of time when the Work or a designated portion of the Work is sufficiently complete in compliance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended purpose without unscheduled disruption. Substantial Completion is documented by the date of the Certificate of Substantial Completion signed by the Owner and the Contractor.
- 1.52 *Superintendent*: The representative of the Contractor on the job site, authorized by the Contractor to receive and fulfill instructions from the Consultant.
- 1.53 *Surety*: The individual or entity that is legally bound with the Contractor and Subcontractor to insure the faithful performance of the contract and for the payment of the bills for labor, materials and equipment by the Contractor and Subcontractors.

00 71 00
Definitions

- 1.54 *Work*: The construction and services, whether completed or partially completed, including all labor, materials, equipment and services provided or to be provided by the Contractor and Subcontractors to fulfill the requirements of the Project as described in the Contract Documents.

00 72 13
General Conditions

Table of Contents of this General Conditions Section

1. Preconstruction Conference2

2. Intent and Correlation of Contract Documents.....2

3. Additional Drawings and Specifications3

4. Ownership of Contract Documents3

5. Permits, Laws, and Regulations3

6. Taxes4

7. Labor and Wages.....4

8. Indemnification5

9. Insurance Requirements5

10. Contract Bonds.....6

11. Patents and Royalties7

12. Surveys, Layout of Work7

13. Record of Documents.....7

14. Allowances8

15. Shop Drawings8

16. Samples8

17. Substitutions8

18. Assignment of Contract.....9

19. Separate Contracts.....9

20. Subcontracts10

21. Contractor-Subcontractor Relationship10

22. Supervision of the Work.....11

23. Observation of the Work11

24. Consultant's Status.....12

25. Management of the Premises12

26. Safety and Security of the Premises13

27. Changes in the Work14

28. Correction of the Work.....15

29. Owner's Right to do Work.....16

30. Termination of Contract and Stop Work Action16

31. Delays and Extension of Time17

32. Payments to the Contractor18

33. Payments Withheld19

34. Liens19

35. Workmanship19

36. Close-out of the Work20

37. Date of Completion and Liquidated Damages21

38. Dispute Resolution21

00 72 13
General Conditions

1. Preconstruction Conference

- 1.1 The Contractor shall, upon acceptance of a contract and prior to commencing work, schedule a preconstruction conference with the Owner and Consultant. The purpose of this conference is as follows.
- 1.1.1 Introduce all parties who have a significant role in the Project, including:
- Owner (State agency or other contracting entity)
 - Owner's Representative
 - Consultant (Architect or Engineer)
 - Subconsultants
 - Clerk-of-the-works
 - Contractor (GC)
 - Superintendent
 - Subcontractors
 - Other State agencies
 - Construction testing company
 - Commissioning agent
 - Special Inspections agent
 - Bureau of General Services (BGS);
- 1.1.2 Review the responsibilities of each party;
- 1.1.3 Review any previously-identified special provisions of the Project;
- 1.1.4 Review the Schedule of the Work calendar submitted by the Contractor to be approved by the Owner and Consultant;
- 1.1.5 Review the Schedule of Values form submitted by the Contractor to be approved by the Owner and Consultant;
- 1.1.6 Establish routines for Shop Drawing approval, contract changes, requisitions, et cetera;
- 1.1.7 discuss jobsite issues;
- 1.1.8 Discuss Project close-out procedures;
- 1.1.9 Provide an opportunity for clarification of Contract Documents before work begins; and
- 1.1.10 Schedule regular meetings at appropriate intervals for the review of the progress of the Work.

2. Intent and Correlation of Contract Documents

- 2.1 The intent of the Contract Documents is to describe the complete Project. The Contract Documents consist of various components; each component complements the others. What is shown as a requirement by any one component shall be inferred as a requirement on all corresponding components.
- 2.2 The Contractor shall furnish all labor, equipment and materials, tools, transportation, insurance, services, supplies, operations and methods necessary for, and reasonably incidental to, the construction and completion of the Project. Any work that deviates from the Contract Documents which appears to be required by the exigencies of construction or by inconsistencies in the Contract Documents, will be determined by the Consultant and authorized in writing by the Consultant, Owner and the Bureau prior to execution. The Contractor shall be responsible for requesting clarifying information where the intent of the Contract Documents is uncertain.
- 2.3 The Contractor shall not utilize any apparent error or omission in the Contract Documents to the disadvantage of the Owner. The Contractor shall promptly notify the Consultant in writing of such errors or omissions. The Consultant shall make any corrections or clarifications necessary in such a situation to document the true intent of the Contract Documents.

00 72 13
General Conditions

3. Additional Drawings and Specifications

- 3.1 Upon the written request of the Contractor, the Owner shall provide, at no expense to the Contractor, up to five sets of printed Drawings and Specifications for the execution of the Work.
- 3.2 The Consultant shall promptly furnish to the Contractor revised Drawings and Specifications, for the area of the documents where those revisions apply, when corrections or clarifications are made by the Consultant. All such information shall be consistent with, and reasonably inferred from, the Contract Documents. The Contractor shall do no work without the proper Drawings and Specifications.

4. Ownership of Contract Documents

- 4.1 The designs represented on the Contract Documents are the property of the Consultant. The Drawings and Specifications shall not be used on other work without consent of the Consultant.

5. Permits, Laws, and Regulations

- 5.1 The Owner is responsible for obtaining any zoning approvals or other similar local project approvals necessary to complete the Work, unless otherwise specified in the Contract Documents.
- 5.2 The Owner is responsible for obtaining Maine Department of Environmental Protection, Maine Department of Transportation, or other similar state government project approvals necessary to complete the Work, unless otherwise indicated in the Contract Documents.
- 5.3 The Owner is responsible for obtaining any federal agency project approvals necessary to complete the Work, unless otherwise indicated in the Contract Documents.
- 5.4 The Owner is responsible for obtaining all easements for permanent structures or permanent changes in existing facilities.
- 5.5 The Contractor is responsible for obtaining and paying for all permits and licenses necessary for the implementation of the Work. The Contractor shall notify the Owner of any delays, variance or restrictions that may result from the issuing of permits and licenses.
- 5.6 The Contractor shall comply with all ordinances, laws, rules and regulations and make all required notices bearing on the implementation of the Work. In the event the Contractor observes disagreement between the Drawings and Specifications and any ordinances, laws, rules and regulations, the Contractor shall promptly notify the Consultant in writing. Any necessary changes shall be made as provided in the contract for changes in the work. The Contractor shall not perform any work knowing it to be contrary to such ordinances, laws, rules and regulations.
- 5.7 The Contractor shall comply with local, state and federal regulations regarding construction safety and all other aspects of the Work.
- 5.8 The Contractor shall comply with the Maine Code of Fair Practices and Affirmative Action, 5 M.R.S. §784 (2).

00 72 13
General Conditions

6. Taxes

- 6.1 The Owner is exempt from the payment of Maine State sales and use taxes as provided in 36 M.R.S. §1760 (1). The Contractor and Subcontractors shall not include taxes on exempt items in the construction contract.
- 6.2 Section 1760 further provides in subsection 61 that sales to a construction contractor or its subcontractor of tangible personal property that is to be physically incorporated in, and become a permanent part of, real property for sale to or owned by the Owner, are exempt from Maine State sales and use taxes. Tangible personal property is defined in 36 M.R.S. §1752 (17).
- 6.3 The Contractor may contact Maine Revenue Services, 24 State House Station, Augusta, Maine 04333 for guidance on tax exempt regulations authorized by 36 M.R.S. §1760 and detailed in Rule 302 (18-125 CMR 302).

7. Labor and Wages

- 7.1 The Contractor shall conform to the labor laws of the State of Maine, and all other laws, ordinances, and legal requirements affecting the work in Maine.
- 7.2 The Consultant shall include a wage determination document prepared by the Maine Department of Labor in the Contract Documents for state-funded contracts in excess of \$50,000. The document shows the minimum wages required to be paid to each category of labor employed on the project.
- 7.3 On projects requiring a Maine wage determination, the Contractor shall submit monthly payroll records to the Owner ("the contracting agency") showing the name and occupation of all workers and all independent contractors employed on the project. The monthly submission must also include the Contractor's company name, the title of the project, hours worked, hourly rate or other method of remuneration, and the actual wages or other compensation paid to each person.
- 7.4 The Contractor shall not reveal, in the payroll records submitted to the Owner, personal information regarding workers and independent contractors, other than the information described above. Such information shall not include Social Security number, employee identification number, or employee address or phone number, for example.
- 7.5 The Contractor shall conform to Maine statute (39-A M.R.S. §105-A (6)) by providing to the Workers' Compensation Board a list of all subcontractors and independent contractors on the job site and a record of the entity to whom that subcontractor or independent contractor is directly contracted and by whom that subcontractor or independent contractor is insured for workers' compensation purposes.
- 7.6 The Contractor shall enforce strict discipline and good order among their employees at all times, and shall not employ any person unfit or unskilled to do the work assigned to them.
- 7.7 The Contractor shall promptly pay all employees when their compensation is due, shall promptly pay all others who have billed and are due for materials, supplies and services used in the Work, and shall promptly pay all others who have billed and are due for insurance, workers compensation coverage, federal and state unemployment compensation, and Social Security

00 72 13
General Conditions

charges pertaining to this Project. Before final payments are made, the Contractor shall furnish to the Owner affidavits that all such payments described above have been made.

- 7.8 The Contractor may contact the Maine Department of Labor, 54 State House Station, Augusta, Maine 04333 for guidance on labor issues.
- 7.9 The Contractor may contact the Maine Workers' Compensation Board, 27 State House Station, Augusta, Maine 04333 for guidance on workers' compensation issues.

8. Indemnification

- 8.1 The Contractor shall indemnify and hold harmless the Owner and its officers and employees from and against any and all damages, liabilities, and costs, including reasonable attorney's fees, and defense costs, for any and all injuries to persons or property, including claims for violation of intellectual property rights, to the extent caused by the negligent acts or omissions of the Contractor, its employees, agents, officers or subcontractors in the performance of work under this Agreement. The Contractor shall not be liable for claims to the extent caused by the negligent acts or omissions of the Owner or for actions taken in reasonable reliance on written instructions of the Owner.
- 8.2 The Contractor shall notify the Owner promptly of all claims arising out of the performance of work under this Agreement by the Contractor, its employees or agents, officers or subcontractors.
- 8.3 This indemnity provision shall survive the termination of the Agreement, completion of the project or the expiration of the term of the Agreement.

9. Insurance Requirements

- 9.1 The Contractor shall provide, with each original of the signed Contract, an insurance certificate or certificates acceptable to the Owner and BGS. The Contractor shall submit insurance certificates to the Owner and BGS at the commencement of this Contract and at policy renewal or revision dates. The certificates shall identify the project name and BGS project number, and shall name the Owner as certificate holder and as additional insured for general liability and automobile liability coverages. The submitted forms shall contain a provision that coverage afforded under the insurance policies will not be canceled or materially changed unless at least ten days prior written notice by registered letter has been given to the Owner and BGS.
- 9.2 The Owner does not warrant or represent that the insurance required herein constitutes an insurance portfolio which adequately addresses all risks faced by the Contractor or its Subcontractors. The Contractor is responsible for the existence, extent and adequacy of insurance prior to commencement of work. The Contractor shall not allow any Subcontractor to commence work until all similar insurance required of the Subcontractor has been confirmed by the Contractor.
- 9.3 The Contractor shall procure and maintain primary insurance for the duration of the Project and, if written on a Claims-Made basis, shall also procure and maintain Extended Reporting Period (ERP) insurance for the period of time that any claims could be brought. The Contractor shall ensure that all Subcontractors they engage or employ will procure and maintain similar insurance

00 72 13
General Conditions

in form and amount acceptable to the Owner and BGS. At a minimum, the insurance shall be of the types and limits set forth herein protecting the Contractor from claims which may result from the Contractor's execution of the Work, whether such execution be by the Contractor or by those employed by the Contractor or by those for whose acts they may be liable. All required insurance coverages shall be placed with carriers authorized to conduct business in the State of Maine by the Maine Bureau of Insurance.

9.3.1 The Contractor shall have Workers' Compensation insurance for all employees on the Project site in accordance with the requirements of the Workers' Compensation law of the State of Maine. Minimum acceptable limits for Employer's Liability are:

Bodily Injury by Accident.....	\$500,000
Bodily Injury by Disease.....	\$500,000 Each Employee
Bodily Injury by Disease.....	\$500,000 Policy Limit

9.3.2 The Contractor shall have Commercial General Liability insurance providing coverage for bodily injury and property damage liability for all hazards of the Project including premise and operations, products and completed operations, contractual, and personal injury liabilities. The policy shall include collapse and underground coverage as well as explosion coverage if explosion hazards exist. Aggregate limits shall apply on a location or project basis. Minimum acceptable limits are:

General aggregate limit.....	\$2,000,000
Products and completed operations aggregate	\$1,000,000
Each occurrence limit.....	\$1,000,000
Personal injury aggregate.....	\$1,000,000

9.3.3 The Contractor shall have Automobile Liability insurance against claims for bodily injury, death or property damage resulting from the maintenance, ownership or use of all owned, non-owned and hired automobiles, trucks and trailers. Minimum acceptable limit is:
Any one accident or loss\$500,000

9.3.4 For the portion of a project which is new construction, the Contractor shall procure and maintain Builder's Risk insurance naming the Owner, Contractor, and any Subcontractor as insureds as their interest may appear. Covered causes of loss form shall be all Risks of Direct Physical Loss, endorsed to include flood, earthquake, transit and sprinkler leakage where sprinkler coverage is applicable. Unless specifically authorized in writing by the Owner, the limit of insurance shall not be less than the initial contract amount, for the portion of the project which is new construction, and coverage shall apply during the entire contract period and until the work is accepted by the Owner.

9.3.5 The Contractor shall have Owner's Protective Liability insurance for contract values \$50,000 and above, naming the Owner as the Named Insured. Minimum acceptable limits are:
General aggregate limit.....\$2,000,000
Each occurrence limit.....\$1,000,000

10. Contract Bonds

10.1 When noted as required in the Bid Documents, the Contractor shall provide to the Owner a Performance Bond and a Payment Bond, or "contract bonds", upon execution of the contract. Each bond value shall be for the full amount of the contract and issued by a surety company authorized to do business in the State of Maine as approved by the Owner. The bonds shall be

00 72 13
General Conditions

executed on the forms furnished in the Bid Documents. The bonds shall allow for any subsequent additions or deductions of the contract.

- 10.2 The contract bonds shall continue in effect for one year after final acceptance of the contract to protect the Owner's interest in connection with the one year guarantee of workmanship and materials and to assure settlement of claims for the payment of all bills for labor, materials and equipment by the Contractor.

11. Patents and Royalties

- 11.1 The Contractor shall, for all time, secure for the Owner the free and undisputed right to the use of any patented articles or methods used in the Work. The expense of defending any suits for infringement or alleged infringement of such patents shall be borne by the Contractor. Awards made regarding patent suits shall be paid by the Contractor. The Contractor shall hold the Owner harmless regarding patent suits that may arise due to installations made by the Contractor, and to any awards made as a result of such suits.
- 11.2 Any royalty payments related to the work done by the Contractor for the Project shall be borne by the Contractor. The Contractor shall hold the Owner harmless regarding any royalty payments that may arise due to installations made by the Contractor.

12. Surveys, Layout of Work

- 12.1 The Owner shall furnish all property surveys unless otherwise specified.
- 12.2 The Contractor is responsible for correctly staking out the Work on the site. The Contractor shall employ a competent surveyor to position all construction on the site. The surveyor shall run the axis lines, establish correct datum points and check each line and point on the site to insure their accuracy. All such lines and points shall be carefully preserved throughout the construction.
- 12.3 The Contractor shall lay out all work from dimensions given on the Drawings. The Contractor shall take measurements and verify dimensions of any existing work that affects the Work or to which the Work is to be fitted. The Contractor is solely responsible for the accuracy of all measurements. The Contractor shall verify all grades, lines, levels, elevations and dimensions shown on the Drawings and report any errors or inconsistencies to the Consultant prior to commencing work.

13. Record of Documents

- 13.1 The Contractor shall maintain one complete set of Contract Documents on the jobsite, in good order and current status, for access by the Owner and Consultant.
- 13.2 The Contractor shall maintain, continuously updated, complete records of Requests for Information, Architectural Supplemental Instructions (or equivalent), Information Bulletins, supplemental sketches, Change Order Proposals, Change Orders, Shop Drawings, testing reports, et cetera, for access by the Owner and Consultant.

00 72 13
General Conditions

14. Allowances

- 14.1 The Contract Price shall include all allowances described in the Contract Documents. The Contractor shall include all overhead and profit necessary to implement each allowance in their Contract Price.
- 14.2 The Contractor shall not be required to employ parties for allowance work against whom the Contractor has a reasonable objection. In such a case, the Contractor shall notify the Owner in writing of their position and shall propose an alternative party to complete the work of the allowance.

15. Shop Drawings

- 15.1 The Contractor shall administer Shop Drawings prepared by the Contractor, Subcontractors, suppliers or others to conform to the approved Schedule of the Work. The Contractor shall verify all field measurements, check and authorize all Shop Drawings and schedules required by the Work. The Contractor is the responsible party and contact for the Contractor's work as well as that of Subcontractors, suppliers or others who provide Shop Drawings.
- 15.2 The Consultant shall review and acknowledge Shop Drawings, with reasonable promptness, for general conformity with the design concept of the project and compliance with the information provided in the Contract Documents.
- 15.3 The Contractor shall provide monthly updated logs containing: requests for information, information bulletins, supplemental instructions, supplemental sketches, change order proposals, change orders, submittals, testing and deficiencies.
- 15.4 The Contractor shall make any corrections required by the Consultant, and shall submit a quantity of corrected copies as may be needed. The acceptance of Shop Drawings or schedules by the Consultant shall not relieve the Contractor from responsibility for deviations from Drawings and Specifications, unless the Contractor has called such deviations to the attention of the Consultant at the time of submission and secured the Consultant's written approval. The acceptance of Shop Drawings or schedules by the Consultant does not relieve the Contractor from responsibility for errors in Shop Drawings or schedules.

16. Samples

- 16.1 The Contractor shall furnish for approval, with reasonable promptness, all samples as directed by the Consultant. The Consultant shall review and approve such samples, with reasonable promptness, for general conformity with the design concept of the project and compliance with the information provided in the Contract Documents. The subsequent work shall be in accord with the approved samples.

17. Substitutions

- 17.1 The Contractor shall furnish items and materials described in the Contract Documents. If the item or material specified describes a proprietary product, or uses the name of a manufacturer, the term "or approved equal" shall be implied, if it is not included in the text. The specific item or material specified establishes a minimum standard for the general design, level of quality, type, function, durability, efficiency, reliability, compatibility, warranty coverage, installation factors

00 72 13
General Conditions

and required maintenance. The Drawing or written Specification shall not be construed to exclude other manufacturers products of comparable design, quality, and efficiency.

- 17.2 The Contractor may submit detailed information about a proposed substitution to the Consultant for consideration. Particular models of items and particular materials which the Contractor asserts to be equal to the items and materials identified in the Contract Documents shall be allowed only with written approval by the Consultant. The request for substitution shall include a cost comparison and a reason or reasons for the substitution.
- 17.3 The Consultant may request additional information about the proposed substitution. The approval or rejection of a proposed substitution may be based on timeliness of the request, source of the information, the considerations of minimum standards described above, or other considerations. The Consultant should briefly state the rationale for the decision. The decision shall be considered final.
- 17.4 The duration of a substitution review process can not be the basis for a claim for delay in the Schedule of the Work.

18. Assignment of Contract

- 18.1 The Contractor shall not assign or sublet the contract as a whole without the written consent of the Owner. The Contractor shall not assign any money due to the Contractor without the written consent of the Owner.

19. Separate Contracts

- 19.1 The Owner reserves the right to create other contracts in connection with this Project using similar General Conditions. The Contractor shall allow the Owner's other contractors reasonable opportunity for the delivery and storage of materials and the execution of their work. The Contractor shall coordinate and properly connect the Work of all contractors.
- 19.2 The Contractor shall promptly report to the Consultant and Owner any apparent deficiencies in work of the Owner's other contractors that impacts the proper execution or results of the Contractor. The Contractor's failure to observe or report any deficiencies constitutes an acceptance of the Owner's other contractors work as suitable for the interface of the Contractor's work, except for latent deficiencies in the Owner's other contractors work.
- 19.3 Similarly, the Contractor shall promptly report to the Consultant and Owner any apparent deficiencies in their own work that would impact the proper execution or results of the Owner's other contractors.
- 19.4 The Contractor shall report to the Consultant and Owner any conflicts or claims for damages with the Owner's other contractors and settle such conflicts or claims for damages by mutual agreement or arbitration, if necessary, at no expense to the Owner.
- 19.5 In the event the Owner's other contractors sue the Owner regarding any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor, who shall defend such proceedings at the Contractor's expense. The Contractor shall pay or satisfy any judgment that may arise against the Owner, and pay all other costs incurred.

00 72 13
General Conditions

20. Subcontracts

- 20.1 The Contractor shall not subcontract any part of this contract without the written permission of the Owner.
- 20.2 The Contractor shall submit a complete list of named Subcontractors and material suppliers to the Consultant and Owner for approval by the Owner prior to commencing work. The Subcontractors named shall be reputable companies of recognized standing with a record of satisfactory work.
- 20.3 The Contractor shall not employ any Subcontractor or use any material until they have been approved, or where there is reason to believe the resulting work will not comply with the Contract Documents.
- 20.4 The Contractor, not the Owner, is as fully responsible for the acts and omissions of Subcontractors and of persons employed by them, as the Contractor is for the acts and omissions of persons directly or indirectly employed by the Contractor.
- 20.5 Neither the Contract Documents nor any Contractor-Subcontractor contract shall indicate, infer or create any direct contractual relationship between any Subcontractor and the Owner.

21. Contractor-Subcontractor Relationship

- 21.1 The Contractor shall be bound to the Subcontractor by all the obligations in the Contract Documents that bind the Contractor to the Owner.
- 21.2 The Contractor shall pay the Subcontractor, in proportion to the dollar value of the work completed and requisitioned by the Subcontractor, the approved dollar amount allowed to the Contractor no more than seven days after receipt of payment from the Owner.
- 21.3 The Contractor shall pay the Subcontractor accordingly if the Contract Documents or the subcontract provide for earlier or larger payments than described in the provision above.
- 21.4 The Contractor shall pay the Subcontractor for completed and requisitioned subcontract work, less retainage, no more than seven days after receipt of payment from the Owner for the Contractor's approved Requisition for Payment, even if the Consultant fails to certify a portion of the Requisition for Payment for a cause not the fault of the Subcontractor.
- 21.5 The Contractor shall not make a claim for liquidated damages or penalty for delay in any amount in excess of amounts that are specified by the subcontract.
- 21.6 The Contractor shall not make a claim for services rendered or materials furnished by the Subcontractor unless written notice is given by the Contractor to the Subcontractor within ten calendar days of the day in which the claim originated.
- 21.7 The Contractor shall give the Subcontractor an opportunity to present and to submit evidence in any progress conference or disputes involving subcontract work.

00 72 13
General Conditions

- 21.8 The Contractor shall pay the Subcontractor a just share of any fire insurance payment received by the Contractor.
- 21.9 The Subcontractor shall be bound to the Contractor by the terms of the Contract Documents and assumes toward the Contractor all the obligations and responsibilities that the Contractor, by those documents, assumes toward the Owner.
- 21.10 The Subcontractor shall submit applications for payment to the Contractor in such reasonable time as to enable the Contractor to apply for payment as specified.
- 21.11 The Subcontractor shall make any claims for extra cost, extensions of time or damages, to the Contractor in the manner provided in these General Conditions for like claims by the Contractor to the Owner, except that the time for the Subcontractor to make claims for extra cost is seven calendar days after the receipt of Consultant's instructions.
22. Supervision of the Work
- 22.1 During all stages of the Work the Contractor shall have a competent superintendent, with any necessary assistant superintendents, overseeing the project. The superintendent shall not be reassigned without the consent of the Owner unless a superintendent ceases to be employed by the Contractor due to unsatisfactory performance.
- 22.2 The superintendent represents the Contractor on the jobsite. Directives given by the Consultant or Owner to the superintendent shall be as binding as if given directly to the Contractor's main office. All important directives shall be confirmed in writing to the Contractor. The Consultant and Owner are not responsible for the acts or omissions of the superintendent or assistant superintendents.
- 22.3 The Contractor shall provide supervision of the Work equal to the industry's highest standard of care. The superintendent shall carefully study and compare all Contract Documents and promptly report any error, inconsistency or omission discovered to the Consultant. The Contractor may not necessarily be held liable for damages resulting directly from any error, inconsistency or omission in the Contract Documents or other instructions by the Consultant that was not revealed by the superintendent in a timely way.
23. Observation of the Work
- 23.1 The Contractor shall allow the Owner, the Consultant and the Bureau continuous access to the site for the purpose of observation of the progress of the work. All necessary safeguards and accommodations for such observations shall be provided by the Contractor.
- 23.2 The Contractor shall coordinate all required testing, approval or demonstration of the Work. The Contractor shall give sufficient notice to the appropriate parties of readiness for testing, inspection or examination.
- 23.3 The Contractor shall schedule inspections and obtain all required certificates of inspection for inspections by a party other than the Consultant.

00 72 13
General Conditions

- 23.4 The Consultant shall make all scheduled observations promptly, prior to the work being concealed or buried by the Contractor. If approval of the Work is required of the Consultant, the Contractor shall notify the Consultant of the construction schedule in this regard. Work concealed or buried prior to the Consultant's approval may need to be uncovered at the Contractor's expense.
- 23.5 The Consultant may order reexamination of questioned work, and, if so ordered, the work must be uncovered by the Contractor. If the work is found to conform to the Contract Documents, the Owner shall pay the expense of the reexamination and remedial work. If the work is found to not conform to the Contract Documents, the Contractor shall pay the expense, unless the defect in the work was caused by the Owner's Contractor, whose responsibility the reexamination expense becomes.
- 23.6 The Bureau shall periodically observe the Work during the course of construction and make recommendations to the Contractor or Consultant as necessary. Such recommendations shall be considered and implemented through the usual means for changes to the Work.
24. Consultant's Status
- 24.1 The Consultant represents the Owner during the construction period, and observes the work in progress on behalf of the Owner. The Consultant has authority to act on behalf of the Owner only to the extent expressly provided by the Contract Documents or otherwise demonstrated to the Contractor. The Consultant has authority to stop the work whenever such an action is necessary, in the Consultant's reasonable opinion, to ensure the proper execution of the contract.
- 24.2 The Consultant is the interpreter of the conditions of the contract and the judge of its performance. The Consultant shall favor neither the Owner nor the Contractor, but shall use the Consultant's powers under the contract to enforce faithful performance by both parties.
- 24.3 In the event of the termination of the Consultant's employment on the project prior to completion of the work, the Owner shall appoint a capable and reputable replacement. The status of the new Consultant relative to this contract shall be that of the former Consultant.
25. Management of the Premises
- 25.1 The Contractor shall place equipment and materials, and conduct activities on the premises in a manner that does not unreasonably hinder site circulation, environmental stability, or any long term effect. Likewise, the Consultant's directions shall not cause the use of premises to be impeded for the Contractor or Owner.
- 25.2 The Contractor shall not use the premises for any purpose other than that which is directly related to the scope of work. The Owner shall not use the premises for any purpose incompatible with the proposed work simultaneous to the work of the Contractor.
- 25.3 The Contractor shall enforce the Consultant's instructions regarding information posted on the premises such as signage and advertisements, as well as activities conducted on the premises such as fires, and smoking.

00 72 13
General Conditions

- 25.4 The Owner may occupy any part of the Project that is completed with the written consent of the Contractor, and without prejudice to any of the rights of the Owner or Contractor. Such use or occupancy shall not, in and of itself, be construed as a final acceptance of any work or materials.
26. Safety and Security of the Premises
- 26.1 The Contractor shall designate, and make known to the Consultant and the Owner, a safety officer whose duty is the prevention of accidents on the site.
- 26.2 The Contractor shall continuously maintain security on the premises and protect from unreasonable occasion of injury all people authorized to be on the job site. The Contractor shall also effectively protect the property and adjacent properties from damage or loss.
- 26.3 The Contractor shall take all necessary precautions to ensure the safety of workers and others on and adjacent to the site, abiding by applicable local, state and federal safety regulations. The Contractor shall erect and continuously maintain safeguards for the protection of workers and others, and shall post signs and other warnings regarding hazards associated with the construction process, such as protruding fasteners, moving equipment, trenches and holes, scaffolding, window, door or stair openings, and falling materials.
- 26.4 The Contractor shall restore the premises to conditions that existed prior to the start of the project at areas not intended to be altered according to the Contract Documents.
- 26.5 The Contractor shall protect existing utilities and exercise care working in the vicinity of utilities shown in the Drawings and Specifications or otherwise located by the Contractor.
- 26.6 The Contractor shall protect from damage existing trees and other significant plantings and landscape features of the site which will remain a permanent part of the site. If necessary or indicated in the Contract Documents, tree trunks shall be boxed and barriers erected to prevent damage to tree branches or roots.
- 26.7 The Contractor shall repair or replace damage to the Work caused by the Contractor's or Subcontractor's forces, including that which is reasonably protected, at the expense of the responsible party.
- 26.8 The Contractor shall not load, or allow to be loaded, any part of the Project with a force which imperils personal or structural safety. The Consultant may consult with the Contractor on such means and methods of construction, however, the ultimate responsibility lies with the Contractor.
- 26.9 The Contractor shall not jeopardize any work in place with subsequent construction activities such as blasting, drilling, excavating, cutting, patching or altering work. The Consultant must approve altering any structural components of the project. The Contractor shall supervise all construction activities carried out by others on site to ensure that the work is neatly done and in a manner that will not endanger the structure or the component parts.
- 26.10 The Contractor may act with their sole discretion in emergency situations that potentially effect health, life or serious damage to the premises or adjacent properties, to prevent such potential loss or injury. The Contractor may negotiate with the Owner for compensation for expenses due to such emergency work.

00 72 13
General Conditions

- 26.11 The Contractor and Subcontractors shall have no responsibility for the identification, discovery, presence, handling, removal or disposal of, or exposure of persons to, hazardous materials in any form at the project site. The Contractor shall avoid disruption of any hazardous materials or toxic substances at the project site and promptly notify the Owner in writing on the occasion of such a discovery.
- 26.12 The Contractor shall keep the premises free of any unsafe accumulation of waste materials caused by the work. The Contractor shall regularly keep the spaces “broom clean”. See the Close-out of the Work provisions of this section regarding cleaning at the completion of the project.
27. Changes in the Work
- 27.1 The Contractor shall not proceed with extra work without an approved Change Order or Construction Change Directive. A Change Order which has been properly signed by all parties shall become a part of the contract.
- 27.2 A Change Order is the usual document for directing changes in the Work. In certain circumstances, however, the Owner may utilize a Construction Change Directive to direct the Contractor to perform changes in the Work that are generally consistent with the scope of the project. The Owner shall use a Construction Change Directive only when the normal process for approving changes to the Work has failed to the detriment of the Project, or when agreement on the terms of a Change Order cannot be met, or when an urgent situation requires, in the Owner's judgment, prompt action by the Contractor.
- 27.3 The Consultant shall prepare the Construction Change Directive representing a complete scope of work, with proposed Contract Price and Contract Time revisions, if any, clearly stated.
- 27.4 The Contractor shall promptly carry out a Construction Change Directive which has been signed by the Owner and the Consultant. Work thus completed by the Contractor constitutes the basis for a Change Order. Changes in the Contract Price and Contract Time shall be as defined in the Construction Change Directive unless subsequently negotiated with some other terms.
- 27.5 The method of determining the dollar value of extra work shall be by:
- .1 an estimate of the Contractor accepted by Owner as a lump sum, or
 - .2 unit prices named in the contract or subsequently agreed upon, or
 - .3 cost plus a designated percentage, or
 - .4 cost plus a fixed fee.
- 27.6 The Contractor shall determine the dollar value of the extra work for both the lump sum and cost plus designated percentage methods so as not to exceed the following rates. The rates include all overhead and profit expenses.
- .1 Contractor - for any work performed by the Contractor's own forces, up to 20% of the cost;
 - .2 Subcontractor - for work performed by Subcontractor's own forces, up to 20% of the cost;
 - .3 Contractor - for work performed by Contractor's Subcontractor, up to 10% of the amount due the Subcontractor.
- 27.7 The Contractor shall keep and provide records as needed or directed for the cost plus designated percentage method. The Consultant shall review and certify the appropriate amount which

00 72 13
General Conditions

- includes the Contractor's overhead and profit. The Owner shall make payments based on the Consultant's certificate.
- 27.8 Cost reflected in Change Orders shall be limited to the following: cost of materials, cost of delivery, cost of labor (including Social Security, pension, Workers' Compensation insurance, and unemployment insurance), and cost of rental of power tools and equipment. Labor cost may include a pro-ratio share of a foreman's time only in the case of an extension of contract time granted due to the Change Order.
- 27.9 Overhead reflected in Change Orders shall be limited to the following: bond premium, supervision, wages of clerks, time keepers, and watchmen, small tools, incidental expenses, general office expenses, and all other overhead expenses directly related to the Change Order.
- 27.10 The Contractor shall provide credit to the Owner for labor, materials, equipment and other costs but not overhead and profit expenses for those Change Order items that result in a net value of credit to the contract.
- 27.11 The Owner may change the scope of work of the Project without invalidating the contract. The Owner shall notify the Contractor of a change of the scope of work for the Owner's Contractors, which may affect the work of this Contractor, without invalidating the contract. Change Orders for extension of the time caused by such changes shall be developed at the time of directing the change in scope of work.
- 27.12 The Consultant may order minor changes in the Work, not involving extra cost, which is consistent with the intent of the design or project.
- 27.13 The Contractor shall immediately give written notification to the Consultant of latent conditions discovered at the site which materially differ from those represented in the Drawings or Specifications, and which may eventually result in a change in the scope of work. The Contractor shall suspend work until receiving direction from the Consultant. The Consultant shall promptly investigate the conditions and respond to the Contractor's notice with direction that avoids any unnecessary delay of the Work. The Consultant shall determine if the discovered conditions warrant a Change Order.
- 27.14 The Contractor shall, within ten calendar days of receipt of the information, give written notification to the Consultant if the Contractor claims that instructions by the Consultant will constitute extra cost not accounted for by Change Order or otherwise under the contract. The Consultant shall promptly respond to the Contractor's notice with direction that avoids any unnecessary delay of the Work. The Consultant shall determine if the Contractor's claim warrants a Change Order.
28. Correction of the Work
- 28.1 The Contractor shall promptly remove from the premises all work the Consultant declares is non-conforming to the contract. The Contractor shall replace the work properly at no expense to the Owner. The Contractor is also responsible for the expenses of others whose work was damaged or destroyed by such remedial work.

00 72 13
General Conditions

- 28.2 The Owner may elect to remove non-conforming work if it is not removed by the Contractor within a reasonable time, that time defined in a written notice from the Consultant. The Owner may elect to store removed non-conforming work not removed by the Contractor at the Contractor's expense. The Owner may, with ten days written notice, dispose of materials which the Contractor does not remove. The Owner may sell the materials and apply the net proceeds, after deducting all expenses, to the costs that should have been borne by the Contractor.
- 28.3 The Contractor shall remedy any defects due to faulty materials or workmanship and pay for any related damage to other work which appears within a period of one year from the date of substantial completion, and in accord with the terms of any guarantees provided in the contract. The Owner shall promptly give notice of observed defects to the Contractor and Consultant. The Consultant shall determine the status of all claimed defects. The Contractor shall perform all remedial work without unjustifiable delay in either the initial response or the corrective action.
- 28.4 The Consultant may authorize, after a reasonable notification to the Contractor, an equitable deduction from the contract amount in lieu of the Contractor correcting non-conforming or defective work.
29. Owner's Right to do Work
- 29.1 The Owner may, using other contractors, correct deficiencies attributable to the Contractor, or complete unfinished work. Such action shall take place only after giving the Contractor three days written notice, and provided the Consultant approves of the proposed course of action as an appropriate remedy. The Owner may then deduct the cost of the remedial work from the amount due the Contractor.
- 29.2 The Owner may act with their sole discretion when the Contractor is unable to take action in emergency situations that potentially effect health, life or serious damage to the premises or adjacent properties, to prevent such potential loss or injury. The Owner shall inform the Contractor of the emergency work performed, particularly where it may affect the work of the Contractor.
30. Termination of Contract and Stop Work Action
- 30.1 The Owner may, owing to a certificate of the Consultant indicating that sufficient cause exists to justify such action, without prejudice to any other right or remedy and after giving the Contractor and the Contractor's surety seven days written notice, terminate the employment of the Contractor. At that time the Owner may take possession of the premises and of all materials,

00 72 13
General Conditions

tools and appliances on the premises and finish the work by whatever method the Owner may deem expedient. Cause for such action by the Owner includes:

- .1 the contractor is adjudged bankrupt, or makes a general assignment for the benefit of its creditors, or
- .2 a receiver is appointed due to the Contractor's insolvency, or
- .3 the Contractor persistently or repeatedly refuses or fails to provide enough properly skilled workers or proper materials, or
- .4 the Contractor fails to make prompt payment to Subcontractors or suppliers of materials or labor, or
- .5 the Contractor persistently disregards laws, ordinances or the instructions of the Consultant, or is otherwise found guilty of a substantial violation of a provision of the Contract Documents.

- 30.2 The Contractor is not entitled, as a consequence of the termination of the employment of the Contractor as described above, to receive any further payment until the Work is finished. If the unpaid balance of the contract amount exceeds the expense of finishing the Work, including compensation for additional architectural, managerial and administrative services, such balance shall be paid to the Contractor. If the expense of finishing the Work exceeds the unpaid balance, the Contractor shall pay the difference to the Owner. The Consultant shall certify the expense incurred by the Contractor's default. This obligation for payment shall continue to exist after termination of the contract.
- 30.3 The Contractor may, if the Work is stopped by order of any court or other public authority for a period of thirty consecutive days, and through no act or fault of the Contractor or of anyone employed by the Contractor, with seven days written notice to the Owner and the Consultant, terminate this contract. The Contractor may then recover from the Owner payment for all work executed, any proven loss and reasonable profit and damage.
- 30.4 The Contractor may, if the Consultant fails to issue a certificate for payment within seven days after the Contractor's formal request for payment, through no fault of the Contractor, or if the Owner fails to pay to the Contractor within 30 days after submission of any sum certified by the Consultant, with seven days written notice to the Owner and the Consultant, stop the Work or terminate this Contract.

31. Delays and Extension of Time

- 31.1 The completion date of the contract shall be extended if the work is delayed by changes ordered in the work which have approved time extensions, or by an act or neglect of the Owner, the Consultant, or the Owner's Contractor, or by strikes, lockouts, fire, flooding, unusual delay in transportation, unavoidable casualties, or by other causes beyond the Contractor's control. The Consultant shall determine the status of all claimed causes.
- 31.2 The contract shall not be extended for delay occurring more than seven calendar days before the Contractor's claim made in writing to the Consultant. In case of a continuing cause of delay, only one claim is necessary.
- 31.3 The contract shall not be extended due to failure of the Consultant to furnish drawings if no schedule or agreement is made between the Contractor and the Consultant indicating the dates

00 72 13
General Conditions

which drawings shall be furnished and fourteen calendar days has passed after said date for such drawings.

31.4 This article does not exclude the recovery of damages for delay by either party under other provisions in the Contract Document.

32. Payments to the Contractor

- 32.1 As noted under *Preconstruction Conference* in this section, the Contractor shall submit a Schedule of Values form, before the first application for payment, for approval by the Owner and Consultant. The Consultant may direct the Contractor to provide evidence that supports the correctness of the form. The approved Schedule of Values shall be used as a basis for payments.
- 32.2 The Contractor shall submit an application for each payment (“Requisition for Payment”) on a form approved by the Owner and Consultant. The Consultant may require receipts or other documents showing the Contractor's payments for materials and labor, including payments to Subcontractors.
- 32.3 The Contractor shall submit Requisitions for Payment as the work progresses not more frequently than once each month, unless the Owner approves a more frequent interval due to unusual circumstances. The Requisition for Payment is based on the proportionate quantities of the various classes of work completed or incorporated in the Work, in agreement with the actual progress of the Work and the dollar value indicated in the Schedule of Values.
- 32.4 The Consultant shall verify and certify each Requisition for Payment which appears to be complete and correct prior to payment being made by the Owner. The Consultant may certify an appropriate amount for materials not incorporated in the Work which have been delivered and suitably stored at the site. The Contractor shall submit bills of sale, insurance certificates, or other such documents that will adequately protect the Owner’s interests prior to payments being certified.
- 32.5 In the event any materials delivered but not yet incorporated in the Work have been included in a certified Requisition for Payment with payment made, and said materials thereafter are damaged, deteriorated or destroyed, or for any reason whatsoever become unsuitable or unavailable for use in the Work, the full amount previously allowed shall be deducted from subsequent payments unless the Contractor satisfactorily replaces said material.
- 32.6 The Contractor may request certification of an appropriate dollar amount for materials not incorporated in the Work which have been delivered and suitably stored away from the site. The Contractor shall submit bills of sale, insurance certificates, right-of-entry documents or other such documents that will adequately protect the Owner’s interests. The Consultant shall determine if the Contractor's documentation for the materials is complete and specifically designated for the Project. The Owner may allow certification of such payments.
- 32.7 Subcontractors may request, and shall receive from the Consultant, copies of approved Requisitions for Payment showing the amounts certified in the Schedule of Values.
- 32.8 Certified Requisitions for Payment, payments made to the Contractor, or partial or entire occupancy of the project by the Owner shall not constitute an acceptance of any work that does

00 72 13
General Conditions

not conform to the Contract Documents. The making and acceptance of the final payment constitutes a waiver of all claims by the Owner, other than those arising from unsettled liens, from faulty work or materials appearing within one year from final payment or from requirements of the Drawings and Specifications, and of all claims by the Contractor, except those previously made and still unsettled.

33. Payments Withheld

- 33.1 The Owner shall retain five percent of each payment due the Contractor as part security for the fulfillment of the contract by the Contractor. The Owner may make payment of a portion of this “retainage” to the Contractor temporarily or permanently during the progress of the Work. The Owner may thereafter withhold further payments until the full amount of the five percent is reestablished. The Contractor may deposit with the Maine State Treasurer certain securities in place of retainage amounts due according to Maine Statute (5 M.R.S. §1746).
- 33.2 The Consultant may withhold or nullify the whole or a portion of any Requisitions for Payment submitted by the Contractor in the amount that may be necessary, in his reasonable opinion, to protect the Owner from loss due to any of the following:
- .1 defective work not remedied;
 - .2 claims filed or reasonable evidence indicating probable filing of claims;
 - .3 failure to make payments properly to Subcontractors or suppliers;
 - .4 a reasonable doubt that the contract can be completed for the balance then unpaid;
 - .5 liability for damage to another contractor.

The Owner shall make payment to the Contractor, in the amount withheld, when the above circumstances are removed.

34. Liens

- 34.1 The Contractor shall deliver to the Owner a complete release of all liens arising out of this contract before the final payment or any part of the retainage payment is released. The Contractor shall provide with the release of liens an affidavit asserting each release includes all labor and materials for which a lien could be filed. Alternately, the Contractor, in the event any Subcontractor or supplier refuses to furnish a release of lien in full, may furnish a bond satisfactory to the Owner, to indemnify the Owner against any lien.
- 34.2 In the event any lien remains unsatisfied after all payments to the Contractor are made by the Owner, the Contractor shall refund to the Owner all money that the latter may be compelled to pay in discharging such lien, including all cost and reasonable attorney’s fees.

35. Workmanship

- 35.1 The Contractor shall provide materials, equipment, and installed work equal to or better than the quality specified in the Contract Documents and approved in submittal and sample. The installation methods shall be of the highest standards, and the best obtainable from the respective trades. The Consultant’s decision on the quality of work shall be final.

00 72 13
General Conditions

- 35.2 The Contractor shall know local labor conditions for skilled and unskilled labor in order to apply the labor appropriately to the Work. All labor shall be performed by individuals well skilled in their respective trades.
- 35.3 The Contractor shall perform all cutting, fitting, patching and placing of work in such a manner to allow subsequent work to fit properly, whether that be by the Contractor, the Owner's Contractors or others. The Owner and Consultant may advise the Contractor regarding such subsequent work. Notwithstanding the notification or knowledge of such subsequent work, the Contractor may be directed to comply with this standard of compatible construction by the Consultant at the Contractor's expense.
- 35.4 The Contractor shall request clarification or revision of any design work by the Consultant, prior to commencing that work, in a circumstance where the Contractor believes the work cannot feasibly be completed at the highest quality, or as indicated in the Contract Documents. The Consultant shall respond to such requests in a timely way, providing clarifying information, a feasible revision, or instruction allowing a reduced quality of work. The Contractor shall follow the direction of the Consultant regarding the required request for information.
- 35.5 The Contractor shall guarantee the Work against any defects in workmanship and materials for a period of one year commencing with the date of the Certificate of Substantial Completion, unless specified otherwise for specific elements of the project. The Work may also be subdivided in mutually agreed upon components, each defined by a separate Certificate of Substantial Completion.
36. Close-out of the Work
- 36.1 The Contractor shall remove from the premises all waste materials caused by the work. The Contractor shall make the spaces "broom clean" unless a more thorough cleaning is specified. The Contractor shall clean all windows and glass immediately prior to the final inspection, unless otherwise directed.
- 36.2 The Owner may conduct the cleaning of the premises where the Contractor, duly notified by the Consultant, fails to adequately complete the task. The expense of this cleaning may be deducted from the sum due to the Contractor.
- 36.3 The Contractor shall participate in all final inspections and acknowledge the documentation of unsatisfactory work, customarily called the "punch list", to be corrected by the Contractor. The Consultant shall document the successful completion of the Work in a dated Certificate of Substantial Completion, to be signed by Owner, Consultant, and Contractor.
- 36.4 The Contractor shall not call for final inspection of any portion of the Work that is not completely and permanently installed. The Contractor may be found liable for the expenses of individuals called to final inspection meetings prematurely.
- 36.5 The Contractor and all major Subcontractors shall participate in the end-of-warranty-period conference, typically scheduled close to one year after the Substantial Completion date.

00 72 13
General Conditions

37. Date of Completion and Liquidated Damages

- 37.1 The Contractor may make a written request to the Owner for an extension or reduction of time, if necessary. The request shall include the reasons the Contractor believes justifies the proposed completion date. The Owner may grant the revision of the contract completion date if the Work was delayed due to conditions beyond the control and the responsibility of the Contractor. The Contractor shall not conduct unauthorized accelerated work or file delay claims to recover alleged damages for unauthorized early completion.

- 37.2 The Contractor shall vigorously pursue the completion of the Work and notify the Owner of any factors that have, may, or will affect the approved Schedule of the Work. The Contractor may be found responsible for expenses of the Owner or Consultant if the Contractor fails to make notification of project delays.

- 37.3 The Project is planned to be done in an orderly fashion which allows for an iterative submittal review process, construction administration including minor changes in the Work and some bad weather. The Contractor shall not file delay claims to recover alleged damages on work the Consultant determines has followed the expected rate of progress.

- 37.4 The Consultant shall prepare the Certificate of Substantial Completion which, when signed by the Owner and the Contractor, documents the date of Substantial Completion of the Work or a designated portion of the Work. The Owner shall not consider the issuance of a Certificate of Occupancy by an outside authority a prerequisite for Substantial Completion if the Certificate of Occupancy cannot be obtained due to factors beyond the Contractor’s control.

- 37.5 Liquidated Damages may be deducted from the sum due to the Contractor for each calendar day that the Work remains uncompleted after the completion date specified in the Contract or an approved amended completion date. The dollar amount per day shall be calculated using the Schedule of Liquidated Damages table shown below.

If the original contract amount is:	The per day Liquidated Damages shall be:
Less than \$100,000	\$250
\$100,000 to less than \$2,000,000	\$750
\$2,000,000 to less than \$10,000,000	\$1,500
\$10,000,000 and greater	\$1,500 plus \$250 for each \$2,000,000 over \$10,000,000

38. Dispute Resolution

38.1 Mediation

- 38.1.1 A dispute between the parties which arises under this Contract which cannot be resolved through informal negotiation, shall be submitted to a neutral mediator jointly selected by the parties.

- 38.1.2 Either party may file suit before or during mediation if the party, in good faith, deems it to be necessary to avoid losing the right to sue due to a statute of limitations. If suit is filed before good faith mediation efforts are completed, the party filing suit shall agree to stay all proceedings in the lawsuit pending completion of the mediation process, provided such stay is without prejudice.

00 72 13
General Conditions

38.1.3 In any mediation between the Owner and the Consultant, the Owner has the right to consolidate related claims between Owner and Contractor.

38.2 Arbitration

38.2.1 If the dispute is not resolved through mediation, the dispute shall be settled by arbitration. The arbitration shall be conducted before a panel of three arbitrators. Each party shall select one arbitrator; the third arbitrator shall be appointed by the arbitrators selected by the parties. The arbitration shall be conducted in accordance with the Maine Uniform Arbitration Act (MUAA), except as otherwise provided in this section.

38.2.2 The decision of the arbitrators shall be final and binding upon all parties. The decision may be entered in court as provided in the MUAA.

38.2.3 The costs of the arbitration, including the arbitrators' fees shall be borne equally by the parties to the arbitration, unless the arbitrator orders otherwise.

38.2.4 In any arbitration between the Owner and the Consultant, the Owner has the right to consolidate related claims between Owner and Contractor.

00 73 46
Wage Determination Schedule

PART 1- GENERAL

1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specifications Sections, apply to this Section.

1.2 Summary

- A. This Section includes the wage determination requirements for Contractors as issued by the State of Maine Department of Labor Bureau of Labor Standards or the United States Department of Labor.

1.3 Requirements

- A. Conform to the wage determination schedule for this project which is shown on the following page.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION (not used)

State of Maine Department of Labor - Bureau of Labor Standards
Augusta, Maine 04333-0045 - Telephone (207) 623-7906

Wage Determination - In accordance with 26 MRS §1301 et. seq., this is a determination by the Bureau of Labor Standards, of the fair minimum wage rate to be paid to laborers and workers employed on the below titled project.

2024 Fair Minimum Wage Rates -- Building 2 Penobscot County (other than 1 or 2 family homes)

Occupational Title	Minimum Wage	Minimum Benefit	Total
Brickmasons And Blockmasons	\$32.25	\$2.95	\$35.20
Bulldozer Operator	\$31.50	\$7.53	\$39.03
Carpenter	\$19.57	\$18.35	\$37.92
Cement Masons And Concrete Finisher	\$22.63	\$3.67	\$26.30
Commercial Divers	\$30.00	\$4.62	\$34.62
Construction And Maintenance Painters	\$21.00	\$0.97	\$21.97
Construction Laborer	\$22.00	\$2.31	\$24.31
Crane And Tower Operators	\$34.00	\$10.12	\$44.12
Crushing Grinding And Polishing Machine Operators	\$23.00	\$4.94	\$27.94
Drywall And Ceiling Tile Installers	\$26.20	\$10.62	\$36.82
Earth Drillers - Except Oil And Gas	\$21.41	\$5.51	\$26.92
Electrical Power - Line Installer And Repairers	\$38.93	\$8.91	\$47.84
Electricians	\$37.58	\$6.36	\$43.94
Elevator Installers And Repairers	\$68.38	\$45.29	\$113.67
Excavating And Loading Machine And Dragline Operators	\$26.00	\$7.01	\$33.01
Excavator Operator	\$31.38	\$5.91	\$37.29
Fence Erectors	\$26.75	\$4.05	\$30.80
Flaggers	\$20.00	\$0.38	\$20.38
Floor Layers - Except Carpet/Wood/Hard Tiles	\$27.00	\$6.21	\$33.21
Glaziers	\$37.00	\$6.60	\$43.60
Grader/Scrapper Operator	\$23.00	\$1.99	\$24.99
Hazardous Materials Removal Workers	\$20.63	\$1.25	\$21.88
Heating And Air Conditioning And Refrigeration Mechanics And Installers	\$30.08	\$5.49	\$35.57
Heavy And Tractor - Trailer Truck Drivers	\$21.50	\$0.95	\$22.45
Highway Maintenance Workers	\$20.00	\$0.00	\$20.00
Industrial Machinery Mechanics	\$31.25	\$1.01	\$32.26
Industrial Truck And Tractor Operators	\$29.25	\$4.06	\$33.31
Insulation Worker - Mechanical	\$23.00	\$3.59	\$26.59
Ironworker - Ornamental	\$29.00	\$11.24	\$40.24
Light Truck Or Delivery Services Drivers	\$23.34	\$1.67	\$25.01
Millwrights	\$33.75	\$8.78	\$42.53
Mobile Heavy Equipment Mechanics - Except Engines	\$27.75	\$4.89	\$32.64
Operating Engineers And Other Equipment Operators	\$24.00	\$2.38	\$26.38
Paver Operator	\$27.03	\$6.49	\$33.52
Pile-Driver Operators	\$32.75	\$1.95	\$34.70
Pipelayers	\$28.50	\$4.89	\$33.39
Plumbers Pipe Fitters And Steamfitters	\$29.50	\$5.48	\$34.98
Pump Operators - Except Wellhead Pumpers	\$31.49	\$32.08	\$63.57
Radio Cellular And Tower Equipment Installers	\$26.00	\$3.77	\$29.77
Reclaimer Operator	\$27.03	\$7.68	\$34.71
Reinforcing Iron And Rebar Workers	\$30.83	\$24.97	\$55.80
Riggers	\$29.25	\$7.79	\$37.04
Roofers	\$23.00	\$3.13	\$26.13
Screed/Wheelman	\$29.25	\$4.94	\$34.19
Sheet Metal Workers	\$26.00	\$6.39	\$32.39
Structural Iron And Steel Workers	\$30.83	\$24.97	\$55.80
Tapers	\$25.00	\$5.11	\$30.11
Telecommunications Equipment Installers And Repairers - Except Line Installers	\$30.00	\$2.39	\$32.39
Telecommunications Line Installers And Repairers	\$23.00	\$5.16	\$28.16
Tile And Marble Setters	\$27.75	\$6.73	\$34.48

Welders are classified as the trade to which welding is incidental (e.g. welding structural steel is Structural Iron and Steel Worker)

Apprentices – The minimum wage rates for registered apprentices are the rates recognized in the sponsorship agreement for registered apprentices working in the pertinent classification.

For any other specific trade on this project not listed above, contact the Bureau of Labor Standards for further clarification.

Title 26 §1310 requires that a clearly legible statement of all fair minimum wage and benefits rates to be paid the several classes of laborers, workers and mechanics employed on the construction on the public work must be kept posted in a prominent and easily accessible place at the site by each contractor and subcontractor subject to sections 1304 to 1313.

Appeal – Any person affected by the determination of these rates may appeal to the Commissioner of Labor by filing a written notice with the Commissioner stating the specific grounds of the objection within ten (10) days from the filing of these rates.

A true copy

Attest: 
 Scott R. Cotnoir
 Wage & Hour Director
 Bureau of Labor Standards

Expiration Date: 12-31-2024
 Revision Date: 1-3-2024

SECTION 011000 - SUMMARY

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. This Section includes the following:
 1. Work covered by the Contract Documents.
 2. Type of the Contract.
 3. Work schedule.
 4. Work under other contracts.
 5. Use of premises.
 6. Owner's occupancy requirements.
 7. Work restrictions.
 8. Specification formats and conventions.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: DDPC - Pooler Pavilion Abatement
- B. Project Location: Dorothea Dix Psychiatric Campus, Bangor, Maine
- C. Owner: State of Maine
 1. Owner's Contact: BGS.architect@maine.gov
- D. Architect: Harriman, 46 Harriman Drive, Auburn, Maine.

1.4 TYPE OF CONTRACT

- A. Project will be constructed under a single prime contract.

1.5 PERMITS

- A. The Contractor is responsible for obtaining all permits required by the City of Bangor, Department of Environmental Protection, and other AHJ.

1.6 WORK SCHEDULE

- A. The construction start dates shall be as follows:
 1. Contractor mobilization shall be on a date to be determined by the Owner.
- B. Completion dates for the work:

1. The work shall be substantially complete on or before November 15, 2024. Primary final completion will be on or before December 20, 2024, with the exception of seasonally prohibitive punch list items including but not limited to the seed and loam of the site.
- C. Time: The term “day” as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

1.7 WORK UNDER OTHER CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts. References to concurrent work included throughout the contract documents is intended to identify areas of potential overlap and conflict but does not necessarily capture all work under separate contracts. The Contractor shall coordinate fully with the Architect, Owner, and separate contractors prior to the commencement of work to identify all potential conflicts between separate contractors and to confirm scheduling requirements for a successful project completion.

1.8 USE OF PREMISES

- A. General: Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.
- B. Use of Site: Limit use of premises to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 1. Owner Occupancy: Allow for Owner occupancy of facilities adjacent to the work and use by the public.
 2. Driveways and Entrances: Keep driveways, parking, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Campus Tobacco Use Policy: A tobacco-free campus has been established at the Dorothea Dix Psychiatric Campus (DDPC).
 1. The DDPC is a tobacco-free campus. This policy applies to all staff, contractors, vendors and visitors. The use of tobacco and all smoking products is not permitted on any DDPC property, which includes but is not limited to, buildings, campus grounds, parking areas, and walkways,.
 2. Tobacco use by definition includes the possession of any lighted tobacco products, or the use of any type of smokeless tobacco, including but not limited to chew, snuff, snus, electronic cigarettes, and all other nicotine delivery devices that are non-FDA approved as cessation products.
 3. It is the shared responsibility of all members of the campus community to respect and abide by this policy. The successful implementation of this policy depends on the courtesy and cooperation of the entire campus community.

- D. Use of Existing Building: Maintain existing building in a weathertight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

1.9 OWNER'S OCCUPANCY REQUIREMENTS

- A. During the construction period the Owner will occupy the building outside of specific project scope areas. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.
 - 1. Maintain access to existing walkways, roadways, and other adjacent occupied or used facilities. Do not close or obstruct walkways, roadways, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
 - 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.
 - 3. Provide protective coverings for all furnishings (flooring, desks, shelves, equipment, etc..) that remain in the building to ensure that no damage occurs during construction.
- B. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of Work, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.
 - 1. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied before Owner occupancy.

1.10 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed inside the existing building during normal hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, except otherwise indicated.
 - 1. Early Morning Hours: Contractor allowed access to site during early morning hours (prior to 7:00 am) upon request and approval of the owner.
 - 2. Hours for Utility Shutdowns: to be coordinated with the Owner a minimum of two weeks prior to the estimated time of work.
 - 3. Hours for Core Drilling and Concrete Saw Cutting: Work shall be performed during Early Morning Hours and be coordinated with the Owner a minimum of two weeks prior to the estimated time of work.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Architect and Owner not less than two weeks in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Owner's written permission.
 - 3. Shutdown of building electrical service shall be only after indicated temporary electrical service is in place and critical loads have been cut over.
- C. Worker Supervision:
 - 1. The Contractor shall supervise the actions of employees and sub-contractors with regard to inappropriate activity at the site. Comply with the following requirements:
 - a. Sexual harassment of any nature will not be tolerated.

- b. No pornography on property.
 - c. No alcohol on property.
 - d. No drugs on property.
 - e. No guns or weapons on property.
 - f. No smoking on property.
2. Failure to comply with the requirements outlined above will result in immediate action by the Owner. First Offense: The individual removed permanently from premises. Second Offense: The responsible subcontractor removed permanently from premises.

1.11 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 50-division format and CSI/CSC's "2004 Master Format" numbering system.
 1. Section Identification: The Specifications use Section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
 2. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.12 MISCELLANEOUS PROVISIONS

- A. Material safety data sheets shall be made available in accordance with OSHA requirements.
- B. No asbestos containing materials shall be used in the work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012600 - 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 01 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 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

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."

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 20 days after receipt of Proposal Request or earlier as specified in Proposal Request issued, 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 quotes on supplier's and subcontractor's letterhead for the requested change.
 - e. 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 time before requesting an extension of the Contract Time.

- 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 time before requesting an extension of the Contract Time.
 6. Comply with requirements in Division 1 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.
- C. Proposal Request Form: Use AIA Document G709 for Proposal Requests, or format as approved by the Owner.

1.5 ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, base each Change Order proposal on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
1. Include installation costs in purchase amount only where indicated as part of the allowance.
 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
 4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the Purchase Order amount or Contractor's handling, labor, installation, overhead, and profit. Submit claims within 21 days of receipt of the Change Order or Construction Change Directive authorizing work to proceed. Owner will reject claims submitted later than 21 days after such authorization.
1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

1.6 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, Architect will issue a University of Maine Change Order form for signatures of Owner and Contractor.

1.7 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. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- 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.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

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SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract Documents, including General Conditions and other Division 01 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. The forms for application for payment, duly notarized, shall be the current authorized edition of the AIA Document G702, Application for Payment, supported by a current authorized edition of AIA G703, Continuation Sheet. Samples of these, and other required AIA documents, are provided in the Contract Documents under Division 00 for informational purposes only.

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. 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 prior to the pre-construction meeting.
- B. Format and Content: Use the specification 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 G702 Application for Payment form and AIA G703 Continuation Sheet (Schedule of Values) form.
 - 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. Name of manufacturer or fabricator.
 - e. Name of supplier.
 - f. Change Orders (numbers).
 - g. Dollar value.
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 Specification table of contents. Provide several line items for principal subcontract amounts, where appropriate.
 - a. For each line item, provide a sublist breakdown as follows:
 - 1) Material.
 - 2) Labor.
 5. Documentation: Submit proper documentation for the amounts being requisitioned from subcontractors and material suppliers with each Application for Payment. Three (3) copies of an Application for Payment or a Payment Requisition are required for all subcontracted work. Three (3) copies of the invoice is required for each major supplier.
 6. Stored Materials: If Contractor is requesting payment for stored materials as part of the Application for Payment, Contractor must complete Column F in the G703 Continuation Sheet (Schedule of Values) to record the stored materials amounts against line items that pertain to those stored materials. Stored materials are materials or equipment purchased or fabricated and stored, but not yet installed or incorporated into the Work.
 - a. Complete and provide three (3) copies of 00 62 79 Stored Materials form with all required documentation. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance or bonded warehousing.
 - b. Only major long lead delivery items may be considered for off-site storage (example: long lead custom mechanical unit). Standard order and production materials and products shall be delivered to the site before including in Application for Payment of such items.
 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 shall be shown as separate line items in the Schedule of Values.
 9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when approved Change Orders or Construction Change Directives result in a change in the Contract Sum.
 10. Retainage: The required five percent (5%) retainage held per Application for Payment submission shall be accounted for on the G703 on a per line item basis. Each line item with a value in Column G "Total Completed and Stored To Date" shall have a corresponding five percent retainage value entered in Column I.
 - a. Final Release of Retainage: The final release of retainage shall be entered as a separate line item on the G703 as "Final Release of Retainage" with the full amount of the five percent retainage entered as a negative number in Column I. The final release of retainage request is submitted as a separate application.

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: G702 Application for Payment shall be submitted to Architect and Owner not less than seven (7) days before monthly progress meeting. The period covered by each Application for Payment is one (1) month, ending on the last day of the month.
- C. Payment Application Forms: The Contractor is required under the Contract Documents to use official original AIA documents. Samples of the required documents are provided in Division 00 of the Specifications.
- 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 approved Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal:
 - 1. Submit three (3) signed and notarized originals of:
 - a. AIA G702 Application & Certificate for Payment.
 - b. AIA G703 Continuation Sheet.
 - c. AIA G706 Contractor's Affidavit of Payment of Debts & Claims.
 - d. AIA G706A Contractor's Affidavit of Release of Liens.
 - e. 00 65 19.17 Waiver of Lien.
 - 2. Transmit each Application for Payment with a transmittal form listing attachments and recording appropriate information about submission.
- F. Waivers of Mechanic's Lien: With each Application for Payment, submit three (3) copies of waivers of mechanic's lien from subcontractors, sub-subcontractors, major suppliers, and every entity who is lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
 - 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 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 00 65 19.17 Waiver of Lien forms, executed in a manner acceptable to Owner.
- G. Certified Payrolls: Wages paid to all workers performing work on the Project shall be in accordance with the Section 00 73 64 Wage Determination Schedule for the Project. Contractor shall submit one (1) copy of each weekly certified payroll for Contractor and all subcontractors, sub-subcontractors, sub-sub-subcontractors, etc. performing work on

the Project during the time covered by the Application for Payment. The certified payroll shall be completed in accordance with Section 3.4.4 of the A201 General Conditions and contain the following information:

1. Contractor name.
2. Contractor address.
3. Period number.
4. Week ending date.
5. Employee(s)'s name.
6. Employee(s)'s job title.
7. Employee hourly wage:
 - a. Straight time rate.
 - b. Overtime rate.
8. Hours worked per day (broken down by straight time and overtime hours).
9. Hours worked per week (broken down by straight time and overtime hours).
10. Total earned for the week:
 - a. Straight time.
 - b. Overtime.
11. Benefits that form a part of the wage rate.
12. The signature and name of the authorized payroll person.

H. Initial Application for Payment: Administrative actions and submittals that must precede submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of Values.
3. Contractor's Construction Schedule.
4. Submittals Schedule.
5. List of Contractor's staff assignments.
6. List of Contractor's principal consultants.
7. Copies of building permits and other required permits.
8. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
9. Initial progress report.
10. Report of preconstruction conference.
11. Insurance verification through submission of insurance certificates, for all Subcontractors.

I. Progress Applications for Payment: Administrative actions and submittals that must precede or coincide with submittal of progress Applications for Payment include the following:

1. Contractor's Construction Schedule update.
2. Submittals for Work being requisitioned that are complete and approved.
3. Submission of list of completed tests, checklists, commissioning, reports, and similar requirements for the work that are submitted and in compliance with the Contract Documents.
4. Distribution of minutes of previous month's progress meeting.
5. Current record drawings.

J. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion, less retainage, for portion of the Work claimed as substantially complete. Application must:

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. Reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- K. 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 fees and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. AIA G707 Consent of Surety to Final Payment, three (3) originals.
 5. Evidence that claims have been settled.
 6. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
 7. Final, liquidated damages settlement statement, if a liquidated damages claim has been processed.
 8. As-built drawings.
 9. Operation and maintenance manuals.
 10. Final lien waivers.
 11. All training and equipment testing is complete.

PART 2 - NOT USED

PART 3 - NOT USED

END OF SECTION 012900

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SECTION 013100 - 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 01 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. Administrative and supervisory personnel.
 - 2. Project meetings.
- B. Related Sections include the following:
 - 1. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
 - 2. Division 01 Section "Closeout Procedures" for coordinating Contract closeout.

1.3 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. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
 - 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components.
- B. Coordinate with contractors doing work for the Owner under separate contracts.
- C. 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.
- D. 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. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Project closeout activities.
- E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

1.4 SUBMITTALS

- A. Coordination Drawings: Prepare Coordination Drawings as determined by the Contractor and subcontractors, if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
1. Content: Project-specific information, drawn accurately to scale. Do not base Coordination Drawings on reproductions of the Contract Documents or standard printed data. Include the following information, as applicable:
 - a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - b. Indicate required installation sequences.
 - c. Indicate dimensions shown on the Contract Drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect for resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
- B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.5 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.
1. Include special personnel required for coordination of operations with other contractors.

1.6 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. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for requests for interpretations (RFIs).
 - g. Procedures for testing and inspecting.
 - h. Procedures for processing Applications for Payment.
 - i. Distribution of the Contract Documents.
 - j. Submittal procedures.
 - k. Preparation of Record Documents.
 - l. Use of the premises.
 - m. Work restrictions.
 - n. Owner's occupancy requirements.
 - o. Responsibility for temporary facilities and controls.
 - p. Construction waste management and recycling.
 - q. Parking availability.
 - r. Office, work, and storage areas.
 - s. Equipment deliveries and priorities.
 - t. First aid.
 - u. Security.
 - v. Progress cleaning.
 - w. Working hours.
 - x. USM campus operational protocols and procedures.
 3. Minutes: Record and distribute meeting minutes.
 - a. Include action items and responsible party.
- C. Progress Meetings: Conduct progress meetings at intervals as required by the project schedule. 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. Application for Payment: Contractor shall bring copy of Application for Payment to meeting. Review Application for Payment and required attachments, including record drawing and documents status, waivers of mechanic's liens, list of completed tests, checklists, commissioning, reports, and similar requirements for the work are submitted and in compliance with the Contract Documents.
 - c. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Status of correction of deficient items.
 - 14) Field observations.
 - 15) Requests for interpretations (RFIs).
 - 16) Status of proposal requests.
 - 17) Pending changes.
 - 18) Status of Change Orders.
 - 19) Pending claims and disputes.
 - 20) Documentation of information for payment requests.
3. Minutes: Record and distribute the meeting minutes.
 - a. Include action items and responsible party.
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.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - 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 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Preliminary Construction Schedule.
 - 2. Contractor's Construction Schedule.
 - 3. Submittals Schedule.
 - 4. Field condition reports.
 - 5. Special reports.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for submitting the Schedule of Values.
 - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
 - 3. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
 - 4. Division 01 Section "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. Cost Loading: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum, unless otherwise approved by Architect.
- C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Event: The starting or ending point of an activity.

- F. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- G. Fragnet: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.
- H. Major Area: A story of construction, a separate building, or a similar significant construction element.
- I. Milestone: A key or critical point in time for reference or measurement.
- J. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.
- K. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 SUBMITTALS

- A. Submittals Schedule: Submit three copies of schedule. Arrange the following information in a tabular 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 Architect's final release or approval.
- B. Preliminary Construction Schedule: Submit two copies.
 - 1. Approval of cost-loaded preliminary construction schedule will not constitute approval of Schedule of Values for cost-loaded activities.
- C. Preliminary Network Diagram: Submit two copies, large enough to show entire network for entire construction period. Show logic ties for activities.
- D. Contractor's Construction Schedule: Submit two copies of initial schedule, large enough to show entire schedule for entire construction period.
- E. CPM Reports: Concurrent with CPM schedule, submit two copies of each of the following computer-generated reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
 - 1. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.

2. Logic Report: List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.
3. Total Float Report: List of all activities sorted in ascending order of total float.
4. Earnings Report: Compilation of Contractor's total earnings from the Notice to Proceed until most recent Application for Payment.

F. Field Condition Reports: Submit two copies at time of discovery of differing conditions.

G. Special Reports: Submit two copies at time of unusual event.

1.5 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 1. Secure time commitments for performing critical elements of the Work from parties involved.
 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

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 Contractor's Construction Schedule.
 2. Initial Submittal: Submit concurrently with preliminary network diagram. Include submittals required during the first 60 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.
 4. The Owner will review the schedule of submittals and identify the submittals that they want to receive a copy of at the same time that the Architect's copies are sent out.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."

- B. Time Frame: Extend schedule from date established for the Notice to Proceed 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.
- C. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
 2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 4. Startup and Testing Time: Include times for startup and testing.
 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
1. Phasing: Arrange list of activities on schedule by phase.
 2. Work under More Than One Contract: Include a separate activity for each contract.
 3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 4. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 5. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 6. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Partial occupancy before Substantial Completion.
 - e. Use of premises restrictions.
 - f. Provisions for future construction.
 - g. Seasonal variations.
 - h. Environmental control.
 - i. Restriction of noise making operations during final exam weeks.
- E. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Mechanical Commissioning, Substantial Completion, and Final Completion.
- F. Cost Correlation: At the head of schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of the Work performed as of dates used for preparation of payment requests.

1. Refer to Division 01 Section "Payment Procedures" for cost reporting and payment procedures.
2. Contractor shall assign cost to construction activities on the CPM schedule. Costs shall not be assigned to submittal activities unless specified otherwise but may, with Architect's approval, be assigned to fabrication and delivery activities. Costs shall be under required principal subcontracts for testing and commissioning activities, operation and maintenance manuals, punch list activities, Project Record Documents, and demonstration and training.
3. Each activity cost shall reflect an accurate value subject to approval by Architect.
4. Total cost assigned to activities shall equal the total Contract Sum.

G. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragments to demonstrate the effect of the proposed change on the overall project schedule.

H. Computer Software: Prepare schedules using a program that has been developed specifically to manage construction schedules.

2.3 BROAD SCOPE MILESTONE SCHEDULE

A. Submit a separate general broad scope schedule to provide a basic progress report for the Owner's use. Examples of broad scope line items to include are: Site Work, Cast-In-Place Concrete, Framing, Rough MEP, Building Envelope, Interior Finishes, Exterior Finishes, Final MEP, Commissioning, 2 Week IAQ Flush Out, Certificate of Occupancy. Update schedule on a monthly basis for submission at project meetings.

2.4 REPORTS

A. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a request for interpretation. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

2.5 SPECIAL REPORTS

A. General: Submit special reports to Architect within one day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.

B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES (2023)

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 requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
 - 1. Section 012900 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
 - 2. 013100 "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
 - 3. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
 - 4. Section 014000 "Quality Requirements" for submitting test and inspection reports and for mockup requirements.
 - 5. Section 017700 "Closeout Procedures" for submitting warranties.
 - 6. Section 017823 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
 - 7. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
 - 8. Section 017900 "Demonstration and Training" for submitting documentation of demonstration of equipment and training of Owner's personnel.
 - 9. Division 01 to 33 Sections for specific requirements for submittals in those Sections.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

- D. Portable Document Format (PDF): An open standard file format used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Architect's Electronic Document Files: Copies of the Contract Drawings in electronic format will be made available by the Architect to those requesting same in accordance with the "Agreement Between Harriman (Architect & Engineer of Record) and Owner or Contractor for Release of Electronic Documents" form attached to the end of this section. Agreement form shall be filled out and signed by each party requesting electronic documents before electronic media is released to them.
- 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. Submit all submittal items required for each specification section concurrently.
 - 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 - 4. 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.
 - 5. No products shall be incorporated into the work unless they have been approved by the Contractor and Architect. No work will be paid for until required submittals for applicable work have been submitted and approved.
- C. Submittals Schedule: Comply with requirements in Division 01 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- D. Processing Time: Allow 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 14 calendar days minimum 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 14 calendar days minimum for review of each resubmittal.
 - 4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 calendar days minimum for initial review of each submittal.
- E. Electronic Submittals: **Architect is using Newforma software to process electronic submittals.** Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into single files incorporating submittal requirements of a single specification section and transmittal form.
 - a. Provide a separate transmittal form for Product Data, a separate transmittal form for Shop Drawings, and a separate transmittal form for Informational Submittals required by each Specification Section.
 - b. Maximum File Size: A single file size, up to 18 MB can be received. Contact Architect for instructions if file exceeds 18 MB.
 - c. For each transmittal, attach one single PDF only. Where multiple PDFs are required for a transmittal, utilize a combine feature to merge the PDFs into a single PDF.
 - 1) Unacceptable Formats: In order to process the transmittals in Newforma, the single PDF file protocol must be followed. Transmittals zip files or grouped PDFs cannot be electronically processed and will be returned without action for correction and resubmittal.
 - 2) Submittals will be returned without action for correction and resubmittal if:
 - a) Submittal does not have an electronic Transmittal Form.
 - b) Multiple specification sections are contained within a single Transmittal form. Submittals must be separated into individual Specification Sections.
 - c) Submittal does not include the Contractors' signed reviewed stamp
 2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a dash and then a sequential number (e.g., LNHS-061000-01). Resubmittals shall include an alphabetic suffix after another dash (e.g., LNHS-061000-01-A).
 3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
 4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner, containing the following information:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Contractor.
 - e. Name of firm or entity that prepared submittal.
 - f. Names of subcontractor, manufacturer, and supplier.
 - g. 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., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).
 - h. Specification Section number and title.
 - i. Drawing number and detail references, as appropriate.
 - j. Location(s) where product is to be installed, as appropriate.
 - k. Related physical samples submitted directly.
 - l. Indication of full or partial submittal.
 - m. Other necessary identification.
- F. Options: Identify options requiring selection by Architect.
- G. Deviations and Additional Information: 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 identification information as related submittal.

- H. 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 with appropriate notation from Architect's action stamp.
- I. Architect will return all processed submittals through the Newforma file transfer procedure. Contractor will be responsible for incorporating the processed submittals into their file management systems as appropriate.
- 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: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with appropriate notation from Architect's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
 - 1. Submit electronic submittals by either of the following methods:
 - a. Via email as PDF electronic file to constructadmin@harriman.com .
 - 1) Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 - b. Post electronic submittals as PDF electronic files directly to Architect's FTP site specifically established for Project.
 - 1) Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 - 2. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - a. Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated.
- 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 published 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 catalog cuts.
 - b. Manufacturer's product specifications.

- c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams showing factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before or concurrent with Samples.
 6. Submit Product Data in the following format:
 - a. PDF electronic file.
 7. Do not submit Material Safety Data Sheets (MSDSs).
- 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.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Schedules.
 - d. Compliance with specified standards.
 - e. Notation of coordination requirements.
 - f. Notation of dimensions established by field measurement.
 - g. Relationship and attachment to adjoining construction clearly indicated.
 - h. Seal and signature of professional engineer if specified.
 2. Submit Shop Drawings in the following format:
 - a. PDF electronic file.
- 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 applicable Specification Section.
 - e. Specification paragraph number and generic name of each item.
 3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
 4. 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 that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
- 5. 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 one full set(s) 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.
- 6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit two sets of Samples. Architect will retain one Sample sets; remainder will be returned.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 - 1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 - 2. Manufacturer and product name, and model number if applicable.
 - 3. Number and name of room or space.
 - 4. Location within room or space.
 - 5. Submit product schedule in the following format:
 - a. PDF electronic file.
- F. Coordination Drawing Submittals: Comply with requirements specified in Section 013100 "Project Management and Coordination."
- G. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."
- H. Application for Payment and Schedule of Values: Comply with requirements specified in Section 012900 "Payment Procedures."
- I. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Section 014000 "Quality Requirements."

- J. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."
- K. Maintenance Data: Comply with requirements specified in Section 017823 "Operation and Maintenance Data."
- L. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- M. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- N. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- O. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- P. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- Q. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- R. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- S. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- T. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.

- U. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- V. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- W. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- X. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- Y. Material Safety Data Sheets (MSDSs): Submit information directly to Owner at end of the project; do not submit to Architect. Maintain copy at the site for the duration of the construction.
 - 1. Architect will not review submittals that include MSDSs and will return them.

2.2 DELEGATED-DESIGN SERVICES

- 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 Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file paper copies of certificate, 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.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: 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. Contractor to mark submittal with their approval stamp before submitting to Architect.
 - 1. The Contractor shall review submittals for completeness and compliance with the Contract Documents. If submittal contains substitutions, Contractor shall process substitutions in accordance with Division 01 Section "Substitutions and Product

Options,” and not part of specified Shop Drawings or Product Data submittals. Contractor is responsible for keeping Subcontractors on time with the submittal schedule. If the Contractor submits submittals that are repeatedly rejected, requiring the Architect to perform multiple reviews of the same submittal because of the failure to properly prepare and complete the submittals:

- a. Owner will compensate Architect for such additional services.
- b. Owner will deduct the amount of such compensation from the final payment to the Contractor.

B. Project Closeout and Maintenance Material Submittals: See requirements in Section 017700 "Closeout Procedures."

C. 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 submittal stamp and will return them without action.

B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an appropriate mark to indicate status.

1. The Architect's marking of "Reviewed, Furnish as Corrected or similar verbiage means submittal has been reviewed for general conformance to the contract documents only and does not mean unqualified acceptance. The Contractor is fully responsible for compliance with the contract documents.

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 prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect.

E. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

F. Submittals not required by the Contract Documents will be returned by the Architect without action.

END OF SECTION 013300

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**AGREEMENT BETWEEN HARRIMAN (ARCHITECT & ENGINEER OF RECORD)
AND OWNER OR CONTRACTOR
FOR RELEASE OF ELECTRONIC DOCUMENTS**

RECIPIENT:

Name: _____ Phone Number: _____

Address: _____

Email Address: _____ Date: _____

Project Name: _____ HA Project No.: _____

- This request to for Harriman to provide the following Electronic Documents (AutoCad file or Revit model), dated _____, for the project use by the Recipient:

(List requested documents clearly) _____

-
- Electronic Documents will be provided in the current software version used by Harriman at the time of the request. Alternate versions may be available at Harriman’s discretion. Current software versions are AutoCAD 2023 and Autodesk Revit 2023.

Alternate Version Requested: _____

- Transfer method shall be by Electronic File Transfer to the email address provided above.
- A fee may be assessed for processing and distributing requested document. Recipient will be notified on any fees prior after receipt of this request document. Fees are payable prior to receiving requested documents.

TERMS AND CONDITIONS:

1. For the purpose of this document, both 2d CAD files and 3d Revit models shall be collectively defined as “Electronic Documents”.
2. It is understood and agreed that all drawings, specifications, or other documents of any kind prepared by Harriman or its subconsultants, whether in hard copy or in electronic format including Electronic Documents (collectively "Harriman’s Documents"), are instruments of their services prepared solely for use in connection with the single project for which they were prepared and that Harriman and its subconsultants retain all common law, statutory and other reserved rights, including the copyright. This agreement is not intended in any way to alter the respective interests of the parties in the Instruments of Service as set forth in the Owner/Architect Agreement, notwithstanding Harriman’s agreement to release the Electronic Documents to Recipient.
3. The Electronic Documents are provided as a convenience to the Recipient for informational purposes only in connection with the Recipient’s performance of its responsibilities and obligations relating to the Project. The Electronic Documents do not replace or supplement the paper copies of the Drawings and Specifications, which are, and remain, the Contract Documents for the Project. In all instances, it is the responsibility of the Recipient to ensure that the Electronic Documents are

consistent with the Contract Documents.

4. The parties agree that the Electronic Documents are not, nor shall they be construed to be, a product. It is expressly agreed by the Recipient that there are no warranties of any kind in such Electronic Documents or in the media in which they are contained, either expressed or implied.
5. Harriman makes no representation as to the compatibility of the Electronic Documents with any hardware or software.
6. Since the information set forth on the Electronic Documents can be modified unintentionally or otherwise, Harriman reserves the right to remove all indicia of its ownership and/or involvement from each electronic display.
7. If any differences exist between printed Instruments of Service and Electronic Documents, the information contained in the printed documents shall be presumed to be correct and take precedence over the Electronic Documents.
8. Recipient agrees not to add to, modify or alter in any way, or to allow others to add to, modify or alter in any way, the Electronic Documents or any printed copies thereof.
9. Revit models are Design Models and will only contain elements and content that Harriman deems necessary and appropriate to share. Not all objects in the models are 3d objects and no specific Level of Detail is implied or expected. Consequently, the models cannot be used to extract precise material or object quantities. The Recipient agrees that no proprietary Revit families or Revit content shall be removed from the model and/or used for any other purpose but to support this specific project.
10. The Electronic Documents are supplied in a translatable format. Any conversion of the format is solely the responsibility of the Recipient. Recipient understands and agrees that the conversion of hard copies of Instruments of Service into electronic format or the conversion of Electronic Documents from formats used by Harriman to some other format may introduce errors or other inaccuracies. Recipient agrees to accept all responsibility for any errors or inaccuracies and to release Harriman, and its subconsultants from any liability or claims for recovery of damages or expenses arising as the result of such errors or inaccuracies.
11. Where the Recipient has received specific permission to use the Electronic Documents in connection with the Recipient's obligation to prepare certain documents for Project, Recipient shall, in addition to the other obligations set forth therein, be obligated to remove Harriman's or its Consultant's title block from the copy of the Electronic Documents used by Recipient. It is understood and agreed that, without the separate express written permission of Harriman to do so, the Electronic Documents are not to be used by any contractor or any of its subcontractors of any tier of material supplier or vendor as a shop drawing or any other type of submittal or as the basis for preparing such shop drawing or submittal. The sole exception to this prohibition shall be that the Recipient may use the Electronic Documents as a clearly distinguishable separate background upon which to prepare its shop drawings or other submittal.
12. Recipient further agrees that Harriman's Documents were prepared for use in connection with this project only and that the Electronic Documents are supplied to Recipient for the limited use stated above only. Recipient agrees not to use, or to allow others to use, the Electronic Documents, in whole or in part, for any purpose other than as stated above.

13. Harriman believes that no licensing or copyright fees are due to others on account of the transfer of the Electronic Documents, but to the extent any are, the Contractor will pay the appropriate fees and hold Harriman harmless from such claims.
14. Any purchase order number provided by the Contractor is for Contractor's accounting purposes only. Purchase order terms and conditions are void and are not a part of this agreement.
15. Harriman has prepared these Electronic Documents for the sole purpose of plotting and printing a hard copy of the design documents. Harriman believes only the hard copy print to be the accurate representation of all drawing information. Hard copy written dimensions override electronic measured dimensions. User must verify computer data against hard copy prints.
16. Electronic Documents are an inherently unstable medium subject to "bugs," deterioration, modifications, and viruses. Electronic Documents are subject to inadvertent changes in the process of moving from one computer to another or by compressing/decompressing the data; or by moving from one software revision to another; or any kind of manipulation of the data will lead to defects.
17. This agreement shall be governed by the laws of the principal place of business of Harriman. Only printed copies of the Instrument of Service shall be signed and sealed.
18. Recipient agrees to waive any and all claims and liability against Harriman and its subconsultants resulting in any way from any failure by Recipient to comply with the requirements of this Agreement for the Delivery of Documents in Electronic Format.
19. The Recipient agrees that no third-party beneficiary status or any other right of action is created in favor of any contractor, subcontractor, materialmen or other third party against Harriman by virtue of this Agreement or in connection with its delivery of Electronic Documents, and no third-party beneficiary status is intended.
20. Recipient further agrees to indemnify and save harmless Harriman and its subconsultants and each of their partners, officers, shareholders, and directors and employees from any and all claims, judgments, suits, liabilities, damages, costs or expenses (including reasonable defense and attorney's fees including claims asserted in breach of contract, breach of warranty, negligence, or any other tort) arising as a result of either: 1) Recipient's failure to comply with any of the requirements of Agreement for the Delivery of Documents in Electronic Format; or 2) a defect, error or omission in the Electronic Documents or the information contained therein, which defect, error or omission was not contained in the Contract Documents as defined in Paragraph 2 or where the use of such Contract Documents would have prevented the claim, judgment, suit, liability, damage, cost, or expense.
21. Harriman reserves the right to deny a request to translate files.

AUTHORIZED ACCEPTANCE

By Recipient

By Harriman (Architect/Engineer of Record)

Signature

Signature

Print Name and Title

Print Name and Title

Date

Date

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SECTION 014000 - 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 01 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 -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 -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
 - 4. The Owner will hire an independent firm to do the testing and balancing of the air system and to do mechanical commissioning.
- C. Related Sections include the following:
 - 1. Division 01 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
 - 2. Division 01 Section "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.
 - 3. Divisions 02 through 33 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. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where

indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples.

- D. Laboratory Mockups: Full-size, physical assemblies that are constructed at testing facility to verify performance characteristics.
- E. 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.
- F. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- G. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- H. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- I. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- J. 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.
- K. 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. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Description of test and inspection.
 - 3. Identification of applicable standards.
 - 4. Identification of test and inspection methods.
 - 5. Number of tests and inspections required.
 - 6. Time schedule or time span for tests and inspections.
 - 7. Entity responsible for performing tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.
- C. 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. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on retesting and re-inspecting.
- D. 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. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- E. 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 products that are similar to those indicated for this Project in material, design, and extent.
- F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirement for specialists shall not supersede building codes and regulations governing the Work.
- G. 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.
- H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 - 1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
 - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
 - f. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups; do not reuse products on Project.
 - 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

- J. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 - 1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
 - 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
 - 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
 - a. Allow seven days for initial review and each re-review of each mockup.
 - 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 - 6. Demolish and remove mockups when directed, unless otherwise indicated.

- K. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Sections in Divisions 02 through 26.

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. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.
 - 3. 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.

- 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.
 - a. 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. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section "Submittal Procedures."

- D. 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.
- E. 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.
- F. 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.
- G. 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.
- H. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within 30 days of date established for commencement of the Work.
 - 1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.8 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, in compliance with applicable building code.

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.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Comply with the Contract Document requirements for Division 01 Section "Cutting and Patching."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

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SECTION 014200 – REFERENCES

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 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AA	Aluminum Association, Inc. (The) www.aluminum.org	(703) 358-2960
AAADM	American Association of Automatic Door Manufacturers www.aaadm.com	(216) 241-7333
AABC	Associated Air Balance Council www.aabchq.com	(202) 737-0202
AAMA	American Architectural Manufacturers Association www.aamanet.org	(847) 303-5664
AASHTO	American Association of State Highway and Transportation Officials www.transportation.org	(202) 624-5800
AATCC	American Association of Textile Chemists and Colorists (The) www.aatcc.org	(919) 549-8141
ABAA	Air Barrier Association of America www.airbarrier.org	(866) 956-5888
ABMA	American Bearing Manufacturers Association www.abma-dc.org	(202) 367-1155
ACI	ACI International (American Concrete Institute) www.aci-int.org	(248) 848-3700
ACPA	American Concrete Pipe Association www.concrete-pipe.org	(972) 506-7216

AEIC	Association of Edison Illuminating Companies, Inc. (The) www.aeic.org	(205) 257-2530
AF&PA	American Forest & Paper Association www.afandpa.org	(800) 878-8878 (202) 463-2700
AGA	American Gas Association www.aga.org	(202) 824-7000
AGC	Associated General Contractors of America (The) www.agc.org	(703) 548-3118
AHA	American Hardboard Association (Now part of CPA)	
AHAM	Association of Home Appliance Manufacturers www.aham.org	(202) 872-5955
AI	Asphalt Institute www.asphaltinstitute.org	(859) 288-4960
AIA	American Institute of Architects (The) www.aia.org	(800) 242-3837 (202) 626-7300
AISC	American Institute of Steel Construction www.aisc.org	(800) 644-2400 (312) 670-2400
AISI	American Iron and Steel Institute www.steel.org	(202) 452-7100
AITC	American Institute of Timber Construction www.aitc-glulam.org	(303) 792-9559
ALCA	Associated Landscape Contractors of America (Now PLANET - Professional Landcare Network)	
ALSC	American Lumber Standard Committee, Incorporated www.alsc.org	(301) 972-1700
AMCA	Air Movement and Control Association International, Inc. www.amca.org	(847) 394-0150
ANSI	American National Standards Institute www.ansi.org	(202) 293-8020
AOSA	Association of Official Seed Analysts, Inc. www.aosaseed.com	(405) 780-7372
APA	Architectural Precast Association www.archprecast.org	(239) 454-6989

APA	APA - The Engineered Wood Association www.apawood.org	(253) 565-6600
APA EWS	APA - The Engineered Wood Association; Engineered Wood Systems (See APA - The Engineered Wood Association)	
API	American Petroleum Institute www.api.org	(202) 682-8000
ARI	Air-Conditioning & Refrigeration Institute www.ari.org	(703) 524-8800
ARMA	Asphalt Roofing Manufacturers Association www.asphaltroofing.org	(202) 207-0917
ASCE	American Society of Civil Engineers www.asce.org	(800) 548-2723 (703) 295-6300
ASCE/SEI	American Society of Civil Engineers/Structural Engineering Institute (See ASCE)	
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers www.ashrae.org	(800) 527-4723 (404) 636-8400
ASME	ASME International (The American Society of Mechanical Engineers International) www.asme.org	(800) 843-2763 (973) 882-1170
ASSE	American Society of Sanitary Engineering www.asse-plumbing.org	(440) 835-3040
ASTM	ASTM International (American Society for Testing and Materials International) www.astm.org	(610) 832-9585
AWCI	AWCI International (Association of the Wall and Ceiling Industry International) www.awci.org	(703) 534-8300
AWCMA	American Window Covering Manufacturers Association (Now WCSC)	
AWI	Architectural Woodwork Institute www.awinet.org	(571) 323-3636
AWPA	American Wood-Preservers' Association www.awpa.com	(205) 733-4077

AWS	American Welding Society www.aws.org	(800) 443-9353 (305) 443-9353
AWWA	American Water Works Association www.awwa.org	(800) 926-7337 (303) 794-7711
BHMA	Builders Hardware Manufacturers Association www.buildershardware.com	(212) 297-2122
BIA	Brick Industry Association (The) www.bia.org	(703) 620-0010
BICSI	BICSI www.bicsi.org	(800) 242-7405 (813) 979-1991
BIFMA	BIFMA International (Business and Institutional Furniture Manufacturer's Association International) www.bifma.com	(616) 285-3963
BISSC	Baking Industry Sanitation Standards Committee www.bissc.org	(866) 342-4772
CCC	Carpet Cushion Council www.carpetcushion.org	(610) 527-3880
CDA	Copper Development Association www.copper.org	(800) 232-3282 (212) 251-7200
CEA	Canadian Electricity Association www.canelect.ca	(613) 230-9263
CFFA	Chemical Fabrics & Film Association, Inc. www.chemicalfabricsandfilm.com	(216) 241-7333
CGA	Compressed Gas Association www.cganet.com	(703) 788-2700
CIMA	Cellulose Insulation Manufacturers Association www.cellulose.org	(888) 881-2462 (937) 222-2462
CISCA	Ceilings & Interior Systems Construction Association www.cisca.org	(630) 584-1919
CISPI	Cast Iron Soil Pipe Institute www.cispi.org	(423) 892-0137
CLFMI	Chain Link Fence Manufacturers Institute www.chainlinkinfo.org	(301) 596-2583

CRRC	Cool Roof Rating Council www.coolroofs.org	(866) 465-2523 (510) 485-7175
CPA	Composite Panel Association www.pbmdf.com	(301) 670-0604
CPPA	Corrugated Polyethylene Pipe Association www.cppa-info.org	(800) 510-2772 (202) 462-9607
CRI	Carpet & Rug Institute (The) www.carpet-rug.com	(800) 882-8846 (706) 278-3176
CRSI	Concrete Reinforcing Steel Institute www.crsi.org	(847) 517-1200
CSA	Canadian Standards Association	(800) 463-6727 (416) 747-4000
CSA	CSA International (Formerly: IAS - International Approval Services) www.csa-international.org	(866) 797-4272 (416) 747-4000
CSI	Cast Stone Institute www.caststone.org	(717) 272-3744
CSI	Construction Specifications Institute (The) www.csinet.org	(800) 689-2900 (703) 684-0300
CSSB	Cedar Shake & Shingle Bureau www.cedarbureau.org	(604) 820-7700
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute) www.cti.org	(281) 583-4087
DHI	Door and Hardware Institute www.dhi.org	(703) 222-2010
EIA	Electronic Industries Alliance www.eia.org	(703) 907-7500
EIMA	EIFS Industry Members Association www.eima.com	(800) 294-3462 (770) 968-7945
EJCDC	Engineers Joint Contract Documents Committee www.ejdc.org	(703) 295-5000
EJMA	Expansion Joint Manufacturers Association, Inc. www.ejma.org	(914) 332-0040

ESD	ESD Association www.esda.org	(315) 339-6937
FIBA	Federation Internationale de Basketball (The International Basketball Federation) www.fiba.com	41 22 545 00 00
FIVB	Federation Internationale de Volleyball (The International Volleyball Federation) www.fivb.ch	41 21 345 35 35
FM Approvals	FM Approvals www.fmglobal.com	(781) 762-4300
FM Global	FM Global (Formerly: FMG - FM Global) www.fmglobal.com	(401) 275-3000
FMRC	Factory Mutual Research (Now FM Global)	
FRSA	Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc. www.floridarroof.com	(407) 671-3772
FSA	Fluid Sealing Association www.fluidsealing.com	(610) 971-4850
FSC	Forest Stewardship Council www.fsc.org	49 228 367 66 0
GA	Gypsum Association www.gypsum.org	(202) 289-5440
GANA	Glass Association of North America www.glasswebsite.com	(785) 271-0208
GRI	(Now GSI)	
GS	Green Seal www.greenseal.org	(202) 872-6400
GSI	Geosynthetic Institute www.geosynthetic-institute.org	(610) 522-8440
HI	Hydraulic Institute www.pumps.org	(888) 786-7744 (973) 267-9700
HI	Hydronics Institute www.gamanet.org	(908) 464-8200

HMMA	Hollow Metal Manufacturers Association (Part of NAAMM)	
HPVA	Hardwood Plywood & Veneer Association www.hpva.org	(703) 435-2900
HPW	H. P. White Laboratory, Inc. www.hpwhite.com	(410) 838-6550
IAS	International Approval Services (Now CSA International)	
IBF	International Badminton Federation www.internationalbadminton.org	(6-03) 9283-7155
ICEA	Insulated Cable Engineers Association, Inc. www.icea.net	(770) 830-0369
ICRI	International Concrete Repair Institute, Inc. www.icri.org	(847) 827-0830
IEC	International Electrotechnical Commission www.iec.ch	41 22 919 02 11
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The) www.ieee.org	(212) 419-7900
IESNA	Illuminating Engineering Society of North America www.iesna.org	(212) 248-5000
IEST	Institute of Environmental Sciences and Technology www.iest.org	(847) 255-1561
IGCC	Insulating Glass Certification Council www.igcc.org	(315) 646-2234
IGMA	Insulating Glass Manufacturers Alliance www.igmaonline.org	(613) 233-1510
ILI	Indiana Limestone Institute of America, Inc. www.iliai.com	(812) 275-4426
ISO	International Organization for Standardization www.iso.ch	41 22 749 01 11
	Available from ANSI www.ansi.org	(202) 293-8020
ISSFA	International Solid Surface Fabricators Association www.issfa.net	(877) 464-7732 (702) 567-8150

ITS	Intertek Testing Service NA www.intertek.com	(972) 238-5591
ITU	International Telecommunication Union www.itu.int/home	41 22 730 51 11
KCMA	Kitchen Cabinet Manufacturers Association www.kcma.org	(703) 264-1690
LMA	Laminating Materials Association (Now part of CPA)	
LPI	Lightning Protection Institute www.lightning.org	(800) 488-6864
MBMA	Metal Building Manufacturers Association www.mbma.com	(216) 241-7333
MFMA	Maple Flooring Manufacturers Association, Inc. www.maplefloor.org	(847) 480-9138
MFMA	Metal Framing Manufacturers Association, Inc. www.metalframingmfg.org	(312) 644-6610
MH	Material Handling (Now MHIA)	
MHIA	Material Handling Industry of America www.mhia.org	(800) 345-1815 (704) 676-1190
MIA	Marble Institute of America www.marble-institute.com	(440) 250-9222
MPI	Master Painters Institute www.paintinfo.com	(888) 674-8937
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc. www.mss-hq.com	(703) 281-6613
NAAMM	National Association of Architectural Metal Manufacturers www.naamm.org	(312) 332-0405
NACE	NACE International (National Association of Corrosion Engineers International) www.nace.org	(800) 797-6623 (281) 228-6200
NADCA	National Air Duct Cleaners Association www.nadca.com	(202) 737-2926

NAGWS	National Association for Girls and Women in Sport www.aahperd.org/nagws/	(800) 213-7193, ext. 453
NAIMA	North American Insulation Manufacturers Association www.naima.org	(703) 684-0084
NBGQA	National Building Granite Quarries Association, Inc. www.nbgqa.com	(800) 557-2848
NCAA	National Collegiate Athletic Association (The) www.ncaa.org	(317) 917-6222
NCMA	National Concrete Masonry Association www.ncma.org	(703) 713-1900
NCPI	National Clay Pipe Institute www.ncpi.org	(262) 248-9094
NCTA	National Cable & Telecommunications Association www.ncta.com	(202) 775-3550
NEBB	National Environmental Balancing Bureau www.nebb.org	(301) 977-3698
NECA	National Electrical Contractors Association www.necanet.org	(301) 657-3110
NeLMA	Northeastern Lumber Manufacturers' Association www.nelma.org	(207) 829-6901
NEMA	National Electrical Manufacturers Association www.nema.org	(703) 841-3200
NETA	InterNational Electrical Testing Association www.netaworld.org	(888) 300-6382 (303) 697-8441
NFHS	National Federation of State High School Associations www.nfhs.org	(317) 972-6900
NFPA	NFPA (National Fire Protection Association) www.nfpa.org	(800) 344-3555 (617) 770-3000
NFRC	National Fenestration Rating Council www.nfrc.org	(301) 589-1776
NGA	National Glass Association www.glass.org	(866) 342-5642 (703) 442-4890
NHLA	National Hardwood Lumber Association www.natlhardwood.org	(800) 933-0318 (901) 377-1818

NLGA	National Lumber Grades Authority www.nlga.org	(604) 524-2393
NOFMA	NOFMA: The Wood Flooring Manufacturers Association (Formerly: National Oak Flooring Manufacturers Association) www.nofma.com	(901) 526-5016
NRCA	National Roofing Contractors Association www.nrca.net	(800) 323-9545 (847) 299-9070
NRMCA	National Ready Mixed Concrete Association www.nrmca.org	(888) 846-7622 (301) 587-1400
NSF	NSF International (National Sanitation Foundation International) www.nsf.org	(800) 673-6275 (734) 769-8010
NSSGA	National Stone, Sand & Gravel Association www.nssga.org	(800) 342-1415 (703) 525-8788
NTMA	National Terrazzo & Mosaic Association, Inc. (The) www.ntma.com	(800) 323-9736 (540) 751-0930
NTRMA	National Tile Roofing Manufacturers Association (Now TRI)	
NWWDA	National Wood Window and Door Association (Now WDMA)	
OPL	Omega Point Laboratories, Inc. (Now ITS)	
PCI	Precast/Prestressed Concrete Institute www.pci.org	(312) 786-0300
PDCA	Painting & Decorating Contractors of America www.pdca.com	(800) 332-7322 (314) 514-7322
PDI	Plumbing & Drainage Institute www.pdionline.org	(800) 589-8956 (978) 557-0720
PGI	PVC Geomembrane Institute http://pgi-tp.ce.uiuc.edu	(217) 333-3929
PLANET	Professional Landcare Network (Formerly: ACLA - Associated Landscape Contractors of America) www.landcarenetwork.org	(800) 395-2522 (703) 736-9666
PTI	Post-Tensioning Institute www.post-tensioning.org	(602) 870-7540

RCSC	Research Council on Structural Connections www.boltcouncil.org	
RFCI	Resilient Floor Covering Institute www.rfci.com	(301) 340-8580
RIS	Redwood Inspection Service www.calredwood.org	(888) 225-7339 (415) 382-0662
SAE	SAE International www.sae.org	(877) 606-7323 (724) 776-4841
SDI	Steel Deck Institute www.sdi.org	(847) 458-4647
SDI	Steel Door Institute www.steeldoor.org	(440) 899-0010
SEFA	Scientific Equipment and Furniture Association www.sefalabs.com	(516) 294-5424
SEI/ASCE	Structural Engineering Institute/American Society of Civil Engineers (See ASCE)	
SGCC	Safety Glazing Certification Council www.sgcc.org	(315) 646-2234
SIA	Security Industry Association www.siaonline.org	(703) 683-2075
SIGMA	Sealed Insulating Glass Manufacturers Association (Now IGMA)	
SJI	Steel Joist Institute www.steeljoist.org	(843) 626-1995
SMA	Screen Manufacturers Association www.smacentral.org	(561) 533-0991
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association www.smacna.org	(703) 803-2980
SMPTE	Society of Motion Picture and Television Engineers www.smpte.org	(914) 761-1100
SPFA	Spray Polyurethane Foam Alliance (Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division) www.sprayfoam.org	(800) 523-6154

SPIB	Southern Pine Inspection Bureau (The) www.spib.org	(850) 434-2611
SPRI	Single Ply Roofing Industry www.spri.org	(781) 647-7026
SSINA	Specialty Steel Industry of North America www.ssina.com	(800) 982-0355 (202) 342-8630
SSPC	SSPC: The Society for Protective Coatings www.sspc.org	(877) 281-7772 (412) 281-2331
STI	Steel Tank Institute www.steeltank.com	(847) 438-8265
SWI	Steel Window Institute www.steelwindows.com	(216) 241-7333
SWRI	Sealant, Waterproofing, & Restoration Institute www.swrionline.org	(816) 472-7974
TCA	Tile Council of America, Inc. www.tileusa.com	(864) 646-8453
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance www.tiaonline.org	(703) 907-7700
TMS	The Masonry Society www.masonrysociety.org	(303) 939-9700
TPI	Truss Plate Institute, Inc. www.tpinst.org	(703) 683-1010
TPI	Turfgrass Producers International www.turfgrassod.org	(800) 405-8873 (847) 649-5555
TRI	Tile Roofing Institute www.tilerroofing.org	(312) 670-4177
UL	Underwriters Laboratories Inc. www.ul.com	(877) 854-3577 (847) 272-8800
UNI	Uni-Bell PVC Pipe Association www.uni-bell.org	(972) 243-3902
USAV	USA Volleyball www.usavolleyball.org	(888) 786-5539 (719) 228-6800
USGBC	U.S. Green Building Council www.usgbc.org	(202) 828-7422

USITT	United States Institute for Theatre Technology, Inc. www.usitt.org	(800) 938-7488 (315) 463-6463
WASTEC	Waste Equipment Technology Association www.wastec.org	(800) 424-2869 (202) 244-4700
WCLIB	West Coast Lumber Inspection Bureau www.wclib.org	(800) 283-1486 (503) 639-0651
WCMA	Window Covering Manufacturers Association (Now WCSC)	
WCSC	Window Covering Safety Council (Formerly: WCMA - Window Covering Manufacturers Association) www.windowcoverings.org	(800) 506-4636 (212) 297-2109
WDMA	Window & Door Manufacturers Association (Formerly: NWWDA - National Wood Window and Door Association) www.wdma.com	(800) 223-2301 (847) 299-5200
WI	Woodwork Institute (Formerly: WIC - Woodwork Institute of California) www.wicnet.org	(916) 372-9943
WIC	Woodwork Institute of California (Now WI)	
WMMPA	Wood Moulding & Millwork Producers Association www.wmmpa.com	(800) 550-7889 (530) 661-9591
WSRCA	Western States Roofing Contractors Association www.wsrca.com	(800) 725-0333 (650) 570-5441
WWPA	Western Wood Products Association www.wwpa.org	(503) 224-3930

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

BOCA	BOCA International, Inc. (See ICC)	
IAPMO	International Association of Plumbing and Mechanical Officials www.iapmo.org	(909) 472-4100
ICBO	International Conference of Building Officials (See ICC)	

ICBO ES	ICBO Evaluation Service, Inc. (See ICC-ES)	
ICC	International Code Council www.iccsafe.org	(888) 422-7233 (703) 931-4533
ICC-ES	ICC Evaluation Service, Inc. www.icc-es.org	(800) 423-6587 (562) 699-0543
SBCCI	Southern Building Code Congress International, Inc. (See ICC)	
UBC	Uniform Building Code (See ICC)	

D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CE	Army Corps of Engineers www.usace.army.mil	
CPSC	Consumer Product Safety Commission www.cpsc.gov	(800) 638-2772 (301) 504-7923
DOC	Department of Commerce www.commerce.gov	(202) 482-2000
DOD	Department of Defense http://dodssp.daps.dla.mil	(215) 697-6257
DOE	Department of Energy www.energy.gov	(202) 586-9220
EPA	Environmental Protection Agency www.epa.gov	(202) 272-0167
FAA	Federal Aviation Administration www.faa.gov	(866) 835-5322
FCC	Federal Communications Commission www.fcc.gov	(888) 225-5322
FDA	Food and Drug Administration www.fda.gov	(888) 463-6332
GSA	General Services Administration www.gsa.gov	(800) 488-3111

HUD	Department of Housing and Urban Development www.hud.gov	(202) 708-1112
LBL	Lawrence Berkeley National Laboratory www.lbl.gov	(510) 486-4000
NCHRP	National Cooperative Highway Research Program (See TRB)	
NIST	National Institute of Standards and Technology www.nist.gov	(301) 975-6478
OSHA	Occupational Safety & Health Administration www.osha.gov	(800) 321-6742 (202) 693-1999
PBS	Public Building Service (See GSA)	
PHS	Office of Public Health and Science www.osophs.dhhs.gov/ophs	(202) 690-7694
RUS	Rural Utilities Service (See USDA)	(202) 720-9540
SD	State Department www.state.gov	(202) 647-4000
TRB	Transportation Research Board http://gulliver.trb.org	(202) 334-2934
USDA	Department of Agriculture www.usda.gov	(202) 720-2791
USPS	Postal Service www.usps.com	(202) 268-2000

E. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG	Americans with Disabilities Act (ADA) Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities Available from Access Board www.access-board.gov	(800) 872-2253 (202) 272-0080
CFR	Code of Federal Regulations Available from Government Printing Office www.gpoaccess.gov/cfr/index.html	(866) 512-1800 (202) 512-1800

CPUC California Public Utilities Commission
www.cpuc.ca.gov

(415) 703-2782

TFS Texas Forest Service
Forest Resource Development
<http://txforestsERVICE.tamu.edu>

(979) 458-6650

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

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. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.
- B. Temporary utilities include, but are not limited to, the following:
 - 1. Sanitary facilities, including toilet facilities.
 - 2. Electric power service.
 - 3. Domestic water service.
- C. Support facilities include, but are not limited to, the following:
 - 1. Waste disposal facilities.
 - 2. Construction aids and miscellaneous services and facilities.
 - 3. Security and protection facilities include, but are not limited to, the following:
 - 4. Security enclosure and lockup.
 - 5. Temporary enclosures.
- D. Related Sections include the following:
 - 1. Division 01 Section "Execution Requirements" for progress cleaning requirements.

1.3 DEFINITIONS

- A. Permanent Enclosure: As determined by Architect, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.4 USE CHARGES

- A. General: Cost or use charges for temporary facilities are not chargeable to Owner or Architect and shall be included in the Contract Sum.
- B. The use of existing power, and water will be allowed for Work in the existing building only.

1.5 QUALITY ASSURANCE

- A. The Contractor is responsible for the implementation, monitoring, and maintenance of job site safety program for the duration of the contract.

1.6 PROJECT CONDITIONS

- A. Temporary Utilities: Temporary electrical service is being provided by Owner and will return to Owner at project completion.
- B. Conditions of Use: The following conditions apply to use of temporary services and facilities by all parties engaged in the Work:
 - 1. Keep temporary services and facilities clean and neat.
 - 2. Relocate temporary services and facilities as required by progress of the Work in coordination with Owner.
 - 3. Temporary electrical services are to return to Owner at project completion. Temporary water service will be included in the building demolition.
- C. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons or firms near the site. Construction noise from loud machinery, equipment, hammering and similar loud noises shall be restricted to the hours when the facility is not in use. Obey State and local noise ordinances.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Architect. Provide materials suitable for use intended.

2.2 EQUIPMENT

- A. General: Provide equipment suitable for use intended.
- B. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA-recommended classes for exposures.
 - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
- C. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation, or combustion type; vented; fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
 - 1. Coordinate with the Engineer and Owner at the preconstruction meeting.

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

3.2 TEMPORARY UTILITY INSTALLATION

- A. Add provisions for work not in the Contract but served by temporary facilities if required.
- B. Water Service: Obtain water required for the work from location designated by the Owner as shown on the drawings. The Contractor is responsible for routing water from that point as required.
- C. Electrical Service: Provide required power cords and connect to approved location provided for use by the owner. Provide portable power generator in all other areas.

3.3 SUPPORT FACILITIES INSTALLATION

- A. Waste Disposal Facilities: Provide waste-collection dumpsters and containers in sizes adequate to handle waste from construction operations. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste. Comply with Division 01 Section "Execution Requirements" for progress cleaning requirements.
 - 1. If required by authorities having jurisdiction, provide separate containers, clearly labeled, for each type of waste material to be deposited.
 - 2. Develop a waste management plan for Work performed on Project. Indicate types of waste materials Project will produce and estimate quantities of each type. Provide detailed information for on-site waste storage and separation of recyclable materials. Provide information on destination of each type of waste material and means to be used to dispose of all waste materials.
- B. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
 - 1. Identification Signs: Provide Project identification signs as indicated on Drawings.
 - 2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
 - a. Provide temporary, directional signs for construction personnel and visitors.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
 - 1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- C. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.

1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Restoration of Roadways and Pavement: Roadways, pavements and curbs that are broken, damaged, settled, or otherwise defective as a result of receiving, handling, storage of materials or the performance of any work under this Contract, shall be fully restored to the satisfaction of the owner and authorities having jurisdiction.
- C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 1. Materials and facilities that constitute temporary facilities are the property of Contractor.
 2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements in Division 01 Section "Closeout Procedures."

END OF SECTION 015000

SECTION 017300 - EXECUTION REQUIREMENTS

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. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. General installation of products.
 - 2. Coordination of Owner-installed products.
 - 3. Progress cleaning.
 - 4. Starting and adjusting.
 - 5. Protection of installed construction.
 - 6. Correction of the Work.
- B. Related Sections include the following:
 - 1. Division 01 Section "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
 - 2. Division 01 Section "Cutting and Patching" for procedural requirements for cutting and patching necessary for the installation or performance of other components of the Work.
 - 3. Division 01 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
- B. Existing Systems: The existence and location of utilities and construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of utilities and other construction affecting the Work.

- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Verification: Before proceeding to layout the Work, verify layout information shown on Drawings. If discrepancies are discovered, notify Architect promptly.
 - 2. Make vertical work plumb and make horizontal work level.
 - 3. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 4. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 - 5. Maintain minimum headroom clearance of 8 feet in spaces without a suspended ceiling, unless indicated otherwise.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.
 - 1. No asbestos containing materials shall be used in the work.

3.4 OWNER-INSTALLED PRODUCTS

- A. Site Access: Provide access to Project site for Owner's construction forces.
- B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction forces.
 - 1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
 - 2. Preinstallation Conferences: Include Owner's construction forces at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction forces if portions of the Work depend on Owner's construction.

3.5 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work. It is the Contactor's responsibility for job site safety.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
 - a. Clean interior spaces prior to the start of finish painting, and continue cleaning on an as-needed basis until painting is finished.
 - b. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly coated surfaces.
 - 3. Remove materials and debris that create tripping hazards.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.6 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 01 Section "Quality Requirements."
- E. Comply with Division 01 Section "Integrated Deliverables and Testing (IDAT)" requirements.

3.7 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.8 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 01 Section "Cutting and Patching."
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

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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. Salvaging nonhazardous demolition and construction waste.
 - 2. Recycling nonhazardous demolition and construction waste.
 - 3. Disposing of nonhazardous demolition and construction waste.
 - 4. Recycling of DEP-Regulated Universal waste.
- B. Related Requirements:
 - 1. Section 024119 "Selective Demolition and Alterations" for disposition of waste resulting from partial demolition of buildings, structures, and site improvements.
 - 2. Refer to drawings for additional information.

1.3 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Reused or Salvaged: Recovery of demolition or construction waste and subsequent sale, donation, or reuse in another facility or incorporated into the Work.
- F. Universal Waste: Any waste designated by the Maine Department of Environmental Protection as Universal Waste i.e. fluorescent lamps, ballasts, thermostats and other lead and mercury containing devices. Information can be found on the DEP's website: <http://www.maine.gov/dep/index.html>

1.4 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 construction and demolition waste from landfills and incinerators by sorting prior to leaving the jobsite. Facilitate recycling and salvage of materials. All waste must be disposed of at facilities that operate in accordance with all local, state, and federal waste regulations. Documentation of compliance can be requested by the University of Maine System at any time.

1.5 SUBMITTALS

- A. Submit 'Anticipated Project Waste Sheet' before commencement of work.
- B. Submit 'Waste Reporting Sheet' monthly with each Pay Requisition during the course of the project and prior to Final Requisition.
 - 1. Include the following information on Waste Reporting Sheet:
 - a. Date of disposal
 - b. Type of material(s)
 - c. Method(s) of disposal: recycled, reused/salvaged, landfilled, incinerated.
 - d. Weight(s): attach copies of scale tickets to form (see below)
- C. Copies of scale tickets from waste facilities, including transfer and processing facilities, for each haul must be attached to monthly 'Project Waste Sheet' on which the waste is listed.
- D. Copies of Certificates of Recycling from DEP-approved consolidators for all hauls over the course of the project which involved Universal Waste must be attached to final Waste Reporting Sheet at conclusion of project.
- E. Copy of Certificate of Refrigerant Recovery must be attached to Waste Reporting Sheet on which device is listed. Refrigerant Recovery must be performed by an EPA-approved Refrigerant Recovery Technician.

1.6 QUALITY ASSURANCE

- A. Contractors must designate someone in their employ (a direct paid employee of the general contractor) to be the contact for waste reporting for the duration of the project.
- B. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
- C. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
 - 1. For any questions or clarifications of waste handling procedures contact the UMS CPPM project manager directly.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 RECYCLING / SALVAGING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers in accordance with UMS and USM Waste Minimization policy.
- B. Preparation of Waste: Prepare and maintain recyclable and salvageable 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 or reusing process.
- C. Procedures: Separate recyclable and salvageable waste from other waste materials, trash, and debris. Sort recyclable waste by type at Project site to the maximum extent practical.
 - 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.
 - 2. Inspect containers and bins for contamination and remove contaminated materials if found.

3.2 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged/reused 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.

END OF SECTION 017419

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SECTION 017700 - CLOSEOUT PROCEDURES

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. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Warranties.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
 - 2. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 3. Divisions 02 through 33 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 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. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Prepare and submit Project Record Documents, operation and maintenance manuals.
 - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 - 7. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 8. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 - 9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
 - 10. Submit initial draft copy of operation and maintenance manuals at least 15 days before requesting inspection for Substantial Completion.

- B. 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. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - 2. Results of completed inspection will form the basis of requirements for Final Completion.

1.4 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
 - 1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
 - 2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 - 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 - 4. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 INSPECTION FEES

- A. If the Architect Performs Re-inspections Due to Failure of the Work to Comply with the Claims of Status of Completion Made by the Contractor, Or, Should the Contractor fail to complete the work, Or, Should the Contractor fail to promptly correct warranty items or work later found to be deficient:
 - 1. Owner will compensate Architect for such additional services.
 - 2. Owner will deduct the amount of such compensation from the final payment to the Contractor.
- B. If the Work is not completed by the date set in the Agreement, and the Architect needs to perform additional Contract Administrative and on site observation duties:
 - 1. Owner will compensate Architect for such additional services.
 - 2. Owner will deduct the amount of such compensation from the final payment to the Contractor.

1.6 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 - 1. Organize list of spaces in sequential order.
 - 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 - 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.

1.7 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated in the contract documents.
 - 1. Unless indicated otherwise, all warranties shall commence on the date of Substantial Completion.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Submit final warranties as a package for the entire project, assembled and identified as described below.
 - 2. Bind warranties and bonds in heavy-duty, D-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents but not greater than 2 inches, and sized to receive 8-1/2-by-11-inch paper. Do not over fill D-ring, allowing 1/2-inch space for future additions.
 - 3. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 4. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
 - 5. Electronic Media: Submit copy of warranty binder on CD-R in .PDF format. Bookmark based on the table of contents, and for each warranty within each section.
- C. Provide additional electronic media copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

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.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 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. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - f. Leave Project clean and ready for occupancy.
- C. 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 017700

SECTION 024116 - STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARYs

- A. The Work of this Section Includes:
 - 1. Demolition and removal of buildings or structures.
 - 2. Demolition and removal of site improvements.
 - 3. Removing below-grade construction.
 - 4. Disconnecting, capping or sealing, and abandoning in-place site utilities.
 - 5. Disconnecting, capping or sealing, and removing site utilities.
 - 6. Salvaging items for reuse by Owner.

- B. Related Requirements:
 - 1. Section 011000 "Summary" for use of the premises and phasing requirements.
 - 2. Section 013200 "Construction Progress Documentation" for preconstruction photographs taken before building demolition.
 - 3. Section 312000 'Earth Moving'

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged.

- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner as indicated. Include fasteners or brackets needed for reattachment elsewhere.

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 COORDINATION

- A. Arrange demolition schedule so as not to interfere with Owner's on-site operations or operations of adjacent occupied buildings.

1.5 PREINSTALLATION MEETINGS

- A. Pre-demolition Conference: Conduct conference at Project site.
 - 1. Inspect and discuss condition of construction to be demolished.
 - 2. Review structural load limitations of existing structures.
 - 3. Review and finalize building demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review and finalize protection requirements.
 - 5. Review procedures for protection of adjacent buildings.
 - 6. Review storage, protection, and accounting for items to be salvaged and returned to Owner.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Statements: For refrigerant recovery technician.
- B. Engineering Survey: Submit engineering survey of condition of building.
- C. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property. Indicate proposed locations and construction of barriers.
 - 1. Adjacent Buildings: Detail special measures proposed to protect adjacent buildings to remain including means of egress from those buildings.
- D. Schedule of Building Demolition Activities: Indicate the following:
 - 1. Detailed sequence of demolition work, with starting and ending dates for each activity.
 - 2. Temporary interruption of utility services. Indicate how long services will be interrupted.
 - 3. Coordination for shutoff and capping of utility services.
- E. 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 in accordance with EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.7 CLOSEOUT SUBMITTALS

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

1.8 QUALITY ASSURANCE

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

1.9 FIELD CONDITIONS

- A. Buildings to be demolished will be vacated and their use discontinued before start of the Work.

- B. Buildings immediately adjacent to demolition area will be occupied. Conduct building demolition so operations of occupied buildings will not be disrupted.
 - 1. Provide not less than 72 hours' notice of activities that will affect operations of adjacent occupied buildings.
 - 2. Maintain access to existing walkways, exits, and other facilities used by occupants of adjacent buildings.
 - a. Do not close or obstruct walkways, exits, or other facilities used by occupants of adjacent buildings without written permission from authorities having jurisdiction.
- C. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- D. Hazardous Materials:
 - 1. It is not expected that hazardous materials will be encountered in the Work with the exceptions of roofing (identified on the drawings) and any materials that are buried within wall assemblies or chases that cannot be reached in the abatement process.
 - a. Hazardous materials will be removed by Owner before start of the Work.
 - b. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. On-site sale of removed items or materials is not permitted.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

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

2.2 SOIL MATERIALS

- A. Satisfactory Soils: Comply with requirements in Section 312000 "Earth Moving."

PART 3 - EXECUTION

3.1 EXAMINATION

- A. 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.
- B. Perform or engage a professional engineer to 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 building demolition operations.

- C. Verify that hazardous materials have been remediated before proceeding with building demolition operations.
- D. Inventory and record the condition of items to be removed and salvaged. Photograph or video conditions that might be misconstrued as damage caused by removal.

3.2 PREPARATION

- A. Existing Facilities: Protect adjacent walkways, loading docks, building entries, and other building facilities during demolition operations. Maintain exits from existing buildings.
- B. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent unexpected movement or collapse of construction being demolished.
 - 1. Strengthen or add new supports when required during progress of demolition.
- C. Temporary Protection: Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction and as indicated. Comply with requirements in Section 015000 "Temporary Facilities and Controls."
 - 1. Protect adjacent buildings and facilities from damage due to demolition activities.
 - 2. Protect existing site improvements, appurtenances, and landscaping to remain.
 - 3. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
 - 4. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 - 5. Provide protection to ensure safe passage of people around building demolition area and to and from occupied portions of adjacent buildings and structures.
- D. Existing Utilities to Remain: Maintain utility services to remain and protect against damage during demolition operations.
 - 1. Do not interrupt existing utilities serving adjacent occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction.
 - 2. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and authorities having jurisdiction.
 - a. Provide at least 72 hours' notice to occupants of affected buildings if shutdown of service is required during changeover.
- E. Existing Utilities to Be Disconnected: Locate, identify, disconnect, and seal or cap off utilities serving buildings and structures to be demolished.
 - 1. Owner will arrange to shut off utilities when requested by Contractor.
 - 2. If disconnection of utility services will affect adjacent occupied buildings, then provide temporary utilities that bypass buildings and structures to be demolished and that maintain continuity of service to other buildings and structures.
 - 3. Cut off pipe or conduit a minimum of 24 inches (610 mm) below grade at or outside the building or structure to be demolished and cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing in accordance with requirements of authorities having jurisdiction.

4. Do not start demolition work until utility disconnecting and sealing have been completed and verified in writing by authorities having jurisdiction.
- F. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment in accordance with 40 CFR 82 and regulations of authorities having jurisdiction.

3.3 SALVAGE

- A. Items to be removed and salvaged are indicated on Drawings.
- B. Comply with the following for salvaged items:
1. Clean salvaged items of dirt and demolition debris.
 2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
 3. Store items in a secure area until delivery to Owner.
 4. Transport items to storage area designated by Owner.
 5. Protect items from damage during transport and storage.

3.4 DEMOLITION, GENERAL

- A. General: Demolish indicated buildings and site improvements completely. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Do not use cutting torches until work area is cleared of flammable materials. Maintain portable fire-suppression devices during flame-cutting operations.
 2. Maintain fire watch during and for at least 2 hours after flame-cutting operations.
 3. Maintain adequate ventilation when using cutting torches.
 4. Locate building demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
- B. Site Access and Temporary Controls: Conduct building demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed trafficways if required by authorities having jurisdiction.
 2. 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.
- C. Explosives: Use of explosives is not permitted.

3.5 DEMOLITION BY MECHANICAL MEANS

- A. Proceed with demolition of structural framing members systematically, from higher to lower level. Complete building demolition operations above each floor or tier before disturbing supporting members on the next lower level.

- B. Remove debris from elevated portions of the building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
 - 1. Remove structural framing members and lower to ground by method suitable to minimize ground impact and dust generation.
- C. Below-Grade Construction:
 - 1. Building foundations, footings, building slabs on ground, utilities under building slabs on ground, exterior slabs, walks and stairs are specified to be completely removed as part of the work in Section 24226 – Structure Demolition and Section 311000 – Site Clearing.
- D. Existing Utilities:
 - 1. Demolish and remove existing utilities and below-grade utility structures.
- E. Hydraulic Elevator Systems: Demolish and remove elevator system, including cylinder, plunger, well assembly, steel well casing and liner, oil supply lines, and tanks.

3.6 SITE RESTORATION

- A. Below-Grade Areas:
 - 1. Rough grade below-grade areas ready for further excavation or new construction.
 - 2. Completely fill below-grade areas and voids resulting from building demolition operations with satisfactory soil materials in accordance with backfill requirements in Section 312000 "Earth Moving."
- B. 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.

3.7 REPAIRS

- A. Promptly repair damage to adjacent buildings caused by demolition operations.

3.8 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction. and recycle or dispose of them in accordance with 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.
- B. Do not burn demolished materials.

3.9 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by building demolition operations. Return adjacent areas to condition existing before building demolition operations began.
 - 1. Clean roadways of debris caused by debris transport.

END OF SECTION 024116

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SECTION 028200 - ASBESTOS REMEDIATION

PART 1 – GENERAL

1.1 GENERAL PROVISIONS

- A. This specification has been compiled on behalf of the State of Maine Bureau of General Services for the purposes of abatement of the State-owned Pooler Pavilion on the Dorothea Dix Psychiatric Campus, Bangor, ME. Harriman's role in this effort was to facilitate the Owner's Industrial Hygiene Consultant, and Harriman's subconsultant, RPF Environmental, in performing the hazardous materials survey and development of abatement design specifications. Harriman compiled the specification front end on behalf of the State of Maine.
Harriman is not responsible for information or services provided including, but not limited to, the surveying, testing, identification, or discovery of asbestos on the Project site, or with developing a design plan to remove known and unknown asbestos containing materials from the site during the Project's demolition phase. These responsibilities, as well as the responsibility to oversee asbestos abatement and to perform air monitoring, reporting, and testing for compliance, are solely those of the Industrial Hygienist that has been hired by Harriman on behalf of the State of Maine Bureau of General Services.
- B. General Conditions, Supplementary Conditions and applicable parts of Division 1 form a part of this specification and the Contractor shall consult them in detail for instructions.
- C. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the work of this trade.

1.2 RELATED WORK UNDER OTHER SECTIONS

- A. Section 028213 "Asbestos Abatement and Related Work."

1.3 DESCRIPTION OF WORK

- A. The work includes the complete removal and disposal of all asbestos containing materials (ACM) as indicated in Section 028213 and Appendix A: Table 1.
- B. The General or Demolition Contractor shall retain the services of a Maine licensed asbestos abatement contractor. The asbestos must include in his scope of work all required services included in Section 028213 and Appendix A: Table 1 and must accept cost and regulatory requirements included throughout the 00, 01, and 02 heading sections of this specification.

- 1.4 SEE SECTION 028213 FOR INFORMATION AND REQUIREMENTS RELATING TO ABATEMENT SCOPE.

END OF SECTION 022820

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SECTION 02 82 13

ASBESTOS ABATEMENT & RELATED WORK

DOROTHEA DIX PSYCHIATRIC CENTER
POOLER PAVILION
BANGOR, MAINE

Contents

PART 1 – GENERAL	2
1.1 RELATED DOCUMENTS	2
1.2 PROJECT SCOPE-OF-WORK	2
1.3 WORK SCHEDULES	2
1.4 CONTRACTOR ESTIMATES	3
1.5 EXISTING CONDITIONS	3
1.6 POTENTIAL ASBESTOS HAZARD	3
1.7 CONTRACTOR USE OF PREMISES	4
1.8 STOP WORK	4
1.9 PROJECT COORDINATION	5
1.10 STANDARDS	6
1.11 CODES, REGULATIONS, AND STANDARDS	6
1.12 DEFINITIONS	7
1.13 NOTICES	11
1.14 SUBMITTAL REQUIREMENTS	12
1.15 AIR MONITORING	14
1.16 TEMPORARY FACILITIES	16
1.17 PRESSURE DIFFERENTIAL AND AIR CIRCULATION SYSTEM	17
1.18 WORKER PROTECTION	17
1.19 TEMPORARY ENCLOSURES	19
PART 2 - PRODUCTS	19
2.1 PRODUCTS	19
2.2 WATER SERVICE	21
2.3 ELECTRICAL SERVICE	22
2.4 PRESSURE DIFFERENTIAL AND FILTRATION	22
2.6 AUXILIARY GENERATOR	22
PART 3 – EXECUTION	22
3.1 TEMPORARY ENCLOSURES	22
3.3 REMOVAL OF ASBESTOS-CONTAINING MATERIALS	26
3.4 INITIAL CLEAN-UP WORK	31
3.5 PROJECT DECONTAMINATION	32
3.6 WORK AREA CLEARANCE	34
3.7 DISPOSAL OF ASBESTOS-CONTAINING WASTE MATERIAL	34
3.8 RESTORATION AND REPLACEMENT	ERROR! BOOKMARK NOT DEFINED.
3.9 ASBESTOS PROJECT CLOSEOUT	35

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. General provisions of the Contract, including General and Supplementary Conditions and Other Abatement Specification Sections, apply to the work of each of the Specification Sections.
- B. This section addresses abatement of asbestos-containing material (ACM) only.
- C. Related Work: The following items are closely related to this work but not included in this Section and shall be performed under the designated Sections.

- 1. 024119 Selective Demolition

1.2 PROJECT SCOPE-OF-WORK

- A. General: Furnish all labor, materials, equipment and perform all work required to safely remove, and otherwise abate as indicated herein, transport, and legally dispose of all asbestos-containing materials (ACM). The scope of work includes the removal, transport, and disposal of designated ACM at the Dorothea Dix Psychiatric Center, Pooler Pavilion Building located at 656 State Street in Bangor, Maine. All work is to be completed in accordance with the schedules stated herein, in the Contract Documents, and as designated by the Owner. It is essential that all work be phased and scheduled as required to Mafacilitate Owner’s renovation and upgrade work. All work is to be completed in strict accordance with applicable local, Maine (State), and federal codes and regulations and the requirements stated in this specification and Contract Documents.
- B. Table 1 of Appendix A includes the listing of ACM to be removed, packaged, transported, and disposed of in accordance with the Contract Documents.
- C. Reference full inspection reports for discussions and additional information and limitations of Owner survey. Quantities listed in Table 1 are approximate only and Contractor shall remove all ACM in the work areas.
- D. The work areas have or may have other regulated or hazardous materials present that are not covered in the Section including but not limited to polychlorinated biphenyl (PCB)-containing materials, mercury, lead paint, guano, mold contamination, other hazardous materials, and universal waste. Contractor’s OSHA-competent person shall also inspect the workplace for other potential hazardous building material during the work. If encountered during the work immediately notify Owner’s Representative. Use only qualified, trained workers to remove, package, transport, and dispose (or recycle) of such material in strict compliance with all local, State, and Federal requirements.

1.3 WORK SCHEDULES

- A. All work shall be completed in accordance with the schedule requirements as indicated by the Owner and as stated in the Contract Documents.

- B. All work shall be strictly coordinated and scheduled by the Contractor as indicated by and approved by the Owner, the Owner's industrial hygiene consultant (IH Consultant), and the General Contractor. Work is to be phased as required to facilitate Owner operations, general occupancy of the site, and general construction activity. Contractor must provide proposed daily schedules to Owner and IH Consultant for each phase of work and each Owner work request. Adequate advance notice shall be provided to the Owner and the IH Consultant prior to any schedule changes. Start and completion dates for the work and specific phasing requirements not otherwise specified herein shall be submitted to Owner and IH Consultant for approval. Contractor shall update all State and EPA notifications and permits as needed for schedule modifications.

1.4 CONTRACTOR ESTIMATES

- A. Estimates: Contractor shall conduct necessary field measurements and site review as deemed necessary by Contractor to delineate the scope of work and site conditions prior to submittal of bid. Contractor shall note on bid any discrepancies between Contractor field measurements and listings of work stated herein. It is the responsibility of the Contractor to verify all project information and site conditions as necessary to satisfy the Contractor as to the requirements of the work for each specific phase of the project. The Contractor must notify the Owner and the IH Consultant of any conflicting information or clarifications required for the preparation of any bids, estimates, and submittal documentation. Unless otherwise stated by the Owner, the Contractor is responsible for the removal of all designated ACM at Owner facility, so designated by the Owner.

1.5 EXISTING CONDITIONS

- A. Prior to commencement of work, inspect areas in which work shall be performed. Prepare a listing and photographs of damage to structure, surfaces, finishes, insulations, and equipment that could be misconstrued as damage resulting from the work. The contractor is responsible for all damage to equipment, furnishings, finishes and building surfaces in the work area and adjacent caused by the Contractor during the course of abatement and general housecleaning. Contractor is responsible for completing all repairs to damaged items/surfaces caused by the work. In addition, Contractor must fully repair all tape, adhesive, and other staining and damage to meet or exceed existing conditions.

1.6 POTENTIAL ASBESTOS HAZARD

- A. The work site contains ACM. Review all site survey reports and conduct ongoing inspections of the work areas to identify potential hazardous material that may be encountered. Provide OSHA competent person to supervise and review work procedures and conduct ongoing work area inspections. Train all affected personnel at the job site based on the hazards and hazardous material to be encountered, impacted, or disturbed including but not limited to ACM.
- B. The disturbance or dislocation of ACM may cause asbestos fibers to be released into the building's atmosphere, thereby creating potential health hazards to workers, and building occupants. Apprise all employers on site, workers, supervisory personnel, subcontractors, and consultants who shall be at the job site of the seriousness of the hazards, other possible site hazards, and of proper work procedures that must be followed.

- C. Where in the performance of the work, workers, supervisory personnel, subcontractors, or consultants may encounter, disturb, or otherwise function in the immediate vicinity of any identified asbestos-containing materials, take appropriate continuous measures as necessary to protect all building occupants from the potential hazard of exposure to airborne asbestos fibers and dust. Such measures shall include the procedures and methods described herein, and compliance with regulations of applicable federal, state, and local agencies.
- D. Complete, and coordinate with Owner's Representative as applicable, all communication of hazards in strict accordance with 29 CFR 1926.1101 (k) and other applicable OSHA and State regulations. The contractor shall coordinate with the Owner's Representative to review all existing inspection records and testing results as needed. Ensure that complete inspections of the space and affected materials have been completed of copies of inspection reports have been provided to the Owner, Contractor site supervisor and other affected contractors and subcontractors at the site as applicable. All site personnel working in areas containing ACM shall be apprised of the locations, types, and quantities of ACM present and all such personnel shall be provided a minimum of asbestos awareness level training (for non-asbestos contractors) or additional training as indicated herein. In the event that other suspect material is encountered (or previously inaccessible spaces are accessed) that are not identified in the inspection report as having been properly inventoried and testing, then immediately cease work that would impact such materials and notify Owner's Representative such that proper testing and inspection can be performed.

1.7 CONTRACTOR USE OF PREMISES

- A. General: The Contractor shall limit his use of the site to the work indicated, so as to allow for Owner operations and general construction activity. Confine operations at the site to the specified work areas of the Specification. Take all precautions necessary to protect the site, buildings, any occupants, and surrounding areas from work-related hazards during the construction period. Maintain building in a safe and structurally sound condition throughout the work. Maintain access to the public and other trades in designated areas (for example, stairwells) as indicated herein and as otherwise noted by Owner. Provide additional barriers and site security as needed to accommodate such access. Use care to prevent damage to existing surfaces during installation of solid barriers, critical barriers, and primary isolation barriers.
- B. Install solid barriers to prevent unauthorized access and visibility from adjacent, public, or Owner-occupied areas as designated by Owner and using materials and construction methods approved by Owner.

1.8 STOP WORK

- A. The Contractor's Site Supervisor shall stop work and shall not proceed until corrective measures are implemented in the event that any of the below occur:
 - Airborne fiber concentrations outside the work area exceed 0.010 f/cc.
 - Airborne fiber concentrations inside the work area exceed 0.10 f/cc.
 - Loss of integrity of any critical barrier
 - Failure to work in accordance with state and federal regulations or this plan.
 - Visible emissions created.

- Other potential safety and health emergencies and changes as warranted.
- B. Complete all corrective work with no change in the Contract Price if high airborne fiber counts or other conditions resulting in stop work were caused by Contractor activities or compliance deficiencies.

1.9 PROJECT COORDINATION

- A. Site Supervisor: Provide a full-time Site Supervisor who is experienced in administration and supervision of asbestos abatement projects including work practices, protective measures for building and personnel, disposal procedures, etc. This person is the Contractor's Representative responsible for compliance with the specification and all applicable federal, state, and local regulations, particularly those relating to asbestos-containing materials.
1. Experience and Training: The Site Supervisor must have completed a course at an EPA Training Center or equivalent certificate course in asbestos abatement procedures and have had a minimum of five (5) years on-the-job training in similar asbestos abatement procedures.
 2. Accreditation/Qualifications: The Site Supervisor is to be (1) a Competent Person as required by OSHA in 29 CFR 1926, and (2) accredited and certified in accordance with the AHERA regulation 40 CFR Part 763, Subpart E, Appendix C; and (3) licensed in accordance with current State requirements.
- B. Project Manager: Provide a qualified and experienced project manager to perform administrative and project management responsibilities and to serve as Contractor management point of contact in addition to the project supervisor.
- C. Pre-Construction Conference: An initial progress meeting, recognized as "Pre-Construction Conference" shall be convened by Owner with Contractor prior to the start of work for each phase. This meeting shall be held to review the scope-of-work, scheduling, coordination, and contractor plan of action and submittals and other applicable items.
- D. Daily Log: Maintain at the work area a daily log documenting the dates and time of but not limited to, the following items:
1. Visitations; authorized and unauthorized
 2. Daily sign-in sheet for all personnel entering and leaving the work area (name, certification, expirations).
 3. Special or unusual events, i.e., barrier breaching, equipment failures, accidents
 4. Documentation of the following:
 - a) Supervisor's daily inspections and exposure monitoring test results
 - b) Work progress each day for each work area.
 - c) Removal of waste material (number and type of containers) from each work area
 - d) Removal of waste from site including a copy of the accompanying waste shipment record
 - e) Decontamination of work area and equipment
 - f) Final inspection and air clearance results, and
 - g) Documentation of containment removal and final general housecleaning activity

5. Complete and maintain daily log in accordance with applicable State and federal record keeping requirements. Provide access to logs to Owner and IH Consultant at all times and provide copies of logs with the submittal package in accordance with the construction submittal requirements.

1.10 STANDARDS

- A. **Applicability of Standards:** It is the Contractor's responsibility to complete all work in accordance with (or exceeding) all applicable industry standards and guidelines. Except where Contract Documents include more stringent requirements, all applicable construction industry standards have the same force and effect as if bound or copied directly into Contract Documents. Applicable construction standards are made a part of the Contract Documents by reference. Where compliance with an industry standard is required, comply with the most current standards in effect as of date of Contract Documents.
- B. **Conflicting Requirements:** Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement shall be enforced, unless the Contract Documents indicate otherwise. Refer to Owner and IH Consultant any requirements that are different or conflicting; outline the more stringent requirement before proceeding.
- C. Comply with applicable standards including, but not limited to, American National Standards Institute (ANSI) standards and American Society for Testing and Materials (ASTM) standards.

1.11 CODES, REGULATIONS, AND STANDARDS

- A. Adhere to work practices and procedures set forth in applicable codes, regulations and standards related to work. Obtain permits, licenses, inspections, and similar documentation, as well as payments and similar requirements associated with codes, regulations, and standards. Update permits, as necessary.
- B. The Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State, and local regulations pertaining to work practices, hauling, disposal, and protection of workers, visitors to the site, and persons occupying areas adjacent to the site. The Contractor is responsible for providing medical examinations and maintaining medical records of personnel as required by the applicable Federal, State, and local regulations. The Contractor shall hold Owner, Owner's Project Management Consultant, and IH Consultant harmless for failure to comply with any applicable work, hauling, disposal, safety, health, or other regulation on the part of himself, his employees, or his subcontractors.
- C. All work performed under this contract shall comply with applicable provisions, including most current versions, and not limited to the listed and all other applicable local, state, and federal codes and regulations.
- D. **Federal Requirements:** which govern asbestos abatement work or hauling, and disposal of asbestos waste materials include but are not limited to the following:

OSHA: U.S. Department of Labor, Occupational Safety and Health Administration, including but not limited to:

1. Occupational Exposure to Asbestos, Tremolite, Anthophyllite, and Actinolite; Final Rules
2. 29 CFR 1910.1001 and 29 CFR Part 1926.1101
3. Respiratory Protection: Title 29, Part 1910, Section 134 of the CFR
4. Construction Industry: Title 29, Part 1926, of the CFR and all related Subparts
5. Access to Employee Exposure and Medical Records: 29 CFR, Part 1910, Section 1020
6. Hazard Communication: Title 29, Part 1910, Section 1200 of the CFR
7. Specifications for Accident Prevention Signs and Tags: 29 CFR Part 1910, Sec. 145

DOT: U. S. Department of Transportation, including but not limited to:

1. Hazardous Material Regulations: Title 49, Part 171-180 CFR

EPA: U. S. Environmental Protection Agency (EPA), including but not limited to:

1. Asbestos Abatement Projects; Worker Protection Rule: Title 40 Part 763, Sub-part G
 2. Asbestos School Hazard Abatement Reauthorization Act (ASHARA)
 3. Asbestos Containing Materials in Schools Final Rule 40 CFR Part 763, Sub-part E.
 4. National Emission Standard for Hazardous Air Pollutants (NESHAPS); National Emission Standard for Asbestos, 40 CFR Part 61, Sub-part A, and Sub-part M (Revised Sub-part B)
- E. Local Requirements: Abide by all local requirements that govern asbestos abatement work or hauling and disposal of asbestos waste materials.
- F. Maine Department of Environmental Protection: which govern asbestos abatement work or hauling, and disposal of asbestos waste materials include but are not limited to the following:
1. Chapter 425 Asbestos Management Regulations

1.12 DEFINITIONS

- A. General Definitions: Definitions contained in this Section are not necessarily complete but are general to the extent that they are not defined more explicitly elsewhere in the Contract Documents.
1. Directed: Terms such as "directed", "requested", "authorized", "selected", "approved", "required", and "permitted" mean "directed by Owner's representative", "requested by the "IH Consultant", and similar phrases. However, no implied meaning shall be interpreted to extend the IH Consultant's, or the Owner's Project Management Consultant's responsibility into the Contractor's area of construction supervision.
 2. Approve: The term "approved," where used in conjunction with the Owner, Owner's Project Management Consultant, or the IH Consultant's action on the Contractor's submittals, applications, and requests, is limited to the responsibilities and duties of the IH Consultant as indicated in the Contract Documents. Such approval or acceptances do not express or claim any certification of completeness, compliance, or approval of programs and documentation,

including but not limited to review of analytical results, historical information, and interpretations. Such approval shall not release the Contractor from responsibility to fulfill Contract Document requirements, unless otherwise provided in the Contract Documents.

3. Furnish: The term "furnish" is used to mean "supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, and similar operations."
 4. Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations."
 5. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use."
 6. Installer: An "Installer" is an entity engaged by the Contractor, either as an employee, subcontractor, or sub- subcontractor for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged in performing.
 7. Owner's IH Consultant: This is the entity employed or engaged as industrial hygiene consultant as described in the Contract Documents. All references to Owner's Consultant, Air Monitoring Consultant, or Consultant with regard to asbestos abatement in the Contract Documents in all cases refer to the Owner's IH Consultant. The Owner's IH Consultant shall represent Owner during abatement and until final payment is. The Owner representative may also constitute other people representing Owner, other than the IH Consultant or consultant, as indicated by Owner. Owner's instructions to the Contractor shall be made directly to the Contractor or forwarded through the Owner's IH Consultant."
 8. Site Supervisor: This is the Contractor's Representative at the work site. This person shall be the Competent Person required by OSHA in 29 CFR 1926 and licensed Site Supervisor/Foreman as required by the State. Provide licensed supervisor at each individual work site during work.
- B. Definitions - Asbestos Abatement:
1. Accredited or Accreditation (when referring to a person or laboratory): A person or laboratory accredited in accordance with section 206 of Title II of the Toxic Substances Control Act (TSCA).
 2. Adequately Wet: Means sufficiently mix or penetrate with liquid to prevent the release of particulate. If visible emissions are observed coming from the asbestos-containing material, then that material has not been adequately wetted. The absence of visible emissions is not sufficient evidence, or measure, of a material being adequately wet.
 3. Air Monitoring: The process of measuring the fiber content of a specific volume of air.
 4. Amended Water: Water to which a surfactant has been added to decrease the surface tension to 35 or less dynes.
 5. Asbestos: The asbestiform varieties of serpentinite (chrysotile), riebeckite (crocidolite), cummingtonite-grunerite, anthophyllite, and actinolite-tremolite. For purposes of determining

respiratory and worker protection both the asbestiform and non-asbestiform varieties of the above minerals and any of these materials that have been chemically treated and/or altered shall be considered as asbestos.

6. Asbestos-Containing Material (ACM): Any material containing equal to or more than 1% of asbestos of any type or mixture of types.
7. Asbestos-Containing Building Material (ACM): Surfacing ACM, thermal system insulation ACM, or misc. ACM in or on interior structure or other parts of a building.
8. Asbestos-Containing Waste Material: Any material that is or is suspected of being or any material contaminated with an asbestos-containing material that is to be removed from a work area for disposal. May also be referred to as "asbestos waste."
9. Asbestos debris: Pieces of ACM or ACM that can be identified by color, texture, or composition, or means dust, if an accredited inspector determines the dust to be ACM or reasonably likely to have asbestos fibers present under conditions present and based on work operations.
10. Authorized Visitor: Owner, the IH Consultant, testing lab personnel, emergency personnel or a representative of any federal, state, and local regulatory or other agency having authority over the project.
11. Barrier: Any surface that seals off the work area to inhibit the movement of fibers.
12. Breathing Zone: A hemisphere forward of the shoulders with a radius of approximately 6 to 9 inches.
13. Category I Non-Friable ACM: means ACM packings, gaskets, resilient floor covering, and asphalt roofing products containing equal to or more than 1% asbestos. Also see definition for Regulated ACM.
14. Category II Non-Friable ACM: means any non-friable ACM, except for Category I Non-Friable ACM.
15. Certified Industrial Hygienist (CIH): An industrial hygienist certified in Comprehensive Practice by the American Board of Industrial Hygiene.
16. Critical Barrier: Polyethylene sheeting, typically 6-mil polyethylene sheeting, over windows, doors, and air passageways separating the work area from non-work area portions of the building. Critical barriers remain in place until clearance testing or inspections are completed and results meet clearance test criteria.
17. Demolition: The wrecking or taking out of any building component, system, finish, or assembly of a facility together with any related handling operations.
18. Disposal Bag: A properly labeled 6 mil thick leak-tight plastic bag used for transporting asbestos waste from work and to disposal site.

19. Contractor: The contractor engaged by the Owner to perform asbestos related activities must be licensed by the State, as applicable, and in accordance with Maine Department of Environmental Protection Chapter 425 Asbestos Management Regulations. All workers and site supervisors engaging in asbestos activity must also be trained and licensed in accordance with current State regulations and 40 CFR Part 763 (AHERA).
20. Encapsulant: A material that surrounds or embeds asbestos fibers in an adhesive matrix, to prevent release of fibers.
 - a. Bridging encapsulant: an encapsulant that forms a discrete layer on the surface of an in-situ asbestos matrix.
 - b. Penetrating encapsulant: an encapsulant that is absorbed by the in-situ asbestos matrix without leaving a discrete surface layer.
21. Encapsulation: Treatment of asbestos-containing materials, with an encapsulant and application of appropriate post removal encapsulant on substrate and containment barriers.
22. Enclosure: The construction of an air-tight, impermeable, permanent barrier around asbestos-containing material to control the release of asbestos fibers into the air.
23. Excursion Limit: Ensure that no employee is exposed to airborne concentrations of asbestos in excess of 1.0 fibers per cubic centimeter of air (1.0 f/cc) as averaged over a sampling period of thirty (30) minutes, as determined by PCM analysis in accordance with NIOSH Method 7400 and as indicated in 29 CFR Part 1926. Also referred to as the short-term exposure limit, (STEL).
24. Friable Asbestos Material: Material that contains more than or equal to 1.0% asbestos and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry. This also includes materials which, when subjected to removal methods and other disturbances, may release fibers and dust due to the abatement actions.
25. Glovebags: Glovebags for removal of insulation in accordance with 29 CFR Part 1926.
26. HEPA Filter: A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97% of asbestos fibers greater than 0.3 microns in diameter.
27. HEPA Filter Vacuum Collection Equipment (or vacuum cleaner): High efficiency particulate air filtered vacuum collection equipment with a filter system capable of collecting and retaining asbestos fibers. Filters should be of 99.97% efficiency for retaining fibers of 0.3 microns or larger.
28. Negative Pressure Respirator: A respirator in which the air pressure inside the respiratory-inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere.
29. Permissible exposure limit (PEL): the Contractor shall ensure that no employee is exposed to an airborne fiber concentration of asbestos in excess of 0.1 f/cc of air as an eight (8) hour time-weighted average (TWA) in accordance with 29 CFR Part 1926.

30. Personal Monitoring: Sampling of the asbestos fiber concentrations within the breathing zone of an employee.
31. Pressure Differential and Ventilation System: A local exhaust system, utilizing HEPA filtration capable of maintaining a pressure differential with the inside of the Work Area at a lower pressure than any adjacent area, and which cleans re-circulated air or generates a constant air flow from adjacent areas into the Work Area.
32. Regulated ACM (RACM): RACM means friable ACM, Category I Non-friable ACM that has been rendered friable, Category I ACM that shall be or has been subjected to sanding, cutting, grinding, or abrading (abrasive action), or Category II Non-friable ACM that has a high probability of becoming, or has become, crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of renovation or demolition operations. Grinding means breaking into small pieces or fragments.
33. Repair: Returning damaged ACM or ACM to an undamaged condition or to an intact state so as to prevent fiber release.
34. Respirator: A device designed to protect the wearer from the inhalation of harmful atmospheres.
35. Time Weighted Average (TWA): The average concentration of a contaminant in air during a specific time period.
36. Visible Emissions: Any emissions coming from RACM, ACM, ACM, asbestos debris, or asbestos waste material, which is visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.
37. Waste Shipment Record: Means the shipping document, required to be originated and signed by the waste generator, used to track, and substantiate the disposition of Asbestos waste.
38. Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using clothes, mops, or other cleaning utensils which have been dampened with amended water and afterwards thoroughly decontaminated or disposed of as asbestos-contaminated waste.
39. Work Area: The area where asbestos-related work or removal operations are performed which is defined and/or isolated to prevent the spread of asbestos dust, fibers or debris, and entry by unauthorized personnel. Work area is a Regulated Area as defined by 29 CFR 1926.

1.13 NOTICES

- A. U.S. Environmental Protection Agency: Send proper written notification as required by USEPA National Emission Standards for Hazardous Air Pollutants (NESHAPS) Asbestos Regulations (40 CFR 61, Subpart M) to the regional Asbestos NESHAPS Contact - Reno/Demo Clerk - at least 10 working days prior to beginning any work which shall directly or indirectly result in disturbance of asbestos-containing materials. Post notifications at job sites.

- B. State and Local Agencies: Send written notification as required by state and local regulations prior to beginning any work on asbestos-containing materials. At least 10 working days prior to the start of work, submit appropriate notification to the Maine Department of Environmental Protection. Post notifications at job sites.

Obtain all necessary State and local permits and work method waivers/approvals for conducting controlled demolition activity to facilitate asbestos removal in unsafe building space.

- C. Permits: Obtain all local, state, and federal permits necessary to conduct the work of this specification. Obtain water permits as necessary for the release of any water originating from the Work. Notify all local emergency agencies of the abatement work to be completed as required. All asbestos containing waste is to be transported by an entity maintaining a current "DOT Common Hauler Permit" specifically for asbestos-containing materials, as required for transporting of waste asbestos-containing materials to a disposal site.
- D. Licenses: Maintain current licenses as required by applicable state and local districts for the removal, transporting, disposal or other regulated activity relative to the work of this contract. Post all company, supervisor, and worker licenses at work area entrance.
- E. Posting and Filing of Regulations: Post all notices required by applicable federal, state, and local regulations. Maintain at least one (1) copy of applicable federal, state, and local regulations and standards at each job site. Post copies of the specification at the job site.
- F. Coordinate with Owner and local fire department authorities the notification and handling of heat and smoke detectors in the work areas, including sealing of detectors during work and removal of seals at the completion of work or shifts.

1.14 SUBMITTAL REQUIREMENTS

- A. Submittal Schedule: The Contractor shall provide submittals as specified herein including (1) Preconstruction Submittal Documentation prior to start of work and (2) Project Closeout Submittals within 25 days upon completion of on-site work. Submit ongoing submittals as required herein and as specified by the Owner and IH Consultant. Provide at the job site a copy of all current submittal packages and related documentation. Ongoing submittals shall also be submitted during the work as required to update the Pre-construction and Closeout submittals including, but not limited to:
 - 1. Schedule or phasing changes, including description and explanations as applicable.
 - 2. Proposed alternative work methods. Requests for revisions in work procedures must be approved by the Owner and IH Consultant.
 - 3. Updated notifications and permitting.
 - 4. Changes to licenses and training records for all personnel at the site
 - 5. Other changes or revisions to the submittals.

B. Submittal Preparation

1. Package and furnish to Owner and IH Consultant each submittal appropriately. Submittal packages shall be in a neat and orderly fashion, shall include an index, and shall be compiled in the order requested herein. Clearly mark and label all sections of the submittal documents.
2. In the event that a submittal package does not meet the requirements herein the submittal may not be accepted, and the Contractor shall make necessary revisions and re-submit the submittal documents.
3. By “approval” or acceptance of submittals, Owner and IH Consultant do not express or claim any certification of completeness, compliance, or approval of programs and documentation, not limited to review of analytical results, historical information, regulatory compliance, and interpretations. Contractor is solely responsible for compliance with Specification and regulatory requirements associated with the work and submittal documentation.

C. Preconstruction Submittal Documentation

1. Provide the following Preconstruction Submittal Documentation prior to the start of each phase of work:
 - a) Notifications: Copies of EPA, State, and local notifications.
 - b) Waste Hauler and Landfill Permits and notifications. Submit names, address, and licenses/permits for the waste hauler(s) and disposal facilities.
 - c) Names, addresses, experience, and references for any subcontractors the Contractor proposes to utilize for Work. Indicate if any asbestos workers or supervisors to be used for Work are subcontracted labor.
 - d) Names and 24-hour phone numbers/pagers for Project Supervisor and other key personnel for the Contractor. Post emergency contact information at Decontamination Unit entrance.
 - e) List of personnel to be on-site. Copies of all company, supervisor, and worker licenses, training and certifications required in accordance with this Specification.
 - f) Notarized Certifications: Submit notarized certification signed by an officer of the Contract stating that exposure measurements, respiratory protection programs, medical surveillance, worker training, and recordkeeping has and shall be completed and maintained during the Work for all involved personnel in accordance with 29 CFR Part 1926 and other applicable State and federal regulations.
 - g) Certify the dates for primary and secondary HEPA filter changes for all negative air units.
 - h) Level of respiratory protection anticipated for each operation required by the project. Include supporting documentation of previous exposure monitoring on a sufficient number similar project and operations in accordance with OSHA requirements.

- i) Detailed schedule and phasing, containment layouts, and summary of approach; detail of any special work procedures or methods to be used if not included or addressed in the abatement specification.
- j) Safety Data Sheets: for all materials to be used on-site not limited to encapsulants, spray adhesives, and other related work material. Note: It is Contractor's responsibility to notify all other contractors and parties in accordance with applicable OSHA hazard communication regulations.
- k) Contingency Plan: Prepare a site-specific contingency plan for emergencies including fire, accident, power failure, pressure differential system failure, supplied air system failure, or any other event that may require modification or abridgement of decontamination or work area isolation procedures. Include in plan specific procedures for decontamination or work area isolation. Note that nothing in this specification should impede safe exiting or providing of adequate medical attention in the event of an emergency. The emergency contingency plan must be in accordance (meet or exceed the requirements of) with applicable OSHA requirements.
- l) Other submittals required by the Contract Documents or as indicated by Owner.

D. Closeout Submittals

1. The following Closeout Submittals shall be provided upon substantial completion of Work.
 - a) Copies of all daily logs in accordance with Section 1.9 Project Coordination of this specification.
 - b) A copy of each waste shipment record, hazardous waste manifest, and chain-of-custody form, signed by the transporter and disposal facility operator, indicating that waste was packaged and disposed of properly. Include a description of any temporary storage facilities used including dates, times, and locations of temporary storage. Note: In accordance with NESHAPS, submit all waste shipment documentation within 35 days from transport of waste from the site (provide interim submittals during the work as needed to comply with federal regulations). Note: copies of waste shipment records in progress shall also be provided to IH Consultant and Owner immediately upon removal of waste from site.
 - c) Complete copy of all revisions and changes to the Pre-Construction Submittals.
 - d) Copy of other written construction documents such as Change Orders and work modifications issued in printed form during construction. Mark these documents and a site drawing to show the work completed and to show substantial variations in actual work performed in comparison with the text of the Specifications and modifications.

1.15 AIR MONITORING

- A. Ambient Area Air Monitoring: IH Consultant shall/may monitor ambient area airborne fiber counts in and around the Work Area. The purpose of this air monitoring shall be to detect airborne

asbestos concentrations that may challenge the ability of the Work Area isolation procedures to protect the balance of the building or outside of the building from contamination by airborne fibers and to monitor concentrations outside the containment or work area perimeter.

- B. Clearance Air Monitoring: Refer to the Work Area Clearance section of this specification.
- C. If any air sample taken outside of the Work Area exceeds 0.010 f/cc, immediately and automatically stop all work except corrective action necessary to address elevated concentrations if it is determined that the elevated concentration is or may likely be the result a deficiency of the Contractor's work; initiate the following actions:
 - a) Erect additional critical barriers to isolate the affected area.
 - b) Install HEPA filtration negative air units in affected area.
 - c) Decontaminate the affected area in accordance with appropriate cleaning procedures.
 - d) Require that respiratory protection and personal protective equipment be used in affected areas until the area is cleared for re-occupancy in accordance with the work area clearance requirements.

Complete corrective work with no change in the Contract Price or Sum if high airborne fiber counts were caused by Contractor activities.

- D. Analytical Methods: Owner reserves the right to use either phase contrast microscopy (PCM) and/or transmission electron microscopy (TEM) to analyze air samples. PCM analysis shall be performed using the NIOSH 7400 method at the job site or at an off-site laboratory. TEM may also be used as Owner deems necessary for ambient area air samples using the analysis method as determined by IH Consultant. Also see the Work Area Clearance section.
- E. Schedule of Air Samples

- 1. Prior to the start of work: The IH Consultant may collect air samples to establish a base line before the start of work. Base line is an action level expressed in fibers per cubic centimeter that is twenty-five percent greater than the largest of the following:
 - a) Average of the PCM samples collected outside each Work Area
 - b) Average of the PCM samples collected outside the building.
 - c) And 0.010 f/cc
- 2. Daily: From start of work involving Temporary Enclosures through the work of Project Decontamination, IH Consultant may be collecting samples during the Work, including but not necessarily limited to:
 - a) At HEPA Exhaust areas
 - b) Non-work-area portions of the building
 - c) At entrance to the Decontamination Unit
 - d) Outside the building
 - e) Clearance sampling: See the Air Clearance Requirements.

- F. Laboratory Testing:

1. The owner shall employ the services of a testing laboratory to perform laboratory analyses of the air samples. Samples shall be sent overnight on a daily basis, so that verbal reports on air samples can be obtained within 24 hours. Results of all air monitoring tests shall be available at the job site on a daily basis.

G. OSHA Monitoring and Additional Testing:

1. Additional Testing: The Contractor may conduct his own air monitoring and laboratory testing. If he elects to do this the cost of such air monitoring and laboratory testing shall be at no additional cost to the Owner.
2. OSHA Compliance and Ambient Area Monitoring: Contractor must provide for collection and laboratory analysis services of Contractor's OSHA personal exposure samples, including daily TWA and STEL monitoring for asbestos and other contaminants resulting from the Work, including but not limited to carbon monoxide, volatile organic compounds, and chemical exposures.

1.16 TEMPORARY FACILITIES

- A. General: Provide temporary connection to existing building utilities or provide temporary facilities as required to complete work. The owner must approve all connections to utilities and facility components. Provide temporary portable water and power sources for all exterior work as indicated and coordinated with Owner, as applicable.

B. Water Service:

1. Temporary Water Service Connection: Provide hot and cold water to the Work Area. Provide a qualified and experienced licensed plumber as necessary to complete all water service work in conformance with applicable building codes and regulations.
2. All connections to the Owner's water system shall include back-flow protection. Monitor for leaks and repair or replace as needed.
3. Water Hoses: Employ suitable heavy-duty abrasion-resistant hoses to provide water into each work area and to each Decontamination Unit.

C. Electrical Service:

1. General: Provide a qualified and experienced licensed electrician to complete all electrical service work. Comply with applicable OSHA, NEMA, NECA, UL and other industry standards and governing regulations for materials and layout of temporary electric service. Provide adequate temporary power to the Work Area sized and equipped to accommodate all electrical equipment required for completion of the work and related testing and inspections. Provide temporary electrical panels as needed sized and equipped to accommodate all electrical equipment and lighting required by the work. Connect temporary panel to existing building electrical system. Protect with circuit breaker or fused disconnect. Locate temporary panel

outside of the work area and in a location acceptable to Owner. Equip all circuits for any purpose entering the Work Area with ground fault circuit interrupters (GFCI).

2. Lamps and Light Fixtures: Provide appropriate temporary work area lighting. Protect lamps with guard cages or tempered glass enclosures where fixtures are exposed to breakage by construction operations.
- D. First Aid: Comply with governing regulations and recognized recommendations within the construction industry. Provide appropriate first aid supplies.
- E. Fire Extinguishers: Provide appropriate fire extinguishers for temporary offices, storage, work areas and other portions of the site occupied or used by the Contractor for the work.
- F. Execution: Use qualified tradesmen for installation of temporary services and facilities. Locate temporary services and facilities where they shall serve the entire project adequately and result in minimum interference with the performance of the Work. Coordinate all such work with Owner. Require that tradesmen be licensed as required by local authorities. Relocate, modify, and extend services and facilities as required during the course of work so as to accommodate the entire work of the project.

1.17 PRESSURE DIFFERENTIAL AND AIR CIRCULATION SYSTEM

- A. Continuously monitor and record the pressure differential between the Work Area and the building outside of the Work Area. Maintain accurate records of time and locations of testing on-site and in daily logs.
2. HEPA Filtered Fan Units: Supply the required number of HEPA filtered fan units to the site in accordance with these specifications. Units must meet the requirements of all applicable regulations and standards.

1.18 WORKER PROTECTION

- A. Comply with respiratory protection requirements as specified in this specification and applicable regulations. Provide worker protection as required by the most stringent OSHA and/or EPA regulations and industry standards applicable to the work. The following procedures are minimum requirements to be adhered to regardless of fiber concentrations in the Work Area.
- B. Worker Training
 1. AHERA Accreditation: All workers are to be accredited as Abatement Workers as required by the AHERA regulation 40 CFR 763 Appendix C to Subpart E, April 30, 1987. All training must be current including current annual refresher training.
 2. Train all supervisors and workers in accordance with EPA NESHAPs and 29 CFR Part 1926 (OSHA) for asbestos and other hazards anticipated during the work. All workers and supervisors must be licensed and certified as required by applicable State regulations.

- C. Medical Examinations: Provide medical examinations for all workers who shall enter the Work Area for any reason in accordance with OSHA requirements as set forth in 29 CFR 1926 and 29 CFR 1910.20.
- D. Protective Clothing
 - 1. Coveralls: Provide cloth full-body coveralls and hats and require that they be worn by all workers in the Work Area. Require that workers change out of coverall in the Equipment Room of the Personnel Decontamination Unit. Dispose of used coverall as asbestos waste.
 - 2. Other: Provide other personal protective equipment as required by OSHA regulations and industry standards, not limited to hard hats, eye protection (goggles), gloves, fall safety, and footwear.
- E. Entering Work Area: Each time the Work Area is entered, remove all street clothes in the changing (clean) room of the personnel decontamination unit and put on new disposable coverall, new head cover, and a clean respirator. Proceed through shower room to equipment room and put on work boots. Only properly licensed/certified personnel shall enter the decontamination unit and work area. All personnel entering the work area must post their State license at the decontamination unit entrance.
- F. Decontamination Procedures: Require all workers to adhere to the following personal decontamination procedures whenever they leave the Work Area:
 - 1. HEPA vacuum all gross debris from the protective clothing prior to entering the equipment room of the decontamination unit. When exiting area, remove disposable coveralls, disposable head covers, and disposable footwear covers or boots in the equipment room.
 - 2. Still wearing respirators, proceed to showers. Showering is mandatory. Care must be taken to follow reasonable procedures in removing the respirator to avoid asbestos fibers while showering. The following procedure is required as a minimum:
 - 3. Carefully wash face piece of respirator inside and out. Each worker leaving the work area must shower completely with soap and water. Rinse thoroughly. Proceed from shower to clean room and change into street clothes or into new disposable work items.
- G. Within Work Area: Require that workers NOT eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the Work Area. Maintain proper use of personnel protective equipment.
- H. Respiratory Protection: Provide sufficient respiratory protection in accordance with applicable OSHA requirements in addition to ANSI and NIOSH standards. Select proper level of protection based on personnel exposure monitoring and the applicable OSHA Permissible Exposure Limits. Require that respiratory protection be used at all times that there is any possibility of disturbance of asbestos-containing materials whether intentional or accidental.
 - 1. Instruct and train each worker for proper respirator use in accordance with OSHA and other applicable industry standards. Require that a respirator be worn by anyone in a Work Area at all times, regardless of activity, until the area has been cleared for re-occupancy.

2. Provide and complete all necessary fit testing for respiratory protection in strict accordance with applicable OSHA regulations.
 3. In the event that applicable OSHA PEL's (8-hour TWA and 30-minute STEL) are exceeded, stop work. Do not recommend work until work procedures, including use of engineering controls, are modified to maintain exposures within the acceptable PEL's.
- I. Complete all lock-out and tag-out of power and air handling systems within the Work Area in accordance with OSHA regulations. Coordinate all lock-out and tag-out with Owner.

1.19 TEMPORARY ENCLOSURES

- A. Work areas are to be considered contaminated during the work and shall be completely isolated from other locations such that asbestos fibers cannot pass through or beyond the perimeters of the work area and into non work areas. Should areas beyond the work area become contaminated with asbestos as a result of the Contractor's work, the Contractor shall be responsible for cleaning non-work areas as required. All costs including cleaning, decontaminating, monitoring, and testing shall be borne by the contractor.
- B. Contractors shall construct temporary containment enclosures in each work area. Prior to proceeding with ACM abatement coordinate and complete inspections of the work area with the IH Consultant. Proceed with work sequentially as listed or indicated.
- C. Disable ventilating systems or any other system bringing air into or out of the Work Area. Disable the system by disconnecting wires, removing circuit breakers, by lockable switch or other positive means that shall prevent accidental premature restarting of equipment as approved by Owner.

PART 2 - PRODUCTS

2.1 PRODUCTS

- A. Provide new or used materials and equipment that are undamaged and in a serviceable condition. Provide only materials and equipment that are recognized as being suitable for the intended use and in strict compliance with appropriate standards. Do not bring products, materials, and equipment to the Owner's site or Owner work areas that are damaged or contain construction or potential contaminated debris.
- B. Warning Signs, Caution Signs and Demarcation: Provide all demarcation, warning signs, caution signs, and other postings required for the work and in accordance with State and federal codes and regulations.
- C. Polyethylene Sheet: A single polyethylene film in the largest sheet size possible to minimize seams, in 6.0 mil thickness, clear or black as indicated.
- D. Duct Tape: Provide duct tape in 3" widths with an adhesive, which is formulated to stick aggressively to sheet polyethylene.

- E. Spray Cement: Provide spray adhesive in aerosol cans which is specifically formulated to stick tenaciously to sheet polyethylene.
- F. Foam Pack: Provide foam pack for sealing small crevices and cracks at critical barriers as required. All foam pack must be approved by Owner and local authorities, not limited to the Fire Department.
- G. Scaffolding: Provide all scaffolding, ladders and/or staging, etc. as necessary to accomplish the work of this contract. Scaffolding may be of suspension type or standing type such as metal tube and coupler, tubular welded frame, pole or outrigger type or cantilever type. The type, erection and use of all scaffolding shall comply with all applicable OSHA provisions. Equip rungs of all metal ladders, etc. with an abrasive non-slip surface. Provide a nonskid surface on all scaffold surfaces subject to foot traffic.
- H. First Aid Supplies: Comply with governing regulations and recognized recommendations within the construction industry.
- I. Fire Extinguishers: Provide Type "A" fire extinguishers for temporary offices and similar spaces where there is minimal danger of electrical or grease-oil-flammable liquid fires. In other locations provide type "ABC" dry chemical extinguishers, or a combination of several extinguishers of NFPA recommended types for the exposures in each case.
- J. Wetting Materials: For wetting prior to disturbance of ACM use amended water: Provide water to which a surfactant has been added. Use a mixture of surfactant and water which results in wetting of the Asbestos-Containing Material and retardation of fiber release during disturbance of the material equal to or greater than that provided by the use of one ounce of a surfactant consisting of 50% polyoxyethylene ester and 50% polyoxyethylene ether mixed with five gallons of water.
- K. Encapsulant: Provide suitable encapsulant material intended by manufacturer for the treatment of asbestos and ACM. Provide SDS and manufacture information for products to be used. Ensure that all encapsulant to be applied is suitable for the substrate and condition thereof and is compatible with replacement materials to be installed by the Contractor or Owner following the Work.
- L. Disposal Bags: Provide 6 mil thick leak-tight polyethylene bags labeled as required by applicable sections of this Specification and federal and state regulations.
- M. Fiberboard Drums of Equivalent: Provide sufficient quantity of fiberboard drums or equivalent (as determined by IH Consultant) for packaging of wire mesh and other contaminated materials with sharp or rough edges.
- N. Disposal Bag/Container Labels and Signs: Provide leak-tight waste bags or containers for disposal of asbestos-containing materials with labels in accordance with OSHA, EPA, and the latest revisions to the US Department of Transportation requirements, not limited to material identification number (#NA2212), material packaging group (PGIII), and labels. Warning labels shall also include:

Legend:

DANGER
CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

1. In accordance with NESHAPS, label each waste bag with the name of the waste generator and address where the material was generated. Include the Contractor name and address on each label also. Attach label in a sufficient manner such that they are properly sealed to or on the containers.
 2. Label all waste bags, containers, and transport vehicles as required by applicable U.S. Department of Transportation Rules and Regulations.
- O. Coveralls: Provide disposable full-body coveralls and head cover in accordance with State and federal regulations. Provide a sufficient number for all required changes, for all workers in the Work Area. Provide sufficient number for use by IH Consultant.
- P. Other PPE: Provide other personal protective equipment as required by OSHA regulations and industry standards, not limited to hard hats, eye protectives, gloves, and footwear.
- Q. Respiratory Protection: Provide respiratory protection in strict accordance with ANSI Z88.2 - 1992 "Practices for Respiratory Protection" and 29 CFR 1926 and 1910.134. The respirators shall be sanitized and maintained in accordance with manufacturer's specifications and recommendations. Provide sufficient respiratory protection based on applicable ANSI and NIOSH standards. Select proper level of protection based on personnel exposure monitoring and the applicable OSHA Permissible Exposure Limits. Use only respirators and filters that are NIOSH-approved for use with asbestos and other atmospheres anticipated during the work.
- R. Solvents: Provide appropriate solvent materials to aid in the removal of flooring materials and mastics. Such solvent materials should be "low odor" rated and all SDS's shall be submitted to the Owner for review prior to storing or using such materials at the job site. The contractor is solely responsible for all environmental and worker protection precautions required for the safe use, clean-up, and disposal of such materials. Additional air testing (area and personal exposure monitoring) must be completed by the Contractor (at no additional cost to the Owner) depending on the solvents to be used and as necessary to ensure a safe environment for site workers and adjacent public. Coordinate with Owner as necessary to assure compatibility with replacement materials prior to installation of solvents and coordinate special cleaning efforts with Owner for replacement issues in accordance with manufacturer's guidelines and flooring industry standards. The contractor shall sufficiently wash and clean all floor areas where solvent is used. Conduct necessary wash, dry, and air change sequences to eliminate residual solvent odors and residual. Note: Charcoal pre-filters shall be required on all HEPA exhaust/filter equipment during use of solvents.
- S. Construction Materials: Provide other construction materials such as plywood, strapping, studs, other related abatement materials, etc., as required to complete the work in accordance with this Specification.
- T. All necessary testing and monitoring equipment as applicable to complete work, including but not limited to gas detection equipment, manometers, exposure sampling equipment.

2.2 WATER SERVICE

- A. Provide water service as necessary to complete Work in accordance with applicable local, state, and federal building codes and regulations.

2.3 ELECTRICAL SERVICE

- A. Provide electric service as necessary to complete Work in accordance with applicable local, state, and federal building codes and regulations.

2.4 PRESSURE DIFFERENTIAL AND FILTRATION

- A. General: Supply the required number of HEPA filtered negative air fan units to the site in accordance with this Specification, industry standards, and applicable State and federal requirements. Use fan units that are intended for asbestos abatement as stated by the manufacturer. Provide HEPA filters that are individually tested and certified by the manufacturer to have an efficiency of not less than 99.97 percent when challenged with 0.3 um dioctylphthalate (DOP) particles or equivalent when tested in accordance with Military Standard Number 282 and Army Instruction Manual 136-300-175A. Provide filters that bear a UL586 label to indicate ability to perform under specified conditions.
- B. Pre-filters: which protect the final filter by removing the larger particles, are required to prolong the operating life of the HEPA filter. Two stages of pre-filtration are required.
- C. Provide appropriate charcoal pre-filters during all work involving use of solvents to minimize odors. Allow HEPA units to run for a sufficient period of time after use of solvents to allow for adequate number of air changes and filtration to adequately dilute odors.
- D. Safety and Warning Devices: Provide units with the appropriate safety and warning devices including but not limited to missing or failure of HEPA filter, automatic shut down in the event of filter rupture or blockage, operating status indicator lights, and audible alarms.

2.6 AUXILIARY GENERATOR

- A. Provide adequate, suitable alternative power with a capacity adequate to power a minimum of 50% of the HEPA filtered fan units in operation at any time during the work as needed for emergency use and backup.

PART 3 – EXECUTION

3.1 TEMPORARY ENCLOSURES

- A. Control Access: Isolate the Work Area to prevent entry by building occupants and the public into the Work Area. Notify the Owner of all doors and other openings that must be secured to isolate Work Area. Maintain safety access to stairwells and building exits. Construct work area containments and isolation barriers as required allowing for Owner operations and as approved by Owner.
 - 1. Secured Access: Arrange Work Area so that the only access into Work Area is through securable doors to personnel and equipment decontamination units.

filtered fan units from the work area. Provide sufficient ventilation for a minimum of 8 air changes per hour and sufficient air movement throughout entire containment area.

3. Vent HEPA negative air ventilation units to outside of building. Ensure adequate security and weather tight seals at each exhaust point.
4. Provide a differential pressure meter or manometer to demonstrate the required pressure differential at every barrier separating the Work Area from the balance of the building or outside. Provide continuous manometer measurements and printouts for all work performed adjacent to public occupied spaces if such spaces are occupied during the work.
5. Start fan units before beginning work involving disturbance of ACM or debris and run units continuously to maintain a constant pressure differential and air circulation until decontamination of the work area is complete and the air clearance criteria has been met.
6. At completion of abatement work, allow fan units to run as specified under Project Decontamination requirements, to remove airborne fibers that may have been generated during abatement work and cleanup and to purge the Work Area with clean makeup air.

D. Pre-Clean and Other Preparation Work Area:

1. Complete the following after installation of (1) critical barriers, (2) pressure differential/air filtration systems, and (3) decontamination facilities as indicated below and in other Specification Sections.
 - a) Pre-clean all work area surfaces, fixtures, and equipment using HEPA vacuums and wet wiping.
 - b) Seal non-removable fixtures and equipment with polyethylene sheeting. Provide a minimum of 12" of overlap, sealed with spray adhesive and duct tape on both flap ends, on all joints in the barriers. Do not damage materials and items to be covered.
2. Provide and install transparent inspection windows in the containment barriers as indicated by the IH Consultant. Maintain inspection window clean of debris to allow for inspection of work in progress.
3. Complete other preparation work as necessary to allow for complete precleaning and allow for installation of containment barriers.

E. Primary Barrier:

1. Do not install primary barriers until all work area surfaces have been pre-cleaned using wet cleaning and HEPA vacuuming.
2. Protect building and other surfaces in the Work Area from damage from water and high humidity or from contamination from asbestos-containing debris, slurry, or high airborne fiber levels by covering with a primary barrier as described below. Coordinate with Owner to provide adequate ventilation to space and equipment that requires air ventilation.

3. Primary Barrier Sheet Plastic: Protect floor surfaces with a minimum of 2 layers of 6-mil plastic sheeting on floors. Provide additional floor protection as required to prevent damage to carpets and other existing flooring surfaces to remain after construction. Protect all existing walls, ceiling, fixed equipment, and other building surfaces with a minimum of 1 layer of 6-mil plastic sheeting in addition to critical barrier systems.
 4. Provide a minimum of 12" of overlap, sealed (poly-to-poly) with spray adhesive and duct tape on both flap ends, on all joints in the barriers. Extend floor sheeting up adjoining walls a minimum of 18 inches. Do not place seams at, or within 18" of any wall, ceiling, or floor joints. Stagger all joints by at least 18 inches. Wall and vertical surface poly shall extend over floor sheeting such that floor sheeting extends up the wall and is covered by the wall sheeting overlap.
 5. Protect all existing building surfaces and fixed equipment/items, also including non-ACM insulations in the work areas, with a minimum of 2 layers of 6-mil plastic sheet as required to maintain existing conditions and to prevent contamination, water damage, or other damages due to the work. Provide a minimum of 12" of overlap, sealed with spray adhesive and duct tape on both flap ends, on all joints in the barriers.
- F. Seal all ducts and equipment with primary barriers. Isolate and shut down air systems in work area during abatement. Isolate all exterior intakes sufficiently from HEPA exhaust points. Ventilation units and ductwork shall be fully sealed with polyethylene sheeting.
- G. Stop Work: If the Critical or Primary Barrier fails or is breached in any manner stop work immediately and repair the breach as required. Do not start work until authorized by the IH Consultant. Any contamination and/or suspect contamination, as determined by Owner and the IH Consultant, resulting from a breach in the barriers or other neglect by the Contractor shall be thoroughly abated in accordance with this Specification at no additional cost to Owner.
- H. Decontamination Units
1. Provide personnel and equipment decontamination facilities in accordance with State and OSHA regulations and require that the personnel decontamination unit be the only means of ingress and egress for the Work Area (for personnel, waste, equipment, and other related items). Provide portable shower units, with continuous dedicated water source, sufficient for personnel decontamination in accordance with State and OSHA regulations, and cascaded filter units on drain lines from showers or any other water source carrying asbestos-contaminated water from the Work Area. The clean room shall be a minimum of 24 square feet for work areas involving 3 or fewer workers entering the regulated area per work shift and a minimum of 32 square feet for all other projects.
 2. Water from the shower shall either be filtered through a minimum of a 2-stage filtration assembly equipped with a 50-micron primary filter and a 5-micron final filter or containerized for disposal as asbestos waste. Do not discharge filtered water unless testing and permitting has been completed as applicable in accordance with State and local requirements.
 3. Clean debris and residue from inside of Decontamination Units on an ongoing basis.

4. Post an asbestos warning sign at the entrance of the decontamination unit.
5. Secure door to entrance of decontamination unit at the completion of each shift.

I. Containment Locations

1. Construct and install containment barriers around each work area as coordinated and indicated by Owner and IH Consultant. Do not allow containment location and installation to inhibit access and adequate airflow to all other areas of the building and mechanical equipment. Coordinate with Owner the isolation of mechanical equipment in the work area.

3.2 REMOVAL OF ASBESTOS-CONTAINING MATERIALS

- A. Inspections: Prior to commencing with ACM removal or other ACM disturbance, each individual work area must pass an inspection by the IH Consultant. If deficiencies are observed, immediate correct in a manner satisfactory to IH Consultant.
- B. Maintain all work area isolation and controls during work of this section. The Contractor shall conduct ongoing inspections of the work area, adjacent areas, and surrounding areas beneath, as applicable, for containment breaches, leaks, or other containment failures. In the event breaches or potential breaches are identified, immediately repair the containment barriers as needed and complete all clean up and decontamination work.
- C. Secondary Barrier: Over any floors and surfaces beneath ACM to be removed in the work areas, install as a drop cloth a clear 6-mil sheet plastic in all areas where asbestos removal work is to be conducted. Completely cover floor with sheet plastic. Install Secondary Barrier at the beginning of each work shift. Install only sufficient plastic for work of that shift. Remove Secondary Barrier at end of each work shift or as work in an area is completed. Carefully pack in disposal bags
- D. Wet Removal and Waste Packaging - General:
 1. Thoroughly wet ACM to be removed or otherwise disturbed prior to disturbance, stripping and/or tooling to reduce fiber dispersal into the air. Maintain materials as adequately wetted during Work and as required by NESHAPS. Accomplish wetting by a fine spray (mist) of amended water. Saturate material sufficiently to wet to the substrate without causing excess dripping. Allow time for amended water to penetrate material and seams thoroughly. Spray material repeatedly during the work process to maintain a continuously wet condition.
 2. Where necessary, carefully remove ACM while simultaneously spraying amended water to minimize dispersal of asbestos fibers into the air. Mist work area continuously with amended water whenever necessary to reduce airborne fiber levels. Do not allow ACM to dry out. As it is removed, simultaneously pack material into appropriate asbestos waste disposal bags/containers. For waste bags, twist neck of waste bags, bend over and seal with minimum three wraps of duct tape. Clean outside of packaging and move packaged waste to the equipment decontamination unit for further cleaning and waste re-packaging. Once in the equipment decontamination unit and cleaned, repackage waste in 2nd waste bag and seal as indicated above.

3. Continuously clean excess water using wet wiping and HEPA vacuuming such that excess water build up on the floor and other containment surfaces does not occur and so that water does not leak or migrate outside of the work area.
 4. Use work procedures that result in 8-hour TWA and STEL airborne fiber counts less than the required limits established by OSHA and as described herein. If airborne fiber counts exceed this level immediately mist the area with amended water to lower fiber counts and revise work practices and engineering controls to maintain level within the required limits.
- E. The contractor may encounter and shall investigate all areas of the building to identify concealed ACM insulation and miscellaneous ACM. Provide full access and selective controlled demolition, as necessary, to identify and fully remove all ACM. Remove as ACM all co-mingled debris or building materials where ACM is embedded or has come in contact with such material and decontamination is not feasible.
- F. Other Safety: As applicable, comply with all appropriate safety procedures during Work in accordance with industry standards and all applicable OSHA regulations including but not limited to: confined space work safety procedures in accordance with 29CFR Part 1910.146; proper personal protective equipment; worker safety training and written programs per current OSHA requirements; fall protection; lockout tag out; and take precautions to avoid burns and heat stress when working in areas of hot equipment and excessive heat as applicable.
- G. Fire Door Insulation
1. Fire doors containing ACM insulation shall be removed whole component and without damaging the doors such that the insulation is disturbed. This removal shall be accomplished within demarcated, OSHA regulated work areas at a minimum. Any doors with damaged outer casings and with ACM insulation exposed shall be secured to prevent further disturbance of the material. ACM shall be wetted prior to disturbance of the door. Each door shall be wrapped in two layers of independently sealed 6-mil poly sheeting, labelled, and disposed of as asbestos waste.
- H. Removal of Tank, Breeching, Pipe and Fitting Insulation
1. Coordinate shut-off and lock-out/tag-out of systems with the Owner. Conduct removal work within full containment barriers. Cut bands holding preformed insulation, slit jackets at seams, remove, and hand place into a disposal bag. Remove job molded fitting insulation in chunks and hand-place to the bottom of the waste bag. Do not drop any material or allow material or water to fall onto the floor or other lower surfaces. Remove any residue on substrate with stiff-bristle-nylon hand brush. Place all waste directly into a waste bag by hand.
 2. Remove fiberglass in contact with the ACM and damaged fiberglass insulation in the general vicinity of damaged ACM as asbestos contaminated waste. All other non-ACM insulation shall be precleaned, sealed in primary barriers and left in place unless otherwise designated by Owner. Cut back (and remove as asbestos waste) all fiberglass insulation within 4" of ACM insulation removed.

3. In areas of soil/dirt floor, prior to removal and final preparation work, wet ground/floor areas with amended water. Hand-pick or HEPA vacuum gross debris from all surfaces. Fine cleaning or contaminated soil removal shall be completed following abatement of pipe insulation as indicated below. Once all gross debris has been removed, install negative pressure enclosures and polyethylene sheeting drop cloths.
 4. After completion of gross removal and cleaning operations (and passing preliminary visual inspection by IH Consultant), remove the outer boiler casing within the containment area. Fully clean all exterior casing using wet wiping and HEPA vacuuming. Cover with polyethylene sheeting and store in the work area or place into temporary storage area(s) as approved by Owner. Once the exterior casing is removed, fully clean all insulation, gasket, and refractory brick as assumed ACM unless otherwise stated by Owner and IH Consultant based on proper testing to be performed as Owner deems in its best interest. In lieu of IH Consultant testing of suspect material, such materials shall be handled as, and removed as, ACM as stated herein. Coordinate all such testing of suspect material encountered with IH Consultant. Provide a minimum of 48 hours advance notice of requested testing by IH Consultant.
 5. For boilers to be demolished as specifically indicated by Owner, fully disassemble, and demolish entire boiler as needed to remove ACM. Properly dispose of or recycle all boiler components and ash in accordance with local, state, and federal requirements in addition to Owner demolition specification sections. All assumed ACM and confirmed ACM insulation, gasket, packing, brick, and other ACM within and on the boiler shall be removed using the above stated methods by the abatement contractor. In the event that suspect ACM is encountered during disassembling and demolition of the boiler unit, work shall cease in the affected area, and the IH Consultant shall be notified. The IH Consultant shall then conduct testing or assume the materials to be ACM and the contractor shall then coordinate and conduct necessary abatement of all additional ACM identified in accordance with the work methods stated herein and applicable local, State and Federal requirements. Update all local, State and Federal permits and notifications as needed.
 6. Properly dispose of or recycle all boiler components in accordance with local, state, and federal requirements in addition to Owner demolition specification sections.
 7. After gross removal and final cleaning of the pipe insulation, remove drop cloths and ground/floor polyethylene sheeting in areas of soil contamination. Remove all visible debris to a minimum depth of 3" and lightly rake the surface while conducting misting operations. Start from the furthest point (away from decontamination unit) and do not track debris or walk from dirty areas to newly removed areas. Then inspect and rake through remaining soil areas and remove any debris. Continue process until no visible debris is present or can be brought easily to the surface. All soil generated by this process and debris shall be handled, packaged, and disposed of as Asbestos waste.
- I. Glovebag Removal of Pipe and Pipe Fitting Insulation
1. Glovebags shall be used to remove pipe and pipe fitting insulation. Conduct glovebag removal within negative pressure enclosures or full containment barriers as indicated in Section 3.2. Glovebags shall be used in strict accordance with 29 CFR 1926.1101 (OSHA) and other applicable regulations. Conduct work in negative pressure enclosure or full containment barriers. Install

polyethylene sheeting drop cloths beneath pipe areas to be worked and along all foot traffic areas in the work area. After the negative pressure enclosure is constructed, install glovebags in accordance with manufacturer's instructions and regulatory requirements.

2. Once completely sealed around the pipe to be worked, inspect glovebag for adequate seals and using proper smoke testing. Allow amended water to saturate material to substrate and ensure ACM remains adequately wetted. Cut bands holding preformed insulation, slit jackets at seams, remove, and hand place in a disposal bag or bottom of glovebag as applicable. Provide dedicated water supply to each glovebag during the entire removal and cleaning operation within the glovebag. Remove job molded fitting insulation in chunks and hand place to the bottom of the glovebag. Spray amended water continuously such that ACM is adequately wetted. Do not drop any material or allow material or water to fall out of the glovebag or to fall to the floor. Remove any residue on pipe or fitting with stiff-bristle-nylon hand brush. Once all cleaning is complete, twist the glovebag with the debris at the bottom of the glovebag and seal with duct tape. Remove the glovebag, bend the top over, and then reseal the neck with duct tape.
3. After gross removal and final cleaning of the pipe insulation, remove drop cloths and ground/floor polyethylene sheeting in areas of soil contamination. Remove all visible debris to a minimum depth of 3" and lightly rake the surface while conducting misting operations. Start from the furthest point (away from decontamination unit) and do not track debris or walk from dirty areas to newly removed areas. Then inspect and rake through remaining soil areas and remove any debris. Continue process until no visible debris is present or can be brought easily to the surface. All soil generated by this process and debris shall be handled, packaged, and disposed of as Asbestos waste.

J. Handling of suspect ACM Encountered in Mechanical Equipment and Previously Inaccessible Space

1. It is possible that the interiors of various mechanical equipment components at the site contain ACM. During the course of work, use care when accessing previous inaccessible spaces. Or mechanical equipment, in the event that gasket material, caulk, or other suspect insulation are encountered, notify Owner and IH Consultant immediately such that proper testing and inspection can be arranged for. In the event that ACM is identified requiring abatement, conduct abatement in accordance with this specification and the Contract Documents and as authorized by Owner. In the event that additional suspect ACM or known ACM is encountered within wall, floor, or ceiling space that was inaccessible previous to the work, stop work in the affected area and immediately notify the Owner and IH Consultant such that proper inspection and testing can be arranged for. Contractor shall conduct abatement of such additional ACM in accordance with this specification and the Contract Documents and as authorized by Owner.

K. ACM Switchgear

1. The ACM switchgear shall be removed whole component, maintaining the switchgear as nonfriable, within a demarcated, OSHA regulated work area. The switchgear shall be de-energized following established lockout-tagout (LOTO) requirements. All accessible surfaces within the switchgear shall be pre-cleaned using wet wiping and HEPA vacuuming to remove any debris prior to removal of any ACM components. The ACM components shall be removed from the switchgear using hand tools to remove any fasteners and without breaking any of the ACM components. Wetting and shaving cream shall be applied to all ACM components as

appropriate to prevent the release of any fibers. The ACM components shall be maintained in a nonfriable condition as whole components. Rendering the components friable shall require removal within a full containment negative pressure enclosure. As they are removed, ACM panels shall be placed in asbestos disposal bags and packaged in accordance with the applicable section of this work plan.

L. Window Caulking and Glazing Material

1. Conduct work within exterior OSHA regulated Work area. Drop cloths of 6-mil polyethylene sheeting shall be placed on ground below each work area and extending out sufficiently to protect the ground from possible debris. The drop cloths and any debris generated shall be disposed of as asbestos waste at the end of each work shift and following the work. Install critical barriers over windows, doors, and other openings in the building. Ensure ACM remains adequately wet. Remove entire window casing units intact without damaging caulk or glaze, packaging, and dispose of as ACM waste. Use hand tools and HEPA vacuums to scrape the caulking from the substrate. Use care to prevent the material from becoming friable. Clean all caulk material that may be encountered during window or door removal from the building substrate. Coordinate with the Owner for safety and building security for any areas that have entire window and/or door units removed.
2. The asbestos contractor shall conduct necessary inspections to ensure safe working conditions and install necessary supports, engineering controls and fall protection to allow for the safe removal of the ACM. Employee and/or General Contractor operations in the surrounding areas shall also be restricted as deemed necessary by the site supervisor/OSHA competent person.
3. The IH Consultant shall be providing representative perimeter area air monitoring during exterior ACM removal work. The acceptable perimeter air monitoring result is 0.010 f/cc.

M. ACM Sink Basin Undercoat

1. Conduct work within regulated area. Drop cloths of 6-mil polyethylene sheeting shall be placed on floors below each work area, and the drop cloths and any debris generated shall be disposed of as asbestos waste following the work. The sink basins containing ACM undercoating shall be removed in whole components. The panels shall be adequately wetted during the entire process. The panels shall be removed by removal of the trim, screws, and nails that secure the panels and using wet-wiping, HEPA vacuums, and continuous misting. Immediately wet-wipe and HEPA vacuum any debris or dust. All substrate and trim shall also be cleaned using wet wiping and HEPA vacuums. As the sinks are removed, wrap in two separate layers of 6-mil polyethylene sheeting, seal with duct tape and spray adhesives. Seal each layer separately. Properly label the outside of the sheeting as an asbestos waste container as indicated in this specification and in accordance with State and federal regulations. Clean all substrate, floor surfaces, and other items in the immediate work area using wet-wiping and HEPA vacuums. Do not render panels friable.

N. Pressboard (white) Behind Radiators

1. Conduct work within full containment barriers. Drop cloths shall be placed below each work area. Drop cloths and any debris generated shall be disposed of as asbestos waste following

each shift and at the completion of work. Allow amended water to saturate material to substrate and ensure ACM remains adequately wetted. Use care to maintain ACM intact and do not render the material friable. Remove gypsum panels and ACM in sections with care to minimize breaking and cutting to the extent needed to remove and package manageable sections of the ACM. As the material is removed, immediately package it as asbestos waste.

O. ACM Roofing

1. Conduct work within exterior OSHA regulated Work areas. The Contractor shall install barrier tape and otherwise properly demarcated the work site areas to prevent unauthorized access in accordance with 29 CFR 1926.1101. Employee and/or general contracting operations in the surrounding areas shall also be restricted as deemed necessary by the OSHA competent persons on site. The Contractor shall conduct necessary inspections to ensure safe working conditions and install necessary supports, engineering controls and fall protection to allow for the safe removal of the ACM.
2. Install drop cloths of 6-mil polyethylene sheeting on ground and lower levels below each work area, as applicable, and extend drop cloths out sufficiently to protect the ground from possible debris. Install critical barriers, consisting of 6-mil polyethylene sheeting, over all roof top ducts, vents, or other openings in the work area. The drop cloths and any debris generated shall be disposed of as asbestos waste at the end of each work shift and following the work. Install critical barriers over windows, doors, and other openings in the building. Ensure ACM remains adequately wet. All ACM roof (asphalt products, flashings, caulk, and sealants) work shall be completed in accordance with current State requirements in addition to this specification and federal requirements. The ACM to be removed shall be adequately wetted by the asbestos contractor during all phases of work as required to minimize dust and visible emissions in accordance with State and federal regulations. The ACM shall be removed using hand tools, wetting, and, as deemed necessary by the asbestos contract, HEPA-equipped saws. Verify areas beneath roof decking are adequately sealed off to prevent debris from dislodging from roof work into attic or other building space.
3. The ACM and associated debris generated during the work shall be either placed into proper asbestos waste bags or sealed and labeled in two layers of 6-mil polyethylene sheeting. Care shall be used to cover rough edges and prevent tearing of waste packaging. Properly packaged waste shall be transported by hand, lowered to the ground, and placed within the waste dumpster to be provided by the Contractor adjacent to the work area. In the event the waste chutes are used for roofing materials, the chute system shall be air-tight and chute directly to an ACM waste dumpster which is lined with a minimum of 2 layers of 10-mil polyethylene sheeting, labeled, and seal with duct tape and spray adhesives, as needed.
4. The IH Consultant shall be providing representative perimeter area air monitoring during exterior ACM removal work. The acceptable perimeter air monitoring result is 0.010 f/cc.

3.3 INITIAL CLEAN-UP WORK

- A. Once gross removal is completed, clean all visible debris on the substrate and containment barriers using HEPA vacuums, scrub brushes, and wet wiping. Do not allow materials to dry out. As material is removed and clean-up is completed, simultaneously pack wetted material into proper waste

disposal bags or package as noted above. For waste bags, twist the neck of the bags, bend the neck over, and seal with a minimum of three wraps of duct tape. Clean the outside of the bags with wet wiping and HEPA vacuum and move to the wash down station in the Equipment Decontamination Unit. Once washed clean, place the clean disposal bags into a second asbestos disposal bag and seal the bag in the same manner as the first. Bags shall then be transported from the work area to the asbestos waste dumpster. Note: Waste dumpster must remain labeled and locked at all times when loading is complete or idle.

- B. Label waste dumpsters in accordance with 29 CFR 1910.145:

DANGER
ASBESTOS DUST HAZARD
CANCER & LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY

- C. Change all filters on the pressure differential systems and properly dispose of as asbestos waste. Maintain adequate filtration and pressure differential during all filter changes.

3.4 PROJECT DECONTAMINATION

- A. Work of This Section includes the decontamination of air and surfaces in the Work Area which has been, or may have been, contaminated by the elevated airborne asbestos fiber levels generated during abatement activities, or which may previously have had elevated fiber levels due to ACM in the space. IH to be present to monitor decontamination and cleaning process.

1. First Cleaning

- a) Carry out a first cleaning of all surfaces of the work area including items of remaining sheeting, tools, scaffolding and/or staging by use of damp- or wet-cleaning and mopping, and HEPA vacuuming. Do not perform dry dusting or dry sweeping. Use each surface of a cleaning cloth once only and then dispose of as contaminated waste. Continue this cleaning until there is no visible debris from the substrate and other work area surfaces.
- b) At the completion of the above cleaning Contractor Supervisor shall visually inspect all work area surfaces. Re-clean if any dust, debris, etc. is found. Inspect the area and if any debris or dust is found, repeat the cleaning. Continue this process until no debris dust or other material is found while sweeping of all surfaces with forced air equipment (important: forced air sweeping to be used only in full containment work areas).
- c) Remove and replace all negative air unit pre-filters, dispose of used filters as asbestos waste.

2. Second and Third Cleaning

- a) At the completion of the first cleaning and Contractor inspection, carry out a second cleaning of all surfaces in the work area in the same manner as the first cleaning. For containments with multiple layers of polyethylene sheeting on floors, remove top layers of sheeting on the floor leaving one layer of the primary barrier remaining. Clean newly exposed areas as outlined above and dispose of removed sheeting as asbestos waste.

- b) Carry out a third cleaning of all surfaces in the same manner as the first cleaning. Change filters on pressure differential systems and properly dispose of as asbestos waste. Allow for sufficient settling period prior to clearance testing. Complete additional cleaning as required and until no visible dust or debris is present.
- B. Visual Inspection: After completion of above cleaning and Contractor's own visual inspection, The Contractors IH Consultant shall perform a visual inspection for debris from any sources, residue on surfaces, dust, or other matter in the Work Area to confirm the Contractor's inspection findings.
1. For full containment work areas, during visual inspection sweep entire work area including walls, ceilings, ledges, floors, and other surfaces in the room with exhaust from forced air equipment (leaf blower with approximately 1 horsepower electric motor or equivalent).
 2. IH Consultant Visual inspection is complete when the area is visually clean, and no debris, residue, dust, or other material is found. If any debris, residue, dust, or other matter is found repeat Contractor cleaning and the IH Consultant Visual Inspection.
 3. Encapsulation of substrate: After successful final visual inspection, perform encapsulation of substrate as approved by Owner using suitable encapsulant material. Coordinate with Owner to ensure compatibility with replacement materials and fire-retardant ratings for the surfaces to be encapsulated. Do not allow overspray to damage other surfaces, materials and equipment in the work area and do not allow overspray and build up or pooling of encapsulant.
- C. Clearance Testing: Air clearance sampling shall be conducted by the Contractors IH Consultant. See Work Area Clearance section. Air clearance testing shall not be completed until the work area passes visual inspection, has had adequate air changes, and sufficient time for surfaces to adequately dry.
- D. Removal of Work Area Isolation: Complete only after the work area clearance sections have been met and verified by the IH Consultant. Remove all Primary Barrier sheeting and equipment decontamination unit(s), leaving only: critical barriers, personnel decontamination unit, and operational pressure differential/air filtration systems. Properly dispose of sheeting as asbestos-waste. Use care to prevent damage to building surfaces and materials during teardown. All damage to surfaces and materials shall be repaired by Contractor unless otherwise noted and agreed to in writing by Owner.
1. Re-inspect all work area surfaces and adjacent areas for any dust and debris that may have originated from the work. Clean all surfaces using HEPA-vacuums and wet-wiping as required and until all surfaces are clean of visible debris. Shut down and remove the Pressure Differential System. Seal HEPA filtered fan units, HEPA vacuums and similar equipment with 6 mil polyethylene sheet and duct tape to form a tight seal at intake end before being moved from Work Area.
 2. Remove personnel decontamination unit. Remove the critical barriers and properly dispose of as asbestos-waste. Clean all surfaces using HEPA-vacuums and wet-wiping as required and until all surfaces are clean of visible debris.

- E. Final Cleaning: This cleaning is now being applied to existing room conditions. Take care to avoid watermarks or other damage. Wet-wipe and HEPA vacuum surfaces in the work area until clean and free from dust and debris. Complete final cleaning in accordance with the project close-out requirements. Accompanied by the Owner, the Contractor Site Supervisor shall complete a final post-abatement inspection of all surfaces and re-clean and conduct repairs, as necessary.

3.5 WORK AREA CLEARANCE

- A. Contractor Release Criteria: The Work Area shall be considered cleared when the Work Area meets the final visual inspection criteria described in the project decontamination section and airborne fiber structure concentrations have been reduced to the level specified below and pursuant to applicable State and federal asbestos regulations. The contractor must provide at least 48 hours advance notice to the IH Consultant for any clearance testing or other inspections required.
- B. Air clearance samples shall be collected by the Contractor's IH Consultant. The Contractor shall be responsible for the cost of all air clearance sampling.
- C. Analytical Method: The number and volume of air samples taken and analytical methods used by the IH Consultant based on conditions of work and the various State and federal requirements. Phase Contrast Microscopy (PCM) and Transmission Electron Microscopy (TEM) may be used for analysis of clearance samples collected to confirm completion of abatement of ACM in accordance with applicable State and federal regulations. Other analytical methods may also be used as determined by IH Consultant based on conditions of the work and other factors.
- D. PCM Air Clearance Testing: Decontamination of Work Areas requiring PCM air clearance testing only is complete when every Work Area clearance sample collected has total fiber concentrations below the 0.010 f/cc. If any sample does not meet the clearance criteria, the decontamination is incomplete and Contractor shall repeat final cleaning. The Contractor shall be responsible for all costs for each subsequent and additional round of testing and analysis required until the clearance criteria are met.

3.6 DISPOSAL OF ASBESTOS-CONTAINING WASTE MATERIAL

- A. General: Asbestos-containing waste materials and debris which is packaged in accordance with the provisions of this Specification may be disposed of at designated sanitary landfills when certain precautions are taken not limited to: notice to appropriate EPA Regional Offices and notice and permit from appropriate State and local agencies are completed. Waste disposal site(s) must be properly licensed, permitted, and qualified to accept and handle Asbestos waste in accordance with all applicable local, State, and federal codes and regulations.
- B. Disposal: Comply with the following sections during all phases of this work: worker protection requirements and respiratory protection requirements. All waste is to be hauled by a waste hauler with all required licenses and permits from all state and local authority with jurisdiction.
 - 1. Carefully load all containerized asbestos-containing waste material on sealed and lined trucks or other appropriate vehicles for transport. Exercise care before and during transport, to ensure that no unauthorized persons have access to the materials.

2. All ACM and asbestos materials removed are to be properly containerized in one of the following: (1) Two 6 mil disposal bags, or (2) Two 6 mil disposal bags and a fiberboard drum, or (3) equivalent method as approved by Owner and State. Do not store disposal bagged material outside of the work area. Take bags or drums from the work area directly to a sealed truck or dumpster. Glove bags shall not be used as waste disposal bags.
3. The owner shall provide a designated location for placement of proper waste dumpster. Line waste dumpster with a minimum of 2 layers of 6 mil polyethylene sheeting and such that a minimum total of 20 mils of lining exists (including waste bags). Waste dumpster(s) shall not be allowed to remain at the job site for longer than 72 hours upon completion of each phase (work area) of work by the Contractor. Do not transport disposal bagged materials on open trucks. During loading and unloading, properly demarcate and label dumpster on all 4 sides. Dumpster shall be sealed, labeled, and locked during all non-loading periods.
4. In accordance with NESHAPs and State regulations, advise the landfill operator or processor in advance of transport of the quantity of material to be delivered. At a disposal site, sealed plastic bags may be carefully unloaded from the truck. If bags are broken or damaged, leave in truck and clean entire truck and contents using procedures set forth herein. Retain receipts from landfill or processor for materials disposed of. At completion of hauling and disposal of each load submit copy of waste manifest, chain of custody form, and landfill receipt to Owner and IH Consultant.
5. Provide copy of waste shipment record (complete to date) to Owner and IH Consultant prior to removing waste from the site. Provide final copy of completed waste shipment record to Owner and IH Consultant within 25 days of removing waste from the site.

3.7 ASBESTOS PROJECT CLOSEOUT

- A. The contractor shall achieve Substantial Completion and then Final Completion as indicated below prior to requesting final payment.
- B. General cleaning during and after construction is required as needed to maintain general housekeeping and as otherwise required herein. Complete all final, general housekeeping and cleaning in the work areas in accordance with 29 CFR Part 1910 and 29 CFR Part 1926, as applicable. Remove temporary protection and facilities installed for protection or security of the work during construction. Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of them in a lawful manner. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.
- C. Conduct all other related work, non-asbestos work, and general construction activity in accordance with the Contract Documents and Owner's written request.
- D. Substantial Completion consists of the following: (1) all work area abatement, decontamination and related site work is complete; (2) interim submittal requirements are submitted; (3) final visual inspection and air clearance requirements have been met in each work area; (4) removal of

containment barriers and Contractor equipment is complete; (5) all general cleaning has been performed and approved as indicated herein; (6) other work tasks and administrative requirements have been completed in accordance with the contract documents and specification; and (7) post-abatement site inspection and review with Owner has been performed.

- E. Final Completion consists of the following: (1) Substantial Completion met; (2) completion of all Closeout Submittal requirements; and (3) complete, to Owner's satisfaction, any remaining punch-list items identified during the post-abatement site inspection with Owner.

END

TABLE 1

SUMMARY OF ACM TO BE REMOVED

MATERIAL DESCRIPTION	LOCATION	QUANTITY	EPA CATEGORY	ASBESTOS CONTENT
Pooler Pavilion (new wing)				
Pipe Insulation (white) Pipe Fitting Insulation (white) Pipe Insulation (grey AirCell) Pipe Fitting Insulation (associated with AirCell Pipe Insulation)	Basement, hallways, stairwells, and rooms throughout	2,500 linear feet	Friable ACM	15% Chrysotile, 5% Amosite
			Friable ACM	15% Amosite, 10% Chrysotile
			Non-ACM	<1% Amosite
Exhaust Breeching Exhaust Breeching Elbows	Basement, Generator Room	20 linear feet	Friable ACM	60% Chrysotile
				55% Chrysotile
Switchgear	Basement Electrical Room	30 square feet	Category II Nonfriable	Assumed ACM
Sheet Flooring	1 st and 2 nd floor throughout	22,000 square feet	Category I Nonfriable	3% Chrysotile
Mastic (black)	Corridors throughout at seams of vinyl sheet flooring	2,000 linear feet	Category I Nonfriable	5.6% Chrysotile
Window Glaze	Exterior windows, throughout	5,300 linear feet	Non-ACM	0.1% Chrysotile
9" Floor Tile (grey/brown) and Flooring Mastic (black)	Basement, throughout south wing, central stairwell, and south stairwell 1 st and 2 nd floor, closets, north, center, and south stairwells, and main entry lobby	12,340 square feet	Category I Nonfriable	4.7% Chrysotile
			Non-ACM	0.5-2.3% Chrysotile
Sink Basin Undercoat (black)	Basement, 1 st , and 2 nd floor kitchenettes and nurse's stations	8 sink basins (50 square feet total)	Category I Nonfriable	5.6% Chrysotile
Caulk (white)	Exterior, throughout wing around windows and doors	3,780 linear feet	Category II Nonfriable	4.5% Chrysotile
Caulk (black)	1 st and 2 nd floor, lounge windows in north and south wings	320 linear feet	Category II Nonfriable	8.9% Chrysotile
Flashing (silver/black)	Roof on vent covers, hatch, and other penetrations	250 square feet	Category II Nonfriable	1.87% Chrysotile

TABLE 1

SUMMARY OF ACM TO BE REMOVED

MATERIAL DESCRIPTION	LOCATION	QUANTITY	EPA CATEGORY	ASBESTOS CONTENT
Tar Paper	Throughout roof, under EPDM roofing system on roof deck	13,825 square feet	Non-ACM	Trace (<1%) Asbestos
Transite Panels	Roof affixed to exterior of penthouse structures	800 square feet	Category II Nonfriable	20% Chrysotile
Pooler Pavilion (old wing)				
Fire Door Insulation (white)	1 st and 2 nd floor, utility room and soiled linen doors Ground Floor, chapel doors	10 Doors, 21 square feet each	Friable ACM	8% Amosite 3% Chrysotile
Pressboard (white)	Ground floor, 1 st and 2 nd floor behind wall mount heaters	140 panels, approximately 1,120 square feet	Friable ACM	60% Chrysotile
Pipe and Fitting Insulation	Ground Floor Chapel	120 linear feet	Friable ACM	10% Amosite
9" Floor Tile (maroon and black) and Black Flooring Mastic	2 nd Floor Throughout 1 st Floor Throughout Ground Floor, Throughout	11,000 square feet 11,000 square feet 7,500 square feet	Category I Nonfriable	6.8% Chrysotile
Caulk (white)	Throughout building at exterior windows, under trim molding. Only residual observed	222 window openings, up to 16 linear feet per opening	Category II Nonfriable	1.8% Chrysotile
Sink Basin Undercoat	1 st and 2 nd floor dish washing rooms	4 counters, approximately 30 square feet per counter 120 square feet total	Category II Nonfriable	9.8% Chrysotile
Tan Sheet Flooring	1 st and 2 nd floor, north and south bathrooms	140 square feet	Category I Nonfriable	13.3% Chrysotile
Stair Tread Floor Tiles	North, South and Central Stairwells	1,000 square feet	Category I Nonfriable	5.6% Chrysotile
Black Mastic				2.0% Chrysotile
Sink Basin Undercoat (black)	1 st and 2 nd floor, north and south nurse's station kitchenette and soiled linen rooms	8 sinks at approximately 6 square feet each	Category II Nonfriable	4.9% Chrysotile
Flashing	Roof, flashing at threshold of elevator top room door	4 square feet	Category I Nonfriable	2.89% Chrysotile
Switchgear Panel	Roof, elevator top room	45 square feet	Category II Nonfriable	20% Chrysotile

SECTION 311000 - SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Protecting existing vegetation to remain.
2. Removing existing vegetation.
3. Clearing and grubbing.
4. Stripping and stockpiling topsoil.
5. Removing above- and below-grade site improvements.
6. Disconnecting, capping or sealing, and abandoning site utilities in place, or removing site utilities, where directed.
7. Temporary erosion- and sedimentation-control measures.
8. Removal of existing building foundations, footings and slabs after the framed structure has been removed; and below-grade utility structures.

B. Related Sections in other Divisions:

1. Division 01 Section "Temporary Facilities and Controls" for temporary utility services, construction and support facilities, security and protection facilities, and temporary erosion- and sedimentation-control measures.
2. Division 01 Section "Temporary Tree and Plant Protection."
3. Division 01 Section "Execution" for field engineering and surveying.
4. Division 02 Section "Structure Demolition" for demolition of buildings, structures, and site improvements.
5. Division 02 Section "Selective Structure Demolition" for partial demolition of buildings or structures.
6. "SITE EROSION CONTROL NOTES" plan for temporary erosion and sedimentation control procedures.

1.3 DEFINITIONS

- A. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- B. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil and is the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably

free of subsoil, clay lumps, gravel, and other objects more than 1 inch (25 mm) in diameter; and free of subsoil and weeds, roots, toxic materials, or other nonsoil materials.

- D. Plant-Protection Zone: Area surrounding individual shrubs, or other vegetation to be protected during construction, and indicated on Drawings.
- E. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined as a circle around each tree with a radius 1.5 times the diameter of the drip line unless otherwise indicated.
- F. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 MATERIAL OWNERSHIP

- A. Cleared materials shall become Contractor's property and shall be removed from Project site, except for stripped topsoil and other materials that are indicated to be stockpiled, salvaged, or otherwise remain the Owner's property.

1.5 SUBMITTALS

- A. Product Data: For each type of product.
- B. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
 - 1. Use sufficiently detailed photographs or video.
 - 2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.
- C. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 QUALITY ASSURANCE

- A. Preinstallation Conference: Conduct conference at Project site.

1.7 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where directed.
- C. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.

1. Pre-mark the boundaries of your planned excavation with white paint, flags or stakes, so utility crews know where to mark their lines.
 2. Call Dig Safe, at either 811 or 1-888-DIGSAFE, at least 72 business hours - but no more than 30 calendar days - before starting work. Don't assume someone else will make the call.
 3. If blasting, notify Dig Safe at least 24 business hours in advance.
 4. Wait 72 business hours for lines to be located and marked with color-coded paint, flags or stakes. Note the color of the marks and the type of utilities they indicate. Transfer these marks to the As-Built drawings.
 5. Contact the landowner and other non-member utilities (water, sewer, gas, etc.), for them to mark the locations of their underground facilities. Transfer these marks to the As-Built drawings.
 6. Re-notify Dig Safe and the non-member utilities if the digging, drilling or blasting does not occur within 30 calendar days, or if the marks are lost due to weather conditions, site work activity or any other reason.
 7. Hand dig within 18 inches in any direction of any underground line until the line is exposed. Mechanical methods may be used for initial site penetration, such as removal of pavement or rock.
 8. Dig Safe requirements are in addition to town, city and/or state DOT street opening permit requirements.
 9. For complete Dig Safe requirements, visit their website.
 10. If you damage, dislocate or disturb any underground utility line, immediately notify the affected utility. If damage creates safety concerns, call the fire department and take immediate steps to safeguard health and property.
 11. Any time an underground line is damaged or disturbed, or if lines are improperly marked, you must call Dig Safe.
- D. Do not commence site clearing operations until temporary erosion- and sedimentation-control and plant-protection measures are in place.
- E. The following practices are prohibited within plant or tree protection zones:
1. Storage of construction materials, debris, or excavated material.
 2. Parking vehicles or equipment.
 3. Foot traffic.
 4. Erection of sheds or structures.
 5. Impoundment of water.
 6. Excavation or other digging unless otherwise indicated.
 7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- F. Do not direct vehicle or equipment exhaust towards plant or tree protection zones.
- G. Prohibit heat sources, flames, ignition sources, and smoking within or near plant or tree protection zones.
- H. Soil Stripping, Handling, and Stockpiling: Perform when the topsoil is dry or slightly moist.
- I. Restore surfaces disturbed during construction, including stockpile and storage areas, to their pre-construction condition, or better. Leave vegetated areas smooth and finished with loam, seed, and erosion control mulch and mesh. Restore damaged paved areas with new pavement to the existing thickness.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Erosion and sedimentation control materials and methods are described on drawing entitled, 'Site Erosion Control Notes'.
- B. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Division 31 Section "Earth Moving".
 - 1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.
- C. Antirust Coating: Fast-curing, lead- and chromate-free, self-curing, universal modified-alkyd primer complying with MPI #79, Alkyd Anticorrosive Metal Primer or SSPC-Paint 20 or SSPC-Paint 29 zinc-rich coating.
 - 1. Use coating with a VOC content of 420 g/L (3.5 lb/gal.) or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly identify trees, shrubs, and other vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction. The Contractor shall conduct his operations in conformity with all Federal and State permit requirements concerning water, air, or noise pollution, or the disposal of contaminated or hazardous materials. Erosion control measures shown on the Plans are minimum only and are not intended to be complete. Satisfy the current requirements of the regulatory agencies. Comply with materials and procedures listed on the 'SITE EROSION CONTROL NOTES' plan, for temporary erosion and sedimentation control.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross plant or tree protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 TREE AND PLANT PROTECTION

- A. Where excavation for new construction is required within tree protection zones, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
 - 1. Cover exposed roots with burlap and water regularly.
 - 2. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.
 - 3. Coat cut faces of roots more than 1-1/2 inches (38 mm) in diameter with an emulsified asphalt or other approved coating formulated for use on damaged plant tissues.
 - 4. Backfill with soil as soon as possible.
- B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Architect.

3.4 EXISTING UTILITIES

- A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed, or abandoned in place.
 - 1. Arrange with utility companies to shut off indicated utilities.
 - 2. Owner will arrange to shut off indicated utilities within his control, when requested by Contractor.
- B. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Architect not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Architect's or Owner's written permission.
- C. Excavate for and remove underground utilities indicated to be removed.
- D. Removal of underground utilities is included in Division 33 Sections.

3.5 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
 - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 - 2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
 - 3. Recycle wood and wood debris either on-site or off-site, and do not bury or burn wood material. Grind down stumps and remove roots, obstructions, and debris to a depth of 18 inches (450 mm) below exposed subgrade.
 - 4. Use only hand methods for grubbing within protection zones.
 - 5. Chip removed tree branches and recycle the material either on-site or off-site.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches (200 mm), and compact each layer to a density equal to adjacent original ground.

3.6 TOPSOIL STRIPPING

- A. Strip topsoil beneath areas receiving new construction, to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, stones and other objects more than 2 inches (50 mm) in diameter; trash, debris, weeds, roots, stumps, and other waste materials.
- B. Stockpile topsoil away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover with temporary seed and mulch to prevent windblown dust and erosion.
 - 1. Do not stockpile topsoil within protection zones.
 - 2. Dispose of surplus topsoil in same manner specified for surplus soil. Surplus topsoil is that which exceeds quantity required for reuse.

3.7 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.
- B. Remove slabs, foundations, retaining walls, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.
 - 2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

3.8 BUILDING, STRUCTURE, AND UTILITY BELOW-GRADE COMPONENTS

- A. Below-Grade Construction: Demolish foundation walls, below grade utilities and other construction extending below-grade.
 - 1. Remove below-grade construction, including basements, foundation walls, footings, and utility structures completely. Crush material and use for fill in compliance with Division 31 Section "Earth Moving" or remove from site and transport to recycling facilities.
 - 2. Below-Grade Areas: Completely fill below-grade areas and voids resulting from building demolition operations and utility removals with satisfactory soil materials according to backfill requirements in Division 31 Section "Earth Moving."
 - 3. 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.

3.9 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
- B. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION 311000

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SECTION 312000 - EARTH MOVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Preparing subgrades and finish grades. Cutting, filling, and providing additional materials required.
 - 2. Excavating, filling, and backfilling to grade.
 - 3. Excavating and backfilling for buried structures, tanks, pipes, wires, and conduits.
 - 4. Restoring loam and seeding lawns.

1.3 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
 - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 - 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Base Course: Aggregate layer placed between the subbase course and finish pavement.
- C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.
- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Crushed Stone(Drainage Fill): Crushed stone backfill to facilitate stormwater flow; that also minimizes upward capillary flow of pore water.
- F. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions for unit prices.
 - 2. Open(bulk) Excavation: Excavation more than 6 feet (3 m) in width.
 - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.
- G. Fill: Soil materials used to raise existing grades.
- H. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material that exceed 2 cu. yd. (1.5 cu. m) for bulk excavation, footing, trench, and pit

excavation, that cannot be removed by rock excavating equipment, without systematic drilling, ram hammering, or blasting, when permitted. Fragmented "weathered" rock which can be removed by excavation equipment with "ripper" teeth will be considered earth.

- I. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- J. Subbase Course: Aggregate layer placed between the subgrade and base course beneath pavement.
- K. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- L. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 SUBMITTALS

- A. Qualification Data: For qualified testing agency.
- B. Material Test Reports: For each soil material proposed for fill and backfill as follows:
 - 1. Classification according to ASTM D 2487; with particle gradation test results.
 - 2. Laboratory compaction curve according to ASTM D 1557.
- C. Pre-excavation Photographs or Video: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by earth moving operations. Submit before earth moving begins.

1.5 QUALITY ASSURANCE

- A. Blasting: Not Anticipated. If ledge is encountered and blasting is approved by Owner, comply with applicable requirements in NFPA 495, "Explosive Materials Code," and prepare a blasting plan reporting the following:
 - 1. Types of explosive and sizes of charge to be used in each area of rock removal, types of blasting mats, sequence of blasting operations, and procedures that will prevent damage to site improvements and structures on Project site and adjacent properties.
 - 2. Seismographic monitoring during blasting operations.
- B. Seismic Survey Agency: An independent testing agency, acceptable to authorities having jurisdiction, experienced in seismic surveys and blasting procedures to perform the following services:
 - 1. Report types of explosive and sizes of charge to be used in each area of rock removal, types of blasting mats, sequence of blasting operations, and procedures that will prevent damage to site improvements and structures on Project site and adjacent properties.
 - 2. Seismographic monitoring during blasting operations.
- C. Geotechnical Testing Agency Qualifications: Qualified according to ASTM E 329 and ASTM D 3740 for testing indicated.

1.6 PROJECT CONDITIONS

- A. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
1. Pre-mark the boundaries of your planned excavation with white paint, flags or stakes, so utility crews know where to mark their lines.
 2. Call Dig Safe, at either 811 or 1-888-DIGSAFE, at least 72 business hours - but no more than 30 calendar days - before starting work. Don't assume someone else will make the call.
 3. If blasting, notify Dig Safe at least 24 business hours in advance.
 4. Wait 72 business hours for lines to be located and marked with color-coded paint, flags or stakes. Note the color of the marks and the type of utilities they indicate. Transfer these marks to the As-Built drawings.
 5. Contact the landowner and other non-member utilities (water, sewer, gas, etc.), for them to mark the locations of their underground facilities. Transfer these marks to the As-Built drawings.
 6. Re-notify Dig Safe and the non-member utilities if the digging, drilling or blasting does not occur within 30 calendar days, or if the marks are lost due to weather conditions, site work activity or any other reason.
 7. Hand dig within 18 inches in any direction of any underground line until the line is exposed. Mechanical methods may be used for initial site penetration, such as removal of pavement or rock.
 8. Dig Safe requirements are in addition to town, city and/or state DOT street opening permit requirements.
 9. For complete Dig Safe requirements, visit their website.
 10. If you damage, dislocate or disturb any underground utility line, immediately notify the affected utility. If damage creates safety concerns, call the fire department and take immediate steps to safeguard health and property.
 11. Any time an underground line is damaged or disturbed, or if lines are improperly marked, you must call Dig Safe.
- B. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- C. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Architect or Owner, and then only after arranging to provide temporary utility services according to requirements outlined in Section 311000.
- D. Do not commence earth moving operations until temporary erosion- and sedimentation-control measures are in place.

1.7 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction. The Contractor shall conduct his operations in conformity with all Federal and State permit requirements concerning water, air,

or noise pollution, or the disposal of contaminated or hazardous materials. Erosion control measures shown on the Plans are minimum only and are not intended to be complete. Satisfy the current requirements of the regulatory agencies.

- B. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

1.8 EXISTING UTILITIES

- A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed, or abandoned in place.
 - 1. Arrange with utility companies to shut off indicated utilities.
 - 2. Owner will arrange to shut off indicated utilities within his control, when requested by Contractor.
- B. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Architect and Owner not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Architect's or Owner's written permission.
- C. Excavate for and remove underground utilities indicated to be removed.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D 2487 or a combination of these groups, free of rock or gravel larger than 6 inches (150 mm) in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487 or a combination of these groups. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Sand: ASTM C 33; fine aggregate.

2.2 GEOTEXTILES

- A. Subsurface Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
1. Survivability: Class 2; AASHTO M 288.
 2. Grab Tensile Strength: 157 lbf (700 N); ASTM D 4632.
 3. Sewn Seam Strength: 142 lbf (630 N); ASTM D 4632.
 4. Tear Strength: 56 lbf (250 N); ASTM D 4533.
 5. Puncture Strength: 56 lbf (250 N); ASTM D 4833.
 6. Apparent Opening Size: No. 70 (0.212-mm) sieve, maximum; ASTM D 4751.
 7. Permittivity: 0.2 per second, minimum; ASTM D 4491.
 8. UV Stability: 70 percent after 500 hours' exposure; ASTM D 4355.
- B. Retain paragraph below if a separation geotextile is required. A typical use is to separate subgrade from granular soil materials such as subbase course, base course, or engineered fill. The geotechnical report may also include geotextile recommendations. See Evaluations for list of geotextile manufacturers.
- C. Separation Geotextile: Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 20 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
1. Survivability: Class 2; AASHTO M 288.
 2. Grab Tensile Strength: 247 lbf (1100 N); ASTM D 4632.
 3. Sewn Seam Strength: 222 lbf (990 N); ASTM D 4632.
 4. Tear Strength: 90 lbf (400 N); ASTM D 4533.
 5. Puncture Strength: 90 lbf (400 N); ASTM D 4833.
 6. Apparent Opening Size: No. 40 (0.430-mm) sieve, maximum; ASTM D 4751.
 7. Permittivity: 0.05 per second, minimum; ASTM D 4491.
 8. UV Stability: 70 percent after 500 hours' exposure; ASTM D 4355.
- D. CONTROLLED LOW-STRENGTH MATERIAL
- E. Controlled Low-Strength Material: Self-compacting, low-density, flowable concrete material produced from the following:
1. Portland Cement: ASTM C 150, Type I.
 2. Fly Ash: ASTM C 618, Class C or F.
 3. Normal-Weight Aggregate: ASTM C 33, 3/8-inch (10-mm) nominal maximum aggregate size.
 4. Water: ASTM C 94/C 94M.
 5. Air-Entraining Admixture: ASTM C 260.
- F. Produce conventional-weight, controlled low-strength material with 140-psi (965-kPa) compressive strength when tested according to ASTM C 495.

2.3 INSULATION BOARD

- A. Extruded polystyrene with a "K" factor of 0.18, and R-factor of 10 per 2" thickness, with a minimum of 2.2 lb./cu. ft. density, and at least 40 psi compressive strength, manufactured by Dow Chemical, or approved equal. ASTM C 578, Type VI.

2.4 ACCESSORIES

- A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches (150 mm) wide and 4 mils (0.1 mm) thick, continuously inscribed with a description of the utility; colored as follows:
 - 1. Red: Electric.
 - 2. Yellow: Gas, oil, steam, and dangerous materials.
 - 3. Orange: Telephone and other communications.
 - 4. Blue: Water systems.
 - 5. Green: Sewer systems.

- B. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches (150 mm) wide and 4 mils (0.1 mm) thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches (750 mm) deep; colored as follows:
 - 1. Red: Electric.
 - 2. Yellow: Gas, oil, steam, and dangerous materials.
 - 3. Orange: Telephone and other communications.
 - 4. Blue: Water systems.
 - 5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth moving operations.
- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
 - 2. Water from construction dewatering operations shall be cleaned of sediment before reaching wetlands, water bodies, streams, or site boundaries. Conform to the requirements of the Department of Environmental Protection.

3.3 EXPLOSIVES

- A. Explosives: Not Anticipated. If explosives are needed and are approved by Owner, obtain written permission from authorities having jurisdiction before bringing explosives to Project site or using explosives on Project site.
 - 1. Perform blasting without damaging adjacent structures, property, or site improvements.
 - 2. Perform blasting without weakening the bearing capacity of rock subgrade and with the least-practicable disturbance to rock to remain.
- B. Rock excavation is not anticipated, however if encountered, ledge rock excavation cost shall be approved prior to excavation. Prior to blasting and rock excavation, provide survey grades of the top of the ledge surface, and calculations of the expected rock quantities to be excavated. Submit this data and obtain Architect's approval prior to proceeding with rock excavation. The Architect will determine the extent of rock excavation and classification.

3.4 EXCAVATION, GENERAL

- A. Classified Excavation: Excavate to subgrade elevations. Material to be excavated will be classified as earth and rock.
 - 1. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; together with soil, boulders, and other materials not classified as rock or unauthorized excavation.
 - a. Intermittent drilling; blasting, if permitted; ram hammering; or ripping of material not classified as rock excavation is earth excavation.
 - 2. Rock excavation includes removal and disposal of rock. Remove rock to lines and subgrade elevations indicated to permit installation of permanent construction.
- B. If hazardous waste or special waste as defined by the U. S. Environmental Protection Agency or State Department of Environmental Protection is encountered during excavation, the Contractor shall avoid disturbance of that material, and shall notify the Owner immediately. The State Bureau of Oil and Hazardous Waste Control must be notified and consulted prior to disturbance of the waste or contaminated soil. Removal and disposal of contaminated materials is not included in the Contract Bid, since it must be handled as directed by the regulatory agencies on a case-by-case basis.

3.5 EXCAVATION FOR STRUCTURES

- A. Excavate for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures to indicated elevations and dimensions within a tolerance of plus or minus 1 inch (25 mm). If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections. Do not disturb bottom of excavations intended as bearing surfaces.

3.6 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.7 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.

1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line, unless pipe inverts are shown otherwise.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches (300 mm) higher than top of pipe or conduit, unless otherwise indicated.
 1. Clearance: As indicated.
- C. Trench Bottoms: For ductile iron pipe, excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.
 1. For pipes and conduit less than 6 inches (150 mm) in nominal diameter, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
 2. For pipes and conduit 6 inches (150 mm) or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe or conduit circumference. Fill depressions with tamped sand backfill.
 3. Excavate trenches 8 inches (200 mm) deeper than bottom of pipe elevation in rock or other unyielding bearing material to allow for bedding course.
- D. Trench Bottoms: For pipe materials other than ductile iron, excavate trenches 4 inches (100 mm) deeper than bottom of pipe and conduit elevations to allow for bedding course. Hand-excavate deeper for bells of pipe.
 1. Excavate trenches 8 inches (200 mm) deeper than bottom of pipe elevation in rock or other unyielding bearing material to allow for bedding course.

3.8 SUBGRADE INSPECTION

- A. Notify Architect and Geotechnical Engineer when excavations have reached required subgrade.
- B. If Geotechnical Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Geotechnical Engineer, without additional compensation.

3.9 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi (17.2 MPa), may be used when approved by Architect.
 1. Fill unauthorized excavations under other construction, pipe, or conduit as directed by Architect.

3.10 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of trees.

3.11 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
 - 2. Surveying locations of underground utilities for Record Documents.
 - 3. Testing and inspecting underground utilities.
 - 4. Removing concrete formwork.
 - 5. Removing trash and debris.
 - 6. Removing temporary shoring and bracing, and sheeting.
 - 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.12 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Place and compact initial backfill of bedding course material, free of particles larger than 1 inch (25 mm) in any dimension, to a height of 12 inches (300 mm) over the pipe or conduit.
 - 1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- D. Place and compact final backfill of satisfactory soil to final subgrade elevation.
- E. Install warning tape directly above utilities, 12 inches (300 mm) below finished grade, except 6 inches (150 mm) below subgrade under pavements and slabs.

3.13 INSULATION BOARD

- A. Place a leveling course of sand, 2 inches (50 mm) thick, over subgrade. Finish leveling course to a tolerance of 1/2 inch (13 mm) when tested with a 10-foot (3-m) straightedge.
 - 1. Place leveling course on subgrades free of mud, frost, snow, or ice.
- B. Install insulation board in layers with abutting edges and ends along pipelines or other objects to be insulated.

3.14 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.15 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 12 inches (300 mm) in loose depth for material compacted by heavy compaction equipment, and not more than 6 inches (150 mm) in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:
 - 1. Under structures, building slabs, steps, walkways, and pavements, scarify and recompact top 12 inches (300 mm) of existing subgrade and each layer of backfill or fill soil material at 95 percent.
 - 2. Under lawns, turf, or unpaved areas, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill soil material at 90 percent.
 - 3. For utility trenches, compact each layer of initial and final backfill soil material at 95 percent.
 - 4. Compact crush stone to 100% of its dry rodded weight.

3.16 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 - 1. Lawn, turf, or unpaved Areas: Plus or minus 1 inch (25 mm).
 - 2. Pavements and walks: Plus or minus 1/2 inch (13 mm).

3.17 FIELD QUALITY CONTROL

- A. Testing Agency: If deemed necessary, the Owner will engage a qualified Geotechnical Engineering testing agency to perform field quality control testing and inspections.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
- C. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
 - 1. Paved Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 1000 sq. ft. (186 sq. m) or less of paved area or building slab, but in no case fewer than three tests.
 - 2. Trench Backfill: At each compacted initial and final backfill layer, at least one test for every 100 feet (30 m) or less of trench length, but no fewer than two tests.

- D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.18 LOAMING AND SEEDING

- A. Topsoil: Topsoil for general site loam, except that existing on the site, will not be made available by the Owner. The Contractor shall be responsible for supplying any additional topsoil needed and hauling it to the site. It shall be obtained from naturally well drained areas. Whether from on-site or off-site source, the topsoil shall be a fertile, friable natural loam. ASTM D 5268 topsoil, with pH range of 5.5 to 7, a minimum of 5 percent organic material content nor more than 15%; soluble salts less than 500 parts per million; free of stones 3/4 inch or larger in any dimension and other extraneous materials harmful to plant growth. Soil shall not be used for planting while in frozen or muddy condition. Unsuitable materials removed shall be disposed of by the Contractor.
- B. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances.
- C. Seed Species: State-certified seed of grass species, 85 percent pure seed, and not more than 0.25 percent weed seed:
 - 1. General Lawn Areas: Proportioned by weight as follows:
 - a. 35 percent creeping red fescue.
 - b. 30 percent chewings fescue.
 - c. 35 percent perennial ryegrass
- D. Sow seed at a total rate of 5 lb/1000 sq. ft. (2.3 kg/92.9 sq. m).
- E. Sow 50% in one direction and 50% at right angles to the first seeding. Spread seed when soil is moist; lightly raked into top 1/8 inch of soil and rolled lightly in two directions.
- F. Hydroseeding may be used in-lieu of hand seeding.
- G. Take whatever measures are necessary to protect the seeded area while it is germinating. These measures shall include furnishing warnings signs, barriers, and other needed measures of protection.
- H. Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
 - 1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
 - 2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.

3.19 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by Architect or Geotechnical Engineer; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.20 DISPOSAL OF SURPLUS AND WASTE MATERIALS AND RESTORATION

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property. Comply with the requirements of Division 01 "Construction Waste Management".
- B. Restore surfaces disturbed during construction, including stockpile and storage areas, to their pre-construction condition, or better. Leave vegetated areas smooth and finished with loam, seed, and erosion control mulch and mesh. Restore damaged paved areas with new pavement to the existing thickness.

END OF SECTION 312000

APPENDIX

Appendix #1 - 2009 Electrical Service Study Excerpt and Images

Narrative excerpt and associated diagrams (fig. 1-2) from the Phase One Master Planning and Sustainability Study, dated May, 2001. Prepared by *Bartlett Design*. On-site review of electrical primary distribution system was conducted by *AWM Engineering*, March 2009.

Current conditions have not been surveyed and may differ from what is depicted in narrative and diagrams below.

Primary Electrical Service

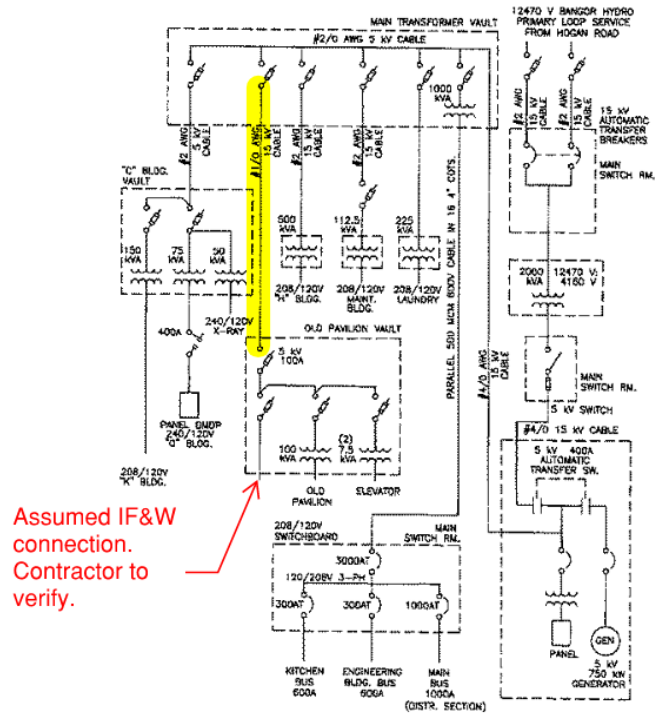
The Dorothea Dix Psychiatric Center (DDPC) campus is served by a 12470-volt primary service from *Bangor-Hydro* that originates at a service utility pole at Hogan Road adjacent to the campus entrance drive. The existing *Bangor-Hydro* utility service pole arrangement consists of a loop primary feed with two services entering the campus underground. The *Bangor-Hydro* service poles each include primary service fused cut-outs.

The underground primary service extends along the DDPC entrance drive and is received at a 15kV automatic transfer switch that is located within the main switch room. The load side service from this automatic transfer switch includes the *Bangor-Hydro* primary service meter. The metered primary extends to an adjacent outside pad mounted service transformer that is rated 12470V:4160V, 2000kVA.

The campus primary distribution system consists of a 5kV system that serves all campus facilities. The campus primary feeder which originates at the load side of the 12470V:4160V pad mount transformer is extended into the main switch room and is connected to a 5kV fused primary switch. The campus primary feeder is then routed to a 400 ampere, 5kV automatic transfer switch that is located within an existing generator enclosure. The transfer switch selects between the normal *Bangor-Hydro* service and an emergency service that is supplied by a 750kW, 4160/2400V generator. Upon loss of normal power, the emergency generator automatically serves the campus 5kV primary distribution system.

The load side feeder from the emergency/normal automatic transfer switch extends to a main transformer vault that includes fused cut-out switches for 5kV distribution to the various buildings across the DDPC campus. The transformer vault feeders include services to Building C, the existing Old Pavilion, Building H, the Maintenance Building, and the Laundry Building. In addition, the vault also includes a 1000kVA, 4160V:208/120V transformer with a secondary service to a switchboard located in the main switch room. This switchboard serves secondary feeders to the kitchen, the Engineering Building, and a main bus.

Step-down transformers from 5kV to secondary voltages include outside pad mount transformers at Building H and at the Maintenance Building. All other step-down transformers are located within local transformer vaults or within individual buildings being served.



Assumed IF&W connection. Contractor to verify.

Fig. 1: Schematic Single Line Diagram of Campus Primary Electrical Service

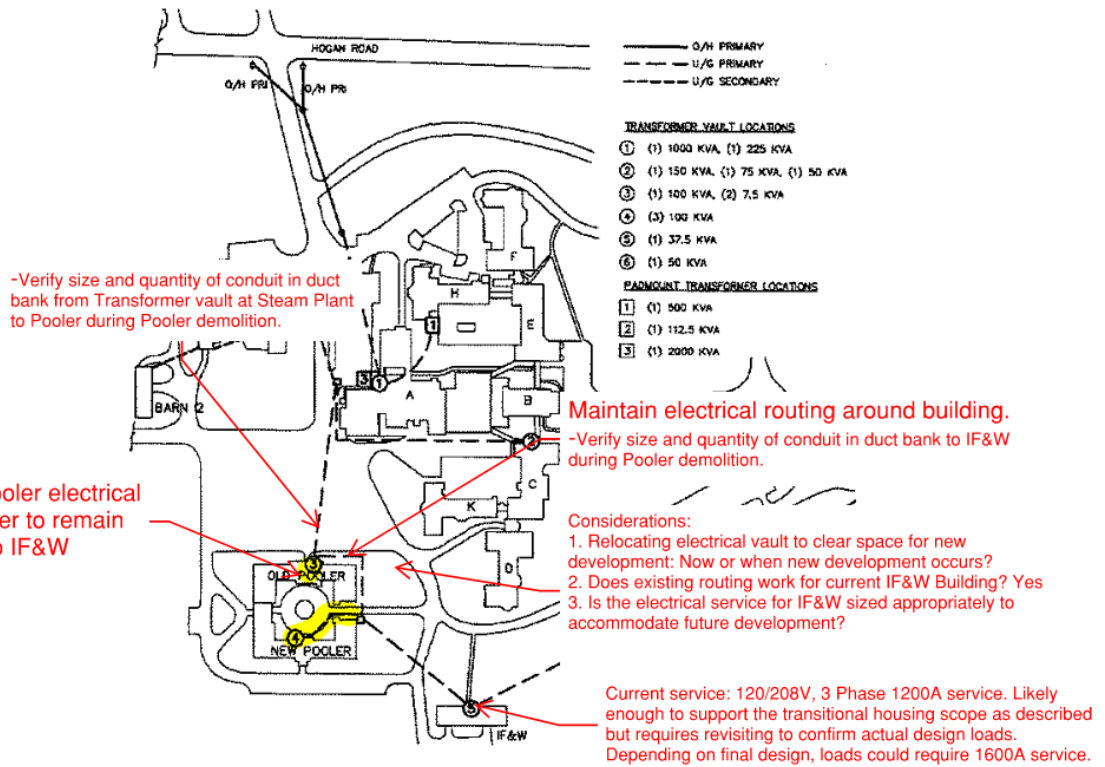
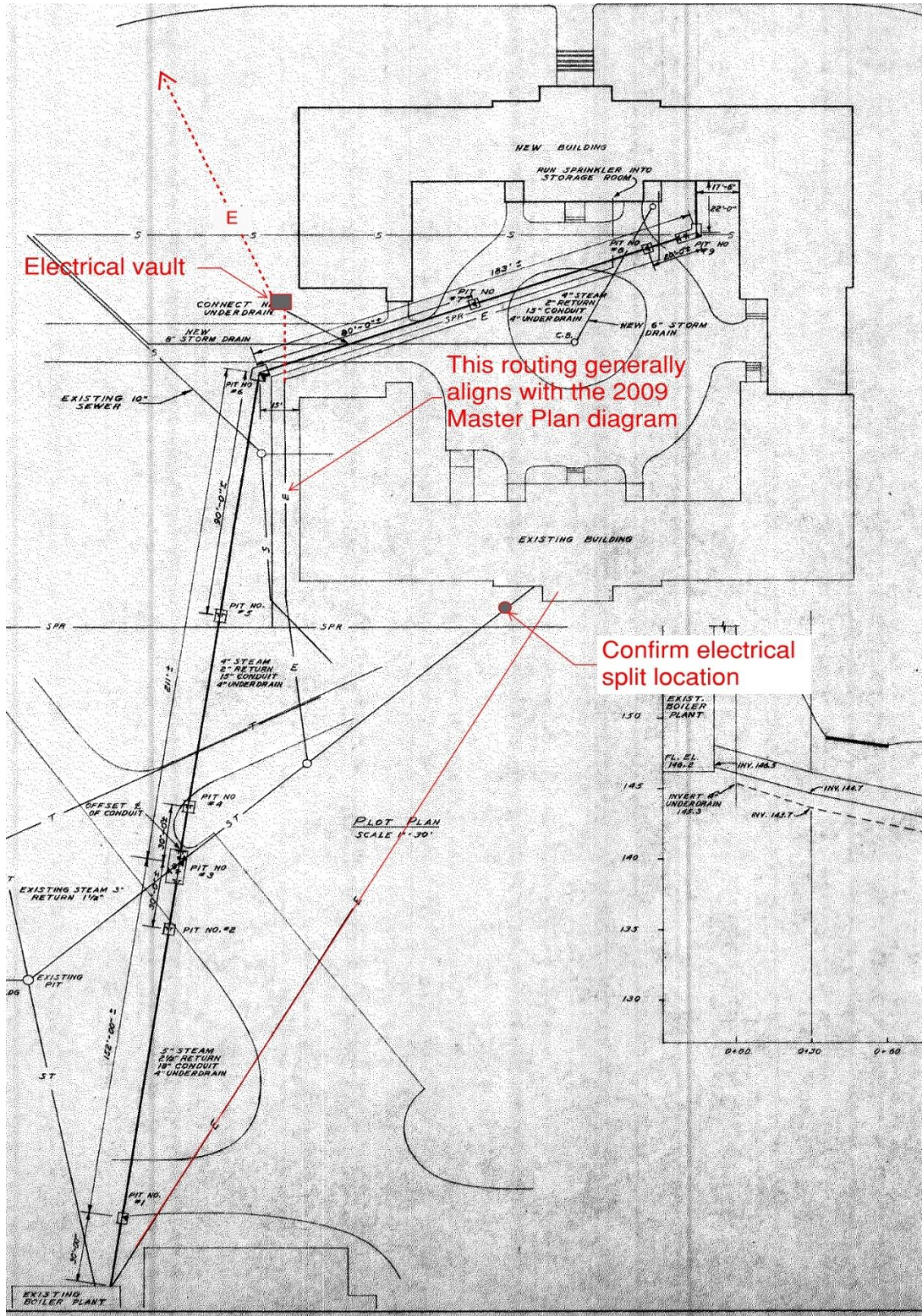


Fig. 2: Schematic Plan of Campus Primary Electrical Service

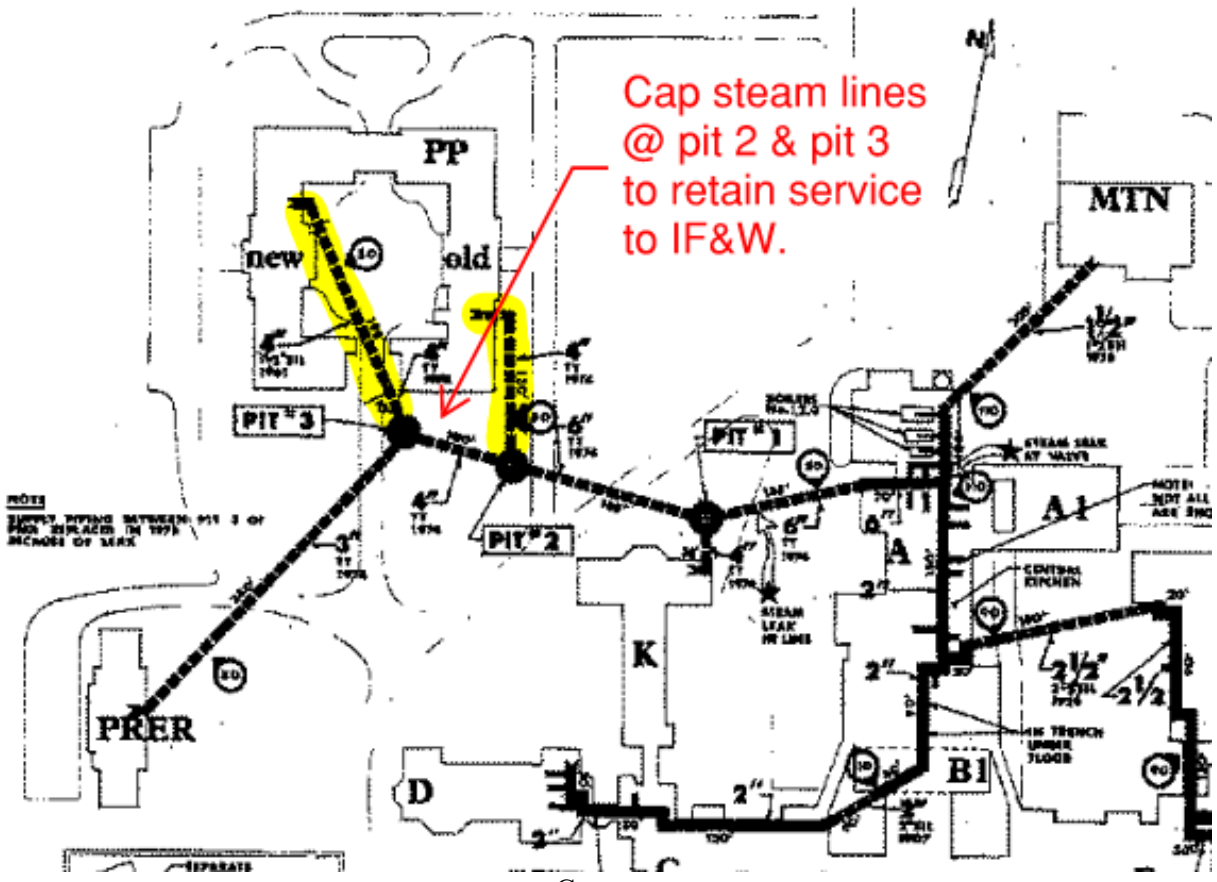
Appendix #2 - 1959 Underground Steamline Plan Clip

Clip markup of existing Underground Steamline Plan. Prepared by Crowell, Lancaster, Higgins & Webster. Dated March 5, 1959

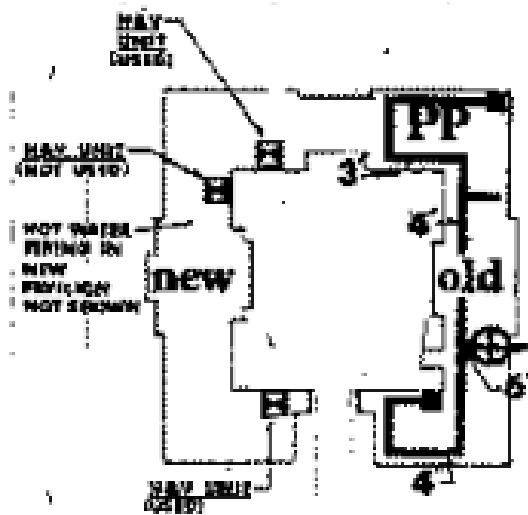


Appendix #3 - 1979 Steam Main Plan Clip

Clip markup indicating routes and pit locations of high pressure steam mains from a report prepared by *Mechanical Systems Engineers*, dated May 16, 1979.



Campus



Enlargement

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October 19, 2022

William Gatchell, AIA
Associate, Senior Architect
Harriman Architects
33 Jewell Ct # 101
Portsmouth NH 03801

Re: Dorothea Dix Psychiatric Center (DDPC)
Bangor, ME
Building Survey Findings
RPF File No. 22.1049

Dear Mr. Gatchell:

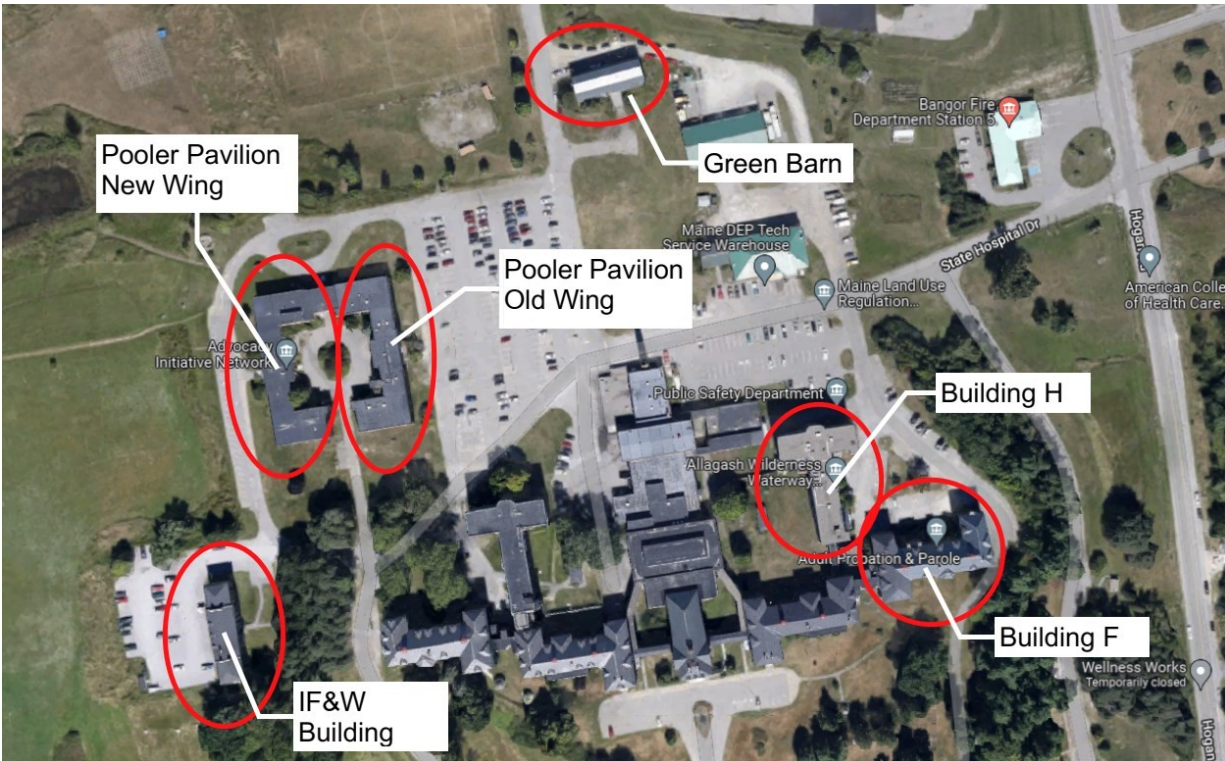
During the period of June 15, 2022, through September 15, 2022, RPF Environmental, Inc. (RPF) conducted a hazardous building material survey at the Dorothea Dix Psychiatric Center (DDPC) Facility located at 656 State Street in Bangor, Maine. The survey was performed in five (5) buildings as part of the Facility Condition Assessment being conducted by Harriman Architects. The survey was performed in the designated buildings for accessible hazardous building material as indicated herein. Below is a summary of findings, discussion of the results and preliminary recommendations for proper management of the identified hazardous building material. Attached to this report are the survey data tables, laboratory results, survey methodologies and limitations.

This report is not intended to be used as an abatement specification or work plan. To proceed with abatement work, the following important steps are necessary:

1. A work plan or project design documents must be prepared prior to abatement by a certified abatement project designer. As part of the design, additional site testing and analysis may be required as discussed in this report.
2. The abatement specification or work plan should then be used to solicit bids from qualified abatement contractors. Only properly licensed contractors should be used for asbestos abatement and disposal.
3. A qualified industrial hygiene/testing consultant should conduct sufficient testing and inspections of the work, independent of the abatement contractor. The consultant should also prepare final abatement reports for the work.

Summary of Findings

The scope of services for this survey included the Green Barn, Building F, Building H, the IF&W Building, and Pooler Pavilion, both new and old wings, as shown in the following Figure 1:



The scope of the survey included asbestos-containing building material (ACBM) in accordance with the asbestos inspection requirements prior to renovation or demolition work as stated in Maine Department of Environmental Protection Chapter 425 Asbestos Management Regulations and U.S. Environmental Protection Agency’s National Emissions Standards for Hazardous Air Pollutants (NESHAP), Title 40 CFR Part 61. Survey work also included screening for lead paint (LP), and inventories for universal and potentially regulated materials and components.

The scope of RPF services for this survey did not include any sampling of roofs or access into any potential tunnels that may exist beneath or between the buildings. RPF was also limited to accessible areas of each building. While this did not pose any problem with most of the buildings, as RPF was provided with effectively unrestricted access, the 3rd floor of Building F was largely inaccessible to RPF as it was occupied at the time of the survey.

Asbestos

Several types of suspect asbestos-containing building material (ACBM) were observed by RPF in each building, including friable and nonfriable suspect material. Based on the testing performed by RPF asbestos was detected in the following materials:

SUMMARY OF ACBM IDENTIFIED	
Building F	Sheet Flooring
Building H	Pipe and Fitting Insulation Sink Basin Undercoat

SUMMARY OF ACBM IDENTIFIED	
Green Barn	Caulk
IF&W Building	Transite Panels
Pooler Pavilion (new wing)	Pipe and Fitting Insulation Exhaust Breeching Switchgear (assumed) Sheet Flooring Sheet Flooring Mastic Window Glaze Floor Tile and Mastic Sink Basin Undercoat Caulk (white) Caulk (black)
Pooler Pavilion (old wing)	Fire Door Insulation Pressboard Pipe and Fitting Insulation Floor Tile and Mastic Caulk Sink Basin Undercoat Sheet Flooring Stair Tread and Mastic

ACBM that was identified was observed to be in conditions ranging from good to damaged, largely depending on whether the building was occupied or not. ACBM observed in Building F and Building H, both of which were currently occupied at the time of the survey, was found to be in good condition while ACBM observed in the Pooler Pavilion, which was unoccupied at the time of the survey and had stood unoccupied for some time, was largely found to be in damaged condition. Regardless of renovation or demolition, some form of abatement will be required in many of these locations.

Lead Paint

Based on the age of each building and extent of renovation conducted over the years, it is reasonable to assume that some lead paint (LP) is present at each building. RPF conducted limited spot testing of paint coatings and lead was detected on a majority of the surfaces tested. The conditions observed within the Pooler Pavilion, both old and new wings, and the Green Barn were largely of peeling and chipped paint throughout. The painted surfaces observed in Building F, Building H and the IF&W Building were largely in fair to good condition. The intent of the lead testing was for potential lead hazardous waste disposal and construction information purposes only.

Other Potentially Hazardous Building Material

The presence of other hazardous or regulated building materials, including mercury containing fluorescent bulbs, fluorescent light fixture ballasts, batteries, and potential other universal wastes were found within each of the buildings.

Depending on the extent of renovation and final construction plans, proper abatement and/or management of the materials will be required in accordance with applicable State and federal regulations. Renovation

and demolition plans should be reviewed by a certified industrial hygienist and a licensed project designer for possible asbestos impact issues. Based on the impact assessment and planned usage, technical specifications should be prepared for abatement, as applicable. A management plan should also be prepared to address any asbestos or other hazardous material scheduled to remain after construction.

Although limited destructive survey methods were employed within the buildings, inspection of concealed portions of the space were constrained by the need to prevent structural damage and damage to the building envelope. As is the case with any survey of this nature, it is not possible to identify all hidden or concealed suspect material until full demolition occurs.

Discussion of Findings

Asbestos-Containing Building Material

Asbestos is the name for a group of naturally occurring minerals that separate into strong, very fine fibers. The adverse health effects associated with asbestos exposure have been extensively studied for many years. Results of these studies and epidemiological investigations have demonstrated that inhalation of asbestos fibers may lead to increased risk of developing one or more diseases. In all cases, extreme care must be used not to disturb asbestos-containing materials or to create fiber release episodes.

In the accessible locations surveyed, RPF identified one hundred seventy-two (172) homogeneous groups of accessible suspect asbestos-containing building material between the six buildings. Suspect materials were identified based on current industry standards, EPA, and other guideline listings of potential suspect ACBM.

The following is a summary list of the suspect ACBM identified and sampled during this survey:

Building F

- Skim Coat, White
- Plaster, Gray
- Suspended Ceiling Tile, White
- Cementitious Flooring, Tan
- Mortar with adhesive
- Ceramic Tile Grout, White
- Blown-in insulation, White
- Textured surfacing, White
- Grout, Grey
- Flue Cement, Grey
- Gypsum & Joint Compound
- Cementitious panel, Black
- Floor paper, Tan
- Floor tile, White & Red
- Mastic, Black
- Cove base adhesive, Tan
- Floor tile, Brown
- Adhesive, Tan
- Carpet adhesive, Tan
- Floor tile, Red & White
- Mastic, Yellow
- Caulking, White
- Sink Basin Coating, White
- Laminate Countertop, Adhesive, clear
- Floor tile, Grey,
- Adhesive, Yellow
- Floor tile, Grey
- Adhesive, Yellow
- Flooring material, Yellow + Pink + Blue
- Duct Sealant, Grey
- Window Glaze, White
- Ceramic Tile Adhesive, Brown
- Floor tile, Tan
- Mastic, Yellow
- Sheet Flooring, White

Building H

- Plaster finish, White
- Plaster base, Gray
- Suspended Ceiling Tile, Gray
- Gypsum Board and Joint Compound, White
- 12" Ceiling Tile, Orange
- Wall Filler, White
- Grout, Wall Tile, White
- Ceiling Tile, White 2x2
- Fitting on Fiberglass Run, White
- Textured Surfacing, White/Gold speckled
- Carpet Glue, Yellow
- Covebase Adhesive, Yellow
- Glaze, White
- Glue, Yellow
- Sheet Floor Sink Basin Undercoating, Black
- Rubberized Tile, Green
- Mastic, Green
- 12" Floor Tile, Green
- Mastic, Green
- 12" Floor Tile, Pink
- Mastic, Pink
- Glaze, White

- Pipe Insulation, Gray
- Fitting, White
- Sink Basin Undercoating, White
- 12" Floor Tile, White
- Mastic, Yellow

Green Barn

- Caulk, White
- Window Glaze, Beige
- Asphalt-like Siding Paper, Black/Silver
- Siding Paper, Black

IF&W Building

- Plaster Finish, White
- Plaster Base, Grey
- Gypsum Board and Joint Compound, White/Grey
- Tectum-like Ceiling Tiles, Tan
- Grout, Ceramic Wall Tiles, White
- Grout, Grey
- Fume Hood Transite Panels Lab Counters, Black
- Insulation/cement, Grey
- Rope Gasket, White
- 12" Floor Tile, White
- Mastic, Yellow
- 12" Floor Tile, Green
- Carpet Glue, Yellow
- Stair Tread, Green Glaze, White
- Duct Vibration Cloth, Black
- 12" Floor Tile, Tan
- Duct Sealant, Grey
- Flooring Mastic, Mixed
- Caulk, White
- Firestop Caulk, Red
- Insulation Compound, Red/Grey

Pooler Pavilion, New Wing

- Gypsum Board and Joint Compound, White
- Plaster, Skim Coat, White
- Plaster, Base Coat, Grey
- Ceiling Tiles, Grey
- Grout, White
- Grout, Grey
- Pipe Insulation, White
- Exhaust Breeching, White
- Breech Elbow Insulation, White
- Pipe Insulation, Grey
- Cementitious Wall Panel
- Sheet Flooring, White
- Vinyl Sheet Flooring, White
- Mastic, Black
- Carpet Adhesive, Yellow
- Caulk, Interior Windows, White
- Caulk, Interior Seams/Doors, White
- Adhesive, Mixed (covebase)
- Glaze, White
- 9" Floor Tile
- 12" Floor Tile, White
- Adhesive, Yellow
- Sink Basin Undercoat, Black
- Mixed Mastics
- Adhesive, White
- Sink Basin Undercoat, White
- 9" Floor Tile, Grey
- 12" Floor Tile, Brown
- 12" Floor Tile, Grey/Tan
- Caulk, White
- Caulk, Black
- Mixed Mastics, Yellow/

Pooler Pavilion, Old Wing

- Plaster finish, White
- Plaster base, Grey
- Plaster finish, white
- Gypsum Board and Joint Compound, White
- Ceiling Tile, Grey
- Ceiling Tile, White
- Fire Door Insulation, White
- Grout, Grey
- Grout, White
- Gypcrete, Grey
- Pressboard, White
- Skim Coat, White
- Base Coat, Off-White
- Mortar, White
- Pipe Insulation, White
- 9" Floor Tile, Maroon
- Mastic, Black
- 12" Floor Tile, White
- Mastic, Yellow
- 12" Floor Tile, Brown
- Mastic and Filler, Brown/Black
- 12" self-stick Floor Tile and Adhesive, White
- Carpet glue, Yellow
- Covebase adhesive, mixed
- Caulk, White
- Sink Basin Undercoat, Black
- Adhesive, White
- Sheet Flooring and Adhesive, White
- Sheet Flooring and Adhesive, Tan
- 12" Floor Tile, Grey
- Adhesive, Yellow
- Sink Basin Undercoat, White
- 12" Floor Tile, White with Tan and Blue Flecks
- Damp Proof Coating, Black
- Stair Tread Floor Tile, Black
- Glaze, White
- Fire Stop Caulk, Red

A total of five hundred eighty-four (584) samples were extracted from the different groups of suspect material in accordance with EPA sampling protocols. Table 1 of Appendix A includes a list of ACBM

identified in each building along with EPA category listings, and asbestos content. Listings of the different homogenous groups of suspect material identified, samples collected, and analytical results from each building are included in the subsequent tables in Appendix A.

Some suspect material is assumed to be ACM as testing of the material was not included in the RPF scope of work or because sampling was not feasible at the time of the survey. For example, roofing was not performed in order not to damage the integrity of the materials at this time. Additionally, there was energized switchgear observed Pooler Pavilion, New Wing that could not be sampled. All assumed ACM should be handled as ACM until and unless full testing is performed and the material is found to be non-detect for asbestos.

Suspect materials encountered at the site subsequent to this survey, which are not included on the enclosed listings of suspect material sampled, should be assumed to be ACM until proper testing proves otherwise (for example prior to any disturbance due to maintenance, renovation, or demolition activity). Please notify RPF in this event to arrange for proper testing and assessments. Please reference the attached methodology and limitations.

Lead Paint Screening

Based on the types and ages of building construction at the site, it is reasonable to assume that various painted surfaces contain lead. It is common in buildings such as this and that have had various renovation and upgrades to have both lead containing paint and non-lead containing paint. Lead is a toxic metal that was used for many years in paint and other products found in and around buildings and homes. Exposure to lead may cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. Children six years old and under are most at risk; however, adults are also susceptible to the effects of lead over exposure.

For the purposes of this survey, RPF collected paint chip samples of representative paint coatings within each of the buildings surveyed. These paint chip samples were analyzed for lead content by flame atomic absorption (Flame AA) Spectroscopy by EPA method SW-846 3050B/6010C/7000B. The intent of the screening was for potential lead hazardous waste disposal screening purposes and for lead safe work practice considerations during renovation or demolition activity.

Varying concentrations of lead were identified on each building included in this survey. A summary of the testing for each building is provided below with laboratory test results included in Appendix B.

Summary of Lead Paint Identified	
Building F	13 out of 14 paint chip samples collected found to contain lead ranging from 0.014 to 24 percent by weight
Building H	9 out of 10 paint chip samples collected found to contain lead ranging from 0.014 to 22 percent by weight
Green Barn	All 4 paint chip samples collected found to contain lead ranging from 0.41 to 12 percent by weight
IF&W Building	9 out of 10 paint chip samples collected found to contain lead ranging from 0.0045 to 0.65 percent by weight

Summary of Lead Paint Identified	
Pooler Pavilion (new wing)	5 of 11 paint chip samples collected found to contain lead ranging from 0.013 to 2.8 percent by weight
Pooler Pavilion (old wing)	10 out of 12 paint chip samples collected found to contain lead ranging from 0.0039 to 7 percent by weight

The paint coatings observed within the unoccupied buildings (Pooler Pavilion, IF&W, and the Green Barn) were generally observed to be in poor condition with loose and flaking paint on surfaces, paint chip debris on the floors and exterior ground surfaces. The occupied buildings (Building F and Building H) were largely observed to have paint coatings in good to fair condition. It is important to note that not all surfaces in each building were tested.

Based on this limited testing, it should be assumed that other similar painted surfaces at the site not specifically listed on the testing results in this report may also contain lead. Any surfaces or components with lead present should be managed in accordance with current rules and guidelines, including but not limited to OSHA worker safety rules and State and EPA waste handling and disposal regulations.

Current State of Maine Child Lead Poisoning regulations consider any paint that contains greater than 0.5 percent by weight to be lead-based paint. However, the intent of this survey was for construction purposes, not for compliance with housing or childhood lead prevention requirements. Additionally, U.S. Occupational Safety and Health Administration (OSHA) construction rules do not specify any "safe" or acceptable levels of lead within paint for the purposes of occupational exposures. Therefore, if any level of lead is present, steps must be taken to control and minimize any exposure. Construction and demolition workers impacting LP or other lead material should be trained and protected in accordance with OSHA regulation 29 CFR 1926.62. In the OSHA standard, construction work is defined as work for construction, alteration, and/or repair, including painting and decorating. It includes but is not limited to the following:

- Demolition or salvage of structures (or sections of the existing structure) where lead or materials containing lead are present.
- Removal or encapsulation of materials containing lead.
- New construction, alteration, repair, or renovation of structures, substrates, or portions thereof that contain lead, or materials containing lead.
- Handlers of salvageable materials and the treatment/disposal facility must also be informed of the material's lead content. All personnel involved must be trained in personal protection and proper work practice procedures in accordance with OSHA regulations.
- If buildings are to be used for housing of children the age of 6 or under or schools, the EPA RRP training requirements may be applicable.

Although not included in the scope of the LP testing, other building materials may also contain lead, such as flashing, cast iron pipes, cable and wire casing, solder (plumbing and electrical); these materials should also be managed and disposed of properly.

All waste contaminated with or containing lead should be disposed of in accordance with all state, local, and federal regulations. As lead was found to be present in the screening, proper waste stream sampling and analysis with the Toxicity Characteristic Leaching Procedure (TCLP) should be completed prior to disposal of any waste generated in accordance with current EPA requirements. Construction/demolition

waste that is found to contain lead greater or equal to 5.0 milligrams per liter (mg/L) by TCLP analysis must be handled and treated as hazardous waste.

Please also note that construction and renovation work involving lead paint in housing and child-occupied facilities built before 1978 is also regulated under the EPA Renovation, Repair, and Painting (RRP) rule. Any contractors conducting such work must be properly certified and must use lead safe work methods pursuant to the EPA RRP rule. In addition, pursuant to Title X requirements landlords and sellers are required to disclose the results of lead inspections to tenants and purchasers, and to provide the warning notice and pamphlets in accordance with Title X and State requirements. The scope of testing for this project did not include an inspection or risk assessment for State or federal lead-based paint rules and regulations.

This report is not intended to be used as a removal specification and the scope of testing did not include a lead-based paint inspection or risk assessment for State or HUD lead-based paint requirements and regulations.

Other Hazardous & Regulated Material

During this survey, RPF conducted an inventory of accessible areas of each building for other potentially hazardous or regulated materials. This includes fluorescent light bulbs and ballasts, mercury containing components, batteries, hydraulic systems, and other potentially regulated materials and components that may need special consideration during future renovation or demolition activities.

Observations were limited to readily accessible areas and stored waste materials. Except for limited spot checks of de-energized systems, equipment and fixtures were not disassembled for inspection. Suspect materials were not specifically tested or analyzed to confirm these findings.

Each of the buildings was found to contain some form of regulated or other hazardous material. A summary of findings is included below. Further characterization and possibly testing may be necessary prior to disposal.

Summary of Universal Wastes Observed (Approximate Quantities)						
Type of Material	Building F	Building H	Green Barn	IF&W Building	Pooler Pavilion (new wing)	Pooler Pavilion (old wing)
Fluorescent Bulbs	342	556	12 (CFL)	834	415	528
Light Ballasts	171	172	-	278	208	264
Batteries	16	28	-	16	50	56
Building System Hydraulics	1	1	-	-	1	1
Mercury Switches	-	-	-	-	-	-
Fire Extinguishers	6	10	-	3	6	8

Fluorescent Bulbs & Mercury Switches

Fluorescent lamps contain a small quantity of mercury that may pose a hazard to human health or the environment if the materials are not managed properly. These bulbs, along with mercury switches (thermostats) should be segregated and properly disposed of during demolition.

Light Ballasts

PCBs have been shown to cause chronic toxic effects and are a human carcinogen. PCBs are toxic according to the U.S. EPA and are a regulated material. The two primary federal laws that affect the handling of PCBs are the Toxic Substance Control Act and the Superfund Law (CERCLA). Other regulations include various State requirements, Department of Transportation, U.S. OSHA, and the Resource Conservation and Recovery Act. The regulations establish various requirements for the removal, handling, storage, and disposal of PCBs.

With regard to light ballasts, approximately half were manufactured prior to 1979 and nearly all pre-1979 ballasts contain PCBs. Ballasts manufactured after July 1, 1978, and that do not contain PCBs are required to be clearly marked “No PCBs”. Please note that it is possible that post 1979 ballasts may contain some PCBs in the capacitor oils and more information should be requested if needed for applicable State and federal agencies. PCBs may also be present in common household appliances with small capacitors and as dielectric fluids; other electric equipment such as transformers, switches, and voltage regulators; and recent studies have shown PCB content in caulk and some paints. Documentation of current conditions and in-depth hazard assessments, and laboratory testing for these other PCB usages, is beyond the scope-of-work for this initial survey.

During demolition, additional inspections should be made to identify PCB versus non-PCB containing ballasts. Ballasts should be checked for a “PCB-Free” or “No PCBs” label prior to disposal. PCB and non-PCB ballasts should be segregated and packaged for waste disposal in accordance with State and federal requirements. There is a substantial cost difference for disposal of PCB ballasts versus non-PCB ballasts.

Batteries

Many batteries should not be disposed through typical garbage or recycling methods. Many nickel-cadmium (Ni-Cd) batteries and small sealed lead batteries must be segregated and properly recycled or disposed in accordance with state and federal regulations.

Building System Hydraulics

Hydraulic oils, such as those present in building elevator systems or other hydraulic lift systems, must be properly removed and disposed prior to dismantling and disposal of such systems. Hydraulic oils can contain polychlorinated biphenyls (PCBs) and other harmful contaminants which must be managed and disposed of in accordance with US EPA regulations. While newer hydraulic oils (after 1978) and older hydraulic systems that have had the oils changed since 1978, should be free of PCBs, older systems may still contain PCBs. Special consideration must be given to these materials during demolition.

Many common items can contain regulated or otherwise hazardous materials that requires special consideration, handling, and disposal during demolition of a building. must be removed and properly disposed of prior to renovation or demolition activities. Many of these wastes are defined as “Universal Waste” by the Maine Department of Environmental Protection and may require special handling, packaging, and disposal. During project design, a building or site-specific work plan should be developed

to document and detail the specific storage, labeling, packaging, and disposal requirements based on the specific items and renovation or demolition planned. Such delineation is beyond the scope of this survey.

Preliminary Budget Estimates

RPF has prepared the following, order-of-magnitude estimates for the abatement of asbestos containing building materials identified in this survey in accordance with applicable federal and state regulations as well as fees for remediation design, oversight monitoring and related testing and laboratory analysis. The estimates were prepared based on similar remediation work as well as preliminary discussions with remediation contractors in the Maine area. The actual costs will vary, in some scenarios significantly, based on grouping of work, scheduling and phasing of work requirements, and final project design.

It should be noted that these budget estimates do not include any considerations for lead paint abatement as these conditions typically have a low impact on the cost of building demolition.

Although costs may also vary if some of the buildings are to undergo remediation work only as needed to facilitate renovation activity and occupancy, the impact on final costs may not be significant overall. However, further information on the types and extent of renovation versus full demolition will be needed to prepare further remediation estimates and breakouts.

Preliminary Budget Estimates	
Building	Preliminary Estimates
Building F	\$3,000-\$4,000
Building H	\$15,000-\$20,000
Green Barn	\$3,000-\$4,000
IF&W Building	\$2,000-\$3,000
Pooler Pavilion (new wing)	\$900,000-\$1,000,000
Pooler Pavilion (old wing)	\$550,000-\$650,000

Conclusions

Based on the survey findings, each building was found to contain ACBM, LP or some form of other hazardous building material.

In order to proceed with renovation or demolition activities at each building, further abatement and/or remediation may be necessary depending on the scope. This report is not intended to be used as an abatement specification or remediation work plan. To proceed with abatement or remediation work, a work plan or project design documents should be prepared prior to abatement or remediation by a qualified, and in many cases, certified project designer. As part of the design, additional site testing and analysis may also be required as discussed in this report. The specification or work plan should then be used to solicit bids from qualified contractors. Only properly licensed contractors should be used for asbestos abatement and disposal. A qualified industrial hygiene/testing consultant should also conduct sufficient testing and inspections of the work, independent of the contractor.

All employees and contractors that may access or otherwise disturb areas with suspect ACM, LP or other hazardous materials present should be notified of the presence and the need to use caution when proceeding with work. Appropriate notifications, labeling and other hazard communications should be completed to all employees, contractors, and others in accordance with US OSHA regulations and other applicable requirements (including asbestos labeling in accordance with 29 CFR Part 1926). The scope of RPF services for this survey did not include labeling or hazard communications to other employees, building occupants, contractors, or subcontractors.

Documentation of current conditions and in-depth hazard assessment is beyond the scope-of-work for this initial survey. With the exception of the specific testing and analysis detailed herein, no other samples of materials, oil, water, ground water, air, or other suspect hazardous materials were collected in the course of this inspection that supports or denies these conclusions.

No additional services beyond those explicitly stated herein were performed and none should be inferred or implied. The summary and conclusions are based on reasonably ascertainable information as described in this report. RPF Environmental, Inc. makes no guarantees, warranties, or references regarding this property or the condition of the property after the period of this report.

If you have any questions at this time, or if you would like to discuss the remediation process, please call our office.

Sincerely,
RPF ENVIRONMENTAL, INC.



Allan D. Mercier, CMC
Operations Manager

Enclosures:

- Appendix A: Asbestos Testing Results
 - Appendix B: Lead Paint Testing Results
 - Appendix C: Certificates and Licenses
 - Appendix D: Summary of Methodology and Limitations
- 22.1049 DDPC Bangor 101922 Report

APPENDIX A

TABLE 1

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME**

SUMMARY OF ACBM IDENTIFIED

Building Material	Location	Approximate Quantity	EPA Category	Asbestos Results
Building F				
Sheet Flooring (white)	Elevator Car	48 square feet	Category I Nonfriable	1.3% Chrysotile
Building H				
Pipe and Fitting Insulation	Lower level, lobby vestibule	75 linear feet	Friable ACM	40% Chrysotile
	Lower-Level records storage mechanical room	Unknown quantity observed extending into underground chase		
Sink Basin Undercoat (white)	Basement kitchen, 1 st floor break room, 2 nd floor break room and FMO evidence room, and 4 th floor break room	5 sink basins @ 6 square feet each	Category II Nonfriable	5.9% Chrysotile
Green Barn				
Caulk (white)	North Side, Windows on Garage Doors	25 linear feet	Category II Nonfriable	2% Chrysotile
IF & W Building				
Transite Panels (gray)	Basement, northeast corner room, sidewalls of fume hood	40 square feet	Category II Nonfriable	20% Chrysotile
Pooler Pavilion (new wing)				
Pipe Insulation (white)	Basement, hallways, stairwells, and rooms throughout	2,500 linear feet	Friable ACM	15% Chrysotile, 5% Amosite
Pipe Fitting Insulation (white)				15% Amosite, 10% Chrysotile
Pipe Insulation (grey AirCell)			Friable ACM	55% Chrysotile
Pipe Fitting Insulation (associated with AirCell Pipe Insulation)			Non-ACM	<1% Amosite
Exhaust Breeching Exhaust Breeching Elbows	Basement, Generator Room	20 linear feet	Friable ACM	60% Chrysotile
				55% Chrysotile

TABLE 1

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME**

SUMMARY OF ACBM IDENTIFIED

Building Material	Location	Approximate Quantity	EPA Category	Asbestos Results
Switchgear	Basement Electrical Room	30 square feet	Category II Nonfriable	Assumed ACM
Sheet Flooring	1 st and 2 nd floor throughout	22,000 square feet	Category I Nonfriable	3% Chrysotile
Mastic (black)	Corridors throughout at seams of vinyl sheet flooring	2,000 linear feet	Category I Nonfriable	5.6% Chrysotile
Window Glaze	Exterior windows, throughout	5,300 linear feet	Non-ACM	0.1% Chrysotile
9" Floor Tile (grey/brown) and Flooring Mastic (black)	Basement, throughout south wing, central stairwell, and south stairwell 1 st and 2 nd floor, closets, north, center, and south stairwells, and main entry lobby	12,340 square feet	Category I Nonfriable	4.7% Chrysotile
			Non-ACM	0.5-2.3% Chrysotile
Sink Basin Undercoat (black)	Basement, 1 st , and 2 nd floor kitchenettes and nurse's stations	8 sink basins (50 square feet total)	Category I Nonfriable	5.6% Chrysotile
Caulk (white)	Exterior, throughout wing around windows and doors	3,780 linear feet	Category II Nonfriable	4.5% Chrysotile
Caulk (black)	1 st and 2 nd floor, lounge windows in north and south wings	320 linear feet	Category II Nonfriable	8.9% Chrysotile
Pooler Pavilion (old wing)				
Fire Door Insulation (white)	1 st and 2 nd floor, utility room and soiled linen doors Ground Floor, chapel doors	10 Doors, 21 square feet each	Friable ACM	8% Amosite 3% Chrysotile
Pressboard (white)	Ground floor, 1 st and 2 nd floor behind wall mount heaters	140 panels, approximately 1,120 square feet	Friable ACM	60% Chrysotile
Pipe and Fitting Insulation	Ground Floor Chapel	120 linear feet	Friable ACM	10% Amosite

TABLE 1

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME**

SUMMARY OF ACBM IDENTIFIED

Building Material	Location	Approximate Quantity	EPA Category	Asbestos Results
9" Floor Tile (maroon and black) and Black Flooring Mastic	2 nd Floor Throughout 1 st Floor Throughout Ground Floor, Throughout	11,000 square feet 11,000 square feet 7,500 square feet	Category I Nonfriable	6.8% Chrysotile
Caulk (white)	Throughout building at exterior windows, under trim molding. Only residual observed	222 window openings, up to 16 linear feet per opening	Category II Nonfriable	1.8% Chrysotile
Sink Basin Undercoat	1 st and 2 nd floor dish washing rooms	4 counters, approximately 30 square feet per counter 120 square feet total	Category II Nonfriable	9.8% Chrysotile
Tan Sheet Flooring	1 st and 2 nd floor, north and south bathrooms	140 square feet	Category I Nonfriable	13.3% Chrysotile
Stair Tread Floor Tiles	North, South and Central Stairwells	1,000 square feet	Category I Nonfriable	5.6% Chrysotile
Black Mastic				2.0% Chrysotile
Sink Basin Undercoat (black)	1 st and 2 nd floor, north and south nurse's station kitchenette and soiled linen rooms	8 sinks at approximately 6 square feet each	Category II Nonfriable	4.9% Chrysotile

Notes:

- Please note that Category 1 and Category 2 nonfriable ACM are recategorized as friable and/or RACM under certain conditions. Current State asbestos regulations are stricter and more comprehensive than the EPA NESHAPs requirements.
- All quantities are approximate only and should be confirmed during abatement project design and abatement bidding.
- It is possible that some concealed or inaccessible ACBM is present. Care should be used when renovating/demolishing inaccessible building space. Further explorative survey work may be necessary during design and/or in conjunction with demolition.
- Table 1 does not include a listing of all ACBM and suspect ACBM present at the site, only the materials found to be ACBM during the limited testing of this limited survey. Full testing and inspections are required to further identify the types, locations and quantities of ACBM present at this site.
- This survey did not include roofing on any of the buildings surveyed.

TABLE 2

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Building F**

Polarized Light Microscopy– EPA 600/R-93/116 Method

Samples Collected: July 18, 2022 & September 15, 2022

Sample ID	Description	Asbestos Content
071822-Hg1a - A	Skim coat, White, 2nd floor, Northeast bathroom wall (31)	None Detected
071822-Hg1a - B	Plaster, Grey, 2nd floor, Northeast bathroom wall (31)	None Detected
071822-Hg1b - A	Skim coat, White, 1st floor, Northeast closet wall (18)	None Detected
071822-Hg1b - B	Plaster, Grey, 1st floor, Northeast closet wall (18)	None Detected
071822-Hg1c - A	Skim coat, White, Attic ceiling, Northwest side	None Detected
071822-Hg1c - B	Plaster, Grey, Attic ceiling, Northwest side	None Detected
071822-Hg1d - A	Skim coat, White, Attic wall, Northwest side	None Detected
071822-Hg1d - B	Plaster, Grey, Attic wall, Northwest side	None Detected
071822-Hg1e - A	Skim coat, White, Attic wall, South side	None Detected
071822-Hg1e - B	Plaster, Grey, Attic wall, South side	None Detected
071822-Hg1f - A	Skim coat, White, 1st floor ceiling, Room 34	None Detected
071822-Hg1f - B	Plaster, Grey, 1st floor ceiling, Room 34	None Detected
071822-Hg1g - A	Skim coat, White, 1st floor, Main hallway ceiling, Outside of room 9	None Detected
071822-Hg1g - B	Plaster, Grey, 1st floor, Main hallway ceiling, Outside of room 9	None Detected
071822-Hg1h - A	Skim coat, White, Basement wall, Northwest side	None Detected
071822-Hg1h - B	Plaster, Grey, Basement wall, Northwest side	None Detected
071822-Hg1i - A	Skim coat, White, Basement ceiling, Northwest side	None Detected
071822-Hg1i - B	Plaster, Grey, Basement ceiling, Northwest side	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 2

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Building F**

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: July 18, 2022

Sample ID	Description	Asbestos Content
071822-Hg3a	Suspended Ceiling Tile, White, 2nd floor, Room 24	None Detected
071822-Hg3b	Suspended Ceiling Tile, White, 1st floor, Room 34	None Detected
071822-Hg3c	Suspended Ceiling Tile, White, 1st floor, Room 29	None Detected
071822-Hg9a	Cementitious Flooring, Tan pebble pattern, 2nd floor, Northeast wing (30)	None Detected
071822-Hg9b	Cementitious Flooring, Tan pebble pattern, 2nd floor, Northeast wing (30)	None Detected
071822-Hg9c	Cementitious Flooring, Tan pebble pattern, 2nd floor, Northeast wing (30)	None Detected
071822-Hg11	Mortar with adhesive, Grey + Tan, 2nd floor, Southeast kitchen doorway	None Detected
071822-Hg13a	Ceramic Tile Grout, White, 2nd floor, Southeast bathroom (18)	None Detected
071822-Hg13b	Ceramic Tile Grout, White, 1st floor, Northwest, Room 5, East side	None Detected
071822-Hg13c	Ceramic Tile Grout, White, 1st floor, Northwest, Room 5, West side	None Detected
071822-Hg16a	Blown-in insulation, White, Northwest side of attic	None Detected
071822-Hg16b	Blown-in insulation, White, Northwest side of attic	None Detected
071822-Hg16c	Blown-in insulation, White, South side of attic	None Detected
071822-Hg20a	Textured surfacing, White, 1st floor ceiling, Northwest hallway	None Detected
071822-Hg20b	Textured surfacing, White, 1st floor ceiling, Middle hallway, West end	None Detected
071822-Hg20c	Textured surfacing, White, 1st floor ceiling, Middle hallway, East end	None Detected
071822-Hg22a	Grout, Grey, 1st floor, Room 5 floor	None Detected
071822-Hg22b	Grout, Grey, 1st floor, Room 5 floor	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 2

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Building F**

Polarized Light Microscopy – EPA 600/R-93/116 Method

Samples Collected: July 18, 2022

Sample ID	Description	Asbestos Content
071822-Hg22c	Grout, Grey, 1st floor, Room 5 floor	None Detected
071822-Hg23	Flue Cement, Grey, Basement Over Southwest exit	None Detected
071822-Hg24a	Gypsum & Joint Compound, White + Grey, 1st floor, Room 12	None Detected
071822-Hg24b	Gypsum & Joint Compound, White + Grey, 1st floor, Room 14	None Detected
071822-Hg24c	Gypsum & Joint Compound, White + Grey, 1st floor, Room 16	None Detected
071822-Hg24d	Gypsum & Joint Compound, White + Grey, 1st floor, Room 27	None Detected
071822-Hg24e	Gypsum & Joint Compound, White + Grey, 1st floor, Room 33	None Detected
091522-HG25a	Cementitious panel, Black, attic at shower wall	None Detected
091522-HG25b	Cementitious panel, Black, attic at shower wall	None Detected
091522-HG25c	Cementitious panel, Black, attic at shower wall	None Detected
091522-HG26a	Floor paper, Tan, attic under hardwood	None Detected
091522-HG26b	Floor paper, Tan, attic under hardwood	None Detected
091522-HG26c	Floor paper, Tan, attic under hardwood	None Detected

RPF File No. 22.1049

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 3

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Building F**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: July 18, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071822-HG2a-A	Floor tile, White & Red, 2nd floor hallway, East end	26.2	66.2	7.60	None Detected
071822-HG2a-B	Mastic, Black, 2nd floor hallway, East end	36.7	-	63.3	None Detected
071822-HG2b-A	Floor tile, White & Red, 2nd floor hallway, East end	26.4	68.2	5.4	None Detected
071822-HG2b-B	Mastic, Black, 2nd floor hallway, East end	66.0	-	34.0	None Detected
71822-HG2c-A	Floor tile, White & Red, 2nd floor hallway, East end	26.2	70.0	3.80	None Detected
071822-HG2c-B	Mastic, Black, 2nd floor hallway, East end	93.5	-	6.50	None Detected
071822-HG4a	Cove base adhesive, Tan, 2nd floor, Northeast Bathroom (31)	37.1	-	62.9	None Detected
071822-HG4b	Cove base adhesive, Tan, 1st floor, Northeast wing (21)	37.5	-	62.5	None Detected
071822-HG4c	Cove base adhesive, Tan, 2nd floor, Room 24	37.6	-	62.4	None Detected
071822-HG5a-A	Floor tile, Brown, 2nd floor, Room 24	26.0	70.8	3.20	None Detected
071822-HG5a-B	Adhesive, Tan, 2nd floor, Room 24	46.0	-	54.0	None Detected
071822-HG5b-A	Floor tile, Brown, 1st floor, Northeast closet (18)	29.1	69.5	1.40	None Detected
071822-HG5b-B	Adhesive, Tan, 1st floor, Northeast closet (18)	65.7	-	34.3	None Detected
071822-HG5c-A	Floor tile, Brown, 1st floor, Room 31	22.9	75.8	1.30	None Detected
071822-HG5c-B	Adhesive, Tan, 1st floor, Room 31	62.0	-	31.7	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 3 (cont.)

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Building F**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: July 18, 2022 & September 15, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071822-HG6a	Carpet adhesive, Tan, 2nd floor, Room 24	37.3	-	38.0	None Detected
071822-HG6b	Carpet adhesive, Tan, 3rd floor, Main hallway (38)	49.3	-	62.7	None Detected
071822-HG6c	Carpet adhesive, Tan, 1st floor, Northeast wing (24)	26.6	-	50.7	None Detected
071822-HG7a-A	Floor tile, Red & White, 1st floor, Main hallway	63.2	68.0	5.40	None Detected
071822-HG7a-B	Mastic, Yellow, 1st floor, Main hallway	63.2	-	36.8	None Detected
071822-HG7b-A	Floor tile, Red & White, 1st floor, Main hallway	45.3	52.8	1.90	None Detected
071822-HG7b-B	Mastic, Yellow, 1st floor, Main hallway	74.7	-	25.3	None Detected
071822-HG7c-A	Floor tile, Red & White, 1st floor, Main hallway	23.6	72.7	3.70	None Detected
071822-HG7c-B	Mastic, Yellow, 1st floor, Main hallway	86.6	-	13.4	None Detected
071822-HG8a	Caulking, White, 2nd floor, Room 24, Door	26.6	-	73.4	None Detected
071822-HG8b	Caulking, White, 1st floor, Room 15, wall seam	26.69	-	74.0	None Detected
071822-HG8c	Caulking, White, 1st floor, Room 30, window frame	45.7	-	54.3	None Detected
071822-HG10	Sink Basin Coating, White, 2 nd Floor, Southeast Kitchen	29.4	-	70.6	None Detected
071822-HG12	Laminate Countertop, Adhesive, Clear, 2 nd Floor, Southeast Kitchen	90.9	-	9.1	None Detected
071822-HG14a-A	Floor tile, Grey, 1st floor, Northeast bathroom (19)	19.4	64.2	16.4	None Detected

Notes:

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- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 3 (cont.)

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Building F**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: July 18, 2022 & September 15, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071822-HG14a-B	Adhesive, Yellow, 1st floor, Northeast bathroom (19)	73.9	-	26.1	None Detected
071822-HG14b-A	Floor tile, Grey, 1st floor, Northeast bathroom (19)	20.6	77.7	1.70	None Detected
071822-HG14b-B	Adhesive, Yellow, 1st floor, Northeast bathroom (19)	30.6	-	69.4	None Detected
071822-HG14c-A	Floor tile, Grey, 1st floor, Northeast bathroom (19)	27.7	71.3	1.00	None Detected
071822-HG14c-B	Adhesive, Yellow, 1st floor, Northeast bathroom (19)	69.9	-	31.0	None Detected
071822-HG15a	Flooring Material, Yellow + Pink + Blue, 1st floor, Northeast Wing (18)	47.2	-	52.8	None Detected
071822-HG15b	Flooring Material, Yellow + Pink + Blue, 1st floor, Northeast Wing (21)	46.9	-	53.1	None Detected
071822-HG15c	Flooring Material, Yellow + Pink + Blue, 1st floor, Northeast Wing (24)	44.2	-	55.8	None Detected
071822-HG17a	Duct Sealant, Grey, Attic Duct, West Side of Attic	36.7	-	63.3	None Detected
071822-HG17b	Duct Sealant, Grey, Attic Duct, Middle of Attic	37.2	-	62.8	None Detected
071822-HG17c	Duct Sealant, Grey, Attic Duct, East Side of Attic	37.5	-	62.5	None Detected
071822-HG18a	Window Glaze, White, Attic, West Window	11.6	85.54	2.86	None Detected
071822-HG18b	Window Glaze, White, 1 st Floor, Room 30	13.0	81.0	6.00	None Detected
071822-HG18c	Window Glaze, White, 1 st Floor, Main Floor, Far East Window	11.4	819	6.70	None Detected

Notes:

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TABLE 3 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building F

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: July 18, 2022 & September 15, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071822-HG19a	Ceramic Tile Adhesive, Brown, 2 nd Floor, Northwest Bathroom Wall	97.4	-	63.3	None Detected
071822-HG19b	Ceramic Tile Adhesive, Brown, 1 st Floor, Northwest Bathroom Wall	97.2	-	2.80	None Detected
071822-HG19c	Ceramic Tile Adhesive, Brown, 1 st Floor, Northwest Bathroom Wall	41.0	-	59.0	None Detected
071822-HG21a-A	Floor tile, Tan, 1st floor, Room 9	28.9	68.6	2.50	None Detected
071822-HG21a-B	Mastic, Yellow, 1st floor, Room 9	59.6	-	40.4	None Detected
071822-HG21b-A	Floor tile, Tan, 1st floor, Room 11	27.2	71.4	1.4	None Detected
071822-HG21b-B	Mastic, Yellow, 1st floor, Room 11	58.5	-	41.5	None Detected
071822-HG21c-A	Floor tile, Tan, 1st floor, Room 29	28.7	54.9	16.4	None Detected
071822-HG21c-B	Mastic, Yellow, 1st floor, Room 29	77.8	-	22.2	None Detected
091522-HG27a	Sheet Flooring, White, Elevator Car	56.36%	0%	42.34% Chrysotile	1.3% Chrysotile
091522-HG27b	Sheet Flooring, White, Elevator Car	-	-	-	*SFP
091522-HG27c	Sheet Flooring, White, Elevator Car	-	-	-	*SFP

RPF File No. 22.1049

Notes:

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- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 4

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Building H**

Polarized Light Microscopy– EPA 600/R-93/116 Method
 Samples Collected: July 25, 2022

Sample ID	Description	Asbestos Content
072522-HG2a - A	Plaster finish, white, 4th floor, Room 113	None Detected
072522-HG2a - B	Plaster base, gray, 4th floor, Room 113	None Detected
072522-HG2b - A	Plaster finish, white, 4th floor, Room 105	None Detected
072522-HG2b - B	Plaster base, gray, 4th floor, Room 105	None Detected
072522-HG2c - A	Plaster finish, white, 4th floor, Room 97	None Detected
072522-HG2c - B	Plaster base, gray, 4th floor, Room 97	None Detected
072522-HG2d - A	Plaster finish, white, 3rd floor, Corridor Ceiling	None Detected
072522-HG2d - B	Plaster base, gray, 3rd floor, Corridor Ceiling	None Detected
072522-HG2e - A	Plaster finish, white, 3rd floor, Room 308 Ceiling	None Detected
072522-HG2e - B	Plaster base, gray, 3rd floor, Room 308 Ceiling	None Detected
072522-HG2f - A	Plaster finish, white, 2nd floor, Break Room	None Detected
072522-HG2f - B	Plaster base, gray, 2nd floor, Break Room	None Detected
072522-HG2g - A	Plaster finish, white, 1st floor, Room 101 Wall	None Detected
072522-HG2g - B	Plaster base, gray, 1st floor, Room 101 Wall	None Detected
072522-HG2h - A	Plaster finish, white, Basement, Lobby	None Detected
072522-HG2h - B	Plaster base, gray, Basement, Lobby	None Detected
072522-HG2i - A	Plaster finish, white, Basement, Records	None Detected
072522-HG2i - B	Plaster base, gray,, Basement, Records	None Detected
072522-HG3a	Suspended Ceiling Tile, gray, 2x2, Pin holed, 4th floor, Hallway at Room 113	None Detected

Notes:

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- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 4

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Building H**

Polarized Light Microscopy – EPA 600/R-93/116 Method
 Samples Collected: July 25, 2022

Sample ID	Description	Asbestos Content
072522-HG3b	Suspended Ceiling Tile, gray, 2x2, Pin holed, 3rd floor, Reception	None Detected
072522-HG3c	Suspended Ceiling Tile, gray, 2x2, Pin holed, 3rd floor, Corridor	None Detected
072522-HG5a	Gypsum Board and Joint Compound, white, 4th floor, Room 105 Exterior Wall	None Detected
072522-HG5b	Gypsum Board and Joint Compound, white, 3rd floor, Corridor Wall	None Detected
072522-HG5c	Gypsum Board and Joint Compound, white, 2nd floor, Corridor	None Detected
072522-HG5d	Gypsum Board and Joint Compound, white, Basement, Wall	None Detected
072522-HG7a	12" Ceiling Tile, Orange, 4th floor, Room 99	None Detected
072522-HG7b	12" Ceiling Tile, Orange, 4th floor, Room 100	None Detected
072522-HG7c	12" Ceiling Tile, Orange, 4th floor, Room 94	None Detected
072522-HG9a	Wall Filler, White, 4th floor, Room 94 to Room 95	None Detected
072522-HG9b	Wall Filler, White, Basement, Demising Wall, Room 1	None Detected
072522-HG9c	Wall Filler, White, Basement, Demising Wall, Room 1	None Detected
072522-HG10a	Grout, Wall Tile, white, 4th floor, Men's Bathroom	None Detected
072522-HG10b	Grout, Wall Tile, white, 4th floor, Men's Bathroom	None Detected
072522-HG10c	Grout, Wall Tile, white, 4th floor, Men's Bathroom	None Detected
072522-HG14a	Ceiling tile, white, 2x2, Fissured, 4th floor, Room 89	None Detected
072522-HG14b	Ceiling tile, white, 2x2, Fissured, Basement, Records Left Bathroom	None Detected
072522-HG14c	Ceiling tile, white, 2x2, Fissured, Basement, Records Left Bathroom	None Detected
072522-HG18a	Pipe Insulation, gray, Basement, Lobby	40% Chrysotile
072522-HG18b	Pipe Insulation, gray, Basement, Records Storage, Mechanical Room	*SFP

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 4

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Building H**

Polarized Light Microscopy – EPA 600/R-93/116 Method
 Samples Collected: July 25, 2022

Sample ID	Description	Asbestos Content
072522-HG18c	Pipe Insulation, gray, Basement, Records Storage, Mechanical Room	*SFP
072522-HG19a	Fitting, white, Basement, Lobby	40% Chrysotile
072522-HG19b	Fitting, white, Basement, Lobby	*SFP
072522-HG19c	Fitting, white, Basement, Lobby	*SFP
072522-HG20a	Fitting on Fiberglass Run, White, Basement Lobby	None Detected
072522-HG22a	Textured Surfacing, White/Gold Speckled, on Plaster over Suspended Ceiling Tile, Basement, Records Room	None Detected
072522-HG22b	Textured Surfacing, White/Gold Speckled, on Plaster over Suspended Ceiling Tile, Basement, Records Room	None Detected
072522-HG22c	Textured Surfacing, White/Gold Speckled, on Plaster over Suspended Ceiling Tile, Basement, Records Room	None Detected
072522-HG22d	Textured Surfacing, White/Gold Speckled, on Plaster over Suspended Ceiling Tile, Basement, Records Room	None Detected
072522-HG22e	Textured Surfacing, White/Gold Speckled, on Plaster over Suspended Ceiling Tile, Basement, Records Room	None Detected

RPF File No. 22.1049

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 5

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Building H**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: July 25, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
072522-HG1a	Carpet Glue, Yellow, 4 th Floor, Room 119	50.6	0.0	49.4	None Detected
072522-HG1b	Carpet Glue, Yellow, 3 rd Floor, Reception	55.3	0.0	44.7	None Detected
072522-HG1c	Carpet Glue, Yellow, 2 nd Floor, Room 223	42.2	0.0	57.8	None Detected
072522-HG1d	Carpet Glue, Yellow, 1 st Floor, Lobby Closet	9.1	0.0	90.9	None Detected
072522-HG4a	Covebase Adhesive, Yellow, 4 th Floor, Corridor	70.2	0.0	29.8	None Detected
072522-HG4b	Covebase Adhesive, Yellow, 3 rd Floor, Room 304B	66.5	0.0	33.5	None Detected
072522-HG4c	Covebase Adhesive, Yellow, 3 rd Floor, Room 304C	54.4	0.0	45.6	None Detected
072522-HG4d	Covebase Adhesive, Yellow, 2 nd Floor, Corridor at Conference Room	49.1	0.0	50.9	None Detected
072522-HG6a	Glaze, white, 4 th Floor, Room 101	15.2	78.6	6.2	None Detected
072522-HG6b	Glaze, white, 2 nd Floor, Corner Office	14.1	82.3	3.6	None Detected
072522-HG6c	Glaze, white, 1 st Floor, Office 115	15.0	77.9	7.1	None Detected
072522-HG8a	Glue, Yellow, 4 th Floor, Room 99	50.2	0.0	49.8	None Detected
072522-HG8b	Glue, Yellow, 4 th Floor, Room 100	50.3	0.0	49.7	None Detected
072522-HG8c	Glue, Yellow, 4 th Floor, Room 94	49.2	0.0	50.8	None Detected
072522-HG11a	Sink Basin Undercoating, White, 4 th Floor, Men's Bathroom	31.0	0.0	69.0	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 5

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Building H**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: July 25, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
072522-HG11b	Sink Basin Undercoating, White, 3 rd Floor, Room 318B	40.9	0.0	53.2	5.9 Chrysotile
072522-HG11c	Sink Basin Undercoating, White, 2 nd Floor, Break Room	-	-	-	*SFP
072522-HG11d	Sink Basin Undercoating, White, 1 st Floor, Break Room 121	-	-	-	*SFP
072522-HG12a	Sheet Floor, 4 th Floor, Room 88	50.6	32.7	16.7	None Detected
072522-HG12b	Sheet Floor, 4 th Floor, Room 89	60.8	19.1	20.1	None Detected
072522-HG12c	Sheet Floor, 4 th Floor, Room 89	49.1	25.9	25.0	None Detected
072522-HG13a	Sink Basin Undercoating, Black, 4 th Floor, Room 89 Kitchenette	19.9	0.0	80.1	None Detected
072522-HG15a-A	Rubberized Tile, Green, Atrium	40.9	0.0	59.1	None Detected
072522-HG15a-B	Mastic, Green, Atrium	47.6	0.0	52.4	None Detected
072522-HG15b-A	Rubberized Tile, Green, Atrium	40.9	0.0	59.1	None Detected
072522-HG15b-B	Mastic, Green, Atrium	53.3	0.0	46.7	None Detected
072522-HG15c-A	Rubberized Tile, Green, Stair tread	41.8	0.0	58.2	None Detected
072522-HG15c-B	Mastic, Green, Stair tread	66.7	0.0	33.3	None Detected
072522-HG16a-A	12" Floor tile, Green, 3 rd Floor, 318A	15.8	73.3	10.9	None Detected
072522-HG16a-B	Mastic, Green, 3 rd Floor, 318A	56.3	0.0	43.7	None Detected

Notes:

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TABLE 5

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Building H**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: July 25, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
072522-HG16b-A	12" Floor tile, Green, 3 rd Floor, 318A	16.8	81.6	1.6	None Detected
072522-HG16b-B	Mastic, Green, 3 rd Floor, 318A	73.1	0.0	26.9	None Detected
072522-HG16c-A	12" Floor tile, Green, 3 rd Floor, 318A	15.0	83.3	1.7	None Detected
072522-HG16c-B	Mastic, Green, 3 rd Floor, 318A	25.0	0.0	75.0	None Detected
072522-HG17a-A	12" Floor tile, Pink, 3 rd Floor, 318B	23.6	70.9	5.5	None Detected
072522-HG17a-B	Mastic, Pink, 3 rd Floor, 318B	54.2	0.0	45.8	None Detected
072522-HG17b-A	12" Floor tile, Pink, 3 rd Floor, 318B	26.9	70.8	2.3	None Detected
072522-HG17b-B	Mastic, Pink, 3 rd Floor, 318B	34.0	0.0	66.0	None Detected
072522-HG17c-A	12" Floor tile, Pink, 3 rd Floor, 318B	27.0	71.2	1.8	None Detected
072522-HG17c-B	Mastic, Pink, 3 rd Floor, 318B	31.7	0.0	68.3	None Detected
072522-HG21a	Glaze, White, Basement, Room 1 to Hallway	17.6	81.2	1.2	None Detected
072522-HG21b	Glaze, White, Basement, Room 1 to Hallway	21.9	77.5	0.6	None Detected
072522-HG21c	Glaze, White, Basement, Room 1 to Hallway	19.4	73.5	7.1	None Detected
072522-HG24a-A	12" Floor tile, White, Basement, Kitchen	17.1	77.6	5.3	None Detected
072522-HG24a-B	Mastic, Yellow, Basement, Kitchen	71.2	0.0	28.8	None Detected

Notes:

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TABLE 5

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Building H

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: July 25, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
072522-HG24b-A	12" Floor tile, White, Basement, Kitchen	17.5	69.5	13.0	None Detected
072522-HG24b-B	Mastic, Yellow, Basement, Kitchen	93.8	6.0	6.2	None Detected
072522-HG24c-A	12" Floor tile, White, Basement, Kitchen	17.2	82.2	0.6	None Detected
072522-HG24c-B	Mastic, Yellow, Basement, Kitchen	77.8	0.0	22.2	None Detected

RPF File No. 22.1049

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 2

**HARRIMAN ARCHITECTS
 DOROTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Green Barn**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: September 15, 2022

Sample ID	Description	Asbestos Content
091522-HG1a	Caulk, White, North Side Along Garage Door	2% Chrysotile
091522-HG1b	Caulk, White, North Side Along Garage Door	*SFP
091522-HG1c	Caulk, White, North Side Along Garage Door	*SFP
091522-HG2a	Window Glaze, Beige, Lower-Level Window on South Side	None Detected
091522-HG2b	Window Glaze, Beige, Lower-Level Window on West End	None Detected
091522-HG2c	Window Glaze, Beige, Lower-Level Window on West End	None Detected
091522-HG3a	Asphalt-like Siding Paper, Black/Silver, West Side Behind Wood Siding	None Detected
091522-HG3b	Asphalt-like Siding Paper, Black/Silver, West Side Behind Wood Siding	None Detected
091522-HG3c	Asphalt-like Siding Paper, Black/Silver, West Side Behind Wood Siding	None Detected
091522-HG4a	Siding Paper, Black, East Side Behind Wood Siding	None Detected
091522-HG4b	Siding Paper, Black, East Side Behind Wood Siding	None Detected
091522-HG4c	Siding Paper, Black, East Side Behind Wood Siding	None Detected

RPF File No. 22.1049

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 7

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 IF&W Building**

Polarized Light Microscopy– EPA 600/R-93/116 Method

Samples Collected: August 4, 2022

Sample ID	Description	Asbestos Content
080422-HG1a - A	Plaster finish, white, 1st floor, North Conference Room	None Detected
080422-HG1a - B	Plaster base, gray, 1st floor, North Conference Room	None Detected
080422-HG1b - A	Plaster finish, white, 1st floor, North Stair at 1.5 Landing	None Detected
080422-HG1b - B	Plaster base, gray, 1st floor, North Stair at 1.5 Landing	None Detected
080422-HG1c - A	Plaster finish, white, 3rd floor, Room 320 Closet	None Detected
080422-HG1c - B	Plaster base, gray, 3rd floor, Room 320 Closet	None Detected
080422-HG1d - A	Plaster finish, white, 3rd floor, Room 304	None Detected
080422-HG1d - B	Plaster base, gray, 3rd floor, Room 304	None Detected
080422-HG1e - A	Plaster finish, white, 3rd floor, Room 329	None Detected
080422-HG1e - B	Plaster base, gray, 3rd floor, Room 329	None Detected
080422-HG1f - A	Plaster finish, white, 2nd floor, Room 216	None Detected
080422-HG1f - B	Plaster base, gray, 2nd floor, Room 216	None Detected
080422-HG1g - A	Plaster finish, white, 2nd floor, ASC Documents Room	None Detected
080422-HG1g - B	Plaster base, gray, 2nd floor, ASC Documents Room	None Detected
080422-HG1h - A	Plaster finish, white, basement South stair	None Detected
080422-HG1h - B	Plaster base, gray, basement South stair	None Detected
080422-HG1i - A	Plaster finish, white, basement, North stair	None Detected
080422-HG1i - B	Plaster base, gray, basement, North stair	None Detected
080422-HG2a	Gypsum Board and Joint Compound, white/gray. 3rd floor, Room 310 Wall	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 7

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 IF&W Building**

Polarized Light Microscopy – EPA 600/R-93/116 Method
 Samples Collected: August 4, 2022

Sample ID	Description	Asbestos Content
080422-HG2b	Gypsum Board and Joint Compound, white/gray. 2nd floor, Map Room	None Detected
080422-HG2c	Gypsum Board and Joint Compound, white/gray. 1st floor, Warden Conference Room	None Detected
080422-HG6a	Tectum-like Ceiling Tiles, 3rd floor, tan, North End Hallway	None Detected
080422-HG6b	Tectum-like Ceiling Tiles, 2nd floor, tan, South End Hallway	None Detected
080422-HG6c	Tectum-like Ceiling Tiles, 1st floor, tan, Center Hallway	None Detected
080422-HG7a	Grout, Ceramic Wall Tiles, white, 1st floor, Women's bathroom	None Detected
080422-HG7b	Grout, Ceramic Wall Tiles, white, 2nd floor, Women's bathroom	None Detected
080422-HG7c	Grout, Ceramic Wall Tiles, white, 3rd floor, Women's bathroom	None Detected
080422-HG9a	Grout, Grey, basement, Northeast corner room	None Detected
080422-HG9b	Grout, Grey, basement, Northeast corner room	None Detected
080422-HG9c	Grout, Grey, basement, Northeast corner room	None Detected
080422-HG14a	Fume Hood Transite Panels, gray, Basement, Northeast Room	20% Chrysotile
080422-HG14b	Fume Hood Transite Panels, gray, Basement, Northeast Room	*SFP
080422-HG14c	Fume Hood Transite Panels, gray, Basement, Northeast Room	*SFP
080422-HG15a	Lab counters, black, basement, Northeast corner room	None Detected
080422-HG15b	Lab counters, black, basement, Northeast corner room	None Detected
080422-HG15c	Lab counters, black, basement, Northeast corner room	None Detected
080422-HG20a	Insulation/cement, Grey, North stairwell floor	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 7

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 IF&W Building**

Polarized Light Microscopy – EPA 600/R-93/116 Method
 Samples Collected: August 4, 2022

Sample ID	Description	Asbestos Content
080422-HG20b	Insulation/cement, Grey, North stairwell floor	None Detected
080422-HG20c	Insulation/cement, Grey, South stairwell floor`	None Detected
080422-HG21a	Rope Gasket, white, basement, boiler room	None Detected
080422-HG21b	Rope Gasket, white, basement, boiler room	None Detected
080422-HG21c	Rope Gasket, white, basement, boiler room	None Detected

RPF File No. 22.1049

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 8

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 IF&W Building**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: August 4, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080422-HG3a-A	12" Floor tile, White, 1 st Floor, Hallway Outside Break Room	18.1	77.5	4.4	None Detected
080422-HG3a-B	Mastic, Yellow, 1 st Floor, Hallway Outside Break Room	95.5	0.0	4.5	None Detected
080422-HG3b-A	12" Floor tile, White, 3 rd Floor, Hallway Outside Room 324	16.2	72.9	10.9	None Detected
080422-HG3b-B	Mastic, Yellow, 3 rd Floor, Hallway Outside Room 324	75.0	0.0	25.0	None Detected
080422-HG3c-A	12" Floor tile, White, 2 nd Floor, Hallway Outside, ASC documents room	16.3	80.2	3.5	None Detected
080422-HG3c-B	Yellow, 2 nd Floor, Hallway Outside, ASC documents room	58.3	0.0	41.7	None Detected
080422-HG4a-A	12" Floor tile, Green, 1 st Floor, Hallway Outside Break room	16.0	80.0	4.0	None Detected
080422-HG4a-B	Mastic, Yellow, 1 st Floor, Hallway Outside Break Room	45.5	0.0	54.5	None Detected
080422-HG4b-A	12" Floor tile, Green, 3 rd Floor, Hallway Outside Room 324	15.5	82.7	1.8	None Detected
080422-HG4b-B	Mastic, Yellow, 3 rd Floor, Hallway Outside Room 324	93.3	0.0	6.7	None Detected
080422-HG4c-A	12" Floor tile, Green, 2 nd Floor, Hallway Outside ASC documents room	19.4	64.2	16.4	None Detected
080422-HG4c-B	Mastic, Yellow, 2 nd Floor, Hallway Outside ASC Documents Room	40.0	0.0	60.0	None Detected
080422-HG5a	Carpet Glue, Yellow, 1 st Floor, North Conference Room	48.3	0.0	51.7	None Detected
080422-HG5b	Carpet Glue, Yellow, 3 rd Floor, South Conference Room	56.9	0.0	43.1	None Detected
080422-HG8a-A	Stair Tread, Green, North Stair	43.0	0.0	57.0	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "080422-HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 8 (cont.)

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 IF&W Building**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: August 4, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080422-HG8a-B	Mastic, Yellow, North Stair	57.9	0.0	42.1	None Detected
080422-HG8b-A	Stair Tread, Green, North Stair	40.5	0.0	59.5	None Detected
080422-HG8b-B	Mastic, Yellow, North Stair	58.8	0.0	41.2	None Detected
080422-HG8c-A	Stair Tread, Green, South Stair	40.5	0.0	59.5	None Detected
080422-HG8c-B	Mastic, Yellow, South Stair	44.5	0.0	55.5	None Detected
080422-HG10a-A	12" Floor Tile, White, 1st floor, Conference Room	27.5	50.2	22.3	None Detected
080422-HG10a-B	Mastic, Yellow, 1 st Floor, Conference Room	74.2	0.0	25.8	None Detected
080422-HG10b-A	12" Floor Tile, White, 1st floor, Conference Room	27.1	59.0	13.9	None Detected
080422-HG10b-B	Mastic, Yellow, 1 st Floor, Conference Room	53.2	0.0	46.8	None Detected
080422-HG10c-A	12" Floor Tile, White, 1st floor, Conference Room	27.8	55.1	17.1	None Detected
080422-HG10c-B	Mastic, Yellow, 1 st Floor, Conference Room	62.8	0.0	37.2	None Detected
080422-HG11a	Glaze, White, 3 rd Floor, Men's Bathroom	18.0	61.8	20.2	None Detected
080422-HG11b	Glaze, White, 2 nd Floor, Room 216	14.1	81.2	4.7	None Detected
080422-HG11c	Glaze, White, Basement, Northeast Corner Room	8.9	82.8	8.3	None Detected
080422-HG12a	Duct Vibration Cloth, Black, Basement, East Center Rooms	30.0	0.0	70.0	None Detected

Notes:

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- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 8 (cont.)

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 IF&W Building**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: August 4, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080422-HG12b	Duct Vibration Cloth, Black, Basement, East Center Rooms	30.5	0.0	69.5	None Detected
080422-HG12c	Duct Vibration Cloth, Black, Basement, East Center Rooms	30.4	0.0	69.6	None Detected
080422-HG13a-A	12" Floor tile, Tan, 2nd floor, Room 230	14.2	83.1	2.7	None Detected
080422-HG13a-B	Mastic, Yellow, 2nd Floor, Room 230	70.1	0.0	29.9	None Detected
080422-HG13b-A	12" Floor tile, Tan, 2nd Floor, Northwest Corner Room	15.3	81.8	2.9	None Detected
080422-HG13b-B	Mastic, Yellow, 2nd Floor, Northwest Corner Room	53.9	0.0	46.1	None Detected
080422-HG13c-A	12" Floor tile, Tan, 2nd floor, Room 216	15.3	83.2	1.5	None Detected
080422-HG13c-B	Mastic, Yellow, 2nd Floor, Room 216	68.1	0.0	31.9	None Detected
080422-HG16a	Duct Sealant, Gray, Basement, East Center Room	43.9	0.0	56.1	None Detected
080422-HG16b	Duct Sealant, Gray, Basement, East Center Room	42.5	0.0	57.5	None Detected
080422-HG16c	Duct Sealant, Gray, Basement, East Center Room	43.5	0.0	56.5	None Detected
080422-HG17a	Flooring Mastic, Mixed, 1st Floor, Hallway Outside Break Room	94.8	0.0	5.3	None Detected
080422-HG17b	Flooring Mastic, Mixed, 3rd Floor, Room 324	28.5	0.0	71.5	None Detected
080422-HG17c	Flooring Mastic, Mixed, 2nd Floor, ASC Documents Room	14.2	0.0	85.8	None Detected
080422-HG18a	Caulk, White, Basement, Exterior Window East Side	58.0	0.0	42.0	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "080422-HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 8 (cont.)

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 IF&W Building**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: August 4, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080422-HG18b	Caulk, White, Basement, Exterior Window East Side	58.3	0.0	41.7	None Detected
080422-HG18c	Caulk, White, Basement, Exterior Window East Side	62.4	0.0	37.7	None Detected
080422-HG19a	Firestop Caulk, Red, 3 rd Floor, North Stairwell Ceiling	52.2	0.0	47.8	None Detected
080422-HG19b	Firestop Caulk, Red, 3 rd Floor, North Stairwell Ceiling	59.6	0.0	40.4	None Detected
080422-HG19c	Firestop Caulk, Red, 3 rd Floor, North Stairwell Ceiling	56.0	0.0	44.0	None Detected
080422-HG22a	Insulation Compound, Red/Gray, Basement Boiler Room	32.5	0.0	67.5	None Detected
080422-HG22b	Insulation Compound, Red/Gray, Basement Boiler Room	23.1	0.0	76.9	None Detected
080422-HG22c	Insulation Compound, Red/Gray, Basement Boiler Room	45.0	0.0	55.0	None Detected

RPF File No. 22.1049

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "080422-HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 9

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (New Wing)**

Polarized Light Microscopy– EPA 600/R-93/116 Method

Samples Collected: August 2, 2022

Sample ID	Description	Asbestos Content
080222-HG1a	Gypsum board and joint compound, White, composite, 2nd floor Room 106	None Detected
080222-HG1b	Gypsum board and joint compound, White, composite, 1st floor Room 6	None Detected
080222-HG1c	Gypsum board and joint compound, White, composite, 1st floor Room 4	None Detected
080222-HG2a - A	Plaster, skim coat, White, 2nd floor shower room north	None Detected
080222-HG2a - B	Plaster base coat, grey, 2nd floor shower room north	None Detected
080222-HG2b - A	Plaster skim coat, White, 1st floor shower room north	None Detected
080222-HG2b - B	Plaster base coat, grey, 1st floor shower room north	None Detected
080222-HG2c - A	Plaster skim coat, White, 1st floor shower room south	None Detected
080222-HG2c - B	Plaster base coat, grey, 1st floor shower room south	None Detected
080222-HG2d - A	Plaster skim coat, White, basement Room 0068	None Detected
080222-HG2d - B	Plaster base coat, grey, basement Room 0068	None Detected
080222-HG2e - A	Plaster skim coat, White, basement Room 0065	None Detected
080222-HG2e - B	Plaster base coat, grey, basement Room 0065	None Detected
080222-HG2f - A	Plaster skim coat, White, basement, Room 0069	None Detected
080222-HG2f - B	Plaster base coat, grey, basement, Room 0069	None Detected
080222-HG11a	Ceiling tiles, grey (fissured), 2nd floor corridor north side	None Detected
080222-HG11b	Ceiling tiles, grey (fissured), 1st floor corridor south side	None Detected
080222-HG11c	Ceiling tiles, grey (fissured) 1st floor corridor north side	None Detected

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 9

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (New Wing)**

Polarized Light Microscopy – EPA 600/R-93/116 Method
 Samples Collected: August 2, 2022

Sample ID	Description	Asbestos Content
080222-HG12a	Ceiling tiles, grey (dimpled), basement room PB0067	None Detected
080222-HG12b	Ceiling tiles, grey (dimpled), basement room PB0067	None Detected
080222-HG12c	Ceiling tiles, grey (dimpled), basement room PB0069	None Detected
080222-HG16a	Grout, White, ceramic wall tile, 2nd floor bathroom T7	None Detected
080222-HG16b	Grout, White, ceramic wall tile, 1st floor, north shower room	None Detected
080222-HG16c	Grout, White, ceramic wall tile, 1st floor, north shower room	None Detected
080222-HG22a	Grout, grey, quarry tile, basement PB0067	None Detected
080222-HG22b	Grout, grey, quarry tile, basement PB0068	None Detected
080222-HG22c	Grout, grey, quarry tile, basement PB0069	None Detected
080222-HG23a	Pipe insulation, White, Basement, Room PB0055	15% Chrysotile 5% Amosite
080222-HG23b	Pipe insulation, White, Basement, Room PB0062	*SFP
080222-HG23c	Pipe insulation, White, Basement, Entryway	*SFP
080222-HG24a	Pipe Fitting Insulation, White, Basement, Room PB0055	15% Amosite 10% Chrysotile
080222-HG24b	Pipe Fitting Insulation, White, Basement, Room PB0062	*SFP
080222-HG24c	Pipe Fitting Insulation, White, Basement, Entryway	*SFP
080222-HG26a	Exhaust breeching, White, Generator Room	60% Chrysotile
080222-HG26b	Exhaust breeching, White, Generator Room	*SFP
080222-HG26c	Exhaust breeching, White, Generator Room	*SFP
080222-HG30a	Breech elbow insulation, White, generator room	55% Chrysotile

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 9

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (New Wing)**

Polarized Light Microscopy – EPA 600/R-93/116 Method
 Samples Collected: August 2, 2022

Sample ID	Description	Asbestos Content
080222-HG30b	Breech elbow insulation, White, generator room	*SFP
080222-HG30c	Breech elbow insulation, White, generator room	*SFP
080222-HG31a	Pipe insulation, grey, airocell, basement, rec area	55% Chrysotile
080222-HG31b	Pipe insulation, grey, airocell, basement, nurse station at rec area	*SFP
080222-HG31c	Pipe insulation, grey, airocell, basement, nurse station at rec area	*SFP
080222-HG32a	Pipe fitting insulation, White (associated with airocell), basement rec area	None Detected
080222-HG32b	Pipe fitting insulation, White (associated with airocell), nurse station at rec area	None Detected
080222-HG32c	Pipe fitting insulation, White (associated with airocell), nurse station at rec area	<1% Amosite
091522-HG33a	Cementitious wall panel, Grey, penthouse, exterior wall	20% Chrysotile
091522-HG33b	Cementitious wall panel, Grey, penthouse, exterior wall	*SFP
091522-HG33c	Cementitious wall panel, Grey, penthouse, exterior wall	*SFP
091522-HG34a - A	Sheet Flooring, White, 2nd floor, North end corridor	None Detected
091522-HG34a - B	Mixed Mastic, Black/Yellow, 2nd floor, North end corridor	None Detected
091522-HG34b - A	Sheet Flooring, White, 2nd floor center corridor	None Detected
091522-HG34b - B	Mixed Mastic, Black/Yellow, 2nd floor center corridor	None Detected
091522-HG34c - A	Sheet Flooring, White, 1st floor, North end corridor	None Detected
091522-HG34c - B	Mixed Mastic, Black/Yellow, 1st floor, North end corridor	3% Chrysotile

RPF File No.

Notes:

- SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 10

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (New Wing)**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: August 2, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080222-HG3a	Vinyl Sheet Flooring, White, 2 nd Floor Nurses Station, North Side	39.7	0.0	60.3	None Detected
080222-HG3b	Vinyl Sheet Flooring, White, 2 nd Floor Corridor by Room T6	43.5	0.0	56.5	None Detected
080222-HG3c	Vinyl Sheet Flooring, White, 1 st Floor Corridor by Nurses Station South Side	44.8	0.0	55.2	None Detected
080222-HG4a	Mastic, Black, 2 nd Floor Corridor at North Nurses Station, Seam	44.5	0.0	49.9	5.6 Chrysotile
080222-HG4b	Mastic, Black, 2 nd Floor Corridor at Room T6, Seam	-	-	-	*SFP
080222-HG4c	Mastic, Black, 1 st Floor Corridor by South Nurses Station, Seam	-	-	-	*SFP
080222-HG5a	Carpet Adhesive, Yellow, 1 st Floor Nurses Office, South	58.5	0.0	41.5	None Detected
080222-HG5b	Carpet Adhesive, Yellow, 2 nd Floor Lobby	60.0	0.0	40.0	None Detected
080222-HG5c	Carpet Adhesive, Yellow, 2 nd Floor Reception off Lobby	69.9	0.0	30.1	None Detected
080222-HG6a	Caulk, Interior Windows, White, 2 nd Floor, Room 106	35.3	0.0	64.7	None Detected
080222-HG6b	Caulk, Interior Windows, White, 2 nd Floor Conference Room 2	37.4	0.0	62.6	None Detected
080222-HG6c	Caulk, Interior Windows, White, 1 st Floor Kitchenette, North	41.9	0.0	58.1	None Detected
080222-HG7a	Glaze, White, 2 nd Floor Conference Room 2	12.0	85.4	2.5	0.1 Chrysotile
080222-HG7b	Glaze, White, 1 st Floor Room Across from South Nurses Station	31.0	66.9	2.0	0.1 Chrysotile

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 10

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (New Wing)**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: August 2, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080222-HG7c	Glaze, White, 1 st Floor South Sitting Room	33.5	63.8	2.6	0.1 Chrysotile
080222-HG8a	Caulk, Interior Seams/Doors, White, 1 st Floor, Room 9, Wall Seam	29.4	0.0	70.6	None Detected
080222-HG8b	Caulk, Interior Seams/Doors, White, 1 st Floor Toilet Room by South Nurses Station, Door	39.0	0.0	61.0	None Detected
080222-HG8c	Caulk, interior seams/doors, White, 1st floor north kitchenette, door	35.6	0.0	64.4	None Detected
080222-HG9a	Adhesive, mixed (covebase), 2nd floor Room 106	46.6	0.0	53.4	None Detected
080222-HG9b	Adhesive, Mixed (Covebase), 1 st Floor, Room 9	33.2	0.0	66.8	None Detected
080222-HG9c	Adhesive, Mixed (Covebase), 1 st Floor, North Nurses Station	43.5	0.0	56.5	None Detected
080222-HG10a-A	9" Floor Tile, grey/brown, 2 nd Floor South Stairs, Landing	35.0	46.2	14.1	4.7 Chrysotile
080222-HG10a-B	Mastic, black, 2 nd Floor, South Stairs, Landing	97.6	0.0	1.9	0.5 Chrysotile
080222-HG10b-A	9" Floor Tile, grey/brown, 2 nd Floor South Stairs, Landing	-	-	-	*SFP
080222-HG10b-B	Mastic, black, 2 nd Floor, South Stairs, Landing	95.4	0.0	3.7	0.9 Chrysotile
080222-HG10c-A	9" Floor Tile, grey/brown, 2 nd Floor South Stairs, Landing	-	-	-	*SFP
080222-HG10c-B	Mastic, black, 2 nd Floor, South Stairs, Landing	95.6	0.0	3.5	0.9 Chrysotile
080222-HG13a-A	12" Floor Tile, white, 2 nd floor, Nurse's Office North Side	19.0	80.6	0.4	None Detected

Notes:

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TABLE 10

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (New Wing)**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: August 2, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080222-HG13a-B	Adhesive, yellow, 2 nd floor, Nurse's Office North Side	77.9	0.0	22.1	None Detected
080222-HG13b-A	12" Floor Tile, white, 1 st floor, Nurse's Office North Side	18.7	81.1	0.2	None Detected
080222-HG13b-B	Adhesive, yellow, 1 st Floor Nurses Office, North Side	75.5	0.0	24.5	None Detected
080222-HG13c-A	12" Floor Tile, white, 2 nd Floor Nurse's Station North Side	19.2	80.3	0.5	None Detected
080222-HG13c-B	Adhesive, yellow, 2 nd Floor Nurses Station, North Side	97.3	0.0	2.7	None Detected
080222-HG14a	Sink Basin Undercoat, Black, 2 nd Floor, North Nurses Station	62.9	0.0	31.5	5.6 Chrysotile
080222-HG14b	Sink Basin Undercoat, Black, 2 nd Floor, South Kitchenette	-	-	-	*SFP
080222-HG14c	Sink Basin Undercoat, Black, 1 st Floor, North Kitchenette	-	-	-	*SFP
080222-HG15a	Mixed Mastics, 1 st Floor, Northwest Corner Room, under rubber tiles	53.3	0.0	45.3	1.4 Chrysotile
080222-HG15b	Mixed Mastics, 1 st Floor, North Center Room, under rubber tiles	-	-	-	*SFP
080222-HG15c	Mixed Mastics, 1 st Floor, Northeast Corner Room, under rubber tiles	-	-	-	*SFP
080222-HG17a	Adhesive, White, Ceramic Wall Tile, 2 nd Floor Bathroom T7	39.2	0.0	60.8	None Detected
080222-HG17b	Adhesive, White, Ceramic Wall Tile, 1 st Floor, North Shower Room	23.0	0.0	77.0	None Detected
080222-HG17c	Adhesive, White, Ceramic Wall Tile, 1 st Floor, North Shower Room	20.1	0.0	79.9	None Detected
080222-HG19a	Sink Basin Undercoat, White, Basement Room PB0069	36.6	0.0	63.4	None Detected

Notes:

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TABLE 10

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (New Wing)**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: August 2, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080222-HG19b	Sink Basin Undercoat, White, Basement Room PB0069	36.5	0.0	63.5	None Detected
080222-HG19c	Sink Basin Undercoat, White, Basement Room PB0061	32.2	0.0	67.8	None Detected
080222-HG20a-A	9" Floor Tile, grey, Basement, Rec Room	26.9	40.5	22.8	9.8 Chrysotile
080222-HG20a-B	Mastic, black, Basement, Rec Room	77.4	0.0	20.3	2.3 Chrysotile
080222-HG20b-A	9" Floor Tile, grey, Basement, Utility Closet by Mechanical Room	-	-	-	*SFP
080222-HG20b-B	Mastic, black, Basement, Utility Closet by Mechanical Room	-	-	-	*SFP
080222-HG20c-A	9" Floor Tile, grey, Basement, Lobby	-	-	-	*SFP
080222-HG20c-B	Mastic, black, Basement, Lobby	-	-	-	*SFP
080222-HG21a-A	12" Brown Floor Tile, Basement North Room to Left	19.2	80.4	0.4	None Detected
080222-HG21a-B	Adhesive, yellow, Basement, North Room to Left	95.5	0.0	4.5	None Detected
080222-HG21b-A	12" Brown Floor Tile, Basement North Room to Left	26.4	73.0	0.6	None Detected
080222-HG21b-B	Adhesive, yellow, Basement, North Room to Left	48.8	0.0	51.2	None Detected
080222-HG21c-A	12" Brown Floor Tile, Basement North Room to Left	24.4	74.1	1.5	None Detected
080222-HG21c-B	Adhesive, yellow, Basement North Room to Left	24.4	0.0	75.6	None Detected
080222-HG27a-A	12" Grey/Tan Floor Tile, Basement, North Room	25.5	64.8	9.7	None Detected

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TABLE 10

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (New Wing)**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: August 2, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
080222-HG27a-B	Adhesive, yellow, Basement, North Room	48.8	0.0	51.2	None Detected
080222-HG27b-A	12" Grey/Tan Floor Tile, Basement, North Room	26.0	71.0	3.0	None Detected
080222-HG27b-B	Adhesive, yellow, Basement, North Room	56.8	0.0	43.2	None Detected
080222-HG27c-A	12" Grey/Tan Floor Tile, Basement, North Room	25.7	62.6	11.7	None Detected
080222-HG27c-B	Adhesive, yellow, Basement, North Room	62.0	0.0	38.0	None Detected
080222-HG28a	Caulk, White, Exterior, Courtyard Side, door to right of center entryway	24.5	0.0	71.0	4.5 Chrysotile
080222-HG28b	Caulk, White, Exterior, Courtyard Side, north corner window	-	-	-	*SFP
080222-HG28c	Caulk, White, Exterior, Courtyard Side, south corner window	-	-	-	*SFP
080222-HG29a	Caulk, Black, Interior Sitting Room Windows, 2 nd Floor, North	40.9	0.0	50.2	8.9 Chrysotile
080222-HG29b	Caulk, Black, Interior Sitting Room Windows, 2 nd Floor, South	-	-	-	*SFP
080222-HG29c	Caulk, Black, Interior Sitting Room Windows, 1 st Floor, North	-	-	-	*SFP
091522-HG35a	Mixed Mastics, Yellow/Black, 2 nd Floor, North End Corridor	21.43%	-	78.57%	None Detected
091522-HG35b	Mixed Mastics, Yellow/Black, 2 nd Floor, Center Corridor	21.70%	-	78.30%	None Detected
091522-HG35c	Mixed Mastics, Yellow/Black, 1 st Floor, North End Corridor	24.71%	-	75.29%	None Detected

RPF File No. 22.1049

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TABLE 11

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy – EPA 600/R-93/116 Method
Samples Collected: July 12, 2022

Sample ID	Description	Asbestos Content
071222-HG1a - A	Plaster finish, white, 2 nd Floor, Shower Room 1	None Detected
071222-HG1a - B	Plaster base, grey, 2 nd Floor, Shower Room 1	None Detected
071222-HG1b - A	Plaster finish, white, 1 st Floor, Bath 1	None Detected
071222-HG1b - B	Plaster base, grey, 1 st Floor, Bath 1	None Detected
071222-HG1c - A	Plaster finish, white, 1 st Floor, Nurses Station, Kitchenette	None Detected
071222-HG1c - B	Plaster base, grey, 1 st Floor, Nurses Station, Kitchenette	None Detected
071222-HG1d - A	Plaster finish, white, Ground Floor, PB0006	None Detected
071222-HG1d - B	Plaster base, grey, Ground Floor, PB0006	None Detected
071222-HG1e - A	Plaster finish, white, Ground Floor, PB0013	None Detected
071222-HG1e - B	Plaster base, grey, Ground Floor, PB0013	None Detected
071222-HG2a	Gypsum board and joint compound, white, composite, 2 nd Floor, Room 52, Wall	None Detected
071222-HG2b	Gypsum board and joint compound, white, composite, 3 rd Floor, Shower, Wall	None Detected
071222-HG2c	Gypsum board and joint compound, white, composite, 1 st Floor, Hallway at Room 25	None Detected
071222-HG2d	Gypsum board and joint compound, white, composite, Ground Floor, Room 19	None Detected
071222-HG12a	Ceiling tile, Grey, 2x4 fissured, 3 rd Floor, Room 52	None Detected
071222-HG12b	Ceiling tile, Grey, 2x4 fissured, Ground Floor, Southeast Kitchen	None Detected
071222-HG12c	Ceiling tile, Grey, 2x4 fissured, Ground Floor, Room 18	None Detected
071222-HG13a	Ceiling tile, Grey, 2x4 square pattern, 3 rd Floor, South Hallway	None Detected
071222-HG13b	Ceiling tile, Grey, 2x4 square pattern, 1 st Floor, South Hallway	None Detected

Notes:

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TABLE 11

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (Old Wing)**

Polarized Light Microscopy – EPA 600/R-93/116 Method
 Samples Collected: July 12, 2022

Sample ID	Description	Asbestos Content
071222-HG13c	Ceiling tile, Grey, 2x4 square pattern, 1 st Floor Room 36	None Detected
071222-HG14a	Ceiling tile, White, 2x4 pinhole, 2 nd Floor, Conference Room 3	None Detected
071222-HG14b	Ceiling tile, White, 2x4 pinhole, 2 nd Floor, Conference Room 4	None Detected
071222-HG14c	Ceiling tile, White, 2x4 pinhole, 2 nd Floor, Conference Room 4	None Detected
071222-HG16a	Fire Door Insulation, White, 2 nd Floor, North Wing, Utility Closet	8% Amosite 3% Chrysotile
071222-HG16b	Fire Door Insulation, White, 1 st Floor, North Wing, Utility Closet	*SFP
071222-HG16c	Fire Door Insulation, White, 1 st Floor, North Wing, Utility Closet	*SFP
071222-HG16d	Fire Door Insulation, White, Ground Floor, Chapel	*SFP
071222-HG18a	Grout, Grey, ceramic floor tile, 2 nd Floor, Shower 1	None Detected
071222-HG18b	Grout, Grey, ceramic floor tile, 1 st Floor, Bath 1	None Detected
071222-HG18c	Grout, Grey, ceramic floor tile, 1 st Floor, Bath next to Room 31	None Detected
071222-HG20a	Grout, White, ceramic wall tile, 2 nd Floor, Shower 1	None Detected
071222-HG20b	Grout, White, ceramic wall tile, 1 st Floor, Bath 1	None Detected
071222-HG20c	Grout, White, ceramic wall tile, 1 st Floor, North Shower	None Detected
071222-HG24a	Gypcrete, Grey, 2 nd Floor, South End Corridors	None Detected
071222-HG24b	Gypcrete, Grey, 2 nd Floor, North End Corridors	None Detected
071222-HG24c	Gypcrete, Grey, 2 nd Floor, North End Corridors	None Detected
071222-HG25a	Pressboard, White, 2 nd Floor, Room 4	60% Chrysotile
071222-HG25b	Pressboard, White, 1 st Floor, Conference Room 1	*SFP

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TABLE 11

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (Old Wing)**

Polarized Light Microscopy – EPA 600/R-93/116 Method
 Samples Collected: July 12, 2022

Sample ID	Description	Asbestos Content
071222-HG25c	Pressboard, White, Ground Floor, Room 19	*SFP
071222-HG35a	Ceiling Tile, Grey, 2x4 regular, 1 st Floor, Room 25	None Detected
071222-HG35b	Ceiling Tile, Grey, 2x4 regular, 1 st Floor, Corridor	None Detected
071222-HG35c	Ceiling Tile, Grey, 2x4 regular, 1 st Floor, Room 24	None Detected
071222-HG36a	Skim Coat, White, concrete beams, 1 st Floor, South wing on N/S Beams	None Detected
071222-HG36b	Skim Coat, White, concrete beams, 1 st Floor, South wing on N/S Beams	None Detected
071222-HG36c	Skim Coat, White, concrete beams, 1 st Floor, South wing on N/S Beams	None Detected
071222-HG36d	Skim Coat, White, concrete beams, 1 st Floor, South wing on N/S Beams	None Detected
071222-HG36e	Skim Coat, White, concrete beams, 1 st Floor, South wing on N/S Beams	None Detected
071222-HG37a	Base Coat, off-white, concrete beams, 1 st Floor, South Wing on N/S Beam, Bottom Layer	None Detected
071222-HG37b	Base Coat, off-white, concrete beams, 1 st Floor, South Wing on N/S Beam, Bottom Layer	None Detected
071222-HG37c	Base Coat, off-white, concrete beams, 1 st Floor, South Wing on N/S Beam, Bottom Layer	None Detected
071222-HG37d	Base Coat, off-white, concrete beams, 1 st Floor, South Wing on N/S Beam, Bottom Layer	None Detected
071222-HG37e	Base Coat, off-white, concrete beams, 1 st Floor, South Wing on N/S Beam, Bottom Layer	None Detected
071222-HG38a	Mortar, White, at glaze blocks, Ground Floor, PB0006, Mortar between Ceramic Blocks	None Detected
071222-HG38b	Mortar, White, at glaze blocks, Ground Floor, PB0005	None Detected
071222-HG38c	Mortar, White, at glaze blocks, Corridor Near PB0037	None Detected
071222-HG39a	Pipe insulation, White, Ground Level chapel	10% Amosite

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TABLE 11

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (Old Wing)**

Polarized Light Microscopy – EPA 600/R-93/116 Method
 Samples Collected: July 12, 2022

Sample ID	Description	Asbestos Content
071222-HG39b	Pipe insulation, White, Ground Level chapel	*SFP
071222-HG39c	Pipe insulation, White, Ground Level chapel	*SFP

RPF File 22.1049

Notes:

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TABLE 12

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method
 Samples Collected: July 12, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG3a-A	9" Floor tile, Maroon, 2nd Floor, South Wing Hallway	24.7	7.6	60.9	6.8 Chrysotile
071222-HG3a-B	Mastic, Black, 2nd Floor, South Wing Hallway	20.8	0.0	79.2	None Detected
071222-HG3b-A	9" Floor tile, Maroon, 1st Floor, North Wing Hallway	-	-	-	*SFP
071222-HG3b-B	Mastic, Black, 1st Floor, North Wing Hallway	47.7	0.0	56.2	None Detected
071222-HG3c-A	9" Floor tile, Maroon, Ground Floor, PB0009	-	-	-	*SFP
071222-HG3c-B	Mastic, Black, Ground Floor, PB0009	57.3	0.0	42.7	None Detected
071222-HG4a-A	12" Floor tile, White, 1st Floor, North Wing Hallway	14.3	77.3	8.4	None Detected
071222-HG4a-B	Mastic, Yellow, 1st Floor, North Wing Hallway	72.9	0.0	27.1	None Detected
071222-HG4b-A	12" Floor tile, White, 1st Floor, North Wing Hallway	15.8	76.2	8.0	None Detected
071222-HG4b-B	Mastic, Yellow, 1st Floor, North Wing Hallway	59.1	0.0	40.9	None Detected
071222-HG4c-A	12" Floor tile, White, 1st Floor, North Wing Hallway	20.8	73.2	6.0	None Detected
071222-HG4c-B	Mastic, Yellow, 1st Floor, North Wing Hallway	49.1	0.0	50.9	None Detected
071222-HG5a-A	12" Floor tile, Brown, 1st Floor, IT Room, Tile on built-up Black filler, 1" thick	19.7	75.7	4.6	None Detected
071222-HG5a-B	Mastic and Filler, Black/Brown, 1st Floor, IT Room, Tile on built-up Black filler, 1" thick	22.6	0.0	77.4	None Detected

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TABLE 12 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: July 12, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG5b-A	12" Floor tile, Brown, 1st Floor, IT Room, Tile on built-up Black filler, 1" thick	22.6	75.4	2.0	None Detected
071222-HG5b-B	Mastic and Filler, Black/Brown, 1st Floor, IT Room, Tile on built-up Black filler, 1" thick	31.9	0.0	68.1	None Detected
071222-HG5c-A	12" Floor tile, Brown, 1st Floor, IT Room, Tile on built-up Black filler, 1" thick	21.8	75.7	2.5	None Detected
071222-HG5c-B	Mastic and Filler, Black/Brown, 1st Floor, IT Room, Tile on built-up Black filler, 1" thick	36.7	0.0	63.3	None Detected
071222-HG6a	12" self-stick floor tile and adhesive, White, 1st Floor, Room 32 (<i>inseparable mastic</i>)	18.4	79.6	2.0	None Detected
071222-HG6b	12" self-stick floor tile and adhesive, White, 1st Floor, Room 32 (<i>inseparable mastic</i>)	17.8	80.4	1.8	None Detected
071222-HG6c	12" self-stick floor tile and adhesive, White, 1st Floor, Room 32 (<i>inseparable mastic</i>)	20.7	77.5	1.8	None Detected
071222-HG7a	Carpet glue, Yellow, 2nd Floor, Room 69	25.6	0.0	74.4	None Detected
071222-HG7b	Carpet glue, Yellow, 2nd Floor, North Wing Corridor	55.8	0.0	44.2	None Detected
071222-HG7c	Carpet glue, Yellow, Ground Floor, Room 19	53.3	0.0	46.7	None Detected
071222-HG8a	Covebase adhesive, mixed, 2nd Floor, South Wing Hallway at Room 55	43.0	0.0	57.0	None Detected
071222-HG8b	Covebase adhesive, mixed, 1st Floor, Room 6A	85.3	0.0	14.7	None Detected

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TABLE 12 (cont.)

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (Old Wing)**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method
 Samples Collected: July 12, 2022**

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG8c	Covebase adhesive, mixed, 1st Floor, Room 25	73.1	0.0	26.9	None Detected
071222-HG9a	Caulk, White, interior doors, 2nd Floor, Center Stairwell Door	32.3	0.0	67.7	None Detected
071222-HG9b	Caulk, White, interior doors, 1st Floor, North Stair Door	31.8	0.0	68.2	None Detected
071222-HG9c	Caulk, White, interior doors, 1st Floor, Room 31	29.9	0.0	70.1	None Detected
071222-HG10a	Caulk, White, joint seams, 2nd Floor, Conference Room 4	31.6	0.0	68.4	None Detected
071222-HG10b	Caulk, White, joint seams, 1st Floor, Bath 1	38.2	0.0	61.8	None Detected
071222-HG10c	Caulk, White, joint seams, 1s Floor, Room 25	28.7	0.0	71.3	None Detected
071222-HG11a	Caulk, White, interior windows, Interior, edge of frame, under trim molding, remnants	9.2	0.0	90.8	1.8 Chrysotile
071222-HG11b	Caulk, White, interior windows, Interior, edge of frame, under trim molding, remnants	-	-	-	*SFP
071222-HG11c	Caulk, White, interior windows, Interior, edge of frame, under trim molding, remnants	-	-	-	*SFP
071222-HG17a	Sink basin undercoat, Black, 2nd Floor, Room 6A, sink counter assemble	51.0	0.0	49.0	9.8 Chrysotile
071222-HG17b	Sink basin undercoat, Black, 2nd Floor, Room 6A, sink counter assemble	-	-	-	*SFP
071222-HG17c	Sink basin undercoat, Black, 2nd Floor, Room 6A, sink counter assemble	-	-	-	*SFP
071222-HG21a	Adhesive, White, ceramic wall tile, 2nd Floor, Shower 1	6.7	0.0	93.3	None Detected

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TABLE 12 (cont.)

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (Old Wing)**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method
 Samples Collected: July 12, 2022**

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG21b	Adhesive, White, ceramic wall tile, 1st Floor, Bath 1	26.3	0.0	73.7	None Detected
071222-HG21c	Adhesive, White, ceramic wall tile, 1st Floor, North Shower	36.2	0.0	63.8	None Detected
071222-HG22a	Sheet flooring and Adhesive, White, 2nd Floor, Room 69 (<i>inseparable mastic</i>)	38.8	0.0	59.4	1.8 Chrysotile
071222-HG22b	Sheet flooring and Adhesive, White, 2nd Floor, Room 69 (<i>inseparable mastic</i>)	-	-	-	*SFP
071222-HG22c	Sheet flooring and Adhesive, White, 2nd Floor, Room 69 (<i>inseparable mastic</i>)	-	-	-	*SFP
071222-HG23a	Sheet flooring and Adhesive, Tan, 2nd Floor, Bath 4 (<i>inseparable mastic</i>)	33.7	0.0	53.3	13.3 Chrysotile
071222-HG23b	Sheet flooring and Adhesive, Tan, 2nd Floor, Bath 4 (<i>inseparable mastic</i>)	-	-	-	*SFP
071222-HG23c	Sheet flooring and Adhesive, Tan, 2nd Floor, Bath 4 (<i>inseparable mastic</i>)	-	-	-	*SFP
071222-HG26a-A	12" Floor Tile, Grey, Ground Floor, Room 21	25.1	64.6	10.3	None Detected
071222-HG26a-B	Adhesive, Yellow, Ground Floor, Room 21	98.3	0.0	1.7	None Detected
071222-HG26b-A	12" Floor Tile, Grey, Ground Floor, Room 21	27.4	63.5	9.1	None Detected
071222-HG26b-B	Adhesive, Yellow, Ground Floor, Room 21	58.0	0.0	42.0	None Detected
071222-HG26c-A	12" Floor Tile, Grey, Ground Floor, Room 21	26.4	64.0	9.6	None Detected
071222-HG26c-B	Adhesive, Yellow, Ground Floor, Room 21	58.0	0.0	42.0	None Detected
071222-HG27a	Sink basin undercoat, White, Ground Floor, Southeast Kitchen	28.9	0.0	71.1	None Detected
071222-HG27b	Sink basin undercoat, White, Ground Floor, Room 18	37.9	0.0	62.1	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 12 (cont.)

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (Old Wing)**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method**

Samples Collected: July 12, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG27c	Sink basin undercoat, White, Ground Floor, Room 27A	29.0	0.0	71.0	None Detected
071222-HG28a-A	12" Floor Tile, White with Tan and blue flecks, Ground Floor, PB0002	16.5	80.4	3.3	None Detected
071222-HG28a-B	Adhesive, Yellow, Ground Floor, PB0002	94.3	0.0	5.7	None Detected
071222-HG28b-A	12" Floor Tile, White with Tan and blue flecks, Ground Floor, PB0002	15.9	81.4	2.7	None Detected
071222-HG28b-B	Adhesive, Yellow, Ground Floor, PB0002	98.3	0.0	1.7	None Detected
071222-HG28c-A	12" Floor Tile, White with Tan and blue flecks, Ground Floor, PB0002	17.1	80.4	2.5	None Detected
071222-HG28c-B	Adhesive, Yellow, Ground Floor, PB0002	95.2	0.0	4.8	None Detected
071222-HG29a-A	12" Floor Tile, Beige, Ground Floor, Southeast Kitchen	25.9	65.0	9.1	None Detected
071222-HG29a-B	Mastic, Black, Ground Floor, Southeast Kitchen	58.0	0.0	38.6	3.4 Chrysotile
071222-HG29b-A	12" Floor Tile, Beige, Ground Floor, Room 15	52.7	42.2	5.1	None Detected
071222-HG29b-B	Mastic, Black, Beige, Ground Floor, Room 15	-	-	-	*SFP
071222-HG29c-A	12" Floor Tile, Beige, Ground Floor, Center Corridor	94.3	3.3	2.4	None Detected
071222-HG29c-B	Mastic, Black, Ground Floor, Center Corridor	-	-	-	*SFP
071222-HG30a	Damp Proof Coating, Black, Ground Floor, Room 21A	78.3	0.0	21.7	None Detected
071222-HG30b	Damp Proof Coating, Black, Ground Floor, Room PB0006	76.9	0.0	23.1	None Detected

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 12 (cont.)

**HARRIMAN ARCHITECTS
 DORTHEA DIX PSYCHIATRIC CENTER
 656 State Street, Bangor, ME
 Pooler Pavilion (Old Wing)**

**Polarized Light Microscopy with Gravimetric Reduction
 EPA 600/R-93/116 and 600/M4-82-020 Method
 Samples Collected: July 12, 2022**

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG30c	Damp Proof Coating, Black, Ground Floor, Room PB0006	75.5	0.0	24.5	None Detected
071222-HG31a	Caulk, White, Exterior at Door	34.7	0.0	65.3	None Detected
071222-HG31b	Caulk, White, Exterior at Window	26.9	0.0	73.1	None Detected
071222-HG31c	Caulk, White, Exterior at Window	11.7	0.0	88.3	None Detected
071222-HG32a-A	Stair Tread Floor Tile, Black, Center Stair, Top of the Landing	29.9	0.0	64.5	5.6 Chrysotile
071222-HG32a-B	Mastic, Black, Center Stair, Top of the Landing	60.3	0.0	37.7	2.0 Chrysotile
071222-HG32b-A	Stair Tread Floor Tile, Black, South Stair	-	-	-	*SFP
071222-HG32b-B	Mastic, Black, South Stair	-	-	-	*SFP
071222-HG32c-A	Stair Tread Floor Tile, Black, North Stair	-	-	-	*SFP
071222-HG32c-B	Mastic, Black, North Stair	-	-	-	*SFP
071222-HG33a	Glaze, White, exterior windows	14.3	81.7	4.0	None Detected
071222-HG33b	Glaze, White, exterior windows	15.4	82.0	2.6	None Detected
071222-HG33c	Glaze, White, exterior windows	20.3	75.7	4.0	None Detected
071222-HG34a	Sink Basin Undercoat, Black, Standard basin sinks, 2nd Floor, South Nurses	19.2	0.0	75.9	4.9 Chrysotile
071222-HG34b	Sink Basin Undercoat, Black, Standard basin sinks, 1st Floor, North Nurse, Kitchenette	-	-	-	*SFP

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

TABLE 12 (cont.)

HARRIMAN ARCHITECTS
DORTHEA DIX PSYCHIATRIC CENTER
656 State Street, Bangor, ME
Pooler Pavilion (Old Wing)

Polarized Light Microscopy with Gravimetric Reduction
EPA 600/R-93/116 and 600/M4-82-020 Method

Samples Collected: July 12, 2022

Sample ID	Sample Description	Organic Weight Percent	Acid Soluble Weight Percent	Other Non-Asbestos Weight Percent	Asbestos Weight Percent
071222-HG34c	Sink Basin Undercoat, Black, Standard basin sinks, 1st Floor, South Nurses	-	-	-	*SFP
071222-HG40a	Fire stop caulk, Red, Ground Level, PB006	58.8	0.0	41.2	None Detected
071222-HG40b	Fire stop caulk, Red, Corridor at PB036	58.9	0.0	41.1	None Detected
071222-HG40c	Fire stop caulk, Red, PB010	59.4	0.0	40.0	None Detected

22.1049

Notes:

- Trace means less than 1%. SFP Means analysis was terminated because asbestos was detected on a previous homogenous sample during the survey work. Please reference the "HG" group number.
- Please reference the full report for discussions and additional information and limitations pertaining to these results.

APPENDIX B



Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B



Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Kate Corey

Lab Order ID: 71995515

Analysis ID: 71995515_PBP

Date Received: 6/29/2022

Date Reported: 7/1/2022

Project: 22.1049 Harriman Green Barn Bangor, ME 062122

Sample ID	Description	Mass	Concentration	Concentration
<i>Lab Sample ID</i>	<i>Lab Notes</i>	<i>(g)</i>	<i>(ppm)</i>	<i>(% by weight)</i>
062122-PC101	White paint, north side of building on wood siding	0.0816	6000	0.60%
71995515PBP_1				
062122-PC102	White aint on door on north side of building	0.0733	28000	2.8%
71995515PBP_2				
062122-PC103	Light green paint on wood siding on north side of building	0.0558	4100	0.41%
71995515PBP_3				
062122-PC104	Dark green paint on wood siding on north side of building	0.0878	120000	12%
71995515PBP_4				

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Matthew Caffey (4)

Analyst

Laboratory Director



Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B



Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Lab Order ID: 71998224

Analysis ID: 71998224_PBP

Date Received: 8/5/2022

Date Reported: 8/10/2022

Project: 22.1049 Harriman-Dix IF&W

Sample ID	Description	Mass	Concentration	Concentration
Lab Sample ID	Lab Notes	(g)	(ppm)	(% by weight)
080122-PC1	White, basement window sill	0.0571	2000	0.20%
71998224PBP_1				
080122-PC2	Light blue, basement northeast room wall	0.0895	45	0.0045%
71998224PBP_2				
080122-PC3	White, basement ceiling	0.0652	320	0.032%
71998224PBP_3				
080122-PC4	White/offwhite, basement wall	0.0566	1200	0.12%
71998224PBP_4				
080122-PC5	light blue/offwhite, 3rd floor northwest corner room wall	0.0701	1500	0.15%
71998224PBP_5				
080122-PC6	green, 3rd floor hallway door/radiator	0.1028	970	0.097%
71998224PBP_6				
080122-PC7	brown, 2nd floor hallway door/radiator	0.0988	610	0.061%
71998224PBP_7				
080122-PC8	tan, 2nd floor Room 228 wall/sill	0.0721	< 55	< 0.0055%
71998224PBP_8				
080122-PC9	white, exterior window trim	0.0776	6500	0.65%
71998224PBP_9				
080122-PC10	white, exterior window sash	0.0564	140	0.014%
71998224PBP_10				

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Xaviera Watkins (10)

Laboratory Director



Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B



Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Lab Order ID: 71998226

Analysis ID: 71998226_PBP

Date Received: 8/5/2022

Date Reported: 8/10/2022

Project: 22.1049 Harriman Dix, New Pooler

Sample ID	Description	Mass	Concentration	Concentration
Lab Sample ID	Lab Notes	(g)	(ppm)	(% by weight)
080122-PC1	White, 1st floor north day room wall	0.0745	< 54	< 0.0054%
71998226PBP_1				
080122-PC2	Yellow, 1st floor north corridor wall	0.0832	< 48	< 0.0048%
71998226PBP_2				
080122-PC3	White/Green, 1st floor north room window sill	0.0630	710	0.071%
71998226PBP_3				
080122-PC4	Red, 2nd floor stair riser	0.0934	28000	2.8%
71998226PBP_4				
080122-PC5	Beige, 2nd floor, Room 108 Door Trim	0.0621	< 64	< 0.0064%
71998226PBP_5				
080122-PC6	Blue/Offwhite, 2nd floor Room 104, wall	0.0716	< 56	< 0.0056%
71998226PBP_6				
080122-PC7	Beige, 2nd floor, Shower Room Ceiling	0.0575	180	0.018%
71998226PBP_7				
080122-PC8	Beige/Green, 2nd floor lobby	0.0954	< 42	< 0.0042%
71998226PBP_8				
080122-PC9	Blue/Beige, basement Room PB0058 wall	0.0795	< 50.	< 0.0050%
71998226PBP_9				
080122-PC10	Light Green, Basement Generator Room Wall	0.1006	770	0.077%
71998226PBP_10				

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Xaviera Watkins (11)

Analyst

Laboratory Director



Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B



Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Lab Order ID: 71998226

Analysis ID: 71998226_PBP

Date Received: 8/5/2022

Date Reported: 8/10/2022

Project: 22.1049 Harriman Dix, New Pooler

Sample ID	Description	Mass (g)	Concentration (ppm)	Concentration (% by weight)
Lab Sample ID	Lab Notes			
080122-PC11	Green, Basement Corridor Doors	0.0794	130	0.013%
71998226PBP_11				

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Xaviera Watkins (11)

Analyst

Laboratory Director



Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B



Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Lab Order ID: 71998220

Analysis ID: 71998220_PBP

Date Received: 8/5/2022

Date Reported: 8/10/2022

Project: 22.1049 Harriman Dix - Old Pooler

Sample ID	Description	Mass	Concentration	Concentration
Lab Sample ID	Lab Notes	(g)	(ppm)	(% by weight)
080122-PC1	Red, Exterior door	0.0737	2900	0.29%
71998220PBP_1				
080122-PC2	White, Exterior on window trim/sash	0.0596	70000	7.0%
71998220PBP_2				
080122-PC3	Green/REd, 2nd floor stairwell door	0.0549	130	0.013%
71998220PBP_3				
080122-PC4	Offwhite, 2nd floor Room 53 wall	0.1079	270	0.027%
71998220PBP_4				
080122-PC5	Peach, 2nd floor Room 59B	0.1044	39	0.0039%
71998220PBP_5				
080122-PC6	White, 2nd loor room 63 wall	0.0905	140	0.014%
71998220PBP_6				
080122-PC7	Offwhite, south stairwell window sill	0.0673	3000	0.30%
71998220PBP_7				
080122-PC8	Light Blue, 1st Floor, South Nurse Station Wall	0.0656	< 61	< 0.0061%
71998220PBP_8				
080122-PC9	Light Blue/Green/Yellow, 1st floor South Nurse Station Ext Wall	0.0898	1200	0.12%
71998220PBP_9				
080122-PC10	Green, 1st floor, North Nurse Station Wall	0.0830	2100	0.21%
71998220PBP_10				

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Athena Summa (12)

Analyst

Laboratory Director



Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B



Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Lab Order ID: 71998220

Analysis ID: 71998220_PBP

Date Received: 8/5/2022

Date Reported: 8/10/2022

Project: 22.1049 Harriman Dix - Old Pooler

Sample ID	Description	Mass	Concentration	Concentration
<i>Lab Sample ID</i>	<i>Lab Notes</i>	<i>(g)</i>	<i>(ppm)</i>	<i>(% by weight)</i>
080122-PC11	Orange, 1st floor Corridor	0.0660	< 61	< 0.0061%
71998220PBP_11				
080122-PC12	Green/Tan, Basement Door Trim	0.0725	5800	0.58%
71998220PBP_12				

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Athena Summa (12)

Analyst

Laboratory Director



Analysis for Lead Concentration in Paint Chips

by Flame Atomic Absorption Spectroscopy
EPA SW-846 3050B/6010C/7000B



Customer: RPF Environmental Inc.
320 1st NH Turnpike
Northwood, NH 03261

Attn: Allan Mercier

Lab Order ID: 10006408

Analysis: PBP

Date Received: 09/19/2022

Date Reported: 09/22/2022

Project: 22.1049 Harriman Building F

Sample ID	Description	Mass (g)	Concentration (ppm)	Concentration (% by weight)
Lab Sample ID	Lab Notes			
091522-PC1	Paint, tan, 2nd floor office, sill	0.0516	200	0.020%
10006408_0001				
091522-PC2	Paint, green, 2nd floor corridor wall	0.0783	370	0.037%
10006408_0002				
091522-PC3	Paint, beige, 2nd floor office wall	0.1191	3200	0.32%
10006408_0003				
091522-PC4	Paint, white, 2nd floor office, window trough	0.0907	2700	0.27%
10006408_0004				
091522-PC5	Paint, light pink, 2nd floor door in "L" wing	0.0690	3600	0.36%
10006408_0005				
091522-PC6	Paint, pink, 2nd floor "L" wing	0.0520	180000	18%
10006408_0006				
091522-PC7	Paint, off-white, 2nd floor "L" wing wall	0.1319	150000	15%
10006408_0007				
091522-PC8	Paint, Blue/Multi, 1st floor center room on right	0.0636	11000	1.1%
10006408_0008				

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Matthew Caffey(14)

Analyst

Approved Signatory

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